How can airports and airlines ensure that their winter operations will stand up to the harsh reality of snowfall and ice on an airfield? We examine the strategies that are put in place, how effective teamwork is a real asset, and the technological advances that have benefited this sector.
While Dresden’s passengers jet off to a variety of holiday destinations in the summer months, the airport is busy planning for its winter season. The technical and traffic control departments play a key role in this. While the latter coordinates airport operations, the technical department is responsible for the organisation and operational implementation of surface clearing. At Dresden International Airport, PortGround GmbH, an affiliate of the airport, is charged with de-icing the aircraft. All involved parties, including the German air traffic control authority, are supported by the German Weather Service, which is on hand to respond to meteorological enquiries, and provides the necessary weather data. In addition, the environmental protection/water protection department manages all drainage-related matters. All departments work hand-in-hand to ensure that processes run smoothly.

Special geographical location
Dresden International Airport is located in the foothills of the Erzgebirge (Ore Mountain) range, above the Elbe valley 221m above mean sea level and 100m above the city of Dresden. As a result of this setting, temperatures can be vastly different, so while it may be raining in Dresden City, it could be snowing at the airport. Masses of humid air, generally from the west and north-west, accumulate in the highlands, often causing extended periods of precipitation.

Meteorological sensors continuously transmit data on wind, visibility, temperature, dew points and air pressure, which the weather station staff record, while the experienced employees at the weather station also record their observations. The data collected is then made available as METAR or SPECI.

Clearing the snow
To keep the airport open in winter, the runway and at least one incoming and outgoing taxiway must be clear of snow and ice, with sufficient snow- and frost-free parking positions. In total, the area to be cleared is the same size as 76 football pitches. At Dresden Airport, this is where the technical department’s clearing equipment comes into play.

JULIA GANTSCHEW has been working at Dresden International Airport in Customer Service since July 2016, and in Marketing and Corporate Communications since April 2018. She graduated with a Bachelor of Science degree in Business Studies from Dresden University of Technology in spring 2018. Her responsibilities at the airport include auxiliary activities in marketing and corporate communications and supporting visitors to the airport during events and guided tours.

In March 2018, storm front Irenäus caught Dresden and the surrounding Elbe region by surprise. But despite the extreme weather conditions, the airport never closed, and no flights were cancelled. This was made possible by well-structured interdisciplinary cooperation at Dresden International Airport. Manfred Kunath, Technical Manager, and Julia Gantschew, Marketing Manager, explain.
The fleet includes seven combined plough/sweeper/blower units from Overaasen, with a total maximum clearance width of 30m. The department also has three compact units (by CJS Schmidt, Jetbroom and Overaasen). The brushes attached to the units have plastic and steel parts laid out in a checkerboard pattern, which is more cost-effective than all-steel brushes but equally as efficient.

For gritting to prevent slippage, two airport multi-de-icer units (by Küpper-Weisser and Dammann), two sand throwers (by Mercedes and Unimog) and a John Deer compact spreader are used. Fire-dried quartz sand can be spread to grit all areas of the airport. This has proven itself in practice and has been implemented for many years. The multi-de-icers are also used for chemical de-icing. If only de-icing is required, a Dammann airport sprayer is used. Safeway KA-HOT is the surface de-icing agent of choice.

The runway has an early warning system for black ice with four sensors. In addition to assessing the conditions using surface friction testers (SFT), their measurements help traffic controllers decide whether the winter service must be deployed early or not. This prevents excessive use of de-icing agents, thus minimising environmental pollution. The winter fleet also includes two solo ploughs (from Fendt) and three snow blowers (from Supra).

In the past, the runway had to be cleared an average of 110 times per season. The 221 deployments in winter 2010/11 were a 10-year high, with a high snow volume caused by extended periods with temperatures below freezing.

**Staff scheduling**

As a rule, staff scheduling for surface clearing spans five months, from early November to the end of March. Roughly 140 airport employees are trained for winter service. This includes 54 employees from the airport’s fire department, who perform winter service work, especially at night when the airport is closed. PortGround GmbH delegates some of its personnel to the technical workshops for winter service. Some administrative employees even work shifts on the winter service vehicles.

The large pool of staff at PortGround GmbH also offer a great deal of flexibility in personnel deployment planning. Eighteen employees are trained for aircraft de-icing (four of whom are de-icing coordinators) while a further seven are responsible for scheduling and controlling, taking into account aircraft departure times, priorities and weather conditions.

To keep the airport open in winter, the runway and at least one incoming and outgoing taxiway must be clear of snow and ice.
Aircraft de-icing

In Dresden, three Vestergaard My vehicles with a three-tank configuration, consisting of Type 1 and Type 2 de-icing fluid and water, are used. The fluid use is optimised for customer requirements via a proportional mixing system. Reducing the use of glycol also helps protect the environment.

The batch heating system allows the fluids to be heated to the required temperatures rapidly; guaranteeing short reaction times between the order and the on-site de-icing. All three vehicles are equipped with MobileUnits data recording systems for precise and reliable documentation of the de-icing process, which enable precise retrospective invoicing.

PortGround GmbH Dresden also has two pre-heaters for the FanBlade de-icing system (engine de-icer).

Each aircraft de-icing fluid type is stored at Dresden Airport in two 30,000-litre tanks. In normal flight operations, these quantities last at least three- to five-days. At the Leipzig/Halle location, like Dresden also part of Mitteldeutsche Flughafen AG, PortGround GmbH even has its own certified laboratory which allows its de-icing agents to be tested quickly and at short notice. Internal standards compliance audits are held regularly to guarantee quality, and the results of the annual IATA-DAQCP (IATA De-Icing/Anti-Icing Quality Control Pool) review are always very good.

On average, over the past six years, the winter flight plan at Dresden International counted roughly 8,200 commercial aircraft movements. Each winter season, an average of 511 de-icing procedures are carried out at the airport. With a total of 1,131 de-icing procedures, this figure reached a new high in 2012/13.

At Dresden Airport, aircraft are uniquely de-iced in their parking positions. The airport strives to obtain approval from the airlines to use brand name effective times, for greater workflow flexibility. By using brand name instead of generics, the effective time can be extended, avoiding double de-icing and thus additional costs for customers.

Besides normal flight operations, PortGround GmbH also faces special challenges in Dresden. Elbe Flugzeugwerke GmbH’s facility adjoins the airport grounds, and offers conversion, servicing and repair services for all Airbus aircraft. As a result, the A380 is often present here. Thanks to close cooperation with PortGround’s Leipzig location, de-icing equipment for large aircraft also allows these special models to be de-iced.

The de-icing planning and control department is integrated in the traffic control centre, resulting in close coordination with traffic management; taking account of the flight plan and winter service activities, in particular the condition of the aviation areas, which avoids double de-icing.

Solid information base

Employees at Dresden Airport rely on dependable weather information for both surface and aircraft de-icing. Besides the standard forecast products, the airport also receives a winter service report three times daily, including statements on the expected weather and temperature trends in the next 30 hours. Once a day, there is also a medium-term forecast for planning purposes, covering a further 48 hours. Employees can access relevant data in a web-based portal. Other products, like animated radar images for the airport location, satellite images, model forecasts and updated summary reports can be accessed here. Since February 2018, employees can access the new NowCastMix winter weather tool. From the information collected, warnings are configured for snowfall, fresh snow depth or freezing precipitation for a two-hour period. The German Weather Service in the Aviation Advice Centre East is also available for telephone consultation at any time.

Drainage

Dresden Airport is situated on a plateau, around which bodies of water form and unpolluted water from precipitation is routed. All clearing and de-icing procedures for aviation areas are supported by a viable drainage system. As a result, Dresden Airport has received permits under water law, subject to specific quantities and qualities of wastewater. Retention reservoirs and underground overflow sewers are maintained to reduce discharge quantities and provide retention volumes in the summer.
The use of de-icing agents for circulation areas and aircraft affects the quality of the precipitation water. Water containing de-icing agents must not be discharged into bodies of water; it must be collected in the municipal wastewater system separately from the precipitation water and treated before being drained into the sewage network via pump stations.

The quality of this 'winter water' is recorded using online measurement technology. Sensors are fitted in the sewer system for the runway that measure the electrical conductivity of the wastewater containing potassium acetate. Total organic carbon devices and sensors for electrical conductivity perform the measurements in the sewers of the taxiways and aprons. Conductivity measurements provide faster results, as no sampling, transport and treatment are required. A process control system manages the wastewater gate position based on the measurements, and records the quantity of winter water.

**High quality standards**

All departments involved in the winter service strive to improve the high-quality standards. As a result all employees involved in aircraft de-icing receive refresher training every year. Changes to the Global Standard for Anti-Icing and De-Icing and new regulations of the respective airlines form part of the annual training program, and a de-icing simulator is also available. Additionally, at the beginning of each winter season, employees receive a refresher on the meteorological contents of the briefing portal, and have access to expert trainers.

The runway has an early warning system for black ice, with four sensors
As I write this article it is 30°C and sunny outside. On days such as these it is easy for those who do not work within the aviation industry to not give a thought about the forthcoming winter. However, for those of us involved in airport winter operations, the summer is our busiest time.

Planning and preparation is the key to success when it comes to being able to cope with whatever nature throws at us weather-wise. For the public at large – but especially airports, airlines and ground service providers in the UK – the 2017/18 winter season will be remembered for the ‘Beast from the East’. Whilst, by UK standards, it was not a particularly cold winter, it was significant for the days of continuous snowfall.

So what can the aviation industry do to prepare for these types of weather conditions? When an airport experiences snowfall of up to 20-25cm, the challenges are considerable, especially if the planning and preparation has not been put in place during the summer period.

Airports, airlines and service providers spend many hours throughout the summer and leading up to the winter season compiling a robust snow plan that is understood by all stakeholders and can be easily activated on any day of snow. It is not enough to just have a plan; it is also important...
to carry out process and procedure tests prior to the winter season to identify the elements that work well and those that need to be refined.

Over the past eight years, since the infamous winter of 2010 – still the UK’s coldest since Met Office records began in 1910 – considerable work has been carried out by all stakeholders to improve winter operations. I can confidently say that frosty days are no longer an issue, as most airlines now carry out an anti-icing process on their first wave aircraft before the departure flight crew arrives, guaranteeing a delay-free start to operations. Airlines around the world place great emphasis on getting this first wave of aircraft away on time, as long delays can affect the schedules and aircraft rotation for the entire day.

Anti-icing an aircraft before the frost starts to materialise protects it from contaminant build-up. The Type II and Type IV fluids available today provide very long holdover times before further de-icing is required. These protective measures taken by airlines obviously incur costs, however when you factor in the cost of departure disruption, this outlay pales into insignificance.

So how does the airport community plan and prepare for the winter season? Most airports publish their snow plans prior to the winter season. The plan is normally based on best practices and practical experience of previous winters.

Successful snow plans are normally developed with the involvement of key stakeholders, as the operation on the day depends on everyone pulling together. The days of expecting airports to do everything is over; it’s now acknowledged that there must be full involvement from everyone.

Safety is a top priority for customers and employees, and to ensure that we minimise risks it is beneficial to have self-help items, such as shovels and de-icing crystals, available close to the working areas. These items should be included in the winter planning process. Achieving a safe working environment that supports winter operational days is undoubtedly for the greater good of the airport and airlines.

As mentioned earlier, winter season planning and preparation starts at the end of the previous winter. In the UK, a review of the previous season to identify learnings – both good and bad – will normally take place at the end of April. If process or procedure shortfalls are identified, they can be worked on to

“Successful snow plans are normally developed with the involvement of key stakeholders, as the operation on the day depends on everyone pulling together.”
It is very important that each airport holds an adequate stock of ADF to maintain operations through significant bad weather. ADF manufacturers cannot always meet demand when a country is going through a period of heavy snowfall, so ensuring that adequate bulk storage is on site or close to the airport, with enough fluid in stock to see the airport/airline through a significant period of bad weather, is vital. During the 2017/18 winter season, several de-icing service providers in the UK and North America came close to running out of ADF following continuous snowfall. This situation can be avoided with good planning and early ADF orders. Snow plans should also be reviewed over the summer period, and updated if necessary, to ensure they include best practices. Table top exercises and process tests should be carried out to keep everyone up-to-date with regard to roles and responsibilities, activation and communications plans, processes and procedures. It's noticeable that the airports and airlines who run these tests are usually those who better manage the winter season. It's in everybody's interest to have aircraft safely departing on time during all conditions.

In July, it is the practice of several airlines and ground handling companies to hold their winter operations review and planning meeting. They review equipment levels and identify any shortfalls. Resource levels, both equipment- and personnel-wise, can also be reviewed to identify any shortfalls. Once the winter review has been carried out – and the areas for improvement have been identified – the plan can be put together.

The SAE G-12 Aircraft De-icing on the Ground conference is held annually in May, either in Europe or North America; the purpose of which is to bring together industry experts to discuss global de-icing standards with regard to methods, training and quality. If changes are deemed necessary, documents will be drafted to update processes and procedures. The conference is both professionally organised and affords all attendees the opportunity to raise issues, concerns, ideas and address questions to the chairman or co-chairman at the various sessions. The summer months are when the focus is put on planning and preparation for the upcoming winter season. At this point equipment levels are reviewed to identify the requirements for the airlines’ winter schedules. Service providers ensure that their de-icing fluid (ADF) stocks have been checked and orders made, and that all equipment is fully serviceable for the winter season.

Ernie Carter is Winter Operations Manager for easyJet. He has worked in the airline industry for over 47 years. Prior to joining easyJet in 2011 he worked for British Airways for 40 years in various managerial positions. He currently has responsibility for ensuring that easyJet and their suppliers are well prepared for the winter operations across each of the 110 cold weather stations the airline operates from. Over the past seven years, Ernie has supported and worked with airport authorities, ground handling partners and de-icing suppliers to improve easyJet’s performance throughout the winter period. He has also been involved in the development and introduction of the UK glycol recovery group, new technologies, and the network’s remote de-icing pads.
readiness conferences, attended by key stakeholders, to convey the latest information regarding plans for the winter season. These conferences also provide an opportunity to share experiences gained over the previous winter season.

August and September is the time to assess the training needs of those individuals who will be involved in the winter season. Training plans are formulated for introduction in September, including annual theory refresher courses to ensure staff are compliant and will pass an audit that can be carried out by their contracted airline or the De-Icing and Anti-Icing Quality Control Pool – an IATA initiative to ensure the safety of aircraft operations.

The winter season planning and preparation for airlines, airports and service providers is a great example of a continuous improvement programme; a community approach that successfully pulls all the winter operation elements together. Airport communities that work together with this objective generally perform better on the day, as everyone understands their part in the plan.

As you can see from this article, winter operations are a 365-day-a-year task. Those individuals involved are continually developing ways to improve day-to-day operations during adverse weather. Keeping airports open and airlines flying through all the possible weather scenarios is everyone’s key objective. The challenges are many, but by working together these challenges can be successfully managed.

Safety is a priority for all those involved in the aviation industry, and because weather conditions can be very changeable, winter operations can be extremely challenging. There are many scenarios that must be accounted for when planning and preparing for the upcoming winter.

Since 2010, massive strides have been made regarding how we manage the winter season. Many airports have developed remote de-icing pads that are beneficial in falling snow conditions. The remote pads can keep the airport open as the arrival stands are vacated for the arriving aircraft. The departing aircraft taxi to the remote pads and are de-iced ready for departure. The process is faster and safer as it avoids the need for the de-icing equipment to travel from stand-to-stand because the aircraft go to the de-icing equipment rather than the other way round. The de-icing procedure carried out on the pad is designed to be a safe, simple repeatable process. It therefore makes sense to introduce the remote de-icing pads at cold weather airports. 

It’s in everybody’s interest to have aircraft safely departing on time during all conditions.

ice clear vision

• World-leading commercial and general de/anti-icing fluids
• Over 85 years of expertise
• AMS1424/AMS1428 approved
• Local supplies
Canada is known for harsh winters, but even Toronto residents usually catch a break by the time mid-April rolls around. Spring squalls are possible, but it wasn’t usual for Toronto Pearson to be staring down a major ice storm heading into the weekend of 13-15 April 2018. At an airport that welcomes an average 155,000 passengers per day, even mild winter conditions can upset the delicate balance of nearly 1,200 daily aircraft movements. With forecasts early in the week suggesting a possible witches’ brew of fog, high wind, rain and up to 30 millimetres of ice accumulation, it was possible that the winter of 2018 (already a busy one that had seen the airport facing down prolonged extreme cold and significant snowfall) wasn’t over yet.

At Canada’s largest airport, the team swung into planning mode, running through a detailed list of preparations that would ensure all airport players had an action plan for the expected severe conditions. The team began consulting forecasts, adding to staff rotas and coordinating with airline and agency partners to ensure resources were in place and teams were prepared. At the airport’s revolutionary de-icing facility is ready for all eventualities.
Central De-icing Facility (CDF), the team was preparing for a weekend that could break records for the most de-icing activity ever at a Canadian airport.

Toronto Pearson’s de-icing team are winter experts. The largest centralised aircraft de-icing facility in the world is staffed by a team of 180 who are highly-trained in ensuring the safety of more than 47 million passengers a year, in the ever-changing Canadian winter. At the 65-acre facility, six de-icing pads can process six wide-body or 12 narrow-body aircraft at one time, with a matching number of aircraft queued and waiting for their turn.

Conceived in 1998 as a centralised facility which could enable the best use of space among the airport’s five runways, Toronto’s CDF can treat 60 aircraft per hour during frost conditions, though thankfully that level of throughput is rarely needed. Its proximity is one of the great advantages to a centralised facility, allowing easy access to taxiways, maximising efficiency and reducing the risk of aircrafts needing to be resprayed in slow moving winter conditions. This ensures the 70-plus air carriers that operate at Toronto Pearson can maintain crucial schedule integrity.

The 2017-2018 de-icing season was already a record breaker at the CDF, with 17,000 aircraft de-iced by the end of March 2018; over 5,100 aircraft alone in December, the busiest month. Echoing Toronto Pearson’s vision that ‘passengers are our passion’, every decision made at the CDF is governed by the desire to maximise flow and enable air carriers and their passengers to depart safely.

Communication innovations allow the CDF to operate safely at this pace and keep the airfield operating efficiently in winter conditions. The facility is recognised as an industry leader in de-icing.

“De-icing is integral to the success of any northern hemisphere airport and Toronto is no stranger to that.”

@IntAirport
operations, developing strategies and using technology to maximise aircraft flow through the CDF. De-icing vehicle on-board telemetry and automated de-icing communication systems allow coordinators in the icehouse to communicate directly with flight crews as they transition through the CDF.

Toronto Pearson has experienced a period of continued growth throughout the decade, and CDF leadership has prepared for ongoing higher demands on the facility. In 2015, the decision was made to insource de-icing services, and a large team was recruited, hired and trained in the limited summer season to ensure a successful start to the following winter’s operation. Bringing the staffing of the CDF into the Greater Toronto Airport Authority’s (GTAA) realm enabled us to enhance the resilience and service delivery of the winter operation to meet airlines’ growing needs. The development of these relationships is critical to the airport’s plans to become a mega-hub while operating in the often-harsh Canadian climate.

Supply management is another critical issue at a growing airport. The CDF has the capability to blend de-icing fluids on site, reducing storage requirements and minimising the need to transport fluid to the airport. With a capacity of 425,000 litres of Type I ADF concentrate and 325,000 litres of Type IV fluid, the CDF can sustain a two-day weather event with additional supply available in close proximity to Toronto Pearson.

Collaboration with airline partners and air navigation service provider, NAV Canada, continues to be integral to managing the growing demand for de-icing services. The CDF has determined an hourly target 20 per cent higher than the runway launch capacity established by NAV Canada, which manages all aircraft traffic into and out of Toronto Pearson. The airport is in constant communication with stakeholders to ensure they can move aircraft off the gate and over to the CDF to meet targets. It’s an integrated system involving all stakeholders to ensure transparent collaboration in this demanding and constantly changing environment.

Of course, with an average increase in passenger traffic of six per cent a year over the past three years, the CDF team recognises that they can’t rest on their laurels when summer finally comes around. A 2017 optimisation study demonstrated that the peaks and valleys of Toronto Pearson’s typical flow are starting to fill in and demand is becoming more constant in winter months. CDF leadership is working to ensure that the facility continues to be able to maintain schedule resiliency for carriers, using demand forecasting, optimising existing space and exploring options for expansion.

More immediately, the team is working to ensure storage capacity doesn’t become an issue. During the summer of 2018, when de-icing operations are not needed, contractors will begin work to install an additional five million litre storage tank. This fourth underground tank will bring the total capacity of the facility to 20 million litres. Additional maintenance and facility improvements are always underway in the short summer season to be ready when the fall winds start to blow.

Also on the horizon is the implementation of airport-collaborative decision making (A-CDM) at Toronto Pearson, expected to roll out this winter. The A-CDM work will allow each operator and partner working at Toronto Pearson to communicate and share information in real-time, which will ensure better utilisation of the airfield and terminals infrastructure and more efficient deployment of resources. The CDF will be no different, and A-CDM implementation is expected to provide efficiencies that will continue to improve the throughput of the facility.

While continued growth and innovation is critical to the airport’s success, the potential impacts of our
Air craft de-/anti-icing fluids

- Cryotech Polar Plus® LT (80) Type I
- Cryotech Polar Guard® II Type II
- Cryotech Polar Guard® Advance Type IV

Runway & commercial de-/anti-icing products

- Provifrost® KA ECO Liquid potassium acetate
- Provifrost® KF ECO Liquid potassium formate
- Provifrost® NF Solid sodium formate
- Cryotech® NAAC Solid sodium acetate
- Cryotech® CMA Solid calcium magnesium acetate
- Cryotech® CMA40 Solid blend of 40% CMA and 60% rock salt

www.proviron.com
provifrost@proviron.com

Let’s beat the elements together

Frost, snow and ice are all commonplace at Toronto Pearson

Business on our community must be considered. Environmental mitigation is integral to the CDF, from the design of the facility to training and daily operation. Developing a centralised facility was an important solution to the problem of glycol run-off, allowing the capture of fluid in underground holding tanks which are constantly monitored for glycol concentration. Fluid collected lower than three per cent glycol is discharged into sanitary systems based on the allowable biological oxygen demand limits set out by the Canadian Environmental Protection Act. Fluid collected with a higher concentration of glycol is stored on site, then sent to a glycol processing facility for treatment. The end product is then repurposed in after-market products such as automobile windshield washer fluid.

De-icing is integral to the success of any northern hemisphere airport and Toronto is no stranger to that. With an eye towards strategic facility management, constant innovation, partnership and collaboration, the Toronto Pearson CDF continues to manage Canada’s harsh winters while accommodating consistent growth.

For that reason, no one was surprised that when the ice storm hit Toronto in April 2018, the team was prepared, focused and equipped to greet it. Over the course of the three-day event, the CDF sprayed approximately 1.5 million litres of glycol and de-iced over 550 aircraft during extreme winter conditions increasing their new CDF seasonal record for activity. While the storm came with a few surprises, the seasoned team followed their plan and used their resources to ensure that this last gasp of winter was a successful start to another efficient spring for Toronto Pearson travellers.

At the 65-acre facility, six de-icing pads can process six wide-body or 12 narrow-body aircraft at one time
As part of our Winter Operations In-Depth Focus, International Airport Review asked this panel:

How have winter operations changed as a result of new technologies, and what do you consider to be the biggest challenges to be in this area?

ROSENKAMP: One of the greatest developments in the field of winter operations is the move towards autonomous use products and their ultimately independent operation. The linking together of people, things and machines to create a global community is advancing at an inevitable pace. Gradually, automation is taking over more accepted working practices, and autonomous vehicles are already commonplace in many areas.

But, the most important cost drivers when it comes to clearing snow and ice from airport working areas are not just the investments in equipment, but in finding suitable employees and providing expert training courses to get them to the required operating level.

One solution is autonomous driving, and we are currently testing this in trials at nine airports in Sweden and at others in Germany. But we don’t see this as one big leap from driver to fully-autonomous operation. Instead, we see three distinct steps, beginning with driver support, assisted by interactive displays and systems; followed by semi-automation, with automated functions including platooning of vehicles for optimum effect in operations such as snow clearing; to full automation, with completely autonomous driving and control of the fleet in certain clearly defined conditions.

There is still a long way to go, but we firmly believe this development will be fundamental in the continued operation of airports of the future.

POJEZNY: In any industry, new technologies can help towards greater efficiency and safety. At Vestergaard, we have successfully adapted IT innovations in aircraft de-icing, for example into our
almost double that of 2009, as we met a greater demand for our anti- and de-icing fluids at UK and Irish airports.

The increased demand is due to several factors, including the use of larger, wider-bodied aircraft, but more importantly we’re seeing a lack of bulk storage at airports. This is one of the biggest challenges to winter operations and we’re working with customers to improve their preparedness. We’re doing this through the introduction of telemetry systems, allowing both Kilfrost and the customer to electronically monitor fluid stock levels. It does this in real-time and will issue alerts when low, meaning we can replenish automatically. Not only does this reduce major peak demand, but also saves time and enables Kilfrost to be proactive in meeting customers’ needs.

VERSAVEL: As a manufacturer of niche chemical products, innovation and technology are part of Proviron’s DNA. With winters being more extreme and aviation customers requesting higher volumes of aircraft and runway de-icing products in shorter lead times, it is very important for Proviron to continuously optimise its chemical processes and invest in new technologies. By doing that Proviron has made its production plants much more efficient and flexible. Proviron also noticed that its aviation customers are investing in new state-of-the-art equipment to increase the efficiency of spraying runway or aircraft de-icing products at airports. Proviron is a big believer in new technologies. The biggest challenge is to always be open-minded about it and to keep your eyes open in order not to miss this fast-moving train of technology.

KAHLBACHER: We are continuously investing in new technologies and the latest technical developments in snow clearing so that we are equipped to supply the ideal application approach to meet future requirements. Our goal is to be able to clear snow from the widest variety of traffic routes in a rapid and environmentally friendly manner.

LYDIATE: Kilfrost is relied upon year after year to ensure the successful movement of aircraft each winter. Last year huge pressure was put on aircraft operations up and down the country, but it wasn’t considered a ‘severe’ winter. Yes, we had prolonged spells of wintry weather, but it wasn’t as bad as 2009, which was classed as severe in nature. Despite this, our tanker movements last winter were

PARTICIPANTS

FREDERIC VERSAVEL
Business Manager
– De-icing Solutions, Proviron

JAN POJEZNY
Manager – Technical Sales,
Vestergaard Company A/S