

# Metso 2017

### Annual Review

Metso's orders and sales grew in improving market conditions. To drive the profitable growth strategy going forward, a new operating model was implemented with solid plans to strengthen customer focus and promote innovation across the businesses.

adjusted ebita-% 9.0		
LTIF* 2.6 *Lost time incident frequency		
Earnings per sha EUR 0.6		nnel over

Metso, the best choice for sustainable processing and flow of natural resources

#### Minerals

Minerals processing equipment, solutions and services for mining customers, and crushing and screening products for aggregates customers.

#### **Flow Control**

Valves, pumps and related services for chemical industries, mines, pulp and paper and other process industries.

# EUR 2,706 million

# Orders received EUR 2,982 million

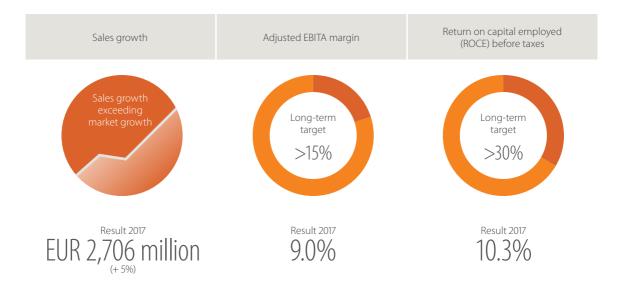
# Free cash flow EUR 158 million

# Operating profit (EBIT) EUR 218 million

# EUR 1.05

# Code of Conduct trained Metso employees 99.8%

### Financial targets and achievements



# Contents

## How to read Metso's reports for 2017

Metso has published four reports that together form the Annual Report for 2017. This Annual Review has been published and printed in English and Finnish. The "Read more" section contains additional sources and information about the topics presented in the Review.

To read all of the four reports, the Annual Review, the Financial Statements, the Corporate Governance Statement and the Sustainability Supplement, please visit our website www.metso.com/2017.

Sustainability information is presented on the website in English, as a PDF file. The Sustainability Supplement has been externally assured.

#### SUSTAINABILITY



The sustainability icon marks sustainability content. More information about the content will be found in our Sustainability Supplement.



**Read more** 

- > metso.com
- > www.metso.com/2017
- > twitter.com/metsogroup
- > facebook.com/metsoworld
- > youtube.com/metsoworld



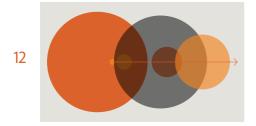
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#### From the CEO

Last year was marked by a positive turnaround in the mining cycle. After several years of a challenging market environment we saw improving demand in all of our customer industries.



#### We create value for our stakeholders

We work in a sustainable manner to create value for our various stakeholders. Discover more about our value creation and its results.



#### **Financial performance**

Sales and orders grew in 2017. To execute on our profitable growth strategy going forward, a new operating model was implemented.



**Timeline of Metso's 150 years** Glance through highlights of our 150-year journey. We shape and make history every day.

# This is Metso

Metso is a world-leading industrial company offering equipment and services for the sustainable processing and flow of natural resources in the mining, aggregates, recycling and process industries. With our unique knowledge and innovative solutions, we help our customers improve their operational efficiency, reduce risks and increase profitability.

In 2017, Metso's sales were about EUR 2.7 billion, and 65 percent of that came from our services-related

businesses. Our services offering covers the whole lifecycle of our customers' products and processes. We are a global company providing innovative solutions for sustainable productivity with a winning team of over 12,000 employees and with operations in more than 50 countries close to our customers.

Metso's shares are listed on the Nasdaq Helsinki stock exchange in Finland.

#### Sales by customer industry

- Mining 51% (51%)
- Aggregates 26% (24%)
- Process industries 19% (21%)
- Recycling 4% (4%)



Orders received by customer industry

- Mining 52% (53%)
- Aggregates 25% (25%)
- Process industries 19% (18%)
- Recycling 4% (4%)



Sales by type

• Services 65% (66%)

• Equipment 35% (34%)

### Global presence



Europe

Asia Pacific Sales EUR 672 million Personnel 2,795

North America Sales EUR 554 million Personnel 1,563

South and Central America Sales EUR 536 million Personnel 2,725 Africa and Middle East Sales EUR 259 million Personnel 841

# From the CEO

Last year was marked by a positive turnaround in the mining cycle. After several years of a challenging market environment we saw improving demand in all our customer industries. In order to be better equipped to execute on our profitable growth strategy, we implemented an organizational change during the second half of the year. Metso is in a good position – both financially and in terms of organizational capability – to capitalize on the favorable market environment.

In 2017, there was a clear upward trend in all our customer industries. Metso's full-year orders received grew by 9%, and our sales increased by 5% compared to the previous year to EUR 2.7 billion. Our profitability did not yet recover, due to challenges we faced in mining projects and in ramping up our activity levels towards the end of the year in the services business of the Minerals segment. Adjusted EBITA margin was 9%. Hence, improving our financial performance is the priority for 2018.

## Strategy intact, we are transforming the way we execute it

During the second half of 2017, we carried out a strategy review and initiated a change program to ensure that the company is equipped for the upcoming phase of profitable growth.

The fundamental elements of Metso's strategy are unchanged; we continue to target a leading position in the chosen Minerals and Flow Control industries. However, the way we are executing our strategy is being transformed. Compared to the previous structure with three business areas. Metso now has seven dedicated business areas: Mining Equipment, Aggregates Equipment, Minerals Services, Minerals Consumables, Valves, Pumps, and Recycling. Each of the seven business areas has clear priorities and action plans to drive growth and improve financial performance in their distinctive businesses.

The new operating model further strengthens the accountability of our businesses and speeds up decision making to enable both the implementation of our growth plans and an agile response to market changes.

#### Spearheading innovations

Metso will continue to increase the use of digital technologies and data to create value for our customers through better productivity. Metso's digital program is targeting to find real solutions that will help our customers succeed. In mining, we will help our customers improve their comminution assets and processes. In the aggregates business, we will revamp our online capabilities and provide an engaging digital customer journey for the entire equipment lifecycle. In flow control, we will build new digital tools to better respond to and deliver on the changing customer requirements in our project business. The digital initiatives go handin-hand with our increased efforts in R&D, and we will invest more in innovation. We are convinced that Metso has a role in tackling the opportunities and challenges of a circular economy, urbanization and climate change. Through the products and services that we innovate and offer to our customers, we can have a noticeable impact in process efficiency, lowering energy and water consumption, and noise and dust levels. For example, our solutions for manufactured sand or the recycling of aggregates can help preserve natural resources or recycle construction waste more efficiently.

#### Sustainable growth

Sustainability remains at the heart of Metso's operations, with safety among the key components. We meticulously track LTIF (lost time incident frequency). Our firm view is that our own or our customers'

# sales EUR 2,706 million

# Earnings per share

LTIF\* 2.6 \* Lost time incident

frequency



The fundamental elements of Metso's strategy are unchanged. However, the way we are executing our strategy is being transformed.



safety must not be compromised under any circumstances.

We updated our Code of Conduct last year and implemented a companywide learning program to ensure global compliance. In less than three months, we managed to get an astonishing 99.8% of our employees to sign their agreement to the updated code, signaling extremely strong commitment.

Metso's priority for 2018 is to grow profitably. This organic growth target

will be complemented by acquisitions where feasible. I would like to thank our customers and partners for their trust and support and all Metso employees for their commitment during a year marked by many changes. I strongly believe that 2018 will be a successful year of strategy execution for Metso.

#### Eeva Sipilä

Interim President and CEO, CFO

# Strategic Metso

Our strategy of profitable growth remains the same. To drive it going forward, a new operating model was implemented to strengthen customer focus and promote innovation across the businesses.

OUR TRELLEX™ TRUCK BED RUBBER LINING PROTECTS TRUCKS FROM WEA

# Operating environment

### Drivers for our business

#### Urbanization

continues to drive infrastructure spending and global demand for minerals. Construction in urban environments calls for stricter requirements for safety, noise and dust.

#### Growth of the middle class

and rising living standards are increasing demand in Metso's customer industries globally. Growth in copper demand is supported by increased demand for electronics and electric cars.

#### Scarcity of natural resources

leads to processing of harder ores and overall larger processing volumes, increasing the demand for wear and spare parts, and more productive new equipment solutions.

#### **Climate change**

policies to combat climate change are shifting demand towards solutions that are based on more energy-efficient technologies, or can use biofuels and other renewable energy sources.

#### **Circular economy**

Metso's service business helps customers improve their performance and extend the life of their equipment. Metso offers solutions for metal and waste recycling and the recycling of aggregates. Water efficiency and closed loops are increasingly in demand from our customers.

#### Digitalization

is changing the way industries operate and it creates new opportunities especially related to performance improvement and better interaction with customers.

#### Mining

As commodity prices improved in 2017, the market started to see recovery in mining investments, for replacement and brownfield projects. Copper-related investments saw a clear pick-up. Miners were focused on productivity improvement and cost containment in their operations. Simultaneously, they focused on strengthening their financial position through portfolio optimization. Innovation and digital transformation are more and more important in the mining industry to unlock the productivity challenge.

#### Aggregates

Global construction market activity strengthened in 2017. Asia Pacific, the largest regional market for aggregates, saw particularly strong growth in India, while the Chinese construction market also recovered during the year. The activity level continued to be healthy in North America, and Europe also saw improvement during the year.

#### Recycling

Market conditions for metal recycling improved in 2017, driven by recovering steel scrap prices and rising scrap availability. The waste recycling market continued to grow in 2017, with positive development in Asia Pacific and the Americas.

#### **Process industries**

The oil and gas market was relatively more stable during 2017. New downstream projects recovered somewhat from the lows of late 2016, while aftermarket spending, upgrade and turnaround activity was healthy.

Demand in the chemical market remained favorable, driven by good activity in petrochemicals globally. Especially in China, many greenfield projects moved forward. Services and replacement activity necessary to maintain the operations was strong.

In pulp and paper, both project and services activity rebounded from previous year, thanks to new pulp mill, board and tissue machine investments.









# Creating value for Metso's stakeholders

# metso

Our products and services

Our vision: Metso, the best choice for sustainable processing and flow of natural resources.

# Our capitals to create value:

- Financial resources
- Innovations and know-how
- Skilled employees
- Production units
- Global service center and sales network
- Supply and distributor network
- Brand and reputation
- Natural resources, raw materials and components we use in our production

- Innovation through research and development
- Efficient and compliant supply chain
- Global distribution network close to our customers
- Manufacturing and assembling key components
- Working with our customers to improve operations and processes
- Ensuring a skilled work force and providing safe working practices
- Compliance and integrity related controls and training
- Dialogue with our stakeholders

- Mining and aggregates processing equipment
- Services and spare parts for mining and aggregates processing
- Minerals consumables
   and wear parts
- Waste and metal recycling equipment
- Pumps
- Industrial valves, controllers and services

We work in a sustainable manner to generate results for our various stakeholders. These are examples of the value we have generated, and continue to create for our key stakeholders and the communities we operate in.

### **Outcomes for our** key stakeholders

#### **Customers:**

- **Business success**
- More productivity with Metso solutions
- Increased energy efficiency
- Safety

#### **Employees:**

- Income
- Safe working environment
- Job opportunities
- Professional development

#### Shareholders:

- Dividend
- Increase in shareholder value

#### Suppliers:

- Responsible supply chain
- **Business opportunities**

### **Examples of the** value created

- Dividends
- EUR 157 million • Wages and benefits
- EUR 650 million Capital expenditure
- EUR 38 million
- Purchases
- EUR 1,630 million Taxes
- EUR 82 million
- Interest for creditors EUR 35 million
- R&D expenditure EUR 27 million
- Safe and motivating work environment: **LTIF 2.6**
- Emissions reduction resulting from use of our technology - In 2017,
  - 613,100 metric tons of CO<sub>2</sub> emissions

were avoided through the use of Metso Lokotrack™ and Vertimill™ technologies.

### How we impact the societies we operate in

#### Local communities / Society

- Employment
- Taxes
- More sustainable and efficient processing of raw materials with Metso equipment: - Reduced water and energy usage
  - Decreased noise, dust and pollution
- Sponsorships
- Local sourcing

# Metso strategy essentials

The year 2017 held many changes for Metso. Our overall strategy and vision "Metso, the best choice for sustainable processing and flow of natural resources" remains unchanged, as does the business portfolio, but our operating model was revised.

According to the new operating model, effective from January 1, 2018, Metso's businesses are managed through seven business areas: Mining Equipment, Aggregates Equipment, Minerals Services, Minerals Consumables, Recycling, Valves, and Pumps. The heads of the business areas are members of the Executive Team and report directly to Metso's President and CEO. The financial reporting segments, Minerals and Flow Control remained unchanged. The new organization is designed to accelerate Metso's strategy implementation by strengthening our service and product businesses in the minerals and flow control markets. Growth will primarily be sought organically, but also through acquisitions. The revised organizational structure ensures the businesses are built around similar customer, competitive and business dynamics. This enables a more focused and agile organization.

The new operating model further strengthens the accountability of our businesses and speeds up decisionmaking to enable both the implementation of our growth plans and an agile response to market changes. Additionally, our focus on innovation and technology will significantly increase, to provide better solutions for sustainability, efficiency and productivity for our customers.

### Metso's offering

Customer industry	Aggregates	Mining	Process industries	Recycling	
Equipment	Aggregates capital equipment	Mining capital equipment	Valves, valve controls	Metal and waste	
Spares and service solutions	Aggregates spares and services solutions	Mining spares, refurb and service solutions	and related services	recycling equipment and spares	
Wears	Minerals consumables				

# The implementation of our strategy is based on five fundamentals that guide our daily actions.

### The fundamentals for our business

#### **Customer centricity**

**Know your customers and be there to serve them** Our company structure supports decision-making close to our customers, and we operate seamlessly together to create value for them. We innovate and develop technologies to address future needs.

#### **Service leadership**

**Presence and solutions for the whole lifecycle** We are experts in maintaining and improving the whole lifecycle of our customers' processes. We operate close to them globally, to always serve them locally.

#### Innovation

### Secure sustaining differentiation with winning innovations

We are innovating new products and solutions and further developing our existing product portfolio. Digitalization is reshaping the way we do business and offering us new ways to serve our customers.

#### **Operational excellence**

**Drive excellence in processes, quality and safety** We continuously develop our ways to operate and our processes throughout the whole supply chain.

#### **People and leadership**

### The best and most motivated team bringing the best results

Developing a strong performance culture ensures the best results for our customers. Competent people with the right capabilities and an open internal job market are key factors for our success.







Metso, the best choice for sustainable processing and flow of natural sources			
Minerals	Flow Control		
Global leader providing innovative solutions for sustainable productivity	A leader in defined core market providing innovative solutions for sustainable productivity and extending core		
Profitably grow business with	asset light and agile organization		

• Organic growth focus, complemented with acquisitions

# Sustainability in the supply chain

Our product development and services expertise focuses on developing to our customers products and solutions that reduce energy consumption and emissions, use less water and raw ingredients, and produce less waste while delivering the same or increased production output. While delivering these results, we operate with high integrity and want to ensure high health, safety and environmental standards and practices.

We follow and measure the sustainability of our operations and have set measurable targets for 2018 and 2020. We have categorized our sustainability work into four focus areas we consistently follow:

#### Responsible supply chain

We want to ensure sustainable business operations throughout our supply chain by developing sustainability management practices in Metso and with our suppliers. We follow and comply with the legislation on restricted materials.

#### **Building customer success**

We offer environmentally efficient and safe products, solutions and services to achieve customer success. We focus on customer's value creation through close partnership and cooperation.

#### Contributing to the environment

We constantly work towards reducing the environmental load generated in our operations. We reduce water and energy consumption, emissions and waste in our production.

#### **Performing together**

We provide a healthy and safe working environment in a culture that supports good performance and competence development and follows our Code of Conduct. We work together with the local communities to create social value.

#### SUSTAINABILITY

To discover more on sustainability results read Metso's Sustainability Supplement 2017: metso.com/2017



### Example of Metso crusher's sustainable journey

Research and development

• 84 percent of Metso's R&D projects had sustainability targets in 2017.

 Environmental efficiency includes reduced energy and water consumption, reduction of emissions, noise, dust, waste and materials efficiency.
 Safety includes safer designs, ease of access, operations and maintenance.

#### Procurement

We work closely with our suppliers and conducted regular audits (58 audits in 2017) to improve sustainability within our supply chain.

Strategy essentials

We include sustainability in the whole value chain, from research and development to the life-cycle of the end product. The main environmental impact is generated in the customers' use phase and therefore the biggest savings or efficiency improvements are achieved through efficient solutions for the life-cycle of our products.



#### **Own operations**

- We work actively to improve the safety of our own operations.
  To reduce the
- environmental impact we focus on minimizing waste going to landfill as well as water and energy usage.
- We have several quality improvement projects based on lean principles in progress with good results.

### Logistics and distribution

We have a global network of distributors and service centers close to our customers. We optimize the loads and packaging material in the transportation of our goods.

The crushing process accounts for over 80% of the lifecycle energy consumption of a crusher.

# Customer engagement ightarrow and cooperation

- We further develop our products, solutions and services more sustainable in close cooperation with our customers.
- We have started regular customer experience management initiative.

## Products solutions and services

- Increased energy efficiency.
- Reduced water consumption.
- Less dust, noise and emissions.
- Less chemicals.
- Improved safety.

In 2017, 24,664,000 litres of diesel was saved and 66,100 tons of CO₂-emissions were avoided through use of Metso Lokotracks™.

# Strategy execution in 2017

#### **Customer centricity**

- Our global distributor network for Aggregates and Flow Control customers was strengthened with several new distributor agreements in new market areas.
- Our global manufacturing capacity for rubber screening media used in minerals processing was strengthened by investing in three new injection presses. The presses have been installed at Metso's facilities in Australia, India and Sweden.
- We rolled out a Metso-wide customer experience management initiative to survey our customers' views on Metso.
- We launched for our aggregates distributors my.metso.com store for online sales and other distributor services, we also opened preowned.metso.com, an online store for used Metso aggregates equipment, with equipment that is at least one year old at least 2,000 hours of operation.
- We introduced a new, hammerless attachment system for the modular Trellex<sup>™</sup> screening media, which provides safer installation, faster removal and maximized uptime. The innovative attachment system improves worker safety during change-outs, as accidents that occur when stuck pins are torn off by force can be avoided.

#### Service leadership

- Metso's Life Cycle Services were voted as the winner of the Mining Magazine Service and Support Award.
- Our Flow Control shutdown and turnaround solution services were involved in 24 demanding shutdown and turnaround operations in various customer industries.
- · Flow Control implemented global field service management systems.

#### Innovation

- We conjoined two individual adjustment methods based on piston and rotating bowl into a single crusher, and as a result launched the MX cone crusher with patented multi-action crushing technology in March. The new crusher cuts operational costs by 10% and enables 10% higher uptime compared to traditional cone crushers.
- Metso Metrics Services, a digital, cloud-based, remote monitoring and data visualization service for Metso mobile crushing plants leverages the possibilities offered by advanced analytics and cloud-based technologies.
- Our new Metso UltraFine Screen (UFS) was created as a mining solution for sorting fine and ultra-fine material common in concentration circuits. The technology enables reducing the circulating load, energy consumption and water consumption compared to conventional equipment.
- Our latest Neles NDX intelligent valve controller model has a double-acting function. It suits a wide range of customer applications, regardless of the industry or valve brand.

#### **Operational excellence**

- We partnered with key valve suppliers in China and India to improve further quality assurance.
- Capacity utilization in all Metso valve and pump plants improved.
- We invested in a new production line for Lokotrack mobile crushing plants in our factory in Tampere, Finland. The approximately EUR 1 million investment will significantly shorten the delivery times for equipment models put into line assembly production, and improve occupational safety. The first new Lokotrack equipment will come out of the line during the first quarter of 2018.
- Manufacturing capacity for large crusher wear part castings used in minerals processing is increased by investing in a second melting furnace at the Isithebe foundry in South Africa. The EUR 3.5 million investment will ensure the availability of Metso's heavy crusher wear parts globally.
- In November, we announced the acquisition of the Australia-based wear lining solutions provider WEARX. The acquisition strengthens Metso's offering for our mining customers in Australia.
- The Metso NW Rapid<sup>™</sup> crushing and screening plant offers a mobile crushing plant with a setup time of less than 12 hours. The solution is versatile for various kinds of crushing sites and logistically fast and lean to transport between sites. The plant can gain 30% grow in production.
- In January, Metso was ranked for the second year running in a survey conducted by IN THE MINE magazine in Brazil as the leading brand in the Brazilian mining sector. Metso was number one in Crushing and Maintenance of Mineral Beneficiation Mills categories.

- In June, Metso was awarded the American Metal Market's Scrap Equipment Provider of the Year in the United States.
- In November, our Nordberg<sup>™</sup> NP15<sup>™</sup> impact crusher received the gold medal awarded by Potencia magazine's XI Potencia Maquinaria awards in Spain. Thanks to its new safety systems and innovative solutions to facilitate maintenance.

#### **People and leadership**

- Updated Leadership Principles
  - We updated our leadership principles to further enhance the mindset for growth and renewal. These principles have been embedded in executive and senior manager selections and learning solutions.
- New operating model
  - We built a new organization structure to support Metso's new operating model for 2018.
- Sales development
  - Our professional competence development continued to focus on excellence in sales capabilities. Around the world, 297 people participated in our Sales Excellence program.
- Resourcing for the future
  - We hired over 2,000 new employees to strengthen our local operations around the Metso world and create strong base for growth.
- The Code of Conduct standard that guides all Metso employees in our everyday work was revised and 99.8% Metso employees took the related training only in three months' time.
- Metso received a recognition for promoting safety at Codelco's and Anglo American's worksites in Chile. Metso has improved the safety of operations at both sites by developing and implementing innovative safety enhancements.



Our new, hammerless attachment system for the modular Trellex<sup>™</sup> screening media, which provides safer installation, faster removal and maximized uptime.

#### **Code of Conduct**

In 2017, we revised our Code of Conduct, a Metso standard that concerns every Metso employee and summarizes the key principles that guide our behavior in all our dealings.

Metso employees have taken the training as e-learning or in a team coaching. Code of Conduct training is a part of our onboarding program for new employees.

# Digitalization

#### Case

**my.metso.com store opened for our distributors** Digitalization offers us more flexible and easier ways to serve our distributors and other customers. As part of our digitalization program, we have renewed the online services for the aggregates business. The my.metso.com store is a solution combining online sales and other services, replacing Metso's previous parts and equipment eCommerce services. The solution was launched for the first distributors in 2017. The service brings more of the business transactions between Metso's distributors to the internet. my.metso.com expands the selection of our online services and improves their usability.

#### Case

### preowned.metso.com – online store for used aggregates equipment

Metso's new online store for used aggregates equipment, preowned.metso.com, was launched in the fall of 2017 for our distributors. The service will also be available for use by many Metso's own sales organization and factories. The online store enables faster rotation of used and traded in equipment.

The service is a response to requests from our distributors to develop better global visibility of the selection of used and in-stock equipment and to increase the collaboration between distributors. The online store is a competitive channel for used aggregates equipment for Metso and for our distributors.

#### Case

#### Metso Innovation Hackathon – more agile development

Metso Innovation Hackathon was a one-day event where new ideas were developed in collaboration with different areas of Metso organization. The event was arranged as part of our internal innovation award program.

"Typically, hackathons are used to collect ideas from outside the company and apply them in the company's own setting. We believe that Metso has tremendous potential for excellent ideas, but there isn't always enough attention given to free innovation. Therefore, we applied our own twist to the hackathon concept and created the Metso Innovation Hackathon, an internal innovation challenge and collaboration event. We received very high quality suggestions from around the world. The deep vision of the finalist teams from Australia, China, and Chile, demonstrated the power of this concept," says **Jani Puroranta**, Chief Digital Officer.

The hackathon provided an opportunity to develop new ideas and to accelerate existing development projects. Digitalization is an integral part of future innovations – and it should always add value for the business. This was one of the key requirements for the projects selected because they shape our vision of the future.







Photo Jean-Marie Liot /CMGO



# Serving our customer industries

We offer equipment and services for the sustainable processing and flow of natural resources in the mining, aggregates, recycling and process industries. With our unique knowledge and innovative solutions we help our customers improve their operational efficiency, reduce risks and increase profitability.



# Financial performance



#### Sales by market area

- Europe 25% (25%)
- North America 20% (22%)
- South and Central America 20% (20%)
- Asia Pacific 25% (23%)
- Africa and Middle East 10% (10%)



#### Sales by reporting segment

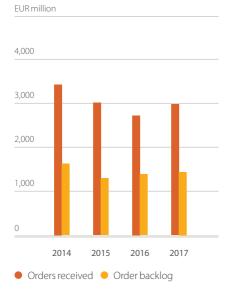
Minerals 76% (76%)

• Flow Control 24% (24%)

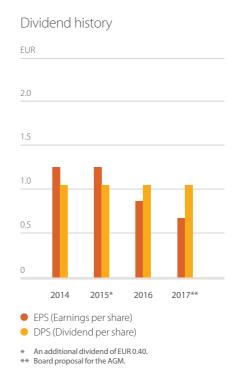
### Metso's key figures

EUR million	2017	2016	Change %
Orders received	2,982	2,724	9
Orders received by the services business	1,897	1,741	9
% of orders received	64	64	
Order backlog	1,439	1,320	9
Sales	2,706	2,586	5
Sales of the services business	1,767	1,703	4
% of sales	65	66	
Earnings before interest, tax and amortization (EBITA), adjusted	244	274	-11
% of sales	9.0	10.6	
Operating profit	218	227	-4
% of sales	8.1	8.8	
Earnings per share, EUR	0.68	0.87	
Free cash flow	158	339	-53
Return on capital employed (ROCE) before taxes, %	10.3	10.4	
Equity-to-assets ratio, %	44.5	48.0	
Net gearing, %	1.8	-1.8	
Personnel at the end of the year	12,037	11,542	4

# Sales and orders grew in 2017. To improve profitability, heavy focus on improving operational efficiency remains a priority. Metso's balance sheet holds strong.



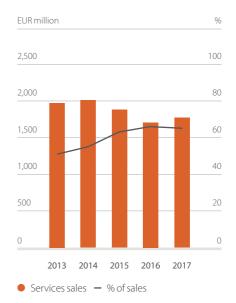
#### Orders received and order backlog



#### Sales and adjusted EBITA



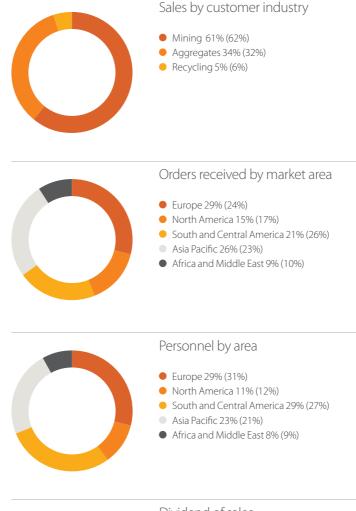
#### Services sales



### Segment key figures:

# Minerals

From January 1, 2018, Minerals reporting segment consists of Mining Equipment, Minerals Services, Minerals Consumables, Aggregates Equipment, and Recycling business areas. These businesses provide minerals processing solutions and systems for mining customers and crushing and screening products for aggregates customers and full-scope services solutions, ranging from spare and wear parts and consumables all the way to highly tailored engineering services. Recycling business area provides equipment and services for mechanical treatment of metal scrap and solid waste.





#### Dividend of sales

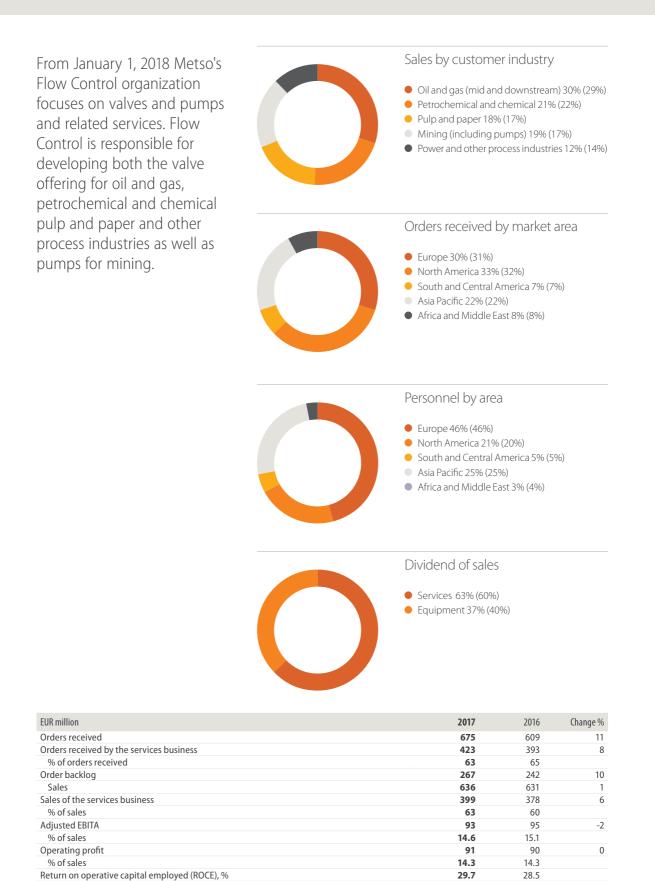
- Services 66% (68%)
- Equipment 34% (32%)

EUR million	2017	2016	Change %
Orders received	2,308	2,115	9
Orders received by the services business	1,474	1,348	9
% of orders received	64	64	
Order backlog	1,173	1,078	9
Sales	2,070	1,956	6
Sales of the services business	1,368	1,325	3
% of sales	66	68	
Adjusted EBITA	168	190	-12
% of sales	8.1	9.7	
Operating profit	153	148	4
% of sales	7.4	7.6	
Return on operative capital employed (ROCE), %	14.7	13.4	
Personnel at the end of the year	8,890	8,370	6

### Segment key figures:

Personnel at the end of the year

# Flow Control



2,663

2,660

0

# Mining

**Mining Equipment** provides comminution, minerals processing and material handling equipment and systems for the mining industry.

**Minerals Services** provides spare parts and service solutions for minerals processing for both mining and the aggregates industry.

Minerals Consumables provides wear parts solutions for both mining and aggregates industries.

**Pumps business** serves mines, mineral processing plants, quarries, and other slurry pump customers with a wide range of slurry pumps, hoses and valves.

#### Case

Los Bronces safely reduces downtime in primary crushing plant by 69 percent in 2016 with Metso Life Cycle Services

Anglo American's Los Bronces mine in Chile is one of the world's largest copper producers. In 2010, the mine was optimizing their operations and contacted Metso to assist. The Los Bronces mine's target was to achieve higher availability and efficiency for their primary crushing plant without compromising safety.

To achieve their goals, the mine signed a contract with Metso for Life Cycle Services (Metso LCS) for the mechanical maintenance of their primary crushing plant. The cooperation was successful, and Los Bronces decided to broaden the scope of equipment covered under the agreement.

Currently, Metso LCS maintains Los Bronces' two Metso Primary Gyratory Crushers and all the necessary operations related to their availability. Thanks to the LCS contract with Metso, Los Bronces was able to reduce the downtime of its primary crushing plant by 69 percent in 2016. Key factors for achieving this were Metso's services experts taking care of the whole primary crushing process and making the most out of the latest technology. All this has been achieved with zero accidents at the site.

Thanks to the safety and success of the cooperation between Metso and Los Bronces, Anglo American awarded Metso with a recognition of "Commitment to Zero Harm and Living the Anglo American Way 2017". The LCS contract between Los Bronces and Metso has been renewed multiple times since 2010 and is currently valid until 2019.







# Aggregates

**Aggregates Equipment** provides crushing and screening products and related systems for the aggregates industry.



## Metso's new $MX^{\mbox{\tiny TM}}$ crushes rock with 10 percent less operational costs

Aggregates producers are facing increasing pressure on efficiency and cost management. To meet these demands, we rethought the crushing basics and combined Metso's long experience in different cone crusher technologies with extensive engineering knowledge. Two individual adjustment methods based on the piston and rotating bowl were combined into a single crusher, and as a result, the MX cone crusher with patented multi-action crushing technology was launched in March 2017.

The new crusher provides a giant leap in profitability by cutting operational costs by 10 percent and enabling 10 percent higher uptime compared to traditional cone crushers. Designed for the most demanding rock conditions and with a special focus on automated adjustment features, the Metso MX enables extremely cost-effective and safe operations. It also provides a very high reduction ratio with a premium end-product shape and consistency critical in aggregate applications. Its robust design makes the Metso MX also very suitable for demanding mining applications.

The Metso MX can utilize up to 70 percent of the mass of new wear parts – a record-breaking utilization rate. Thanks to the intelligent design of the crusher, the quality characteristics of all sized end-product fractions stay consistent throughout the lifetime of the wear parts. This innovative crusher has impressed our customers and been very popular since its launch.



## Community-friendly Lokotrack<sup>™</sup> Urban<sup>™</sup> enables safe rock crushing in urban environments

Our customers have an increasing need for crushing operations close to densely inhabited areas, even in city centers. Especially in fast-growing countries, where cities are quickly expanding and masses of people are moving closer to what would be considered traditional crushing sites, urban crushing is often a necessity. These operations are regulated by environmental permits that vary from country to country. When designing the new Lokotrack Urban™, we wanted to simplify the answer to some of these key environmental and operational challenges with a single solution.

Environmental permits usually regulate the noise level caused by the crushing operations. From an occupational health and safety perspective, 85 decibels is the most common level defined that requires ear protection, although even much lower levels can be disturbing for people living or working around crushing sites. With our patent-pending solution, the noise-protected Lokotrack Urban LT106, the required protection distance drops up to 60 percent from 23–25 meters to 9–11 meters (from 75'–82' feet to 30'–36' feet). Outside this area, the sensory impact on the human ear can be even more significant.

In addition to very low noise emissions, the Lokotrack Urban series includes an advanced dust suppression system. The dust is funneled to stay inside the mobile crushing plant and a high-pressure water spraying system absorbs most dust particles from the air. The environmental features integrated into the mobile plant do not require any special maintenance. The crushing plant is also very easy to move from one site to another. If needed, the Urban can be "packed up" for transportation in only 15 to 30 minutes.

Whether crushing closer or farther away from cities, demands will continue to increase for smoother, safer and more sustainable crushing operations. Regulations as well as cost structures are changing, and equipment too must support these developments.

# Process industries

**Valves business** focuses on providing valves and related services for various process industries covering among all oil and gas in mid and downstream, petrochemical and chemical, industrial gas, pulp and paper, power and other process industries.

#### CASE

**Bioproduct mill's operational reliability and efficiency targets ensured with Metso's valve solutions and comprehensive maintenance services** Metsä Group's modern bioproduct mill in Finland started up in August 2017. The mill is the world's first next-generation bioproduct mill and in addition to high-quality pulp, it also produces a wide range of other bioproducts.

The customer valued Metso's strong expertise when selecting their valve solutions to meet the process requirements. Valve solutions contribute to the operational reliability of production, a reduction in water consumption, energy efficiency, and minimized emissions.

The mill has about 3,000 valves and related devices from Metso, which covers more than 90 percent of the mill's automation valves. Furthermore, a full-scope spare parts, maintenance and service agreement supports the operational reliability of the valves.







# Recycling

**Recycling business** provides equipment and services for mechanical treatment of metal scrap and solid waste. Our customers are the automotive industry, scrap yards, steel mills, waste handlers, plant builders and the cement industry.

#### CASE

#### **Eternal resource**

In a world where the population is growing and the known natural resources are diminishing, recycling is something we should do more of. All the materials that we do not take full advantage of generate losses both in efficiency and to the environment.

Many metals, like steel, aluminum and copper, are ideal for recycling. They can be recycled infinitely without losing their physical properties. Reproducing metals from recycled materials saves energy and natural resources, but the economic and environmental potential is still underutilized.

Steel is the most recycled material in the world. However, even with steel we can improve. In 2016, global steel production was 1,630 million tonnes. During the same period, about 600 million tonnes of steel was recycled, and approximately 520 million tonnes was used to produce new steel. Less than 40 percent of steel was produced from recycled material.

Massive amounts of useful materials are also lost with municipal waste. Solid waste generation rates are rising, and much of the waste is dumped in landfills, even though many components could be reused, recovered and utilized as an energy source.

Metso wants to make reproduction and reutilization of materials easy and effective by developing processing equipment and services for metal and waste recycling. The recent Metso N-Series product family for smaller scrapyards and the all-rounder Metso M&J shredders for various waste processing facilities are examples of solutions we manufacture for businesses, that want to work towards better use of resources without compromising profitability.









# We shape and make history every day

2018 marks Metso's 150th anniversary. Our long industrial history and heritage with roots in different continents drives our knowledge and expertise to innovate and further develop our technical expertise.

METSO'S VALVES AT METSÄ GROUP'S BIOPRODUCT MILL IN FINLANI

10

Metso 2017

# Metso People



### People drive our customer success

At Metso, we are a truly global team working closely together. The knowledge, expertise and skills of our more than 12,000 industry professionals across 50 countries ensure a strong foundation for our success. We believe that we can drive profitable growth and reach our targets through customer success, engaged employees and by performing together.

Metso's ability to deliver successfully is based on the local expertise all over the Metso world. We acknowledge each other's strengths and build on them. It is vital that we have leadership, organization, resources and competencies geared towards the future growth. To ensure delivering on our growth targets we want to attract the right people to work with us. We aim to seek and share ideas and better ways of working together, systematically develop our people, and seize growth opportunities through innovations and digitalization.

We utilize data as part of decision making: as an example, in 2017 we conducted a thorough analysis on how our employees are rewarded, developed, engaged and retained, based on people and organizational performance data. The results show that we are systematic in carrying out our people priorities. We strive to build our organization coherently by developing and promoting internal candidates. We want to ensure that all Metso people are committed, know clearly what is expected of them and how they are performing. Therefore, we decided to develop our annual review process and performance management.

### Reshaping our annual review process

In 2017, we developed our annual review process (performance review, target setting, and development discussion). We believe that at its best the process is tailored for each company to fit the business purposes. That is why we started with an internal study involving our people, asking their opinions and needs, and testing different approaches.

Our new "Performance and Development Discussion" will be implemented in 2018. It aims to ensure that our managers and employees have the possibility to reflect their targets, achievements and development continuously throughout the year, and give and receive timely feedback. They will have a better opportunity to drive short- and long-term business targets, and support Metso's strategy, values and growth in the best possible way.



Read more

 Read more about People and leadership strategic achievements on p. 19
 Read more about Metso as an employer in metso.com/careers

### Safety is caring for each other

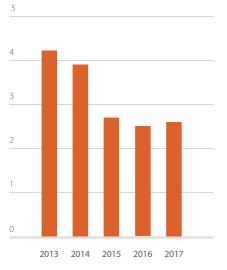
Taking care of safe working conditions is an essential part of our everyday management. Metso wants to encourage and promote a positive safety culture.

During the past year, we did not meet the targets set for our safety performance, ending the year with an LTIF (Lost time incident frequency) of 2.6 (2.5). We strive for continuous improvement, and our occupational safety target is to achieve an LTIF of less than one.

The undesired halt of our LTIF development indicates that new actions must be introduced. For this reason, in 2017, we started comprehensive, global-level Safety Excellence training for Metso managers responsible for service and production employees. The target is to ensure a thorough understanding of our safety requirements and stronger employee engagement throughout the organization. The training aims to explain both the business and personal aspects of safety and to help our employees find concrete ways to improve our safety in their everyday work. The training program will continue in 2018. In 2017, we clearly exceeded the set target for HSE (health, safety and environment) training for employees (eight hours/year).



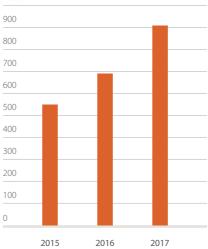
"Because I care" was the theme of our annual global safety pledge campaign. The focus was to emphasize the personal responsibility for safety in a form of a short, moviestyle video that aimed at awaking emotions and encouraging us to show that we care the safety of our co-workers, and intervene in unsafe actions.



LTIF at Metso

#### Risk observation frequency

1000



 Lost-time incident frequency reflects the number of incidents resulting in an absence of at least one workday per million hours worked.

 Risk observation frequency reflects the number of risk observations per million hours worked.

### Learning from each other

In addition to working safely and following safety procedures, we think talking about safety is important. All employees are encouraged to openly discuss safety related matters. Safety conversations are face-to-face conversations between managers or supervisors and employees, where they discuss safety matters related to the work environment and procedures. They are an important part of our safety development, and a part of our managers' individual targets. We can learn from each other and work together to identify safe and unsafe work practices.

Proactivity, such as risk observations, is vital in order to take corrective action in advance. We strongly encourage active risk observation reporting, and it was included as individual target for our employees. The number of risk observations has increased annually and was at a satisfactory level of 19,895 (15,894) in 2017. We also monitor the number of risk observations that have been processed and the corrective actions that have been taken.

Metso's internal HSE audit function checks globally that our locations follow Metso's HSE guidelines and local legislation. All major locations are audited biannually to support the local organization in finding hidden hazards and planning corrective actions. HSE audits were carried in 20 locations. We started to systematically use audit findings for monthly inspection purposes, requiring our other manufacturing and service locations to check certain matters within a month. One aim is also to find best practices that could be implemented in other locations as well. For example, our valve factory in Finland has developed designated lifting tools for valve production to replace lifting slings. This type of tool was taken into use in our Shanghai factory in China. This practice increases both safety and productivity.









#### **Read more**

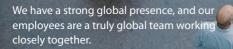
> Read more about People and leadership strategic achievements on p.19 > Read more about Metso as an employer at metso.com/careers



> Read more in Sustainability Supplement: metso.com/2017



# Metso as an employer



Number of countries

Number of locations

(2016:51)

(2016: 179)

The knowledge, expertise and skills of our industry professionals ensure a strong base for our success.

Average length of service

(2016: 9.6)

their risk observations.



A proactive approach to safety is key for us and integrated in our everyday work. We encourage our employees to actively report



**Risk Observation** Frequency



(2016:691)

\*LTIF (lost-time incident frequency) reflects the number of injuries in an absence of at least one workday per million hours worked

We are focused on performing and delivering our customer promise "Expect results". Our people seek and share knowledge and better ways of working together.

New

employees

Number of employees

(2016: 11,542)

(2016: 1,240)

Our employees from various countries and cultures drive customer success. We are equal, open and fair with each other.

Average Number of nationalities



age

(2016:84)

At Metso, we support our managers with global leadership development programs, and develop professional capabilities across the company.

Leadership development programs – participants

Sales Excellence program - participants

# Timeline of Metso's 150 years

# 1868



Erik Jan Hammarberg establishes Sunds Bruk ironworks in Sweden.

#### 1886

Bruno Nordberg, a Finnish migrant who settled in Michigan, establishes the Nordberg Manufacturing Company. In the beginning, the company specializes in the manufacture of steam machines and related equipment, and soon also in crushing equipment used in mines.

Today, Metso's Nordberg<sup>™</sup> brand is a world-renowned trade name for premium crushing and screening equipment.

#### 1985

The track-mounted Lokotrack™ crushing plant is developed in Tampere, Finland. It is the first serial-manufactured mobile crushing plant in the world.

#### 1895

Ateliers Bergeaud is established in Mâcon, France, to produce machinery for building the new infrastructure needed for railway and automobile transportation, particularly road construction. Today, Mâcon is an expert knowledge hub for industryleading aggregates processing solutions, providing complete crushing and screening systems and, among others, industryleading impact crushers and cone crushers.

#### 1988

The valve offering starts to shape when Rauma-Repola Oy purchases Neles Oy in Finland in 1982 and Jamesbury Inc. in the USA in 1988. The two companies merge to form Neles-Jamesbury, combining Jamesbury's softsealed valves and Neles<sup>™</sup> metal valve portfolio under one roof.

#### Lokotrack

#### 2007

NelesValvGuard is introduced to the oil and gas customers. The solution helps diagnose the performance of emergency shutdown valves and hence eliminate risks with such installations.

#### 2008

MAPAG Valves GmbH, a company manufacturing engineered butterfly valves, is acquired from the Linde Group, a German company. With the acquisition, Metso complements the product offering for the energy and hydrocarbon industries. Today, MAPAG's technology is sold with trade name Neles.

#### 2009

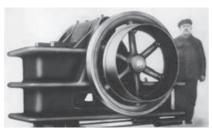
Life Cycle Services for the mining industry are launched. Life Cycle Services are designed to help customers reach their lowest sustainable cost structure by offering supplementary resources to customers' team, handling shutdowns, or managing all areas of a maintenance plan.

Acquisition of Danish M&J Industries A/S, one of the world's leading suppliers of recycling solid-waste recycling equipment and services.



For the past 150 years, Metso and our predecessor companies have been shaping and making industrial history every day. Glance through some of the highlights during our journey so far.

#### 1915



Lokomo Oy is established in Tampere, Finland, to produce steam-powered locomotives. Jaw crusher production starts in 1921.

#### 1956

Antti Nelimarkka and Eino Santasalo establish Neles Oy in Helsinki, Finland. The Neles product family has evolved from reliable valves to also include a comprehensive range of expert services and intelligent valve controller solutions.



Antti Nelimarkka

#### Metso Corporation is born on July 1, 1999.



On November 17, 1998, the Boards of Rauma and Valmet propose a merger of Rauma and Valmet. The merger plan is approved by extraordinary meetings of Rauma's and

Valmet's shareholders on January 31, 1999. A new era begins with the merger. The company's customer base consists of pulp and paper, construction and civil engineering, mining, and other process and energy industries.

#### 2001

The foundation for a full, industry-leading rock and minerals processing solution portfolio is laid with the acquisition of Svedala Industri AB in Sweden.

The primary gyratory crushers, grinding mills and vertical shaft impactors in Metso's current portfolio are of Svedala origin.

The acquisition includes the industryleading Lindemann metal recycling solutions, which today, together with Metso Denmark's M&J waste recycling solutions, form the basis for Metso's metal and waste recycling solutions.

#### 2013

Metso's focus sharpens: the company is split into two independent listed entities: Metso Corporation and Valmet Corporation. Metso concentrates on intelligent solutions and services for the mining, aggregates, oil and gas industries, as well as on flow control solutions for process industries. The process automation business is divested in 2015.

#### 2017

Acquisition of the Australian wear lining solutions provider WEARX strengthens position in the wear lining business and extends offering to local customers.

Launch of Metso Metrics Services, a cloud-based, remote monitoring and data visualization service for Metso Lokotrack<sup>™</sup> mobile crushing plants.

Launch of my.metso.com, spare and wear online store for aggregates distributors and preowned.metso.com, an online store for used Metso aggregates equipment.

# 2018



# Metso Executive Team



**Eeva Sipilä** Interim President and CEO, CFO



**Markku Simula** President, Aggregates Equipment business area



**Mikko Keto** President, Minerals Services business area



Sami Takaluoma President, Minerals Consumables business area



Victor Tapia President, Mining Equipment business area



**Uffe Hansen** President, Recycling business area



**John Quinlivan** President, Valves and Pumps business areas



**Merja Kamppari** Senior Vice President, Human Resources



Jani Puroranta Chief Digital Officer



### Metso's Annual Report 2017

Our Annual Report 2017 consists of four reports: a printed Annual Review and a printed Financial Statements, which are available in Finnish and English, Corporate Governance Statement which is available as a PDF in Finnish and in English as well as an externally assured Sustainability Supplement available as a PDF in English. All reports can be viewed as PDF files on our website www.metso.com/2017. The reports for the year 2017 present Metso's strategy, our businesses, our customer industries, and sustainability issues.

Welcome to explore more at > www.metso.com/2017

### Financial calendar 2018

<b>Financial Statements</b>	Annual Report	Annual General	Interim	Half-Year	Interim
Review 2017	2017	Meeting	Review	Review	Review
February 2, 2018	February 23, 2018	March 22, 2018	April 25, 2018	July 26, 2018	October 26, 2018

Metso Corporation Töölönlahdenkatu 2 PO Box 1220, FI-00100 Helsinki, Finland Tel: +358 20 484 100 metso.com

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