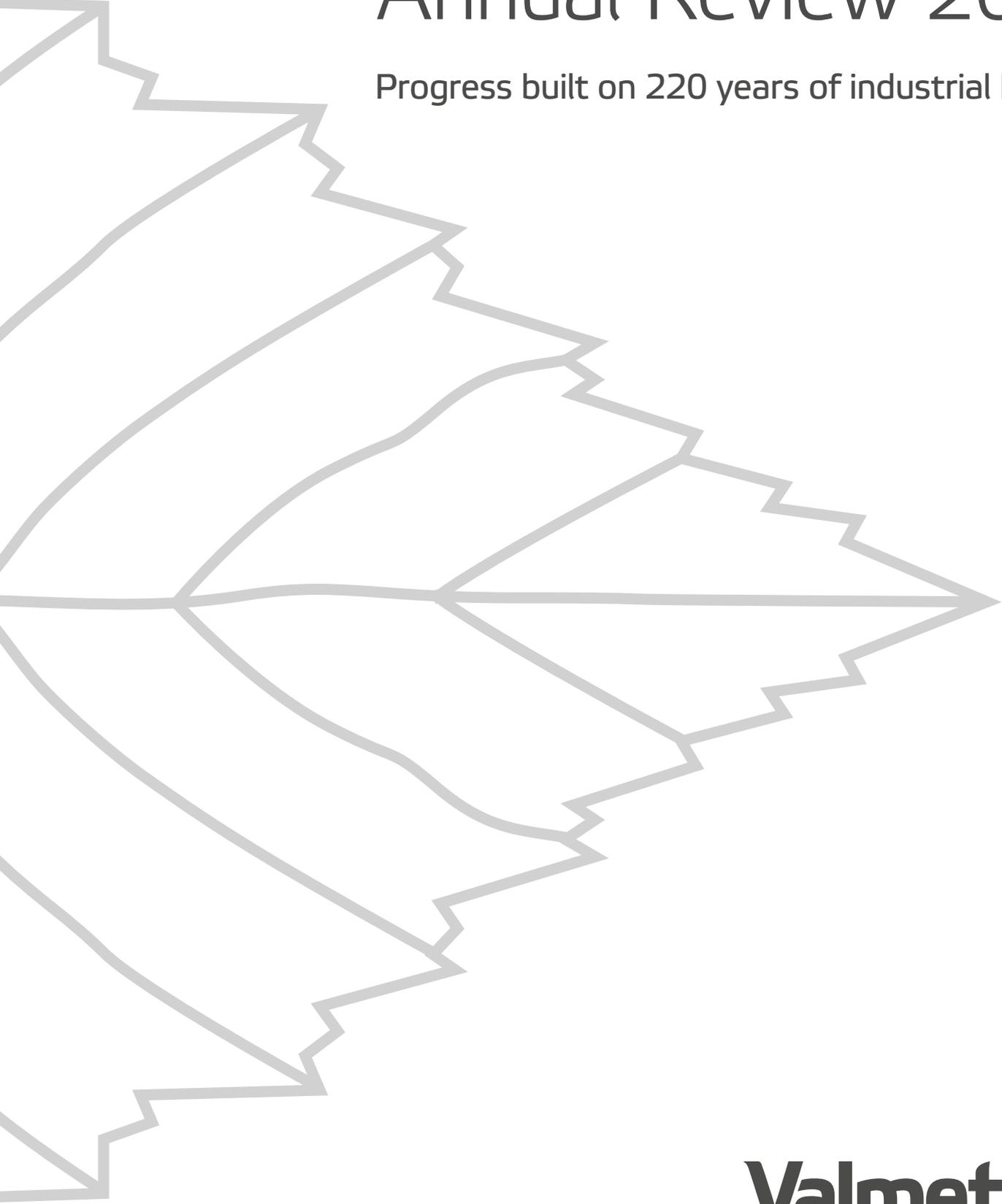


# Annual Review 2017

Progress built on 220 years of industrial history



**Valmet** 

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# Valmet's history in a nutshell



**1797**

Valmet's journey begins with the founding of Tampere Clothing Factory, later known as Tamfelt.

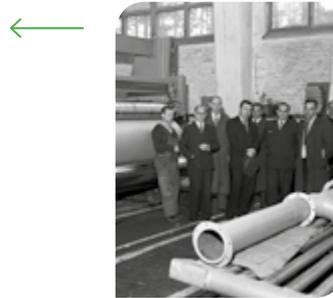
**19<sup>th</sup> CENTURY**

The roots of Valmet's predecessors are deep in industrial history: Götaverken (1841), Tampella (1856), Beloit (1858), Karlstads Mekaniska Werkstad (KMW) (1860), Sunds Defibrator (1868).



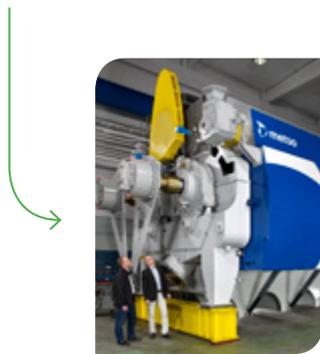
**1968–1996**

Valmet focuses on paper machines, while strengthening its technological expertise in paper and board machines and paper finishing technology through mergers and acquisitions: Karstads Mekaniska Werkstad in 1986, Wärtsilä paper finishing machinery in 1987, Tampella Papertech in 1992.



**1951**

The former arms factories manufacturing war reparation products merge to form the State Metalworks, Valmet. The product range was wide: aircraft, ships, paper machines, trains and tractors.



**1999**

Metso is created through the merger of Valmet and Rauma. Valmet's paper technology and Sunds Defibrator's fiber technology operations merge, and Metso now serves the pulp industry as well.

**2000–2009**

Several mergers and acquisitions strengthen and expand the product and services offering, e.g. Beloit Technology in 2000, Kvaerner Pulping and Kvaerner Power in 2006, and Tamfelt in 2009.



**2015**

The acquisition of Metso's Process Automation Systems completes Valmet's offering, strengthening the company's competitiveness by creating a unique customer offering that combines process technologies, services and automation.



**2013**

Metso demerges into two companies: Valmet and Metso. Metso's Pulp, paper and power business transfers to Valmet, which focuses on the global pulp, paper and energy industries.



**THE YEAR 2017 WAS  
EXTRAORDINARY  
YEAR FOR OUR BOARD,  
TISSUE AND PAPER  
TECHNOLOGIES**

# Progress built on 220 years of industrial history

The year 2017 was a special one for Valmet, with a celebration of the company's 220 years of industrial history. The history of Valmet can be woven from many different strings, looking into the history of the different companies that today form Valmet. The first roots of Valmet were established in 1797, when Tampere Clothing Factory was founded and our paper machine clothing business began.

Throughout our long history, Valmet has had a crucial role in moving several industries forward with the help of its technological solutions. Many innovations created by Valmet's experts in collaboration with our customers have led to significant leaps in the pulp, paper and energy industries. They have enabled totally new bio-based products for consumers, odorless pulp mills with good environmental performance, and continuous improvements in energy, water and raw material efficiency in production processes.

We are proud of our past, and we are embracing the future by aiming to always be one step ahead in developing new, future-focused solutions that benefit our customers and the whole planet. We achieve this through our unique offering, combining leading process technologies, services and automation.

## Extraordinary year for our board, tissue and paper technologies

Our Paper business line develops and provides technologies for board, paper and tissue production. Last year was a successful one for the business line, and orders received increased by 44 percent, amounting to a record-high EUR 1,035 million. Orders came from the board and paper producers, as well as from tissue-makers. Customer activity was especially strong in China, with five container-board machine orders. In addition, a fine paper machine was ordered from the United Arab Emirates and several rebuilds of paper machines were ordered both from Europe and other parts of the world. Furthermore, all our newest tissue-making technologies continued

to be extremely well received by customers, with orders placed for six tissue-making lines from Spain, Russia and North America.

In our Pulp and Energy business line, demand for our bioenergy technologies was good, and we continued our business expansion in Japan with two new biomass boilers and flue gas cleaning system delivery agreements. In the pulp business, one of the major customer projects – key technology delivery to Metsä Fibre's Äänekoski bioproduct mill – was completed, and the mill successfully started up exactly on time. The orders received in Pulp and Energy business line were lower than last year, at EUR 678 million.

## Growth in stable business and improved company level profitability

Our stable business – meaning the Services and Automation business lines – continued its solid performance. Orders received increased by 5 percent in the Services business line, and 6 percent in the Automation business line. Orders received in the stable business totaled EUR 1.6 billion, which was almost half of Valmet's total orders received in 2017. The strategic initiatives – our new services approach launched in 2016 and Industrial Internet services launched in 2017 – further strengthen our competitiveness in the global markets.

In 2017, Valmet's orders received increased by EUR 133 million, to EUR 3,272 million. Net sales were EUR 3,159 million and our profitability improved further. The Comparable EBITA margin was 7.2 percent, moving closer to our target range of 8–10 percent. The work on profitability and efficiency is continuing, and with an order backlog of EUR 2.3 billion, we have a sound basis for 2018.

## Consistent progress in strategic focus areas

Our way forward is based on four Must-Wins that we are focusing on – Customer Excellence, Leader in Technology and Innovation,

Process Excellence, and Winning Team. Under these Must-Wins, we concentrated for example on the global implementation of our new services approach – Shared Journey Forward – introduced in 2016. As part of this program, we renewed our Industrial Internet offering to our customers and started to build a related ecosystem with leading partners in the field. We also established Performance Centers for each customer industry as a channel to our Industrial Internet services.

We have systematically widened our global footprint close to our customers in recent years. As Asia-Pacific continues to be one of the major growth areas for Valmet, we inaugurated a new Services center in Indonesia in September 2017. The Indonesian service center's offering includes roll services, fiber line services, field services, machine section upgrades and mill improvement projects.

Our major internal efficiency development program – the Leap Forward enterprise resource planning system (ERP) renewal project – has progressed well. In late 2017, we successfully started the stepwise implementation of the ERP, first in our Services Business Line in Finland.

Furthermore, we continued to have a very positive trend in employee engagement, and working together continued to be our major internal strength. To accelerate our progress in our Must-Wins, we ran seven global training programs, improved our performance management processes, activated internal mobility and enhanced internal mentoring.

### **Mitigating risks and creating opportunities through sustainability leadership**

Valmet's mission is to convert renewable resources into sustainable results. This means that with the help of our process technologies, services and automation, our customers can develop and produce recyclable and sustainable products from renewable raw materials. In that way, Valmet is also at the heart of the circular economy.

In our first four years as an independent company, we have concentrated on sustainability risk mitigation in our operations. That is why we have worked a lot to ensure sustainable procurement practices globally, to drive a strong safety culture, and to develop our people, R&D and Health Safety and Environment (HSE) pro-

cesses to ensure and strengthen our sustainable and responsible way of operating globally.

Valmet's strong progress in sustainability has been globally recognized, and in 2017 Valmet was selected in the Dow Jones World and Europe Sustainability Indices for the fourth consecutive year. Valmet was also selected to the Ethibel Europe Sustainability Excellence Index for a second consecutive year as one of the 200 ethical investment targets, and received an A- rating in the CDP Climate rating for its work to mitigate climate change.

In the coming years, we will continue with this long-term work, and at the same time build further business opportunities based on our comprehensive sustainability work. We believe that being at the forefront of sustainable development in products and services for customers and acting as a responsible corporate citizen enables future business success.

### **Becoming the champion in serving our customers**

Looking back to the year 2017, I am happy to see all the good progress in the strategic focus areas, in our financial performance, and in the way our personnel works together and commits to moving our customers' performance forward daily in the field. The shift towards a cleaner world and sustainable business practices is an ongoing one, and Valmet wants to be part of creating future solutions to strengthen this development. We combine digitalization and our strong process expertise to ensure optimized production with maximized resource efficiency and minimized environmental footprint in our customers' production processes – and in our own operations – every day.

I see many opportunities in front of us. With an innovative mindset, strong customer focus and consistent work, we can bring the future to our customers today and tomorrow.

I warmly thank our customers for the strong trust they have shown in Valmet, and our partners for the fruitful collaboration. To the entire Valmet team – thank you for your great commitment and diligent work!

**Pasi Laine**

President and CEO

## Focusing on the best services experience



**At Valmet, we want to offer our customers world-class services that move their process reliability and performance forward. To fulfill this goal, we have unified our way to serve and renewed our services offering. This services approach is called Shared Journey Forward.**

At the core of giving our customers the best services experience are our commitments – 'safety comes first', 'close to you', solutions to your needs', and 'people you can trust'. We are committed to delivering these experiences to our customers – every day. To make it easier for our customers to find just the right service or solution, we offer our services in three categories: reliability services, performance services, and new technology for process and automation upgrades.

Our services respond to our customers' everyday challenges, like keeping equipment and processes running reliably, or optimizing the performance of industrial processes to get the most out of the least. We help our customers to keep their processes competitive with the latest developments and the best expertise. We also have an extensive Industrial Internet solutions offering, as well as expertise and experience in remote solutions.



**Read more:**  
Meaningful dialogue  
with data p.40  
[www.valmet.com](http://www.valmet.com)



**BACK IN THE OLD DAYS**  
Knitting frames at fabrics  
factory in Tampere in the 1960's.

# This is Valmet



Total net sales,  
EUR million

**3,159**



Personnel

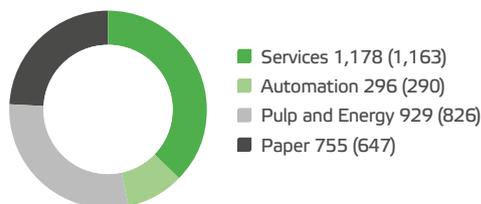
**12,268**

Valmet is the leading global developer and supplier of process technologies, automation and services for the pulp, paper and energy industries. We aim to become the global champion in serving our customers.

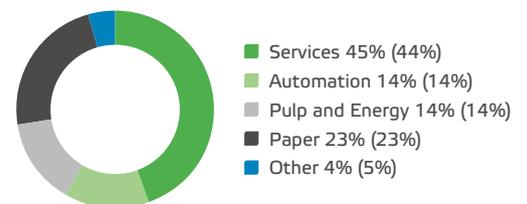
Valmet’s strong technology offering includes pulp mills and board, paper and tissue production lines, as well as power plants for bioenergy production. Our advanced services and automation solutions improve the reliability and performance of our customers’ processes and enhance the effective utilization of raw materials and energy.

Valmet’s net sales in 2017 were EUR 3.2 billion. Our more than 12,000 professionals around the world work close to our customers and are committed to move our customers’ performance forward – every day. Valmet’s head office is in Espoo, Finland, and its shares are listed on the Nasdaq Helsinki.

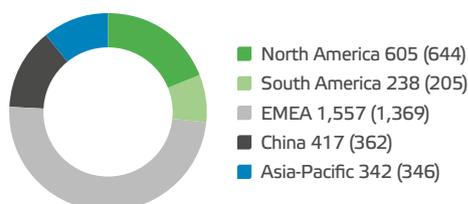
**Net sales by business line, EUR million**



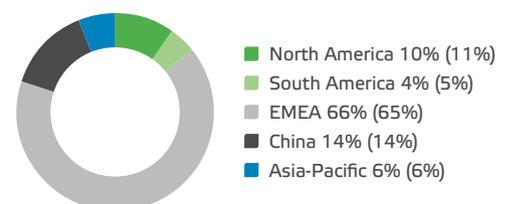
**Personnel by business line, %**



**Net sales by area, EUR million**



**Personnel by area, %**



# Key figures

Financial <sup>1</sup>	2017	2016	CHANGE
Orders received, EUR million	<b>3,272</b>	3,139	4%
Services	<b>1,242</b>	1,182	5%
Automation	<b>317</b>	299	6%
Pulp and Energy	<b>678</b>	939	-28%
Paper	<b>1,035</b>	718	44%
Order backlog <sup>2</sup> , EUR million	<b>2,292</b>	2,283	0%
Net sales, EUR million	<b>3,159</b>	2,926	8%
Comparable EBITA <sup>3</sup> , EUR million	<b>226</b>	196	15%
% of net sales	<b>7.2%</b>	6.7%	
Operating profit (EBIT), EUR million	<b>178</b>	147	21%
% of net sales	<b>5.6%</b>	5.0%	
Dividend per share, EUR	<b>0.55<sup>4</sup></b>	0.42	31%
Return on capital employed (ROCE) before taxes, EUR million	<b>15%</b>	12%	
Research and development expenses, net, EUR million	<b>64</b>	64	0%
<b>Social</b>	<b>2017</b>	<b>2016</b>	<b>CHANGE</b>
Personnel <sup>2</sup>	<b>12,268</b>	12,012	2%
Total recordable incident frequency (TRIF) <sup>2, 5</sup>			
Own employees	<b>5.5</b>	6.0	-8%
Contractors	<b>10.1</b>	7.6	33%
Safety committee coverage, % personnel	<b>92</b>	91	
Support for non-profit organizations, EUR million	<b>0.1</b>	0.3	-51.2%
Number of supplier sustainability audits	<b>56</b>	54	4%
<b>Environmental</b>	<b>2017</b>	<b>2016</b>	<b>CHANGE</b>
CO <sub>2</sub> emissions <sup>6</sup> , 1,000 t	<b>86</b>	83	4%
Energy consumption, TJ	<b>1,336</b>	1,336	0%
Water consumption, 1,000 m <sup>3</sup>	<b>3,046</b>	3,149	-3%
Waste, 1,000 t	<b>42</b>	39	8%
NO <sub>x</sub> , SO <sub>x</sub> and other significant air emissions, t	<b>86.6</b>	75	16%

<sup>1</sup> Group figures: the formulas for calculation of the key financial figures are presented in the Financial Statements 2017.

<sup>2</sup> At the end of period.

<sup>3</sup> Comparable earnings before interest, taxes and amortization.

<sup>4</sup> Board of Directors' proposal.

<sup>5</sup> TRIF reflects the number of injuries resulting in medical treatment, restricted work or an absence of at least one workday per million hours worked.

<sup>6</sup> Scope 1 and 2 (location-based) emissions.



Orders received in the Paper business line increased

**44%**



Comparable EBITA margin

**7.2%**



**56** supplier sustainability audits



Water consumption reduced by

**3%**

## Valmet business lines

Valmet operates through four business lines. We have a strong global market position in all our businesses.



### Services

Services offers fit for purpose services to improve the reliability and performance of the customers' production processes and new technology upgrades to take the production to the next level. We are close to our customers by over 120 service centers and by remote services. We never compromise safety and we work hard every day to earn our customers' trust.

NET SALES,  
EUR MILLION

**1,178**

ORDERS RECEIVED,  
EUR MILLION

**1,242**

**#1-2 IN SERVICES**



### Automation

Automation solutions range from individual measurements to mill-wide process automation systems. They are designed to maximize the profitability of customers' businesses by improving production performance as well as cost, material and energy efficiency.

NET SALES,  
EUR MILLION

**296**

ORDERS RECEIVED,  
EUR MILLION

**317**

**#1-3 IN AUTOMATION**



### Pulp and Energy

Pulp and Energy business line provides complete pulping lines, from wood handling to pulp drying, boilers for heat and power generation and solutions for advanced biomass conversion. Our technologies maximize the value of renewable raw materials while increasing production efficiency and minimizing environmental impact.

NET SALES,  
EUR MILLION

**929**

ORDERS RECEIVED,  
EUR MILLION

**678**

**#1-2 IN PULP  
#1-3 IN ENERGY**



### Paper

Paper business line delivers complete board, tissue and paper production lines as well as machine rebuilds and key solutions. Our technologies are designed for high operational and environmental efficiency, flexibility and reliability. Our machines have a modular structure with as much standardization as possible to enable easy to use, cost efficient solutions to our customers.

NET SALES,  
EUR MILLION

**755**

ORDERS RECEIVED,  
EUR MILLION

**1,035**

**#1 IN TISSUE  
#1 IN BOARD  
#1 IN PAPER**

# Valmet worldwide

Valmet has a strong global presence close to its customers to serve different local needs. We have operations at 156 locations in 33 countries around the world. We have over 120 service centers, 87 sales offices, 36 production facilities, and 16 research and development (R&D) centers. Our more than 12,000 professionals work in close cooperation with our customers every day around the globe.



**Read more:**  
Market data  
by area on p.11  
[www.valmet.com](http://www.valmet.com)



# Market data by business

BUSINESS	MARKET SIZE <sup>1</sup> & GROWTH	MARKET DRIVERS	PRODUCT GROUP	VALMET'S POSITION AND COMPETITION
<b>Services</b>	EUR 8.0bn ~1–2%	<ul style="list-style-type: none"> <li>Increasing pulp, paper<sup>2</sup> and energy production</li> <li>Demand for more efficient processes, maintenance and outsourcing of non-core operations</li> <li>Customers decreasing own resources</li> <li>Size and gradually aging installed base, capacity increases in China, South America and Asia-Pacific</li> <li>Machine and mill closures in North America and EMEA</li> <li>Demand for Industrial Internet based solutions</li> </ul>	Rolls and Workshop Services	<ul style="list-style-type: none"> <li>#1–2</li> <li>Voith, Xerium</li> </ul>
			Mill Improvements	<ul style="list-style-type: none"> <li>#1–2</li> <li>Andritz, Bellmer, Voith</li> </ul>
			Performance Parts	<ul style="list-style-type: none"> <li>#1–2</li> <li>Andritz, Kadant, Voith</li> </ul>
			Fabrics	<ul style="list-style-type: none"> <li>#6</li> <li>Albany, AstenJohnsen, Voith, Xerium</li> </ul>
			Energy and Environmental	<ul style="list-style-type: none"> <li>#3–4</li> <li>Andritz, Babcock &amp; Wilcox, Sumitomo SHI FW</li> </ul>
<b>Automation</b>	EUR 2.0bn ~1%	<ul style="list-style-type: none"> <li>Ageing machines and installed automation systems</li> <li>Investments in new pulp and paper machines and power plants</li> <li>Demand for raw material savings, process efficiencies and sustainability</li> <li>Demand for Industrial Internet based solutions</li> </ul>	Distributed Control System (DCS)	<ul style="list-style-type: none"> <li>#3 in P&amp;P<sup>3</sup>, niche player in energy and process industries</li> <li>ABB, Emerson, Honeywell, Siemens, Yokogawa</li> </ul>
			Quality Management System (QMS)	<ul style="list-style-type: none"> <li>#1–2 in P&amp;P<sup>3</sup></li> <li>ABB, Honeywell, Voith</li> </ul>
			Analyzers and measurements	<ul style="list-style-type: none"> <li>#1 in P&amp;P<sup>3</sup></li> <li>ABB, BTG</li> </ul>
<b>Pulp</b>	EUR 1.4bn ~1%	<ul style="list-style-type: none"> <li>Growth in board and tissue consumption</li> <li>Need for virgin wood pulp. Decreasing availability of recycled paper and limitations to recycling rates</li> <li>Increased size of pulp lines and mills</li> <li>New applications for bio based products</li> <li>Increasing environmental awareness and stricter regulations</li> </ul>		<ul style="list-style-type: none"> <li>#1–2</li> <li>Andritz</li> </ul>
<b>Energy</b>	EUR 2.0bn ~1%	<ul style="list-style-type: none"> <li>Growth in energy consumption</li> <li>Demand for sustainable energy and shutdowns of coal capacity</li> <li>Modernization of aging plants</li> <li>Incentives and regulation</li> </ul>		<ul style="list-style-type: none"> <li>#1–3</li> <li>One of few global players in bioenergy niche</li> <li>Andritz, Babcock &amp; Wilcox, Sumitomo SHI FW</li> </ul>
<b>Board</b>	EUR 1.0bn ~2–3%	<ul style="list-style-type: none"> <li>World trade, e-commerce and emerging markets growth drive packaging</li> <li>Demand for light-weight board</li> <li>Shift from plastic packaging to renewable materials</li> <li>Conversions from paper to board</li> </ul>		<ul style="list-style-type: none"> <li>#1</li> <li>Voith</li> </ul>
<b>Paper</b>	EUR 0.3bn ~1%	<ul style="list-style-type: none"> <li>Increasing role of digital media decreases demand for printing and writing papers</li> <li>Demand for technology driven efficiency improvements</li> </ul>		<ul style="list-style-type: none"> <li>#1</li> <li>Voith</li> </ul>
<b>Tissue</b>	EUR 0.7bn ~3%	<ul style="list-style-type: none"> <li>Rise in purchasing power and living standards</li> <li>Fast growth in emerging markets</li> <li>Demand for higher quality</li> </ul>		<ul style="list-style-type: none"> <li>#1</li> <li>Andritz, Toscotec, Voith</li> </ul>

<sup>1</sup> Market size is defined as Valmet's target market, meaning those geographical markets, product segments and customer industries where Valmet is currently competing or aiming to compete.

<sup>2</sup> Refers to board, paper and tissue, as well as other paper grades.

<sup>3</sup> Pulp and paper

<sup>4</sup> Figures for 2016 production and 2016–20 growth based on RISI estimates

## Market data by area

AREA	MARKET SIZE <sup>1</sup> & GROWTH	MARKET CHARACTERISTICS	VALMET'S POSITION
<b>North America</b>	<p>Target market size<sup>1</sup>: EUR 2.8bn</p> <p>P&amp;P<sup>3</sup> annual production<sup>4</sup>: 150m tonnes, growth +0.9%</p>	<ul style="list-style-type: none"> <li>• Mature market with large aging installed base creating service demand</li> <li>• Rebuild and new process technology opportunities in board and tissue grades. Capacity closures in printing papers</li> <li>• Continued customer focus on availability, reliability, operating cost and environmental savings in mills</li> <li>• Service, rebuild and upgrade opportunities in pulp</li> </ul>	<ul style="list-style-type: none"> <li>• Net sales: EUR 0.6bn (19% of total)</li> <li>• Employees: 1,223</li> <li>• Leading position P&amp;P process technology, a well-established position in the services and automation business</li> </ul>
<b>South America</b>	<p>Target market size<sup>1</sup>: EUR 1.6bn</p> <p>P&amp;P<sup>3</sup> annual production<sup>4</sup>: 40m tonnes, growth +2.9%</p>	<ul style="list-style-type: none"> <li>• Service growth driven by demand for more efficient operations and environmental considerations</li> <li>• Cyclical process technology project business driven by large pulp mill investments. Continuous opportunities in pulp mill rebuilds and upgrades</li> <li>• Opportunities in tissue, and occasionally in board, with new lines and rebuilds</li> <li>• Brazil's political and economic instability impacts project decisions</li> </ul>	<ul style="list-style-type: none"> <li>• Net sales: EUR 0.2bn (8% of total)</li> <li>• Employees: 534</li> <li>• Valmet has a strong position and installed base in in pulp mills and services</li> <li>• Continued strong competition from regional players expected in pulp &amp; energy as well as from Andritz in large new pulp mills</li> <li>• Local presence important, especially in Brazil due to customs duties</li> </ul>
<b>EMEA (Europe, Middle-East and Africa)</b>	<p>Target market size<sup>1</sup>: EUR 5.7bn</p> <p>P&amp;P<sup>3</sup> annual production<sup>4</sup>: 160m tonnes, growth +1.3%</p>	<ul style="list-style-type: none"> <li>• Valmet's largest Area with significant services and technology markets and large installed base</li> <li>• Services growth potential through broader service offering, agreements-based business and new value added solutions to increase customers' productivity and efficiency</li> <li>• Process technology project opportunities in board, tissue, pulp and energy driven by increasing focus on sustainability and growth in packaging and tissue consumption</li> </ul>	<ul style="list-style-type: none"> <li>• Net sales: EUR 1.6bn (14% of total)</li> <li>• Employees: 8,088</li> <li>• Leading position in P&amp;P process technology as well as in biomass boilers in energy</li> <li>• Leading position in the more fragmented services market and in P&amp;P automation</li> </ul>
<b>China</b>	<p>Target market size<sup>1</sup>: EUR 2.8bn</p> <p>P&amp;P<sup>3</sup> annual production<sup>4</sup>: 120m tonnes, growth +2.4%</p>	<ul style="list-style-type: none"> <li>• Growing services market driven by new board and tissue lines, and demand for energy savings, efficiency improvements and reliability</li> <li>• Process technology project opportunities in board, tissue and energy driven by growing consumption, stricter environmental regulation and demand for clean energy</li> </ul>	<ul style="list-style-type: none"> <li>• Net sales: EUR 0.4bn (13% of total)</li> <li>• Employees: 1,696</li> <li>• Leading position in P&amp;P process technology and a strong position in services and P&amp;P automation market</li> <li>• Continued strong competition from local and global competitors</li> </ul>
<b>Asia-Pacific</b>	<p>Target market size<sup>1</sup>: EUR 2.5bn</p> <p>P&amp;P<sup>3</sup> annual production<sup>4</sup>: 100m tonnes, growth +1.8%</p>	<ul style="list-style-type: none"> <li>• Services growth potential in both emerging and mature markets in growing installed base and market share</li> <li>• Process technology project opportunities in rebuilds, grade changes and new capacity in pulp, board and tissue, and in renewable energy projects in selected countries</li> </ul>	<ul style="list-style-type: none"> <li>• Net sales: EUR 0.3bn (11% of total)</li> <li>• Employees: 727</li> <li>• Leading position in P&amp;P process technology and increasing local presence</li> <li>• Increasing competition from Chinese players moving into Asia-Pacific region</li> </ul>

# Value creation

## INPUTS



## BUSINESS MODEL



### Financial

- Total equity EUR 933 million
- Net interest-bearing debt EUR -100 million
- Cash and cash equivalents EUR 296 million

### Natural

- Purchased components (mainly metals-based)
- Purchased raw materials (mainly metals, minerals, polymers and gas)
- Energy consumption 1,336 TJ
- Water consumption 3,046,000 m<sup>3</sup>

### Human

- Number of employees 12,268
- FTE<sup>1</sup> of subcontractors and supervised workers
- Investment in development and know-how
- Investment in occupational health and safety

### Infrastructure

- 156 locations in 33 operating countries<sup>2</sup>
- 36 production units and over 120 service centers
- 87 sales offices
- Suppliers in over 50 countries

### Intellectual

- Proven customer references
- Technology know-how
- Product portfolio
- 16 technology centers and pilot facilities
- R&D expenses EUR 64 million
- 1,300 protected inventions

### Social and relationship

- Open dialogue with stakeholders (e.g. customer events, investor meetings, supplier days, stakeholder surveys)
- Cooperation with over 30 universities and research institutes
- Over 25 memberships in associations
- Relationships and partnerships
- Collaboration with local communities



### Customers

Pulp and paper industry  
Energy industry  
Other process industries

### Key processes

R&D  
Marketing  
Sales  
Engineering  
Procurement  
Production  
Delivery  
Service



### Our employees, expertise and experience

### Valmet's Way Forward:

Mission, Strategy, Must-Wins,  
Vision and Values



<sup>1</sup> Full-time equivalent

<sup>2</sup> Includes technology centers

All figures are from December 31, 2017, unless otherwise stated.



<sup>3</sup> Scope 1 emissions are direct GHG emissions from sources that are owned or controlled by Valmet, such as fossil fuels burned on site.  
<sup>4</sup> Scope 2 (location based) emissions are indirect GHG emissions resulting from the generation of electricity, heating and cooling, or steam generated off site but purchased by Valmet.  
<sup>5</sup> Scope 3 data covers only four selected relevant categories; category 1: purchased goods and services; category 4: upstream transportation and distribution; category 6: business travel; and category 9: downstream transportation and distribution.



**1960's**

**Knitting frames  
at fabrics factory  
in Tampere**



# Today

Weaving loom  
at Tampere  
fabrics factory

# Strategy

Valmet's Way Forward crystallizes the identified megatrends, our mission, strategy and the related strategic actions that describe how we aim to achieve our vision of becoming the global champion in serving our customers.

Valmet's mission is to convert renewable resources into sustainable results, and it defines our core purpose. Customers can use our technologies, automation and services to help them refine renewable raw materials into sustainable and environmentally responsible products. Moreover, our solutions help our customers, as well as Valmet, to perform profitably and responsibly.

Valmet's business environment is impacted by megatrends that create both opportunities and risks. We have defined three key megatrends in the areas of resource efficiency, digitalization and consumer behavior, which impact on our strategic choices. Our values and sustainability agenda are closely linked to our strategy and Must-Wins.

Valmet's main customer industries are the board, tissue, paper, pulp and energy industries. We are committed to improving our customers' performance through our unique offering, combining process technologies, automation and services. Valmet's Services and Automation businesses operate in relatively stable markets driven by the size of the installed technology base and customer mill operating rates.

Our process technologies comprise board, paper and tissue machines, as well as pulp mills, and heat and power boilers, which are all driven by our customers' new investments. All our businesses serve the same customer base, which enables us to deliver customer benefits through our full combined offering, as well as to develop new technology and services that improve our customers' performance.

## Valmet's Way Forward



# Strategy Implementation

Valmet's vision of becoming the global champion in serving our customers defines our long-term direction. It means that we want to be the leader both in market share and in serving our customers. We implement our strategy through our Must-Wins, which structure our strategy implementation and tell us where we need to focus in order to reach our goals. Valmet's strategy, Must-Wins and financial targets were reconfirmed in June 2017. During 2017, Valmet continued to implement its Sustainability360° agenda as a part of its strategy.

## Further developing customer excellence

With our 'Customer excellence' Must-Win, we focus on providing the best customer service by having strong, capable, and committed teams close to customers, and by providing customer benefits through our integrated offering combining process technology, automation and services.

In line with this goal, we continue to develop our services approach, 'Shared Journey Forward', with the aim of improving the performance and reliability of our customers' processes while enabling a better customer experience and growth in Valmet's services business. In our process technology business, we continue to strengthen Valmet's position as the preferred supplier.

We develop our sales management practices through systematic development of sales capabilities, common tools and processes, to drive growth and gross profit. In order to strengthen our local presence, we are continuing to develop our local sales and service capabilities and presence, as well as to strengthen our key account management. We are focusing particularly on markets with higher growth, as well as on markets where Valmet does not currently have a strong presence.

## Solutions for customer needs

As part of our 'Leader in technology and innovation' Must-Win, we are focusing on developing and providing products and services that reduce our customers' operating and investment costs, while developing solutions that better meet their needs.

Improving our product cost is important in improving our competitiveness – and Valmet's profitability. We achieve this through increasing modularization, standardization and optimization of our product design and by enhancing our delivery chain.

'Innovation Pathways' training program was launched to promote innovation culture

We continuously renew our existing product portfolio while developing innovative new solutions that improve our customers' performance and create new revenue streams for both our customers and Valmet. Strengthening our collaboration with key customers is an important part of developing our offering.

## Megatrends



### RESOURCE-EFFICIENT AND CLEAN WORLD

Climate change, environmental awareness and resource scarcity are driving the need to improve resource efficiency and reduce emissions.



### DIGITALIZATION AND NEW TECHNOLOGIES

Digitalization, automatization and new, high-impact technologies are driving efficiency and new business models.



### URBAN, RESPONSIBLE AND GLOBAL CONSUMERS

Urbanization, increasing living standards, changing demographics, and globalization are driving changes in consumer behavior and our customers' demand.

### Efficiency in processes

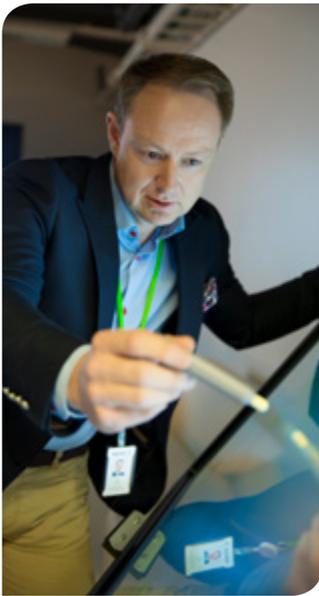
With the 'Excellence in processes' Must-Win, our focus is on continuously increasing our efficiency and cost competitiveness by improving our processes and operations.

We have a global project management initiative aimed at continuously improving our gross profit by strengthening our project management and execution through developing key capabilities, and common tools and processes. To improve our quality, we are implementing continuous improvement practices and executing focused quality improvement projects across our businesses. In

health, safety and environment (HSE), we are systematically building a culture of safety excellence to drive zero harm for people and the environment by implementing best-in-class HSE management practices, tools and systems.

In procurement, we are targeting cost savings and better quality through further developing our global category management and by focusing on quality of supply and delivery performance. To keep our cost structure competitive, we continuously aim to increase our flexibility and optimize our value chain to respond to changes in demand. Finally, we are investing in ERP (Enterprise Resource Plan-

## Strategy highlights 2017



### New Industrial internet offering

Valmet launches its new Industrial internet offering, with five Performance Centers for customers. Valmet also started to build a leading Industrial Internet ecosystem with selected partners.



### 4 containerboard machines for Nine Dragons

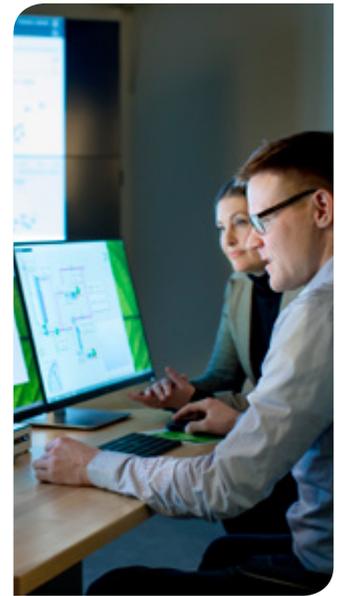
Valmet announces orders to supply four containerboard machines and related automation systems to Nine Dragons Industries in China.

MEMBER OF  
**Dow Jones  
Sustainability Indices**  
In Collaboration with RobecoSAM



### Leader in sustainability

Valmet was included in the Dow Jones World and Europe sustainability indices for the fourth consecutive year, as well as A- rating in the CDP Climate rating.



### Biomass power plant and automation for DONG Denmark

DONG Energy in Denmark orders a 140 MWth biomass-fired power boiler plant and Valmet DNA automation system.

ning), renewal with the objective of driving benefits through unifying our key processes and ways of working across Valmet. The successful launch of the first phase of ERP was implemented in late 2017.

### We are close to our customers

Through our 'Winning team' Must-Win initiative, we want to ensure that Valmet's capabilities are globally balanced and close to customers, and that we have engaged and performance-driven teams.

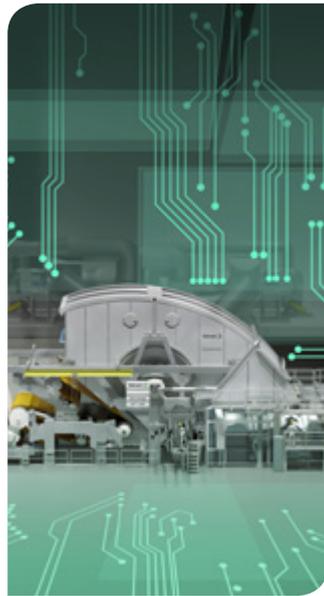
To boost performance and engagement, we are implementing targeted actions based on the OurVoice employee engagement

survey, improving our performance management practices and developing leadership and managerial skills. We continuously develop our global training programs to strengthen our strategic capabilities and accelerate the achievement of our Must-Wins. In 2017, we successfully launched new programs for sales and innovation, and began planning a new program for project execution. Our global programs are complemented by a balanced portfolio of learning opportunities to support business-specific and local competence development. We also promote internal mobility as a tool for development.



### Key technology at Metsä Group's Äänekoski bioproduct mill

Valmet delivers a recovery boiler, pulp drying line and lime kiln that are the largest in Europe. The delivery also includes a gasification plant, sulfuric acid plant, and mill-wide Valmet DNA automation system.



### 15<sup>th</sup> tissue production line for Sofidel in Spain

Sofidel orders its fifteenth Valmet tissue machine, an Advantage NTT 200.



### Service center opened in Indonesia

Valmet strengthens its presence in Asia-Pacific by opening a new service center in Indonesia focusing on serving the pulp, paper and energy industries.



**Read more:**  
[www.valmet.com](http://www.valmet.com)

# Progress of Must-Win actions

## MUST-WIN



## KEY ACHIEVEMENTS IN 2017

- Implementation of the Shared Journey Forward services approach continued through development of the services offering, including product renaming, and streamlining solution sales and delivery process
- New service center inaugurated in Indonesia
- New Customer Portal piloted
- Customer-specific Mill Teams implemented and CRM system developed
- Further develop corporate account management practices
- Implement country growth plans



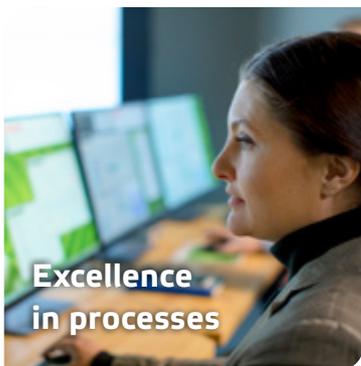
**Read more:**  
Focusing on the best services experience, p.5



- Industrial Internet offering launched successfully with five Valmet Performance Centers
- Industrial Internet ecosystem partnerships agreed with Tieto and Kemira
- Orders received of new products and services continued at good level
- Successful kick-off of 'Innovation Pathways' global training program to promote innovation culture



**Read more:**  
Meaningful dialogue with data, p.40  
Making coffee-to-go greener, p.45



- Valmet-wide project execution model implemented in Paper and Services business lines
- Implementation of new project management tool started
- Roll-out of new ERP system started
- Global quality feedback & problem-solving process harmonized
- Total recordable incident frequency decreased from 6.0 to 5.5
- Collaboration for contractor safety program started
- Procurement cost savings targets exceeded
- 56 supplier sustainability audits conducted
- Global Management System certification project established



**Read more:**  
Auditing suppliers for sustainability, p.31



- Positive trend in employee engagement continues
- Target and reward libraries established to align performance practices
- Two new global training programs launched
- Renewed 360° feedback process aimed at reaching ~1,000 managers



**Read more:**  
Developing sales competence, collaboration and connections, p.39

## KEY ACTIONS FOR 2018

- Develop sales competences through Sales Journey program
- Continue implementation of Shared Journey Forward services approach in area organizations
- Further develop the new Customer Portal and promote to customers
- Further develop customer-specific Mill Teams

## STRATEGIC GOALS



**Valmet has strong, capable, and committed teams close to customers. We serve our customers with our full offering and stand out by combining process technology, automation and services.**

- Further develop Industrial Internet offering and accelerate Industrial Internet sales in Areas
- Build delivery operations for Industrial Internet applications
- Improve competitiveness and gross profit of selected products with highest business impact
- Develop new technologies and services, and strengthen Valmet's technology leadership
- Strengthen customer input into R&D through meetings with selected key customers and 'Innovation Pathways' training program



**Valmet provides leading technology and competitive products and services that improve resource efficiency, and reduce our customers' operating and investment costs. We innovate and develop solutions that create new customer revenues, and we promote renewable materials and our Industrial Internet offering.**

- Improve project and project portfolio management practices, enhance risk and opportunity management and contract management
- Expand ERP roll-out to cover Finland and prepare for global roll-out
- Identify and execute high-impact quality improvement projects
- Reinforce safety culture through training, best-in-class practices and implementation of HSE action plan in all locations
- Continue to improve cost competitiveness
- Develop global category management and focus on supply quality and delivery performance
- Support key suppliers as part of Sustainable Supply Chain program
- Certification of Global Management System



**Valmet operates with efficient and harmonized processes with continuously increased cost competitiveness. In project business, we increase our flexibility to respond to cyclical demand. Quality, and health and safety are constantly improved.**

- Continue to Implement OurVoice engagement survey actions and communicate progress
- Introduce employee role description to continue the development of a culture of accountability
- Rollout team management practices and new manager training program
- Fully utilize learning library for technical and functional training
- Launch new global training program for project execution



**Valmet has engaged and performance-driven teams living Valmet's shared values. Competences are globally balanced and close to customers.**

**1949**

**First continuous  
pulp cooking plant**





# Today

Compact Cooking

# Financial targets

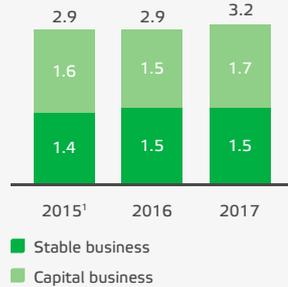
## GROWTH

**2x**

Net sales growth to exceed market growth:

- Net sales in stable business to grow over two times the market growth
- Net sales in capital business to exceed market growth

### Net sales, EUR billion



### KEY ACTIONS TO REACH THE TARGET

- New Valmet way to serve
- Improved sales process
- Leverage strong installed base
- Innovation and new technology development

## PROFITABILITY

**8–10%**

Comparable EBITA target 8–10%

### Comparable EBITA, % of net sales



### KEY ACTIONS TO REACH THE TARGET

- Sales process management
- Project management and project execution
- Procurement & quality
- Technology, R&D and ERP

## ROCE

**15–20%**

Comparable return on capital employed (pre-tax), ROCE target 15–20%

### Comparable ROCE, %



### KEY ACTIONS TO REACH THE TARGET

- Profitability improvement
- Net working capital improvement

## DIVIDEND PAYOUT

**50%**

At least 50% of net profit

### Dividend per share, EUR/ % net profit



<sup>1</sup> Figures include Automation net sales from April 1, 2015 onwards

<sup>2</sup> Proposal by the Board of Directors.

# Sustainability at the core of our strategy

Valmet's comprehensive Sustainability360° agenda supports the company's strategy and is at the core of strategy implementation and Must-Wins. Our sustainability agenda has been defined in accordance with the three key megatrends identified as most important to our business. The agenda focuses on five core areas: sustainable supply chain; health, safety and environment; people and performance; sustainable solutions; and corporate citizenship. The sustainability agenda has been approved by Valmet's Executive Team and it is reviewed annually. The current sustainability action plan is on-going for 2016–2018. Valmet's values, Code of Conduct, international principles and frameworks, as well as the most important stakeholder needs, form the foundation for our sustainability work.

Our Sustainability360° agenda and the connected action plans are also aligned with the United Nations Sustainable Development Goals (SDG), which aim to end poverty, protect the planet, and ensure prosperity for all. All the targets of Valmet's sustainability action plan are intended to contribute to the most material SDG's. As a global industrial company, we have an opportunity to positively impact the development of these goals. Valmet's contribution to the four UN goals that we identified as most relevant to us is described below. More information about Valmet's work towards the UN development goals can be found on Valmet's website, at [valmet.com/sustainability](http://valmet.com/sustainability).

## Sustainability360° agenda focus areas

 <p><b>Sustainable supply chain</b></p> <ul style="list-style-type: none"> <li>● We continue to develop sustainable procurement practices globally</li> <li>● We support selected key suppliers to meet the level of sustainability expected by Valmet</li> </ul>	 <p><b>Health, safety and environment (HSE)</b></p> <ul style="list-style-type: none"> <li>● We develop our processes, competences and culture for HSE excellence</li> <li>● We secure that our operations meet our HSE standards</li> </ul>	 <p><b>People and performance</b></p> <ul style="list-style-type: none"> <li>● We develop and engage our people</li> <li>● We continuously strengthen leadership and managerial skills</li> <li>● We are a responsible employer and promote diversity</li> </ul>	 <p><b>Sustainable solutions</b></p> <ul style="list-style-type: none"> <li>● We increase the understanding of our customers' sustainability needs</li> <li>● We integrate sustainability criteria into our R&amp;D processes</li> </ul>	 <p><b>Corporate citizenship</b></p> <ul style="list-style-type: none"> <li>● We ensure that our people know and understand Valmet's Code of Conduct</li> <li>● We transparently communicate about our operations</li> <li>● We support local communities in which we operate</li> </ul>
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## Valmet's contribution to the UN Sustainable Development Goals:

### Goal 6: Clean water and sanitation

Technologies developed by Valmet help to reduce water pollution and fresh water use in industrial operations. Technologies such as our board-making solutions can also help to increase the recycling of process water.

### Goal 7: Affordable and clean energy

In 2017, Valmet launched new environmental targets for 2030 for its own operations, aimed at e.g. improving the use of renewable energy. Technologies developed by Valmet also impact this goal, e.g. multifuel boilers for energy production, enabling use of different energy mixes.

### Goal 8: Decent work and economic growth

Valmet contributes to global economic productivity and innovation through its R&D development. Valmet ensures that it has a positive impact on safe and fair working conditions and issued a Human Rights Statement in 2017.

### Goal 12: Responsible consumption and production

Light-weighting technologies that reduce the amount of fiber used in board production, and power boilers that can use agricultural residues impact this goal by increasing the efficient use of resources. Valmet's own programs and actions, such as waste management, Valmet's work towards environmental targets, and supply chain management contribute to this goal.

# Progress on Sustainability 360° agenda



## Sustainable supply chain progress

TARGETS	KEY ACHIEVEMENTS 2017	KEY ACTIONS FOR 2018
<b>Develop sustainable procurement practices globally</b>	<ul style="list-style-type: none"> <li>73% of new direct suppliers went through the supplier approval process and were screened for sustainability</li> <li>56 supplier sustainability audits conducted by Valmet and a third-party auditor</li> <li>Created traceability process for tier 2 (suppliers of direct suppliers) and pilot with high risk category</li> <li>Strengthened the number of Valmet's own auditor pool members in risk areas</li> </ul>	<ul style="list-style-type: none"> <li>Continue supplier sustainability audits (min. 50 / year)</li> <li>Continue to increase traceability in supply chain</li> <li>Develop carbon footprint calculations</li> <li>Continue with sustainability training for global procurement and integrate sustainability into procurement training programs</li> </ul>
<b>Support selected key suppliers to meet the level of sustainability expected by Valmet</b>	<ul style="list-style-type: none"> <li>Planned sustainability engagement program for key suppliers</li> </ul>	<ul style="list-style-type: none"> <li>Launch sustainability engagement program key suppliers with targets, KPIs and follow-up mechanisms</li> </ul>



## Health, safety and environment (HSE) progress

TARGETS	KEY ACHIEVEMENTS 2017	KEY ACTIONS FOR 2018
<b>Drive safety culture</b>	<ul style="list-style-type: none"> <li>Safety culture training concept piloted</li> <li>Over 850 management safety walks. Training video in use.</li> <li>65% of employees completed Safety@Valmet awareness e-learning</li> </ul>	<ul style="list-style-type: none"> <li>Start global implementation of safety culture training program</li> <li>Renew Valmet's Health and Safety key performance indicators</li> <li>Weekly toolbox talks to be held in all workplaces</li> </ul>
<b>Best in class HSE management practices</b>	<ul style="list-style-type: none"> <li>Hand injury prevention initiative started</li> <li>Collaborating for contractor safety program started</li> <li>Valmet's environmental efficiency program renewed with 2030 targets in alignment with climate science</li> </ul>	<ul style="list-style-type: none"> <li>Implementation of global standard for risk assessments</li> <li>Collaborating for contractor safety program continues</li> <li>Define global roadmap to reduce waste to landfill</li> </ul>
<b>Secure compliance and improvements</b>	<ul style="list-style-type: none"> <li>Valmet HSE induction e-learning launched for our people and partners</li> <li>Global management system project ongoing</li> <li>HSE audits of 12 customer sites and 20 locations</li> </ul>	<ul style="list-style-type: none"> <li>Local HSE action plans in all locations and follow-up of selected units</li> <li>Certified global management system in place (to ISO 9001; 14001 and 45001)</li> <li>Complete minimum 20 HSE audits per year</li> </ul>



**Read more:**  
[www.valmet.com/sustainability](http://www.valmet.com/sustainability)

Over 850 management safety walks were conducted to further drive safety culture in Valmet



**People and performance progress**

TARGETS	KEY ACHIEVEMENTS 2017	KEY ACTIONS FOR 2018
<b>Boost employee engagement</b>	<ul style="list-style-type: none"> <li>Conducted OurVoice employee engagement survey</li> <li>87% response rate, up from 81% in 2015</li> <li>Increase in employee engagement (+2 percentage points), performance excellence (+3 percentage points) and values (+3 percentage points) indices</li> </ul>	<ul style="list-style-type: none"> <li>Execute OurVoice development actions and communicate progress</li> <li>Introduce an employee role description to continue to develop a culture of accountability</li> </ul>
<b>Develop the best talent</b>	<ul style="list-style-type: none"> <li>99% annual review and 95% mid-year review discussion completion for the annual review population</li> <li>Two new global training programs kicked off</li> <li>Learning library created to support the delivery of technical and functional training</li> <li>1,056 development actions identified for talent review population</li> </ul>	<ul style="list-style-type: none"> <li>Ensure annual review discussion coverage of &gt;95% for white collar employees</li> <li>Develop global training portfolio to support strategic goals; launch project execution program</li> <li>Utilize learning library for technical and functional training</li> <li>Execute development actions for talent review population</li> </ul>
<b>Increase diversity</b>	<ul style="list-style-type: none"> <li>33% internal mobility, up from 29% in 2016</li> <li>Diversity talent prioritized in global training portfolio nomination process</li> <li>Active mentoring program, with 153 mentor-mentee pairs participating</li> </ul>	<ul style="list-style-type: none"> <li>Create programs and processes to support career development of diversity talent</li> <li>Continue prioritizing diversity talent in global training portfolio nomination process</li> <li>Widen recruitment pool beyond traditional candidates</li> </ul>
<b>Be a responsible employer</b>	<ul style="list-style-type: none"> <li>Human rights work continued: published human rights statement; mapped human rights risks and created action plans based on results</li> <li>Renewed 360° feedback process; ~1,000 managers identified to take part</li> <li>Active use of ManagerAcademy; 9,359 hours of training recorded</li> <li>Global wellbeing frame created, 34% more employees took part in the Global Challenge</li> </ul>	<ul style="list-style-type: none"> <li>Further develop human rights framework through systematic 3-year roadmap</li> <li>Rollout team management practices and new manager training program</li> <li>Run 360° feedback process for identified managers</li> <li>Launch sustainability e-learning</li> <li>Plan wellbeing roadmap for 2018–2020 as part of integrated workforce approach</li> </ul>

**Sustainable solutions progress**



TARGETS	KEY ACHIEVEMENTS 2017	KEY ACTIONS FOR 2018
<b>Deepen understanding of customers' sustainability needs</b>	<ul style="list-style-type: none"> <li>Continued to conduct in-depth interviews with key customers</li> <li>Conducted a benchmark study on customer industries, covering e.g., sustainability strategy, goals, actions, measurements and reporting</li> <li>Training arranged for Key Account Managers on Valmet's sustainability messages and actions</li> </ul>	<ul style="list-style-type: none"> <li>Continue to conduct interviews with selected key customers and integrate improvement actions into key account management process</li> <li>Continue to arrange sustainability training for sales teams</li> </ul>
<b>Integrate sustainability into research and development processes and tools</b>	<ul style="list-style-type: none"> <li>Created case examples of our environmentally efficient technologies</li> <li>Launched sustainability guidelines for R&amp;D and engineering as part of innovation projects</li> </ul>	<ul style="list-style-type: none"> <li>Study the possibility of manufacturing consumables from renewables</li> </ul>



**Corporate citizenship progress**

TARGETS	KEY ACHIEVEMENTS 2017	KEY ACTIONS FOR 2018
<b>Ensure compliance with guiding principles</b>	<ul style="list-style-type: none"> <li>Created e-learning on sustainability</li> <li>Further developed global process for ensuring sustainability when entering into new markets</li> </ul>	<ul style="list-style-type: none"> <li>Launch e-learning on sustainability for all Valmet employees</li> <li>Review the Code of Conduct content and relaunch e-learning</li> </ul>
<b>Promote transparent reporting and active stakeholder collaboration</b>	<ul style="list-style-type: none"> <li>Inclusion in Dow Jones Sustainability World and Europe Indices (DJSI) for a fourth consecutive year</li> <li>Assured CO<sub>2</sub> levels of procurement, logistics and business travel</li> </ul>	<ul style="list-style-type: none"> <li>Create a long-term roadmap for social projects</li> <li>Continue stakeholder dialogue and encourage stakeholders to give feedback about sustainability performance in stakeholder surveys</li> </ul>

# Supply chain

Valmet's target is to continuously enhance its supply chain management and the transparency of its value chain. Sustainability is fully integrated into the way Valmet operates in its procurement and supply chain processes.

Valmet has a global supply chain that includes procurement from countries with different risk levels. Ensuring a sustainable supply chain is one of Valmet's five sustainability agenda focus areas. Global megatrends, such as resource efficiency, growing customer awareness and digitalization, are increasing the need for a transparent supply chain.

Potential risks in the supply chain include breaches of intellectual property rights and company assets, compromising human rights or labor rights, risks to occupational health and safety, and causing environmental damage. Valmet's suppliers could cause reputation or business risks for Valmet if they were to engage in such unethical behavior.

Valmet recognizes its responsibility to reduce negative environmental and social impacts throughout its value chain and its own operations, as well as during the customer use phase of the technologies, automation and services that Valmet provides.

Valmet's supply chain activities promote opportunities and strive to ensure there is a genuine dialog with suppliers. The aim is to improve and develop suppliers' operations in many areas, and to further strengthen cooperation. To ensure a comprehensive approach, Valmet's research and development (R&D) and engineering functions also actively participate in supplier cooperation.

## Sustainable procurement practices

Suppliers are an integral part of our manufacturing and delivery processes. Valmet aims to ensure that the materials and components we procure comply with relevant local and global regulations and standards. Valmet purchases a variety of different products and components, electronics, and services.

Procurement operations are significant in ensuring that Valmet is efficient and profitable. Materials, machines and components comprise around 76 percent, and purchased services 24 percent, of Valmet's total direct spend. The figures can vary depending on the business line. Valmet has some 10,000 active direct suppliers from more than 50 countries. Some 60 percent of Valmet's direct purchases originate from Finland, Sweden and China. We are sourcing more from emerging markets now, but we are also seeing sourcing opportunities with local suppliers in developed countries, especially related to our Services business.

Valmet continues to aim for annual savings in procurement of no less than 3 percent. In 2017, Valmet exceeded the target, with savings of 4 percent. In 2018, Valmet will focus on design-to-cost projects, with the aim of designing smarter and more efficient solutions to create new savings opportunities.

The work of creating a supplier relationship management (SRM) program began in 2016, with the aim of supporting key suppliers in developing their operations together with Valmet. The program includes targets, KPIs and follow-up mechanisms for selected suppliers. In 2017, Valmet began to integrate and develop a supplier sustainability engagement concept in the current SRM program. The aim is to steer Valmet's suppliers towards more sustainable operations. Valmet will start implementing this program in 2018.

Valmet recognizes its role in the global value chain and is committed to working with suppliers in developing countries to develop their operations. Valmet's current focus is on strengthening procurement and growing its supplier base in developing countries to support growth strategies in Valmet's operating areas.

In 2017, Valmet continued to further integrate sustainability into its procurement activities. Sustainability is part of procurement's main KPIs and targets. Valmet also continued its sustainability training programs for global procurement and developed a new sustainability e-learning course in 2017, which has a study module specifically for procurement professionals.

## Global supply chain management process

To effectively manage risks in the supply chain, Valmet has a comprehensive approach to sustainable supply chain management, including sustainable supply chain policy, risk assessments, supplier self-assessments, and supplier sustainability audits executed with a third party.

Compliance with Valmet's Sustainable Supply Chain Policy is the starting point for entering and maintaining any kind of business relationship with Valmet. We expect all our suppliers to comply with the sustainability requirements in the policy, and we have zero tolerance towards the use of forced labor or child labor.

Sustainability gates are an integrated and automated part of the supplier evaluation process and tool. The automated process ensures that all suppliers are assessed in relation to their potential



73% of new direct suppliers were automatically screened for sustainability

56 supplier sustainability audits conducted in 14 countries

**Purchases**  
(10 largest countries)

<b>EUR MILLION</b>	<b>2017</b>	<b>2016</b>
Finland	751	758
Sweden	265	211
China	157	114
USA	116	130
Germany	78	75
Brazil	68	24
Poland	62	65
Estonia	40	30
Italy	34	40
Spain	25	7

sustainability risk, sign the Sustainable Supply Chain Policy, and complete a sustainability self-assessment, if this is required based on the risk assessment. The online self-assessment is available in nine languages.

In 2017, 73 percent of all new direct suppliers were automatically screened on sustainability. The remaining suppliers have been manually assessed in regard to potential sustainability risk. The screening covers business ethics, compliance, human and labor rights, health, safety and environmental management, as well as product safety topics.

**Supplier sustainability auditing**

In 2017, Valmet conducted a total of 56 supplier sustainability audits using Valmet’s global sustainability audit protocol together with an independent, certified, third-party auditor, in Poland, Estonia, India, Thailand, China, Brazil, Chile, Mexico, the United States, Indonesia, Turkey, Hungary, Romania and Sweden. The protocol ensures the process is consistent and enables comparability between suppliers.

Sustainability audit findings are based on non-conformities with Valmet’s Sustainable Supply Chain Policy, or with local or international law. Most findings (58 percent of all findings) were related to human and labor rights, as well as health and safety. We follow up all findings from sustainability audits through a systematic process that includes a corrective action plan that the supplier carries out and that we monitor and verify. Of all the suggested corrective actions in 2015–2017, around 67% were completed and verified by the end of 2017. Valmet can support suppliers in implementing corrective actions, but if the supplier refuses to proceed

with the corrective actions, Valmet reserves the right to terminate the contract with the supplier.

In 2017, Valmet continued to develop global templates and guidance for sustainability auditing to ensure uniform processes. Valmet also developed its sustainability audit follow-up guidelines to ensure globally consistent processes. In 2017, we held internal training in all areas where the process was enforced, and we shared best practices about sustainability auditing across areas and audit teams.

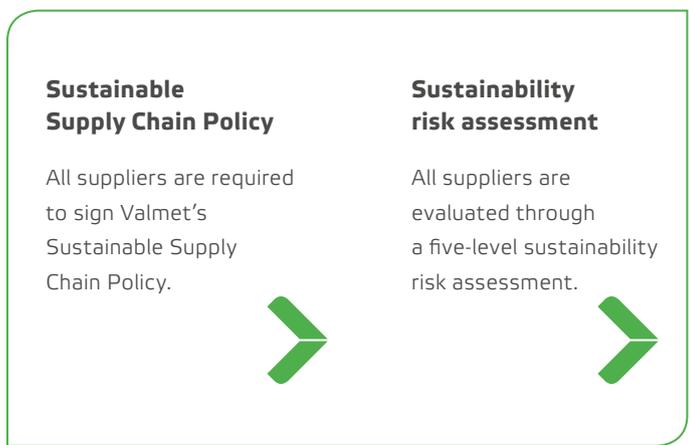
**Developing more sustainable transportation solutions**

Valmet transports large amounts of products at both ends of its value chain. Valmet is aiming to transport its goods more sustainably, and continued to develop the tracking of its carbon footprint in transportation. In 2017, Valmet continued to implement a roadmap with several concrete steps to develop transport solutions and to reduce its CO<sub>2</sub> impact from transportations. Activities include e.g., developing more light-weighting solutions in packaging, developing standardized packaging solutions, increasing collaboration with key transportation suppliers to reduce CO<sub>2</sub> emissions, and increasing the use of alternative shipping modes.

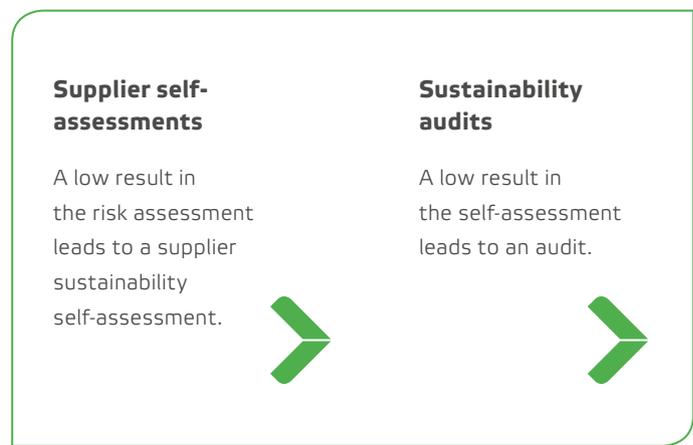
During 2017, Valmet developed its reporting on CO<sub>2</sub> emissions and cooperated with selected suppliers to develop transportation reporting and increase data quality. Valmet constantly develops its Transport Management System and connects suppliers to the system which helps to increase transport consolidation. In long-term transportation contracts, as well, Valmet continues to strive for efficiency, both in performance and in reducing CO<sub>2</sub> emissions. Upstream and downstream transportation accounted for 71,000 tonnes of CO<sub>2</sub> in 2017.

**A global supplier sustainability management process**

**Required from all suppliers**



**Required based on supplier risk assessment**



## Auditing suppliers for sustainability



Every year, Valmet conducts around 50 sustainability audits for its suppliers as part of its sustainable supply chain program. At the core of the process is Valmet's own supplier sustainability auditor pool, which consists of Valmet professionals from global procurement. These auditors ensure that Valmet's suppliers meet the minimum requirements in Valmet's sustainable supply chain policy. Two of Valmet's auditors, Will Li (China) and Arnaldo Sanchez (Mexico) tell us about their experiences. Will and Arnaldo are part of group of over 30 auditors around the world.

Both auditors perform sustainability audits as part of their work. For them, sustainability auditing has been an eye-opening experience. "I see that sustainability audit processes and implementing corrective action plans have a real impact in achieving more sustainable and safe operations at suppliers' facilities," says Sanchez. "It has been a great learning opportunity for me, too," he adds. "I enjoy seeing how many suppliers have really changed the mindset regarding sustainability here in China," Li explains.

Since the two started to audit suppliers, noticeable changes have occurred in both countries. "People in China have become increasingly aware of sustainability. The government is now imposing stricter environmental regulations, and we can support our suppliers so that they are more likely to meet these new requirements," says Li. "In Mexico, there's still room for improvement regarding safety issues, but Valmet and other global companies have been pushing Mexican companies forward in sustainability," says Sanchez.



### BACK IN THE OLD DAYS

Loading for transport of mercerizing equipment to Chile from Sunds Verkstäder AB in 1956.

# Health, safety and environment

We are committed to protecting the health, safety and environment (HSE) of our people, partners, customers and the communities where we operate. Promoting wellbeing at work, driving safety culture and active collaboration with our partners are in focus as we strive towards our goal of zero harm.

## Everybody home safe, every day

We make intensive efforts to provide safe and healthy workplaces for all. In 2017, our operations were fatality-free. We have improved our total recordable incident frequency (TRIF) rate for own employees by 50% since 2014, and 9% during this year. We believe all incidents can be prevented, and we continue to work on reducing injuries and their severity through effective preventive and protective measures, as well as by encouraging attitudes and behaviors that maintain a safety mindset in everything we do.

## A culture where safety always comes first

Valmet managers promote health and safety, and this year we clearly specified the activities that managers should engage in, such as delivering toolbox talks, giving feedback, and ensuring HSE risks are considered in all action plans. To further encourage the practice of management safety walks, we have made a training video, and managers completed over 850 walks in 2017. We also continued with the train-the-trainer approach to safety feedback training for managers in Hagfors, Sweden, and Cernay, France.

In 2017, we started to develop a global safety culture training program. Part of the program will give all our managers an understanding of the importance of actively leading safety as a key determinant of a positive safety culture – and the tools to do so – as well as a commitment to put it into practice. The other part of the program is for everyone, and here we explore personal risk tolerance, the value of safety, and the responsibility that we all share to take care of ourselves and each other at work. We piloted both aspects of the program in our mill maintenance outsourcing operations in Sydney, Australia, this year.

We continued with our annual global activities, such as the WWF's Earth Hour and our HSE awareness week. In North America, we held "Safety Cafés" – informal interactive sessions on topical HSE issues – in 18 locations to encourage participation and build engagement. Proactive reporting of near misses and safety observations increased by 10 percent in 2017. We also reached our target level of eight hours HSE training per person.

## Best practice as a global practice

We continued global implementation of our common HSE management routines for customer site safety, as well as with 5S\* in our production locations. Throughout the year, we emphasized hand injury prevention at all sites with hand injury awareness training, task-specific personal protective equipment risk assessments and continued implementation of "Think About", our tool for pre-task hazard identification. We also emphasized using the 5 Whys or fishbone analysis methods as everyday tools for analyzing the root causes of incidents in order to improve the quality of the safe practice reminders we distribute in our HSE alerts after every recordable incident or serious near miss.

The Global HSE team performed HSE audits in 12 customer projects and 20 production units during the year, with a focus on ensuring compliance with HSE standards. We also continued with the practice of local safety booster programs, with targeted actions to support sustainable changes in HSE performance.

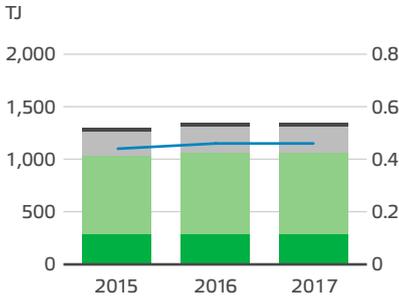
## Excellent collaboration and continuous, constructive dialogue

Incident rates are higher among our contractors than among our own employees. To address this, we are continuing with our Collaborating for Contractor Safety management program, where we are using pilot schemes and adopting industry best practices to improve the selection, induction and management of contractors. We started using a pocket size booklet called Safety in Pictures at the beginning of the year as a tool to bridge language diversity in our sites. We have also opened an e-learning platform for suppliers called PartnerAcademy. An HSE induction e-learning course is now available, with modules containing both general rules applicable to all Valmet workplaces, and also worksite-specific rules. We expect all contractors working in our facilities or at our installation or service sites to complete induction before starting work. We also held a Site Service Supplier Safety Day in Gothenburg, Sweden.

\*Systematic approach to organizing workplaces (Lean)

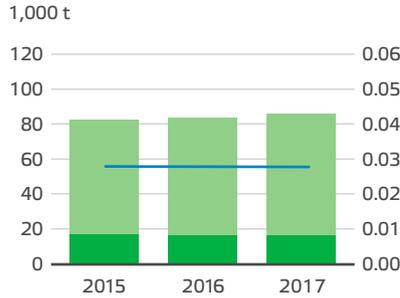
# Health, safety and environmental data

## Energy



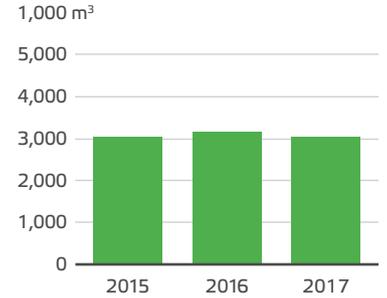
- Fuel
- Electricity
- District heating
- Steam
- TJ/EUR million Net sales

## CO<sub>2</sub> emissions



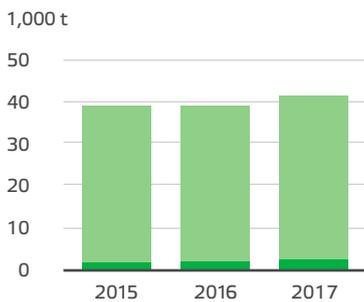
- Direct emissions (scope 1)
- Indirect emissions (scope 2)
- 1,000 tCO<sub>2</sub>/EUR million Net sales

## Water consumption



- Water consumption

## Waste



- Hazardous waste
- Non-hazardous waste

## Management systems (% of headcount)

### SHARE OF CERTIFIED OPERATIONS<sup>1</sup>, 2017

**85%**

ISO 9001  
Quality  
Management System

**73%**

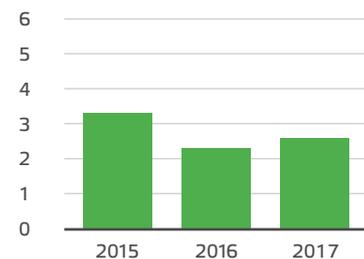
ISO 14001  
Environmental  
Management Systems

**59%**

OHSAS 18001  
Occupational  
Health and Safety  
Management System

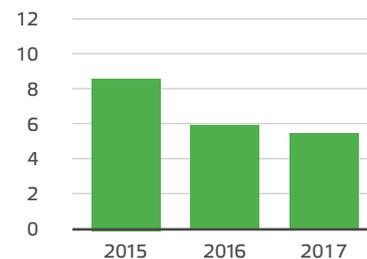
<sup>1</sup>Including offices

## Lost time incident frequency (LTIF)<sup>2</sup>, own employees



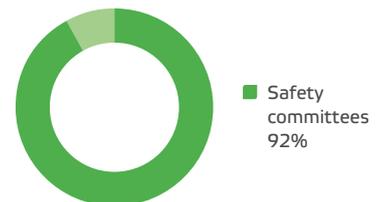
<sup>2</sup> LTIF reflects the number of injuries resulting in an absence of at least one workday per million hours worked

## Total recordable incident frequency (TRIF)<sup>3</sup>, own employees



<sup>3</sup> LTIF+medical treatment and restricted work cases

## Coverage of safety committees<sup>4</sup>, % of workforce



<sup>4</sup> Percentage of workforce represented in formal joint management-worker health and safety committees

In 2018, we will proceed with the implementation of updated supplier HSE assessment and evaluation processes and continue with contractor management meetings with an HSE agenda.

We have open and proactive dialogue with customers on safety in the sales phase of installation or service projects to ensure that all parties are equally committed to rules and responsibilities that will enhance safe work practices. During these projects, we engage in active benchmarking and sharing of best practices, and we are always ready to improve our performance based on what we learn. The discussion continues all the way through to the post-delivery evaluation of the project.

### Wellbeing at work

Valmet has a global approach to wellbeing, where we focus on actively promoting five evidence-based actions to improve personal wellbeing: Be active (such as providing exercise opportunities at the workplace), Keep learning (such as enabling internal job rotation and offering global learning programs), Connect (such as town hall meetings, customer seminars, youth programs, and family days at work), Give (such as mentoring or sending a HighFive feedback) and Take notice (such as lean ways of working).

During 2016 and 2017, some 3,500 of our people participated in the Global Challenge™, a health and performance program for companies all over the world that provides awareness, motivation and education for lifestyle changes. To keep up our momentum, we also launched an internal campaign called “220 ways to wellbeing” for people to share different tips and experiences of everyday activities.

In addition to these global actions, we are co-operating closely with occupational health services in our locations to ensure fitness for work and effective management of occupational health risks, as well as to support wellbeing actions. Absenteeism due to sickness and injuries at work remains low, at 2.5% of workhours (2.5).

### Reducing our operational footprint

We are committed to the sustainable use of resources and the prevention of pollution, and we always operate within our local environmental regulations and permits. There were no significant spills in our locations (zero in 2016). Since 2009, Valmet has followed an operational efficiency program in our production locations, with steady progress towards the 2020 reduction targets for energy, water and CO<sub>2</sub>. During 2017, we renewed the program by setting targets for 2030, as well as by adding new objectives to increase the scope of ISO 14001 system certification, to reduce the amount of waste sent to landfill, and to increase our use of renewable energy. We also introduced environmental guidelines for our offices.

One of the largest fractions of Valmet’s waste is sand from our five foundries, which is traditionally landfilled. We took another step towards the circular economy, when 60 tonnes of sand from the Jyväskylä foundry in Finland was instead reused as material in a golf course construction.

### Adopting shared standards

We continued our work towards certification in 2018 of one global management system (GMS). This is done according to the updated ISO occupational health and safety, environment and quality standards. We believe this step change away from local systems to a global system that also covers corporate functions supports our process-oriented way of working and enhances strategic alignment, risk and opportunity management, and continuous improvement. Certification assures our stakeholders that we integrate sound quality and HSE management practices into all aspects of our business. We are aiming to expand the coverage to all production facilities so that 90% or more of our people work in operations certified to all three standards by 2025 (see table on page 33 for current coverage).

As part of the GMS project, we are also implementing a global HSE IT application strategy so that we have the best available tools to support us.

#### ENVIRONMENTAL EFFICIENCY PROGRAM

TARGETS	2020	2025	2030
100% compliance with environmental regulations	100%	100%	100%
ISO 14001 system certification (% employees)	80%	90%	90%
Reduction in waste to landfill (Baseline reference yearly average 2010–2012)	20%	50%	80%
Reduction in water consumption (Baseline reference yearly average 2010–2012)	15%	18%	20%
Reduction in location CO <sub>2</sub> emissions (Baseline reference yearly average 2005–2009)	20%	40%	60%
Reduction in location energy consumption (Baseline reference yearly average 2005–2009)	20%	25%	30%
Increase use of renewable energy (% total annual electricity consumption)	20%	30%	35%

#### HEALTH AND SAFETY PROGRAM

TARGETS	2018
Lost time incident frequency (LTIF) (own employees per million workhours)	2
Total recordable incident frequency (TRIF) (own employees per million workhours)	5
Near miss and safety observations	3 / employee
HSE training	8h / employee
Safety committee coverage	90% of employees

## Workplace exercises are an investment in healthy and happy people



**For more than 40 years, Valmet has been actively promoting workplace exercises as an investment in healthy and happy people. Stretching and strengthening exercises are known to be effective in preventing strain-related issues caused by poor posture as well as repetitive and static activities including computer work, and manual handling in general. Many Valmet locations now have exercise sessions every day. Our office in Tampere, Finland is one of them.**

In 2006, a team of Valmetees started a stretching club, and they still meet every day at 9:30 am to exercise together. The club has 40 members, but everyone is welcome to drop in and participate. The practice began 43 years ago as an instructor-led activity in 1974. "In Tampella, there has been a six-month test of daily exercise breaks. A few minutes of exercising and stretching in the morning and in the afternoon at four different departments," states an article in *Tampella tänään*, the internal newsletter at the time.

"The value of a daily exercise break lies in daily repetition, which makes it an effective habit, strengthening your body and improving performance at work," continues the article. "We need breaks in static office work; so why not take this kind of instructor lead exercising and stretching break? It surely gives back the time that it takes from the working day."



### **BACK IN THE OLD DAYS**

Gymnastic exercises at Rautpohja plant in Finland in 1970's.

# People and performance

Our people – and the teams they work in – are at the heart of Valmet. They live our values, strive to achieve the goals set by our strategy, and improve every day to move our customers' performance forward.

## Positive trend in engagement

At Valmet, we believe an engaged and performance-driven culture is built from within. We use the OurVoice survey to measure engagement and performance levels, which are important for developing as a company and building a strong Valmet community. The results of our most recent survey show positive trends in engagement and performance levels globally. In total, 87% of Valmeteers participated in the survey (up from 81% in 2015), which gives us an excellent base for taking action.

The survey highlights the positive development we continue to make as a company. The overall results showed improvement in all three indices: engagement, performance excellence, and values. Ninety-three percent of all the questions increased while only 7 percent remained stable. Particularly notable were the increases in belief in Valmet's future, feedback on performance, and recognizing a job well done. Working together continued to be a strength, improving to a level of 85% positive globally, beating the international benchmark.

We identified two global focus areas based on the results: managerial skills (where we want to continue to develop) and working together – an area where we are already strong, but we want to excel. We selected additional focus areas for the business lines and areas, and follow their progress on a quarterly basis.

## A performance attitude

We have a strong set of tools in place designed to drive high performance, and we have continued to improve in how well we utilize them. In our annual review discussion process, we emphasized the importance of smart target setting to better align and connect individual targets with our strategic objectives, and in preparation for the 2018 process, we introduced a target library with example targets for key roles. We also took steps to improve how well we identify and rate performance differences, and to create action plans to address poor performance and reinforce top performance through feedback, rewards and development opportunities.

We look to feedback as a core element of successful performance management, and we are putting processes in place that encourage

multiple kinds of feedback. The HighFive feedback channel proved popular again in 2017, with a constant stream of positive feedback around the organization. In total, 7,684 HighFives were sent during the year. Our annual review and mid-year review discussions continued to achieve high completion rates, providing the opportunity for formal manager-employee feedback for over 95% of our white-collar employees.

Our rewarding practices help build a high performance culture, and we continuously evaluate the need to develop them. In 2017, we granted 3,793 performance rewards as part of our Spot and Special Rewards program. Since its introduction in 2014, the program has been expanded and improved each year to better meet our rewarding needs. In 2018, we will expand our reward library and better support the utilization of individual and team rewards, especially in the production environment. In the 2017 salary planning process, we once again highlighted the importance of rewarding high performance, and we used in-depth analysis to support the business in identifying the most relevant focus areas when allocating increases, such as gender equality and high performers at the lower end of the pay range. Future changes to our people reporting system will significantly improve the analysis available to make rewarding decisions.

## Better managers make a better Valmet

We invest in developing managerial skills, because we believe better managers make a better Valmet. In 2017, we continued our efforts to strengthen managerial skills through sharing best practices, actively using our ManagerAcademy learning platform, and increasing the emphasis on the manager role description as the basis for all managerial work. We kicked off a renewed 360° feedback process which includes individual coaching that focuses on concrete action planning and follow-up.

In 2018, we will focus on accountability and on ensuring best practices are more consistently used across the organization. We'll launch a face-to-face manager training program that builds on the Forward for Managers training tool, and we will introduce new team management practices and set expectations for them. We will



**12,268**

employees

**11**

percentage point  
increase in engage-  
ment since 2014, up  
2 points since 2015

**7,684**

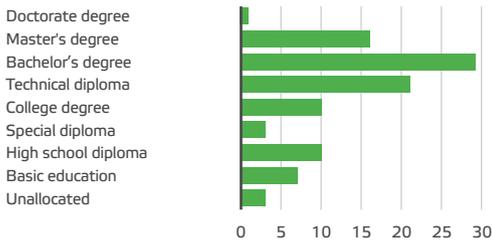
HighFives

**9,359**

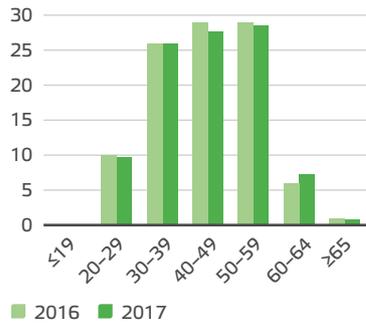
ManagerAcademy  
learning hours

## Personnel data

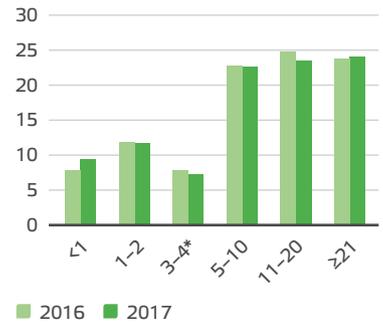
Education structure, %



Age structure, %



Service years, %



\* Decrease in 3-4 year category due to fewer new hires in 2013.

also unveil an employee role description, to be used together with the manager role to create understanding, increase accountability and strengthen manager-employee relationships.

### Programs to take us forward

We ran seven global training programs in 2017, each designed to accelerate the achievement of our Must-Wins, as well as to engage and develop talent. In total, 551 individuals participated in one of the 16 sessions held during the year. Project work continued to be an integral part of program success; in total, we began 12 group projects and 157 individual projects during the year. We introduced new alumni networking groups for select programs to promote project outcomes and foster collaboration. The two new programs, Sales Journey and Innovation Pathways, kicked off with good results, and we began developing a new program for project execution. Having a diverse group of participants is a key success factor for all programs, and this was especially clear in Innovation Pathways, a program designed to build an innovation culture and boost the development of competitive products that address our customer's diverse needs.

### Activating talent globally and locally

Valmet follows a 70-20-10 learning philosophy, where 70 percent of learning takes place on the job (new projects, internal mobility), 20 percent from learning relationships (mentoring, coaching), and 10 percent from formal training. We run an annual talent review process covering approximately 1,500 management, successor and high-potential resources. The focus of the 2017 process was to devel-

op the strength of our successor bench, to discover hidden talent, and to create development opportunities that challenge and motivate our top performers. In total, we identified 1,056 development actions for this group, including mentoring, global program participation, and opportunities for internal mobility.

Ensuring we have the right competence in place close to our customers continues to be a priority. Our current competence development initiatives focus on closing identified gaps, successfully transferring knowledge, and developing our technical competences. We set up a new Learning Library this year to support the delivery of technical and functional training in a systematic way to meet business needs. The library will be available for all employees starting in January 2018, and we will use it as a tool in the annual review discussions. Other new programs launched in 2017 to support business-specific competence development include Technology School, a field service certificate program, and Fabrics Academy.

We have also taken full advantage of existing programs and processes to build competence across the organization. We successfully implemented the internal mobility guideline and have seen an increase in positions filled internally, up 16 percent since 2016. Our mentoring programs continued to attract interest, with 153 mentor-mentee pairs taking part. We expanded access to ManagerAcademy, providing new learning opportunities for around 1,000 individual contributors. When it comes to attracting new talent, we tried more modern recruitment methods, sharpened our messages, and focused on a smoother onboarding process to ensure that new talent feels welcome and can start contributing to our success from day one.

## Developing sales competence, collaboration and connections



**Sales Journey is a competence development framework for the sales function in support of Shared Journey Forward. Sales Journey is being cascaded worldwide during 2017–2019, and it will give teams in the sales and customer interface the opportunity to broaden their existing skills and learn new competencies to succeed in our demanding market environment.**

### Leading the journey

The work in sales development began in 2016 with the 'Agility through Sales' program focusing on mill team development, and continued with 'Leading High-Performing Sales Teams', a face-to-face development program designed to improve sales efficiency by strengthening sales management, clarifying expectations of sales leaders, and giving opportunities to put the lessons learned into action. The program received excellent feedback, with an average feedback score of 4.5/5 from the 138 participants.

### Reaching all geographies

Sales Journey is set to reach more than 1,000 Valmet sales professionals across Valmet. We will use it to ensure Valmet's sales process is consistent, with roles and responsibilities clarified and understood for all organizations. It will also give us the opportunity to review our achievements in mill team development, boost our capability to sell our full offering, and deepen our understanding of customers' business through extensive case work. Everyone involved practices true customer communication in a variety of challenging situations, learning to lead our team towards higher performance and talk about how to work effectively in our matrixed environment.



### BACK IN THE OLD DAYS

Training on the job for welders, arranged jointly with the local vocational school in 1975.

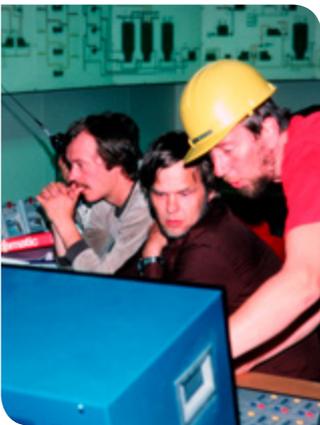
## Meaningful dialogue with data



**Valmet launched its new Industrial internet offering in June 2017, built on the experience and expertise we have gained from our unique combination of process technologies, services and automation over the years. Our systems and measurements with customers' other mill and plant systems provide an enormous amount of data, and our experts have a key role in identifying which data to analyze and how to utilize it for the customers' benefit.**

As part of its Industrial Internet offering, Valmet has established five industry-specific Performance Centers. The centers serve customers in the pulp, energy, paper and board, and tissue industries, as well as in automation. Our experts work there either physically, or virtually through a remote connection. These centers give customers easy access to our Industrial Internet applications and the expertise they need through secure data connections.

We also started to bring the leading industry players together to establish an ecosystem to create new value-adding Industrial Internet applications for pulp, paper and energy customers. In 2017, we established ecosystem partnerships with Tieto and Kemira.



### BACK IN THE OLD DAYS

Damatic – the first digital automation system by Valmet was started in 1979 at Board Machine 2 in Pankakoski mill.

# Our solutions

Valmet's unique product and services offering is based on its leading technology and expertise. We continuously improve our products and services, and we bring new innovations to market to improve our customers' performance.

Valmet develops and supplies advanced process technologies, automation solutions and services for its customers in the pulp, paper and energy industries. This unique combination enables innovative product and service development and a competitive offering.

Valmet's services cover everything from maintenance outsourcing to mill and plant improvements and spare parts (read more about our services approach on p. 5). Our strong technology offering includes pulp mills, tissue, board and paper production lines,

as well as power plants for producing bioenergy. Valmet's advanced automation solutions range from single measurements to mill-wide, turnkey automation projects.

In 2017, Valmet launched its new Industrial Internet offering, combining our knowledge of process technology, automation and services, and started to build an ecosystem that brings together key players in the business (Read more from the previous page).

## Valmet's unique customer offering – combining process technologies, automation and services

### Paper

- Recycled fiber lines
- Tailor-made board and paper machines
- Modularized board and paper machines
- Tissue production lines
- Modernizations and grade conversions
- Standalone products

### Services

- Spare parts and components
- Maintenance and shutdown management
- Outsourcing services
- Production consumables
- Process support and optimization
- Process upgrades
- Remote solutions and services



### Pulp and Energy

- Complete pulp mills
- Sections and solutions for pulp production
- Multifuel boilers
- Biomass and waste gasification
- Emission control systems
- Biotechnology solutions e.g., for producing biofuels

### Automation

- Distributed control systems
- Quality control systems
- Analyzers and measurements
- Performance solutions
- Process simulators
- Safety solutions
- Automation upgrades
- Industrial Internet solutions

# Research & Development

R&D spend

**64**

EUR million in 2017

Orders received of new products and services

**692**

EUR million in 2017

The aim of Valmet's R&D is to continuously strengthen the company's technology leadership position and further improve its competitive edge. We achieve this by developing competitive new solutions to customers' needs; by enhancing raw material, water and energy efficiency; and by promoting the use of renewable raw materials.

Our long-term vision is to develop mills that can produce pulp, paper and other bioproducts with no emissions and minimum consumption of resources, as well as technologies enabling new, high-value end products utilizing bio-based raw materials.

Valmet launches around 100 new products to the market every year. The value of the new products and services in Valmet's orders received has increased to a good level over recent years. In 2017 it was EUR 692 million. The net spend on research and development was EUR 64 million.

Examples about the recent development projects are a Valmet supplied demonstration scale plant for second generation sugar extraction that was officially opened at Sappi Ndogwana Mill in South Africa in 2017 and Valmet's IQ corrugator concept that exploits proven technology in pulp & paper industry introducing warp and multipoint moisture measurement technologies for converting industry.

**Customer needs drive our work**

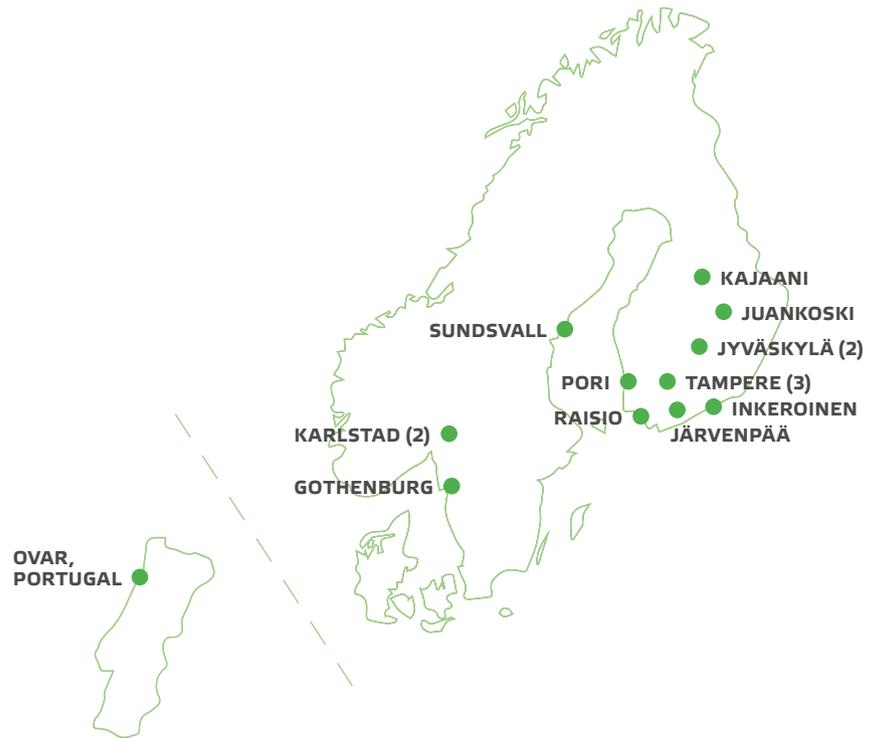
Customers' needs drive Valmet's R&D work. These include improved production efficiency, high availability, usability, safety and environmental performance, and reduced investment and operating costs. Furthermore, our customers want to maximize the value of raw materials and create new revenue streams.

Customer needs drive Valmet's R&D work

- Increase production efficiency
- High availability
- Provide high-value end products and new revenue streams
- Maximize value of raw materials
- Improve safety
- Reduce emissions, energy and water consumption
- Reduce investment and operational costs
- Improve usability

## Valmet's pilot facilities

- **Energy and Biotechnology**, Tampere, Finland
- **Automation**, Tampere, Finland
- **Fabrics and Service**, Tampere, Finland
- **Fabrics**, Juankoski, Finland
- **Board and Paper Technology**, Jyväskylä, Finland
- **Polymer and Hard Coating**, Jyväskylä, Finland
- **Fiber Technology**, Inkeroinen, Finland
- **Finishing Technology**, Järvenpää, Finland
- **Cutter Technology**, Pori, Finland
- **Air Systems**, Raisio, Finland
- **Automation**, Kajaani, Finland
- **Fiberline and Biotechnology**, Sundsvall, Sweden
- **Cooking and Biotechnology**, Karlstad (2), Sweden
- **Tissue Technology**, Karlstad, Sweden
- **Evaporator Technology**, Gothenburg, Sweden
- **Filter Fabrics**, Ovar, Portugal



Global megatrends – like resource efficiency, clean solutions and digitalization – are driving our customers' needs for sustainable solutions. Many companies are moving towards the circular economy. Valmet has a strong role to play in the circular economy, helping our customers to implement it, and in our own operations (Read more on p. 44–45).

### Our pilot facilities and networks give us a competitive edge

Valmet has 16 pilot facilities, which carry out both internal R&D and customer projects. Our customers can take advantage of Valmet's pilot facilities to test new furnishes or fuels, or to optimize the processes in terms of energy, raw material and water consumption. This is important to secure performance and mitigate risks in new lines and plants, as well as in rebuilds. In 2017, we reached the milestone of 1,000 customer pilot trials at our Karlstad tissue pilot facility in Sweden. Thanks to these facilities, we can decrease the time to market and reduce the

risk of commercializing new technologies.

Valmet has over 420 R&D professionals working across its businesses. We also have an extensive co-operation network in place with leading universities and research institutions in Europe, Asia, and North and South America. Moreover, we have created successful R&D and innovation partnerships with customers and suppliers to create a competitive edge through product development.

### Boosting innovative culture

In 2017, Valmet launched a new global innovation training program, in close cooperation with selected key customers. This program is targeting a concrete business impact through an improved innovation culture, a deeper understanding of customer needs and business logic, stronger R&D cooperation with key customers and suppliers, as well as through active internal networking and cooperation. The target of the program is to train about 300 Valmet employees from different functions during the coming three years.

# 1,300

protected  
inventions



Read more:

[www.valmet.com/research](http://www.valmet.com/research)

# Valmet's role in circular economy

In a circular economy, products, components and materials stay in a continuous cycle instead of being thrown away. The key idea is to take as little new materials into use as possible and to minimize the amount of waste. This can be achieved by reducing the initial need for raw materials, by circulating the materials longer in the process, by recycling the used materials, and by prolonging the lifetime of production equipment with well-planned maintenance. This very idea is built into Valmet's solutions for customers.

## Circular economy creates business opportunities

Demand for a more resource-efficient and clean world is driving the need for more sustainable solutions. Valmet has a strong role in the circular economy by offering customers technology and services for converting renewable resources into sustainable products, such as pulp, board and bioenergy.

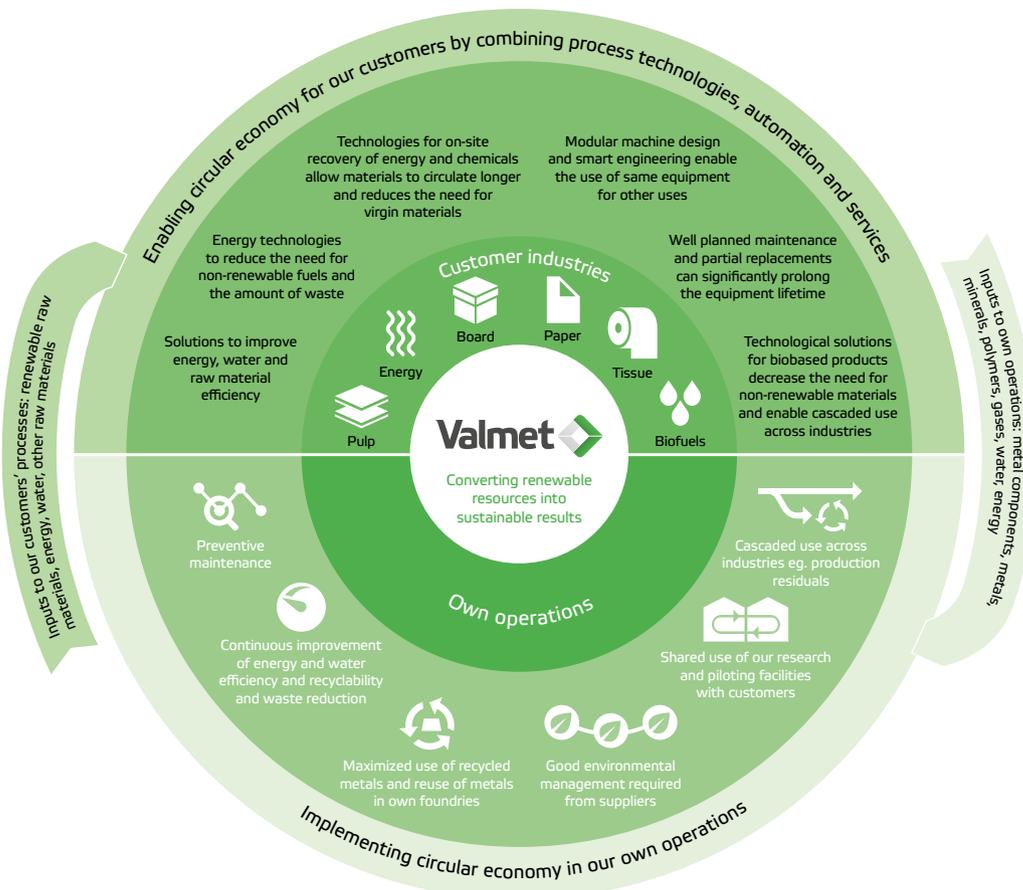
With Valmet's solutions, customers can for example reduce their environmental load by using less energy, water or chemicals, or by minimizing waste by using production side-streams from other applications, processes or even industries.

With modular machine design and smart engineering, Valmet enables equipment to have multiple uses. Well-planned maintenance and partial replacements can significantly prolong the lifetime of equipment as well.

Valmet constantly develops and introduces new technologies and services to support the circular economy. We work with our customers to utilize our research and pilot facilities to develop solutions that meet their needs.

## Implementing the circular economy in our own operations

Valmet is also implementing the circular economy in its own operations by, for example, improving efficiency of production operations and maximizing the reuse and recycling of metals. In 2017, Valmet renewed its environmental targets for its own operations to further improve environmental performance in the long term. The targets include goals for reducing waste sent to landfill, and water use. Valmet requires that its suppliers commit to resource efficiency and good environmental management, too.



## Making coffee-to-go greener



Photo: Hannes Frigård, KuvaBiltri Oy

**Around 16 billion disposable paper cups are used every year around the world, creating vast amounts of waste. The plastic content of these cups makes recycling them challenging. Still, we can make changes one step – or in this case, one paper cup – at a time. Valmet’s innovative curtain coating technology turns the barrier board production inside out making the cups recyclable like paper waste. It’s an excellent example of circular economy in action.**

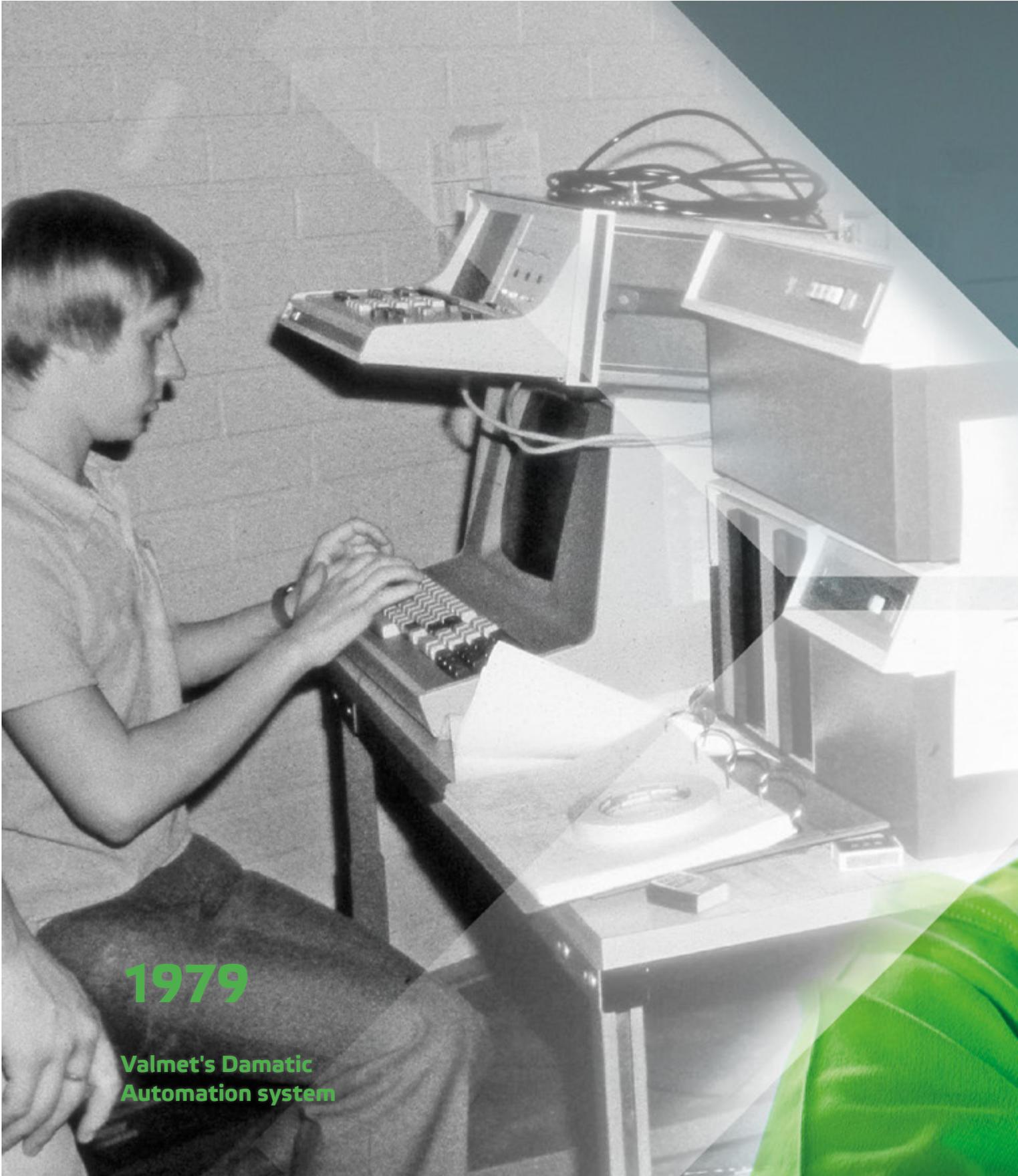
In a circular economy people reuse products, components and materials in a continuous cycle instead of throwing them away. Kotkamills, a Finnish forest industry company, converted its printing paper machine to a board machine. One of the innovative grades the machine produces is dispersion barrier-coated cup board. Unlike the conventional cup boards, it can be recycled with normal paper waste, recovering and reusing the fibers.

Valmet’s OptiCoat Layer curtain coating stations play an important role in producing this new, more sustainable board grade. With curtain coating, barrier can be applied as a thin coating layer, rendering the plastic extrusion coating obsolete. This fully recyclable board is one example of how Valmet’s technology solutions enable customers to improve their environmental performance and lower their ecological footprint.



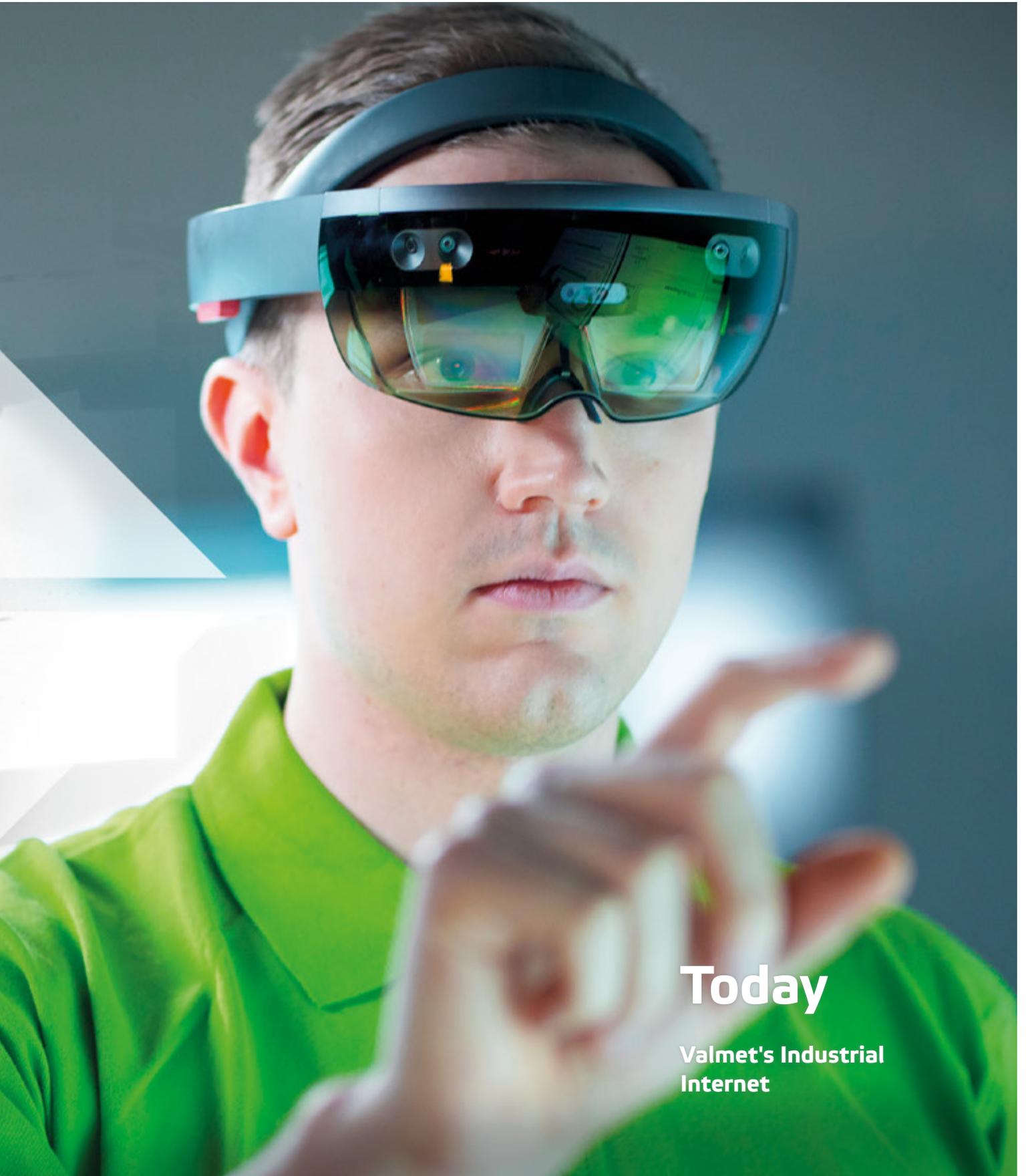
### BACK IN THE OLD DAYS

Mobile research laboratory at Norske Skogindustries AS Skogn PM1 in 1986.



**1979**

**Valmet's Damatic  
Automation system**



# Today

Valmet's Industrial  
Internet

# Corporate citizenship

Valmet is socially responsible and actively develops its processes to be fully aligned globally. In 2017, Valmet maintained its position among the world's sustainability leaders. The company received external recognition for its strategic and integrated approach to sustainability and for its sustainability reporting.

With global operations in 33 countries, Valmet provides employment and business opportunities to a wide range of stakeholders and indirectly builds wealth in local societies. We promote transparency in our communications with our stakeholders and actively engage with them to learn about their expectations. We aim to ensure that all our operations comply with laws and regulations in a socially responsible and globally aligned manner.

## Code of Conduct and other guiding policies

Valmet's Code of Conduct guides the behavior and decisions of Valmet's employees and its partners, and it creates a uniform foundation for all our business transactions and work assignments. The Code of Conduct is supported by a set of policies defining more detailed principles for specific activities. All these policies are described in more detail in Valmet's GRI Supplement, on page 11.

All new employees learn about, and must get to know the Code of Conduct. Valmet has an obligatory e-learning course for all employees about our Code of Conduct. By the end of 2017, almost all of our employees (99.8%) had completed the training. The Code of Conduct e-learning course is available in 19 languages. In 2017, Valmet began the work to develop a new e-learning course on sustainability. The course's topics include Valmet's sustainability agenda, focus areas and how sustainability is connected into daily work. The course is obligatory for all white-collar employees at Valmet.

Valmet supports and promotes the principles set out in the UN Universal Declaration of Human Rights, the UN Guiding Principles on Business and Human Rights, the UN Sustainable Development Goals, the Declaration on Fundamental Principles and Rights at Work of the International Labour Organization (ILO), and the OECD's Guidelines for Multinational Enterprises.

## Human rights

As a global company, Valmet recognizes its responsibility to respect human rights and requires its business partners to do the same. To ensure compliance with international laws and guiding

principles, Valmet has continued to develop a comprehensive due diligence framework and monitoring system for human rights. It will be implemented and used globally in our operations. Valmet's comprehensive framework includes long-term action plans that are monitored and reported.

Valmet has identified 14 salient potential human rights impacts and potentially vulnerable groups in Valmet's value chain. In 2017, Valmet identified potential human rights-related risks for both Valmet and the rights holders, and identified actions to catch potential violations and remedy them, mitigate risks and enable continuous improvement.

In 2017, Valmet issued a statement to promote its commitment to and respect for human rights, and to raise awareness among its stakeholders. Valmet's Human Rights Statement is approved by Valmet's President and CEO, and it applies to all employees and entities within Valmet.

## Social and environmental assessment for business expansions

In 2017, Valmet continued to develop its global sustainability assessment process for new market entries or expansions. The target is to ensure that Valmet operates in accordance with the Code of Conduct whenever operations expand or new legal entities are established in new countries. The assessment process was piloted in 2016 for our service center investment in Jakarta, Indonesia.

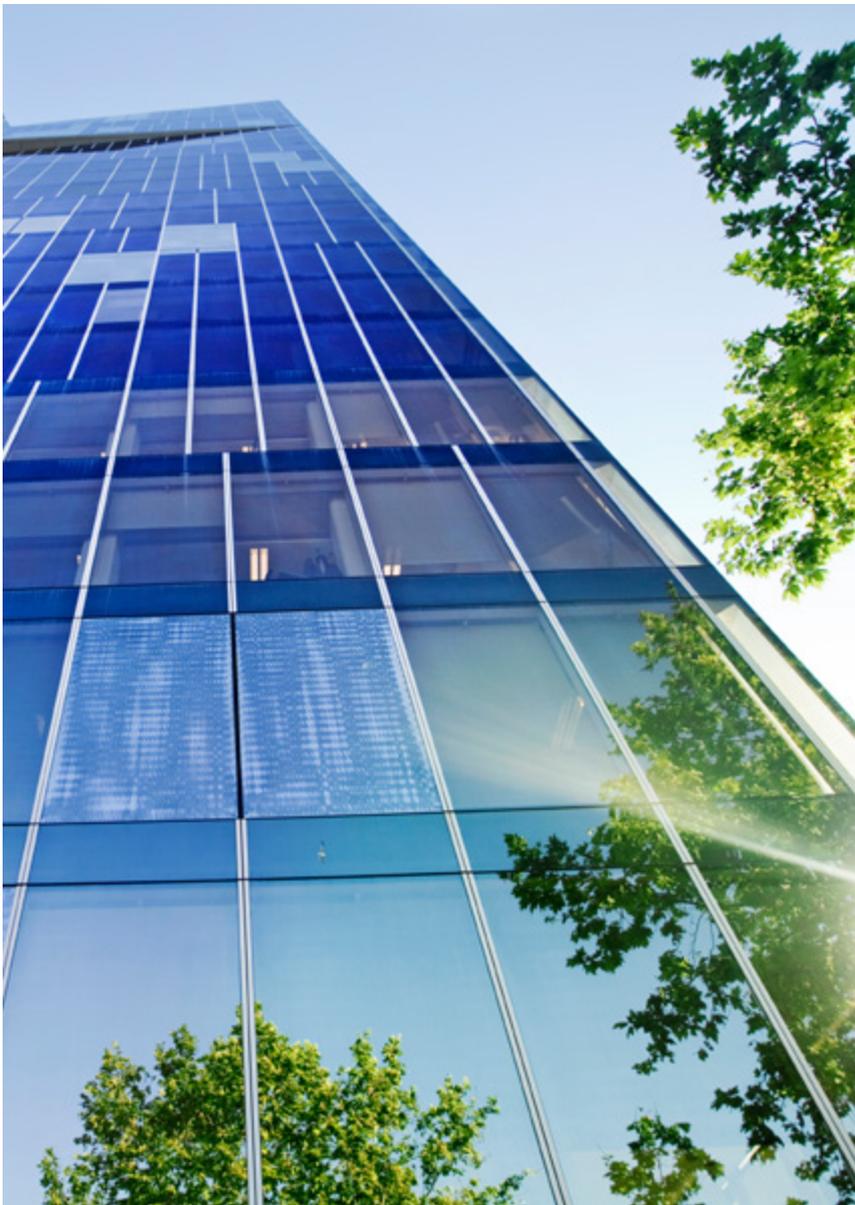
When expanding Valmet's business presence, we build an understanding of local market practices to identify our economic, social and environmental impacts, as well as the potential risks. The sustainability assessment process covers human and labor rights, health and safety, environmental management, and business ethics issues. The results are used in decision-making processes.

## Active stakeholder dialogue

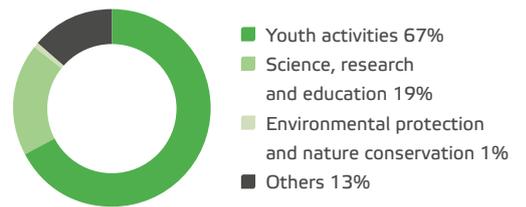
Valmet's most relevant stakeholders are its existing and potential customers and employees, suppliers and subcontractors, share-

## A recognized sustainability leader

MEMBER OF  
**Dow Jones  
 Sustainability Indices**  
 In Collaboration with RobecoSAM



### Support for non-profit organizations, % EUR 123,341.80 in total



### Income taxes (10 largest countries)

EUR MILLION	2017	2016
Finland	20.0	51.1
Sweden	9.0	0.8
China	2.8	2.8
Italy	1.8	0.5
Brazil	1.5	0.4
Japan	1.5	2.4
Portugal	1.5	1.2
USA	1.5	9.2
Canada	1.3	1.7
Chile	0.8	0.8

holders and investors, media, non-governmental organizations, authorities and local communities, research institutes, universities and vocational schools.

Valmet engages in active stakeholder dialogue on sustainability themes, such as the development and implementation of energy and climate policy, legislation and regulation, and research and technology development activities in environmental technology. Valmet has a stakeholder survey available online for all of Valmet's stakeholder groups. Valmet reviews its sustainability agenda against the results annually. The aim of the survey is to map which sustainability themes are most important to our stakeholders.

Valmet promotes the development of sustainable solutions and has a long tradition of supporting e.g. universities in researching sustainable production technologies. We also share our knowledge and raise awareness of environmentally efficient products among our stakeholders to initiate further discussion.

During 2017, Valmet continued the tradition to support non-governmental, humanitarian organizations that work locally with youth activities, environmental protection, and research and education (see graph on page 49).

In 2017, Valmet engaged in the following projects:

- Our seasonal donation was directed to Save the Children. The donation supports the organization's work in Syria and neighboring countries.
- In Finland, Valmet developed and executed a youth program with the Children and Youth Foundation to offer 100 young people paid, three-week internships.
- Valmet continues to support SOS Children's Village in Chennai and Mumbai, India. Valmet's local employees are also engaged in creative activities with the children and gave them gifts of sport equipment and utility bags.

### Stakeholder meetings and events in 2017

Valmet arranges several stakeholder meetings and events annually such as seminars, meetings and customer events, to maintain dialogue with its stakeholders.

During 2017, Valmet arranged six Supplier Day events, in China, India, South Korea, Indonesia, Brazil, and the United States. The events aimed to achieve more sustainable and open relationships with our suppliers and to increase their ability to deliver added value and innovative solutions for our businesses. The topics discussed included innovation and R&D, enhanced networking, quality and sustainability, especially ensuring health and safety in operations throughout the value chain. Some 203 supplier companies attended these events.

Valmet engaged with investors and analysts through different channels, such as conference calls, roadshows, and meetings. The dialogue also included webcasts, site visits and the Annual General Meeting.

### Valmet recognized as a sustainability leader

Valmet has been recognized for its actions and strategy to mitigate climate change and for its reporting on sustainability actions. In 2017, Valmet was included in the Dow Jones Sustainability Index (DJSI) for the fourth consecutive year and thus maintained its position among the world's sustainability leaders. Valmet was included in both the DJSI World and Europe indices. Valmet was also included in the Ethibel Sustainability Index (ESI) Excellence Europe for 2017 and received Prime status in the oekom Corporate Rating.

Valmet also reports to CDP, an international non-profit organization that promotes sustainability. Valmet was awarded a leadership position and the second-best A- ranking in CDP's Climate program in 2017. Valmet's Annual Report for 2016 was chosen as Best Practice in Sustainability by Report Watch.

## Distribution of economic value added to our stakeholder groups

Direct economic  
value generated

Revenues  
EUR 3,180  
million



Economic value distributed



Retained in business



EUR  
59 million

## Unique opportunities for young people



**To celebrate its 220 years of industrial history and the centenary of Finland's independence, Valmet provided 100 young people an opportunity to develop their working life skills during 2017. Valmet offered internships for youngsters aged 16–29 who have challenges in finding their paths in life or in working life skills, for example, to complete practical work training and gain work experience in its Finnish units during the spring and autumn.**

Valmet's program was planned and executed in cooperation with the Children and Youth Foundation, Academic Work and WorkPilots. In 2017, some 45 young people attended the program in the spring and 55 in the autumn (58 girls and 42 boys). Each of the participants had a personal mentor from Valmet, responsible for creating a safe and inspiring environment for the trainees, and for providing meaningful assignments that helped them practice their working life skills and build self-confidence.

The program received plenty of positive feedback from the participants and the mentors. Preparing presentations, taking photos and filing were mentioned as their favorite tasks, among many others. More than 50 percent of the trainees felt that their self-esteem had improved during the program. "I became more confident about my skills and future," one of the participants said. "I learned a great deal from the young people," said one of the mentors.



### **BACK IN THE OLD DAYS**

A skiing competition for children organised by Rautpohja in Finland in the 1950's.

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## Valmet reports 2017



### ANNUAL REVIEW 2017

The report describes Valmet's market environment and the progress of its strategy, operations and sustainability in 2017.



### FINANCIAL STATEMENTS 2017 AND INFORMATION FOR INVESTORS

The report includes Valmet's Financial Statements for 2017 and information about its shares, shareholders and management.



### GRI SUPPLEMENT 2017

The report includes Valmet's sustainability reporting indicators and principles, and its alignment with the Global Reporting Initiative (GRI) Standards framework.



### CORPORATE GOVERNANCE STATEMENT 2017

The report covers Valmet's governance principles and activities, Board and management in 2017.



### REMUNERATION STATEMENT 2017

The report covers Valmet's remuneration principles and remuneration in 2017.

## About this report

This report is made from paper and pulp that were produced on Valmet machinery and equipment. It is printed on Maxioffset paper, which is certified according to the PEFC standard and the Nordic Ecolabel.

This report is from sustainably managed forests and controlled sources. PEFC certification requires that the forests are managed well with regard to biodiversity, forest health and maintenance, as well as recreational use. The PEFC logo promotes responsible consumption.

The Nordic Ecolabel ensures that products that are used in printed matter fulfill certain criteria. Inks are mineral-oil free, and for all other materials, those that are recyclable and environmentally friendly are preferred.

### **DESIGN AND PRODUCTION**

Miltton Oy

### **PAPER**

Maxioffset 250 g

Maxioffset 140 g

### **PRINTING**

Grano Oy



# 220

With 220 years of industrial history, we are committed to moving our customers performance forward – every day.



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