



Annual Report

2019

The Aebi Schmidt Group at a Glance

EUR '000	2019		2018	
SALES BY SEGMENTS				
Aebi products	60 263	11.7%	58 674	14.2%
Schmidt products	243 246	47.1%	200 912	48.5%
Meyer/Swenson products	40 111	7.8%	32 638	7.9%
M-B products	74 023	14.3%	28 368	6.9%
Service and spare parts business	98 530	19.1%	92 817	22.5%
Total net sales	516 173	100.0%	413 409	100.0%
BALANCE SHEET TOTAL				
Current assets	264 985	82.8%	240 668	81.5%
Fixed assets	55 028	17.2%	54 689	18.5%
Total assets	320 013	100.0%	295 357	100.0%
Loan capital	242 279	75.7%	234 649	79.4%
Equity capital (incl. shareholders' loans)	77 734	24.3%	60 708	20.6%
Total liabilities	320 013	100.0%	295 357	100.0%
NUMBER OF EMPLOYEES (FTE)				
Germany	466	24.9%	454	25.1%
Switzerland	280	14.9%	249	13.8%
Poland	305	16.3%	277	15.3%
Netherlands	214	11.4%	220	12.2%
USA	424	22.6%	426	23.5%
Other	186	9.9%	183	10.1%
Total employees	1 875	100.0%	1 809	100.0%

Whether runways and taxiways at airports, pedestrian walkways, freeways or green spaces in challenging terrain – the areas of application of the Aebi Schmidt Group's products are as diverse as our portfolio: it comprises our own vehicles, attachable and demountable devices for individual vehicle equipment as well as intelligent product systems and customized services. Decades of diverse experience make the Aebi Schmidt Group unique – and a reliable and competent partner for our customers from all over the world. A support and service program perfectly tailored to customers' needs offers the appropriate solution to nearly any challenge.

Our Vision

In 2022, the Aebi Schmidt Group is the global leader of smart solutions for the treatment of mission-critical infrastructural and agricultural areas.

Our Mission

Based on our competitive product range, we strive for total solutions, enabling an economic, safe and traceable clearing. Our ultimate mission is to improve the performance of our customers.

Annual Report 2019

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Facts & Figures

800 000
PRODUCTION HOURS WORLDWIDE




14

IN 14 COUNTRIES ...

we are present with our own sales and service organisation.

+

90

IN A FURTHER 90 COUNTRIES ...

we are represented through established sales partners who in turn serve other countries.



70

TRAINEESHIP POSITIONS

Attractive traineeship positions and opportunities for a career start at various locations.

10

COMPETENCE CENTRES AND PRODUCTION FACILITIES

with a total production area of 90 000 m².



1875

EMPLOYEES IN FULLTIME EQUIVALENTS

We benefit from the comprehensive expertise and the passionate commitment of our employees.



EUR

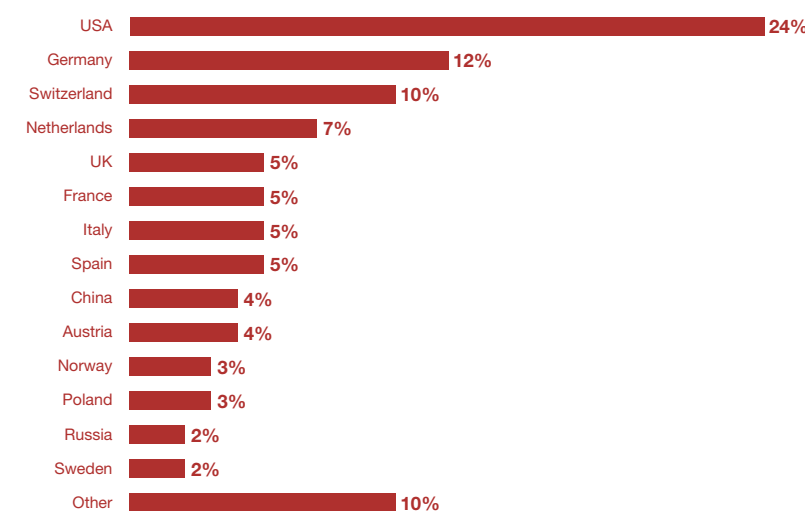
516

MILLION

In the past year, the Aebi Schmidt Group generated net sales of EUR 516 Million.

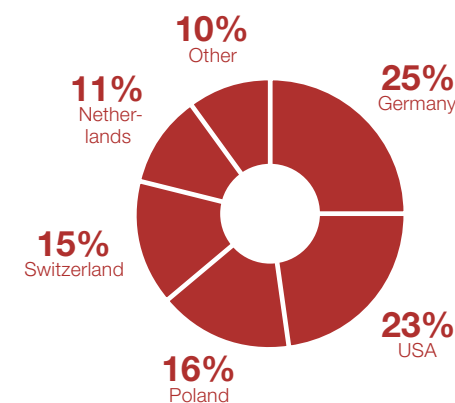
SALES BY COUNTRIES

in 2019



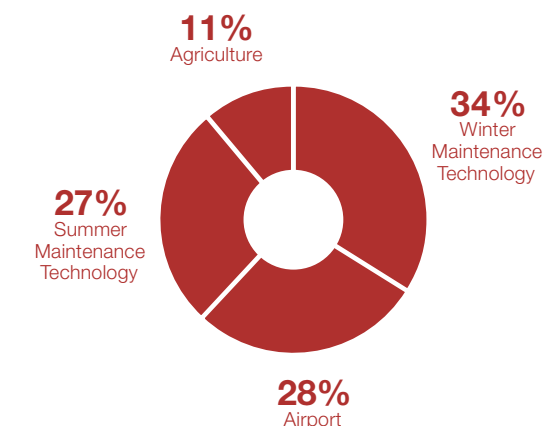
EMPLOYEES BY COUNTRIES

in full-time equivalents



SALES BY AREAS OF APPLICATION

in 2019





The Financial Year 2019

2019 was a very successful financial year for the Aebi Schmidt Group. We saw unprecedented organic growth of 17% and profitability of 6%. We increased revenue to EUR 516 million, which represents an improvement of 25% over the previous year.

A key driver of this success was the expansion of our airport business, this has further strengthened our position as the global market leader in this sector. In 2019, we successfully integrated M-B Companies into our Group and significantly increased our airport business in Europe and Asia.

Our order income remains strong in areas outside of the airport business. We were able to win large and prestigious tenders in various other areas, such as sweepers and winter equipment.

We are moving ahead with our After Sales strategy, increasing productivity and revenue. Notably, we have improved the availability of spare parts as well as launched new services.

The success of the financial year required significant commitment from all our plants, particularly in the final quarter. We increased capacities in St. Blasien (D), Kielce (PL) and Holten (NL) and further optimised processes and interfaces at all plants.

Growth remains our strategic ambition

Generally speaking, the markets we are active in are growing, particularly the airport sector. At the same time, the trend for market consolidation is also continuing, driven by winters with low snowfall and also by digitalisation. Smaller competitors are often unable to keep up with these developments and end up being taken over. We constantly review the opportunities for acquisition or cooperation

with suitable companies. An example of this would be the acquisition of the US-based M-B Companies in 2018 or the acquisition of sweepers from the Danish Nilfisk Group in March 2019.

Expansion of production capacity in the USA

M-B Companies has become a key member of the Aebi Schmidt Group and has extremely motivated and committed employees. In 2019, we focussed on maximising the use of available capacity and were forced to acknowledge that we had reached our limits in this respect. That is why, in 2020, we will be expanding capacity at the Chilton plant and building a new production hall.

We have also made progress at Meyer and Swenson, with both companies massively improving their profitability.

Current issues and trends

Digitalisation is changing our industry, for us as a provider as well as for our customers and suppliers. There is an increasing number of tenders with high demands in terms of telematics data. We are accepting this challenge from the market and extending our services accordingly. In the future, our customers will be able to collect, process and analyse data from Aebi Schmidt machines as well as from competitor's machines on one platform. This will allow them to use and operate their vehicles more efficiently.

Thanks to the strong order income we were able to smooth out the seasonal fluctuations in our business and recruit additional employees.

The environmental footprint and CO₂ neutrality of our machines are the main issues across all areas of the business and our customers are setting increasingly stringent environmental standards. Technologies relating to cleaner energy are developing rapidly. The whole industry is looking for new alternative drives. Electric motors are not the only possibility here; operating using fuel cell technology is also an option worth exploring. The pursuit of alternative drives is key to our success and we are making sure we keep our eye on the ball.

Having said that, we will only launch new machines into a market when we are convinced that they can be used sustainably while still delivering the same perfor-

mance. This was the case with our fully electric eSwingo sweeper, its market launch was a highlight in this financial year. Demand in cities and municipalities continues to be high. After its successful start, we plan to bring substantial quantities of eSwingos to the market in 2020. We are confident that customers are open to this and that we can achieve it from a production perspective.

The environmental footprint and CO₂ neutrality of our machines are the main issues across all business areas.

Our small Multigo multifunctional machine offers an economical, and environmentally friendly solution for small municipalities, even though it does not have an electric drive. As it can be used for both winter and summer maintenance, it allows municipalities to take care of all tasks with just one machine.

The gap between environmental requirements in Western countries and those in other regions, where powerful diesel engines are still in demand and emission standards are far less stringent, remains a big challenge. This makes the management of our product portfolio extremely complex.

Sustainability – an integral part of our corporate strategy

Sustainability doesn't just happen by itself. It comes from how we think and act. And ultimately, from how consistent we are about it. As a company, it is our responsibility to invest in progress and in the future. But that also applies to our customers: everything we develop and produce also needs their commitment when put into practice.

Sustainability is an essential part of our business activities. Our customers expect it of us, and we are convinced that sustainable companies are a step ahead of the rest and are more successful in the long term.

Our economic, social, and environmental targets are being implemented along the entire value chain. We care about protecting the environment and use resources sparingly. As an industry leading employer we continue to invest in sustainable technologies. We will act in a responsible and credible way along the entire value chain. As the following pages show, this has resulted in valuable progress being made in recent years in terms of environmental awareness at our plants, in our processes and in our machines. As you will see, the Aebi Schmidt Group is

also contributing towards implementing the individual sustainability goals set by the UNO* – and we are doing so with conviction. *(for example, the following Sustainable Development Goals: SDG 8, 9, 11, 12, 17)*

Our employees – the basis for our success

Overall, thanks to the strong order income, we were able to smooth out the seasonal fluctuations in our business and recruit additional employees. This also reflects that we understand the needs of our customers, and offer the right products and services. Based on these customer requirements, our colleagues in development and product management understood the need to develop marketable products and, thanks to the launch of our new market presence in 2019, we can now present these in a more attractive and understandable way.

The increase in our customers' requirements are changing the demands of our sales organisation and on our employees. Our business is developing from the sale of products into the sale of solutions and growing internationally. That is why we invested further in training and development and launched 1SALES, for example, at the beginning of 2019. This programme defines uniform standards and methodologies in sales, promotes best practices within the Aebi Schmidt Group, and thus establishes the basis for our strategic ambition of becoming the number one in numerous markets.

Additionally, as an international company, we offer our employees attractive prospects. We have established a talent pool and planned successors for the top two management levels. Our goal is to fill 70% of vacancies internally. That is why we systematically review career development and succession opportunities for our employees. After all, they are the basis for our success and I would like to take this opportunity to thank them all for their commitment, their loyalty and their contribution to an excellent financial year and the ongoing development of the Aebi Schmidt Group.

Barend Fruithof
CEO

Milestones in 2019



Beginning of January: Aebi Schmidt takes over the City Ranger models from Nilfisk

This acquisition closes a key gap in our product portfolio and strengthens our St. Blasien production site. Our existing sales and service network will take over the supply of spare parts and servicing work for City Ranger 3500 and 3570 models already in use.



March: Meyer Super Blade delights customers

The Meyer Super Blade is bigger and stronger than any other automatically adjustable plough on the North American market. The blade segments can be manipulated in pairs or independently. After the plough was introduced at a trade fair, a record-breaking 141 orders were received via the dealer network within a matter of days.



June: Aebi launches the smallest in its class: the TP 410

The new transporter is clearly laid out and easy to operate and is tailored to meet the requirements of alpine agriculture. With a tare weight of just 2350 kg, it provides the highest load capacity in its class and its latest generation engine enables diesel consumption to be reduced by a good 5%.



4 July: eSwingo 200+: the first fully electrically operated compact sweeper

We delivered our first eSwingo to the city of Thun in a rather unusual way. Instead of being transported on a truck, the eSwingo drove the 191 km from the plant in St. Blasien to Thun under its own power. The initial experiences of the machine in use have been wholly positive, both for the drivers and the operational managers.



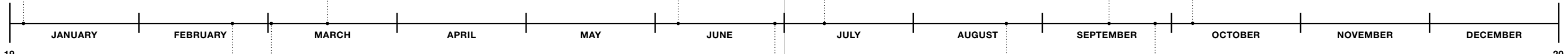
17 September: Major order for Chicago O'Hare and Midway

The city of Chicago accepted a bid from MB for a major order. The municipal authority is responsible for cleaning and winter maintenance at the O'Hare and Midway airports. In future, it will be putting its trust in our MB-3 machines, which we will be able to customise and maintain perfectly in terms of the equipment required to meet the needs of both airports.



8 October: Airport professionals meet to exchange ideas

Over 200 guests accepted our invitation to meet in Munich for an exchange of experiences. The main focus was the subject of 'autonomous driving', for which we were able to present our three-step model with our partner CPAC Systems AB, a member of the Volvo Group.



19

20



1 March: The ASH Group is now called Aebi Schmidt Group

The new and unified brand identity should express more clearly, both internally and externally, the philosophy that has shaped our company's thoughts and actions for many years: a group is stronger than the individual. Instead of hiding behind the impersonal abbreviation of ASH, we are now calling ourselves what we have essentially been called for a long time now: Aebi Schmidt – the Aebi Schmidt Group. The new brand presence also simplifies our brand portfolio, which had become rather complicated over the years.



February: Aebi launches world premiere in the car-free mountain village of Stoos

Working in collaboration with the Swiss company ecovolta, based in Brunnen, we supplied the mountain railways with the first 100% electrically operated and emission-free transporter by Aebi – the eVT 450. It will use crawler tracks for its daily work on the Stoos mountain to begin with and then switch to wheels later. The experience gained during the trial is being incorporated directly into the planned serial production.



27 June: Smart Fleet project

Stuttgart Airport wants to use self-driving vehicles in the near future. It will begin with jet sweepers and baggage tractors. To achieve this, the airport has launched a project called Smart Fleet in collaboration with Aebi Schmidt and Volk. The first fully automated prototypes should be tested in real conditions on the runways, aprons and taxiways from 2022.



23.–25. August: Aebi as a main partner at the festival of superlatives

The Swiss Wrestling and Alpine Festival takes place every three years and is the biggest public festival in Switzerland, attracting and entertaining around 420 000 visitors. Aebi was the main sponsor of the event and had a strong general presence at the festival itself, as well as in communications, with its new logo and many of its machines and vehicles. Of course, it was also there to clean the streets overnight with its sister brand Schmidt. This presence was the ideal way to advertise and establish the new trademark for the traditional Aebi brand.



September: Schmidt launches the Multigo 150, a true all-rounder

It can be driven with a standard passenger vehicle driving licence and its low weight enables it to handle pedestrian walkways easily, with no loss of performance – the Multigo 150. It is called 'Multi' because a range of attachments can be fitted easily by hand. In addition to sweeping, these also facilitate ploughing, spreading, mowing and scrubbing.

Areas of Application

The Aebi Schmidt Group's range of products comprises our own vehicles, attachable and demountable devices for individual vehicle equipment as well as intelligent product systems and customised services. Our ambition is to help our customers improve their performance and to enable them to work and run their businesses in a sustainable manner. We ensure that they achieve their prescribed KPIs with our products and services and we follow a clear strategy regarding alternative drives and the reduction of our machines' carbon footprint.



AIRPORT

The Aebi Schmidt Group is a global leader in the field of airport equipment. We offer our discerning customers extensive expertise and a comprehensive product programme ranging from snow clearing to cleaning vehicles. Our customised high-tech machines and systems meet the highest safety standards, offer maximum performance and availability and have now also become CO₂ neutral and partly autonomous on request.



WINTER

The Aebi Schmidt Group is a global leader in the fields of snow clearance and de-icing. Our snow clearing machines and snow plows remove any kind of snow on any terrain and at any altitude, with the same reliability and efficiency. When it comes to de-icing, our wide range of modern spreaders set the standard, particularly in terms of environmental protection. Electronic control enables all of our supply systems to offer the highest possible dosing accuracy.



SUMMER

We have the largest range of sweeper technology products worldwide. Our extensive range includes mounted, attachable and compact sweepers. Our machines are characterised by their compact design, excellent sweeping performance and environmentally friendly technology. The eSwingo also adds a fully electric model to the range. Street washers, sand cutter blowers and multi-purpose transporters complement summer maintenance technology that meets every possible need.



AGRICULTURE

We offer a wide range of vehicles and other equipment for agricultural use, all of which are perfectly customised to meet our customers' requirements. Our comprehensive product portfolio includes the popular Terratrak range with extremely flexible implement carriers with attachment points at the front and the rear, as well as customised transporters which, on request from the customer, we fitted with an electric drive in 2019 for the first time. All vehicles and devices meet the highest standards, are very efficient, safe, manoeuvrable, easy to maintain and have a long service life.



RAIL

Thanks to its ongoing development, high quality standards and exemplary services, Beilhack has established itself as one of the leading specialists in snow clearance. When it comes to the highly specialised clearing of rail tracks, Beilhack is always able to offer the perfect solution.



TELEMATICS

With the integration of innovative information systems, we provide our customers with products that offer added value. Use of spreading material and route reporting – by equipping our machinery with digital data acquisition, we allow our customers to precisely plan, monitor and document the safety, efficiency and economic viability of all applications.



SERVICE & SPARE PARTS

The service offered by the Aebi Schmidt Group is distinguished by high availability of technicians and spare parts. Thanks to a comprehensive stock of spare parts, our technicians and their mobile workshops en-

sure that any downtime is kept to a minimum for the customer. Our logistics service and modern warehouse facilities guarantee the fast delivery of spare parts around the clock.



SERVICES

Efficiency advice – Using precise analysis of the routes to be treated, we work out the ideal combination of vehicles and equipment.

Safety training – Safety at work is a top priority for us. To live up to this standard, the Aebi Schmidt Group offers professional training courses and practical training sessions.

Financing – We offer our customers fair financing solutions through Aebi Schmidt Finance to ensure that the business transaction is beneficial for all those involved.

Calibrating and adjusting the winter fleet – We make sure our customers' winter fleets are in perfect shape and help them to reduce salt usage.

Subscriptions for spare parts – This enables us to guarantee our customers high availability of spare parts and fast, direct delivery.

Training – We offer our customers courses and training sessions for their drivers and technical staff so that they can learn how to make optimal and efficient use of our machines.

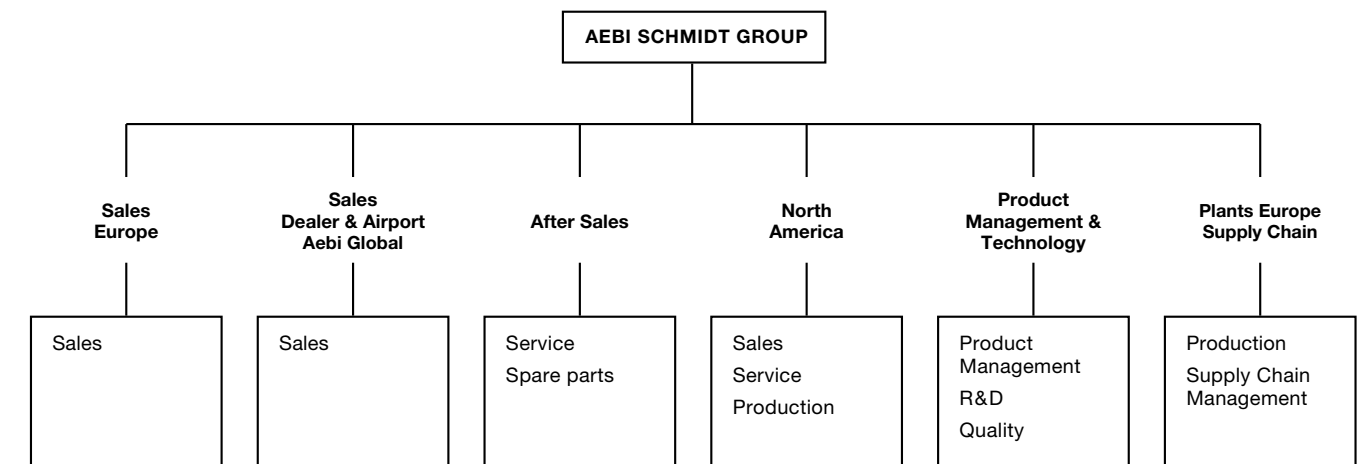
Operational Corporate Structure

The managerial responsibility for the Aebi Schmidt Group lies with the CEO and with the Division Managers for the individual divisions. The parent company of all Group companies is Aebi Schmidt Holding AG.

The Aebi Schmidt Group is formed of six divisions: Sales Europe, Sales Dealer & Airport/Aebi Global, After Sales, North America, Product Management & Technology and European Plants/Supply Chain.

The After Sales division supports our aim of achieving significant growth and achieving above-average performance in this area.

The plants in Germany, Switzerland, Poland and the Netherlands are now each under the purview of one manager reporting directly to the CEO. The Supply Chain division is centralized and also reports directly to the CEO.



Product Range



The vehicles shown here are only a selection from the wide range of different products of our group. In addition to the products, we offer a broad range of service and data management solutions.

Winter Maintenance

- Snow ploughs
- Rotary snow clearance (motorised or attachable)
- Spreaders
- Sprayers
- Multipurpose machines (spreading, spraying, ploughing)
- Winter maintenance for tractors and pick-ups
- Brine saturators
- Special snow ploughs

Summer Maintenance

- Compact sweepers
- Truck-mounted sweepers
- Attachable sweepers
- Towed sweepers
- Street washers
- Universal transporters
- Universal carrier vehicles

Municipal Equipment

- Universal transporters
- Universal carrier vehicles
- Motor mowers/single axis
- Dump bodies

Agriculture

- Carrier vehicles for steep slope/Terratrac
- Multipurpose transporters
- Motor mowers/single axis

Airport

- Snow ploughs
- Rotary snow clearance
- Multipurpose machines (spreading and spraying)
- Airport sweepers
- Jet sweepers
- Multipurpose vehicles and attachables like rotating brushes, snow cutters and ploughs

Rail Technology

- Special machines
- Multipurpose machines

Other products

- Brooms and brushes
- Dump and all purpose bodies
- Pavement marking & maintenance vehicles
- Special vehicles e.g. for firefighting or military purposes
- Certified used machines

Supply Chain & Procurement

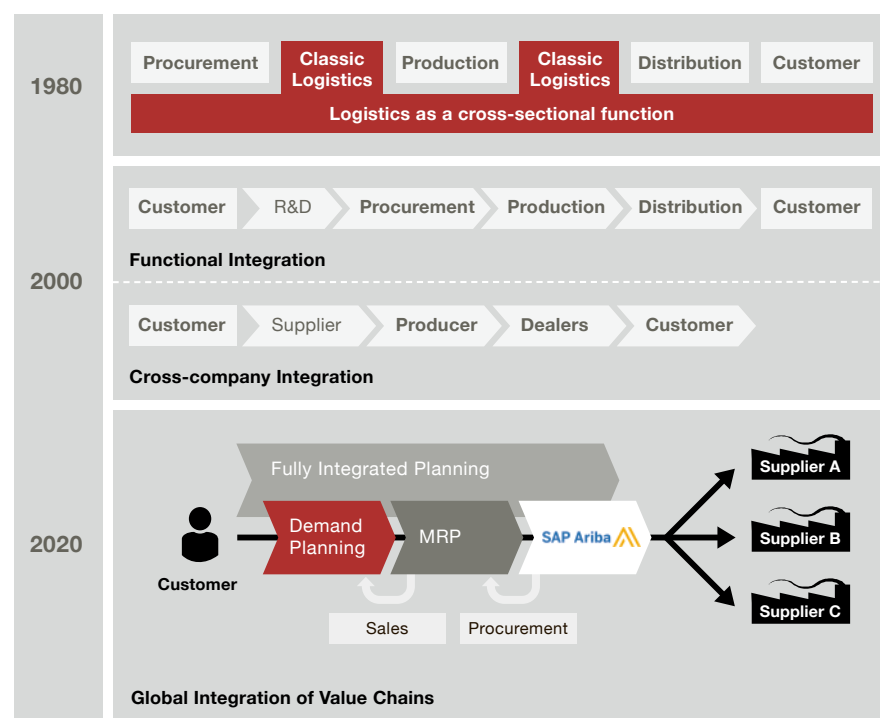
Material procurement is adapting to keep up with the dynamic growth of the Aebi Schmidt Group.

These days, it is impossible to imagine a comprehensive and integrated planning process from the customer to the supplier without the use of modern software: CRM, sales and production planning and electronic procurement (e-procurement) systems support the whole procurement process by providing timely and automated requirements planning, including data about supplier capacities.

As our business has become more internationalised, so our sales and production planning has also become increasingly complex and challenging. We have also had to adapt the procurement process to keep up with the growth in sales, customer base and product range.

For this reason, at the start of the year under review, we strengthened the area of procurement and supply chain management. The aim was to optimise purchasing by improving the quality of our master data and by harnessing more synergies within the Group. We are also using more

SUPPLY CHAIN MANAGEMENT FUNCTION CHANGES



IT-based platforms, which allow us to simulate future material requirements as well as automate and thereby simplify and accelerate our purchasing processes.

This change from decentralised to centralised and global procurement is a significant challenge for the Aebi Schmidt Group. First of all, it means implementing planning and simulation tools to allow optimal control and to ensure that as little as possible has to be performed manually.

Faster processes and high process reliability

New planning and simulation software allows us to simulate scenarios quickly and easily and optimise planning. This allows critical bottlenecks to be identified and forecasts to be created for supplier usage, efficiency and lead times, all with a high level of accuracy.

A seamless and reliable supply chain will be the competitive advantage of the future.

In summary, the simplification of our planning and procurement processes is resulting in:

- Greater customer satisfaction, as the result of improved service levels
- Reduced stock and lower storage costs
- Prevention of material shortages
- Greater profitability and a better financial result due to harnessing synergies throughout the Group
- More financial resources being freed up to support growth and invest in profitable innovations

Individual actions and initiatives are measured using a clearly defined controlling dashboards well as KPIs that are used as a standard in various industries and companies worldwide.

AREAS FOR OPTIMISATION

Group-wide organization (Group Commodity Managers)	Integrated Supply Chain Management & Supplier Risk Management	Master Data Management (Material, Supplier and Customer Data)	Growing together as a Group
<ul style="list-style-type: none"> – Procurement specialists acting globally for Aebi Schmidt – Procurement specialists with good knowledge in the commodity – Experienced cost optimization specialists 	<ul style="list-style-type: none"> – Material availability – Inventory reduction – Turnover increase – Customer service level increase – Supplier lifecycle management 	<ul style="list-style-type: none"> – Make communication with the customer easier – Reduction of error rates e.g. maintenance across systems – Make data usable – Reduction of duplicity and process costs 	<ul style="list-style-type: none"> – Common saving initiatives – Scale and synergy effects – Global agreements with supplier – More sustainability including code of conduct

The Aebi Schmidt Group Brands

A group is stronger than the individual, as our new brand identity clearly expresses. The logos for our product brands have been modernised and now make it absolutely clear that the individual product brands belong together – and belong to a strong Group.



The Aebi Schmidt Group Values

Our values are the foundation for our actions and the guideline for our behaviour – both within the company and in dealing with customers and business partners.



RESULT ORIENTED

We contribute and add value to Aebi Schmidt Group performance
 ... recognize and realize business opportunities
 ... aim for the best result
 ... focus on the outcome of our actions
 ... maximize profitability



COLLABORATION

We strive together for one common goal
 ... work in a global network
 ... utilize each other's skills
 ... take risks, learn from mistakes
 ... benefit from other cultures



CUSTOMER FOCUSED

We improve the performance of our customer
 ... think in solutions
 ... achieve excellent results
 ... build strong partnerships
 ... focus on customer needs



INTEGRITY

We strive for long-term relationships
 ... are trustworthy and keep promises
 ... are open and honest
 ... are reliable and take responsibility
 ... act ethical and tolerant, we respect others' opinion



PASSION

We are part of a winning team
 ... inspire others
 ... are proud of what we do
 ... choose a positive attitude
 ... challenge the limits



INNOVATION

We break new grounds
 ... think out of the box
 ... try the untried
 ... strive for sustainable solutions
 ... encourage continuous improvement

Generation E: Think smart!

The development and application of new technologies requires us to think in a completely new way. For us, 'smart thinking' means switching to sustainable, responsible and cost-cutting technology with zero emissions, and a careful use of our resources. In short, Generation E.

We can help our customers to work and run their businesses in a sustainable manner and ensure that they achieve their prescribed KPIs with our products and solutions.

An economic model with a future

For most people, the term 'circular economy' primarily conjures up thoughts of recycling and the re-use of materials. However, it is much more than that: it in-

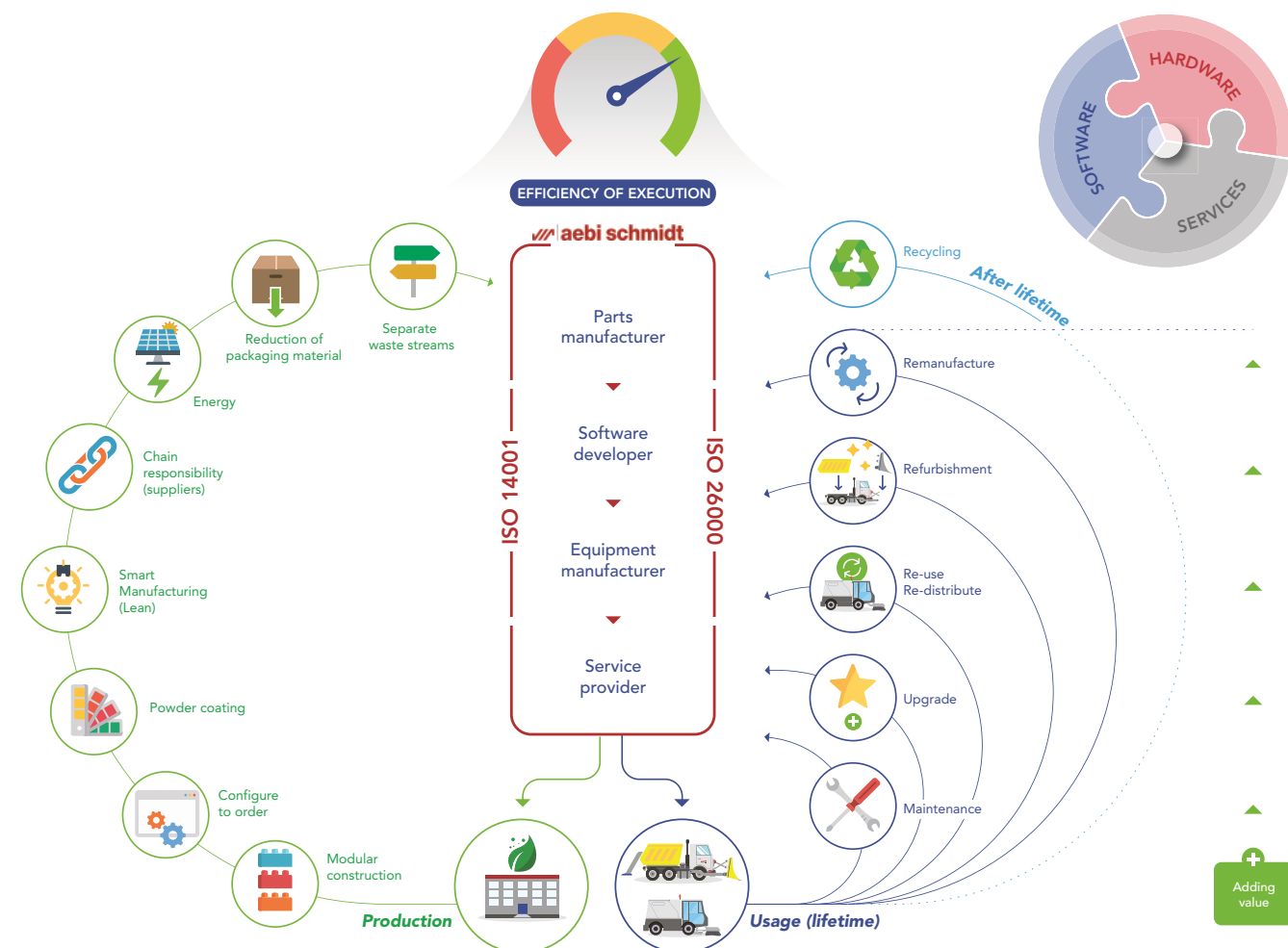
cludes reduction, re-manufacturing, re-furbishing, sharing and the prolonging of a machine's service life through repair and good maintenance. The latter step is where circular economy begins!

Cities and municipalities are increasingly calling for sustainable products that do not pollute the environment. That is why Aebi Schmidt focuses on machines with a modular design, this combines the best of both worlds: the use of standardised components that are easy to replace and improve, and regularly upgraded software that ensures a machine is kept up to date throughout its service life.

Butterfly model

The circular model used at Aebi Schmidt is based on the 'butterfly model' developed by the Ellen MacArthur Foundation (see below). It is based on two pillars: the internal relationships required for achieving a sustainable business (left-hand side) and the external developments in the market (right-hand side). At Aebi Schmidt, internal elements would be, for example, 'configure to order' (less waste), an environmentally friendly powder coating, lean manufacturing (including suppliers), reducing and having environmentally friendly packing material, separate waste

CIRCULAR ECONOMY



streams and the use of solar energy or hydroelectricity in some operations.

The external factors concern the market itself. In practical terms, this means that we coordinate the maintenance program for our customer's machines and thus ensure that a vehicle has a long service life. The modular production process at the Aebi Schmidt Group also allows old machines to be fitted with new operating systems. And should an upgraded machine no longer be right for a customer's existing fleet, then it can often find a new life in another fleet.

Only pay for what you use

This circular approach enables the Aebi Schmidt Group to meet the rising demand in cities and municipalities for sustainable procurement: a sustainable (circular) vehicle fleet that always uses the latest technology and makes optimal use of resources – enabling ongoing savings to be made.

The ideal kind of circularity is one where you no longer sell a machine to a customer, you just charge them for its use. This means that, as the manufacturer, Aebi Schmidt remains the owner of the machine until the end of its service life – and is therefore responsible for its re-use, re-manufacture or recycling. There are various options available for financing such a business model.

Our mission is therefore not only to bring the most innovative machine to the market, but also to continuously improve the customer's performance.



The natural energy certificate for Aebi Schmidt Germany

Aebi Schmidt Germany is working with 100% green energy

All locations of Aebi Schmidt Germany have switched to purchasing 100% hydroelectricity. Taking this step has enabled the St. Blasien plant to reduce its CO₂ emissions by 707.42 tons in comparison to buying the German federal electricity mix.



The eVT 450 on the Stoos mountain (CH)

Electric transporter ensures zero emissions in the Swiss mountains

The car-free Swiss mountain village of Stoos has been using a fully electrically driven Aebi transporter – the eVT450 – since the beginning of the year under review. The vehicle was converted in collaboration with the company Ecovolta. Just like the conventional model, it has an all-wheel drive and a step less mechanical hydrostatic power split transmission. The knowledge gained during this trial operation is now being continually incorporated into the development of our transporter, so that we will also be able to offer an electric drive as a standard option in the near future.

Emission-free and quiet: the fully electric eSwingo sweeper

For decades, customers in 40 countries around the world have valued the Swingo 200+ sweeper for its reliability, safety, efficiency and long service life. Because air pollution control and noise re-

duction are becoming increasingly important issues for cities and municipalities, since 2019 Aebi Schmidt has been offering a fully electric sweeper under the name eSwingo 200+. The eSwingo operates quietly and emission-free for up to ten hours with just one battery charge and has no problem handling challenging inclines. And the best thing is that there is no compromise in performance – the eSwingo works just as well and just as reliably as the diesel version.

The eSwingo is already being used in various European cities and on the apron of international airports.

Aebi Schmidt saves customers up to 158kg of CO₂ – on a daily basis and using just one machine

CO₂ emissions are no mystery; they come down to simple physics: 1 litre of diesel becomes 2.64 kg of CO₂. If a diesel engine uses six litres and a compact sweeper is used for 1500 hours per year, this means 23 760 kg of CO₂ per year or 15.8 kg per operating hour. This corresponds to a saving of 158 kg per day, if operating for 10 hours.

Based on the assumption that the electric power comes from renewable energy sources, the CO₂ emissions from our eSwingo 200+, in contrast, are zero. The switch from diesel to electric drive thus saves on 10 hours of use 158 kg CO₂ per day with only one machine.

With the TCO calculator on the Aebi Schmidt website customers can calculate quickly and to the point, how much CO₂ can be saved per year by switching from diesel to electric drive.



The eSwingo 200+ at the ICCA 2019 international climate conference in Heidelberg (D)

Our Locations

The Aebi Schmidt Group maintains a global sales and service organisation that is being continuously expanded. Our customers in Europe are served by our own local sales and service organisations as well as local sales and service partners, whereas customers outside this region are taken care of by our globally operating “Aebi Schmidt International”.

Competence Centres and local Sales and Service Organisations

- 1 Germany**
Aebi Schmidt Deutschland GmbH
- 2 Netherlands**
Aebi Schmidt Nederland BV
- 3 Poland**
Aebi Schmidt Polska Sp.z.o.o.
- 4 Switzerland**
Aebi & Co. AG Maschinenfabrik
- 5 USA, Cleveland, Ohio**
Meyer Products LLC
- 6 USA, Lindenwood, Illinois**
Swenson Spreader LLC
- 7 USA, New Holstein & Chilton, Wisconsin**
M-B Companies
- 8 USA, Muncy, Pennsylvania**
M-B Companies

Local Sales and Service Organisations as well as representations

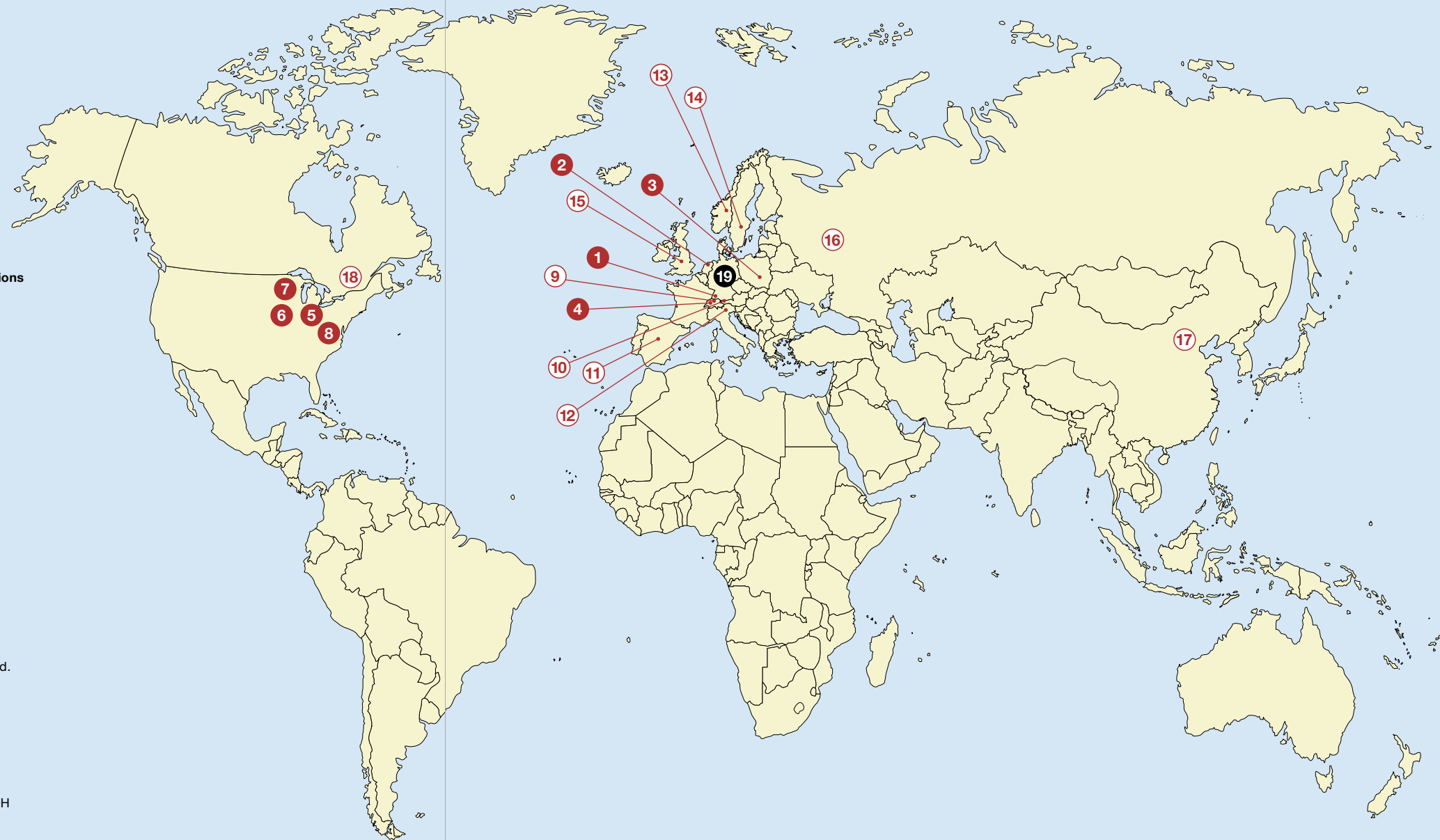
- 9 International**
Aebi Schmidt International AG
- 10 Austria**
Aebi Schmidt Austria GmbH
- 11 Spain**
Aebi Schmidt Iberica S.A.
- 12 Italy**
Aebi Schmidt Italia s.r.l.
- 13 Norway**
Aebi Schmidt Norge AS
- 14 Sweden**
Aebi Schmidt Sweden AB
- 15 Great Britain**
Aebi Schmidt UK Ltd
- 16 Russia**
OOO ASH Rus
- 17 China**
ASH Trading & Services Co., Ltd.
- 18 Canada**
Aebi Schmidt Canada Inc.

Global Logistics Centre

- 19 Germany**
Aebi Schmidt Logistic Centre,
Aebi Schmidt Deutschland GmbH

Holding

- 9 Switzerland**
Aebi Schmidt Holding AG



Customers, Sales Organisation, Markets

The Aebi Schmidt Group helps its customers to work and run their businesses in a sustainable way by making the customer's needs its top priority.

The Aebi Schmidt Group helps its customers to work and run their businesses in a sustainable way by making the customer's needs its top priority.

Our products help our customers to achieve their goals. The Aebi Schmidt Group invests considerable time, money and energy in the development of new products and services that will completely fulfil its customers' needs, such as fully electric street sweepers or software solutions for the efficient use and operation of our vehicles. Our ambition: we want to be a full service provider for our customers and adapt our product range to that effect.

Ensuring customer safety

Quality assurance is extremely important to us. The safety of our products not only needs to be guaranteed at all times for reasons of liability, but, in light of customers' ever increasing awareness of safety aspects, it is also essential for our success in the market. In the European Union, the Aebi Schmidt Group follows the Directive of the European Parliament on General Product Safety and its respective national transpositions that define the fundamental requirements for safe operation. Compliance with applicable laws and standards concerning product safety is documented by CE markings and GS certificates (Tested Safety). The CE marking is a legal requirement in the European Union. Even though GS certificates are only

valid in Germany, they are also recognized in other countries. For products sold outside the EU, we comply with the local applicable laws. All European products of the Aebi Schmidt Group fully meet the respective requirements. The company regularly examines the entire life cycle of all products to check the impact on the health and safety of the user. Sites in the US perform a technical risk and hazard assessment as part of product development, spanning the products' entire life cycle.

Appropriate instruction for the user is a key element in ensuring customer health and safety. All products feature various protection systems, such as warning lights and warning signs. For example, all vehicles with lithium-ion batteries are marked accordingly. We also communicate clearly about the safe use of our products by providing training and information materials. Customers confirm compliance with a set handover protocol by providing their signature. The respective operating manuals, safety manuals and safety data sheets provide information on all relevant safety instructions. For example, rescue cards can be found in every eSwingo electric sweeper to provide the emergency services with information about the risks and instructions for the safe handling of high-voltage technology. Operating manuals include information about the disposal and recycling of individual vehicle components. A number of countries additionally require certificates that prove the EU origin of individual product components. That is why the Aebi Schmidt Group requires its suppliers to provide a certificate of origin for all essential materials.

Closeness to customers

We have an extremely diverse customer base. We supply municipalities, public administrations, airports, service enterprises, the military, agricultural businesses and industrial companies. The Aebi Schmidt Group strives to respond to the heterogeneous needs of its customers and to satisfy all customers to the best of its ability. As different needs also involve a variety of product requirements, the Aebi Schmidt Group maintains a close relationship with its customers and a strong presence on social media. This ensures an

ongoing dialogue with customers, users and interested parties. In doing this, the Aebi Schmidt Group places great importance on fair and transparent communication, for instance with regard to the sustainability of its products. Remaining close to customers enables active dialogue and allows the Aebi Schmidt Group to continually improve its products and services. The quality management system encompasses all interactions with customers – from the initial telephone contact through to supplying spare parts or maintenance services. It makes sure that feedback from customers is not only collected and

Our ambition: we want to be a full service provider for our customers and adapt our product range to that effect.

forwarded to the relevant departments but also evaluated and translated into appropriate measures. The feedback is recorded mainly at end-of-season meetings and in the case of any complaints. There is also regular dialogue with the Aebi Schmidt Group dealer network. As part of this, we discuss specific improvement measures and development ideas for gaining a competitive advantage. During the year under review, for example, a number of ideas discussed with the Aebi dealers in Switzerland were successfully transferred into product strategy. Our customers are often also involved in the development of new products. Special workshops are held to identify their needs regarding design and function. The Aebi Schmidt Group secures prompt customer feedback for new products by testing prototypes with customers and then using the findings to further develop the product. Particularly in the airport sector, we often develop and test new products in collaboration with customers from the very start. For example, the CJS-DI jet sweeper with de-icer was tested in conjunction with Stuttgart Airport. Where it is economically viable to do so, the Aebi Schmidt Group also takes special requests from customers into account when developing products. (GRI 102-43)

The Aebi Schmidt Group regularly conducts customer surveys in order to better understand their needs. An online survey was carried out at the end of 2018 and beginning of 2019 to determine levels of satisfaction with product quality, service, customer service, sales and marketing as well as order processing. With an

average score of 7.7 points out of 10, the outcome showed a positive picture. The weak points identified were analysed in greater detail so that appropriate measures could be identified and implemented. For example, an app for product acceptance and final acceptance will be tested in 2020, with the aim of achieving 100% final acceptance and thereby further improving vehicle quality.

In the year under review, a detailed survey of international customers was also carried out in the form of a structured and standardised in-depth interview. The interviews focused on identifying customer needs, applications of the vehicle concepts concerned and options for using alternative drive concepts. Through this, it became clear that not every application is possible with every drive technology. Further market segmentation is therefore required in order to clearly define the benefits and potential for customers. In addition to ease of contact, customers also place great importance on getting swift help with technical queries and having short delivery times.

Alternative drive technologies are also becoming more important, particularly in municipal areas where the demand for low-emission products is politically driven. The results of the survey have been incorporated into vehicle design, project evaluation, investment calculations and the template for determining project approval and were then embedded in product strategy with specific development goals. In November 2019, a planning tool for service technicians was introduced in Germany and will be rolled out to other locations during 2020. The tool gives additional geographical and task-specific information which the operational controllers can then use to coordinate the field technicians more efficiently. This also allows journeys to be optimised and CO₂ emissions thereby reduced – and customers can receive reliable information about appointments. (GRI 102-43/GRI 102-44)

Products and Services

The Aebi Schmidt Group promotes the use of innovative technologies in order to offer its customers consistently functional, high-quality and environmentally friendly products.

Customers have an increasing awareness of sustainability issues, such as the reduction of greenhouse gas emissions or energy-efficient electric drives. In addition to that, international and national laws and regulations are also increasingly stipulating that low-emission engines are used and spreading material measurement is controlled. The new EuroMot Stage 5 emissions standard came into effect across Europe on 1 January 2019. It sets stricter limits for air pollutant emissions for all motorised vehicles, machinery and equipment that are not considered to be road vehicles. This means that since the beginning of 2019, gradually only agricultural and forestry vehicles and machines equipped with particulate filters and SCR catalysts have been entering the market. The Euro6c emissions standard has applied to trucks since as early as 1 September 2018. The Aebi Schmidt Group has actively implemented these standards. Thanks to the early adaptation of the agricultural Aebi Terratracs and Aebi transporters to meet the new emissions standard, Aebi machines were among the first to be fully compliant with EuroMot Stage 5 by the beginning of 2019. Schmidt sweepers were also adapted to the latest emissions guidelines. The Swingo and Cleango machines now not only meet the legally required EuroMot Stage 5 emissions standard, but also the latest Euro6c emissions standard. We therefore offer our customers the most environmentally friendly diesel sweepers – the Euro6c engines exceed even the most stringent legal requirements. The CJS/TJS airport machines, along with SUPRA snow clearance machines, have also been converted to the latest Level 5 emissions technology and can now be

supplied as such. The projects to convert the engines in the Street King 660 truck sweeper and AS990 airport sweeper have been successfully carried out and completed.

For the benefit of our customers and other stakeholders, we are continuing to press ahead with the development of environmentally friendly products, focusing on durability and light, eco-friendly materials as well as technical improvements. In 2018, the Aebi Schmidt Group launched the eSwingo, the first fully electric compact sweeper by Schmidt, representing a key milestone in the promotion of alternative drive concepts. In Germany, the eSwingo has been approved for serial production as part of an industrialisation project. This means that the sweeper can be offered in the market in serial production quantities from 2020. Swenson in Lindenwood and Meyer in Cleveland (USA) also offer their customers purely electric products as part of their wide range of spreaders, such as the VBEL, Electric PV Select, Electric LPV Select, Electric MDV and Electric PV Standard. For the Street King 660, launched in 2019, Schmidt developed an innovative operating concept to assist and take the strain off the driver. Using a pressurised

The Swingo and Cleango machines now not only meet the legally required EuroMot Stage 5 emissions standard, but also the latest Euro6c emissions standard.

water recirculation system and an enclosed engine compartment also makes this carrier vehicle particularly quiet and environmentally friendly. With its Super Blade, Meyer launched the largest and strongest automatically adjustable plough on the North American market. Development work has continued in Poland, aiming to make snow plows 300 to 700 kg lighter, meaning a reduction of 14% to 23%, depending on the model. This results in substantial savings in fuel and a reduction in CO₂ emissions, which also saves costs.

Airport

The Aebi Schmidt Group is transforming itself from a pure product vendor towards a solution provider.

The Airport Professionals Experience Day by Aebi Schmidt

At the Airport Professionals Experience Day organised by the Aebi Schmidt Group, it was clear that many factors influence and determine which challenges individual airports focus on at a strategic level. 'The outcome of the event is consistent with our experience of day-to-day business,' said Rudi Rosenkamp, CCO Dealer/Airports. 'There isn't just one solution that fits all; each individual airport faces its own specific challenges.' Aebi Schmidt explained at the event how the experience gained from individual test projects in the area of autonomous driving is being incorporated into the three-step model that Aebi Schmidt, together with CPAC Systems AB, is offering interested cus-

tomers. In response to a question about what she would recommend when it came to preparing for a complex issue, Aebi Schmidt's Airport Target Group Manager said: 'Experience shows that it is worth going step by step, starting with small things and getting bigger.' The Fleet Manager Operations of the Schiphol Group also agreed with this approach. Together with the Aebi Schmidt Group Digital Solutions Manager, they showed the audience how Schiphol Airport first started recording its processes step by step with the help of data management and then went on to continuously optimise them.

In addition to the two main topics, which were also expanded on by experts from Stuttgart and Vnukovo Airports, Aebi Schmidt presented its cur-



Panel discussion at the Airport Professionals Experience Day

rent machines and products, as well as explaining how the Aebi Schmidt Group wants to transform itself from being purely a product vendor into a solution provider. Special attention was paid to the new training simulator, the subject of electrification and the wide range of After Sales services that Aebi Schmidt has continued to expand in recent years.

A live poll showed that over half of the experts rated the strategic relevance of the issue of autonomous driving as high or very high.

Well on the way towards autonomous driving

The Aebi Schmidt Group continued to develop and expand the technology and product range in the field of autonomous driving in 2019. Knowledge gained from individual test projects is very promising and shows that, with the help of the appropriate systems, operating time can be increased substantially in the double-digit range – notably with less damage, lower training costs and effort, as well as fuel savings.

Aebi Schmidt is working in cooperation with CPAC Systems, a subsidiary of Volvo, to develop and refine the three-step model further (see graph on the left).



**Step 1
Driver Guidance**
e. g.
– Driver & TJS Guidance
– Dynamic routes
– Back-office overview
– Edit paths & geo events

**Step 2
Semi Automation**
e. g.
– TJS Control
– Automation lateral control
– CACC

**Step 3
Full Automation**
e. g.
– fully autonomous driving
and control of the fleet

The development towards autonomous driving follows three steps.



The CJS-DI at Stuttgart Airport (D) – not yet driving around autonomously.

Smart Fleet and autonomous driving, as seen at Stuttgart Airport

The mission at Stuttgart Airport is ambitious: it wants to be one of the best-performing and most sustainable airports in Europe. The following step is therefore a logical one: Stuttgart is the first airport in Germany to plan the use of self-driving vehicles. The 'Smart Fleet' project is collaboration between Stuttgart Airport, the Aebi Schmidt Group and Volk Fahrzeugbau. Its aim is to develop the first fully automated prototypes by 2022 and to test them in real conditions on the runways, aprons and taxiways. The project will start with jet sweepers for winter maintenance and baggage tractors.

These fully automated vehicles will contribute towards Stuttgart Airport's organisational, economic and environmental goals. They reduce:

- Personnel costs
- Accidents
- Damage to infrastructure and ground support equipment (GSE)
- Fuel consumption

The last of these increases the fleet's energy efficiency. The overall goal is to maximise the availability of runways and taxiways in winter.

Montreal and Calgary Airports put their trust in Aebi Schmidt jet sweepers

The team at Aebi Schmidt Canada secured two major orders and thereby gained a strong position in the North American market. Both orders have the potential for follow-on business and the sale of additional machines.

The team at Aebi Schmidt Canada won the tender in the highly competitive Canadian market and can now supply

Montreal's Trudeau International Airport with five Schmidt TJS-C 630 jet sweepers. In their efforts to continuously improve their processes and efficiency, the airports in Montreal and Quebec regularly discuss and exchange their experiences of winter maintenance. This also includes reciprocal visits and the testing of new equipment and machines. After Quebec had successfully trialled the TJS-C 630 in 2017/18 and then put a machine into service in 2019, Montreal also decided, based on this positive experience, to purchase the Schmidt TJS-C. An additional three units have also been ordered for winter 2020.

Building on this success, another Schmidt TJS-C 630 was also sold to Calgary Airport. During the 2017/18 season, Calgary carried out a trial of the TJS-560, but decided to purchase the TJS-C 630 in 2019 due to its impressive performance. This is the first replacement machine supplied as part of a fleet replacement plan for fifteen units over several years.

→ Details and current information at: blog-en.aebi-schmidt.com



A TJS like this will soon also be keeping the runways clear in Montreal and Calgary.

Summer

eSwingo is here.

No matter where the Aebi Schmidt eSwingo is found, it receives rave echoes. The reason is simple: it is as powerful as its diesel sibling but more eco-friendly and therefore more economical over its lifetime. Another bonus is that it is quiet and drivers do not need any training or time to readjust – with only a few exceptions, they simply find themselves back in their familiar workspace.

Thun

A fully electric eSwingo has been in use in the Swiss city of Thun since the start of July 2019. The compact sweeper had previously performed light work on its journey from the plant in St. Blasien to Thun – 190 kilometers with just one battery charge and zero CO₂ emissions. Feedback from the team was that the machine impressed in every aspect – in terms of sweeping performance and noise reduction, comfort for the driver and performance on hills, even those with a 15% incline.

The driver starts the day with a full battery and after an eight-hour shift with no recharging, the battery still has 30% to 40% capacity left. The machine

is fully charged overnight for an extremely low cost: a full 75 kW battery for around CHF 6!

Heidelberg

Heidelberg is setting a great example. As early as 1992, it was the first major German city to adopt a municipal climate protection concept. Named a 'Global Green City' by the United Nations, today Heidelberg is seen as an international pioneer. The city plans to make its municipal vehicle fleet emissions-free by 2025 and to achieve climate neutrality for the whole city by 2050. An important milestone towards achieving this goal is therefore the electrification of its sweeper fleet. This started with the introduction of the eSwingo, which cleans streets and paths without emitting harmful CO₂ and is also much quieter than a conventional diesel machine – much to the delight of the city's residents and tourists. Working for up to ten hours without recharging is no problem at all for the high-performance 75 kW battery – with the same proven suction performance witnessed in the diesel Swingo. And, thanks to the quiet-



The eSwingo 200+ in Heidelberg (D)

ness of the machine, the team can now also sweep the old town more frequently on weekends. As the City of Heidelberg specifically highlighted at its press conference, in addition to the emission-free and quiet drive, the special air circulation system in the eSwingo also reduces discharge of harmful micro particles by up to 70%.

Düsseldorf Airport

Düsseldorf Airport wrote in its press release: 'Electromobility is an important element in Düsseldorf Airport's sustainability strategy' – and it has therefore put its trust in a fully electric eSwingo sweeper. A week-long trial with all positive results convinced the airport managers. They were most impressed by the elimination of trips to fill up with fuel. The 60-litre tank on the conventional diesel model is usually sufficient to cover two shifts. However, due to safety precautions, the airport filling station is not close to where the vehicles park up, as it is at a municipal depot, for example. In order to fill up, vehicles therefore have to drive to filling stations that are located far away from where the sweepers are used. 'A trip to fill up loses us a good half an hour of otherwise productive time,' said the Operations Manager. 'Electricity, in contrast, is available in many operational areas, so the drivers can charge the battery directly where it is parked, even over lunchtime, without extra journeys to the filling station.'

While the large sweepers exclusively clean the open areas, the compact eSwingo is out and about on the

pathways and along the length of the terminal quietly clearing litter as it goes. The airport also uses the machine in heavy rain, either to suck up water or to work in combination with the large machines when sucking up glycol. The major benefit of this is that the collected water can be discharged directly and doesn't need to be tipped out.

In addition to environmental factors, economic factors also played a role in their decision to invest in electric vehicles. 'Our expectation is very clear: maintenance costs and visits to the workshop must be reduced.'

Netherlands

Customers and interested parties in the Netherlands were able to test the machine directly at Aebi Schmidt Netherlands during a number of presentations and demo events. The journey from Aebi Schmidt Netherlands in Holten to the customer ROVA in Zwolle formed part of the proof of concept. After 47 kilometres, zero emissions and a 1½-hour drive, including sections of sweeping, the battery still had 72% capacity – enough to cover the subsequent test drives and demonstrations.

The feedback from customers was entirely positive. Two benefits were repeatedly highlighted: zero emissions and zero noise. These are persuasive arguments, especially for cities. They mean that machines can operate early in the morning or at night and the driver also benefits from having less noise in the cab. However important emissions-free operation is for the customer, the machine ultimately needs to deliver the same performance for the same operating costs (TCO) as a diesel vehicle. And it does.

→ **Details and current information at:**
blog-en.aebi-schmidt.com



The eSwingo 200+ on a demonstration tour in Zwolle (NL)



The Multigo 150 with its redesigned panoramic cab

An absolute all-rounder

The Multigo 150 fills a gap in our range of compact sweepers and helps us to show what the future can look like. After all, the sustainable use of resources also applies to fleet management. Many customers want to use their carrier vehicle all year round, instead of having to put it away in the garage for a whole season. The Multigo 150 is the perfect vehicle for this. It can be used for five different tasks: sweeping, ploughing, spreading, mowing and scrubbing.

Our many years of experience with compact sweepers was a big advantage when developing the new machine and we were able to optimise many features that cannot be taken for granted in this class of vehicle. The ergonomics and clarity of the controls were a key focus. The clear layout of the panoramic cab leaves little to be desired for the driver and the new joystick has made operation and control of the machine much easier. However, ergonomics encompasses so much more and the Multigo is now proud to carry the 'Campaign for Healthy Backs' seal of approval. This is awarded by independent experts and not only certifies the back-friendly workspace for the driver, but also the well-designed ergonomics of the product as a whole.

In terms of technology, this small machine in no way needs to hide away behind the bigger ones. This is also confirmed by it being awarded the top combined four-star certification (PM2.5/PM10). The Multigo has a high-performance, 67 hp, level 3B common rail diesel system and patented Bosch Rexroth HET four-wheel drive (High Efficiency Traction Control). This guarantees optimal handling, even on demanding inclines of up to 30%. The unique airflow system increases the airflow much more rapidly and provides outstanding suction power. The collision protection system automatically retracts the front brush and the Multigo's total permissible weight of 3.5 tonnes gives it a high load capacity of one tonne. The low overall weight enables effortless sweeping – including on pavements – and means that operating the machine does not need a special driving licence.

→ **Details and current information at:**
blog-en.aebi-schmidt.com



The eSwingo 200+ in Thun (CH)

Winter

Intelligent solutions for winter maintenance save salt, increase efficiency and reduce environmental impact.



Bigger and stronger: the Meyer Super Blade plough

tions that reduce the overall salt requirement, increase efficiency and cause less environmental damage, while also keeping the roads safe. Aebi Schmidt North America highlights these facts as part of its 'spread salt smarter' campaign.

In a presentation at the PWX Expo in Seattle, Aebi Schmidt North America gave an overview of the progress made in winter maintenance in the European market. A key issue was the switch to applications and technologies using a higher proportion of pre-wetted salt. When municipalities in the USA use pre-wetted salt, it is usually FS5 (5% brine/water and 95% salt), whereas many European countries use FS30 (30/70 mix) – or even higher. The higher proportion of brine saturates the salt so that it sticks to the ground when applied and melts the ice more effectively.

The well-attended presentation in Seattle showed that there is growing interest in cheaper and more environmentally friendly solutions in the USA. More and more of the decision-makers in this area agree with Aebi Schmidt's approach, that it is time to act.

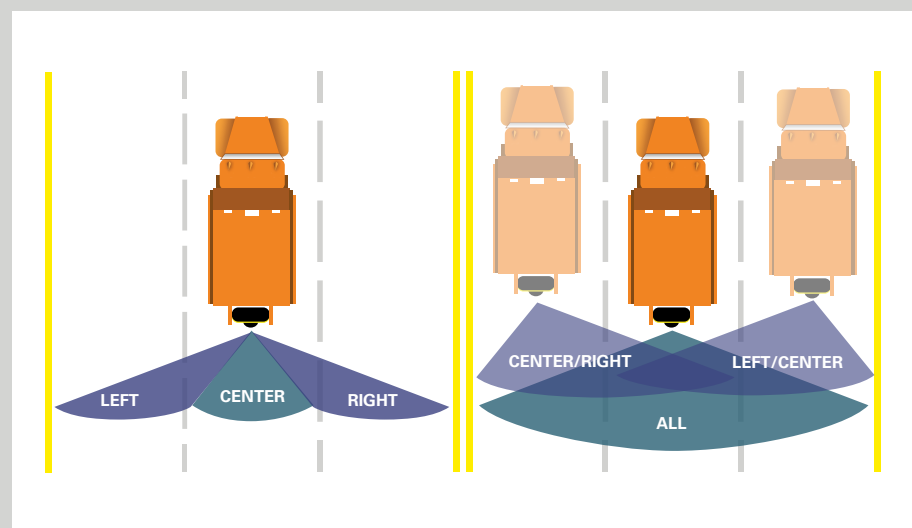
Bigger, stronger, better – the Super Blade in the USA

The Meyer Super Blade is bigger and stronger than any other automatically adjustable plough on the North American market. The width can be adjusted between 8 and 10.5 feet at the push of a button. The blade segments can be operated in pairs or independently. The Super Blade was introduced in March 2019 and Meyer received over 140 orders via its dealer network in the following three months. This proves that we truly understood our customers' needs!

When less is more: spread salt smarter

Analyses estimate the cost of winter maintenance in the USA to be USD 2.3 billion for motorways alone, with up to 22 million tons of salt used every year. Using intelligent spreading technologies could reduce this quantity by a third – obviously the roads still remain safe and the infrastructure stays protected.

The fluctuating cost of salt and long-term effects of shortages, combined with corrosion damage to infrastructure and cleaning costs, everybody demands that intelligent solutions are found for winter maintenance: solu-



With a pre-wetted salt ratio of 70:30 (30% brine), not only does the ice melt better but 30% less salt is used, reducing damage and wear for vehicles and spreaders.

Tirol executes a new approach to salt spreading

Tirol has increasingly relied on pre-wetted salt for a number of years now. In the last record winter alone, this resulted in a saving of 4000 tons of salt. When using dry salt you have to anticipate that up to 60% could get blown away. In other words, dry salt doesn't stick to a dry road and will get blown by every movement of air. That is why those responsible looked for alterna-

tives – and found brine. In the meantime, the state of Tirol has been using a mix of dry salt and brine on many sections of road to combat ice and snow.

In 2019, they went a step further: at the Vomp road maintenance centre, the Aebi Schmidt Combi Soliq WSP was the first spreader on the roads that was able to spray pure brine. Experiences using pure brine have been very positive and concerns that it would not be suitable at very low temperatures have

proved unfounded – it is fully effective even at temperatures of minus 10 degrees.

The advantages of brine are clear: less salt consumption, less environmental impact. However, liquid salt has its limitations: dry salt is better for heavy snowfall, as it absorbs moisture. Even then, the brine vehicle does not need to remain in the garage – the driver can switch to using dry salt at the push of a button.

→ Details and current information at: blog-en.aebi-schmidt.com



Stratos Combi Soliq: soon to be in action in summer, too!

Agriculture

Aebi launches the smallest among the biggest – and also impresses in other areas where a large load capacity and versatility are required.

Agile and nimble – the new transporter by Aebi

Aebi's newly developed TP 410 transporter meets the needs of alpine agriculture even better than existing models. It is particularly suitable for versatile family-run businesses in mountainous regions.

The TP 410 offers a choice of two wheelbases: 2.75 or 3.15 metres. Equipped with a manual 1616 gear reversing transmission, it reaches a maximum speed of 40 km/h on paved roads. Add to that its front steering, the longitudinal and lateral differential locks and the optional double tyres and voilà: the TP 410 is an off-road talent, too. Its excellent maneuverability is a great help – the model with the short wheelbase has a turning circle of just 5.7 metres, thanks to its hydrostatic steering system with a 45° steering angle.

And no vehicle is safe without reliable brakes: a hydraulic external power dual-circuit braking system and the optional spring-loaded brake keep the TP 410 secure while in motion or at a standstill. Additionally, the new Aebi transporter also boasts an unladen weight of 2350 kg. Combined with the total permissible weight of 6.5 tons, its theoretical load capacity is 4150 kg – impressive for a transporter of this size.



Aebi at work for the energie company ReLL in Susten (CH)

Reciprocal assistance: agricultural technologies support energy companies – and vice versa

Whether in agriculture or in private and public services, using electricity to drive more cheaply, emission-free and with no compromise in performance is one side of the story. The other is making sure that enough electricity is constantly available from sockets. Many

energy companies work to achieve this every single day. And these areas of work also require vehicles – either electrically or conventionally operated – with large load capacities and customised equipment options. Such as those produced by Aebi.

Until recently, the general opinion was that it would be some time yet before electric vehicles were used in agri-

culture. And some people were even convinced that it would never happen. However, there are now fewer sceptics, in part thanks to local energy company initiatives, which have convinced farmers and fleet managers otherwise. The fact is that, in all likelihood, all businesses will be faced with CO₂ reduction targets in the foreseeable future. Obviously, having electric vehicles will then be a huge advantage.

For example, in 2019, the Linth Energy Alliance invited interested parties, primarily farmers, to a presentation and discussion on using electric devices in agriculture. A few weeks later, the e-Mola association invited road maintenance depot employees and decision-makers from local municipalities to join them at the depot.

On this occasion, the fully electric eSwingo compact sweeper by Aebi Schmidt was in the spotlight; however, electrically powered Aebi transporters are also indispensable in municipal service and the energy sector, because these areas need much more than just a 'normal' vehicle!

For energy companies, having a large load capacity and equipment that is tailored to the vehicle's individual remit is imperative. Aebi – a pioneer in this regard – has proved through its eVT450 prototype, among others, that this is still possible with electric vehicles.

Switzerland: Prominent appearance by Aebi at the Swiss Wrestling and Alpine Festival in Zug

Just like wrestling, Aebi can also look back on a long tradition in Switzerland, spanning over a hundred years. Being a successful wrestler particularly requires good technique and grip on the ground. Fair play also plays a more central role than in almost any other sport. Wrestling is a unique combination of traditional and modern sport that conveys a sense of togetherness in a very impressive way. The values and character of wrestling perfectly match the values and culture of Aebi as a brand and company.



As a main partner, the Aebi brand was omnipresent at ESAF 2019.

The Swiss Wrestling and Alpine Festival, which takes place every three years, is a highlight of the wrestling calendar. ESAF, as the festival is known for short, provided main partner Aebi with the ideal platform for presenting its new brand logo and products. It also allowed the Aebi Schmidt Group to give its invited customers and guests an unforgettable experience. ESAF 2019 in Zug had the world's largest temporary area with 56500 seats and welcomed 420000 visitors, making it the biggest ever festival of its type – in the world.

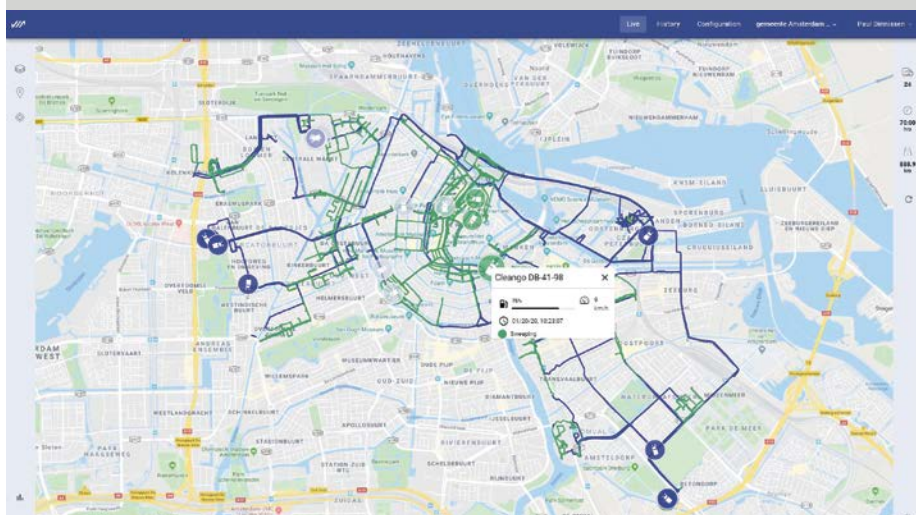
→ Details and current information at: blog-en.aebi-schmidt.com



The new Aebi TP 410: as versatile as ever and with a large load capacity

Services

Digital data acquisition allows to plan and monitor the safety, efficiency and economic viability of all activities.



Display of routes and activities on a local map

Telematics in Amsterdam

The city of Amsterdam is already using Aebi Schmidt's telematics solution for its winter maintenance and the application has helped to significantly reduce its salt and diesel consumption. The application suggests the most efficient routes, based on previously completed activities, and thus supports economical work planning. Amsterdam also makes the data available to its residents so that they can check when and where the sweepers are in use at any time.

Telematics at Scheremetyevo Airport in Moscow

The Aebi Schmidt jet sweepers at Moscow's Scheremetyevo Airport are fitted with modems. These ensure data transmission of all vehicles and allow the airport operators to follow and save all winter maintenance activity, down to the smallest detail. The benefit of this is that data can not only be used for monitoring vehicle activities; it is also important evidence in the event of accidents or other problems.

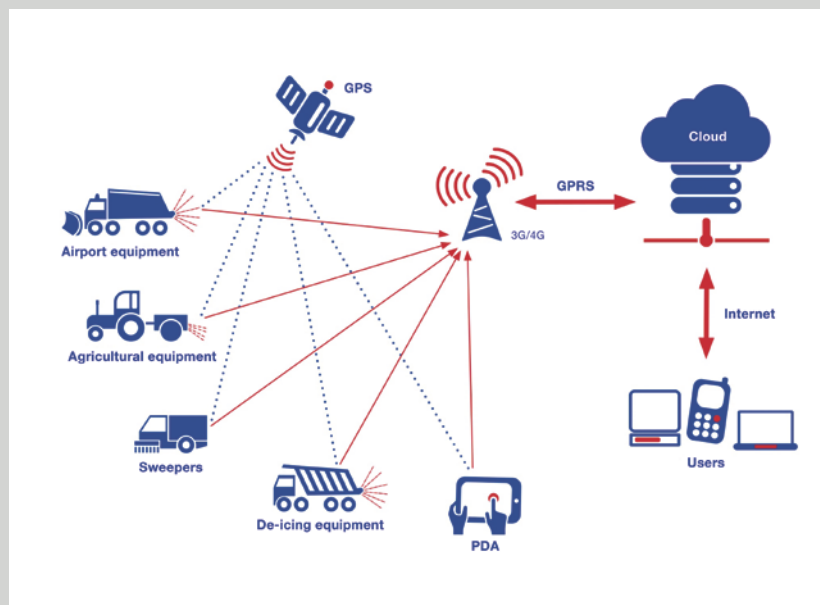
Pooling of products and services in data management and telematics

Our ambition to improve the performance of our customers not only applies to our products, but also to the offer, presentation and use of our telematics solutions. Instead of having individual solutions and reports, in future there will be a single platform where all data-related issues can be processed and dealt with. The data on which the system is based can be divided into three areas:

- Machine and operation data from Aebi Schmidt vehicles
- Machine and activity data from competitors' vehicles
- Service data from Aebi Schmidt vehicles

The platform records all activity data from winter maintenance and sweeping equipment in a secure cloud environment. Customers can live monitor their machines, whether they are supplied by Aebi Schmidt or a competitor, and the detailed information allows all operational activities to be checked and optimised where necessary. The platform also helps customers to perform their work processes efficiently, cost-effectively and in an environmen-

- tally conscious way. The result:
- Optimised working and operational processes
 - Reduced fuel consumption
 - Less de-icing agent required
 - Reduced mileage and therefore a reduction in CO₂ emissions



Many individual pieces of data and reports – one central platform

Top-class service – even after the purchase is completed

The Total Lifetime Care (TLC) service program is the core of Aebi Schmidt's service activities. It maximises service life and therefore also the value of the investment in an Aebi Schmidt machine.

We want to provide customers with the best possible level of service, even after they have purchased an Aebi Schmidt product. Our service employees ensure that all of our customers' service needs are met, including on-site visits by a technician, if required. To prevent downtime, every spare part is thoroughly re-checked before dispatch. All Aebi Schmidt products have a comprehensive guarantee for the first twelve months: we commit to repair or replace all faulty parts free of charge during the first year and we offer our customers a 24-hour emergency hotline for technical support.

For example, the Aebi Schmidt UK service centre is located just outside Glasgow and serves whole Scotland from there. Its central location and proximity to most major transport routes enable Aebi Schmidt UK to supply spare parts quickly and easily right up to the remotest corner of Scotland. Using GPS satellite navigation the service technician who is closest to the customer is deployed each time. And even in difficult winter weather, our service fleet can still reach Scottish customers quickly to provide them with the spare parts they need – around the clock, including at night for emergencies.



Professional maintenance and original spare parts ensure operational reliability and sustained performance.

→ Details and current information at: blog-en.aebi-schmidt.com

Projects

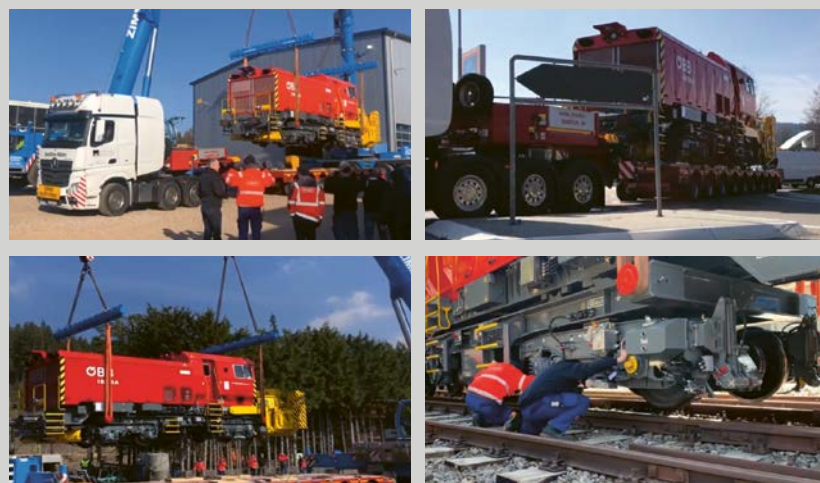
Whether it is a snow blower weighing several tonnes or an agile electric transporter – our products satisfy the demanding requirements of our customers.

76 tons of steel go travelling

As the 76-ton Schmidt Beilhack HB1100S high-performance snow blower made its way from Tiefenhäusern near St. Blasien to the customer in Austria in April 2019, it wasn't just two mobile cranes and a low loader that were required – the journey also demanded plenty of sure instinct from the specialists. With a lot of skill and a good eye, the steel giant was set down on square timbers and brought 17 km by low loader to Seebrugg, where the forwarding station is located. In Seebrugg, the specialists used a mobile crane once again to set the snow blower on the rails. After an operability test, the brand-new Schmidt Beilhack HB1100S was able to cover its first kilometre on the tracks. A transport locomotive from RailAdventure brought it to its first stop at Wörgl in Austria, where the customer, Austrian Federal Railways (ÖBB), picked it up the next morning.

Part of the team creating the optimal fleet

The gap in the motorway between Munich and Passau has been closed since October 2019 and the previously missing and controversial section along the Isen valley opened to traffic. Isental-Autobahn-Services GmbH & Co. KG



Getting 76 tonnes of steel across the road from the factory to the rail track requires great precision.

was established as part of a PPP project – PPP stands for public-private partnership – to handle the operation and maintenance of the 77-kilometre stretch. The consortium will maintain the road for 30 years and has built a motorway maintenance depot to do this. Aebi Schmidt won the general contract for providing the depot with vehicles and equipment for operational and winter maintenance – not your average contract!

'Supplying a depot's entire fleet, including mowers, doesn't happen too

often,' explains the Sales Manager for Airport & Projects at Aebi Schmidt Germany. He worked with MAN Truck & Bus AG and the operating company for around two years to find the ideal concept. There were many special issues to be considered, all of which could only be resolved thanks to the outstanding teamwork. The key elements were load capacity and braking technology, optimal design and flexibility with regard to the topography and the efficient use of spreading materials.



The fleet at the new motorway depot in Ampfling



The Aebi eVT 450 out and about in the mountain village of Stoos

The Aebi Schmidt electric transporter: zero emissions and full performance

Working in cooperation with the company Ecovolta and an innovative Swiss mountain community, Aebi Schmidt is testing the electric drive in a vehicle category that many think is not suitable for using alternative drives. They are wrong.

The transporter can be used for four hours before it needs to be recharged, and the payload of up to five tons equals that of the diesel model. And that is absolutely inimitable in the electric transporter category. It also has an all-wheel drive and a continuous mechanical hydrostatic power split transmission.

In winter, the electric transporter uses crawler tracks to get around – an advantage over using tractors which cause unlovely track marks and muddy puddles with their wheels. In the summer, the vehicle is fitted with wheels.

Aebi Schmidt is incorporating the knowledge gained from the trial into ongoing development activities and will be offering a transporter with an electric drive as a standard option in the near future.

→ Details and current information at: blog-en.aebi-schmidt.com

Production and Competence Centres

Our ten production and competence centres in Europe and the USA form the backbone of our organisation. Our machines and equipment are produced across a total area of over 90 000 m² using state-of-the-art technology and continuously improved processes.



USA, Cleveland, Ohio

Meyer Products LLC

Snow ploughs
Spreaders for light and medium
duty applications



USA, Muncy, Pennsylvania

M-B Companies

Pavement marking trucks



Switzerland, Burgdorf

Aebi & Co. AG Maschinenfabrik

Implement carriers
Multipurpose transporter
Single-axle machines



USA, New Holstein, Wisconsin

M-B Companies

Multi Service Vehicle and Attachments like
rotary brooms, snow blowers and snow
ploughs



USA, Chilton, Wisconsin

M-B Companies

Chilton plant 1:
Airport snow removal products

Chilton plant 2:
Brushes and brooms



USA, Lindenwood, Illinois

Swenson Spreader LLC

Spreaders
Sprayers
All purpose bodies
Dump bodies



Netherlands, Holten

Aebi Schmidt Niederlande

Spreaders
(Airport) Sprayers
Combination machines
Towed sweeper



Germany, St. Blasien

Aebi Schmidt Deutschland

Compact sweepers
Truck mounted sweepers
Rotating snow clearing equipment
Compact and towed jet sweepers
Snow clearing railway



Poland, Kielce

Aebi Schmidt Polen

Snow ploughs
Attachable sweepers
Components

Board of Directors



Peter Spuhler
Chairman of the
Board of Directors
Swiss citizen
1959



Dr. Gero Büttiker
Vice President of the
Board of Directors
Swiss citizen
1946



Hansruedi Geel
Member of the
Board of Directors
Swiss citizen
1956



Peter Muri
Member of the
Board of Directors
Swiss citizen
1958



Dr. Peter Ramsauer
Member of the
Board of Directors
German citizen
1954



Andreas Rickenbacher
Member of the
Board of Directors
Swiss citizen
1968



Markus Bernsteiner
Member of the
Board of Directors
Swiss citizen
1966

Studies of Business Administration at University St. Gallen, Executive Chairman of the Board at Stadler Rail AG

Since 1989: Chairman of the Board at Stadler Rail AG, 1989–2017: Group CEO at Stadler Rail AG. Other activities and interests: Chairman of the Board at several companies of the Stadler Rail Group; of Estonia Train Finance AG, Nordic Train Finance AG and PCS Holding AG; Member of the Board of Directors at several other companies such as European Loc Pool AG, Allreal Holding AG, Autoneum Holding AG, Rieter Holding AG and Evonik Industries AG; since April 2019: shareholder of Rudolf Bosch Industrietreuhand KG and member of the Supervisory Board at Rudolf Bosch GmbH; 1999–2012: member of the Swiss Parliament (National Council); member of the Board of Directors at Von Roll Holding AG (2002–2004), UBS AG (2004–2008) and Kühne Holding AG (2006–2008)

Dipl. Bau-Ing. ETH Zurich, Dr. oec. publ.

Since 1993: Self-employed entrepreneur, 1985–1993: NUEVA Holding AG (formerly Schweizerische ETERNIT Holding AG), Delegate of the Board of Directors

lic. oec. HSG, Qualified Public Accountant

Since 2017: PCS Holding AG, Finance and Investment Management, 2001–2017: CFO Stadler Rail Group, 1994–1997: CFO Lüchinger+Schmid Group, 1990–1994: CFO Elektronikgruppe FELA, 1981–1990: PwC, Public Accountant

lic. iur. Solicitor

Since 1994: Owner of a lawyer's office in Weinfeldern specialized in economic and revenue law, Member of the Board of Directors in various in various SMEs for example Gerlinger Industries AG, Kissling Swiss Switches AG, KMU Personal AG, Polygal AG, Rausch AG Kreuzlingen (SSI AG), TLA Transport Logistik Swiss AG, SwissChem AG, Kifa AG, SUN Bürglen AG, Arbenz + Partner AG Risk Service as well as Board member of chamber of Industry and Commerce Thurhau

Dipl. Kaufmann, doctorate in political science

Since 1990: Member of the German Bundestag, since 2018: Chairman of the Committee on Economic Cooperation and Development in the German Bundestag, 2009–2013: Federal Minister of Transport, Building and Urban Development, 2005–2009: Chairman of the CSU parliamentary group in the German Bundestag, general partner of the company Ramsauer Talmühle KG in Traunwalchen, Bavaria, Chairman of the Supervisory Board of Streicher GmbH & Co. KGaA, Deggendorf, Germany, member of the Supervisory Board of Münchener Hypothekenbank eG, Munich and of Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, Bonn, Germany

Master of Science (MSc) Business economist

Since 2016: Owner of Andreas Rickenbacher Management AG, Bern, 2006–2016: member of the Bern cantonal government, Member of the Board of Directors of Bernexpo AG, BKW AG, HRS Real Estate AG, Vice President of the Switzerland Innovation foundation and the Internationale Laubhornrennen Wengen association

Executive MBA – University of St. Gallen

Since 1999: Stadler Rail AG, Executive Vice President, 1995–1999: Operations Manager and Member of the Board of Directors of Elektrolux-Compactus AG, 1993–1995: Divisional Management and Member of the Executive Board of Aluwag AG, Member of the Board of Directors of LRS Engineering AG and Trunz AG, Member of the Board of Trustees of the ALLVISA pension fund

Management Board



Barend Fruithof
Chief Executive Officer
Chief Operating Officer
Swiss citizen
1967



Thomas Schenkirsch
Chief Financial Officer
and Deputy CEO
Swiss and German citizen
1975



Rudi Rosenkamp
Chief Commercial Officer
Sales Dealer/Airport, Aebi Global
Dutch citizen
1963



Gerhard Neudorfer
Chief Commercial Officer
Sales Europe
Austrian citizen
1966



Burkhard Ditsche
Chief After Sales Officer
German citizen
1967



Jochen Schneider
Chief Executive Officer
North America
German citizen
1962



Henning Schröder
Chief Product Officer
(since 01.04.2019)
German citizen
1977

Executive MBA, University St. Gallen

Since 2017: CEO Aebi Schmidt Group, 2015–2016: Bank Julius Bär & Co. AG, Head of Switzerland & Global Custody, Member of the Management Board, 2008–2015: Credit Suisse Group, Zurich, Head of Corporate & Institutional Clients, Member of the Management Board, Credit Suisse Switzerland, Member of Divisional Management Private Banking, 2004–2007: Raiffeisen Group Switzerland, St. Gallen, Chief Financial Officer and Head of Finance & Corporate Centre Department, Member of the Management Board, 2001–2003: CEO Viseca Card Services SA, Glattbrugg, 1997–2000: ZKB, 1997: EUROPAY (Switzerland) SA, 1992–1996: ZKB

Dipl. Betriebswirt

Since June 2016: CFO Aebi Schmidt Group, 2008–2016: Director Group Controlling ASH Group, 2003–2008: Corporate Controller und Head of Corporate Controlling and Head of Corporate Controlling Von Roll Management AG, Switzerland, until 2003: Financial Analyst Perkin-Elmer, Switzerland, and Senior Treasury Analyst Perkin-Elmer, Boston, USA

Dipl. Ingenieur

Since June 2017: CCO Global Sales Dealer/Airport Aebi Schmidt Group, 2013–2017: Head of Division Sales & Service, ASH Group, 2010–2012: Head of Direct Marketing Department, 2008–2010: Head of Service Department, 2004–2008: Sales management in the Netherlands

Mag. rer. soc. oec.

Since October 2018: CCO Sales Europe Aebi Schmidt Group, 2014–2018: Managing Partner at Optimus Consulting GmbH, 2011–2014: CEO of Linde Fördertechnik GmbH, 1987–2011: various managerial roles at Wacker Neuson Baumaschinen GmbH

Dipl. Kaufmann

Since June 2018: CASO Aebi Schmidt Group, 2016–2018 Manager Aftermarket Development EU at KUBOTA GmbH, 2004–2015 Manager Aftermarket Sales at John Deere, where till 2011 Sales Germany and from 2011–2015 John Deere International for EU28, CIS and EAME, 1996–2004 Manager Marketing & Media Services at Kramp Groep B.V. (NL)

Dipl.-Wirtsch.-Ing. Darmstadt University

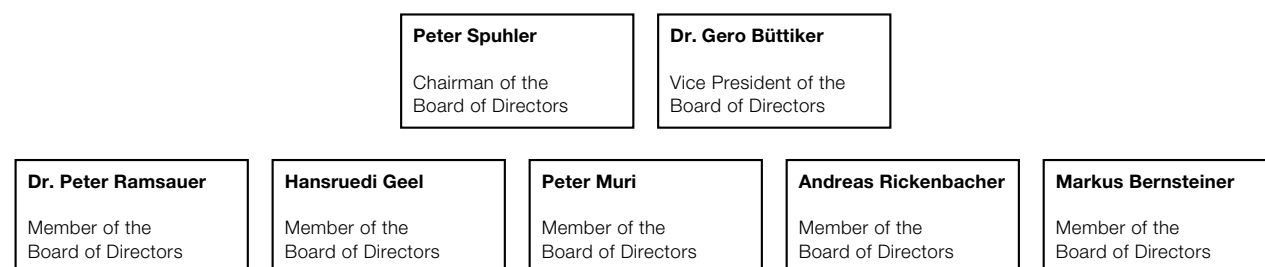
Since 2018: CEO North America Aebi Schmidt Group, 2016–2018: COO Operations Global ASH Group, 2012–2016: Head of Division Schmidt, 2004–2012: Managing Director FAUN Umwelttechnik GmbH & Co. KG, 2000–2004: CEO Dätwyler Inc. Rubber + Plastics Automotive, 1996–2000: Vice President & Partner ABB Business Services Ltd, 1991–1996: Colgate Palmolive

Dipl. Ingenieur

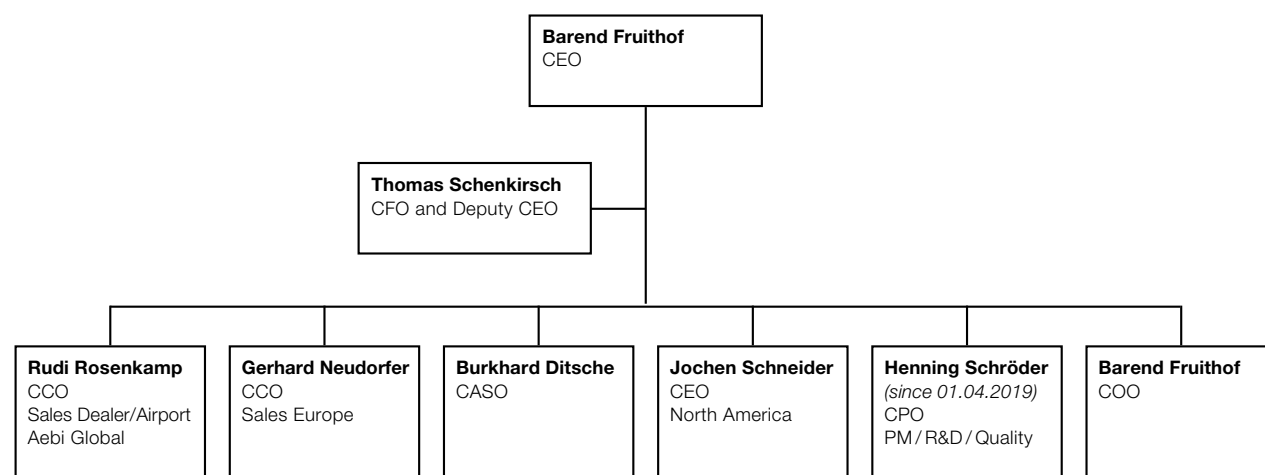
Since 2019: CPO Aebi Schmidt Group, 2017–2019: Hella Automotive Sales, Inc. (USA), President & Head of Aftermarket Americas, 2013–2017: Hella Pagid GmbH, Managing Director, 2010–2013: Hella KGaA Hueck & Co., Vice President Global Sales Special OE, 2008–2010: Hella Asia Singapore Pte. Ltd., Head of Product Management Asia Pacific, 2001–2008: Hella KGaA Hueck & Co., various roles and management functions

Group Structure

BOARD OF DIRECTORS



MANAGEMENT BOARD



Sustainable Value Creation through clear Management and Control Principles

Aebi Schmidt Holding AG, with registered office in 8500 Frauenfeld, Schulstrasse 4, and another business address in 8050 Zurich, Leutschenbachstrasse 52, is a public limited company under Swiss law.

The Board of Directors and the Executive Board attach great importance to proper business management in the interest of customers, business partners, employees and shareholders. The basis for this is provided by the company's statutes and organisational regulations. Their implementation and consistent application ensure the required transparency for stakeholders to assess the company's quality.

Group structure

The organisational structure was adapted on 1 June 2017 and is shown on the left side. The managerial responsibility for the Aebi Schmidt Group lies with the CEO, unless it is delegated to the Division Managers. The managerial responsibility for the divisions is incumbent upon the Division Managers. The parent company of all group companies is Aebi Schmidt Holding AG. For an overview of all group companies that belong to the consolidated entity, please see pages 55 of this report.

Shareholders

Aebi Schmidt Holding AG is owned by the following shareholders:

SHAREHOLDERS	
PCS Holding AG, Switzerland (owner: Peter Spuhler)	54%
Gebuka AG, Switzerland (owner: Dr. Gero Büttiker)	35%
CEO Aebi Schmidt Holding AG, Barend Fruithof	8%
Other members of the Board of Directors and the Executive Board	3%

Capital

The fully paid-up equity capital of Aebi Schmidt Holding AG amounts to CHF 27 932 000 and is subdivided into 2 793 200 registered shares, each with a nominal amount of CHF 10. Each registered share constitutes one vote at the general meeting. All shares entitle to share in profits. There is neither approved nor conditional capital. The transfer of shares, whether for ownership or usufruct, is subject to the approval of the Board of Directors. The approval can be withheld for a good cause. The equity capital has remained unchanged since 4 July 2007.

Board of Directors

The Board of Directors is usually elected within the scope of the annual general meeting for the period of one year; the term of office ends on the date of the next annual general meeting. Members newly appointed during a term of office complete the term of office of their predecessors. Re-election is permissible. The Chairman of the Board of Directors is elected in the general meeting. Apart from this, the Board of Directors constitutes itself.

The Board of Directors is in charge of the executive management, supervision and control of the Executive Board of the Aebi Schmidt Group. The Board of Directors is responsible for all matters delegated to its members under statutory law and the statutes, unless the Board of Directors delegates them to third parties. Except as

otherwise provided in statutory law or in the statutes, the Board of Directors fully delegates the operational management to the CEO of the Aebi Schmidt Group, who is supported in this task by the remaining members of the Executive Board according to the authorities assigned to them. The CEO is accountable to the Board of Directors. All members of the Board of Directors are non-executive.

The board meeting is convened upon invitation by the Chairman as often as business matters require and as soon as requested by a member, although usually four times a year. A meeting usually takes half a day to one day. The notice of invitation contains all items that are dealt with. The attendants to the meeting receive an extensive written documentation of the proposals in advance. Besides the Board of Directors, these meetings are attended by the Executive Board, which has no voting rights. The resolutions are passed by all members of the Board of Directors. The Board of Directors constitutes a quorum if the majority of its members are present. The resolutions are passed by a majority of the votes cast. In the event of a tie, the Chairman has the deciding vote.

The Board of Directors appoints an Audit Committee consisting of three members, currently comprising Hansruedi Geel, Dr. Gero Büttiker and Peter Muri. The Audit Committee is the point of contact for the external auditors, holds a meeting at least once a year and is entitled to prepare the company's annual financial statement for inspection by the external auditors as well as to discuss the results of the audit with the external auditors at the end of the audit. The meetings are usually attended by the CEO and the CFO and, if necessary, a representative of the external auditors. The Audit Committee makes no final decisions. It prepares the business transactions assigned to them and files proposals to the full Board of Directors.

In 2019 the Board of Directors has additionally a Nomination and Compensation Committee initiated. This is currently comprising by Andreas Rickenbacher, Peter Muri and Markus Bernsteiner. The meetings are usually attended by the CEO. The Nomination and Compensation Committee supports the Board of Directors by subjects governed by law or by laws articles in the area of compensation and human resources policies.

Information and control instruments

The Board of Directors is in charge of supervising the Aebi Schmidt Group's internal control systems, which limit, but cannot rule out, the risk of inadequate business performance. These systems provide adequate, although no absolute, protection against substantial misstatements and pecuniary loss.

The Board of Directors is extensively informed of the business development on a monthly basis. The members of the Board of Directors are provided with a monthly report containing up-to-date information on the business development and the transactions of the Aebi Schmidt Group. At the board meetings, the Executive Board presents and comments on the business development and tables important issues.

Additionally, the Board of Directors adopts the budget for the following year. Once a year, it receives the results of the medium-term plan for the next four years and discusses and resolves adaptations to the corporate strategy. The Board of Directors and the Audit Committee additionally determine factual issues that are taken up within the scope of the internal controlling processes and elaborated by analyses and assessments. The Audit Committee also determines major issues concerning the definition of the scope and the contents of the external audits. Once a year, the Board of Directors deals with the strategic issues of the Aebi Schmidt Group within the scope of a strategy meeting. The Chairman of the Board of Directors and the CEO regularly inform each other of and discuss all business transactions that are of fundamental significance or might have far-reaching consequences.

The Board of Directors subjects the internal information and control systems to a periodic inspection regarding their effectiveness to identify, assess and cope with risks associated with the business activities.

Risk management

The Board of Directors and the Executive Board attach great importance to the careful handling of strategic, financial and operational risks. The risk assessment

is determined by the Risk Controlling Manual, which was approved and introduced by the Board of Directors within the scope of its meeting of 9 September 2008. Based on periodic and systematic risk identification, the relevant risks for the Aebi Schmidt Group are assessed regarding their probability of occurrence and their effects. These risks are avoided, limited or passed on by taking corresponding measures. The last risk assessment was conducted by the Board of Directors in October 2019. It is incumbent upon the Executive Board to identify and communicate the substantial risks to the Board of Directors.

Executive Board

The CEO is in charge of the management of the Aebi Schmidt Group. Under his direction, the Executive Board deals with all relevant issues, makes decisions within the limits of its authority and files proposals to the Board of Directors. The Division Managers are responsible for the development and achievement of their entrepreneurial goals and the independent management of their divisions. The Board of Directors appoints the Executive Board; the CEO is entitled to file proposals. The board meeting is convened if requested by a member or if a meeting is necessary, usually once a month.

Shareholders' participation rights

The general meeting is convened by the Board of Directors, if necessary, by the Audit Committee. The annual general meeting takes place once a year within 6 months after closing the business year. The Annual Report and the Audit Report are sent to the company's registered office no later than twenty days prior to the annual general meeting. Extraordinary general meetings are convened as necessary. The Board of Directors shall convene an extraordinary general meeting if requested in writing by shareholders representing at least 10% of the share capital, indicating the purpose and the proposals. The general meeting is convened by letter to the shareholders no later than twenty days prior to the date of the meeting. Besides the date, time and place of the

meeting, the items listed on the agenda as well as the proposals of the Board of Directors and the shareholders shall be indicated in the notice of convocation. No resolutions can be passed on items that are not announced in this manner with a proviso to the regulations regarding general meetings attended by all shareholders (universal meetings).

Provided that no objection is raised, the representatives of all shares can hold a general meeting without having to comply with the formal requirements of convocation (universal meeting). As long as the owners or representatives of all shares are present, this meeting is entitled to discuss and pass valid resolutions on all items within the limits of the general meeting's authority.

There is no statutory limitation of voting rights. Registered shareholders whose names are entered in the company's share register are eligible to vote. Each shareholder can have himself represented by another shareholder provided with a written power of attorney.

Pursuant to Art. 703 OR [Swiss Law of Obligations], resolutions of the general meeting shall be passed by absolute majority of the represented voting shares. Resolutions listed in Art. 704 OR as well as resolutions regarding the conversion of registered shares into unregistered shares, which requires at least two-thirds of the votes represented and absolute majority of the nominal share value represented, shall be exempted from this regulation.

External auditors

In 2014, PricewaterhouseCoopers AG, Zurich, assumed the mandate as the external auditor of Aebi Schmidt Holding AG. Successor of the auditor in charge of Stefan Räbsamen is Philipp Gnädinger (since 2019).

The inspection and supervision of the audit is incumbent upon the Audit Committee. The external auditors draw up an extensive report on the results of their audit on an annual basis. The Audit Report is accompanied by a management letter and a comprehensive report to the Board of Directors.

Compliance

The Aebi Schmidt Group distributes a large portion of its products in the environment of public institutions (federal states, cities, municipalities, motorway and airport operators) and therefore pays special attention to always complying with all applicable national and international regulations.

The term compliance stands for compliance with standards, laws and industrial standards as well as any requirements within the scope of self-regulatory measures or in-house directions. In the past business year, the Aebi Schmidt Group examined the existing compliance regulations and processes and adapted them to amended and new statutory requirements, where necessary. Today, the Aebi Schmidt Group exhibits a well-balanced overall system to fulfil the ever more complex issue of compliance.

The major elements of compliance are as follows:

- Code of Conduct – Defines the fundamental values of our employees' activities.
- Competence regulations – Defines the competencies within the company.
- Risk management – The Executive Board examines the risks of the Aebi Schmidt Group on behalf of the Board of Directors and defines measures to avoid, limit or pass on the risks.
- ICS (Internal Control Systems) – The risks identified by the persons in charge of the processes are examined within the scope of appropriate inspections. The inspections are reviewed by the Executive Board on an annual basis and, where necessary, adaptations are requested from the Board of Directors.
- Dealers and agents must undergo regular compliance audits, which are monitored by the Compliance Board. The Compliance Board holds meetings as required and decides whether or not any transactions can be effected with the respective dealer or agent.
- There is also a regular customer review and dual-use inspection in the spare parts business. The export regulations

demand compliance and verification that no goods or services are provided to a person or institution prohibited by an official authority from being supplied and whether or not the regulations for goods that can also be used for military purposes are complied with. Last year, the list of affected persons and institutions was constantly extended due to political upheavals. Using the newly introduced processes and IT-based check programmes, the inquiries can be carried out efficiently and promptly.

The Aebi Schmidt Group is convinced that the principle of conducting business transactions in a responsible manner and in compliance with the statutory and official regulations of the countries in which we are operating is feasible. The Aebi Schmidt Group is making every effort to constantly improve its compliance system in order to be able to respond to the changing requirements in our global business.

Employees

Around 2000 skilled and experienced employees dedicate themselves to ensuring the satisfaction of our customers every day.

As a global corporate organisation, it is important that the Aebi Schmidt Group defines and implements norms and standards that create a consistent framework for all employees. Our key corporate values include flexibility and openness towards the different cultural and job-specific backgrounds of our employees. Strong seasonal variations in incoming orders and the ongoing lack of specialist workers in specific areas are the main issues faced by Human Resources. Advance production would be too risky as our products are often configured to customer specifications. Careful planning is therefore essential for the Aebi Schmidt Group. If necessary, additional temporary workers are hired. Due to the strong order book following the summer break, and in

consultation with the works council, two-shift operation was introduced in Germany. The company is also making continuous improvements to the recruitment process and encourages the development of existing employees.

Attractive employer

In order to recruit skilled workers and to retain them in the company long term, the Aebi Schmidt Group offers its employees an attractive working environment. Central to this is open and honest interaction with each other, which encourages all employees to get actively involved in the company. To this end, the Aebi Schmidt Group also further extended its internal communications in 2019 and keeps its staff regularly informed via the CEO newsletter, teleconferences, town hall meetings and the CEO roadshow at the beginning of the year. The Aebi Schmidt Group is dedicated to ensuring a high level of staff satisfaction, which helps to keep good employees in the company. This satisfaction is measured by requesting feedback from employees. For example, the Aebi Schmidt Group conducted an employee survey in North America in

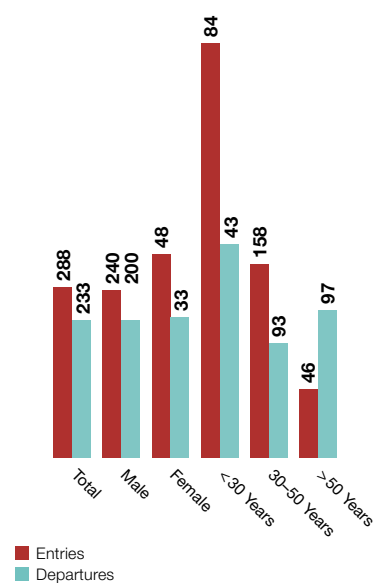
2019. To gain an even better understanding of the issues raised, the local management also organised panel discussions attended by the Group CEO and the HR department. Many employees took up this opportunity for face-to-face discussion. In Switzerland, the Aebi Schmidt Group offers attractive pension plans and, as the employer, takes on the majority of pension contributions and the premium for daily benefits insurance to help ensure a secure future for staff. Company outings, practice and family days as well as health campaigns contribute to a good working atmosphere and enhance the well-being of employees. The Aebi Schmidt Group continually strives to create ideal working conditions for employees, allowing them to work without any distractions. This also

Our goal is to fill 70% of vacancies internally. That is why we systematically review career development and succession opportunities for our employees.

enables the company to position itself as an attractive employer in the competitive labour market. The good employment situation in many countries means that the cost and effort required for recruiting skilled workers is still high. That is why the Aebi Schmidt Group introduced a digital solution in 2019 to make the recruitment process more efficient. The company also places job adverts in print media and is therefore able to reach people who are not actively job hunting. The introduction of a 'friend of a friend' incentive scheme allows the workforce to recommend new employees. In Poland, we created an employer profile on the web portal that enables candidates to familiarise themselves with the company. The application process for production employees had already been simplified significantly in 2018, with tours and trial days replacing written applications. M-B Companies also visits careers fairs at universities and colleges to inspire young people to work in its industry.

For the Aebi Schmidt Group, staff diversity is an asset that needs to be protected and promoted. Diversity boosts understanding of global markets and customers, helps the company access skilled staff and stand out from the competition and, last but not least, it's great for its reputation. The Aebi Schmidt Group is dedi-

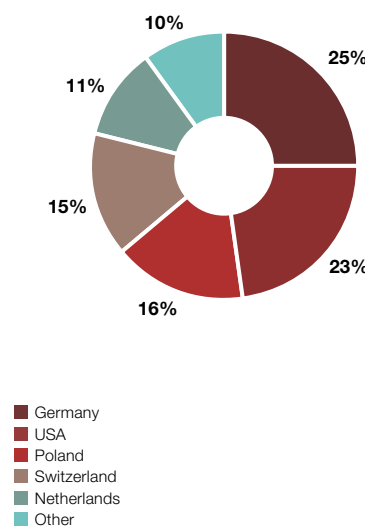
FLUCTUATION BY GENDER AND AGE GROUP



Numbers above the columns are in persons. Only permanent staff.

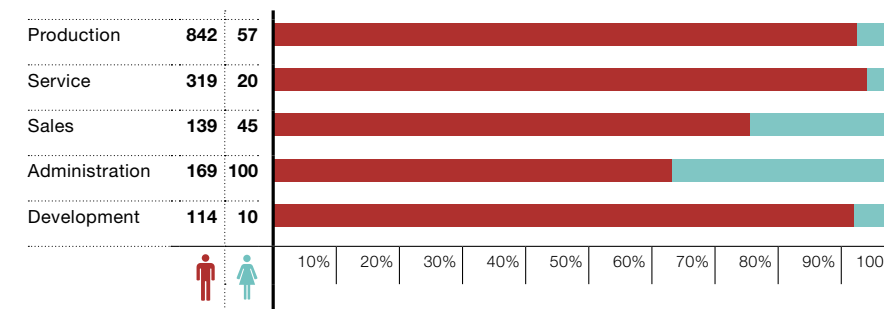
EMPLOYEES BY COUNTRY

2019



WORKFORCE BY CATEGORY*

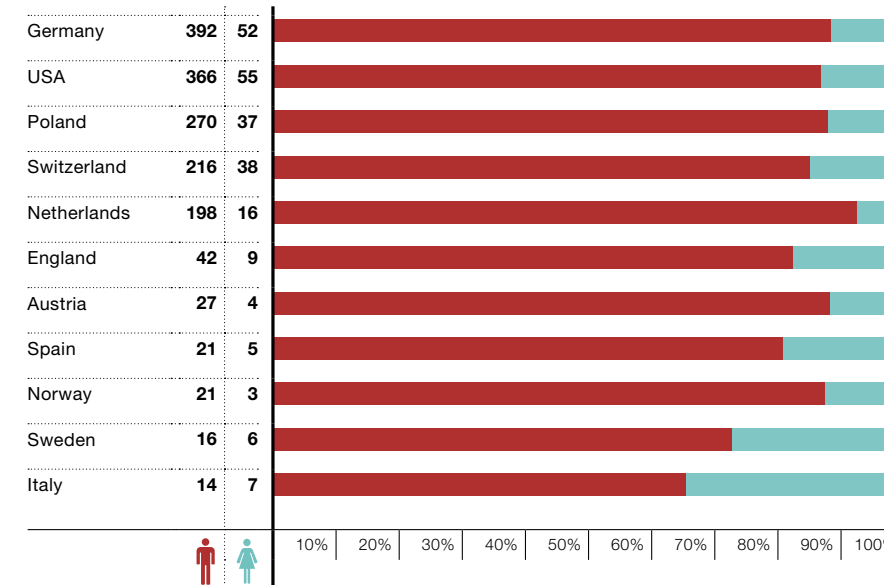
in full-time positions



* excl. interns, apprentices and temporary agency workers

WORKFORCE BY COUNTRY AND GENDER*

in full-time positions



* excl. interns, trainees, apprentices and temporary agency workers; allocated to countries of employment

cated to ensuring that all employees have equal opportunities. In Switzerland, the Swissmem collective bargaining agreement formalises the requirement for equal treatment. Equal opportunities and remuneration are controlled in Switzerland each year via the Loqib self-assessment tool and by checking of the minimum wage by the external auditor.

Fair and non-discriminatory interaction within the company and with business partners is a basic prerequisite for long-term partnerships and is firmly embedded in the corporate culture. The binding Group-wide Code of Conduct defines core values and standards, which all employees undertake to observe in writing. Managers also have a key responsibility to lead by example, promoting and monitoring compliance with these standards in daily business routine. In the event of any questions or complaints, the employees can contact the Compliance Officer. In 2019, there were no registered cases of discrimination within the Aebi Schmidt Group.

Employees at several business locations are covered by collective agreements. This applies to all employees in Germany and the Netherlands, as well as in Norway, Spain, Italy and Sweden. In the USA, it applies to 53% of employees at Meyer Products and, in Switzerland, 77% of all employees are subject to the Swissmem collective bargaining agreement. (GRI 102-41)

Health and safety at work

The health and safety of employees is top priority throughout the Group. Of course, the Aebi Schmidt Group complies with all corresponding statutory regulations. It also implements additional preventive healthcare measures within the scope of occupational safety management. These include internal regulations and the Code of Conduct, safety initiatives and regular information events. Employees also receive training on how to deal with risks and hazards in their day-to-day work. The preventive healthcare programme initiated at the end of 2017 in collaboration with Deutsche Rentenversicherung (the German statutory Pension Insurance Scheme) has proved its worth and was continued by Aebi Schmidt Germany in 2019. In Poland, the company

COMPOSITION OF THE WORKFORCE*

in full-time positions (as of 31.12.2019)

	Male	Female	Total
Workforce by employment contract			
Permanent	1 583	232	1 815
Temporary*	117	7	124
Workforce by employment type			
Full-time	1 538	190	1 728
Part-time	45	42	87

* excl. interns, trainees and apprentices

OCCUPATIONAL SAFETY AND HEALTH

Numbers per 100 full-time positions

	Male	Female	Switzerland	Other Locations	All
Injuries	8,3	0,5	7,8	7,6	7,3
Days lost as a result of injury	45,9	12,6	104,6	33,7	41,7
Days lost as a result of injury and illness	719	641	233	785	709,0

Rates were calculated for 200 000 working hours (= 100 full-time positions). There were no fatalities. The data represents a weighted average of all incidents (actual number of incidents weighted by the number of target hours).

held workshops on the subject of 'Back health at work'.

To monitor hygiene and safety in the workplace, Aebi Schmidt Poland performs an audit every three years. In Switzerland, the production plant is subjected to an annual audit by the Swiss National Accident Insurance Fund (SUVA) in the area of occupational safety and health-care. The six Emergency Response Officers undergo ongoing training. All accidents at work are recorded and analysed. The results are then used to determine measures for ensuring the continuous improvement of safety.

Skilled and well-qualified employees

The long-term success of the Aebi Schmidt Group depends on having skilled and well-qualified employees. In light of the ongoing shortage of skilled workers, the training and further education of the workforce is becoming increasingly important. In addition to electricians and painters, mobile service technicians were also particularly difficult to recruit in 2019. In Switzerland, finding qualified agricultural mechanics with knowledge of hydraulics or electricians also proved difficult. The management at each location is responsible for ensuring that training and further education targets the best interests of the company and the employees. The Aebi Schmidt Group carries out regular employee appraisals with around 80% of the workforce in total. These are also used to plan specialist training requirements.

While product training is offered throughout the Group, the Aebi Schmidt Group only offers specialist technical train-

ing courses to individual groups. Other training and continuing education offered is based on the employees' individual needs and the corporate strategy. For example, methodological knowledge, technical skills as well as process management and team-building skills are promoted specifically.

The company supports continuing education via internal and external courses as required, either by making a financial contribution or offering the option of taking out an interest-free loan for training. For example, Aebi Schmidt Group employees in Germany and Switzerland attended external training on high-voltage work in 2019. A Sales Academy has also been set up. In 2019, all sales staff have been trained in sales methodology and key account management there. In Germany, financial support for gaining an HGV licence has been improved. In Poland, the company extended availability of forklift truck and crane training for production employees and individuals from relevant specialist departments. Coaching and training was also offered to managers. In 2020, the Aebi Schmidt Group is

In 2019, a Sales Academy has been set up, to train all sales staff in sales methodology and key account management.

planning to further extend the range of training offered by developing an e-learning platform and also creating a new role for training and development.

The Aebi Schmidt Group launched structured succession planning in 2018 to enhance our support of internal talent and this was further developed in the year under review. The aim is to fill 70% of vacancies with internal candidates. A promotion programme for internal talent and individual

development plans for employees were also introduced in 2018. The first promotion programme ends in mid-2020 and is already proving successful. For example, the position of Production Manager in Switzerland and the newly created Contractors department were filled by internal talent. A survey of all participants is planned in order to develop and improve the next promotion programme.

Community

The Aebi Schmidt Group's presence in regions with weak infrastructure allows it to create jobs and to contribute to the economic development of the surrounding areas.

By cultivating partnerships with suppliers located in close proximity to its production facilities. In addition to shorter transport routes and lower costs, this also enables the Aebi Schmidt Group to reduce its CO₂ emissions.

Close cooperation with suppliers

In 2019, the Aebi Schmidt Group purchased products and services from about 1800 suppliers, including companies of varying sizes from a wide range of industry sectors. The most important product categories include steel, stainless steel, welded assemblies, engines as well as hydraulic and electronic components. The Aebi Schmidt Group also has a network of local specialist suppliers for handling specific finishing work. In August 2018, a Group-wide Supply Chain Manager was introduced, reporting directly to the CEO. In 2019, the implementation of new supply chain management systems was finalised at all locations and the previous more locally-based initiatives replaced by a common approach. The Group also defined cost-reducing measures. The new organisation and standardised processes are bringing a significant increase in efficiency and this is having a positive impact on the cost structure of the Aebi Schmidt Group.

For the products of the Aebi brand manufactured in Switzerland and the vehicles of the Schmidt brand manufactured in various European countries, the suppliers come predominantly from Europe. The inbound freight products are received, consolidated and shipped to the produc-

tion facilities by two logistics partners. For key suppliers, the Aebi Schmidt Group uses centralised procurement, which is supplemented by decentralised, logistically optimised procurement from the respective business locations' local areas. In Asia, the Aebi Schmidt Group procures smaller volumes directly via specialist dealers. In 2019, the purchasing volume amounted to EUR 180 million for products and services for the European factories; CHF 45 million of this was attributable to Switzerland (for around 3000 suppliers across Europe). The purchasing volume for North America amounted to USD 96 million from 1150 suppliers, with the majority of them based in the US and Canada.

The Aebi Schmidt Group uses the ABC principle to analyse its suppliers and is thus able to establish targeted collaboration and maintain good relationships. This structured supplier management makes it possible to evaluate and classify all suppliers with regard to processes, quality, energy consumption, environmental policies as well as ISO 9001 and 14001 certifications. Global quality management plays a key role in the evaluation of suppliers. Quality assurance agreements are an important contractual component as they include fines or free replacement of sub-standard parts.

The Aebi Schmidt Group also sets sustainability standards for its suppliers. In a market where customers are placing increasing value on sustainability, the Aebi Schmidt Group can make itself stand out

The Aebi Schmidt Group uses the ABC principle to analyse its suppliers and is thus able to establish targeted collaboration and maintain good relationships.

from the competition by implementing environmental guidelines and having corresponding certifications. This increases the value of incoming and outgoing goods and also streamlines the supply chain. However, the Aebi Schmidt Group continues to face the challenge that customers are not willing to pay a higher purchase price for products with enhanced environmental benefits. Existing suppliers are monitored regularly to ensure compliance with sustainability standards. If a check shows that a supplier is not meeting the required criteria, then the Aebi Schmidt Group ends the collaboration. The qualifi-

cation process for new suppliers includes the evaluation of environmental criteria, such as the recycling of raw materials and the reduction of CO₂ emissions. All suppliers are also subjected to a compliance check to ensure that they have not gained an economic advantage through either corruption or illegal practices.

Ongoing dialogue with stakeholders

The Aebi Schmidt Group's most important stakeholders include employees, customers, suppliers, business partners, trade associations, municipalities, regional authorities and research institutions (GRI 102-40/GRI 102-42). The Aebi Schmidt Group informs its stakeholders about its activities, objectives and progress in the Annual Report. The company also engages in regular dialogue with all parties. Customer requests, in particular, are considered in detail and implemented whenever possible. As was the case in previous years, environmental issues, such as CO₂-neutral vehicles, were a major concern in 2019. Following on from Europe, the sparing and optimised use of salt is now also an issue in the USA and the Aebi Schmidt Group is leading the way in this area. Ergonomics in the workplace is another customer wish that the Aebi Schmidt Group takes seriously; since the end of the year under review, all compact sweepers have been certified under the 'Campaign for Healthy Backs' (Aktion gesunder Rücken). The company has seen an increasing demand from customers for dual-use products; in order words, being able to handle both summer and winter maintenance with a single machine. That is why, for example, the Aebi Schmidt Group in Austria designed a spreader in such a way that it can also be used to clean the streets in the summer (GRI 102-43/GRI 102-44).

The Aebi Schmidt Group also develops bespoke products and trials prototypes with customers. Products can then be checked in good time to ensure that they meet market requirements and offer the intended customer benefits. For example, the CJS-DI jet sweeper with deicer was tested in conjunction with Stuttgart Airport. A common approach to automation and sustainability was also discussed as part of the cooperative



partnership with Stuttgart Airport. Building on this dialogue and with the involvement of other industry participants, the Smart Fleet research project was created and went on to successfully apply for funding. The aim of the project is to explore the framework conditions required

The Aebi Schmidt Group sets great emphasis on ergonomics. Since the end of 2019, all compact sweepers have been certified under the ‘Campaign for Healthy Backs’ (Aktion gesunder Rücken).

for automated and autonomous driving in the airport environment. In 2019, the Aebi Schmidt Group also involved its employees in the product management process. Using an internal survey, the company gained valuable insights into electric drive technologies, which then influenced the focus of the product portfolio. In general, the company conducts regular surveys as a means of addressing economic, social and environmental topics in greater depth with stakeholders (GRI 102-43).

The Aebi Schmidt Group is actively involved in various regional and international committees and associations. These include the European Engineering Industries Association (EUnited), the DIN Standards Committee on Municipal Technology (NKT), the Municipal Vehicles and Equipment Industry Association (VAK) and the Mechanical Engineering Industry Association (VDMA). In addition, the Aebi Schmidt Group is a member of the SWISSRAIL Industry Association, which unites more than 100 companies from the Swiss automotive and transport industry, and the European International Contractors (EIC) federation, which advocates the interests

of the construction industry on an international scale. In the Netherlands, Aebi Schmidt is involved in the Smart Welding Factory organisation, which aims to bring together companies and non-profit organisations. Aebi Schmidt Poland is a member of the Polish-Swiss Chamber of Commerce. M-B Companies in the USA is also involved in the local Chamber of Commerce. Aebi Schmidt North America is a member of the

National Truck Equipment Association (NTEA), which supports the sustainability efforts of companies from the truck industry and represents their interests. Moreover, the factories in Cleveland and Lindenwood are members of the Member Verification Program (MVP), which honours companies for excellent business practices and the implementation of quality standards. In 2018, the factory in Cleveland successfully renewed its membership for the next three years.

Social commitment

The Aebi Schmidt Group’s social commitment predominantly includes the support and sponsorship of local sport and social projects. As a Swiss-based company, the Aebi Schmidt Group was a main partner and sponsor of the Wrestling and Alpine Festival 2019 in Zug, as well as of young wrestlers and an ice hockey club. At Holten in the Netherlands, a triathlon and various local social projects are supported. Numerous employees in St. Blasien also help students in the Hochrhein-Bodensee economic region to prepare for job interviews. Aebi Schmidt Germany became the sponsor of an emergency telephone (for emergency assistance and rescue) for the Björn Steiger Foundation and also participated in careers guidance evenings for students from local schools. M-B Companies supports the Salvation Army and families in need via donation boxes from the New Hope Center in Chilton, and also provides Christmas wreaths for the local scout buildings. Meyer also supports the annual initiatives of the local scouts. The employees at Meyer also donate to the Ronald McDonald

House and a local refuge for mothers at risk in Cleveland. Swenson arranges food donation campaigns at Christmas.

Corporate values and compliance

The Group-wide Code of Conduct, which is specified in in-house directives, was adapted in late 2018 and came into effect at the beginning of 2019. It defines the corporate values and applicable ethical standards and addresses issues such as IT security and data privacy, environmental protection, fair competition and anti-corruption. By having a clear definition of responsibilities, risk management and efficient control systems, the Aebi Schmidt Group makes sure that all statutory provisions and industry standards in a complex regulatory environment are observed. In 2020, the company also plans to deliver online training on relevant compliance topics to raise employee awareness even further.

The six Group values – focus on results, collaboration, customer focus, integrity, passion and innovation – are the foundation for the business activities of our approx. 2000 employees – both within the company and in dealing with customers and business partners. The Group values are also used as criteria for the annual employee reviews. If all employees consistently adhere to the corporate values in all their activities, this should make collaboration easier and ensure the long-term success of the company.

The Aebi Schmidt Group also understands integrity to mean that the operations are in line with the applicable anti-trust and competition laws and that all employees refrain from any actions that would inhibit trade or restrict competition or could make such an impression. The Code of Conduct stipulates the rules for handling gifts and other benefits and prohibits any form of bribery.

In 2019, the Aebi Schmidt Group was not involved in any legal proceedings relating to anti-competitive conduct, nor were any fines or non-monetary penalties imposed on it for violations of other laws and regulations. In the year under review, no cases of corruption were registered.

As the Aebi Schmidt Group also supplies customers in the public sector, corruption risks particularly need to be mini-

mised in the supply chain. These risks are reduced via a systematic review as part of strategic supplier development, strict selection and evaluation procedures and improved supplier management. The Aebi Schmidt Group applies stringent export controls to ensure that civil goods and spare parts, in particular, are not used for military purposes. A software solution compares every new contracting partner – whether a supplier, customer or dealer – with public sanctions lists to prevent supply to any person or institution that is banned from receiving supplies by a public authority. Should they screen as positive, additional clarification takes place. In order to further minimise the risks of corruption, in 2019 the Aebi Schmidt Group started to prepare a handbook for the purchasing process. Amongst other things, this defines the rules for dealing with suppliers and it will be introduced in 2020.

Environment

The careful use of natural resources is important to the Aebi Schmidt Group for a number of reasons. As well as the environmental benefits, the other main priorities are cost considerations, political guidelines, innovation and customer expectations.

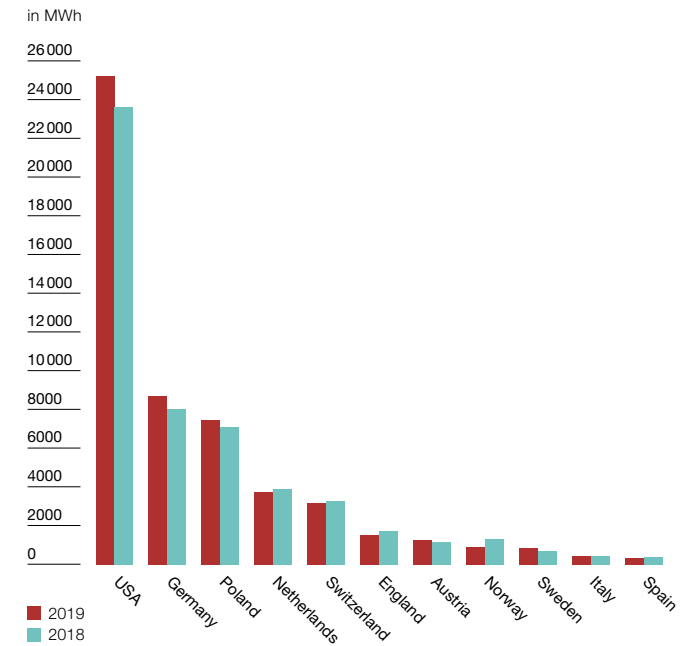
The global challenge of climate change also affects our industry. The development of high-quality and environmentally friendly products can become a unique selling point in a highly competitive international market. For example, our electric eSwingo sweeper supports municipal CO₂-neutrality targets. Alongside increasing customer demand for ‘green’ products, there is also growing political pressure to make products and production processes more environmentally friendly. For example, production facilities must comply with increasingly stringent limits for energy consumption and emission levels. The Aebi Schmidt Group con-

stantly monitors the relevant national and international developments and prepares for any changes in the regulatory framework in good time. The ongoing development of the product portfolio and increasing productivity are crucial to this. The Aebi Schmidt Group therefore constantly promotes its own innovative ability in order to keep pace with ever-increasing technical and social change. To encourage an ongoing reduction in the consumption of resources, the company regularly measures its progress by recording environmental performance figures, implements operational measures and trains its employees in the responsible handling of resources. The Aebi Schmidt Group also complied with all applicable statutory environmental regulations and was neither fined nor punished with non-monetary penalties for violations of environmental laws and regulations in 2019.

Environmental standards

The Aebi Schmidt Group sets itself goals for environmental protection which exceed the minimum statutory requirements. These are supported by certifications, among other things, and all locations have been ISO 9001 certified since 2009. The production facilities as well as the local sales and service organizations

ENERGY CONSUMPTION BY COUNTRY



in Peterborough (UK), Fiume Veneto (Italy), Burgdorf (Switzerland), Skänninge (Sweden), Holten (Netherlands) and St. Blasien (Germany) and the plant in Poland are also certified to ISO 14001. Furthermore, the entire Group observes the guidelines for social responsibility in accordance with ISO 26000.

Reduced consumption of resources

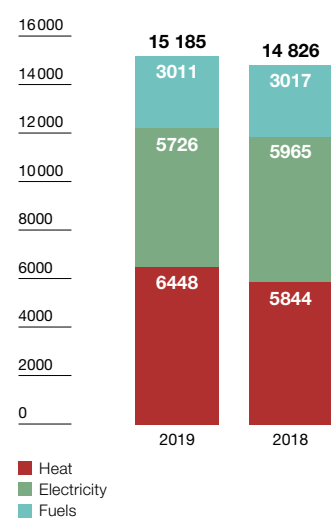
In the year under review, the Aebi Schmidt Group implemented measures to reduce consumption of resources and fuel and to lower CO₂ emissions at many of its business locations.

All locations of Aebi Schmidt Germany have switched to purchasing 100% hydroelectricity. Taking this step has enabled the St. Blasien plant to reduce its CO₂ emissions by 707.42 tons in comparison to buying the German federal electricity mix. A plan has also been devised in Germany to reduce the use of solvents and this has been submitted to the relevant authorities for approval. This should gradually reduce solvent emissions over the next few years. By installing compressors with pressure intensifiers on the production line for standard and project products, the St. Blasien plant managed to significantly reduce noise and also make energy savings. At the central warehouse in Laatzen, installation of new light-



GREENHOUSE GAS EMISSIONS BY SOURCE

in tCO₂e



ing technology enabled electricity consumption to be reduced by 25%. The sites in the Netherlands and Poland have completely switched to LED lighting. In North America, the plants are gradually converting to LED lighting systems. There has also been investment in infrastructure in Switzerland. Between May and September, the plant in Burgdorf fitted a second room for cavity treatment (a process for better protection against vehicle corrosion) with a new ventilation system. Separating both rooms from the existing building ventilation system enabled optimal filtration and regulation of the interior climate. Completion of this project resulted in better work safety and reduced CO₂ emissions. The plant in Kielce, Poland, replaced its laser-cutting machine, which was based on old CO₂ technology, with the new generation of lasers, which work on the basis of solid materials. A modern layout is planned for the extended production facility at the plant in Chilton, USA. This will optimise energy efficiency and waste management in accordance with the latest standards. As well as implementing selected optimisation measures and projects, all business locations of the Aebi Schmidt Group consistently opt for energy-efficient machines when re-

placing old ones and, wherever possible, reduce the amount of technical equipment to further lower energy consumption.

Besides energy consumption, the gradual reduction of waste and effluents is also high priority. This is becoming increasingly important to customers and also reduces disposal costs at the same time. In the year under review, the plant in

The Aebi Schmidt Group sets itself ambitious goals for environmental protection: all locations have been ISO 9001 certified since 2009.

Poland developed a new waste management system, which has already been approved. The infrastructure and internal regulations required for implementing it will be ready from 2020. At the beginning of 2019, the plant already started to use new collection areas for industrial waste, which comply with all national and international regulations. In the Netherlands, a powder robot offering adjustable coating thickness reduces the consumption of coating material and the corresponding amount of waste. The plant also pays attention to reducing waste in the canteen

and has replaced plastic packaging with eco-friendly recycled materials. The Aebi Schmidt Group installed a biological waste water treatment plant at Burgdorf in Switzerland. This discharges pre-purified water into the sewers, substantially reducing the environmental impact. In North America, more efficient production layouts have been devised and partially implemented as part of the Fit 4 Tomorrow project. This aims to use intelligent waste management to reduce the amount of manual work involved.

Various types of waste are produced in the Aebi Schmidt Group production plants: general waste and special waste. Where waste cannot be prevented, it is sorted according to the waste code applicable in the country in question or reintroduced to the production process in the spirit of the 'circular economy'. All recyclable waste is sent to specialist disposal companies and the remaining waste is sent for thermal use. In Kielce, Poland, waste is split into 36 groups.

ENVIRONMENTAL PERFORMANCE INDICATORS¹⁾

	2019	2018	Delta
Energy consumption in MWh	53 290	51 308	3.9%
Electricity	12 020	12 798	-6%
Of which from renewable sources ²⁾	24%	-	-
Heat	29 952	27 170	10.2%
Fuel oil	4 706	4 157	13%
Natural gas	24 464	22 242	10%
LPG/propane	243	279	-13%
District heating	540	491	10%
Fuels	11 319	11 340	0%
Diesel	10 592	10 503	1%
Petrol	517	718	-28%
LPG	210	118	78%
Energy consumption in kWh per FTE	28 433	28 592	-1%
Total GHG Emissions in tCO₂e^{3) 4)}	15 185	14 826	2%
Scope 1	9 340	8 752	7%
Combustibles	6 328	5 735	10%
Fuels	3 011	3 017	0%
Scope 2	5 845	6 074	-4%
Electricity ⁵⁾	5 726	5 965	-4%
District heating	120	109	10%
Total GHG emissions in kg CO ₂ e per FTE	8 102	8 262	-2%
Waste in metric tons	1 772	1 652	7%
General waste	1 245	1 193	4%
Incineration	118	114	4%
Residue landfill	226	191	18%
Recycling	900	887	1%
Special waste	527	460	15%
Incineration	79	95	-17%
Recycling	76	74	2%
Other ⁶⁾	372	290	28%
Total waste in kg per FTE	946	921	3%

¹⁾ Figures for 2018 slightly differ from the report published last year due to corrected numbers.

²⁾ Indicator reported since 2019

³⁾ Calculations in accordance with the WRI/WBCSD Greenhouse Gas Protocol guidelines. Scope 1: GHG emissions from own sources, e.g. boilers and fuels. Scope 2: GHG emissions stemming from the production of electricity and district heating.

⁴⁾ Sources for emission factors: Defra, IEA & Frischknecht.

⁵⁾ Greenhouse gas emissions associated with the production of electricity were accounted for in accordance with the 'location-based approach' according to the Greenhouse Gas Protocol Scope 2 standard.

⁶⁾ Absorption and filter material, cleaning cloths, protective wear, scrap from ironworks, laser scrap.

Information on the Sustainability Report

Sustainability at the Aebi Schmidt Group is a Group-wide responsibility and is therefore not allocated to an independent department.

After creating self-contained sustainability reports in 2015 and 2016, the Aebi Schmidt Group has gone back in 2017 to report on its sustainability efforts as part of the Annual Report.

The last Sustainability Report was published in May 2019. This report has been prepared in accordance with the GRI Standards: Core option. No external assurance of the report contents was performed. The Annual Report of the Aebi

Schmidt Group was subjected to and successfully passed the GRI Materiality Disclosures Service (see GRI icon on p. 51). The Annual Report includes all divisions and business locations of Aebi Schmidt Holding AG that are listed in the consolidated entities on page 16/17 (GRI 102-45). The contact for any questions regarding the 2019 Annual Report is Thomas Schiess, Group Marketing Director, thomas.schiess@aebi-schmidt.com.

The takeover of the multifunctional machine by Nilfisk was completed in March 2019. This has been produced at the St. Blasien plant in Germany, under the Multigo name, since 2019. Restatements of information given in the previous reports were not made (GRI 102-48).

The essential sustainability topics were determined in 2015 as part of an internal workshop which took various functions of the Aebi Schmidt Group as well as the points of view of the Group and the individual divisions into account. External stakeholders were not involved directly in this process. The Executive Board reviewed the result (GRI 102-46).

Essential sustainability topics (GRI 102-47)

ECONOMIC	Economic performance
	Indirect economic impacts
	Anti-corruption
	Anti-competitive behaviour
ENVIRONMENTAL	Energy
	Emissions
	Effluents and waste
	Supplier environmental assessment
	Environmental compliance
	Energy-efficient products and services
SOCIAL	Employment
	Occupational health and safety
	Training and further education
	Diversity and equal opportunity
	Non-discrimination
	Customer health and safety
	Marketing and labelling
	Socioeconomic compliance

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GRI 102-50	Reporting period	01.01.–31.12.2019
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For the Materiality Disclosures Service, the GRI Services team checked that the GRI content index is clearly presented and that the references for Disclosures 102-40 to 102-49 align with the appropriate sections of the report. The Materiality Disclosures Service used the German version of the report.

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