

Autonomous Operations on Airports

Aebi Schmidt's three-step approach



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a brand of aebi schmidt

Shift your performance to a new level

Imagine the benefits of about 15% more uptime

More uptime means more aircraft movements and thus more income. However, increased uptime through automated and autonomous systems also means a substantial performance improvement, cost savings, increased flexibility and above all greater levels of safety. An integrated system enables flexible deployment, improved security of staff as well as decreased training efforts and costs. Automated clearing decreases operational risks and damage as well as offering improved fuel efficiency and overall environmentally friendlier operations. Operation control gets easier as the system itself makes sure that the jobs are done correctly. It's not about track and trace anymore, it's about to do the right job at the right time.

Automation has become an integral part of our everyday life. However, the use of automated and auto-

nous systems, especially on the airfield, cannot be coordinated with a standardised universal solution. Without exception, it is necessary to take into account the specific conditions and to adapt the systems step by step.

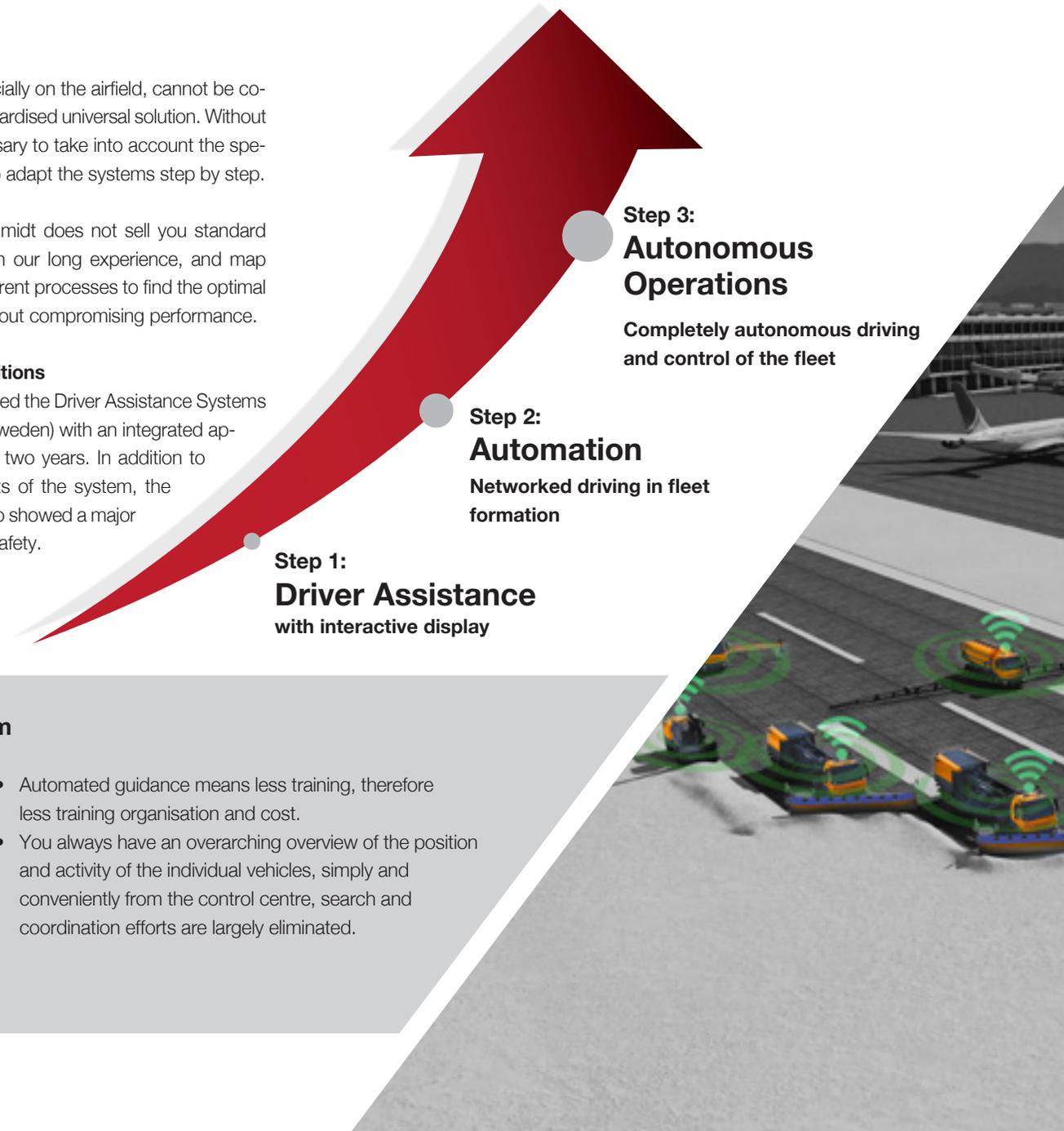
This is why Aebi Schmidt does not sell you standard systems; we draw on our long experience, and map them against your current processes to find the optimal efficiency levels - without compromising performance.

Tested in real conditions

Aebi Schmidt has tested the Driver Assistance Systems at Bromma Airport (Sweden) with an integrated approach over the past two years. In addition to the confirmed benefits of the system, the results of the tests also showed a major impact to increased safety.

Key Benefits of the Aebi Schmidt Driver Assistance System

- Overall increased efficiency and performance improvement: Thanks to the Driver Assistance System, the tasks are completed on the first go, time-consuming touch-ups are no longer necessary.
- Low investment risk as the Aebi Schmidt Driver Assistance System can be used with any vehicle and any Jet Sweeper brand.
- Drivers can be deployed on different vehicles and in different roles without special measures; personnel planning becomes easier and more flexible.
- Automated guidance means less training, therefore less training organisation and cost.
- You always have an overarching overview of the position and activity of the individual vehicles, simply and conveniently from the control centre, search and coordination efforts are largely eliminated.





Driver Assistance System

Fits to any machine

Our Driver Assistance System fits not only with our own Jet Sweepers, but also with other Jet Sweepers you may have in your fleet.

Route Recording and Editing

With high precision standards such as RTK or NTRIP, routes can be recorded and edited including the corresponding positions and operation modes of plough, rotary brush and blower. A highly sophisticated control tool enables your operational team to edit paths, add geo-events and create routes and segments.

Machine and Driver Guidance

The Driver Assistance System optionally supports the driver with advice and information on both driving behaviour and machine positions.

Real-time Route Correction

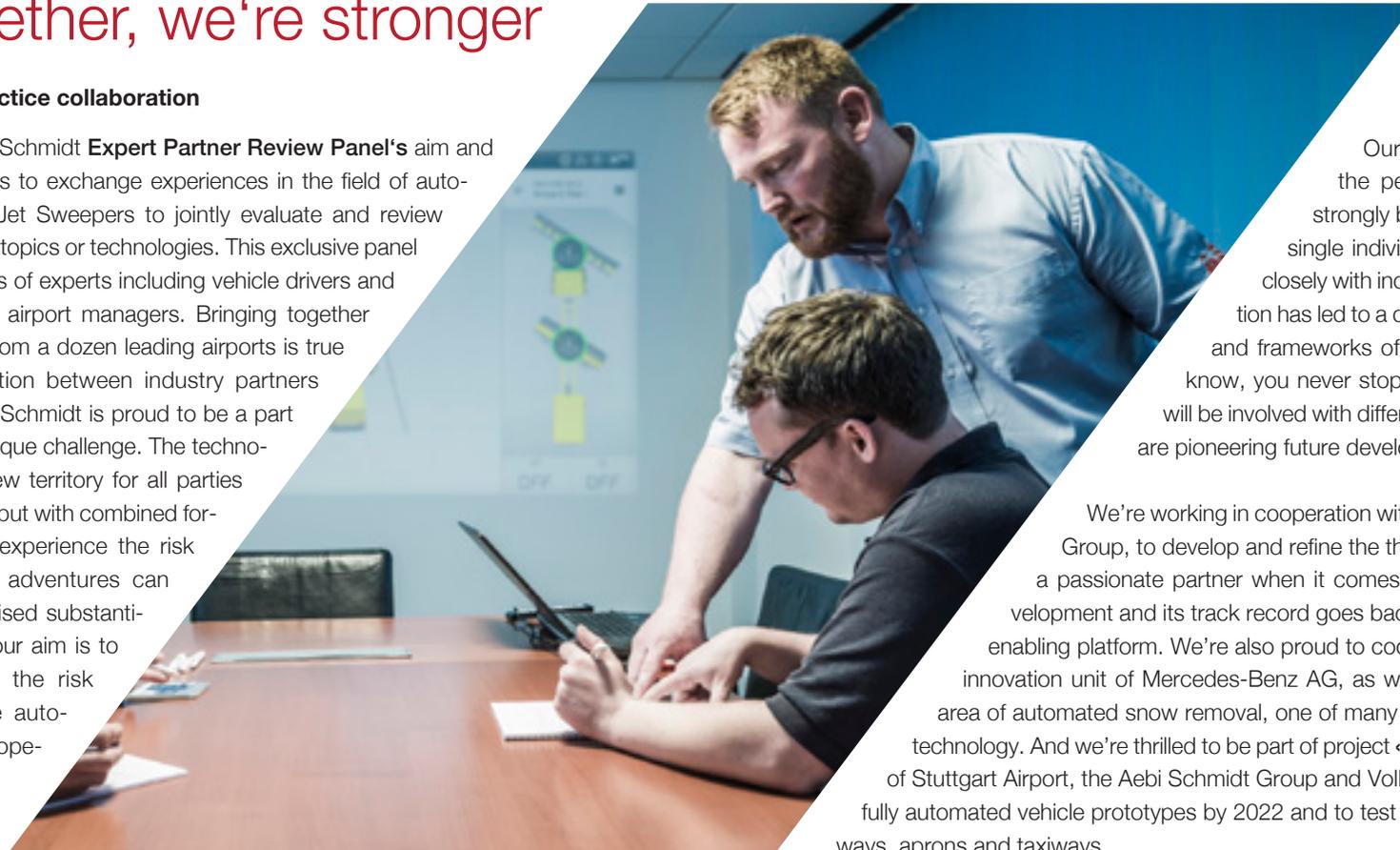
The Driver Assistance System reports any deviation from a defined route or operation of vehicles in the front, enabling them to adjust their operation plan and make sure there is no gap in clearing coverage.



Together, we're stronger

Best practice collaboration

The Aebi Schmidt **Expert Partner Review Panel's** aim and purpose is to exchange experiences in the field of autonomous Jet Sweepers to jointly evaluate and review individual topics or technologies. This exclusive panel comprises of experts including vehicle drivers and executive airport managers. Bringing together experts from a dozen leading airports is true collaboration between industry partners and Aebi Schmidt is proud to be a part of this unique challenge. The technology is new territory for all parties involved, but with combined forces and experience the risk of costly adventures can be minimised substantially and our aim is to decrease the risk for future autonomous operations.



Co-operation with leading Pioneers

Our ultimate mission is to improve the performance of our customers. We strongly believe that a group is greater than a single individual, and we've been co-operating closely with industry leaders. This type of co-operation has led to a deep understanding of the processes and frameworks of the airport industry. But, as we all know, you never stop learning, which is why we are and will be involved with different industrial leaders in projects that are pioneering future developments.

We're working in cooperation with **CPAC Systems**, part of the Volvo Group, to develop and refine the three-step approach further. CPAC is a passionate partner when it comes to technology driven business development and its track record goes back to 2003 when it launched the first enabling platform. We're also proud to cooperate with **Lab1886**, the business innovation unit of Mercedes-Benz AG, as well as with Daimler Truck AG in the area of automated snow removal, one of many applications of Mercedes' **AXYARD** technology. And we're thrilled to be part of project «**Smart Fleet**» which is a joint project of Stuttgart Airport, the Aebi Schmidt Group and Volk Fahrzeugbau. Its aim is to develop fully automated vehicle prototypes by 2022 and to test them in real time conditions on runways, aprons and taxiways.

