

## Annual Report 2016



#### The brands of the ASH Group

The ASH Group is an alliance of traditional brands for special-purpose vehicles and attachments that take a leading position in their respective markets and whose technological excellence creates a synergistic effect for enhanced customer value. Combined with reliable services, customers thereby receive optimum solutions of lasting value.

Thinking ahead and acting in a responsible manner are the main pillars of the economic success of the ASH Group, a company in which environmental and social sustainability throughout the value chain, comprehensive product stewardship and a clear commitment to conserving natural resources are an integral part of the corporate strategy.



## The ASH Group at a glance

EUR '000	2016 in %	2015 in %
SALES BY SEGMENTS		
Aebi products	62 574 17.2%	61 210 18.9%
Schmidt products	173 715 47.8%	172 419 53.1%
Meyer/Swenson products	55 923 15.4%	18 047 5.6%
Service and spare parts business	70 908 19.6%	72 790 22.4%
Total net sales	363 120 100.0%	324 466 100.0%
BALANCE SHEET TOTAL		
Current assets	198 717 75.3%	200 317 74.6%
Fixed assets	65 114 24.7%	68 031 25.4%
Total assets	263 831 100.0%	268 348 100.0%
Loan capital	148 591 56.3%	157 606 58.7%
Equity capital (incl. shareholders' loans)	115 240 43.7%	110 742 41.3%
Total liabilities	263 831 100.0%	268 348 100.0%
NUMBER OF EMPLOYEES (FTE)		
Germany	406 25.6%	402 25.4%
Switzerland	246 15.5%	268 17.0%
Poland	264 16.7%	251 15.9%
Netherlands	221 14.0%	220 13.9%
USA	234 14.8%	238 15.0%
Other	212 13.4%	202 12.8%
Total employees	1 583 100.0%	1 581 100.0%

### The products of the ASH Group: sustainable and safe.

We aim to constantly contribute to improving our customers' performance capacity. From pedestrian walkways, motorways and runways at airports to the professional management of green spaces in challenging terrain: The areas of application of the ASH Group's products are manifold. The ASH Group's extensive range of products comprises our own vehicles, attachable and demountable devices for individual vehicle equipment as well as intelligent product systems and customised services. Decades of wide-ranging experience make the ASH Group a both reliable and competent partner to customers from all over the world. A support and service programme perfectly tailored to sophisticated customer needs offers the appropriate solution to nearly any challenge.

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Our vision: The ASH Group is the globally leading provider of smart product systems and services for cleaning and clearing traffic areas as well as for mowing green spaces in challenging terrain. Based on our superior product range, we endeavour to provide complete solutions to enable economical, safe and traceable cleaning and clearing operations. We aim to contribute to improving our customers' performance capacity.

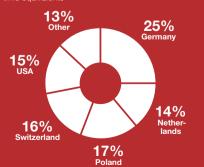


### brands – one message.

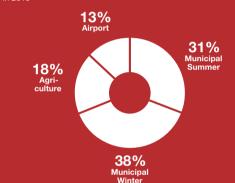
The ASH Group is an alliance of traditional brands for special-purpose vehicles and attachments that take a leading position in their respective markets and whose technological excellence creates a synergistic effect for enhanced customer value. Combined with reliable services, customers thereby receive optimum solutions of lasting value.

### Employees by countries

in full-time equivalents



### Sales by areas of application



## 1583 11111111

### employees in full-time equivalents.

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



**120** 

### sales partners worldwide.

Our own sales organisations are complemented by a globally operating distribution network.

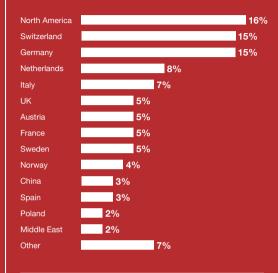
## competence centres and production facilities.

With a total production area of 73 000 m<sup>2</sup>.



### Sales by countries

n 2016



### traineeship positions.

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





15

### service organisations.

Our own service organisations cover the markets in the respective countries.

## 363 million.

In the past business year, the ASH Group generated net sales to the amount of EUR 363 120 000.



### THE 2016 BUSINESS YEAR: SHAPED BY CHALLENGES AND A CLEAR PERSPECTIVE!

The past business year was overall uneven and we were not able to achieve our high sales targets in all regions. While increasing climate change and political uncertainty continued to negatively affect our business in Europe, we were able to expand our operations in China and the U.S. Strategically, 2016 saw us further sharpen our focus on becoming a globally leading system provider – we have compiled the required organisational and structural measures in an agenda to be gradually implemented by 2021.

Overall, it must be said that we did not meet our ambitious goals in 2016 – which is not completely surprising, considering current global events and yet another far-too-warm European winter in 2015/2016. Nevertheless, we can be proud to have achieved some partial successes: The number of orders we received throughout the year exceeded expectations, making us optimistic about 2017. Particularly noteworthy were the record sales of more than 630 compact sweepers! Our latest product, the SK 660 truck-mounted sweeper, also received excellent market acceptance – the machine

sets unique standards which no other product in this class worldwide has been able to reach. Altogether, we gained significant market share in the sweeper segment and continued to expand our leading position, further reducing the dependence on our winter business.

### Successful start in the North American market.

Another notable development was the integration of the U.S. locations which have been a part of the ASH Group since 2016. The first "lean production" steps have been taken and together with the local sales team we have multiplied sales of innovative winter maintenance equipment - especially of our Stratos spreaders - in the North American market. We believe that this market has great overall potential for all business segments. The fact that U.S. policymakers have been discussing plans to invest heavily in renovating and expanding infrastructure in the near future also makes us optimistic about the municipal sector. But the local airport business also picked up speed in 2016: Although U.S. regulation demands a high local share of production, our local colleagues were again able to successfully identify and implement suitable projects. For example, we presented our airport technology for the first time at the Buffalo Airport Show, where we attracted great interest from North American airport operators.

### New presence and new perspectives in China.

There has been a promising development in Asia, which makes it particularly pleasing that our long-standing decision to establish an ASH Group office in Beijing has produced positive results after one year of operation. Our strategy of maintaining close relationships with our international customers has once again proved its worth, as evidenced by various newly acquired airport projects! In addition to the growing airport potential, our local focus also includes the municipal sector, and we will gradually expand the customer segment of regional service providers. This is aided by the fact that many cities are increasingly employing external service providers for city cleaning and infrastructure maintenance: Thanks to our office in Beijing, we now have a finger on the pulse of this market. We now benefit not only from fast and verified market information but also from the great trust that our customers have in our regional representatives.

### Our expansion strategy has a solid foundation.

While our main business has so far been focused on Europe, the future will see us defining ourselves as a global player. The acquisition in the U.S. is one of the first important elements in this process.

At the same time, our product philosophy has evolved considerably: After being mainly an equipment manufacturer just a few years ago, we have now become a leading innovative system provider that serves as an indispensable partner for our customers, including after-sales support.

The digitisation and internationalisation of our business as well as the increasing consolidation in individual national markets are strong drivers of our change. The key to remaining successful will increasingly be about selling "performance and intelligence" rather than individual products: These will be the central added values that globally create clear competitive advantages. Practically, this means, for example, that we are currently working at full capacity to equip all our machines with our innovative

control and information systems – communication between humans and machines, between machines as well as between machines and the Internet is increasingly becoming an essential selling point.

> "While our main business has so far been focused on Europe, the future will see us defining ourselves as a global player."

In this commitment, it goes without saying that we also ensure the appropriate state-of-the-art production conditions for groundbreaking innovations: Our "Fit for Tomorrow" programme also made great strides in 2016. An excellent example for this is the great success we are currently experiencing with our compact sweepers, reflecting not only our strong spirit of innovation but, above all, our ability to create maximum efficiency in our internal structures and processes. Our transition to lean production has been instrumental in this effort, providing us with an exemplary success model that we will apply in all our factories within the next few years!

### Our new strategy takes us to the next entrepreneurial level.

Our goal is to make the ASH Group a global leader in intelligent product systems and services in our target markets by 2021. This means we are committed to being a local partner for our customers that is easy to work with and contributes to significantly increasing performance by providing intelligent product systems. Our solutions are always designed to

make our customers' work easier, more affordable and more sustainable. Different customers often have different needs, but depending on the customer type, there are also major commonalities. In recognition of this fact, we have defined seven market segments within which we offer products and services tailored to the respective customer requirements.

"Our solutions are always designed to make our customers' work easier, more affordable und more sustainable."

### In 2017, the merger of Aebi and Schmidt has its 10th anniversary.

The strategic goal of merging Aebi and Schmidt under the umbrella of Aebi Schmidt Holding AG was to permanently establish the ASH Group as a powerful and successful group of companies. Although we continue to be very satisfied with this decision, there has been and will be a wide range of challenges to overcome: the difficult development of the exchange rate, the many warm winters without much snow, the persistently tight financial situation of Europe's public sector, Brexit and China's weakening economic growth, just to name the most important examples. Overall, however, it must be noted that we have achieved major progress. We have consolidated our locations and have established strong competence centres. have turned 30 individual businesses into 12 ASH companies and have made strategically important acquisitions. Based on what we have accomplished together over the past 10 years, the ASH Group today enjoys an excellent reputation in the industry and sets global standards. The performance and quality of our products and our high level of service have earned us the trust of our customers across the globe.

### The ASH Group: ideally positioned for the future.

Realising our vision of global market leadership will also involve making investments into our organisation and our processes. But we believe that it takes a powerful organisation and consistent expansion into international growth markets for us to create lasting values. The ASH Group has a wide variety of products, excellent innovations and a consistently positive brand image – all indicators are clearly in our favour.

"Based on what we have accomplished together over the past 10 years, the ASH Group today enjoys an excellent reputation in the industry and sets global standards. The performance and quality of our products and our high level of service have earned us the trust of our customers across the globe."

Of course, we look forward to deepening our collaboration in our international team and we firmly believe that we as a group will accomplish our goals.

Walter T. Vogel Chairman of the Board of Directors Barend Fruithof CEO

## Major Events in 2016



### 13.4.2016: Debut of the new CJS and TJS at the "Professionals on the airport" expert conference.

On 13 April, we hosted the "Professionals on the airport" expert conference at Salzburg Airport to present our new CJS and TJS jet sweeper models to an international audience. Our invitation to Salzburg was accepted by 220 industry experts from across the globe. All those customers and interested individuals who were unable to attend the event had the opportunity to join our successful presentation live on the Internet.



### 2/2016: Meyer presents new Power Box™ snow plough.

Our plough manufacturer Meyer in Cleveland, USA, presented to the customers an innovative new snow plough which sets entirely new standards in terms of versatility and ease of use! The patented multifunctional plough ensures maximum clearing efficiency – making the work of all future users considerably easier.





#### 24.4.2016: Schmidt TJS-C 630 jet sweeper conquers North America.

On 24 April, the "International Aviation Snow Symposium" opened its doors for the 50th time in Buffalo, USA: By presenting the TJS-C 630 at this event, the ASH Group not only premiered as an equipment manufacturer, but also got off to a flying start, according to the statements of the high-ranking North American trade visitors - our products met with such a great interest that we can consider our attendance to be an entirely successful prelude to all future activities of our new AS North America Division!

### 30.5.–3.6.2016: Swingo 200+ honoured with VAK Innovation Award.

The Municipal Vehicles and Equipment Industry Association, VAK e.V., presented an innovation award for municipal vehicles and equipment for the first time at the IFAT 2016. The panel of judges, consisting of staff members of user associations as well as press and university representatives, selected our patent-pending combination of pressurised water recirculation and Koanda air circulation system in the Swingo 200+ as one of the winners. We are delighted to have received this beautiful award.



#### resources, innovations, solutions,

#### 30.5.-3.6.2016: IFAT in Munich.

True to the motto "everything from a single source", the ASH Group presented its globally leading municipal and winter maintenance technologies and products, including the new Schmidt SK 660 truck-mounted sweeper, to the international visitors at the IFAT 2016. The anniversary edition of the IFAT held in Munich from 30 May to 3 June 2016 was attended by as many as 138 000 visitors from more than 170 countries – more than ever before.

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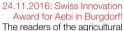
## 1.6.2016: ASH Group expands its operations with new office in China. The ASH Group expanded its global operations on 1 June 2016 by opening a new office in Beijing, China – setting the course for growth in the Asia-Pacific region.

by opening a new office in Beijing, China – setting the course for growth in the Asia-Pacific region. The skilled team in the Beijing office will be serving customers from Asia, Australia and New Zealand – ensuring that the Aebi and Schmidt brands fully satisfy its customers not just with innovative products but also in terms of "service and customer focus".



#### 20.-23.9.2016: InnoTrans in Berlin.

At the InnoTrans in Berlin - the world's largest international trade fair for transport technology - the ASH Group presented itself for the first time as a member of the SwissRail Association: The ASH Group's participation as a co-exhibitor provided an excellent networking platform and also received a pleasingly strong response from



publication Schweizer Landtechnik have chosen our Aebi
TT carrier vehicle for steep
slopes with the autonomous
driving option as the winner of
the Swiss Innovation Award!
The GPS-guided, driverless,
double-axle carrier vehicle won
by a wide margin, receiving the
majority of about 2000 votes
cast. The Swiss Association for
Agricultural Engineering (SVLT)
had called for the vote in
November 2016 on the
occasion of the AGRAMA.



### **AGRAMA**Bern, 24. – 28.11.2016

#### 24.-28.11.2016: Agrama in Bern.

At the AGRAMA 2016. we unveiled two steep-slope carrier vehicles of our Terratrac range that have been further enhanced in terms of efficiency, versatility and quality. The main selling point of our popular machine (Aebi TT) is its overall economy: high surface capacity, a fuel-efficient turbo-diesel engine featuring eco drive (fuel consumption reduced by up to 20%), automatic drive control, intelligent couplings as well as state-of-the-art technology that always adapts to the current application will continue to be unbeatable success factors!



### 22.11.2016: AOA Award for the ASH Group!

The AOA Award is the Oscar of the airport industry. At a festive ceremony in London, the Airport Operators Association annually gives out awards in eight categories – honouring "the best". There was particular excitement about who would be the winner in the most prestigious category of "Best Manufacturer". We, the ASH Group, are absolutely delighted to have been chosen as this year's recipient of this coveted trophy.



### 12.–14.9.2016: Exhibiting at Inter Airport China, Beijing.

Inter Airport China was held in Beijing for the seventh time. There was no question that we would be there, considering that Chinese airports expected more than 870 million passengers in 2016 alone. Additionally, a total of 70 new airports are currently being built or planned.

20.-23.09

22.11 24.11 24.–28.11

### Projects in 2016

Becoming lean means becoming more efficient. By 2021, all production sites of the ASH Group will implement in every detail exactly those lean standards without which maximum success cannot be achieved.

### Lean-Management "Fit forTomorrow"

### The ASH Group is expanding its successful lean concept to include all factories.

As early as 2013, our Schmidt Division started to introduce continuous process optimisation in its factories as part of the in-house lean management programme "Fit for Tomorrow" (F4T) - the raving success allowing us to increase the monthly productivity of our compact sweepers by a respectable 66% within just three years has now become our benchmark and a role model for all our production sites and centres of activity.

No doubt: Anyone who wants to prevail in national and international competition today and in the future has to make sure to use their in-house resources with as much foresight and efficiency as possible. The tried-and-tested instruments employed in this connection are called "lean management" and "lean manufacturing" - both terms imply the simple insight that in times of ever tighter budgets the in-house production conditions also need to be continuously put to the test. However, this is not only a question of whether all resources are actually recognised and used: The essential question is what new opportunities these two instruments hold in store for a company.

### The lean principle in the ASH Group: comprehensive, consistent and goal-oriented!

A company is particularly efficient when it recognises all its resources and knows how to best use them: In practice, this simple theoretical insight presents any company with numerous challenges. While introducing the "Fit for Tomorrow" programme, the ASH Group has also had valuable experiences from which it had to quickly draw the right, i.e. sustainable, consequences. We knew from the very beginning: Without extensive training - with a particular focus on lean manufacturing - and raising awareness among all staff members, we will not succeed in introducing and maintaining a culture of continuous improvement within the company. Therefore, it was, and still is, of utmost importance to us that our staff members do not perceive the "Fit for Tomorrow" lean programme as an "order from above", but live and breathe it out of personal conviction and with the highest level of responsibility - we are very proud to have initiated all the measures that are crucial in this process.

### Efficient work at – and collaboration between – all factories worldwide.

As part of our new "takeoff:21" strategy, we

envisage that the "Fit for Tomorrow" programme be implemented at all factories of the ASH Group worldwide; to this end, the "Fit for Tomorrow Global" project was started in November.

Our goal is to implement by 2021 for all global brands and production sites in every detail exactly those lean standards without which maximum success cannot be achieved, Our North American factories Swenson and Mever also started to apply the "Fit for Tomorrow" programme in the spring of 2016. The task and goal of each factory is to develop an efficient and sustainable environment by continuously streamlining the processes – another key success factor of "Fit for Tomorrow" will be to enable

close collaboration between all factories so that they can learn a lot from each other: The prerequisite for profitability is the barrier-free access to the valuable experience and knowledge of all involved. For this purpose, lean coordinators have been appointed for all factories who actively promote lean management in the ASH Group in close consultation with each other. All improvements will be implemented according to a defined and ambitious schedule. The result will be a so-called "Rapid Response System" that meets the needs of our customers and the expectations of our stakeholders: We will be in a position to not only maintain but also consistently improve the competitiveness of our factories!



By the rigorous application of the Lean Concept we are now able to produce up to 20 compact sweepers per week (eight more than before). This means a raise in production of 66%!

### The lean production for our Swingo – the success model for all factories within the ASH Group!

By implementing lean manufacturing for our Swingo compact sweeper, we have substantially optimised our production hall to get it in shape for all future challenges. Every lean concept is about becoming faster, more flexible and more economical: Our outstanding example of successful application dates back to 2013 when we started thinking about making our Swingo production more efficient.

Naturally, the first step was to precisely analyse in the first place where potential may be wasted and where new potential can be opened up. To this end, we put virtually the entire production – including workbenches, toolboxes, shelves, etc. – to the test and newly thought out all workplaces using "carton simulation". An important finding:

#### Less is not only more, but also the prerequisite for optimised new assembly processes.

With this finding in mind, the Swingo cabin line at the German factory in St. Blasien received a new, brighter floor covering 800 m² and zones separated by different colours were introduced during the company holidays in the summer of 2014. In 2015, these improvements were also made in the rest of the Swingo

### Projects in 2016

assembly line. These measures were also taken in an effort to clearly separate the preassembly and assembly lines. And because an inconsistent lean concept would not be worth much, we also separated the logistics area from the assembly line: A new Kanban system enables a warehouse staff member to fill up the required material simply and in time using tugger trains - handily prepared for the colleagues in the assembly line. The staff members there are now responsible for both ordering material from the warehouse and ensuring that the workplace is constantly supplied with the required components and is handed over to the next colleagues in an orderly manner. On what is known as an "Andon board". the staff can track the planned orders, the current number of units and the status of the machines - according to the motto "better informed, more motivated".

The successful conversion of the assembly line from Stratos 2 to Stratos 3 deserves mention as a flagship project at the Dutch factory in Holten. Every single staff member was actively involved in this joint project from planning to implementation. In addition, the goods receipt process was successfully optimised; as a result, all newly received components are now available for the production process within no more than 8 working hours. Further process

optimisations in the Stratos 3 tack welding/welding shop led to the output having tripled as early as 2015.

At the factory in Kielce, Poland, the full conversion of the assembly line is worth mentioning as a lean production project, where two assembly lines (steel snow ploughs and lightweight snow ploughs) were merged into one line and the assembly area was additionally separated from the logistics corridor. At the fitter's shop, new saws (band saws and circular saws) and a new processing centre were implemented.

The first steps towards lean production have also already been taken at other production factories in North America (Meyer and Swenson) and in Norway (Tellefsdal). Moreover, as part of a joint workshop of all plant managers and lean coordinators in November 2016, further detailed project plans were defined for all factories, which are now being implemented.

### Becoming "lean" means becoming more efficient:

By now, more than 200 staff members have received further training, some of whom have also been certified. It goes without saying anyway that a lean concept can only work optimally if it is internalised by all staff members. Therefore, our comprehensive training was aimed at both making visible all potential and conveying all skills required for

practical implementation. In this process, the change in the cycle system has turned out to be very motivating for the staff members: Instead of only one, they are now responsible for several cycles, not only making them capable of working at multiple workstations – to better compensate for both times of absence and order peaks – but also significantly increasing their attachment to the machines!

### Operational Corporate Structure

The general managerial responsibility for the ASH Group lies with the CEO, but it can also be delegated to the members of the Management Board. The managerial responsibility for the individual divisions is incumbent upon the Division Managers. The parent company of all group companies is Aebi Schmidt Holding AG.

The ASH Group had previously been subdivided into four divisions: the

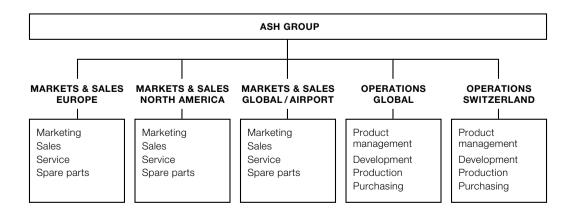
product division Aebi, the product division Schmidt, the regional division AS North America and the division Sales & Service.

Since 01.10.2016, the ASH Group has consisted of the divisions Market & Sales, Operations Global and Operations Switzerland. In addition, the sales regions have been subdivided into the areas of Europe, North America as well as Global/Airport.

#### SUSTAINABLE VALUE CREATION THROUGH CLEAR MANAGEMENT AND CON-TROL PRINCIPLES

Aebi Schmidt Holding AG, with registered office in 8500 Frauenfeld, Zürcherstrasse 310, and another business address in 8050 Zurich, Leutschenbachstrasse 52, is a public limited company under Swiss law. The Board of Directors and the Management 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.

### ASH Group since 1.10.2016



### **Areas of Application**

The areas of application of the ASH Group's products are manifold. Our extensive range of products comprises our own vehicles, attachable and demountable devices for individual vehicle equipment as well as intelligent product systems and customised services - we aim to constantly contribute to improving our numerous customers' performance capacity.





#### MUNICIPAL WINTER

The ASH Group is a world leader in the field of snow clearance and de-icing. Our snow clearing machines and snow ploughs are capable of removing any type of snow in any terrain at any altitude reliably and efficiently. When it comes to de-icing operations, our broad range of state-of-the-art spreaders also set standards especially as regards environmental protection: Thanks to the electronic control system, each of our feed systems offers maximum dosing accuracy.





### **MUNICIPAL SUMMER**

We boast the world's largest range of products in the field of sweeper technology. The extensive product range comprises truck-mounted, attachable and compact sweepers. Our machines stand out with their compact design, environmentally friendly technology and excellent sweeping performance. Street washers, sand cutter blowers as well as our own multipurpose transporters complement the summer maintenance equipment that leaves nothing to be desired.





#### **AGRICULTURE**

In the field of agricultural equipment, we offer a wide range of vehicles and equipment that are perfectly adapted to the varied requirements of our customers. With our popular Terratrac range, we offer extremely flexible carrier vehicles for steep slopes with front and rear attachment points. Our extensive product portfolio additionally comprises customised transporter models as well as the Combicut single-axle line. All Aebi vehicles and equipment meet the highest standards and are thus very efficient, safe, manoeuvrable, easy to maintain and durable.





#### **AIRPORT**

The ASH 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.





### RAIL TECHNOLOGY

The business segment of rail track clearance is represented in the market by the Beilhack brand. Outstanding development achievements, highest quality standards and exemplary

services have made Beilhack a leading specialist in snow clearance. For the highly specialised snow clearance on rail tracks. Beilhack has the appropriate solution in any case.





#### TELEMATICS - DMI

No matter in what area of application, the intelligent provision of data and their meaningful use is critical to the economic success of our customers. Therefore, we offer systems and self-developed products that allow for comprehensive and transparent documentation of human and machine performance. Our solutions permit an immediate clear statement of the amount and weights applied in the specific operation - thus showing the quality of all work performed.



### **SERVICE & SPARE PARTS**

ASH Service is characterised by a high availability of both service technicians and spare parts. The large number of spare parts in stock enables our numerous regional service technicians in their mobile workshops to minimise downtimes in our customers' operations. Our state-of-the-art warehouse quarantees the prompt supply of spare parts at all times.



#### **SFRVICES**

Efficiency advice - a precise analysis of the routes to be covered allows us to select the ideal combination of vehicles and their equipment.

Safety training – safety at work is the top priority not only for us, but also for our customers. In order to meet this requirement, the ASH Group offers professional educational programmes and practical training courses. **Financing** – ASH Finance offers

our customers collaborative financing solutions to make smooth operations profitable for all involved.

### Product range



#### **Municipal Winter**

- Snow ploughs
- Rotary snow clearance (motorised)
- Rotary snow clearance (attachable)
- Spreaders

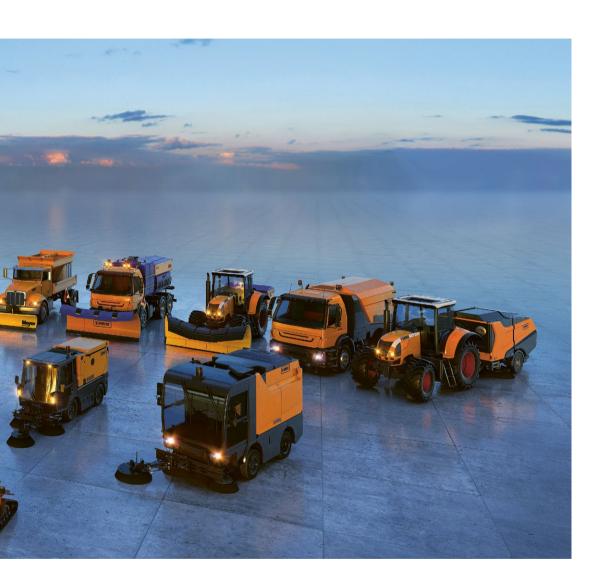
- Sprayers Multipurpose machines (spreading
- and spraying)
  Winter maintenance equipment for tractors
- Brine saturators
- Special snow ploughs

#### **Municipal Summer**

- Compact sweepers
- Truck-mounted
- sweeper Attachable
- sweepers Towed sweepers
- Street washers
- Snow cutter blowers
- Universal transporter
- Universal carrier vehicles

#### Municipal equipment

- Universal
- transporter Universal
- carrier vehicles Motor mowers
- Dump body



- Agriculture
   Carrier vehicles for steep slopes/ Terratrac

  - Multipurpose
- transporters
- Motor mowers

- Airport
   Snow ploughs
- Rotary snow clearance (motorised)
- Multipurpose machines (spreading and spraying)

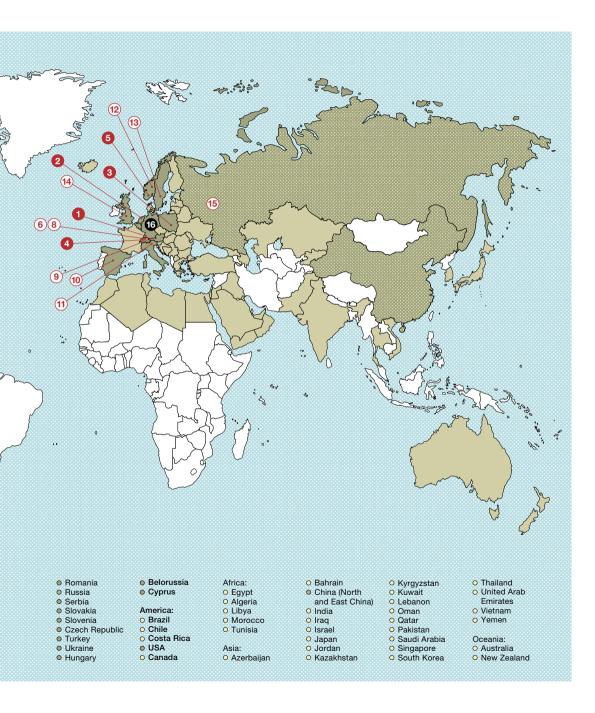
### Airport sweepersJet sweepers

- Rail Technology
   Special machines
- Multipurpose machines

### Our locations

The ASH Group maintains a global sales and service organisation that is being continuously expanded. Our customers in Europe are served by our own 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".





## Global markets, global opportunities

### **Europe**

The ASH Group continues to hold a leading position in most Western European countries. While it goes without saying that we are committed to defending and – wherever possible – expanding this position, the overall situation is dominated by steadily growing challenges.

The budgetary situation in the municipalities continues to be increasingly tight across all product segments, resulting in restrictive purchase activities: In practice, reduced budgets very often lead to delayed decisions and/or also to stricter contract terms – which is why large-scale projects, in

particular, have become unpredictable for us. Our winter equipment business segment was also affected by uncertainty as the winter of 2016 in Europe was much too warm again – a major disappointment that stands in contrast to our best year of compact sweeper sales.

The CHF/EUR exchange rate continues to be a problem for our business as pricing pressure in Switzerland remains high. Moreover, the decision in favour of Brexit resulted – at least temporarily – in disadvantages for us that were caused by socio-political factors: In June 2016, the

British market came to an almost complete standstill, but we were still able to return to a normal business level by the end of the year. As we had expected, the competitive environment became even more intense, especially due to the aggressive pricing policies of low-cost suppliers in Eastern Europe. It is indicative of the increasingly fierce competition that some of the contracts that had already been awarded were contested in court.

### **China and Asia**

We continue to be actively engaged in the growing Chinese market as well. Our repeat business in the airport segment is a clear sign of a positive overall development. In order to further expand our presence in China, we established our own sales organisation in Beijing in 2016.

In no other country of the world is the airport industry experiencing such a tremendous and rapid change as in China. While China still had 175 airports in 2011, this figure is expected to increase to about

250 by 2020. The Civil Aviation Administration of China (CAAC) aims to enable 82% of the Chinese population (about 1.07 billion) to reach an airport within 100 km - at present (2016), 60% (about 780 million) are able to do so. The municipal business will also continue to remain a focus, with the purchase activities being often directly connected to the regional infrastructural measures. Overall, the municipal markets in Asia show uneven, but still very dynamic, development and our potential

here is correspondingly promising.

#### **North America**

By acquiring the companies Mever and Swenson in 2015, the ASH Group created the promising strategic basis for entering the lucrative North American market. The northern part of the U.S. and Canada represent a highly interesting future market, especially (but not only) for winter equipment. For more than three years. the American market has been picking up speed; the unemployment rates are steadily decreasing. The willingness of municipalities, private individuals and corporate organisations to make investments is correspondingly high. Overall, a trend towards system providers is becoming apparent, which makes it necessary to have a diversified portfolio to stand out against competitors.

For our group, the potential in the airport business is particularly promising. In terms of market strategy, it is of particular significance that American winter equipment standards are 20 years behind those of Europe, in particular those of the ASH Group. In addition, the significantly arowina environmental consciousness among Americans is very much in line with our product policy ("green mobility") - as regards both winter and summer maintenance equipment. Whereas the ASH Group has so far managed its sales activities in North America via local traders, we will expand our activities in the long term via our American business locations with established customer bases.

### **Global opportunities**

One thing is certain: We will have to continue addressing the increasing international competitive pressure exerted by local low-cost suppliers and trends towards collaboration among our competitors. Furthermore, our future success will increasingly depend on a reliable political environment.

Europe: Even though the signals from the euro area have recently been more promising, the development of the markets will remain uneven in the foreseeable future. Whereas

the upward trend in Southern Europe is expected to continue, a substantial recovery is not apparent in the eastern part of the continent.

Asia: Our positive estimation for Asian countries was once again confirmed by lucrative repeat business; China, in particular, continues to show strong willingness to invest – our new sales organisation in Beijing puts us in an excellent position.

North America: Due to the extensive need for modernisation of both vehicle fleets and

infrastructures, this market is gaining momentum again – there is great pent-up demand for high-quality and sustainable solutions. Unexpected sales successes in the winter equipment segment and great interest in our airport solutions make us confident about the future.



# MUNICIPAL WINTER MAINTENANCE EQUIPMENT: SAFETY AND EFFICIENCY THAT PAY OFF EVERYWHERE.

Despite another far-too-mild winter in Europe and increasing pressure due to aggressive competitor pricing, we once again successfully defended our strong market share in 2016.

Although our business in Europe did not meet our high expectations, our expansion strategy paid off this year, especially in the U.S., where the integration of our North American companies Swenson and Meyer soon produced a very pleasing increase in orders. In contrast to many European regions, climate change is less noticeable in the northern part of the U.S. and Canada, where winters continue to be colder and snowier.

### New markets – new opportunities!

Overall, it must be said that our 2016 winter business again fell short of our expectations. We were unable to reach our ambitious sales targets in either product sales or aftersales. Again, this was due to a far-too-mild winter in Central Europe, tight public budgets and continuously increasing competitive pressure from Eastern European suppliers with aggres-

sive pricing policies. The worldwide market nevertheless continues to offer a wide range of opportunities which we, as a globally operating group, are determined to seize.

Our acquisition of Meyer Products and Swenson Products in 2015 soon proved to be a groundbreaking move, which – thanks to the support of our American colleagues and the established local customer base – successfully kicked off the first sales of Schmidt products: It already became apparent that there is a tremendous need for modernisation in the field of machinery and equipment; since the U.S. economy is noticeably recovering, the willingness of municipalities to make investments is expected to pick up speed.

Moreover, the growing market trend of digitisation has also found its way into winter maintenance equipment, with the collection of objective data serving as an indispensable foundation for sound decisions regarding safety, efficiency and cost transparency. Our technology company DMi enables us to offer a wide range of products for data acquisition during operation, allowing our customers to receive reliable real-time information about the amount of spreading material used and any potential safety issues. The combination of these selling points also puts us in an ideal position to meet future challenges!

### New products – new sales arguments!

The acquisition of Swenson and Meyer enabled us to once again expand our varied range of products for municipal winter maintenance operations. The product range of the ASH Group comprises machines and equipment for snow clearing and de-icing operations as well as a wide range of attachments for trucks, Unimog and tractors. It is our mission to continu-

ously optimise these products, which set standards in many areas, in terms of technical superiority, operational efficiency, comfort and quality; in 2016, we were once again able to make a great deal of detail improvements to our product range that are important to customers.

#### **Ploughs**

This year, we introduced the new SNK.2 snow plough, which will completely supersede the SNK.1 range from 2017. While redesigning this plough, the primary focus was placed on adaptation to new market requirements, such as new cutting edges and improvement of the lifting system for larger variants. Another major focus is the harmonisation of the compact electrical systems, while also modernising them in line with the latest standards. Moreover, we expanded the areas of application of our easyto-operate lightweight "EN" plough to include other carrier vehicles, such as our Swingo compact sweeper, which is now optionally available as a full "winter package" (incl. spreader). As a result, the Swingo can also be used profitably in the cold season.

North America saw the introduction of the "European" plough types (Cirron, Tarron, SNK, Tellefsdal, etc.) – the main challenge being to synchronise the attachment systems (a European DIN mounting plate is not available in the U.S.).

#### Spreaders and sprayers

The Syntos range was supplemented by adding another variant. Previously available with a hopper capacity of 0,8–1,5m³, another model with a hopper capacity of 1,7m³ was added to the Syntos range.

The entire Syntos range is suitable for both mounting on loading platforms, pick-up trucks

or narrow-track vehicles and attachment to towing vehicles (small vehicles, tractors, passenger vehicles with all-wheel drive). The easy-to-clean hopper is made of polyethylene, the chute and the spreading disc of stainless steel – a material combination that guarantees perfect corrosion protection.

The rollout of the Stratos 3 platform to include multipurpose machines (spreader/sprayer) as well as the XL range (9–14m³) is planned for 2017. Both machine types were tested successfully as early as winter 2016/2017. In addition, a U.S.-specific adaptation (incl. modification of the hydraulic system) was introduced, accompanied by the market launch of Stratos 3 in North America.

#### Snow cutter blowers

Our FS attachable snow cutter blower range was comprehensively redesigned in terms of clearing capacity, drive and snow ejection, enabling us to offer power hydraulics for attachments to carrier vehicles such as wheel loaders, yard loaders and tractors. To make optimum use of the carrier vehicle's drive power, we additionally redesigned the cutting drum and the blower wheel, resulting in an increase in clearing capacity of about 25%!

Our Supra 4002 and 5002 snow cutter blowers are now available with EuroMot4 engines to meet the latest European emission standards. To optimise the clearing operations in challenging terrain (e.g. mountain passes), a GPS-guided control system was additionally integrated.

#### Control system

In 2016, we equipped our SK 660 large demountable spreader with the innovative EvolutionLine control platform. The implementation of the new generation of control systems –

which was started with our Stratos 3 as early as 2014 – will also be extended to other areas of application (e.g. sweepers or airport equipment) by including further software products. Our goal is to be able to use the EvolutionLine in all spreaders and ploughs. Moreover, the Smart WinterCare concept – our intelligent GPS guide system for vehicle route control, planning and analysis in de-icing operations – was further optimised in collaboration with DMi.

### Price stability and cost reduction – key success factors.

Price stability and cost reduction are the key success factors in purchasing. We are therefore very pleased to have achieved further reductions by renegotiating the prices with some of our suppliers. At the same time, we are naturally always interested in both close and continuous collaboration: This is the only way to optimally coordinate processes and save unnecessary costs. Due to the drop in raw material prices, the prices of semi-finished products and sheet metal also fell, creating some financial freedom.

Moreover, further price reductions were arranged for 2016. In addition, an increase in the percentage of framework agreements with a full contract package (framework, quality, tool and development agreements) was achieved. Our terms of purchase and our supplier risk analyses were updated as well.

### New production conditions – new efficiency!

Introduced as early as 2014, our new "Fit for Tomorrow" efficiency programme has proved very successful in spreader production in Holten, leading to a significant increase in efficiency in both production and logistics (more information on pages 10–12). In keeping with

the philosophy of lean manufacturing, we largely detached the manufacturing organisation at the Holten factory from the Stratos 2 in 2016 to build the Stratos 3 on our new assembly line. In the peak season, larger quantities were assembled here for the first time - a mix of altogether eight spreader types including the Stratos 3. We are very proud that this new, highly efficient multi-mix line was prepared, planned and implemented for the most part by our own staff members. The implementation of "Fit for Tomorrow" measures at our Polish factory in Kielce, which is responsible mainly for snow plough production, allowed for significant improvements of the production processes. In addition, we created the basis for efficient cross-factory collaboration. To this end, we developed an online platform to visualise the continuous improvement cycle - of course, our two new American factories were also integrated into the "Fit for Tomorrow" programme, which will be introduced in all organisations in 2017 as part of the new "takeoff:21" strategy.

#### North America.

To further establish the Schmidt brand in the North American market, we launched a separate website which exclusively deals with our winter maintenance equipment. As a matter of course, we will continue to offer the established Meyer and Swenson brands - the factories in Cleveland (Meyer) and in Lindenwood (Swenson) implemented some forwardlooking modernisation measures in 2016. Meyer, for example, installed a new plough assembly line to offer customers unbeatably short assembly times. Swenson once again made investments into the paint shop (conventional painting and laser technology), resulting in another significant enhancement of product quality standards. Moreover, both the Swenson



"Working with the Schmidt Supra is a real privilege. During times when passes need to be cleared, it is like a second home for me. I spend many hours a day operating it and every time I'm amazed with the machine's power and supreme capacity. Even though you should always have respect up on the mountain, I feel very safe in the Supra."

Michele Delfoc, Luigi Filippi SA, Via Gottardo, Piotta

and Meyer teams received advanced management training to allow even more efficient and sustainable business management.

### New challenges – new dynamism!

In an effort to counterbalance climate change and the increasing competitive pressure in Europe, we decided to internationalise the winter business as consistently as possible in the long term. Both the acquisition of Tellefsdal in Norway and that of Meyer and Swenson in North America serve the purpose of expanding our range of products and becoming more flexible in our markets while increasing the level of market penetration. In 2017, both the European and the U.S. market will see the introduction of numerous innovations, which will give fresh impetus to the market and ensure a competitive edge.

As part of our "takeoff:21" strategy, we will be consistently expanding and optimising all development, production and service processes.







### MUNICIPAL SUMMER MAINTENANCE EQUIPMENT: MAXIMUM SWEEPING PERFORMANCE WITH MINIMUM EMISSIONS.

Although the summer maintenance equipment market continues to be hotly contested due to the tight budgets of municipal clients, we were able to generate pleasing overall growth in sales and even marked record sweeper sales in 2016. We are also pleased that we made rapid progress with the implementation of our lean production lines, enabling us to significantly reduce our manufacturing times.

### The markets are favourable – and we are in a leading position.

Although budgets continue to be tight, the overall market dynamics for municipal summer maintenance equipment are increasingly favourable. Whereas the positive trend which had already been apparent last year in important countries once again intensified, the situation in the low-sales countries was in line with our forecasts. Pleasingly high growth rates can also be reported for the recovering Spanish market, where we became the market leader in

the field of compact sweepers this year for the first time. Our business performance was also positive in Italy, where our sweepers again produced solid results. In Germany, we were able to once again become the market leader in the 2m³-compact sweeper segment.

By contrast, the market development in the UK was temporarily dramatic due to the decision in favour of Brexit, which is why we hardly sold any machines during the summer as a result of the overall uncertainty – but we were able to stabilise sales at a normal level towards the end of the business year.

### Our products keep getting better – to the benefit of our customers.

Our product range in the municipal summer maintenance equipment segment comprises compact, attachable, towed and truckmounted sweepers for cleaning roads and streets, multipurpose transporters, carrier vehicles for steep slopes and motor mowers, in addition to other special-purpose products. Thanks to a multitude of innovations and specifications, included in our compact sweepers, we are a global leader in the field of summer maintenance equipment. The advancement of our machines and vehicles is always designed for operational efficiency, cost-effectiveness and sustainability: In 2016, we were once again proud to have offered numerous products that continue to set new standards and pave the way for the success of our customers.

#### **Towed sweepers**

Our mechanical compact sweepers are manufactured in two sizes, MSH070 and MSH150, with the smaller one being designed in two variants specifically for the market requirements in Scandinavia and Western Europe. Following the successful product integra-

tion of the mechanical sweepers at the beginning of the year, the production of the MSH070 and MSH150 was relocated to our Polish production facility. Our factory in Kielce already produced 50 machines in the first year, with the first deliveries having been made to Sweden.

#### **Compact sweepers**

Our popular and very powerful Swingo compact sweeper was also enhanced with additional features for our customers: The new Swingo 200+ is a particularly eco-friendly and resource-saving piece of equipment for urban areas - its technology is based on a combination of a pressurised water recirculation system and Koanda air circulation system, reducing the emission of harmful particulate matter by up to 95%. At the same time, new features such as the optimised steering column were integrated, significantly enhancing ergonomics for the driver thanks to individual adjustment options. This machine, which also delivers in terms of cost-effectiveness by significantly reducing time-consuming stops thanks to its low water consumption, earned us the VAK Innovation Award when we presented it at the IFAT.

From our range of highly manoeuvrable compact sweepers, 2016 also saw us successfully place the MFH CS550 on the Swiss market in addition to our MFH CS250: Following the debut at the Suisse Public in 2015, we were able to carry out the first few major orders and deliveries in the past year. These machines also come with a Koanda system and are particularly well suited for use in urban areas.

In order to meet the latest technical requirements, our Cleango 500 compact sweeper was equipped with a VM Euro6 engine last year so that our entire range of compact sweepers now complies with the emission standards prescribed by law. In addition, an ergonomically shaped

multi-functional drive lever was introduced, allowing comfortable control of all sweeping functions and driving commands. With a hopper capacity of about 4 m³, the Cleango 500 offers almost the capacity of a truck-mounted sweeper while combining this advantage with the manoeuvrability of a compact sweeper.

#### **Truck-mounted sweepers**

Our new SK 660 truck-mounted sweeper also made its first major appearance at the IFAT. In addition to its compact and consistently well-thought-out design, the steering on the basis of the EvolutionLine control panels is another true highlight. This truck-mounted sweeper stands out with enhanced performance, maximum efficiency and an innovative operating system. The modular system makes it possible to satisfy individual wishes of customers as regards the carrier vehicle. The encapsulated engine compartment reduces the noise level while also being easy to maintain and repair. The SK 660 deserves the title of being "guiet and environmentally friendly" for a reason. Since its harmful particulate matter emission level is well below the required maximum level, it received the 3-star PM10 label. Owing to the adjustable brush ground pressure and brush speed, brush wear is reduced to a minimum. The core component is the high-performance suction fan - powered hydraulically and operated from the driver's cab. The flowoptimised suction fan is fitted directly on the hopper and the suction nozzle with integrated brush roller permits high suction performance even at low fan speed - with the operating speed being up to 15% higher compared to other models. Following its presentation at the trade fair in Munich, the sweeper was also successfully introduced in the UK, Europe's largest truck-mounted sweeper market.



"We have a responsibility to ensure that Poole's natural and built environment, including public spaces and where we live, are safe, clean and attractive. To ensure we are able to deliver on this commitment, Poole employs a small multi-skilled team utilising innovative high-tech equipment. That's why we use Schmidt sweepers!"

**John Burridge,** Fleet Services Officer, Environmental and Consumer Protection Services, Borough of Poole in Dorset (UK)

#### Street washers

Originally designed for winter service, our Straliq Cityjet (de-icing by spraying brine) has been converted into a street washer. Its operating principle permits the cleaning of dirty and dusty roads using high-pressure water jetting. This new machine has been developed specifically for the Southern European (Spanish) market. The redesign includes the implementation of the control system based on EvolutionLine control panels for most efficient use.

### "Leaner" at all levels of production.

In 2016, we again implemented numerous improvements in our factories as part of our "Fit for Tomorrow" programme which will provide us with essential added value. For example, owing to our consistent supplier management and continuous process optimisations, we were able to considerably improve the quality

of compact sweepers – resulting in enhanced customer satisfaction and a corresponding reduction in warranty costs.

In the field of inventory/materials management, we implemented a new barcode scanner system to enable faster and error-free data entries. The material supply using kanban and tugger trains, which had already been introduced in 2015, proved to save a lot of time. Furthermore, the high-bay warehouse was modified by introducing SLCs (Schmidt load carriers). The receiving department was completely redesigned by integrating a repacking station with the aim of providing optimum lot sizes in the assembly line.

The conversion of the entire Swingo manufacturing area on the basis of lean production also played an important role, increasing the manufacturing capacity by up to 66%. The flexibility in manufacture was also improved; in this

connection, the staff members were additionally trained in multi-workstation capability. By making targeted investments, it was possible to expand the production area of our 2 m³ compact sweepers to become a highly efficient assembly area featuring a new handling system and ergonomic workbenches.

In particular, a traverse system for the Swingo line was installed as early as January 2016 – the new system made it possible to further optimise the production processes.

The Swingo line's highly proven lean concept was also adopted for the 4 m³ Cleango line in 2016. The Cleango's new production layout was immediately put to the test by the strong volume of incoming orders, operating very successfully at its full capacity of six machines per week. As a result of the positive experiences with the new Swingo production line, the new production line for the new SK 660 compact sweeper was also set up in August 2016. Comprehensive figures and data were collected to optimise the acceptance process. Our modernisation measures enabled us to set new records in the production of both the Swingo and the Cleango!

The introduction of mechanical sweepers in Kielce made it possible to utilise the factory's capacity more consistently. Expanding production to include mechanical sweepers counteracted the seasonal influences that affect the manufacture of winter maintenance equipment.

### Summer maintenance equipment has great potential – for businesses with a clear strategy.

Although we are experiencing a sharp increase in competition, we will continue to offer our customers exclusively high-quality products at appropriate prices. We know that competitors with aggressive pricing policies will

achieve some temporary successes – but even customers with tight budgets will eventually come to realise that economically viable products can neither compromise on quality nor be available "off the rack". Our concept of quality is both comprehensive and focused: Our innovative commitment to creating products that provide maximum customer value will continue to be the foundation of our business success.



vative spirit, 100% passion and a healthy dose of down-to-earth attitude.





# CARRIER VEHICLES FOR STEEP SLOPES & MULTIPURPOSE TRANSPORTERS: UNIQUELY INNOVATIVE AND HIGHLY VERSATILE.

In 2016, we once again introduced numerous groundbreaking product innovations to the market. With the future in mind, the vehicles we offer our customers today are designed to fully meet the requirements for "autonomous driving" and "electromobility". Again, it was essential to ensure maximum efficiency in production and highly motivated staff – with successful results.

# We are successful in a difficult market environment.

The agricultural industry has been going through increasingly tough times in recent years: Dropping agricultural product prices, unreliable government and EU subsidy policies as well as growing competitive pressure from overseas and climate change have taken a heavy toll on most farmers – many of them are forced to revise their business models and to seek new profitable niches in order to secure their income. Although the situation for many

agricultural businesses is by no means easy, we are still able to do a lot for our customers thanks to our extensive experience in providing efficiency, product and financing advice. It goes without saying that we only sell products that yield the best added value for our customers.

Our highly innovative and versatile product range again enabled us to achieve our targets in 2016. At the same time, it must be noted that we have been seeing very different developments within our core markets. While we were able to slightly increase our market share in the segment of our Terratrac carrier vehicles for steep slopes and our powerful single-axle Combicut motor mowers, we experienced a slight decrease in sales in the transporter segment. The American market also appears to be promising for our Aebi products. The integration of the two North American companies Meyer and Swenson into the ASH Group allowed us to establish a sales network in the North American market that we will now gradually expand. The results we have achieved so far also make us confident about the coming years.

With our Aebi brand, we want to offer products that not just meet every need, but also continue to set new standards. In this endeavour, 2016 saw us launch two outstanding product innovations which immediately received a strong response from our customers. Our Terratrac can now alternatively be operated autonomously by employing GPS for driverless use. The route to be covered is planned automatically within the predefined field of work or can optionally be remote-controlled. The vehicle offers mainly economic advantages by enabling the farmer to focus on other tasks while it is in operation. Our new Aebi EC electric carrier vehicle, which delivers maximum performance with zero emissions, attracted even more interest - we can report that trends such as "autonomous driving" and "electromobility" have now also reached the agricultural segment.

# The Aebi brand stands for innovation – and therefore always stays in motion.

The Aebi brand name is synonymous with a both versatile and innovative product range as well as superior quality: Our Terratrac carrier vehicles for steep slopes are the world's premier choice for operations in sloping terrain, the multipurpose transporters are ground-breaking from concept to comfort, our single-axle motor mowers deliver unrivalled power – and Aebi once again stood out with one-of-akind products in 2016.

### Carrier vehicles for steep slopes

The market launch of the TT211 Autonomous was a true highlight of 2016: The autonomous Terratrac delivers enhanced productivity. precision and economic efficiency by combining the tried-and-tested Aebi double-axle carrier vehicle with the benefits of driverless operation. Once it is programmed, the Terratrac autonomously mows not only the steepest slopes but also embankments, noise barrier walls or parks, enabling the driver to simultaneously take care of other tasks on site. The operating routes can be repeated to the centimetre. During practical application, this means less overlapping of operating widths, in addition to saving fuel and time. Moreover, the additionally integrated remote control improves work safety, for example when working in unknown or military areas. It enables the driver to operate the Terratrac from outside the danger zone as if he was sitting at the wheel. Of course, conventional, manned operation of the Terratrac is possible as well. The Aebi Terratrac "Autonomous" was nominated for the Swiss Innovation Award in November 2016.

The new generation of our TT241 and TT281 was also introduced to the market in 2016. Designed for enhanced efficiency, the machines have been significantly improved in their hydraulics, cooling and drive, substantially reducing fuel consumption while increasing performance. Another particular focus of our research and development was on comfort, about which we had previously conducted customer surveys. The result is a very clear and straightforward cab design, a very-easy-to-understand and at the same time uniquely multifunctional drive lever as well as an intuitive user software that leaves no questions unanswered. Although this new generation does not mark the end of our development, these machines have once again set new standards. A special focus was placed on engine technology by employing the latest EuroMot IV and IIIB (TT240) engines, which deliver considerably higher performance at reduced fuel consumption. In addition, we have revised the cooling to turn on automatically as needed, saving fuel and reducing noise. The drive lever has also been fully integrated into the armrest, with a very positive effect on ergonomics.

### **Electric carrier vehicles**

The fully electric (manned) EC170 and (unmanned) EC130 carrier vehicles are brand-new additions to the product range that are particularly interesting for customers who find the TT carrier vehicle for steep slopes too big and the CC motor mower too small. Powerful and extremely versatile thanks to their many attachment options for year-round use, these carrier vehicles are supplied by an efficient lithium-ion battery and powered by two strong electric disc motors. Both machines have a peak power output of 18 kW and 1000 Nm torque – making them a real pleasure to drive and work with.

Our innovative carrier vehicles produce no emissions or noise while delivering maximum efficiency: The electric ECs are an absolutely unique selling point that will satisfy many customers!

### **Multipurpose transporters**

We have integrated a wear-free auxiliary brake into our VT450 Vario and TP420 multipurpose transporters, which is particularly useful for those of our customers whose agricultural operations often involve driving downhill for extended periods of time. Given its versatility, we have further enhanced the Aebi TP420 in both its design and market strategy: An additional hydraulic pump now permits the use of a spreader and plough, making the transporter now also ideally suited for municipal operations. The versatility and modularity of our VT range also proved its worth during a new project in Germany that involved the disposal of nuclear waste. Since the vehicles were needed 1600 metres underground, they had to be completely taken apart to be transported down the shaft. Once they arrived at the bottom, it was possible to quickly put them back together.

# Efficient production – from processes to purchasing.

Every Aebi product reflects the experiences of our highly skilled and versatile development and product management teams. It takes a deep and comprehensive understanding of a wide variety of customer requirements and wishes for us to be able to manufacture products that are truly relevant and therefore marketable. One thing is always clear: Every innovation and every single idea must be realisable in the most cost-efficient way possible. With that mind, increasing efficiency, quality and delivery reliability was again a key focus of

our production in 2016 – and was successful put into practice. In autumn, our assembly line was set up for the new Terratrac TT281 and TT241 products and implemented on time. As part of our "Fit for Tomorrow" project, we were able to optimise the material supply, thereby further reducing setup times. The improved processes also enabled us to considerably increase our delivery reliability. Furthermore, consistent compliance allowed us to adhere to the budgeted product costs in the product requirements documents in all projects.

### Purchasing.

Due to the cost pressure caused by the strong Swiss franc, we have stepped up our efforts to consolidate suppliers since as early as 2015. In some segments, it became apparent that subassembly procurement can be even more efficient than parts procurement – this realisation also affects the selection of suppliers. In the future, we will therefore focus on suppliers who not just turn our drawings into products, but can provide us with efficient support as early as during the development stage.

# Our prospects are good. But we will make them even better.

The growing requirements for our products as well as their increasing complexity require more extensive collaboration with universities, technology centres, testing institutes and industry partners. In order to improve our products in the long term and further increase the internal know-how, we also work with external specialists in the field of design-to-cost. The new European authorisation regulations effective from 2017 will entail considerably higher technical requirements. The new regulations will also apply to our existing products (Transporter, Terratrac and Combicut), which is why



"Whether they are deployed on steep slopes or to move large amounts of snow, when it comes to the challenges of working on a slope, the Aebi Terratrac and the EC170 are the perfect addition to the snow groomers. It is impossible to imagine racing slopes being prepared for the Ski World Cup without using such machinery."

Robert Lehmann, Race Director at the Lauberhorn Ski World Cup

these will also need to be homologised by the effective date of the standard. For this reason, we reinforced our team in the fields of verification and homologation for 2016.

With the EC130 and EC170, two ground-breaking products have been introduced. By offering these 100% electrically-powered products, Aebi meets the trend towards renewable energy and zero emissions. This groundbreaking technology will also be included in other product lines. Of course, the production of the new ECs is based on the latest standards of lean manufacturing.

The market launch of the TT241 and TT281 in November also marked another perfect addition to Aebi's product range. All products clearly stand out from the competition in terms of their quality, performance and efficiency.







# AIRPORT EQUIP-MENT: THE PREMIUM BRAND SCHMIDT STANDS FOR FIRST-CLASS AIRPORT EQUIPMENT WHICH WILL ALSO ENSURE GLOBAL GROWTH.

Whether innovative power, efficiency, versatility, quality, sustainability or service orientation: The name Schmidt stands for all attributes that characterise a leading supplier of first-rate airport equipment now and in the future.

Given our many years of experience and comprehensive expertise, we believe that the time has now come for the Schmidt brand to become a major global player in the airport equipment segment. Being one of today's most well-known system providers in Europe, we will also considerably intensify our activities in Asia and the U.S. – we are determined to ensure further growth, also on a global scale.

# The markets continue to be dynamic – offering great opportunities.

Compared to the previous year, we were able to increase our sales in the airport equipment segment in 2016. Despite a solid airport

market with annual growth rates, we also expect increasing competitive and margin pressure in the airport equipment segment. We are perfectly prepared for the various global markets and requirements and are therefore very optimistic about the future on the whole.

Whereas global European and North American airport operators aim to continuously ensure that their airport equipment meets the legally required safety and environmental standards, the Chinese and Russian markets are additionally characterised by the expansion of existing and the opening of new airports. Our position as an innovative system provider is strengthened by the fact that both a new awareness of mobility and traffic and the requirements for efficient and sustainable technologies will continue to increase in China.

In North America, we have been seeing a strong increase in environmental consciousness and demand for high-tech solutions from one source over the last few years – our technological edge will again constitute a clear competitive advantage. The response at the IASS (International Airport Snow Symposium) in Buffalo, where 500 players of the most important U.S. airports were represented, was accordingly positive: We are very confident about being able to establish our Schmidt brand in the North American market in the long term! By acquiring Meyer and Swenson, we have also locally created an excellent strategic basis for our airport equipment.

# Our product range: consistent, forward-looking approach continued in 2016.

Whether both versatile and powerful innovations for efficient snow clearing and de-icing operations, high-tech sweepers for high speeds or pioneering control technologies for highly

economical spreading and information systems: We are world leaders in the field of airport equipment and have the appropriate solution for all our airport customers throughout the world.

### Jet sweepers

In 2016, we again implemented a number of product optimisations that will constitute further important selling points. A focus was placed on the CJS (the compact machine for snow clearance on runways, taxiways and aprons) and TJS (works in combination with a towing vehicle) jet sweepers. In line with our philosophy of offering eco-friendly technologies whenever possible, we fitted the carrier vehicles (Arocs by Daimler is used for our compact CJS) with low-emission Euro6 engines and upgraded the auxiliary engines to the Euro-Mot4 standard, bringing both the CJS and the TJS up to the most state-of-the-art level in terms of engines.

In collaboration with truck manufacturer Daimler, we reinforced the chassis of the Arocs carrier vehicle. This measure has considerably increased the permissible (weight) loads when attaching front-mounted ploughs – making it possible to now also use the carrier vehicle in combination with the large airport ploughs.

In order to also visually demonstrate the innovative power of our airport vehicles, the hoods of the two machines were also redesigned, which we presented for the first time at the "Professionals on the Airport 2016" airport event. The new design of our CJS compact sweeper was particularly well received by the visitors: The new machine was perceived as a successful overhaul with a dynamic and functional design – a significant image boost in international competition! The new generation of the CJS and the TJS also features improved access to the battery, the hydraulic unit and

other internal components – contributing to reducing maintenance times. In addition, a new fan system almost completely prevents fine snow particles from being drawn in.

### **Truck-mounted sweepers**

We also fitted a low-emission EuroMot4 auxiliary engine in our AS 990 truck-mounted sweeper developed specifically for airport applications – the first machine equipped with this engine was delivered to a German customer in 2016.

### Snow cutter blowers

Already equipped with EuroMot4 engines since the beginning of 2015, our tried-and-tested Supra 4002 and 5002 snow cutter blowers now also meet the latest European emission standards.

# Optimum production conditions for maximum success.

As regards our production, 2016 saw a rising number of incoming orders for our versatile AS 990 truck-mounted sweeper, which is why we accordingly adapted and optimised the production processes. For example, all airport vehicle production lines were equipped with new tugger trains, ensuring much more efficient material supply. Our factory in Poland, which is responsible for supplying welding parts and snow ploughs within the airport segment, was also further expanded and modernised. Apart from that, we naturally also take all measures in the airport segment as part of our "Fit for Tomorrow" programme to make our production as efficient and customer-oriented as possible.

### The prospects are good.

The airport market has seen more dynamic development than any other market for years.



"The runway has to be available for Beluga deliveries all day from 06.30 am to 11.59 pm. We continually assess our snow fleet and how we can improve our equipment. The Schmidt equipment has proved very reliable, with good after-sales service and technical back-up."

Nick Trueman, Operational Compliance Officer Areodome Management, GWLUA Airbus, Great Britain

The continuously growing passenger numbers - by 6% on a global scale in 2016 alone - attest to a trend that will also continue in the future. The temporarily low oil prices and the increasing competition among airlines make travelling by plane affordable for more and more people. Progressing globalisation also greatly contributes to air travel remaining one of the most attractive ways of travelling for an indefinite period. Business success is nevertheless not guaranteed in this segment either: Anyone who wants to convince airport operators not only has to offer premium products and services, but also have a long-term strategy to reflect the major future trends. The increasing trend towards intelligent safety concepts (keyword: visual tracking systems), driver assistance systems to increase efficiency (remote control systems and/or autonomous snow clearance) as well as green technologies (for example jet sweepers fuelled with biogas) continue to bear

great sales potential. As regards our products, the prospects for our redesigned TJS and CJS jet sweepers are particularly positive. Equipped with new environmentally friendly engines and a new modern design, they will help us reliably defend our solid position against the increasing number of competitors. Moreover, we are convinced that our customers will particularly benefit from integrated solutions from a single source.

Our global orientation allows a positive forecast for the next few years. In contrast to the uncertain Russian market, the market in Asia is experiencing dynamic growth and North America has huge potential. Our long-term business relationships we have established over many years as well as our excellent reputation as a premium full-service provider offering customised solutions will help us achieve our ambitious goals.







# RAIL TECHNOLOGY: WE PROVIDE SO-LUTIONS THAT FEW OTHERS CAN OFFER.

This year, we were again able to implement large-scale projects and were awarded additional contracts by our satisfied customers. In addition to the strong growth in the number of potential customers, our successful presence at the Innotrans 2016 in Berlin (leading international trade fair for transport technology) also confirms that the decision to revitalise the rail technology business segment was the right move to make.

### A small market bearing great potential.

Our rail technology business segment is represented in the market by our product brand Beilhack – a name that is synonymous with unique expertise in rail track clearance that is known throughout the world: Beilhack railway snow blowers offer unparalleled quality and efficiency; a great number of machines have been installed and used for decades. We sell and develop solutions with a focus on the field of winter service: The varied product programme ranges from attachable snow clearing units and shunted snow clearing machines to automotive high-performance snow blowers with a clearing capacity of up to 22 000 t/h.

Although the resurgence of this business segment was sparked by the need for modernisation of our snow blowers, we now also have entirely new projects in prospect. In addition, we will again efficiently use our very extensive database comprising all relevant railway companies and rail operators for our marketing activities in 2017.

Our specialists' high level of professional expertise in rail technology constitutes a great competitive advantage for us: We are looking forward to also tackling the upcoming projects of several other railway companies.

### A good year with new expertise.

The project business in the rail technology segment typically involves relatively complex decision-making processes and extended runtimes. To ensure long-term success in this area, individually customised solutions are just as indispensable as the necessary level of comprehensive expertise and flexibility - these important requirements are quaranteed to be met by the ASH Group. The 2016 business year was dominated by repair orders which we executed successfully, for example the overhaul of the HB12 driver's cab as another project for Matterhorn Gotthard Bahn and a new HB blower head for the Norwegian National Rail Administration. Moreover, we once again completely redesigned the PB400 railway snow plough, making it possible to attach it to the rail track vehicles of more manufacturers

# A strong company with a first-class team.

Our newly created team for this business segment with a focus on development at the St. Blasien location proved highly successful in 2016 – just like the direct collaboration between the development department and the

customer, which, with the involvement of the pertinent key account manager, allowed us to offer tailor-made technical solutions, detailed coordination processes and very short response times.

To be able to respond as flexibly as possible to the expected new projects, we specifically trained additional production staff in rail technology, with a particular focus on our certified welding expertise.

In line with our increased sales efforts, we also continued to expand the necessary procurement activities. The additional strategic purchasing location made it possible to efficiently use the newly created space in the procurement area of "steel construction and hydraulics" for procuring high-quality railway components. Of course, our selected suppliers possess the officially required railway authorities' licences.

# An exciting business segment with bright prospects.

The consistently positive experience we have had with already executed orders will provide a solid basis for all future projects. Follow-up orders and orders from new customers are in prospect – we are sure that the rail technology business segment will be seeing a very positive development in the coming years.



Clear track ahead – the Beilhack HB10 snow blower on the Oberalp Pass. In 2015, the more than 50-year-old "veteran" was completely overhauled at the factory in St. Blasien and handed over to Matterhorn Gotthard Bahn just in time for the 2015/2016 winter season. The HB10 named "Tschamut" has since then been used in winter for these challenging snow clearing operations at an altitude of about 2000 m.







# TELEMATICS: WE WANT OUR CUS-TOMERS TO HAVE EVERYTHING UNDER CONTROL AT ALL TIMES.

The smart integration of innovative information systems is an integral part of our philosophy of providing our customers with maximum added value. Reporting of spreading material consumption or routes: By providing our machines with a digital data acquisition system, we put our customers in a position to precisely evaluate the safety, efficiency and profitability of all operations in real time. Our software company DMi enables us to develop practice- and user-oriented solutions, helping each of our customers connect to their future in a sustainable manner.

# The market is ready for smart integration systems.

Since the acquisition of DMi (Data Mining Innovators) International BV by the ASH Group, the market opportunities for digital-based information systems have increased significantly. Whether in winter service, summer service or airport technology: Intelligent software systems, which serve to increase efficiency, safety or operational comfort, are increasingly re-

quested – an unstoppable trend which bears enormous opportunities, but presents our developers with the greatest challenges. In order for us to not just follow this trend but be the trendsetter ourselves, we have invested a great deal of work in the field of telematics. The market-leading position of the ASH Group enables us to quickly convince our global customers of the numerous benefits of innovative information systems. Of course, we also offer customised telematics solutions

# DMi data acquisition: As diverse as our customers' requirements.

Start knowing. Stop guessing! The collection of objective data for operation and maintenance constitutes an important basis for optimising winter service, cleaning and green space maintenance operations. A solid database serves as the basis for valid decisions as regards safety, efficiency and cost transparency. DMi features a wide range of products for data acquisition in winter service. Depending on the specific application, either black boxes or mobile terminal devices are employed to collect all machine data or, via a guided menu structure, current local statuses fully automatically.

### **DMi Winter Report**

This smart information system enables our customers to check quickly and easily whether spreading operations have been carried out efficiently on all tracks. The data mining technology behind Winter Report delivers all data directly from the spreaders in real time while the spreading operation is still ongoing – any security gaps can be reliably eliminated.

### DMi Infra&Green

In this case, DMI's data mining is applied for the purpose of quality assurance in public areas and streets. The data is collected from sweepers, mowers, sewer cleaning vehicles, mobile devices and the route control in real time. The system permits an accurate assessment of the working areas in terms of both quantity and quality.

### **DMi Airport Report**

In this specific segment, the statutory requirements for safety and environmental friend-liness are particularly high. Thanks to our innovative Airport Report, our discerning airport customers always know where sweepers and spreaders are in service and what work is currently being performed – as a result, the machines can be delegated and employed as efficiently and safely as possible.

### We constantly improve our solutions.

Recognising the needs and the potential of our customers in time is an indispensable prerequisite for our success – which is why seeking maximum proximity to the market is a matter of course in both our product management and our development department. Our innovations are not created in a vacuum, but are based exclusively on the actual needs and challenges of our customers.

A great challenge for our group is posed by the rapid advancement of intelligent machines and vehicles as well as the optimum adaptation of software. To this end, we were working in 2016 on an improved and integrated approach for our development and project list both on part of DMi and in the Schmidt and Aebi development departments. Since the last quarter of 2016, all departments have been working with closely coordinated planning systems, enabling us to substantially shorten the delivery periods.

The integration of the new eGate databox into the control box of the Schmidt Stratos III series was also a great success. This product

also offers great potential for all other vehicles, which is why further implementations are planned. The first data protocols for remote diagnosis were also used successfully. Because of the positive experiences, other machines will now also benefit from this – just like our customers, who can now expect a significant increase in machine availability.

# DMi is investing into an entirely new digital platform.

In the future, data acquisition will place increasing demands on machines; at the same time, however, the requirements in the data processing centre are also growing. In order to be successful in the future, DMi is creating a completely new platform which will offer maximum flexibility and much more cost efficiency. The new platform, which will be launched on the market in the summer of 2017, will open up all doors to "Internet of Things (IoT)" and remote diagnosis for our increasingly discerning customers. For example, useful weather, traffic and other geographical data will become available to customers. The intelligent and forwardlooking consolidation of industry-relevant data will also offer our customers huge added value - of course, we make sure that the best performance can actually be purchased at the most favourable price on the new platform.

For 2017, even more freedom of action and another capacity expansion are planned for the responsible development department. To achieve this goal, DMi is consistently investing in professional staff training and new highly qualified personnel. Our developers not only need to be always up to date with the latest technologies, but also demonstrate a high level of team spirit – this is the only way to develop solutions that meet the continuously increasing requirements.

# We are perfectly prepared for the global digital transformation.

Whether intelligent safety concepts (keyword: visual tracking systems) or driver assistance systems to increase efficiency (remote control systems and/or autonomous snow clearance): The broad field of data acquisition will become a worldwide standard, with the range of possible applications being theoretically unlimited.

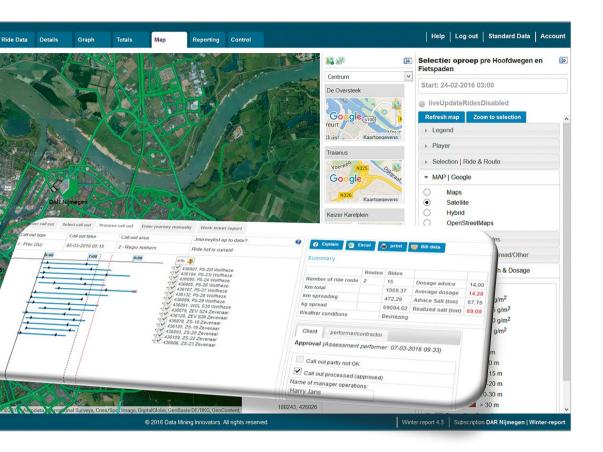
Our company DMi now enjoys a high level of trust among customers – it has a very good reputation, in particular among discerning European airport operators, enabling us to benefit from the expertise gained there on a worldwide scale.

Due to the tight budgets in the municipalities, products bearing great savings potential are also in high demand in the municipal markets – we will therefore inform our customers even more specifically about the savings potential offered by our telematics solutions – in this respect, diagnostic systems for passenger vehicles and utility vehicles are worth mentioning.

When it comes to data acquisition, machine availability and remote diagnosis, we want to exceed our customers' expectations – we are sure that the initiated measures have put us on the right track.

SmartCare: Online communication between office and machine. One click shows all operations quickly and easily. The intelligent provision of data and their meaningful use is critical to success in many of today's industries.





# THINKING HOLISTI-CALLY, DEVELOPING WITH FORESIGHT, WORKING SUSTAIN-ABLY.

As a leading manufacturer of special vehicles and attachments, the ASH Group creates economic value while giving regard to ecological objectives and social requirements. Our sustainable business approach is reflected in numerous innovative products and in-house processes.

Thinking ahead and acting in a responsible manner are the main pillars of the economic success of the ASH Group, which is why sustainability is firmly integrated in the corporate strategy throughout the value chain.

In this strategic environment, the three main pillars of the ASH Group's guiding principle are customer satisfaction, employee satisfaction and profitability. Resource-saving products and solutions enable customers to work in an even more effective, economical and environmentally friendly manner. Moreover, the ASH Group attaches great importance to comprehensive customer advisory services, high service quality and efficient spare parts and emergency management. To this end, the ASH Group needs well-trained, motivated and satisfied employees who are willing to take responsibility. Profitability and solid financial manage-

ment are the basic prerequisites for making investments into new products, production infrastructures as well as the training and continuing education of employees to ensure a healthy growth.

Environmental considerations play an important role not only in product development but also at the individual business locations and in the production. The ASH Group exceeds the minimum statutory requirements for environmental protection and keeps to its own ambitious guidelines. Since 2009, all business locations have been ISO 9001-certified. The local sales organisations as well as the production facilities in Peterborough (UK), in Fiume Veneto (Italy), in Burgdorf and Hochdorf (Switzerland) as well as in Skänninge (Sweden) are certified according to the ISO 14001 corporate environmental management standard, just like the factories and the sales organisations in Holten and Leimuiden (Netherlands). Holten was the first organisation in the Netherlands to be audited and certified according to the current ISO 14001 2015 standard in 2016. In addition, the ASH Group meets ISO 26000, the guideline for social responsibility.

The ASH Group is an important employer, training establishment and partner to local suppliers at its respective business locations. Owing to the regular exchange with associations, community representatives, stakeholders and training centres, the factories of the ASH Group are firmly rooted at their business locations. This is also reflected by the corresponding sponsorship activities.

# Sustainability report in accordance with GRI G4.

Comprehensive information on sustainability at the ASH Group is published separately in a sustainability report which can also be found

on the website from May 2017. The report provides information on sustainability aspects identified as being the most relevant for the ASH Group as part of the materiality analysis. For the report in the 2016 business year, the GRI G4 guidelines of the Global Reporting Initiative (GRI) are used. GRI is the globally leading standard in the field of sustainability reporting and aims to ensure that companies provide transparent information on their economic, ecological and social activities. These guidelines place a focus on the key sustainability aspects for the company and on the management approach. The ASH Group's 2016 Sustainability Report meets these guidelines of this leading standard.



### → Sustainability Report 2016

The ASH Sustainability Report will be published in May 2017. A digital version of this report can be found on our website from May 2017: www.aebi-schmidt.com/en/sustainability

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# **Board of Directors**



Walter T. Vogel Chairman of the Board of Directors Swiss citizen 1957

## Dipl. Masch.-Ing. ETH Zurich

Since 2015: Chairman of the Board of Directors, ASH Group: 2007-2015: CEO ASH Group; 2003-2007: CEO Von Roll Holding AG: 1999-2003: Von Roll Group, Head of the Infratec Division and Member of the Group Management; 1995-1999: HILTI AG, Head of Direct Fastening Business Unit and Member of the Extended Group Management: 1992-1995: Aliva AG, Marketing and Sales Director and Member of the Management Board



**Dr. Gero Büttiker** Vice President

Swiss citizen 1946

# 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



Peter Spuhler Member of the Board of Directors Swiss citizen 1959

### Entrepreneur

Since 1989: Majority shareholder (83%) and CEO Stadler Rail AG, Bussnang, Other activities and interests: Chairman of the Board of Directors Stadler Rail AG, Bussnang, in various companies of the Stadler Rail Group and PCS Holding AG, Warth-Weiningen; Member of the Board of Directors, Walo Bertschinger Central AG. Zurich: Allreal Holding AG. Baar; Rieter Holding AG, Winterthur; DSH Holding AG, Warth-Weiningen; Wohnpark Promenade AG, Frauenfeld; Vice President ZLE Betriebs AG, Zurich; 1999-2012: Member of the Swiss Parliament (National Council)



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

### Dipl. Kaufmann, Dr. oec. publ.

Since 1990: Member of the German Bundestag: since 2014: Chairman of the Committee on Economic Affairs and Energy in the German Bundestag; 2009-2013: Federal Minister for Transport, Building and Urban Development; 2005-2009: Chairman of the CSU regional faction in the German Bundestag. personally liable partner of Ramsauer Talmühle KG in Traunwalchen, Bavaria



Hansruedi Geel Member of the Board of Directors Swiss citizen 1956

lic. oec. HSG, Qualified Public Accountant Since 2001: CFO Stadler Rail Group; 1997–2001: CFO Benninger AG/Benninger Group; 1994–1997: CFO Lüchinger + Schmid Group; 1990–1994: CFO Elektronikgruppe FELA; 1981–1990: PwC, Public Accountant



Peter Muri Member of the Board of Directors Swiss citizen 1958

lic. iur. Solicitor Since 1994: Owner of a lawver's office in Weinfelden 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



Andreas Rickenbacher Member of the Board of Directors Swiss citizen 1968

Master of Science (M Sc) Since 2016: Owner of Andreas Rickenbacher Management AG, Bern; 2006–2016: Member of the government of the Canton of Berne (2013–2016: Chairman of the Conference of Directors for Swiss National Economy) Member of several boards of directors for example: Bernexpo AG, HRS Real Estate AG, Swissgrid AG

# **Management Board**



Barend Fruithof CEO (since 1 March 2017) Swiss citizen 1967

Executive MBA der University St. Gallen 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: Zurich Cantonal Bank; 1997: EUROPAY (Switzerland) SA; 1992-1996: Swiss Cantonal Bank

Stefan Heiniger CEO (09.2015-02.2017) Swiss citizen 1973



Thomas Schenkirsch CFO

Swiss and german citizen

Dipl. Betriebswirt
June 2016-February 2017:
CFO ASH Group (interim);
2008–2017: Director Group
Controlling ASH Group;
2003–2008: Corporate
Controller and Head of
Corporate Controlling
Von Roll Management AG,
Switzerland; until 2003:
Financial Analyst PerkinElmer, Switzerland, and
Senior Treasury Analyst
PerkinElmer, Boston

Stefan Naef CFO (01.01.2008–28.06.2016) Swiss citizen 1962



Marco Studer COO Operation Switzerland Swiss citizen 1976

Dipl. Automobil.-Ing. FH 2011–09.2016: Head of Division Aebi; 2010–2011: Operational management of Division Aebi; 2008–2010: Aebi & Co Maschinenfabrik, Head of Assembly; 2006–2008: Mercedes-Benz Automobil AG, Branch Manager NF Wetzikon; 2001–2006: Mercedes-Benz Automobil AG, Service Manager and Deputy Manager NF Schlieren



Jochen Schneider COO Operations Global German citizen 1962

Dipl.-Wirtsch.-Ing.
Darmstadt University
2012–09.2016: 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



Christian Stryffeler CCO Markets & Sales Global /Airport Swiss citizen 1964

Dipl. Chem. Ing. FH/MBA
Since 2016: COO Sales and
Markets Global/Airport ASH
Group; 2015–2016: CEO
Mecalac Baumaschinen
GmbH; 2004–2015:
Executive Vice President,
Machines Division, Ammann
Group; 1998–2004: Area
Manager and Member of
the Management Board
Novartis Training Centre



Rudi Rosenkamp CCO Markets & Sales Europe Dutch citizen 1963

Dipl. Ingenieur 2013–09.2016: 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



Andrew L. Outcalt CCO Markets & Sales North America American citizen 1960

Dipl. Bachelor of Arts, Ohio Wesleyan University 10.2015–09.2016: CEO AS North America; 2006–2015: President Louis Berkman Work Products Company; 2003–2006: EVP LBWPC; 1999–2003: Sr. Vice President MTD Products Inc. USA; 1995–1998: Vice President MTD Products Europe; 1987–1995: MTD Products Inc. USA



Roger Weber CHRO

Swiss citizen 1965

Dipl. Bankfachmann 05.2016-09.2016: Global HR Manager ASH Group; 2008-2015: Global HR Manager of automotive supplier WEIDPLAS (formerly Weidmann Plastics Technology – WICOR Group); 1985-2007: work in the banking and telecommunications as well as the hearing aid industry

# **Group Structure**

### **BOARD OF DIRECTORS**



Chairman of the Board of Directors

### Dr. Gero Büttiker

Vice President

### Peter Spuhler

Member of the Board of Directors

### Dr. Peter Ramsauer

Member of the Board of Directors

### Hansruedi Geel

Member of the Board of Directors

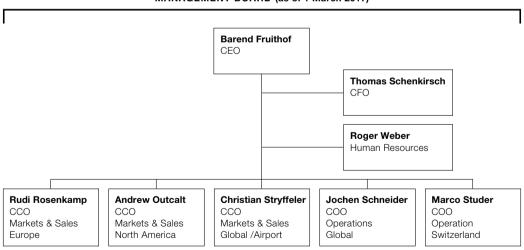
### Peter Muri

Member of the Board of Directors

### Andreas Rickenbacher

Member of the Board of Directors

### MANAGEMENT BOARD (as of 1 March 2017)



# SUSTAINABLE VALUE CREATION THROUGH CLEAR MANAGE-MENT AND CONTROL PRINCIPLES.

Aebi Schmidt Holding AG. with registered office in 8500 Frauenfeld, Zürcherstrasse 310, and another business address in 8050 Zurich. Leutschenbachstrasse 52, is a public limited company under Swiss law. The Board of Directors and the Management 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 October 2016 and is shown on page 60. The managerial responsibility for the ASH 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 page 66/67 of this report.

### Shareholders

Aebi Schmidt Holding AG is owned by the following shareholders:

SHAREHOLDERS	
PCS Holding AG, Switzerland (owner: Peter Spuhler)	57.26%
Gebuka AG, Switzerland (owner: Dr. Gero Büttiker)	38.55%
Other members of the Board of Directors and the Management Board	4.19%

### 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 three years; 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 Management Board of the ASH 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 ASH Group, who is supported in this task by the remaining members of the Management 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 Management 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 audi-

tors 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.

### Information and control instruments

The Board of Directors is in charge of supervising the ASH 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 ASH Group. At the board meetings, the Management 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 mediumterm 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 ASH 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 farreaching 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 Management 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 ASH 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 September 2015. It is incumbent upon the Management Board to identify and communicate the substantial risks to the Board of Directors.

### Management Board

The CEO is in charge of the management of the ASH Group. Under his direction, the Management 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 manage-

ment of their divisions. The Board of Directors appoints the Management 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. The senior auditor Stefan Räbsamen has been in office since then.

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 ASH 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 stand-

ards as well as any requirements within the scope of self-regulatory measures or in-house directions. In the past business year, the ASH Group examined the existing compliance regulations and processes and adapted them to amended and new statutory requirements, where necessary. Today, the ASH 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 Management Board examines the risks of the ASH Group on behalf of the Board of Directors and defines measures to avoid, limit or pass on the risks. One of the identified risks explicitly deals with compliance risks. A "risk officer" and risk limitation measures were defined for these risks as well; the implementation of the measures is inspected on an annual basis and adapted, where necessary.
- 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 Management Board on an annual basis and, where necessary, adaptations are requested from the Board of Directors.
- The process of checking existing and new dealers and agents was supplemented and

- a Compliance Board was introduced. The dealers and agents must undergo an extensive inspection and sign an agreement amended by the new compliance regulation. The Compliance Board holds meetings as required and decides whether or not any transactions can be effected with the respective dealer or agent.
- The inspection of customers and the dualuse inspection were tightened, especially 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 computer-based check programmes, the inquiries can be carried out efficiently and promptly.
- The international sales team completed a training conducted by external specialists to further raise awareness of compliance and improve communication.

The ASH 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 and that the high compliance requirements will develop to become an integral part of our business model. The ASH 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.

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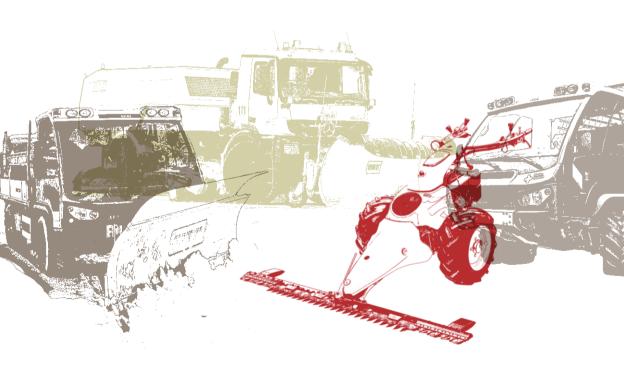
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