

Annual Review  
**2018**

Progress in operations  
and sustainability



# Valmet reports 2018



## **ANNUAL REVIEW 2018**

The report describes Valmet's market environment and the progress of its strategy, operations and sustainability in 2018.



## **FINANCIAL STATEMENTS 2018 AND INFORMATION FOR INVESTORS**

The report includes Valmet's Financial Statements for 2018 and information about its shares, shareholders and management.



## **GRI SUPPLEMENT 2018**

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



## **CORPORATE GOVERNANCE STATEMENT 2018**

The report covers Valmet's governance principles and activities, Board and management in 2018.



## **REMUNERATION STATEMENT 2018**

The report covers Valmet's remuneration principles and remuneration in 2018.

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**THE CUSTOMER ACTIVITY  
CONTINUED HIGH IN 2018,  
LEADING TO A RECORD  
YEAR IN MANY WAYS**

# A strong year for Valmet

Year 2018 was characterized by the strong confidence in Valmet shown by the customers all over the world. Our unique combination of process technologies, automation and services continued to prove their value to our customers and as a competitive advantage for Valmet.

## **Growth with improved profitability continued**

The customer activity continued high in 2018, leading to a record year in many ways. Valmet's orders received increased by 14 percent to EUR 3,722 million, and our order backlog at the end of the year was on a record high level of EUR 2,829 million. Net sales increased 9 percent and amounted to EUR 3,325 million. The comparable EBITA margin was 7.7 percent, making 2018 another successive year of margin improvement. With the good order backlog level and our consistent roadmap to enhance the company's growth with improved profitability, we have a good basis for year 2019.

## **Active demand for our paper and board technologies**

Our Paper business line received a large number of new orders for new board making lines, rebuilds and new tissue making lines, leading to a high order intake for a second consecutive year,

amounting to EUR 1,077 million. Orders received increased in all geographical areas except China, which was an exceptionally active market in 2017.

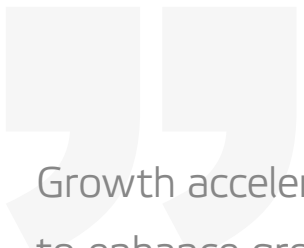
In the paper market, containerboard and tissue are the fastest growing areas, and we have also seen an increasing demand for wider machines opposite to the previous years' trend prioritizing more narrow models. The development work we started years ago in creating modular machine concepts is still paying off. It has been delightful to see the great confidence in Valmet by our customers in the form of several repeat orders as well. During the year we agreed on six board production line deliveries, eight tissue production line deliveries and completed fifteen successful tissue line start-ups with our customers around the world.

## **Further improved competitiveness in pulp and energy markets**

Our Pulp and Energy business line had a good year and we made many key technology delivery agreements with our customers. The orders received of the Pulp and Energy business line were EUR 1,000 million. The share of energy related orders in the Pulp and Energy business line's orders received was 51 percent.

The small and medium sized investments in the pulp industry continued their stable development and the mega mill investments were picking up. During the earlier quieter times in the mega mill market, we have continuously developed the competitiveness and performance of our key pulping technologies and our project execution competences, and we are ready to meet the demand.

In the energy market, the demand for our multifuel boilers enabling even 100 percent utilization of biomass in the energy production was good, leading to several delivery agreements e.g. from Spain, Turkey, China and Finland. Furthermore, we agreed on a number of flue gas cleaning deliveries and made a breakthrough in the marine scrubber market addressing to the International Maritime Organization's (IMO) sulphur oxides (SOx) regulation with our own marine scrubber technologies.



## Growth accelerators to enhance growth with improved profitability

### Strong performance in services

The Services and Automation business lines are less sensitive to the economic cycles than the process technology projects and are therefore more stable businesses in nature. Services continued its consistent progress and growth in 2018. The orders received of the Services business line increased by 6 percent, amounting to EUR 1,315 million.

We continued with our major services transformation program – Shared Journey Forward – towards excellent customer experience started in 2016. As part of the program we launched a new Customer Portal, which will be further developed in close cooperation with our customers. Furthermore, we expanded our services footprint with new spreader roll workshops in North America and Brazil, and by starting to build a service center in Chile.

### Stable progress in automation business

The demand for our automation solutions for the pulp and paper industries continued to be active in 2018 and our position as the trusted automation provider for the energy and process industry customers strengthened further. The growth was enabled both through new installations and a large number of competitor system replacements. The orders received of the Automation business line

without internal orders increased to EUR 330 million and with internal orders to EUR 386 million.

Our strong R&D spend in automation offering development has led to over 50 percent of the sales coming from products commercialized within five years. In 2018, we launched new visual Valmet DNA Dashboards that are an important step in our development work towards the future automation solutions.

### Growth accelerators to enhance growth with improved profitability

Valmet has made consistent and strong progress forward in the past years and this continued in 2018 as well. We worked relentlessly with our four Must-Wins that are a tool for us to continuously improve the company's performance and the competences of all Valmet employees.

On top of the Must-Wins we were now ready to take a next step in the company's roadmap towards its vision – to become the champion in serving our customers. In 2018 we defined two Growth Accelerators – cross organizational initiatives that we will focus on in the coming years in addition to our Must-Win work. “Becoming the frontrunner in field services” and “Taking the lead in Industrial Internet and Digitalization” are accelerators enhancing our growth with improved profitability and where we have now intensified actions ongoing.

As part of the first mentioned Growth Accelerator program we are further developing our field services expert network and way to operate globally covering maintenance and shutdown services. In the Industrial Internet and Digitalization program we have taken major steps forward and today we can provide remote monitoring and optimization, expert support and problem solving to our customers globally through already seven Valmet Performance Centers.

### Towards a sustainable future

The needs from our customers and our internal ambition will keep Valmet moving forward continuously. We continue to build the foundation for the future by investing in innovation and R&D, in our people and performance, and in our internal processes. Enhancing our position as an acknowledged company in sustainable business practices is the core in ensuring our competitiveness today and in the future.

I want to express my warmest thanks to our customers for the trust and inspiring cooperation, our partners for constructive collaboration, and to all the colleagues at Valmet for the great commitment and solid progress.

### Pasi Laine

President and CEO

# 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 2018**

**EUR 3.3**  
**BILLION**

**PROFITABILITY**

**8–10%**

Comparable EBITA target 8–10%

**PROFITABILITY 2018**

**7.7%**

**ROCE**

**15–20%**

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

**ROCE 2018**

**20%**

**DIVIDEND PAYOUT**

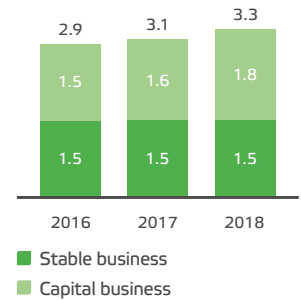
**50%**

At least 50% of net profit

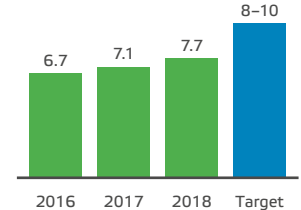
**DIVIDEND PAYOUT 2018**

**64%<sup>1</sup>**

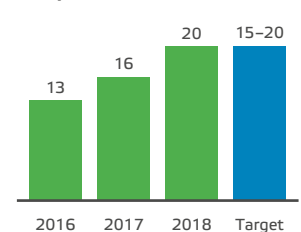
**Net sales, EUR billion**



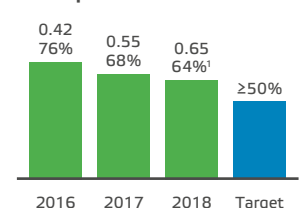
**Comparable EBITA, % of net sales**



**Comparable ROCE, %**



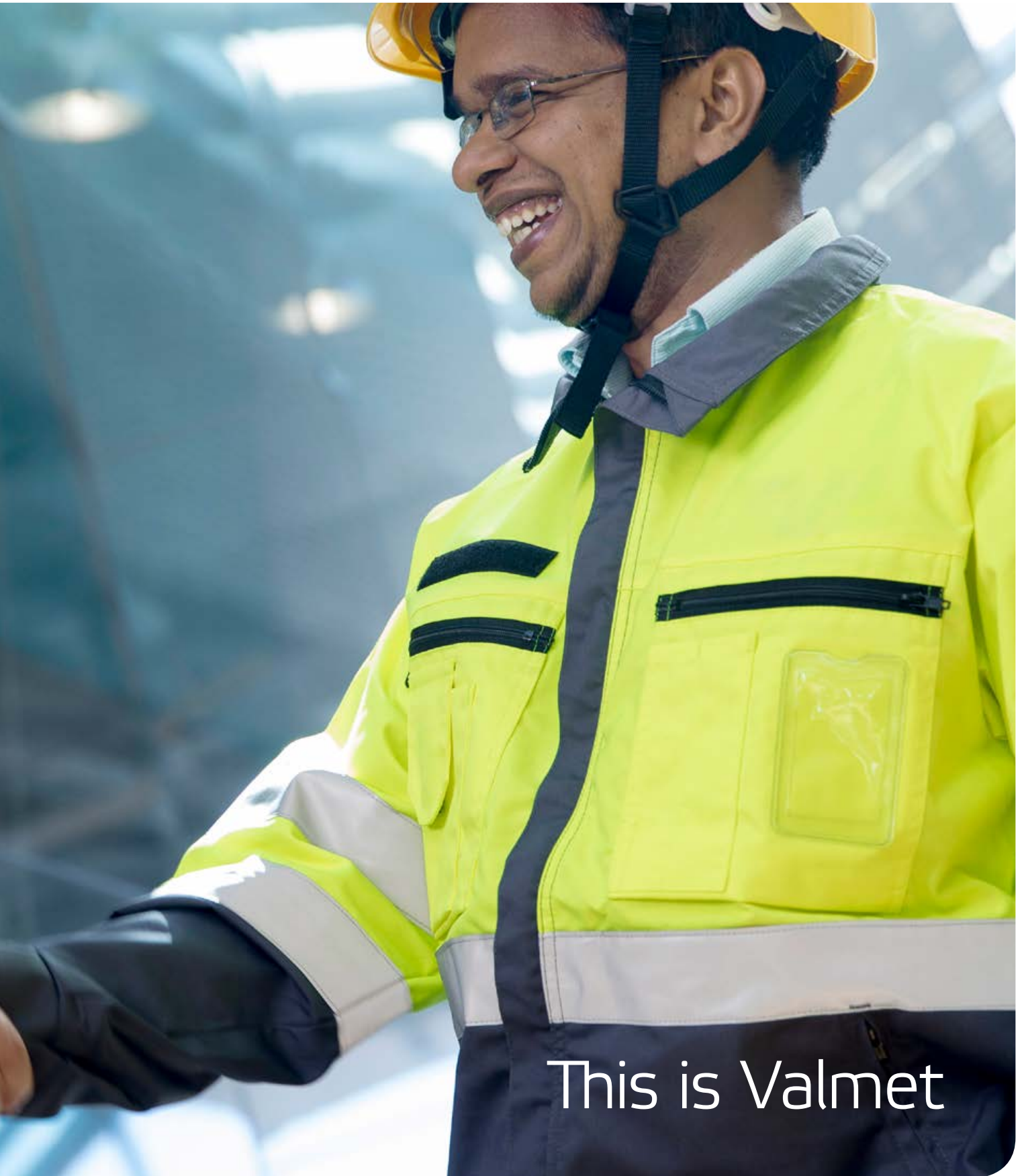
**Dividend per share, EUR/ % net profit**



<sup>1</sup> Proposal by the Board of Directors.







This is Valmet

# Valmet in brief

Valmet is the leading global developer and supplier of process technologies, automation, and services for the pulp, paper, and energy industries.

Valmet's net sales in 2018 were approximately EUR 3.3 billion. Our more than 12,000 professionals around the world work close to our customers and are committed to moving 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  
EUR million  
**3,325**



Personnel  
**12,528**



Orders received  
EUR million  
**3,722**



Comparable  
EBITA margin  
**7.7%**



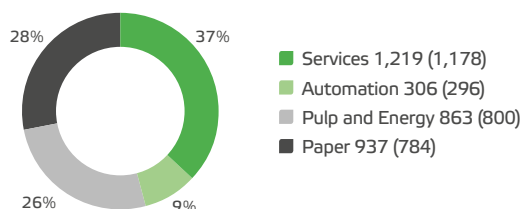
**52**  
supplier  
sustainability  
audits



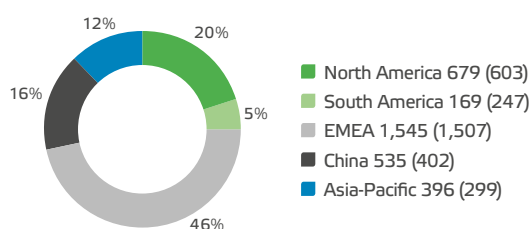
Comparable  
EBITA  
EUR million  
**257**

# Key figures

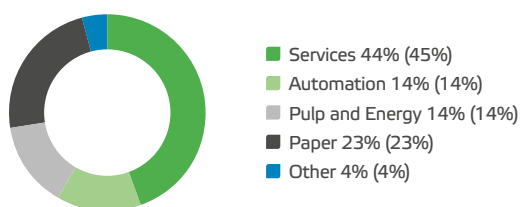
## Net sales by business line, EUR million



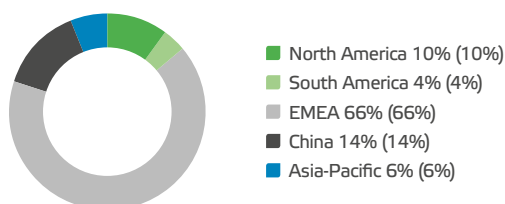
## Net sales by area, EUR million



## Personnel by business line, %



## Personnel by area, %



## Financial<sup>1</sup>

	2018	2017 <sup>2</sup>	CHANGE
Orders received, EUR million	<b>3,722</b>	3,272	14%
Services	<b>1,315</b>	1,242	6%
Automation	<b>330</b>	317	4%
Pulp and Energy	<b>1,000</b>	678	47%
Paper	<b>1,077</b>	1,035	4%
Order backlog <sup>3</sup> , EUR million	<b>2,829</b>	2,458	15%
Net sales, EUR million	<b>3,325</b>	3,058	9%
Comparable EBITA <sup>4</sup> , EUR million	<b>257</b>	218	18%
% of net sales	<b>7.7%</b>	7.1%	
Operating profit (EBIT), EUR million	<b>211</b>	170	24%
% of net sales	<b>6.4%</b>	5.6%	
Dividend per share, EUR	<b>0.65<sup>5</sup></b>	0.55	18%
Return on capital employed (ROCE) before taxes, EUR million	<b>19%</b>	14%	
Research and development expenses, net, EUR million	<b>66</b>	64	3%

## Social

	2018	2017	CHANGE
Personnel <sup>3</sup>	<b>12,528</b>	12,268	2%
Total recordable incident frequency (TRIF) <sup>3,6</sup>			
Own employees	<b>4.4</b>	5.5	-20%
Contractors	<b>9.3</b>	10.1	-8%
Safety committee coverage, % personnel	<b>93</b>	92	
Support for non-profit organizations, EUR million	<b>0.2</b>	0.1	
Number of supplier sustainability audits	<b>52</b>	56	-7%

## Environmental

	2018	2017	CHANGE
CO <sub>2</sub> emissions <sup>7</sup> , 1,000 t	<b>91</b>	87	5%
Energy consumption, TJ	<b>1,381</b>	1,331	4%
Water consumption, 1,000 m <sup>3</sup>	<b>3,077</b>	3,046	1%
Waste, 1,000 t	<b>47</b>	43	9%
NO <sub>x</sub> , SO <sub>x</sub> and other significant air emissions, t	<b>106.9</b>	93.6	14%

<sup>1</sup> Group figures: the formulas for calculation of the key financial figures are presented in the Financial Statements 2018.

<sup>2</sup> 2017 financials have been presented on restated basis.

<sup>3</sup> At the end of period.

<sup>4</sup> Comparable earnings before interest, taxes and amortization.

<sup>5</sup> Board of Directors' proposal.

<sup>6</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>7</sup> Scope 1 and 2 (location-based) emissions.

## Valmet business lines

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

### Services

The Services business line provides flexible and fit-for-purpose services to promote improved performance and reliability. Services offering increases the environmental and cost efficiency of our customers' production processes, while ensuring safe and reliable operations.

**NET SALES,  
EUR MILLION** **1,219**

**ORDERS  
RECEIVED,  
EUR MILLION** **1,315**

**#1-2 IN SERVICES**

### Automation

Automation solutions range from single 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** **306**

**ORDERS  
RECEIVED,  
EUR MILLION** **330**

**#1-3 IN AUTOMATION**

### Pulp and Energy

The Pulp and Energy business line provides technologies and solutions for pulp and energy production, as well as for biomass conversion. Our technologies maximize the value of renewable raw materials while increasing production efficiency and minimizing environmental impact.

**NET SALES,  
EUR MILLION** **863**

**ORDERS  
RECEIVED,  
EUR MILLION** **1,000**

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

### Paper

The Paper business line delivers complete board, tissue, and paper production lines and machine rebuilds. 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-effective solutions for our customers.

**NET SALES,  
EUR MILLION** **937**

**ORDERS  
RECEIVED,  
EUR MILLION** **1,077**

**#1 IN PAPER  
#1 IN TISSUE  
#1 IN CONTAINERBOARD**



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## 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>Closures of non-competitive production lines</li> <li>Demand for Industrial Internet based solutions</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, Andritz, AstenJohnsen, Voith</li> </ul>
			Rolls and Workshop	<ul style="list-style-type: none"> <li>#1–2</li> <li>Andritz, Voith</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>Aging 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>#2 in P&amp;P<sup>3</sup>, niche player in energy and process industries, marine</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 driven demand</li> <li>Environmental solutions driven by marine SO<sub>x</sub> regulation and target market expected temporarily to exceed 1B€</li> </ul>		<ul style="list-style-type: none"> <li>#1–3</li> <li>One of few global players in bioenergy niche</li> <li>Energy: Andritz, Babcock &amp; Wilcox, Sumitomo SHI FW,</li> <li>Marine: Alfa Laval, Wärtsilä, Yara</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.

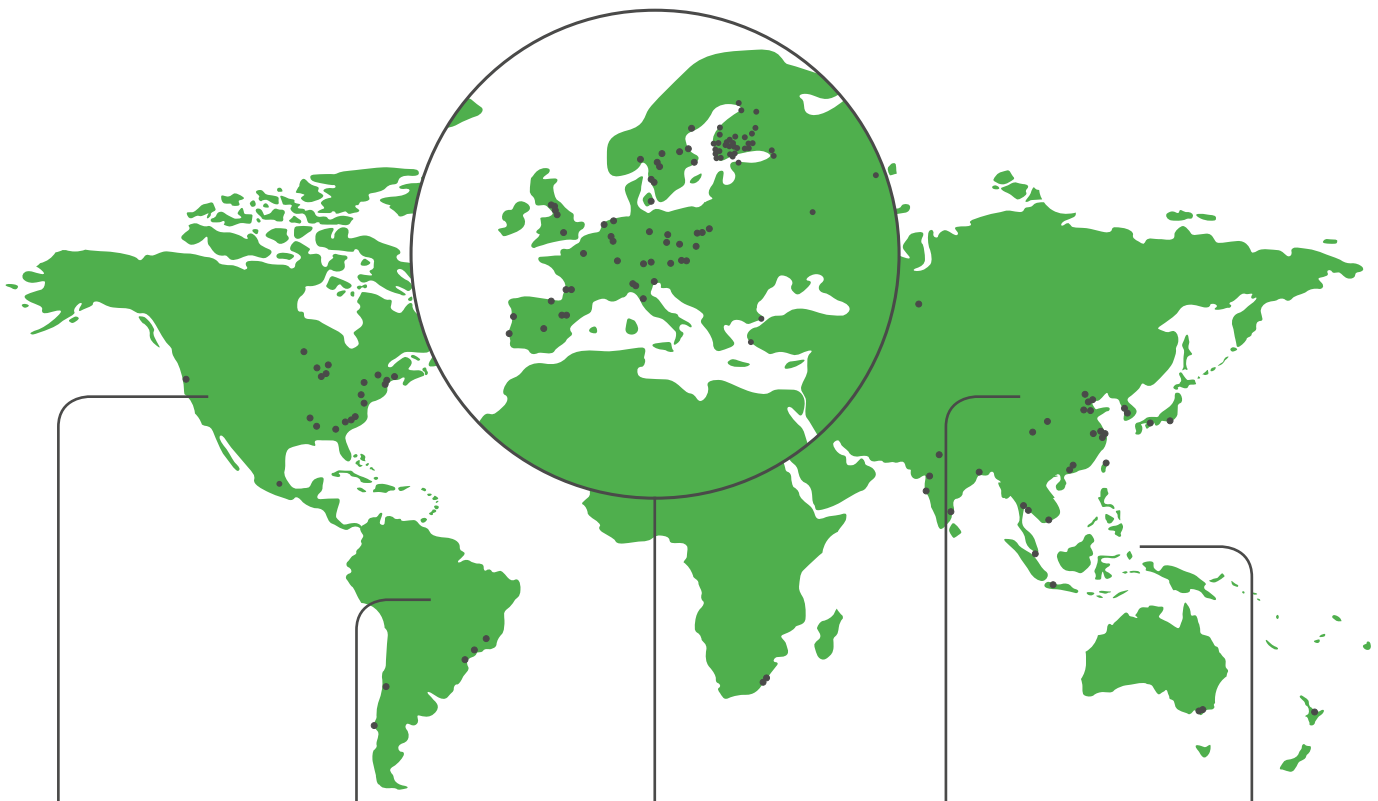
<sup>3</sup> Pulp and paper

# Global presence

Valmet has a strong global presence, which enables us to meet our customers' needs in the best possible way and to leverage the growth potential in different markets. We employ more than 12,000 professionals around the world and have customers in 100 countries. We have more than 100 service centers, 85 sales offices, 35 production facilities, and 16 R&D centers around the globe.



**READ MORE:**  
[www.valmet.com](http://www.valmet.com)



## North America

17 service centers  
 7 production units  
 8 sales offices

**1,202**

NET SALES,  
 EUR MILLION

**679**

## South America

3 service centers  
 2 production units  
 5 sales offices

**510**

NET SALES,  
 EUR MILLION

**169**

## EMEA

16 R&D centers  
 63 service centers  
 21 production units  
 54 sales offices

**8,303**

NET SALES,  
 EUR MILLION

**1,545**

## China

6 service centers  
 5 production units  
 6 sales offices

**1,752**

NET SALES,  
 EUR MILLION

**535**

## Asia-Pacific

12 service centers  
 12 sales offices

**761**

NET SALES,  
 EUR MILLION

**396**

## 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 2.5– 2.8bn</p> <p>P&amp;P<sup>2</sup> annual production<sup>3</sup>: 150m tonnes, growth +1.3%</p>	<ul style="list-style-type: none"> <li>• Mature market with large aging installed base creating service demand</li> <li>• Rebuild and new capacity 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 0.7bn (20% of total)</li> <li>• Employees: 1,202</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 1.1–1.7bn</p> <p>P&amp;P<sup>2</sup> annual production<sup>3</sup>: 45m tonnes, growth +3,7%</p>	<ul style="list-style-type: none"> <li>• Service growth driven by demand for more efficient operations, environmental considerations and growing trend of mill maintenance outsourcing</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>• Consolidation in Pulp and Tissue customers</li> </ul>	<ul style="list-style-type: none"> <li>• Net sales: EUR 0.2bn (5% of total)</li> <li>• Employees: 510</li> <li>• Valmet has a strong position and installed base 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 5.5–5.6bn</p> <p>P&amp;P<sup>2</sup> annual production<sup>3</sup>: 165m tonnes, growth +1.8%</p>	<ul style="list-style-type: none"> <li>• Valmet's largest area with significant services and technology markets in all Valmet's businesses 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 1.5bn (46% of total)</li> <li>• Employees: 8,303</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 2.5–2.9bn</p> <p>P&amp;P<sup>2</sup> annual production<sup>3</sup>: 125m tonnes, growth -1.5%</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, energy and marine driven by growing consumption, stricter environmental regulation and demand for clean energy</li> </ul>	<ul style="list-style-type: none"> <li>• Net sales: EUR 0.5bn (16% of total)</li> <li>• Employees: 1,752</li> <li>• Valmet is the leader in P&amp;P Process technology and has a strong position in services and P&amp;P automation market</li> <li>• Strong competition from local and global competitors</li> </ul>
<b>Asia-Pacific</b>	<p>Target market size<sup>1</sup>: EUR 2.0–2.5bn</p> <p>P&amp;P<sup>2</sup> annual production<sup>3</sup>: 105m tonnes, growth +2.7%</p>	<ul style="list-style-type: none"> <li>• Large geographical area covering multiple countries with differing market situation and dynamics</li> <li>• Service 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, in marine and in renewable energy projects in selected countries</li> <li>• China's restrictions on imported waste paper and trade war with US moving investment activity into Asia-Pacific</li> </ul>	<ul style="list-style-type: none"> <li>• Net sales: EUR 0.4bn (12% of total)</li> <li>• Employees: 761</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>

<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.

# Value creation

## INPUTS



## BUSINESS MODEL



### Financial

- Total equity EUR 949 million
- Net interest-bearing debt EUR -219 million
- Cash and cash equivalents EUR 376 million

### Natural

- Purchased components (mainly metals-based)
- Purchased raw materials (mainly metals, minerals, polymers and gas)
- Energy consumption 1,381 TJ
- Water consumption 3,077,000 m<sup>3</sup>

### Human

- Number of employees 12,528
- FTE<sup>1</sup> of subcontractors and supervised workers
- Investment in development and know-how
- Investment in occupational health and safety

### Infrastructure

- 154 locations in 35 operating countries<sup>2</sup>
- 35 production units and over 100 service centers
- 85 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 66 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 40 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

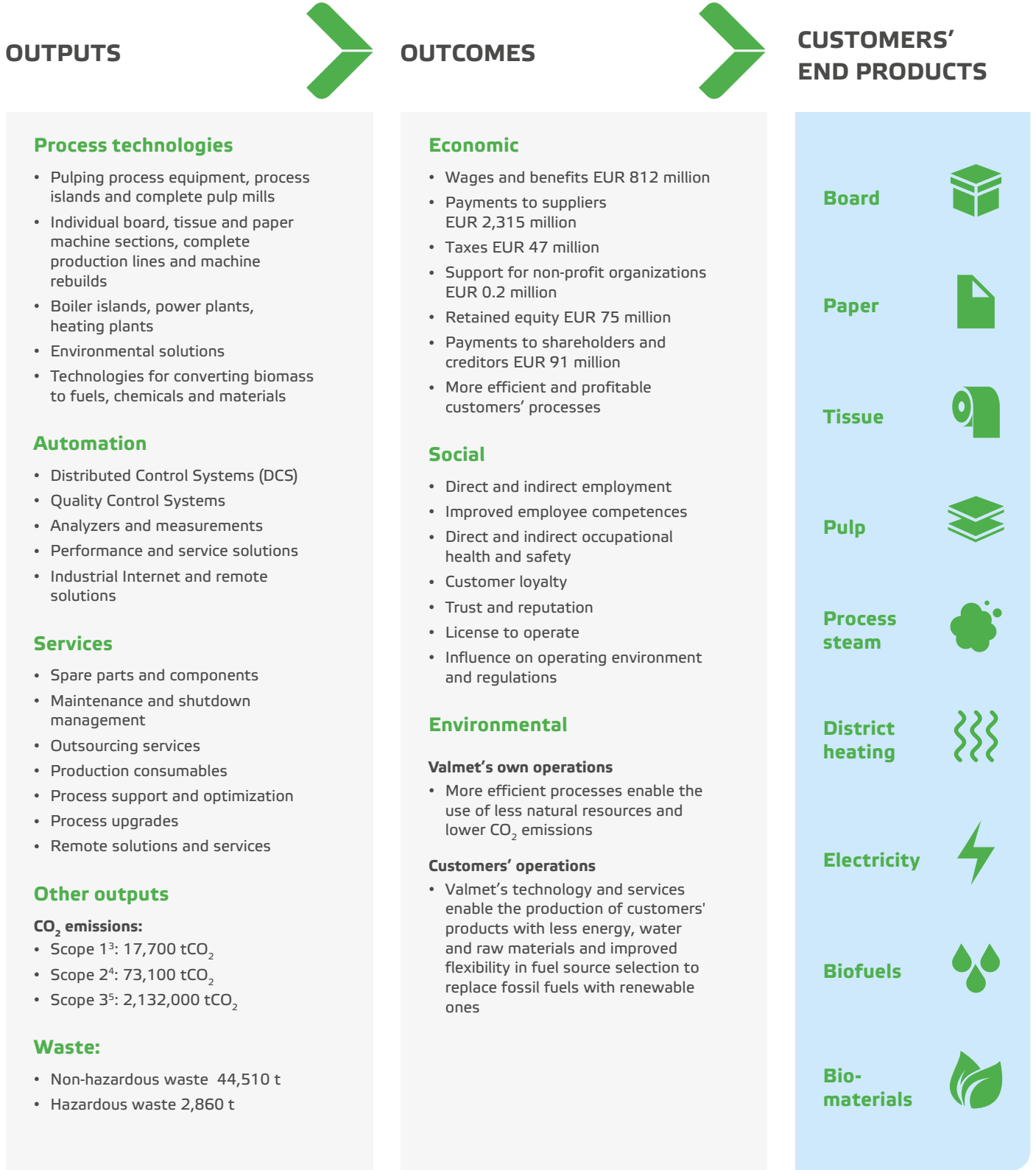


<sup>1</sup> Full-time equivalent.

<sup>2</sup> Includes technology centers.

All figures are from December 31, 2018, unless otherwise stated.





**OUTPUTS**

**OUTCOMES**

**CUSTOMERS' END PRODUCTS**

**Process technologies**

- Pulping process equipment, process islands and complete pulp mills
- Individual board, tissue and paper machine sections, complete production lines and machine rebuilds
- Boiler islands, power plants, heating plants
- Environmental solutions
- Technologies for converting biomass to fuels, chemicals and materials

**Automation**

- Distributed Control Systems (DCS)
- Quality Control Systems
- Analyzers and measurements
- Performance and service solutions
- Industrial Internet and remote solutions

**Services**

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

**Other outputs**

**CO<sub>2</sub> emissions:**

- Scope 1<sup>3</sup>: 17,700 tCO<sub>2</sub>
- Scope 2<sup>4</sup>: 73,100 tCO<sub>2</sub>
- Scope 3<sup>5</sup>: 2,132,000 tCO<sub>2</sub>

**Waste:**

- Non-hazardous waste 44,510 t
- Hazardous waste 2,860 t

**Economic**

- Wages and benefits EUR 812 million
- Payments to suppliers EUR 2,315 million
- Taxes EUR 47 million
- Support for non-profit organizations EUR 0.2 million
- Retained equity EUR 75 million
- Payments to shareholders and creditors EUR 91 million
- More efficient and profitable customers' processes

**Social**

- Direct and indirect employment
- Improved employee competences
- Direct and indirect occupational health and safety
- Customer loyalty
- Trust and reputation
- License to operate
- Influence on operating environment and regulations

**Environmental**

**Valmet's own operations**

- More efficient processes enable the use of less natural resources and lower CO<sub>2</sub> emissions

**Customers' operations**

- Valmet's technology and services enable the production of customers' products with less energy, water and raw materials and improved flexibility in fuel source selection to replace fossil fuels with renewable ones

**Board**



**Paper**



**Tissue**



**Pulp**



**Process steam**



**District heating**



**Electricity**



**Biofuels**



**Bio-materials**



<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.





# Strategy

# Strategy

Valmet's Way Forward is our strategic roadmap. It crystallizes the identified megatrends, our mission and 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. With our solutions, our customers can refine renewable raw materials into sustainable and environmentally responsible products.

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

Valmet focuses on customers in the pulp, paper and energy industries. We are committed to improving our customers' perfor-

mance through our unique offering that combines process technologies, automation and services. Our 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. On top of the core customer industries, our Automation business serves other process industries and the marine industry as well.

## Valmet's Way Forward



## Strategy Implementation

We implement our strategy through our Must-Wins, which structure our strategy work and tell us where we need to focus to reach our goals. In order to accelerate our growth, we introduced new growth programs called “Growth Accelerators,” which are focusing on the opportunities in field services and the Industrial Internet and digitalization. During 2018, Valmet continued to implement its Sustainability360° agenda as a part of its strategy.

### Further developing customer excellence

As part of 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, which combines process technology, automation and services.

We continued 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 for Valmet’s services business. In our process technology business, we continue to strengthen our position as the preferred supplier.

We systematically develop our sales capabilities, common tools and processes to drive growth and profits. We continue to develop our local sales and service capabilities and presence, as well as to strengthen our key account management. We are particularly focusing on markets with higher growth, as well as on markets where Valmet currently lacks a strong presence.

### Customer-driven solutions

With the “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



## 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.

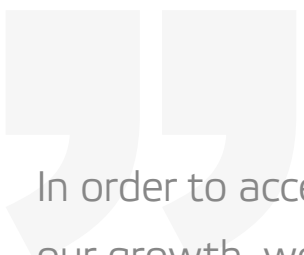


### URBAN, RESPONSIBLE AND GLOBAL CONSUMERS

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

increasing modularization, standardization and optimization of our product design and by enhancing our delivery chain.

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



In order to accelerate our growth, we introduced new growth programs "Growth Accelerators"

### Efficient global processes

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

Our global project management initiative aims at continuous improvement of 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 focusing on improving our quality culture and developing the way we operate and manage quality in our value chain. In health, safety and environment (HSE), we continue systematically to strengthen safety awareness 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, enhancing our sustainable supply chain, and by focusing on the 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. The

implementation of our updated ERP (enterprise resource planning) system continued in 2018 with new rollouts in Finland and preparation for the global rollout. With this updated ERP system, we are targeting 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.

### Performance-driven teams close to our customers

With 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.

We are systematically developing employee engagement and implementing targeted actions based on the OurVoice employee engagement survey. Our global training portfolio is designed to support the execution of our strategic goals, as well as to drive change within the organization. In 2018, we continued the implementation of our global training portfolio, including the successful sales and innovation training programs introduced last year. We also promote internal mobility as a tool for development.

### Accelerating growth with improved profitability

In 2018, we introduced new growth programs in field services, the Industrial Internet and digitalization called Valmet "Growth Accelerators". These programs are built on the solid basis created by our Must-Wins and aim to further accelerate our strategy of growth with improved profitability.

For us, field services are an integral part of delivering our distinctive service experience, and of moving our customers' process reliability and performance forward. By developing new products and services, building an excellent global network of experts, and developing our processes and tools both at the customer interface and internally, we aim to make our field services the differentiator for our service business.

We are striving to realize the full benefits of digitalization in serving our customers and internally. In our Industrial Internet offering, we combine our strong know-how in process technology, automation and services with data-driven solutions to make tangible improvements to the performance of our customers' mills or plants. We are developing our digital channels and services to offer a great customer experience and better service throughout the customer journey. Finally, we are building and launching new digital platforms and tools to drive our efficiency, quality and productivity.

## Strategy highlights 2018



### Recognized leader in sustainability

Valmet was included in the Dow Jones World and Europe sustainability indices for the fifth consecutive year. Valmet also received the best A rating in the CDP Climate rating.



### Industrial Internet expert network expanding

In addition to five industry-specific Performance Centers that opened last year, two new local centers opened, in Shanghai and Atlanta.

### High potential in marine scrubbers

We made a breakthrough in marine scrubber markets and received orders valued at EUR 190 million.



### Key technology for Arauco's pulp mill in Chile

Valmet is delivering pulp drying and baling, a recovery boiler and a biomass boiler for Arauco's mill in Chile. The delivery is part of Arauco's major investment to expand the current production capacity and build a new pulp production line.



### Multifuel boilers in China

We made a breakthrough in the Chinese boiler market with the first waste-to-energy boiler started up and four new orders during 2018.



### Strong year in tissue startups

Fifteen new tissue lines started up and a couple of rebuild projects were completed in 2018.



**READ MORE:**  
[www.valmet.com](http://www.valmet.com)



### Full advantage of digitalization

Valmet launched a new digital Customer Portal to offer its customers even better service and a better experience. We also launched a new people management system – Workday – and continued with the ERP renewal and development of other digital platforms and tools.

# Progress of Must-Win actions

## MUST-WIN



### Customer excellence

## WHERE ARE WE TODAY

We are implementing Shared Journey Forward, our way to serve customers and provide them with the best services experience based on our core commitments and unique offering. We are managing our sales based on a global process, common tools and a strong customer interface built on key account management and customer-specific mill teams.



### Leader in technology and innovation

We are actively developing new products and services based on technology roadmaps and close collaboration with our customers. We have product competitiveness programs in all our businesses to improve the cost competitiveness and performance of our offering.



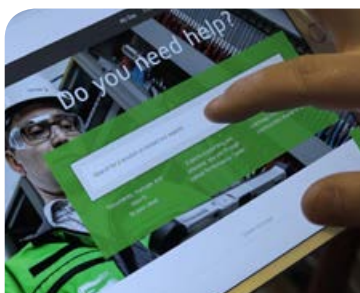
### Excellence in processes

We are using a global process and tool to systematically develop our project management capabilities. We have a strong focus on improving our quality based on continuous improvement and lean practices. We have clearly defined HSE management practices for all our operations to improve HSE performance. We are systematically promoting sustainability in our supply chain and supporting our product competitiveness targets through procurement savings. We are developing and unifying our processes and ways of working as part of our ERP renewal.



### Winning team

We strengthen our high performance culture through performance management as well as by developing engagement and managerial skills. We have a strong focus on capability development based on a combination of global training programs, internal job rotation and local competence development.



### Growth accelerators

We have launched a Field Service growth program to develop and grow our on-site services in line with our Shared Journey Forward services approach. We have launched our Industrial Internet services to improve the reliability and performance of our customers' operations based on a meaningful dialogue with data. We are building a digital foundation to further drive efficiency, quality and productivity in our operations.



**FOCUS GOING FORWARD**

**STRATEGIC GOALS**



**READ MORE:**  
A digital collaboration space to improve the customer understanding p. 53



We continue to implement and develop our way to serve customers based on our Shared Journey Forward approach, and to develop our sales interface and sales management practices.



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



**READ MORE:**  
Innovation Pathways refine collaborative development work p. 49



We continue to strengthen our R&D cooperation with key customers, and we systematically develop and renew our offering, and continue to implement product competitiveness initiatives.



**Valmet provides leading technology and cost-competitive products and services that reduce customer operating and investment costs.**



**READ MORE:**  
Sustainability program for key suppliers in China p. 33



We continue to develop our processes and operations focusing on:

- Project management practices and key projects
- Building a strong quality culture and way to operate to drive quality performance
- Strengthening existing HSE practices and collaboration with customers and suppliers to improve safety
- Supplier quality and delivery performance, and sustainability in our supplier network
- Rollout of new ERP and realizing the process benefits
- Certification of global management system to quality and HSE management standards



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



**READ MORE:**  
Mentoring program supports professional growth p. 45



We continue to boost performance and engagement through effective performance management and increased focus on innovation, renewal and collaboration. We continue to develop our strategic capabilities and our functional and technology competence to support our strategic targets and business growth.



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



**READ MORE:**  
A digital collaboration space to improve the customer understanding p. 53



We focus on developing our field service capabilities, offering and way to operate to grow and deliver distinctive on-site services. We continue to develop our Industrial Internet services and digital capabilities to:

- Provide new advanced analytics and remote services that improve the performance and reliability of our customers' operations
- Enhance our customer experience with digital means
- Build and leverage digitalization in more efficient and productive operations



**Valmet strives to accelerate growth through focused business initiatives in field services and digitalization.**

## Sustainability agenda updated for the next three years

# 52

**SUPPLIER SUSTAINABILITY AUDITS**

**KEY SUPPLIER SUSTAINABILITY ENGAGEMENT PROGRAM INTRODUCED**

# 58%

**OF VALMET WHITE COLLAR EMPLOYEES PARTICIPATED IN SUSTAINABILITY E-LEARNING**

Sustainability is at the core of Valmet's business strategy and operations. It is integrated into our processes through the comprehensive Sustainability360° agenda. The agenda has been approved by Valmet's Executive Team, and it is reviewed annually. It covers five sustainability focus areas: sustainable supply chain; health, safety and environment; people and performance; sustainable solutions; and corporate citizenship.

Through its focus areas, the agenda helps us mitigate risks, become more cost efficient, and grow our business. Growth is supported by our product development, which is based on sustainable innovations that open new markets, and by deep cooperation with our customers to meet their sustainability targets.

Valmet's Sustainability360° agenda is aligned with the United Nations Sustainable Development Goals and is executed through

three-year action plans. We have made good progress and reached the targets of the plan for 2016–2018. The action plan for 2019–2021 was updated during the year, and new development areas and targets were defined for all five sustainability focus areas. Extensive research and workshops engaging stakeholders were included in the update process. Increased sustainability awareness internally was identified as one of the development areas. We will continue to further develop and integrate sustainability into all our key processes for the coming years.

Our approach of continuously improving our performance has positioned us as the industry leader in sustainability. In 2018, Valmet was included in the Dow Jones Sustainability Index for the fifth consecutive year and in CDP's Climate A list for its actions to help mitigate climate change.



**Most relevant UN Sustainable Development Goals for Valmet**



**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 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 has a human rights monitoring framework in place.



**Goal 7: Affordable and clean energy**

Valmet has 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 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 Sustainability360° agenda

## Sustainable supply chain progress

TARGETS	KEY ACHIEVEMENTS 2018	KEY TOPICS 2019–2021
<b>Develop sustainable procurement practices globally</b>	<ul style="list-style-type: none"> <li>84% of new direct suppliers went through the supplier approval process and were automatically screened for sustainability                             <ul style="list-style-type: none"> <li>Sustainability screening coverage increased to all new indirect suppliers and to indirect key suppliers</li> </ul> </li> <li>52 supplier sustainability audits conducted by Valmet and a third-party auditor</li> <li>Updated Sustainable Supply Chain Policy</li> </ul>	<ul style="list-style-type: none"> <li>Continue supplier sustainability audits (min. 40 per year)</li> <li>Continue to increase traceability in supply chain</li> <li>Continue to develop carbon footprint calculations</li> <li>Reduce emissions from transportation and logistics</li> <li>Continue implementation of sustainability engagement program for key suppliers globally</li> </ul>
<b>Support selected key suppliers to meet the level of sustainability expected by Valmet</b>	<ul style="list-style-type: none"> <li>Launched sustainability program for key suppliers and started implementation in China                             <ul style="list-style-type: none"> <li>Engaged 100% of key suppliers in China</li> </ul> </li> </ul>	



## Health, safety and environment (HSE) progress

TARGETS	KEY ACHIEVEMENTS 2018	KEY TOPICS 2019–2021
<b>Ensure risk-based HSE management in all operations</b>	<ul style="list-style-type: none"> <li>Certification of global management system according to ISO 9001, ISO 14001 and OHSAS 18001</li> <li>Valmet’s health and safety program renewed with 2025 targets</li> <li>HSE audits of 13 customer sites and 14 locations</li> </ul>	<ul style="list-style-type: none"> <li>Expand HSE certificate coverage to 80% of employees by 2021</li> <li>Continue to develop tools to assess implementation of global standards, including location HSE self-assessment protocols and cross-auditing</li> <li>Implement business management incident review process</li> <li>Continue with collaborating for contractor safety program</li> <li>“Safety comes first” training concept in place and under implementation</li> <li>Continue with local environmental action plans</li> <li>Increase access of our people to local health and wellbeing promotion activities</li> </ul>
<b>Improve safety performance</b>	<ul style="list-style-type: none"> <li>Toolbox talk practice started in all workshops</li> <li>Three HSE workshops held with contractor management</li> <li>Safety booster action plans in 10 locations</li> <li>Valmet HSE induction e-learning for our people and partners under implementation</li> </ul>	
<b>Minimize environmental impact</b>	<ul style="list-style-type: none"> <li>Local environmental action plans started towards Valmet’s 2030 environmental efficiency targets</li> <li>Global standard for HSE compliance management launched</li> </ul>	
<b>Promote health and wellbeing</b>	<ul style="list-style-type: none"> <li>Continued with Valmet’s wellbeing at work concept through global and local activities</li> <li>Global PPE standard for roll service operations launched</li> </ul>	



## Sustainable solutions progress

TARGETS	KEY ACHIEVEMENTS 2018	KEY TOPICS 2019–2021
<b>Deepen understanding of customers’ sustainability needs</b>	<ul style="list-style-type: none"> <li>Continued to conduct interviews with selected key customers and integrate improvement actions into key account management process</li> <li>Continued to arrange sustainability training for sales teams</li> </ul>	<ul style="list-style-type: none"> <li>Reduce environmental footprint in Fabrics</li> <li>Investigate whether consumables or spare parts can be manufactured from renewable or recyclable materials.</li> </ul>
<b>Integrate sustainability into research and development processes and tools</b>	<ul style="list-style-type: none"> <li>Continued to emphasize sustainability in R&amp;D projects</li> <li>Continued to support implementing sustainability into daily R&amp;D work and decision-making through training</li> </ul>	



## People and performance progress

TARGETS	KEY ACHIEVEMENTS 2018	KEY TOPICS 2019–2021
<b>Boost employee engagement</b>	<ul style="list-style-type: none"> <li>Continued to implement OurVoice engagement survey actions; high-level action completion reached 95%</li> <li>Introduced employee role to continue to develop a culture of accountability</li> </ul>	<ul style="list-style-type: none"> <li>Use sustainability to drive engagement and attract talent</li> <li>Increase internal mobility between businesses and geographies</li> <li>Continue to support and partner with organizations that promote diversity in the workplace</li> <li>Create and launch an umbrella for Valmet’s view on how to integrate work with the rest of life, taking into account different life situations, generations and local preferences</li> <li>Enhance global training portfolio to strengthen strategic skillsets</li> </ul>
<b>Develop the best talent</b>	<ul style="list-style-type: none"> <li>98% annual review discussion completion for white collar employees</li> <li>Fully utilized global training programs to support strategic goals; 1,058 participants in 2018</li> <li>Executed 79% of the development actions set for the talent review population</li> </ul>	
<b>Increase diversity</b>	<ul style="list-style-type: none"> <li>37% internal mobility, up from 33% in 2017</li> <li>Continued to prioritize diversity talent in global program nominations</li> <li>Active local mentoring with 128 pairs participating</li> <li>Created hire for potential concept to widen recruitment pool beyond traditional candidates</li> </ul>	
<b>Be a responsible employer</b>	<ul style="list-style-type: none"> <li>Rolled out managerial best practices for team and one-on-one meetings</li> <li>Kicked off “Forward for Managers 2” training</li> <li>Ran renewed 360° feedback process for 226 managers</li> </ul>	



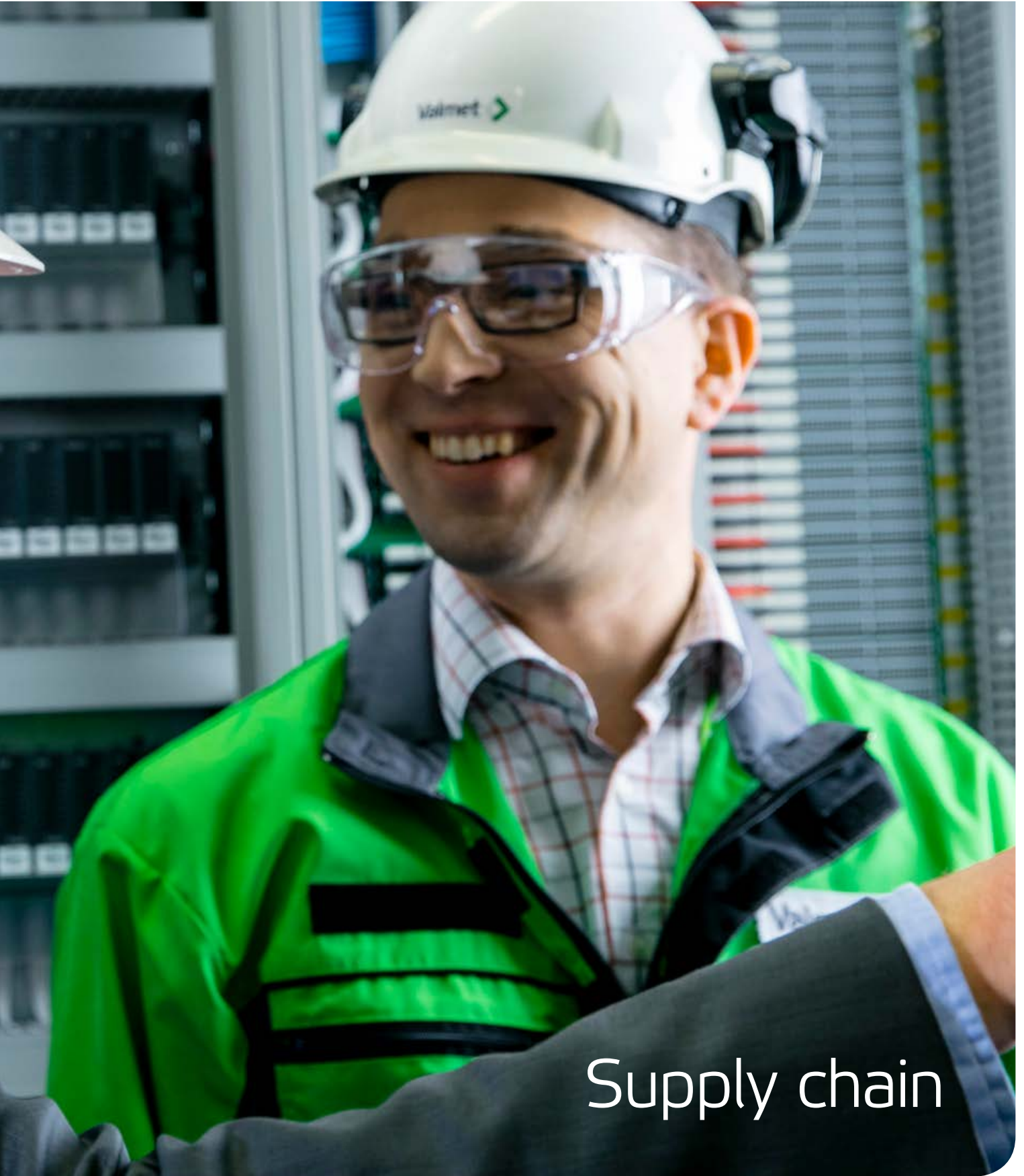
## Corporate citizenship progress

TARGETS	KEY ACHIEVEMENTS 2018	KEY TOPICS 2019–2021
<b>Ensure respect for human rights in own operations</b>	<ul style="list-style-type: none"> <li>Started implementation of eight mid-term action plans based on the Group-level assessment in 2017</li> <li>Developed a way to operate, tools and training for conducting a location human rights impact assessment. Piloted in one location</li> </ul>	<ul style="list-style-type: none"> <li>Continue action plans and checks on internal policies and processes at the Group level</li> <li>Implement internal training on human rights</li> <li>Continue human rights action plans</li> <li>Conduct location human rights impact assessments in selected high-risk countries</li> <li>Continue global process when entering new markets</li> <li>Continue to implement new social responsibility program</li> <li>Continue active stakeholder dialogue and engaging with stakeholders</li> </ul>
<b>Ensure compliance with guiding principles</b>	<ul style="list-style-type: none"> <li>Launched and implemented sustainability e-learning for all Valmet employees                             <ul style="list-style-type: none"> <li>E-learning completed by 58% of Valmet white-collar employees</li> </ul> </li> <li>Started to review the Code of Conduct content and e-learning</li> <li>Reviewed Sanctions Policy</li> <li>Reviewed agent approval process and guidelines</li> <li>Implemented a global process to ensure compliance on sustainability when entering new markets</li> </ul>	
<b>Promote transparent reporting and active stakeholder collaboration</b>	<ul style="list-style-type: none"> <li>Disclosure of non-financial information published for the first time as part of Financial statements and information for investors</li> <li>Transitioned to reporting according to the GRI Standards</li> <li>Included in Dow Jones Sustainability World and Europe Indices (DJSI) for the fifth consecutive year</li> <li>Created a social responsibility program with a long-term roadmap for social responsibility projects</li> <li>Continued stakeholder dialogue and assessing results to support update to sustainability action plan</li> </ul>	



**READ MORE:**  
[www.valmet.com/sustainability](http://www.valmet.com/sustainability)





# Supply chain

Our main focus in strengthening our sustainable supply chain management in 2018 was creating and launching a new sustainability engagement program for our selected key suppliers and ensuring the active use of our global supplier management process internally.

Ensuring a sustainable supply chain is one of our five sustainability focus areas. We have integrated sustainability into the way we operate in our procurement and supply chain processes, and our target is to continuously enhance our supply chain management and the transparency of our value chain.

Valmet has some 10,000 direct suppliers from more than 50 countries with different risk levels. There are several potential risks that may occur in the supply chain. Our suppliers' engagement in somehow unethical behavior could cause reputation or business risks for Valmet, and thus we work systematically to ensure responsible business practices throughout our global supply chain.

Valmet's supply chain activities emphasize opportunities and strive for an open dialogue with suppliers. Our ambition is to improve and develop the sustainability of our suppliers' operations and to further strengthen cooperation with them. We believe that close collaboration with our suppliers in sustainability issues also leads to increased end customer benefits.

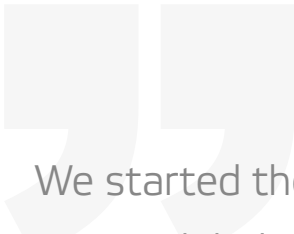
## Key supplier sustainability engagement program roll-out started

In 2018, we started the roll-out of a new global sustainability engagement program for our selected key suppliers. We have around 100 key suppliers, of which 28 are identified as possible sources of potential sustainability risks for Valmet. The country of origin and the purchasing category are the basis for assessing the potential sustainability risks related to the key suppliers. Through our program, we will support these suppliers in taking the first most critical steps to develop sustainability in their operations.

The elements of the program reflect the core requirements of Valmet's Sustainable Supply Chain Policy: ethical business practices and compliance, human and labor rights, occupational health and safety and environmental management. The sustainability engagement development is integrated as a vital part in our supplier relationship management (SRM) program that was initiated in 2016. The main idea of this program is to ensure a two-way interaction between Valmet and its suppliers and thus promote innovativeness and renewal.

The program includes trainings for selected key suppliers and provides a capacity building material library to support these suppliers in their sustainability work. As part of the program, individual targets and KPIs for each participating supplier are set and followed up. Also, internal trainings for Valmetees working in procurement are organized.

The program roll-out started in China in November 2018. Global implementation of the program will begin in 2019.



We started the roll-out of a new global sustainability engagement program for our selected key suppliers

## Ensuring the active use of our harmonized supplier management process

We have a comprehensive approach to sustainable supply chain management, including a 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 a prerequisite for entering and maintaining any kind of business relationship with us. All our suppliers are expected to comply with the requirements of the policy. We have zero tolerance towards the use of forced or child labor. In 2018, we updated the Sustainable Supply Chain Policy to meet today's requirements for sustainable





84% of new direct suppliers were automatically screened for sustainability

52 supplier sustainability audits conducted in 13 countries

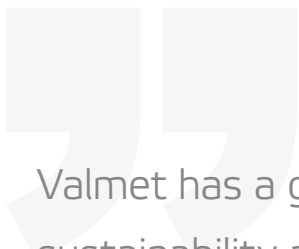
**Purchases**  
(10 largest countries)

EUR MILLION	2018
Finland	821
Sweden	202
China	192
USA	120
Germany	80
Poland	47
Estonia	44
Italy	31
Denmark	29
Canada	27

business practices set by our stakeholders and to address themes that are growing in importance globally.

In 2018 we put extra effort into ensuring that our harmonized supplier management process, which also includes an approval process for new suppliers, is actively used in our procurement operations worldwide.

We utilize an automated process to ensure that all suppliers are assessed in relation to their potential sustainability risk, sign the Sustainable Supply Chain Policy, and complete a sustainability self-assessment, if so required on the basis of the risk assessment.



Valmet has a global sustainability audit protocol, which ensures that the audit process is consistent

In 2018, 84 percent of all new direct suppliers were automatically screened on sustainability. In 2018, sustainability screening coverage of indirect supplier was increased to all new indirect suppliers and to indirect key suppliers. To further enhance the sustainability perspective in our site services purchasing, in 2018 we created and implemented guidelines for the site services procurement process.

**Supplier sustainability audits carried out globally**

Valmet has a global sustainability audit protocol, which ensures that the audit process is consistent globally. In 2018, Valmet conducted 52 supplier sustainability audits in 13 countries with a certified third-party auditor. Audits were conducted in China, India, Indonesia, Thailand, Brazil, Mexico, Estonia, Poland, the USA, Chile, Czech Republic, Italy and Lithuania.

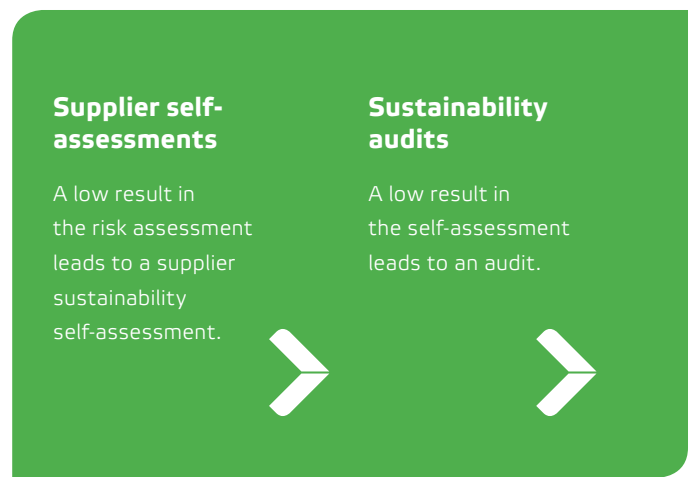
Sustainability audits are done against Valmet Sustainable Supply Chain Policy, and with local and international law. During 2018, 58 percent of the audit findings were related to human and labor rights, and health and safety. As a part of the sustainability audit protocol, Valmet has a follow up process in place to monitor and verify that audited suppliers carry out corrective actions done according to sustainability audit findings. Of all the suggested actions in 2015–2018, 69 percent were completed and verified by the end of 2018. Valmet preserves the right to terminate the contract with suppliers that are not willing proceed the corrective actions.

**A global supplier sustainability management process**

**Required from all suppliers**



**Required based on supplier risk assessment**



## Sustainability program for key suppliers in China



Valmet's sustainability engagement program for selected key suppliers kicked off with a pilot program in China during the third quarter of 2018. Twenty-eight percent of key suppliers are identified as potentially posing high or medium sustainability risks to Valmet. With the new program, Valmet will support suppliers in taking the first, most critical steps towards more sustainable operations.

The China pilot program included a Key Supplier Sustainability Day, which took place in November in Shanghai. We offered key suppliers in China training in compliance, practical advice, and inspiration through case studies and examples of best practices. Valmet has higher expectations of its suppliers than Chinese law requires.

According to Amos Yang, Chinese key suppliers appreciate the fact that Valmet is helping them to evaluate and improve their sustainability.

"We have implemented Valmet's Sustainable Supply Chain policy for four years, and we've audited more than sixty suppliers in China. Now, we're offering them the training that they need to start self-evaluating their running activities. In addition, we've provided them with a capacity-building library including guidance and tools for taking corrective action. Our most important goal is to help our suppliers develop their overall understanding of sustainability," Amos says.

Our suppliers have  
a big impact, and through them,  
we can make a difference

**Amos Yang**  
Manager, Supplier  
Quality and Development,  
Paper business line

Yang works with supplier  
quality and development  
in China.



**READ MORE:**  
[www.valmet.com/  
supplychain](http://www.valmet.com/supplychain)





Health, safety  
and environment

# Health, safety and environment

We work to provide safe and healthy workplaces for all and we strive to continuously improve the environmental footprint of our operations. We do this through a consistent focus on a culture where safety comes first, and a work environment that supports wellbeing and responsible management of our operations.

## Consistent progress towards our goal of zero harm

We are committed to protecting the health, safety and environment (HSE) of our people, partners and customers, as well as the communities where we operate. In 2018, our operations were again fatality-free. We continued to make progress towards our strategic objectives during the year, achieving a 20 percent reduction in the total recordable incident frequency (TRIF) for employees. Reporting rates for safety observations continued to increase, reaching 1.7 per employee (1.2). We continued our local safety booster programs with actions to support sustainable changes in HSE performance. At the end of the year, 33 of 51 workshops had achieved more than one year without any lost time incidents.

Since we achieved our mid-term target of a TRIF of below five, we renewed our health and safety program by setting targets for improvement by 2025 for both Valmet and our contractors. We added new objectives to increase the scope of ISO 45001 system certification, to reduce the number of life-changing incidents, to increase management safety walks, and to improve access to local health promotion and wellbeing activities.

all aspects of our business. During 2018, we completed a two-year project to certify Valmet's global management system, covering 71 locations according to occupational health and safety (OHSAS 18001:2007), environmental (ISO 14001:2015), and quality (ISO 9001:2015) standards.

During the year, we increased the coverage of our occupational health and safety management system certification to 67 percent (59%) by including our new service workshop in Jakarta, our head office in Espoo, and our Automation locations in Kajaani and Tampere. We also certified our Espoo head office and Florence workshop in the United States of America for environmental management. Our target is that by 2025, at least 90 percent of Valmet's people will be working in operations certified under all three standards (see the table on page 37 for the current coverage).

In addition to external audits, Valmet conducted internal HSE audits of 13 customer projects and 14 workshops during the year, with a focus on ensuring compliance with HSE standards.

## Concrete steps in safety collaboration

Our focus on meaningful collaboration on HSE with customers, suppliers and contractors continues. We believe that having common rules, clear responsibilities, effective planning and good coordination is the key to safety on shared worksites.

During 2018, we held HSE development meetings with several customers. We shared best practices, agreed on common requirements and made action plans. Looking forward, the ambition is to extend this practice.

As part of our contractor safety program, HSE workshops with contractor management took place in Tampere, Finland, and in Krakow, Poland, during 2018. The aim of these sessions was to ensure that Valmet's and our customers' HSE requirements are aligned during service and installation work. Another element of the program was to launch a standard e-learning course for all employees and contractors so that everyone receives HSE induction at their place of work. The training covers Valmet's HSE rules and minimum safety standards.

Implementation of common HSE management for all areas of Valmet's scope of supply in larger maintenance shutdowns was done for at least twenty customer mills during 2018. A Valmet HSE manager is appointed for each shutdown to create and follow up on

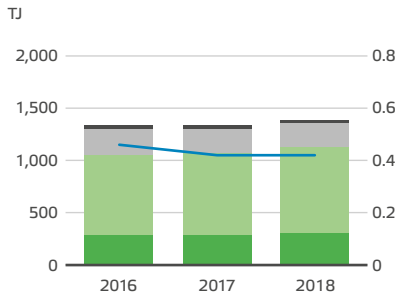
Our focus on meaningful collaboration on HSE with customers, suppliers, and contractors continues

## Certified global management system

We believe that certification of our operations under one multi-site certificate assures our customers and other stakeholders that we integrate sound quality and HSE management practices into

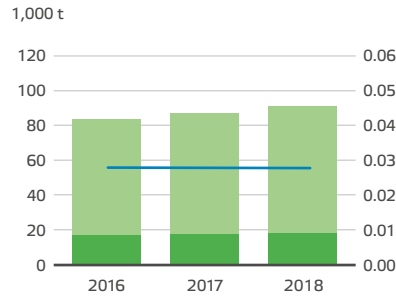
# Health, safety and environmental data

## Energy



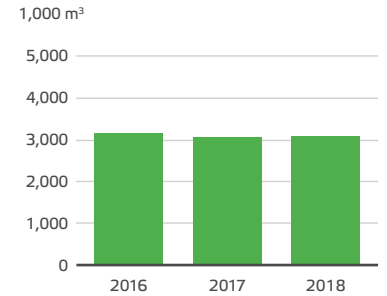
- Fuel
- Electricity
- District heating
- Steam
- TJ/MEUR Net sales

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

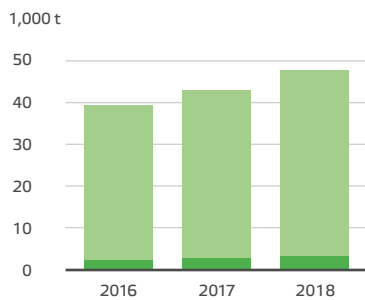


- Direct emissions (scope 1)
- Indirect emissions (scope 2)
- 1,000 tCO<sub>2</sub>/MEUR Net sales

## Water consumption



## Waste



- Hazardous waste
- Non-hazardous waste

## Management systems (% of headcount)

### SHARE OF CERTIFIED OPERATIONS<sup>1</sup>, 2018

**87%**

ISO 9001  
Quality  
Management System

**77%**

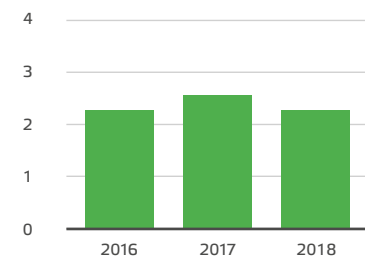
ISO 14001  
Environmental  
Management Systems

**67%**

OHSAS 18001  
Occupational  
Health and Safety  
Management System

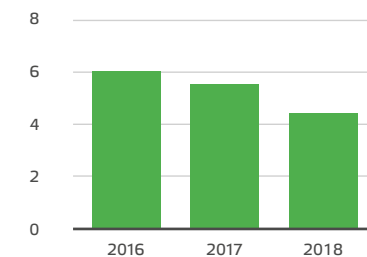
<sup>1</sup>Including offices

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



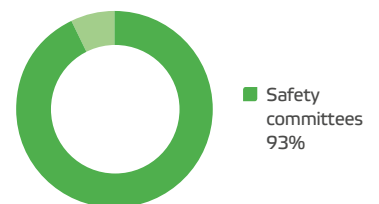
<sup>2</sup> LTIF reflects the number of injuries resulting in an absence of at least one workday per million hours worked

## 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

a common HSE plan for all involved Valmet units and our subcontractors. During shutdown execution, the HSE manager is on site to enforce HSE standards through kick-off meetings, safety inspections, toolbox talks, investigations of any incidents, and constant dialogue with all parties.

### Safety comes first campaign

Everyone is expected to take responsibility for HSE, and we actively train and engage with our people to ensure our values, competencies and behaviors support a safe working culture and promote sustainability. We continued with our global awareness activities, such as the WWF Earth Hour, our annual HSE week, and the “Safety Café” concept. We also introduced monthly toolbox talks in all workshop operations.

Our “safety comes first” campaign proceeded with various safety mindset training sessions across the organization. A video was produced to further support the campaign. Job-based HSE competencies are kept up-to-date via an extensive range of HSE training. Overall, we averaged eight hours of HSE training per person, exceeding our target of eight.

### Global programs for health, safety and wellbeing

Valmet facilitates its employees’ participation in health and wellbeing activities, and is continuing with its global wellbeing approach. We have close partnerships with local occupational health service providers to ensure fitness for work, as well as to support health promotion activities. Absenteeism due to sickness and injuries remained low, at 2.6 percent of scheduled work days (2.5 in 2017).

To further reduce occupational health risks in our operations, Valmet has initiated a chemical management program. Key ele-

ments of the program are to phase out the most hazardous substances, to establish common standards for personal protective equipment for specific tasks, to implement electronic registers of chemicals, and to harmonize local operational control programs to ensure critical controls. During 2018, we made a major safety improvement with the launch of a chromium-free Yankee cylinder surface metallization – called Infinikote-2 – eliminating the hazard of exposure to hexavalent chromium during welding and thermal spraying.

Two new minimum safety standards on working around radiation and electrical safety were launched, bringing the total number to twelve. These standards are a tool to provide increased emphasis on high-risk activities and to ensure global minimum requirements are met in all of Valmet’s activities and operations.

### Reducing the footprint of our own operations

Valmet designs and operates its facilities to promote the sustainable use of resources and to prevent pollution. Our operational footprint increased during 2018 with a new service workshop in Jakarta, Indonesia, as well as expansions in Ovar, Portugal, and Karlstad, Sweden. All of our production locations have environmental efficiency actions towards our 2030 reduction targets for energy, CO<sub>2</sub> emissions, water usage, and waste sent to landfill. We continuously upgrade equipment such as motors and lighting with more energy-efficient alternatives. In Xian, China, emission control equipment was also upgraded, further reducing emissions. In Jyväskylä, Finland, the share of sustainable commuting has increased. There have been approximately 100 new users of public transport during the past two years, decreasing emissions from Valmet people’s commuting by 18 percent.

## Environmental efficiency program

Target	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

Target	2020	2025
Reduction in TRIF – employees (per million workhours, rolling 12 months)	3.5	2.5
Reduction in LTIF – employees (per million workhours, rolling 12 months)	1.5	1
Reduction in TRIF – external workers whose work and/or workplace is controlled by Valmet (per million workhours, rolling 12 months)	6.5	2.5
Reduction in LTIF – external workers whose work and/or workplace is controlled by Valmet (per million workhours, rolling 12 months)	4	1
Access to local health promotion and wellbeing activities (% employees)	70%	100%
Increase in safety observation reporting (per employee/ year)	3	4
Increase in management safety walks (per manager/year)	3	4
OHSAS 18001/ ISO 45001 system certification (% employees)	70%	90%
Elimination of life changing injuries (nr injuries/year for employees and external workers whose work and/or workplace is controlled by Valmet)	<5	0



## Collaborating on safety at customer sites



Every year, Valmet provides services during maintenance shutdowns at customer mills. Petteri Nousiainen (Finland) is responsible for development related to health, safety and the environment (HSE) of Valmet's Services business line, and he has participated in implementing safe shutdown management.

"During a week-long annual shutdown at a customer mill, there may be thousands of people from hundreds of different companies working on the site. Valmet and our subcontractors work on dozens of different jobs around the clock," Petteri says. "An enormous number of demanding tasks must be carried out safely in a short period of time. It's like a pit stop in a Formula 1 race."

According to Petteri, clear communication of common rules, individual responsibility, effective planning, and good coordination on site are crucial to achieving incident-free shutdowns.

"Ensuring that all supervisors prepare job-specific safety plans and risk assessments for all workers under the Valmet umbrella lets us work systematically to prevent injuries."

"Before starting their shift, every single person working on the site must fill in a Think About Safety form. This two-minute safety check aims to ensure that risks have been adequately assessed and that there are no new conditions to consider before starting work," he says.

In Petteri's view, safety culture is put into action through talking to people face-to-face. "Safety kick-off meetings, toolbox talks, and safety walkthroughs and discussions all aim to engage people in safety at work," he says. "Positive interaction is key. People need to feel that they are cared about. We all have the right to return home from work safe and healthy, every day."

Safety culture starts  
with caring and  
positive interaction

**Petteri Nousiainen**  
Global HSE Manager,  
Services business line

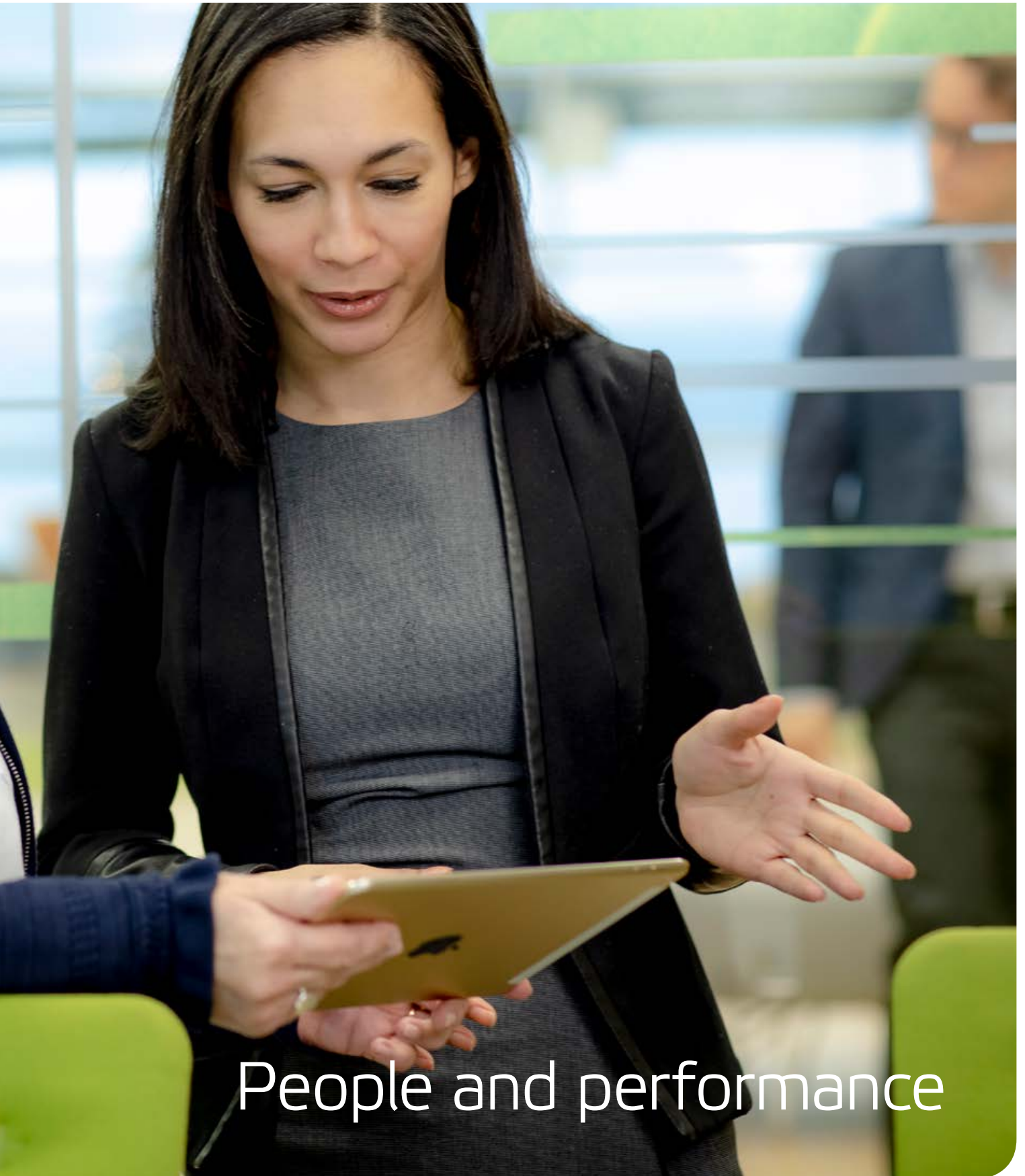
Nousiainen is responsible for the development of HSE management in Valmet's Services business line.



**READ MORE:**

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





# People and performance

**12,528**

Employees globally

**95%**

OurVoice action completion

**4,399**

Spot and Special Rewards granted

**37%**

Positions filled internally



# People and performance

Valmet has more than 12,500 employees, representing 64 nationalities working in 35 countries around the world. Since we became Valmet five years ago, our culture has evolved into one deeply rooted in our values. Customers, Renewal, Excellence and People are ingrained in how we work. We improve every day, create new ideas, and work together – all to move our customers' performance forward.

## Action for engagement

We use the OurVoice employee survey to systematically develop engagement. The OurVoice survey runs every second year, allowing enough time to analyze results, define focus areas and take required actions. Completion of high-level actions – those set at the business line-, area- and global levels – was 95 percent for the 2017 survey. Global-level actions include the launch of managerial best practices for one-on-one and team meetings, a Forward for Managers 2 training program, an *Excel in working together* video series, and an employee role designed to increase accountability and highlight the behaviors which will help us become an even better work community.

## Performance in focus

Strengthening practices driving high performance continues to be a top priority for us. In our annual review discussion process, we focused on improving target setting. We sharpened our definition of what we mean by good targets, created a library of example targets, and increased our understanding of how company-level targets are defined, evaluated and cascaded through the organization. In 2019, we will further improve our annual review discussions by linking the employee role to the overall performance evaluation.

Ensuring we are properly rewarding and recognizing high performance is a priority for us. In 2018, we continued with our Spot and Special Reward program, granting 4,399 rewards. We also worked to sharpen manager knowledge of compensation practices by providing in-depth materials on topics like total compensation, base pay, salary development, job grades, job ranges and compa-ratio.

This work also supports the successful implementation of our new people management system by enabling managers to fully utilize the compensation analysis available to make rewarding decisions and to support team members in compensation-related questions.

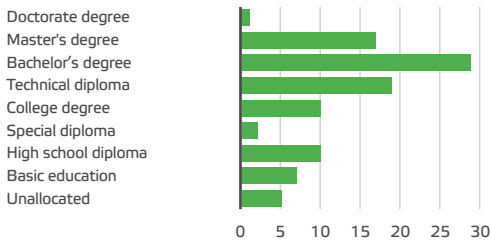
## Managerial skill development continues

In 2018, our work to improve managerial skills continued, with the introduction of managerial best practices for team and one-on-one meetings, which are designed to help managers communicate the company's direction, strategy, development and other essential

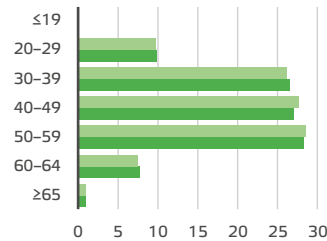
Our newest programs, Innovation Pathways and Sales Journey, with their toolkits and non-traditional learning methods, are transforming how we work and think

## Personnel data

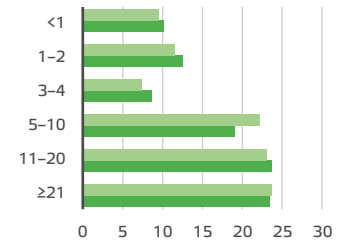
Education structure, %



Age structure, %



Service years, %



information. We also kicked off Forward for Managers 2, a day-long training for Valmet managers which enhances key managerial skills, emphasizing performance management, accountability and coaching. Forward for Managers 2 will reach most Valmet managers by the end of 2019.

The renewed Valmet 360° feedback process was in full swing in 2018, with 226 managers taking part. It focuses on individual development, with more time embedded in the process for internalizing feedback, action planning and concrete follow-up. When complete, Valmet 360° will have reached more than 1,000 managers.

### New perspectives on competence

We are developing our capabilities to support our strategic targets and business growth, ensuring we have the right competences in the right place. In 2018, we developed a new competence model that links our strategy with the company's values, culture, roles, competences, skills and potential. In addition to linking all competence-related elements, the model explains how each is connected to and used in various people processes to support Valmet's Way Forward.

With the launch of our employee role description, we are looking to increase individual ownership of competence development by expecting our people to proactively identify and maintain competence, to actively seek learning opportunities in their daily work, and to share knowledge and learn from each other. At the same time, we have made available a new learning library with training materials to support technical and functional development to all employees. We have also created a competence transfer framework, with practical tools to improve our ability to capture and transfer competence. This will be promoted in 2019.

Our global training portfolio is designed to support the execution of our strategic goals and drive change within the organization. We continue to fully utilize our global training portfolio, running 36 sessions with 1,058 participants in 2018. Our newest programs, Innovation Pathways and Sales Journey, with their toolkits and non-traditional learning methods, are transforming how we work and think. Feedback continues to be good for all global programs. The next global program we launch will focus on project execution.

### A strong talent pool

In 2018, we began the process of reshaping our resourcing processes to make them more efficient and future focused. In September, we started using a new modern recruitment system, which significantly improves candidate experience and restructures our recruitment process. We also introduced a hire for potential concept to attract candidates with the best potential and fit, which will support us in recruiting non-traditional and hard-to-find skill sets.

It is important for us to create opportunities for people to grow and develop within Valmet. We use our talent review process to identify, evaluate and develop around 1,800 managerial, successor and high-potential resources each year. This year, 904 development actions such as mentoring, shadowing, job rotation and global training were identified for this group. Our efforts to promote and encourage internal mobility continue to pay off, with internal mobility reaching 37 percent in 2018. Building an active culture of internal mobility not only engages and develops our people but also works to strengthen our successor pipeline, especially in moves between business lines and areas.

## Mentoring program supports professional growth



Valmet's mentoring program aims to support the professional development of Valmetees. My Andersson (Sweden) participated in the program as a mentee.

"I was nominated for the mentoring program in November 2017 by my manager. I wanted to focus on change management, and I got a mentor who was experienced in just that. The program lasted for six months, during which my mentor and I met seven times," My says.

"At the start of the program, we worked together to draw up a mentoring agreement, setting the targets and covering the practicalities. Then we discussed various topics in such a way that they supported my daily work and the change management projects that I had going on," she explains.

In her view, she has gained a lot from mentoring. "The program has helped me see my strengths and work on my weaknesses. It has helped me be more proactive and figure out what my future at Valmet could be like. I've got concrete tools for my daily work, as well as support in developing my thinking and the way I work," My describes.

"I think it was a good time to participate in the program, because I was quite new in my role at Valmet. I started a lot of new projects at the same time, all of them involving change management and going in different directions. I had three or four projects in the same stage, and it was good to have a sparring partner to talk with about how to move the projects in the right direction."

My mentor has supported me in my projects involving change management

### My Andersson

Production  
Development Engineer,  
Services business line

Andersson works with technology transfer and production development. She is based in Sweden, but works globally.



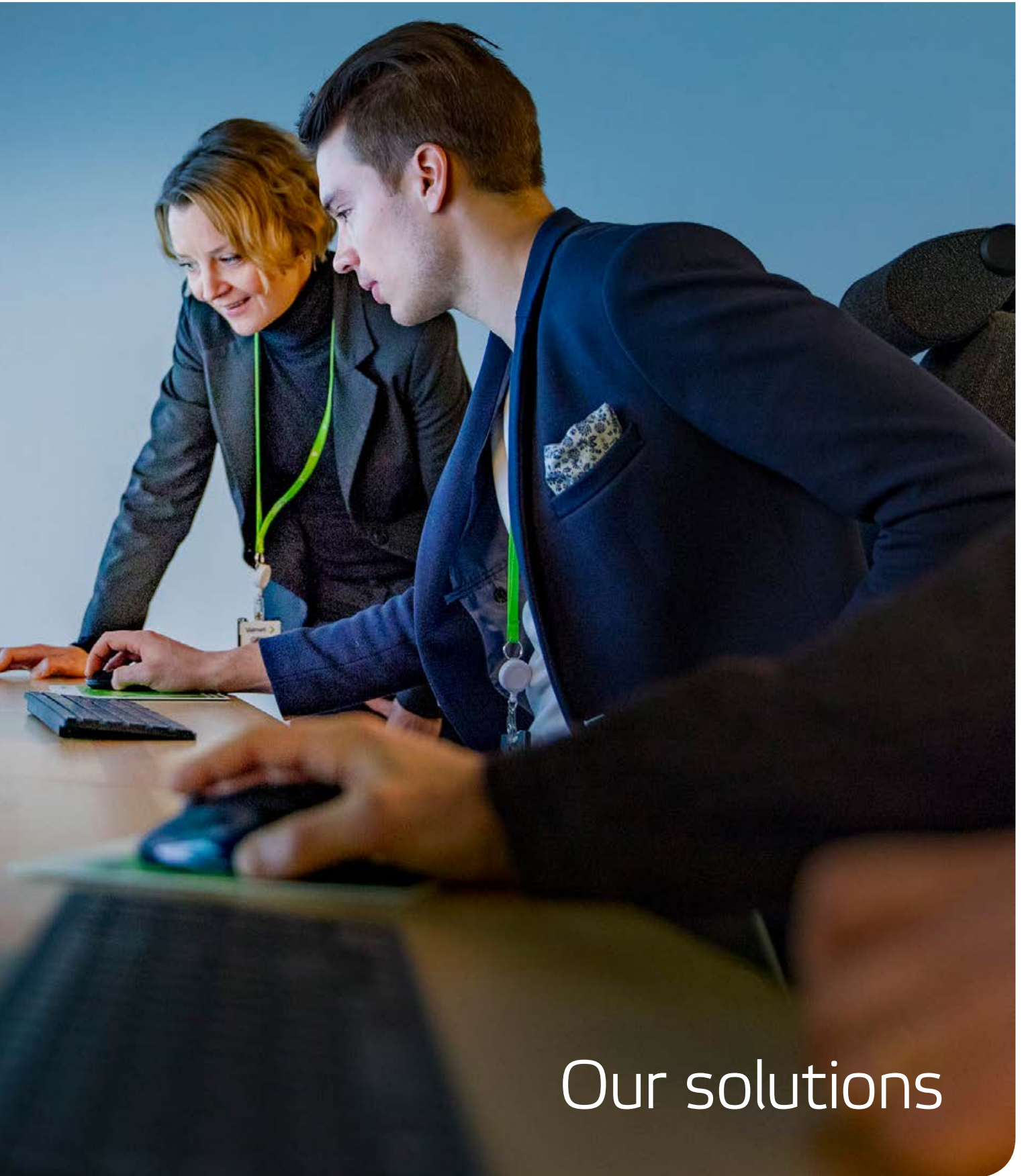
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[www.valmet.com/  
sustainability/  
peopleandperformance](http://www.valmet.com/sustainability/peopleandperformance)









Our solutions

# Our solutions

Valmet's unique product and services offering is based on leading technology and continuous development of new solutions to improve our customers' performance.

Valmet offers technologies, automation and services from greenfields to rebuilds to its customers in the pulp, paper and energy industries. This unique combination enables innovative and competitive offering.

Our process technology offering includes pulp mills, tissue, board and paper production lines, as well as power plants for bio-energy production. Services cover everything from maintenance outsourcing, to mill and plant improvements, and spare parts. Our advanced automation solutions range from single measurements to mill-wide, turnkey automation projects.

In 2018, we continued to strengthen our Industrial Internet offering and partner ecosystem. We established five industry-specific Performance Centers in 2017 to offer our customers an easy-access channel for our Industrial Internet applications and remote services. In 2018, we established local Performance Centers in China and North America. We also launched the Valmet Customer Portal, a digital space where customers and Valmet experts can collaborate, share information, and innovate together in real time. The portal is now in the pilot phase, and the development work is continuing – we are building new services and features based on feedback from customers.

## 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

### 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

### Services

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



### Automation

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

## Innovation Pathways refine collaborative development work



The Innovation Pathways training program is designed to build a culture of innovation and ensure profitable growth. Participants work in project teams to solve real customer challenges, using “fail fast” tools and methods to create minimal viable products, and speeding up traditional development cycles. A high point of the program is when teams present their solutions to a senior panel. The best proposals are embedded into Valmet’s R&D process for further development and implementation.

Twice a year, 30 Valmet employees participate in the program. The goal is to include Valmeteers from all business lines and geographical areas. Etienne Guyon (France) took part in the training in autumn 2018.

“My team consisted of five people. We all had different profiles: we came from different positions and had different experience,” Etienne says.

“For me, it was challenging to forget about my daily work and let go of emails and such. Changing my mindset to a new way of working and keeping up my energy levels was quite demanding,” he says.

“During the training, I learned that it’s good to fail fast. Each team had a customer challenge. Ours was about shutdown on their pulp and paper mills. We asked the customer lots of questions to really understand the challenge. We generated ideas both by ourselves and in brainstorming sessions. Then we tested, validated and adapted our ideas for a solution as quickly as possible. We got feedback from each other, from the customer and from Valmet’s senior management,” he explains.

The best ideas from Innovation Pathways will be developed further in collaboration with the customers.

I learned a lot from my colleagues from different business lines in just one session

**Etienne Guyon**  
Sales Manager,  
Automation business line

Guyon sells automation systems and performance solutions to companies in the energy sector in France.



**READ MORE:**

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



# Research & Development

R&D spend

**66**

EUR million in 2018

Orders received of new products and services

**1,080**

EUR million in 2018

Valmet's mission is to convert renewable resources into sustainable results. The aim of our research and development work is to create new technologies, products and services that address customer needs: enhancing raw material, water and energy efficiency, and promoting the use of renewable raw materials.

Valmet launches around 100 new products to the market every year. The share of the new products in Valmet's orders received has increased over recent years. In 2018, it was EUR 1,080 million. The spend on research and development was EUR 66 million.

### Collaborative way of working

Valmet has approximately 400 full-time R&D professionals working across its businesses. We have an extensive cooperation network with leading universities and research institutes around the world. We believe in close cooperation with

our customers when innovating new products and solutions.

Valmet's 16 pilot facilities carry out both internal R&D and customer projects. Our pilot facilities enable us to decrease the time to market and reduce risk in commercializing new technologies. Our customers are welcome to utilize Valmet's pilot facilities to test new furnish or fuel, or to optimize their processes from the energy, raw material and water consumption point of view. This is important in securing good performance and mitigating risks, for both new lines and plants, and in rebuilds as well.

### Customer needs in focus

Global megatrends like resource efficiency and the need for a cleaner world are driving our R&D work. Digitalization is the area where we increased our R&D efforts most in 2018.

## 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



One example of our recent achievements to meet our customers' needs is the creation of two new hybrid tissue concepts that enable sustainable production of structured tissue. Advantage eTAD and Advantage QRT technologies enable the production of premium and ultra-premium tissue products with low energy and fiber consumption. These flexible technologies also make the top-quality segment accessible for new producers and markets.

Our newly launched, upgraded, third-generation Compact Cooking concept for pulp production is, to a large extent, the result of close customer cooperation. Another example of how our new solutions meet our customers' needs is our NOX scrubber technology for energy industry. This solution provides significant flue gas NOX reductions and complies with even the strictest emission limits.

**Promoting open innovation**

As a company, we strive for open innovation. As one example, in 2018, we organized an open innovation competition to find fresh ideas and new partners for the development of future field services. The competition attracted over 60 companies to share their ideas with us.

We continued our Innovation Pathways training program, launched in 2017. The trainings are built around actual customers' problems. Approximately 100 Valmet employees from different functions and countries have participated in the program. The targets of this program are a concrete business impact through an improved innovation culture, a deeper understanding of customer needs and business logic, even stronger R&D cooperation with our main customers and suppliers, and active internal networking and cooperation.

**1,300**

protected inventions



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

**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, Sweden
- Tissue Technology**, Karlstad, Sweden
- Evaporator Technology**, Gothenburg, Sweden
- Filter Fabrics**, Ovar, Portugal

## Capturing the growth opportunities of the Industrial Internet and digitalization

Valmet aims to further accelerate its growth with improved profitability. To support this growth, we introduced two new strategic growth programs called “Growth Accelerators” in 2018.

The other of these Growth Accelerators focuses on capturing the growth opportunities of the Industrial Internet and digitalization. Through this program, we are striving to realize the full benefits of digitalization in two ways: in serving our customers, and in improving our internal efficiency.

In 2018, we further developed our digital channels and services to be able to offer a great customer experience and better service throughout the customer journey. In 2018, we launched a new customer portal as a collaboration space with our customers, and we will continue to complement the existing customer interface operations and introduce new services through the portal. Introducing the portal to customers will continue in parallel with the portal content development work.

Our Industrial Internet offering to customers in the pulp, paper and energy industries continued to strongly develop, and the commercialization to customers moved forward well during the year. Valmet’s Industrial Internet solutions combine our strong know-how in process technology, automation and services with data-driven solutions to make tangible improvements to the performance of our customers’ mills or plants. These improvements can include maximized availability and optimized quality, reduced variation and improved productivity, as well as enhanced environmental

efficiency. As part of our industrial Internet services, we continued to establish new Valmet Performance Centers, which provide our customers with remote monitoring and optimization, on-demand support from experts, and data discovery and analysis services. Today, Valmet has five customer industry-specific Performance Centers and three area ones actively serving our customers.

In our automation business, we launched our new Valmet DNA automation solution dashboards to customers at the end of the year. This was the first step on our systematic path towards future automation solutions. The dashboard utilizes real-time and historical data from customers’ automation systems provided by Valmet and enables them to see what is happening in their mills or plants without delay in a highly visual format through desktop or mobile devices.

To drive our internal efficiency and to support our employees’ high performance, we have a systematic internal digital roadmap, along which we progressed well in 2018. The renewal of our ERP system is our major internal program, which started in 2016. On top of that, we introduced the Workday platform for people management and continued to develop our internal digital workplace through collaborative and fit-for-purpose digital tools and digital training environments. Our internal digitalization focus will continue to be on enhancing our product portfolio management through globally harmonized systems, on employee platforms and solutions, and on enabling mobility.



## A digital collaboration space to improve the customer understanding



In June 2018, Valmet launched an online customer portal to improve its customer understanding, accelerate operations and better serve its customers.

“The portal is a digital collaboration space – a channel for continuous cooperation and real-time information-sharing,” says Pekka Moio (Finland). “The portal allows us to digitalize some of the work that had previously been done face-to-face or offline. We have long relationships with our customers, and digital tools help us to improve the customer journey and our efficiency,” he continues.

“The pilot program was carried out with key customers and was based on their needs. They helped us define concrete use cases where we could add value using the portal. Often, these were quite small and simple needs, such as reporting KPIs,” Pekka says.

“The portal is equally as useful for senior and middle management as it is for production operators. Production, maintenance and daily tasks are simpler and more efficient, since it is easier and faster to share, find and utilize personalized data. Moreover, we’re connecting the portal to our Industrial Internet services, giving our customers an overview of their digitally connected equipment.”

“The portal will be developed further based on feedback from customers. Next, we are moving on to find use cases that are relevant to several customers and could be multiplied. Harmonizing Valmet’s internal systems is also on the agenda,” Pekka concludes.

This pilot has shown that there is a need for a shared collaboration space

### Pekka Moio

VP, Process Management

Moio works with sales processes and key account management.



#### READ MORE:

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







Corporate citizenship

# Corporate citizen

Valmet actively develops its processes and operations to meet the responsibility expectations of its stakeholders. In 2018, we launched a new sustainability e-learning course for our employees and started to implement our human rights monitoring framework.

With operations in 35 countries, Valmet recognizes its responsibility to respect and promote human rights and requires its business partners to do the same. We aim to ensure that all our operations comply with laws and regulations in a socially responsible and globally aligned manner.

## Sustainability know-how enhanced by e-learning

Valmet's Code of Conduct guides the behavior and decisions of Valmet's employees and its partners and creates a uniform foundation for all our business transactions and work assignments. Valmet has an obligatory Code of Conduct e-learning course for all employees. The e-learning course is available in 19 languages.

In 2018, we launched an e-learning course on Sustainability. The training is available in five languages and consists of three different modules: Sustainability at Valmet; Sustainable supply chain; and Developing and selling sustainable solutions. The first module is mandatory for all white-collar employees at Valmet. By year end, 58 percent of white-collar employees had completed the first module.

Information on our commitment to international sustainability and human rights declarations can be found on our corporate website.

## Human rights high on the agenda

Valmet is committed to the United Nations (UN) Guiding Principles on Business and Human Rights. As outlined in Valmet's Human Rights Statement, we aim to embed human rights principles and a due diligence framework into our management system.

In accordance with the human rights monitoring framework, we perform human rights impact assessments on the Group-level and in three specific cases: when our presence in a market changes, in connection with supplier sustainability audits, and for selected specific locations. As of year-end 2018, eight mid-term action plans are being implemented based on the Group-level assessment carried out in 2017. The assessment process for specific locations was developed and deployed for the first time in 2018.

## Social and environmental assessment for business expansions

Valmet aims to ensure that it operates in accordance with the Code of Conduct whenever operations are expanded or new legal entities are established in new countries. In 2018, Valmet carried out a sustainability assessment related to its investment in the new service center in Concepcion, Chile.

## Active stakeholder dialogue continued

Valmet's most relevant stakeholders are its existing and potential customers and employees, suppliers and subcontractors, shareholders and investors, media, non-governmental organizations, authorities and local communities, research institutes, universities and vocational schools.

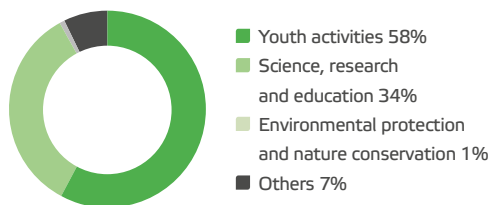
We have an active dialogue with our stakeholders on sustainability themes, and we also have a stakeholder sustainability survey available online for all Valmet's stakeholder groups. We review our sustainability agenda against the results annually.

During the year, Valmet continued the tradition to support non-governmental, humanitarian organizations that work locally with youth activities, environmental protection, and research and education.

In 2018, we engaged in the following projects:

- Our seasonal donation was directed to Save the Children Yemen Response. The donation supports the organization's work in Yemen in delivering the needed aid, food and clean water for children and their families.
- In Finland, Valmet continued its cooperation with the Children and Youth Foundation and offered internships to young people in its main locations.
- Valmet continued to support SOS Children Village in Chennai and Mumbai, India. Valmet has cooperated with the organization in India since 2007.

**Support for non-profit organizations, %**  
EUR 179,070 in total



**Income taxes**  
(10 largest countries)

EUR MILLION	2018
Finland	21.8
USA	5.8
Sweden	5.7
China	4.8
Indonesia	2.3
Chile	2.0
Brazil	2.0
Canada	1.8
India	1.8
Italy	1.5



## A recognized sustainability leader

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



During the year, Valmet created new themes for its global long-term social responsibility program. The program will have three major themes: Towards the future with science; Protecting the planet for next generations; and Equal opportunities for wellbeing. The program will be launched in 2019.

### Several stakeholder meetings and events arranged

Valmet arranges several stakeholder meetings and events annually to encourage and maintain dialogue with its different stakeholders.

Valmet Customer Days in 2018 brought together 220 customers from 41 countries to Vienna. Also, key customer interviews on sustainability continued with three key customers in different countries, leading to in total 15 customer interviews conducted since 2016. The purpose of the interviews is to enhance our understanding of our customers' sustainability-related needs and to better integrate sustainability topics into our key account relationship management. In addition, nine deep-dive meetings and interviews between Valmet's R&D and customers as well as suppliers regarding R&D topics and cooperation possibilities were organized.

During 2018, Valmet arranged three Supplier Day events, in Brazil, China and Poland. The key supplier sustainability engagement program was launched in connection with the Key Supplier Day arranged in China in November 2018.

In October we arranged a Capital Markets Day for investors and analysts in Finland. In addition, we engaged with investors

and analysts through different channels, such as conference calls, roadshows and meetings. The dialogue also included webcasts and the Annual General Meeting.

### Sustainability action plan updated

During the year Valmet updated the action plan for sustainability for the next three-year period 2019–2021. The focus remains on mitigating risks, reducing costs and enabling growth through sustainable business practices. Systematic work to integrate sustainability seamlessly into Valmet's key processes is at the core of the action plan.

We will continue to implement sustainability topics and gates into all our key processes to reduce risks and costs. Growth will be strongly supported by further integrating sustainability into our R&D processes and competences, sales and project management.

### Recognized sustainability leadership

Valmet has been recognized for its actions and strategy to mitigate climate change and for its reporting on sustainability actions. In 2018 Valmet was included in the Dow Jones Sustainability Index (DJSI) for the fifth consecutive year, positioning us among the world's sustainability leaders. Valmet was included in both the DJSI World and Europe Indices. Valmet also reports to CDP, an international non-profit organization promoting sustainability, and was highlighted as a global leader on corporate climate action, achieving a place on the CDP Climate Change A list.

## Distribution of economic value added to our stakeholder groups

### Direct economic value generated

**Revenues  
EUR 3,341  
million**



### Economic value distributed



Operating costs: **EUR 2,315 million**  
Employee wages and benefits: **EUR 812 million**  
Payments to providers of capital: **EUR 91 million**  
Payments to government: **EUR 47 million**  
Support for non-profit organizations: **EUR 0.2 million**



### Retained in business

**EUR  
75 million**

## Implementing sustainability through e-learning



Learning to identify and seize the opportunities that sustainability brings to Valmet's business is crucial to the company's future success. To increase awareness and understanding of sustainability, a new company-wide, e-learning course about sustainability was launched in February 2018. The course helps Valmetees to implement sustainability in their daily work and decision-making, and to ensure that the added value that sustainability creates is recognized.

The course consists of three modules, and the first module is mandatory for all white-collar employees. The e-learning is available in five languages.

Hanna Karlsson (Sweden) has taken modules one and three.

"Sustainability is at the core of my unit's business. In my view, it's very good that Valmet has these e-learning training courses and that the first part is mandatory, because it gives a signal of the importance of the issue," says Hanna.

"The way I see it, sustainable technologies and products as well as resource efficiency maintain our life on this planet. Additionally, sustainability is important for Valmet's business, because we won't have long-term business if we don't focus on this," she continues. "To me, just following regulations is being one step behind. Somebody has to lead the way, and I think Valmet can do that."

"The e-learnings are easy to use. More importantly, you can take the course whenever and wherever you have time. This way, more people have the opportunity to learn", Hanna concludes.

You can do the e-learning course whenever and wherever you have time

**Hanna Karlsson**  
 Manager, LignoBoost Technology, Pulp and Energy business line

She works with technologies that help to make Valmet's customers' business more resource-efficient.



**READ MORE:**

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

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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 300 g

Maxioffset 140 g

### **PRINTING**

Grano Oy



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