

The Valmet logo, consisting of the word "Valmet" in a bold, sans-serif font followed by a green chevron symbol pointing to the right.The Valmet logo, consisting of the word "Valmet" in a bold, sans-serif font followed by a green chevron symbol pointing to the right.

# Annual Review

PROGRESS IN OPERATIONS AND SUSTAINABILITY

# 2023



### About this report

The report covers Valmet's market environment and the progress of its strategy, operations and sustainability in 2023.

### Valmet's Annual Report 2023

PDFs of Valmet's Annual Review 2023, Financial Statements and Report of the Board of Directors 2023, GRI Supplement 2023, Remuneration Report 2023 and Corporate Governance Statement 2023 can be read and downloaded at [www.valmet.com/investors/reports-and-presentations/](http://www.valmet.com/investors/reports-and-presentations/).



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# Valmet in brief

Valmet is a leading global developer and supplier of process technologies, automation and services for the pulp, paper and energy industries. With our automation systems and flow control solutions, we serve an even wider base of process industries. Our more than 19,000 professionals around the world work close to our customers and are committed to moving our customers' performance forward – every day.

The company has over 220 years of industrial history and a strong track record in continuous improvement and renewal.

Valmet's shares are listed on Nasdaq Helsinki, and the head office is in Espoo, Finland.



 ORDERS RECEIVED  
EUR MILLION  
**4,955**

 NET SALES  
EUR MILLION  
**5,532**

 COMPARABLE EBITA  
EUR MILLION  
**619**

 COMPARABLE  
EBITA MARGIN  
**11.2%**

 PERSONNEL  
**19,160**



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PRESIDENT AND CEO'S REVIEW

# A decade of consistent progress



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# “Valmet’s success is not just about numbers; it is about vision, resilience, and the collective spirit of innovation and moving forward that defines us.”

As I approach the final chapter of my journey as the President and CEO of Valmet, I find myself compelled to reflect on the extraordinary decade we have shared.

Valmet started as an independent company at the end of 2013, and the trading of its shares on the Nasdaq Helsinki stock exchange began on January 2, 2014. Between 2013 and 2014, we laid the foundation for long-term success: introduced the mission of converting renewable resources into sustainable results; defined a strategy based on four Must-Wins; created the corporate identity and brand; agreed on a sustainability agenda; and built the basis for a forward-oriented culture of renewal and continuous improvement. Valmet’s inception was characterized by strong customer trust from the outset, as well as by the exceptional energy and commitment of the global Valmet team.

Over the past ten years, we have continuously raised the bar for our performance and together overcome challenges and celebrated successes with our global team and our valued customers. Valmet’s upward trajectory, marked by consistent performance improvement and growth, is a result of the dedication and hard work of our entire team. We have focused on growing the company organically with improved profitability but also moved systematically forward with mergers and acquisitions that have complemented our unique offering and significantly increased the amount of recurring, profitable and stable business in Valmet’s business portfolio. The stable business orders received, consisting today of the Services, Automation Systems and Flow Control businesses, has grown from EUR 1,035 million in 2013 to EUR 3,100 million in 2023. At the same time, the Valmet team has grown from 11,000 to more than 19,000, and the comparable EBITA margin from 2.1% in 2013 to 11.2% in 2023. When looking at the ten-year development, Valmet’s brand and reputation as an employer and among the global customer base and investors has become exceptionally positive and strong.

I want to emphasize that Valmet’s success is not just about numbers; it is about vision, resilience, and the collective spirit of innovation and moving forward that defines us. While we have been navigating dynamic market shifts, the COVID-19 pandemic, and global turbulence due to the war in Ukraine and global economic and political developments, we have seen change and challenges as an opportunity for development and

growth, ensuring that we have not only kept pace with industry trends but have often set them.

Together, we have been fostering a corporate culture built on future-orientation, renewal and continuous improvement, and a shared commitment to moving our customers’ performance forward. Our people are our greatest asset, and seeing Valmeteers thrive and develop as teams and individuals has been incredibly rewarding.

As I prepare to step down from my role during 2024, I am confident that the foundation we have built at Valmet positions the company well for continued success in the future.

In closing, I extend my deepest thanks to our customers and partners for the good cooperation we have enjoyed over the years, to our shareholders for your trust, and to all my colleagues at Valmet for your hard work, dedication and passion.

It has been an incredible journey together!

**Pasi Laine**

President and CEO

# Key events in 2023

## The acquisition of NovaTech Automation's Process Solutions business completed

Valmet completed the acquisition of the US-based NovaTech Automation's Process Solutions business. The acquired business specializes in process control and optimization solutions for batch, continuous and hybrid processes. It serves customers mainly in process industries such as food and beverage, pharmaceuticals, and chemical products. The acquired operations employ 76 people in the United States and the Benelux countries.



## Key technology and automation solutions for the expansion project of Stora Enso's Oulu mill in Finland

Valmet will deliver bleached chemi-thermomechanical pulp (BCTMP), evaporation and non-condensable gas (NCG) technology, as well as an extensive automation solutions package for Stora Enso's Oulu mill in Finland. The delivery is part of Stora Enso's approximately EUR 1 billion investment to convert the remaining idle paper machine at their Oulu site into a high-volume consumer board production line. The deliveries will be made in phases, and the upgraded mill is scheduled to be in operation in early 2025.

## Continued investment in press felt production in Finland

Valmet decided to further strengthen its press felt production capabilities in Tampere, Finland, by investing in a new weaving machine and a new heat-setting machine in addition to the ongoing press felt investment announced in August 2022. Valmet has been producing press felts in Tampere, Finland, since 1882.



## Automation offering strengthened by acquiring the Process Gas Chromatography business of Siemens AG

Valmet entered into an agreement to acquire Siemens AG's Process Gas Chromatography business, which is a market leader with its Maxum II Gas Chromatograph platform, Systems Integration, and Customer Services offering. Gas Chromatographs are used to measure the chemical composition in gases and evaporable liquids in all production stages. The business employs around 300 people, and its main locations are in the USA, Germany and Singapore. The acquisition is expected to be completed on April 1, 2024, at the earliest, upon completion of carve-out measures and customary closing conditions.

January 3, 2023

January 30, 2023

January 31, 2023

March 29–31, 2023

May 2, 2023

July 7, 2023

July 17, 2023

## Paper machine rebuild to Sappi North America's Somerset facility

Valmet will supply an extensive rebuild for Sappi's Somerset paper manufacturing facility in Skowhegan, Maine, USA. As a result of the PM 2 conversion from coated woodfree graphic paper to solid bleached sulphate board, the machine capacity will be increased from 240,000 tonnes to 470,000 tonnes per annum. The start-up of the rebuilt machine is scheduled for the middle of 2025.



## Customer Days with a record number of customers in Copenhagen, Denmark

Valmet Customer Days 2023 gathered a record number of customers from all over the world in Copenhagen, Denmark. Pulp, paper and energy producers from 32 countries participated in the event. The event offered presentations, demonstrations, customer cases and discussions around the event theme "Forward to a carbon neutral future."

## Process Technologies and Services segments strengthened by acquiring Körber's Business Area Tissue

Valmet entered into an agreement to acquire Körber Group's Business Area Tissue. The Business Area Tissue specializes in innovative converting and packaging technologies and services for the tissue industry. With the acquired business, Valmet creates the markets' widest technology, automation and services offering for the growing tissue industry, covering the entire tissue value chain. The business employs around 1,170 employees in Italy, Brazil, the US, China and Japan. The acquisition was completed on November 2, 2023.



# Key events in 2023

## The most attractive employer in Finland among engineering professionals

Valmet was ranked the most attractive employer among engineering professionals in Finland according to a study by Universum. The ranking was published in Universum's annual survey, which is the biggest employer attractiveness survey in Finland. In May, Valmet was ranked the second most attractive employer among engineering students in Finland.

## A biomass power plant to Göteborg Energi in Sweden

Valmet is to supply a biomass plant to Göteborg Energi AB in Gothenburg, Sweden. Göteborg Energi is building a new plant to produce electricity and district heat from renewable and recovered sources by 2025. Valmet's delivery will include a 140 MWth Valmet BFB Boiler plant utilizing bubbling fluidized bed technology, as well as a flue gas cleaning system and a flue gas condensing system. The primary fuels will include forest residues and recycled wood chips. The plant's start-up is scheduled for 2025.



## Inclusion in the Dow Jones Sustainability Index among the world's sustainability leaders

Valmet has been included in the Dow Jones Sustainability Index (DJSI) for the tenth consecutive year. The company was listed in both the Dow Jones Sustainability World and Europe indices. The Dow Jones Sustainability Index evaluates companies' sustainability performance in the environmental, social and governance categories.

Member of  
**Dow Jones Sustainability Indices**  
Powered by the S&P Global CSA

September 19, 2023



## Valmet-delivered Metsä Fibre Kemi bioproduct mill started up in Finland

Metsä Fibre's Kemi bioproduct mill in Finland was successfully started up. Valmet's delivery for the mill covers the full production process from wood handling to baling, as well as flow control solutions and mill-wide automation systems. After the start-up, the production process will be fine-tuned for full-scale production, which will be achieved within approximately one year of start-up. The annual pulp production capacity will be 1.5 million tonnes, and the mill will also produce various other bioproducts.

September 20, 2023

October 10, 2023

## A major order of multiple technologies from Liansheng Pulp & Paper in China

Valmet has received a major order from Liansheng Pulp & Paper (Zhangzhou) in Fujian Province in China, covering multiple technology deliveries for the customer's Zhangpu site. Valmet will supply a coated board making line (BM 2) with related automation systems, bleached chemi-thermomechanical pulp (BCTMP) technology and two small tissue machines (TM 5 and TM 6). In addition, Valmet will supply four tissue machine headboxes for tissue machines TM 7, TM 8, TM 9 and TM 10 at the same site. The start-up of the coated board machine and BCTMP technology are scheduled for the third quarter of 2025, the tissue machines for the fourth quarter of 2024, and tissue machine headboxes for the third quarter of 2024.



October 25, 2023

December 11, 2023

## Demuth acquisition strengthens wood handling technology and services in South America

Valmet entered into an agreement to acquire Demuth, a Brazilian family-owned company specializing in wood handling solutions for the pulp industry. This acquisition will strengthen Valmet's wood handling technology offering and services presence in South America. The acquisition is subject to relevant competition authority approvals and is expected to be completed during the second or third quarter of 2024. The company employs 300-400 people.

December 22, 2023



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# This is Valmet

# Key figures

Financial <sup>1</sup>	2023	2022	CHANGE
Orders received, EUR million	4,955	5,194	-5%
Services	1,760	1,756	0%
Automation	1,340	1,081	24%
<i>Flow Control</i>	789	576	37%
<i>Automation Systems</i>	551	505	9%
Process Technologies	1,856	2,356	-21%
<i>Pulp and Energy</i>	854	1,072	-20%
<i>Paper</i>	1,002	1,285	-22%
Order backlog <sup>2</sup> , EUR million	3,973	4,403	-10%
Net sales, EUR million	5,532	5,074	9%
Comparable EBITA <sup>3</sup> , EUR million	619	533	16%
% of net sales	11.2%	10.5%	
Operating profit (EBIT), EUR million	507	436	16%
% of net sales	9.2%	8.6%	
Dividend per share, EUR	1.35 <sup>4</sup>	1.30	4%
Return on capital employed (ROCE) before taxes EUR million	14%	18%	
Research and development expenses, net, EUR million	114	95	19%

Social	2023	2022	CHANGE
Personnel <sup>2</sup>	19,160	17,548	9%
Total recordable incident frequency (TRIF) <sup>2, 5</sup>			
Own employees	3.0	3.2	-6%
External workers	4.6	4.7	-2%
Health, safety and environmental committee coverage, % personnel	92	92	0%
Support for non-profit organizations, EUR thousand	327	415	-21%
Number of supplier sustainability audits	43	45	-4%

Environmental <sup>6</sup>	2023	2022	CHANGE
CO <sub>2</sub> emissions <sup>7</sup> , 1,000 t	64	86	-24%
Energy consumption, GWh	418	422	-1%
Water consumption, 1,000 m <sup>3</sup>	1 524	1 681	-9%
Waste, 1,000 t	46	43	7%

<sup>1</sup> Group figures: the formulas for calculating the key financial figures are presented in the Financial Statements 2023.

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

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

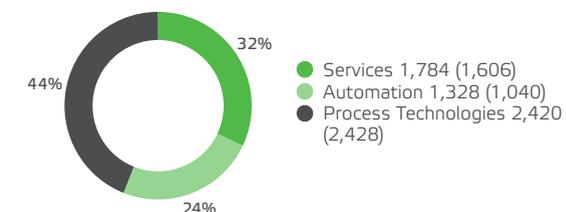
<sup>4</sup> Board of Directors' proposal.

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

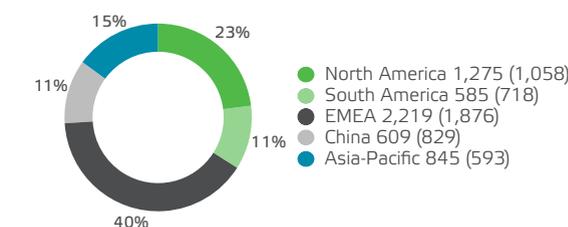
<sup>6</sup> Environmental data, including Scopes 1 and 2 (market-based) emissions. Tissue Converting acquisition is excluded from the data.

<sup>7</sup> Scopes 1 and 2 (market-based) emissions.

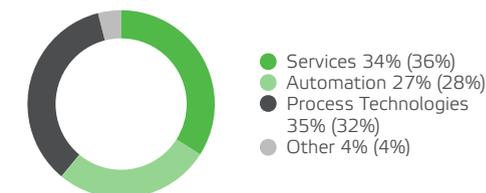
## Net sales by segment, EUR million



## Net sales by area, EUR million



## Personnel by segment, %



## Personnel by region, %



# Value creation

## INPUTS

### Resources we need to create value



Financial

#### Financial

- Total equity EUR 2,572 million
- Net interest-bearing debt EUR 1,027 million
- Cash and cash equivalents EUR 432 million



Natural

#### Natural

- Purchased metals, polymers, electronics and manufactured components
- Energy consumption 418 GWh
- Water consumption 1,524,000 m<sup>3</sup>



Human

#### Human

- Number of employees 19,160
- FTE<sup>1</sup> of subcontractors and supervised workers
- Investment in development and expertise
- Investment in occupational health and safety
- Investment in capabilities and competences



Infrastructure

#### Infrastructure

- More than 270 locations in more than 40 operating countries<sup>2</sup>
- 60 production units and more than 130 service centers
- More than 130 sales offices
- Suppliers in 60 countries
- Distributors



Brand and intellectual

#### Brand and intellectual

- Proven customer references
- Technology expertise
- Product portfolio
- 32 technology centers and pilot facilities
- R&D expenses EUR 114 million
- 1,500 protected inventions
- Valmet brand



Social and relationship

#### Social and relationship

- Open dialogue with stakeholders (e.g., customer events, investor meetings, supplier days, stakeholder surveys)
- Cooperation with approximately 40 universities and research institutes
- More than 35 memberships in associations
- Relationships and partnerships
- Collaboration with local communities

## BUSINESS MODEL

Our dedicated employees work close to our customers around the world



#### Customers

- Pulp and paper industry
- Energy industry
- Other process industries

#### Key processes



#### Our employees, expertise and experience

#### Valmet's Way Forward:

Mission, Strategy, Must-Wins, Vision and Values

## OUTPUTS

We develop and supply process technologies, automation and flow control solutions, and services

#### Process technologies

- Pulping process equipment, process islands and complete pulp mills
- Individual board, paper, tissue and tissue converting 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 systems

- Distributed Control Systems (DCS)
- Quality Management Systems (QMS)
- Analyzers and measurements
- Industrial applications
- Automation services and Industrial Internet solutions

#### Flow control solutions

- Valves
- Pumps
- Valve controls, actuators and limit switches
- Valve spare parts
- Services and Industrial Internet solutions

#### Services

- Spare and process parts
- Workshop and roll services
- Fabrics
- Maintenance development and outsourcing
- Field services
- Process upgrades
- Industrial Internet solutions

#### Other outputs

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

- Scope 1<sup>3</sup>: 19,800 tCO<sub>2</sub>
- Scope 2<sup>4</sup>: 44,700 tCO<sub>2</sub>
- Scope 3<sup>5</sup>: 64,679,000 tCO<sub>2</sub>

##### Waste

- Non-hazardous waste 42,608 t
- Hazardous waste 2,959 t

## OUTCOMES

We aim to enhance the positive impacts and minimize the negative impacts on society and the environment

#### Economic

- Wages and benefits EUR 1,292 million
- Payments to suppliers EUR 3,510 million
- Taxes EUR 135 million
- Support for non-profit organizations EUR 0.3 million
- Retained equity EUR 96 million
- Payments to shareholders and creditors EUR 293 million
- More efficient and profitable customer 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

- More efficient processes enable the use of fewer natural resources and reduce the CO<sub>2</sub> emissions in customers' operations
- Valmet's technologies and services enable the production of customers' products with less energy and water, fewer raw materials, and improved flexibility in fuel source selection to replace fossil fuels with renewable ones

## CUSTOMERS' END PRODUCTS

Our technologies help customers produce their products more sustainably



Pulp



Board, paper and tissue



Energy and industrial gas



Biomaterials and fuels



Chemicals



Minerals



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

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

<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 (market-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 four selected relevant categories – category 1: purchased goods and services; category 4: upstream transportation and distribution; and category 6: business travel, and category 11: use of sold products. All figures are from December 31, 2023, unless otherwise stated.

# 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 19,000 professionals around the world and have customers in more than 100 countries. We have more than 130 service centers, more than 130 sales offices, 60 production units, and 32 R&D centers around the world.

## NORTH AMERICA

4 R&D centers  
29 service centers  
18 production units  
11 sales offices

**2,273**  
NET SALES  
EUR MILLION **1,275**

## SOUTH AMERICA

2 R&D centers  
5 service centers  
3 production units  
8 sales offices

**1,164**  
NET SALES  
EUR MILLION **585**

## EMEA

21 R&D centers  
84 service centers  
26 production units  
75 sales offices  
Head office

**11,644**  
NET SALES  
EUR MILLION **2,219**

## CHINA

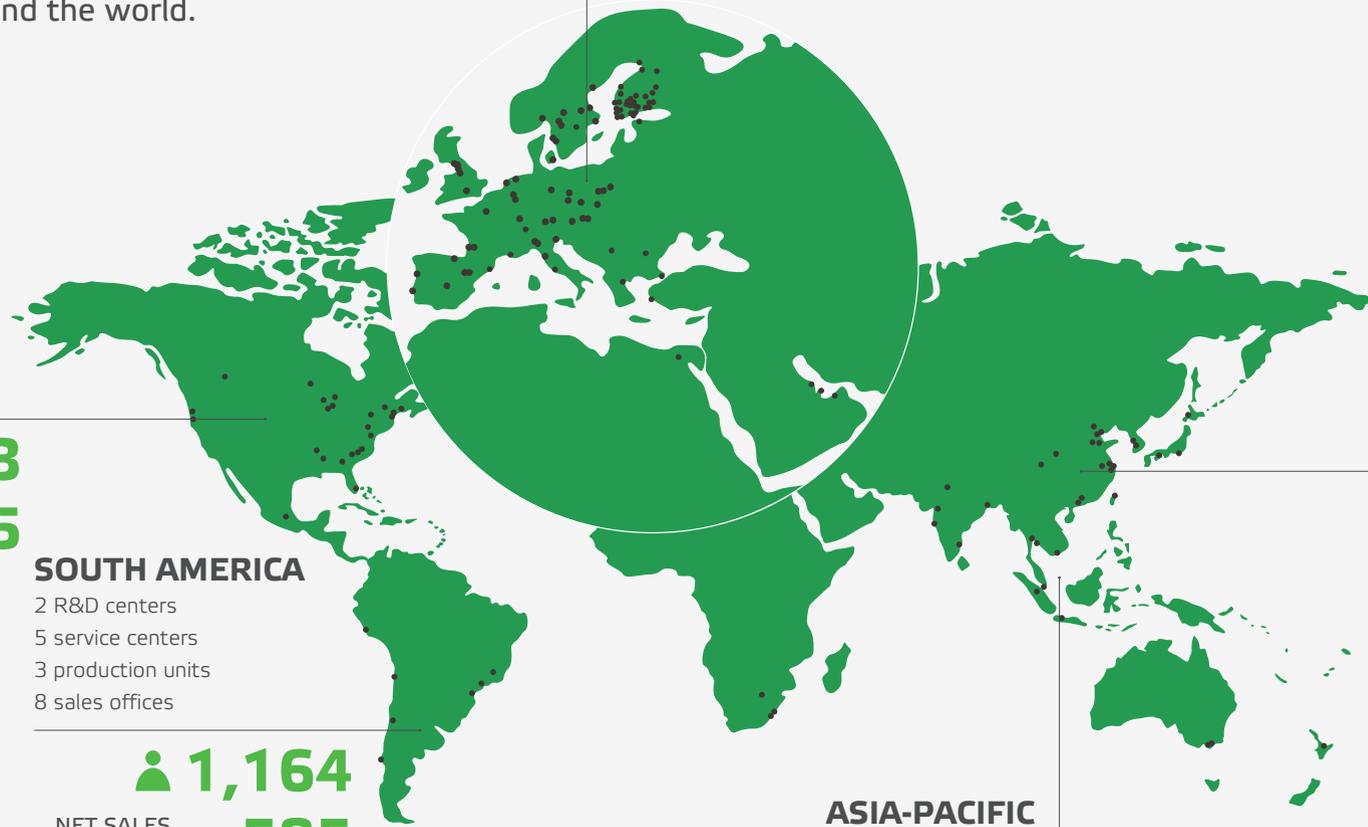
3 R&D centers  
5 service centers  
7 production units  
7 sales offices

**2,432**  
NET SALES  
EUR MILLION **609**

## ASIA-PACIFIC

2 R&D centers  
11 service centers  
6 production units  
30 sales offices

**1,647**  
NET SALES  
EUR MILLION **845**



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

# Market data by area

AREA	MARKET CHARACTERISTICS	VALMET'S POSITION
<b>North America</b>	<ul style="list-style-type: none"> <li>• Mature market with large aging installed base creating service and automation demand, as well as demand for renewals and rebuilds</li> <li>• Rebuild and new capacity demand in board and tissue grades. Rebuild and upgrade demand in pulp.</li> <li>• Continued customer focus on availability, reliability and operating costs, including energy and environmental savings in mills</li> <li>• Flow Control demand in various process industries, while expanding service by installed base management</li> </ul>	<ul style="list-style-type: none"> <li>• Net sales: <b>EUR 1.3 bn</b> (23% of total net sales of the company)</li> <li>• Net sales range 2019–2023: <b>EUR 0.7–1.3 bn</b></li> <li>• Employees<sup>1</sup>: <b>2,273</b></li> <li>• Leading position in pulp and paper process technology</li> <li>• Well-established position in the services and automation business</li> </ul>
<b>South America</b>	<ul style="list-style-type: none"> <li>• Service growth driven by demand for higher availability, reliability, lower operational costs, environmental considerations, agreements-based business, as well as serving new installed capacity</li> <li>• Process technology business driven by large pulp mill investments and continuous demand in rebuilds and upgrades</li> <li>• Demand for board and tissue with new lines and rebuilds</li> <li>• Automation Systems demand in pulp and paper</li> <li>• Flow Control demand in pulp and paper, and metals and mining</li> </ul>	<ul style="list-style-type: none"> <li>• Net sales: <b>EUR 0.6 bn</b> (11% of total net sales of the company)</li> <li>• Net sales range 2019–2023: <b>EUR 0.4–0.7 bn</b></li> <li>• Employees<sup>1</sup>: <b>1,164</b></li> <li>• Valmet has a strong position in pulp and paper process technology</li> <li>• Well-established position in the services and automation business</li> <li>• Competition from regional players and global competitors in large investment projects</li> <li>• Local presence important, especially in Brazil due to customs duties</li> </ul>
<b>EMEA (Europe, Middle East and Africa)</b>	<ul style="list-style-type: none"> <li>• Valmet's largest area with significant services, process technology and automation markets in all Valmet's businesses and the largest installed base</li> <li>• Services growth potential through a broader service offering, agreements-based business, and new value added solutions to increase customers' productivity, efficiency, energy savings and environmental impact</li> <li>• Process technology demand in board, tissue, pulp and energy, driven by an increasing focus on sustainability and energy savings, and growth in packaging and tissue consumption</li> <li>• Automation Systems and Flow Control demand in board, pulp and tissue, and other process industries driven by large installed base and new investments</li> </ul>	<ul style="list-style-type: none"> <li>• Net sales: <b>EUR 2.2 bn</b> (40% of total net sales of the company)</li> <li>• Net sales range 2019–2023: <b>EUR 1.5–2.2 bn</b></li> <li>• Employees<sup>1</sup>: <b>11,644</b></li> <li>• Leading position in pulp and paper process technology, as well as in biomass boilers in energy</li> <li>• Leading position in the more fragmented services market and in pulp and paper automation</li> </ul>
<b>China</b>	<ul style="list-style-type: none"> <li>• Growing services market driven by new board and tissue capacity, demand for energy savings, efficiency improvements and reliability, and a growing mill maintenance outsourcing trend</li> <li>• Process technology demand in board, tissue, pulp, and energy impacted by growing consumption, stricter environmental regulation and demand for CO<sub>2</sub> neutral energy</li> <li>• Automation Systems and Flow Control growth from growing installed base and new investments in pulp and paper</li> </ul>	<ul style="list-style-type: none"> <li>• Net sales: <b>EUR 0.6 bn</b> (11% of total net sales of the company)</li> <li>• Net sales range 2019–2023: <b>EUR 0.5–0.8 bn</b></li> <li>• Employees<sup>1</sup>: <b>2,432</b></li> <li>• Valmet is the leader in pulp and paper process technology</li> <li>• Strong position in services and the pulp and paper automation market</li> <li>• Competition from local and global competitors</li> </ul>
<b>Asia-Pacific</b>	<ul style="list-style-type: none"> <li>• Large geographical area covering multiple countries with differing market situations and dynamics</li> <li>• Service growth potential in both emerging and mature markets in growing installed base and market share</li> <li>• Process technology demand in rebuilds and new capacity in pulp, board and tissue, and in renewable energy projects</li> <li>• Automation Systems and Flow Control demand in new pulp and paper capacity and other process industries</li> </ul>	<ul style="list-style-type: none"> <li>• Net sales: <b>EUR 0.8 bn</b> (15% of total net sales of the company)</li> <li>• Net sales range 2019–2023: <b>EUR 0.4–0.8 bn</b></li> <li>• Employees<sup>1</sup>: <b>1,647</b></li> <li>• Leading position in pulp and paper process technology, and increasing local presence</li> <li>• Strong position in services and the pulp and paper automation market</li> </ul>

<sup>1</sup> Includes employees from the Area organization and other employees in the geographical region.



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President and CEO's review

This is Valmet

➤ **Business reviews**

Segments

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Automation Systems

Pulp and Energy

Paper

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# Business reviews



# Segments

Valmet has a financial reporting structure that consists of three reportable segments. The segments are Services, Automation and Process Technologies.

The Services segment consists of the Services business line, the Automation segment of the Flow Control and Automation Systems business lines, and the Process Technologies segment of the Pulp and Energy, and Paper business lines.

The segments' structure was introduced to better highlight the performance of Valmet's businesses. The structure reflects how Valmet's operational model is aligned with how Valmet's management follows the operational performance of Valmet's segments. Each segment has a strong position in the growing market for converting renewables into sustainable results and long-term growth possibilities supported by favorable megatrends.

In its reporting, Valmet discloses the orders received, net sales and profitability of the segments. Valmet also reports the orders received and net sales of its business lines.

## SERVICES

The Services segment provides customers with flexible and fit-for-purpose services throughout the lifecycle to improve process performance and reliability. The Services segment consists of the Services business line.

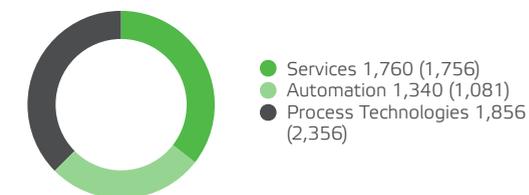
## AUTOMATION

The Automation segment delivers flow control technologies and services, as well as automation solutions, ranging from single measurements to mill- or plant-wide process automation systems. The Automation segment consists of the Flow Control and Automation Systems business lines.

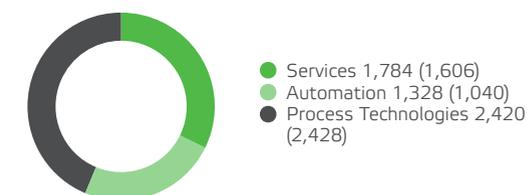
## PROCESS TECHNOLOGIES

The Process Technologies segment provides technology solutions for pulp and energy production, as well as for biomass conversion and emission control, and complete production lines, machine rebuilds and process components for board, tissue and paper production. The Process Technologies segment consists of the Pulp and Energy, and Paper business lines.

Orders received by segment, EUR million



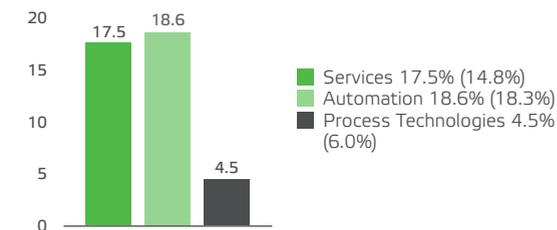
Net sales by segment, EUR million



Comparable EBITA by segment, EUR million<sup>1</sup>



Comparable EBITA by segment, % of net sales



# Business lines

## SERVICES

Valmet's Services business line provides customers with flexible and fit-for-purpose services throughout the lifecycle to improve process performance and reliability. Our Services offering increases the environmental efficiency and cost-effectiveness of our customers' production processes, while ensuring safe and reliable operations.

NET SALES, EUR MILLION

**1,784**

#1-2 IN SERVICES

ORDERS RECEIVED,  
EUR MILLION

**1,760**

## FLOW CONTROL

The Flow Control business line delivers mission-critical flow control technologies and services for the continuously evolving needs of various process industries. We help our customers to improve their process performance and environmental efficiency, and to ensure the safe flow of materials.

NET SALES, EUR MILLION

**777**

#1 IN PULP AND PAPER

ORDERS RECEIVED,  
EUR MILLION

**789**

## AUTOMATION SYSTEMS

The Automation Systems business line delivers automation solutions ranging from single measurements to mill- or plant-wide process automation systems. They are designed to maximize the profitability and sustainability of customers' businesses by improving production performance, quality management, raw material and energy efficiency, and cost-effectiveness.

NET SALES, EUR MILLION

**551**

#1-4 IN AUTOMATION  
SYSTEMS

ORDERS RECEIVED,  
EUR MILLION

**551**

## PULP AND ENERGY

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

NET SALES, EUR MILLION

**1,067**

#2 IN PULP  
#1-3 IN ENERGY

ORDERS RECEIVED,  
EUR MILLION

**854**

## PAPER

The Paper business line delivers complete production lines, machine rebuilds and process components for board, tissue and paper production. The technologies are designed for high process and environmental efficiency, flexibility, reliability and safety. The solutions have a modular structure with as much standardization as possible, and they are easy to use and cost-effective.

NET SALES, EUR MILLION

**1,353**

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

ORDERS RECEIVED,  
EUR MILLION

**1,002**

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





BUSINESS REVIEW

# Services

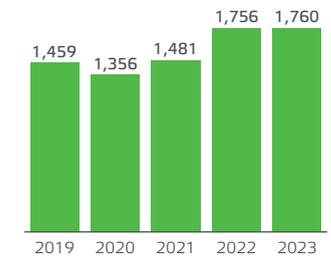
Valmet's Services business line provides our customers with flexible and fit-for-purpose services throughout the lifecycle to sustainably improve process performance and reliability. In 2023, a special focus was paid to developing new services and promoting existing ones that mitigate climate impact at customers' sites.

NET SALES  
EUR MILLION  
**1,784**

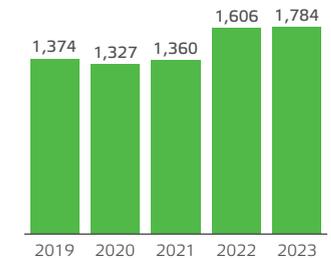
ORDERS RECEIVED  
EUR MILLION  
**1,760**

NUMBER OF  
EMPLOYEES  
**6,493**

Orders received, EUR million<sup>1</sup>



Net sales, EUR million<sup>1</sup>



<sup>1</sup> 2019–2020 figures have not been restated to reflect the new segment reporting structure, which Valmet implemented as of January 1, 2022.

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➤ **Services**

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Automation Systems

Pulp and Energy

Paper

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SERVICES

**Key innovations in 2023**

- Valmet Oil Monitoring to secure bearing lubrication in fiber processing equipment. This application is part of the Valmet Industrial Internet offering
- Valmet Gap Optimizer, a process upgrade for defibrators/refiners to save energy and increase segment lifetime
- Valmet electrical heating system for air dryers to improve energy efficiency
- Valmet Screen Basket ML, providing high screening capacity, improved runnability and long lifetime
- Valmet Hybrid Filter for power plants to achieve lower emissions limits and safe and reliable operation at minimized cost

Valmet's services are designed to match the customer's specific need, whether it is improved environmental performance, reduced energy and raw material costs, optimized quality and production, or reduced process variability. The service solution can be provided as a one-time delivery or as a longer-term partnership through service agreements offering a systematic approach to improving customers' performance. In 2023, more service agreements were signed, including remote services provided by Valmet Performance Centers.

The Services business line delivers services and solutions mainly for the pulp, board and paper, tissue, and energy industries. The offering ranges from spare and process parts, rolls and workshop services, and fabrics all the way to field services, maintenance development and outsourcing, as well as process upgrades. The services are complemented by onsite and remote

Industrial Internet solutions. Valmet also provides learning services that give customers access to more than 200 courses as self-paced e-learning, blended learning and simulations.

Services are offered globally through more than 130 service centers and by approximately 6,500 service professionals. With the acquisition of the Körber's Business Area Tissue, Valmet now also offers services to tissue converting lines.

**Lifecycle collaboration with customers**

Valmet's "way to serve" services approach focuses on the lifecycle collaboration. The aim is to provide the best experience at all the touchpoints of the customer journey and emphasize the value provided through collaboration over the lifecycle.

Valmet can offer the right combination of sustainable services and capabilities for customer needs in each phase of the production lifecycle. When planning the investment, the foundation for optimized operational results can be set. Services can help to accelerate the start-up curve when ramping up production. By working together in maintenance and operations, the maximized reliability and optimized performance of the production process can be ensured.

When delivering services, Valmet's professionals are bound to the core commitments: Safety comes first; Close to you; People you can trust; and Solutions to your needs.

**New customer agreements to enhance efficient and sustainable operations**

Longer-term collaboration ensures maximized reliability, optimized performance and the best operational results, including cost savings, improved competitiveness and a reduced environmental impact.

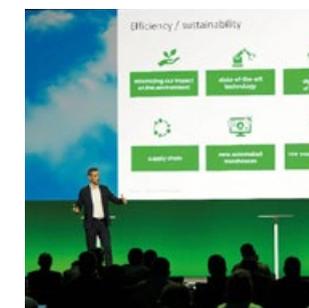
In 2023, Valmet signed its first Performance Agreement within the second-generation bioethanol segment with Meliora Bio ApS in Kalundborg, Denmark. A three-year service agreement was signed between Valmet and Greenalia Biomass

Power Curtis-Teixeiro S.L.U in Spain to further improve the performance of the customer's biomass plant.

Valmet continues to support Holmen Iggesund in Sweden to maximize reliability and optimize the performance of the fiberline and cooking through a three-year Performance Agreement. It covers continuous support and collaboration for operation and process evaluations, onsite services, reports and Industrial Internet services. Valmet will also deliver a comprehensive paper machine clothing package to the new Valmet-delivered board making line PM 3 of Batı Kipas Kagit Sanayi İşletmeleri in Turkey.

During the year, customers included services in the scope more frequently already when placing an order for a new board and paper machine. Examples of these are a container board making line for DS Smith in Italy, a fine paper making line for Yueyang Forest Paper, and a coated board making line for Liansheng Pulp & Paper, both in China. Services were also included in the order of a biomass plant for Göteborg Energi AB in Sweden, starting production in 2025.

➤ **READ MORE:**  
[valmet.com/servicesbusiness](https://valmet.com/servicesbusiness)



➤ **Long-term collaboration pays off in many ways**

Valmet and Saica Paper in Spain started collaboration in 2005. Today, Saica Paper takes pride in its world-class maintenance operations.



BUSINESS REVIEW

# Flow Control

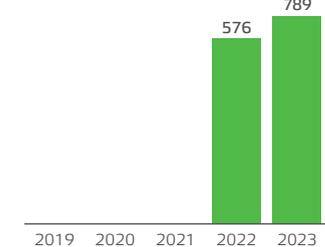
The Flow Control business line delivers mission-critical flow control innovations, technologies and services for the continuously evolving needs of various process industries. In 2023, one of the highlights was the delivery of valves and valve automation solutions to Sibanye-Stillwater's Keliber lithium refinery in Finland, together with a Valmet DNA automation system.

NET SALES  
EUR MILLION  
**777**

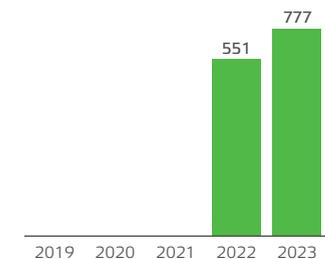
ORDERS RECEIVED  
EUR MILLION  
**789**

NUMBER OF  
EMPLOYEES  
**2,841**

Orders received, EUR million<sup>1</sup>



Net sales, EUR million<sup>1</sup>



<sup>1</sup> The merger with Neles took place on April 1, 2022, so Flow Control was not yet part of Valmet before that date.

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- > **Flow Control**
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## FLOW CONTROL

### Key innovations in 2023

- Neles™ 6D series ball valve for improved customer process reliability, safety and efficiency
- Neles™ NDX™ 2.0 valve controller for more sustainable industrial processes
- Neles™ XH metal-seated ball valve series

The Flow Control business line's valves, pumps and valve automation technologies are known for quality, reliability and the highest safety. They help customers improve their process performance and environmental efficiency and ensure the safe flow of materials. Our customers operate in a variety of process industries, including the pulp, paper and bioproducts industry, renewable energy, oil and gas refining, mining and metals processing, and chemicals.

Valmet's flow control solutions allow our customers to produce materials that keep our societies and infrastructures up and running. Wherever liquid or gas is moved in a pipe, valves are involved. The role our valves play in the productivity and safety of process plants makes them mission-critical.

#### Valves, spare parts and maintenance always at hand

Valmet's flow control expertise is based on over 65 years of innovations. Innovations and environmentally efficient solutions are actively developed in close cooperation with customers to meet their needs and objectives.

Customers are increasingly focusing on efficiency, reliability and effective maintenance to avoid disruptions in their processes: Valves, pumps, spare parts and services must be at hand when they are needed.

At the end of 2023, the business line employs more than 2,800 industry professionals and serves customers in more than 100 countries in good cooperation with its sales and service partners. The largest markets are North America and Europe.

#### Designed for more sustainable processes

Thousands of valves that control and safeguard today's process plant operations consume a sizeable amount of compressed air provided by motor-driven compressed air systems that are themselves large consumers of electricity and sources of indirect CO<sub>2</sub> emissions.

Valmet's next generation Neles NDX™ intelligent valve controller consumes approximately 80 to 90 percent less air than conventional controllers, which means an equal reduction in energy usage and less CO<sub>2</sub> emissions than an alternative valve assembly. To quantify these energy savings, see the [calculator tool](#) featured on our webpage.

Raw material efficiency in valve construction plays an important role in our designs. In 2023, Valmet completed its metal-seated ball valve range by introducing a high-performance ball valve construction, the Neles™ XH series. In addition to its emission control capabilities, the new XH series enables raw material savings, which, in some cases, result in a weight reduction of up to 30 percent. Better material efficiency also improves the efficiency and sustainability of related processes from transportation and logistics to installation and commissioning.

#### Expanding into new markets and applications

The Flow Control business line has continuously strengthened its position in metals and mining through a team of industry experts, the Flowrox™ offering and the partner channel. In 2023, Valmet received various important orders for mining and metals projects and finalized the integration of the Flowrox™ offering with the visual brand alignment: The traditionally red Flowrox™ pumps and valves now have the typical blue color all Valmet flow control products have in common.

With Valmet's other business lines, Flow Control has successfully expanded its reach in new applications. One of the highlights in 2023 was the lithium project run by Sibanye-Stillwater's subsidiary Keliber: Valmet will deliver a Valmet DNA automation system with mission-critical valves and valve automation solutions to Keliber's lithium refinery in Finland. The production ramp-up is planned for the second half of 2025.

In renewable energy and gases, the business line has continued to win orders in commercial-scale green hydrogen projects. In 2023, the Flow Control business line launched the new Neles™ 6D series ball valve, as well as many extensions to size ranges in butterfly and ball valve platforms. In addition, the next-generation intelligent valve controller Neles™ NDX™ was introduced to further markets.

> **READ MORE:**  
[valmet.com/flowcontrolbusiness](https://valmet.com/flowcontrolbusiness)



#### > Expanded offering and renewed branding

The Flowrox™ product family, which is known in the mining and metals segment for quality and reliability, has assumed a new, upgraded identity during the past year.



BUSINESS REVIEW

# Automation Systems

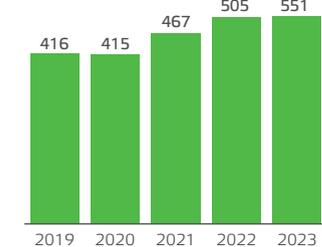
The Automation Systems business line's offering ranges from single measurements to mill- or plant-wide process automation systems, products and services to maximize the profitability and sustainability of our customers' businesses. Throughout 2023, the business line maintained a consistent focus on innovation, resulting in the launch of several new solutions.

NET SALES  
EUR MILLION  
**551**

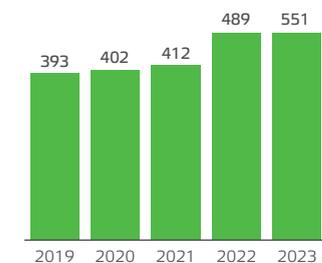
ORDERS RECEIVED  
EUR MILLION  
**551**

NUMBER OF  
EMPLOYEES  
**2,330**

Orders received, EUR million<sup>1</sup>



Net sales, EUR million<sup>1</sup>



<sup>1</sup> 2019–2020 figures have not been restated and include internal orders received and net sales.

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## AUTOMATION SYSTEMS

### Key innovations in 2023

- Valmet Mill-Wide Optimization for enhancing overall pulp and paper mill profitability
- The third generation of Rotating Consistency Measurement for highly accurate fiber consistency measurement
- Valmet Brown Stock Analyzer for high analysis frequency for digester and brown stock washing control
- Optical Consistency Measurement model (Valmet OC2W) for stock preparation's short circulation applications
- The sixth generation of the Residual Measurement (Valmet Polarox6) for further optimizing the bleaching process

The Automation Systems business line supplies and develops automation and information management systems, applications, products and services to companies in the pulp, board, tissue, paper, energy and other process industries, and marine. The main products and solutions are Distributed Control Systems (DCS), industrial applications, Quality Management Systems (QMS), analyzers and measurements, Industrial Internet solutions, and automation services.

Valmet offers its automation systems lifetime compatibility and ongoing support, delivered with expertise for customers' processes.

#### Maximizing profitability and sustainability

Valmet's automation solutions are designed to maximize the profitability and sustainability of customers' businesses by

improving production performance, quality management and cost, energy and material efficiency. We have delivered nearly 5,000 automation systems and more than 100,000 analyzers and measurements. More than 1,200 power plants worldwide feature Valmet's process automation.

The business line employed more than 2,300 professionals in more than 30 countries at the end of 2023. The most important geographical market for the Automation Systems business line is EMEA (Europe, Middle East and Africa), and the second-largest area in terms of net sales is North America. Almost half the business consists of services.

Approximately 20 percent of the business line's net sales are generated when automation is sold as part of Valmet's process technology project delivery. The remaining 80 percent are generated from solutions and services sold directly to customers.

#### New solutions and deliveries worldwide

On top of the substantial number of orders received in 2023, the Automation Systems business line launched several products and applications.

Valmet was the first to introduce a mill-wide optimization solution to enhance overall pulp and paper mill profitability. With Valmet Mill-Wide Optimization, production teams can boost the mill's performance by making well-informed decisions across different process areas towards shared goals. The solution was piloted in a Finnish pulp mill, and further orders have already been booked.

As the world's leading supplier of analyzers and measurements for the pulp and paper industry, we are continuously innovating solutions to increase the efficiency of pulp and paper making. For instance, the Valmet Brown Stock Analyzer was developed to complement Valmet's online pulp quality analyzer family.

The third generation of Valmet Rotating Consistency Measurement (Valmet Rotary) for pulp and paper producers

was also introduced to the market in 2023. With the latest technology, a new user interface and easier maintenance, the transmitter continues to offer highly accurate fiber consistency measurement for critical applications.

#### Pioneering technologies and acquisitions

In Tampere, Finland Valmet developed in close cooperation with the waste-to-energy plant Tammervoima an optimization solution with machine vision that improves the combustion management and availability of the plant and reduces support fuel consumption.

The acquisition of NovaTech Automation's Process Solutions business was completed in early 2023 and has been integrated into the Automation Systems business line. In July 2023, Valmet announced that it had entered into an agreement to acquire Siemens AG's Process Gas Chromatography business. It is planned to integrate the business into the Automation Systems business line. Gas Chromatographs are used to measure the chemical composition in gases and evaporable liquids in all stages of production. The business leverages expertise in chemicals, liquefied natural gas (LNG), refining, and biofuels to offer essential insights for enhancing quality, sustainability and safety.

> READ MORE:  
[valmet.com/automationbusiness](https://valmet.com/automationbusiness)



#### > A new star shines on the Baltic Sea

The second Tallink LNG-powered vessel shows that Valmet's DNA automation system backs its world-class operational efficiency.



BUSINESS REVIEW

# Pulp and Energy

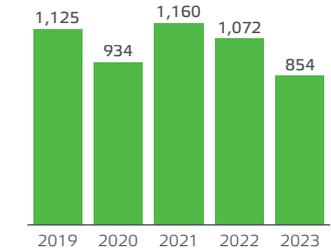
The Pulp and Energy business line provides technology solutions for pulp and energy production, as well as for biomass conversion and emission control. In 2023, the Valmet-delivered Metsä Fibre Kemi bioproduct mill in Finland was started up, as well as the BioCMPC in Brazil; a major upgrade and modernization project of CMPC's Guaíba 2 production line. The year also brought several new energy solution orders in Europe and in Asia.

NET SALES  
EUR MILLION  
**1,067**

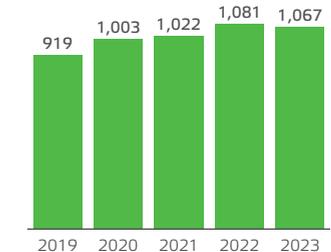
ORDERS RECEIVED  
EUR MILLION  
**854**

NUMBER OF  
EMPLOYEES  
**1,948**

Orders received, EUR million<sup>1</sup>



Net sales, EUR million<sup>1</sup>



<sup>1</sup> 2019–2020 figures have not been restated to reflect the new segment reporting structure, which Valmet implemented as of January 1, 2022.

## PULP AND ENERGY

### Key innovations in 2023

- Catalytic pyrolysis of biomass to transportation fuels successfully piloted at Valmet Tampere R&D center in Finland
- First textile recycling concept started up for Renewcell in Sundsvall, Sweden
- BCTMP evaporation concept developed to improve sustainability

The Pulp and Energy business line supplies complete pulp mills and process equipment for chemical and mechanical pulp production, as well as biomass- and waste-fueled power plants, boiler islands, and related environmental systems. Its customers are mainly pulp producers and power and heat producers. The most important geographical markets are Europe, South America and Asia.

Valmet's pulp production solutions are designed for high raw material efficiency and low chemical and water consumption. Pulp is used mainly as a raw material in producing various paper grades, including board, tissue and printing paper. It is also used for other applications such as textiles and hygiene products.

Valmet's energy products include boilers, gasifiers, environmental protection systems, technology rebuilds and fuel conversion projects. Valmet is a leading global supplier of biomass-based heat and power generation solutions. The company also supplies complete medium-scale heat and power plants that use biomass and sorted waste as fuel.

Valmet's emission control solutions are designed to secure safe operation with low emissions. In addition to pulp and

energy applications, we have developed technology for various industrial processes and marine exhaust gas emissions.

#### Biomass conversion technologies and R&D initiatives

Valmet has focused on commercializing new biomass conversion technologies such as lignin extraction technology for replacing fossil chemicals, pyrolysis for liquid biofuel solutions, and biomass pretreatment for producing bioethanol and biochemicals. Valmet also focuses on improving the performance of existing products.

Valmet has research and development (R&D) centers and pilot machines for both Valmet and its customers. The R&D centers include analytical laboratories that perform physical and chemical analyzes of raw materials, products and process liquors.

#### Major milestones reached

During 2023, Valmet reached major milestones in several pulp and energy projects. The year was kicked off with the announcement of the production of the first bale of pulp by the new production line of the Arauco MAPA project in Chile. Valmet played a key role in the development of the project, supplying the pulp drying line, the recovery boiler and the power boiler, enabling Arauco to further improve its environmental standards.

In April 2023, the Valmet-delivered flash drying and baling line and chemi-thermomechanical (CTMP) rebuild were successfully started up at the SCA Ortviken pulp mill in Sweden. In November, CMPC's upgraded Guaíba pulp mill started operation in Brazil. The target of this BioCMPC project was to modernize and increase the production capacity of the pulp mill's line 2 with Valmet-delivered key technology and automation.

#### Energy solution projects in Europe and Asia

Meanwhile in Finland, Metsä Fibre's Kemi bioproduct mill was successfully started up in September. Valmet's delivery covered

the full production process from wood handling to baling, as well as flow control solutions and mill-wide automation systems. The mill will not use any fossil fuels and will produce two terawatt hours (TWh) of renewable electricity per year.

In Italy, the Valmet delivered BioTrac prehydrolysis system for steam explosion was started up at the Hera Life Steam project to convert low value biomass waste to high-value biofuels for the transportation sector and fertilizer for agricultural use.

Valmet also received several energy solution orders in Europe and in Asia, such as boiler conversions and emission reduction solutions for Veolia Group's subsidiary in Hungary and supplying a biomass plant to Göteborg Energi AB in Gothenburg, Sweden to produce electricity and district heat from renewable and recovered sources by 2025.

The project of the Valmet-delivered Naistenlahti 3 biopower plant at Tampereen Sähkölaitos in Finland was also completed in 2023. The plant is located close to Valmet's own production facilities and produces carbon-neutral district heating for Valmet's Lahdesjärvi facilities, contributing to Valmet's goal of reducing its carbon emissions by 80 percent by 2030. The project highlights the importance of partnerships in achieving carbon neutrality and environmental responsibility.

> **READ MORE:**  
[valmet.com/pulpandenergy](https://valmet.com/pulpandenergy)



> **New era of efficiency and environmental performance at ARAUCO, Chile**  
 ARAUCO's historic MAPA project faced several challenges but was ultimately a success.



BUSINESS REVIEW

# Paper

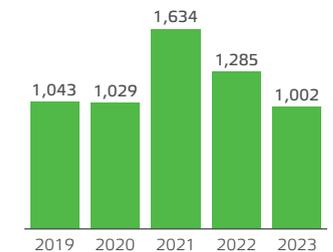
The Paper business line delivers complete production lines, machine rebuilds and process components for board, tissue and paper production. The key benefits to customers are high process and environmental efficiency, flexibility, reliability and safety. In addition to various new orders, in 2023, Valmet closed the acquisition of Körber's Business Area Tissue that was integrated into the Paper business line as the Tissue Converting business unit.

NET SALES  
EUR MILLION  
**1,353**

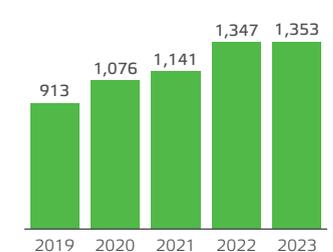
ORDERS RECEIVED  
EUR MILLION  
**1,002**

NUMBER OF  
EMPLOYEES  
**4,759**

Orders received, EUR million<sup>1</sup>



Net sales, EUR million<sup>1</sup>



<sup>1</sup> 2019-2020 figures have not been restated to reflect the new segment reporting structure, which Valmet implemented as of January 1, 2022.

PAPER  
**Key innovations in 2023**

- Valmet 3D Fiber technology for molded fiber products
- Forming with Sleeve roll technology

The Paper business line supplies board, tissue and paper machinery, tissue converting lines, equipment and machine rebuilds for the board, tissue and paper industries. The solutions are designed to be fit-for-purpose, focusing on energy and raw material savings, efficiency, flexibility and safety. As a result, our customers' end products can be manufactured with the highest quality and increased competitiveness on the market.

Demand for new board and paper machines in recent years has been especially lively in China, Europe and North America. Over the years, Valmet has cooperated with its customers in more than 700 board machine, 900 paper machine and more than 300 tissue machine deliveries globally. Today, Valmet also offers its customers extensive Industrial Internet solutions and remote services from Valmet Performance Centers in Jyväskylä, Finland, Karlstad, Sweden, and Lucca, Italy.

**Paper machines can have a lifespan of several decades**

Board, tissue and paper are used for a variety of purposes, including packaging, hygiene products like facial and bathroom tissue and paper towels, and writing and printing papers. Board, tissue and paper are produced from virgin or recycled pulp.

The papermaking process includes several stages in which the pulp slurry is converted into board, tissue or paper through forming, pressing, drying and sizing. In addition, a paper mill includes technology and equipment for stock preparation, air

systems, chemical handling and paper finishing, including reeling and winding, tissue converting, as well as automation, flow control and Industrial Internet solutions.

Paper machines can have a lifespan of several decades. Besides new machines, Valmet has a strong position in machine rebuilds and improvements. In addition, converting an existing paper machine to produce a different paper grade or relocating a paper machine is an important part of our offering.

**Megatrends supporting the demand for board and tissue machines**

The demand for board and tissue machines and machine rebuilds is supported by megatrends like e-commerce, plastics replacement, improved hygiene standards and urbanization.

In 2023, Valmet entered the tissue converting business by acquiring Körber Group's Business Area Tissue, which was integrated into the Paper business line as the Tissue Converting business unit. Today, Valmet can provide the tissue industry with end-to-end solutions from stock-preparation to tissue machines, rewinders and converting lines. The new business unit's product portfolio includes converting lines for roll and fold products, engraving solutions, packaging equipment, and services and digital solutions for tissue converting.

Valmet received major orders worldwide during 2023, including a containerboard machine for DS Smith in Italy, a coated board machine for Graphic Packaging International in the US, a fine paper machine for Yueyang Forest Paper in China and a coated board machine, as well as two tissue machines, to Liansheng Paper in China. Significant tissue machine orders received by Valmet also included a new line for Metsä Tissue's future mill in Mariestad, Sweden, Sofidel's investment in Circleville in the USA and the seventh tissue line to Papel San Francisco in Mexico. In China, interest in both Valmet's hybrid tissue machines for the premium segment and dry crepe machines for the small and mid-size segment has grown.

**Important recognitions in 2023**

Valmet's and Metsä Group's innovation company Metsä Spring's 3D fiber demo plant in Äänekoski, Finland, was announced as the Prize Winner in its own category in the Quality Innovation Award competition in February 2023. In the United Arab Emirates, Fine Hygienic Holding's Al Nakheel mill in Abu Dhabi set a world record by running their Valmet-delivered tissue machine Advantage DCT 200 at a speed of 2,222 meters per minute for 24 hours.

> READ MORE:  
[valmet.com/paper](https://valmet.com/paper)



> **Liansheng Pulp & Paper targets sustainable production with multiple technology deliveries from Valmet**

The order included a coated board making line and two tissue machines.

# Market data by business

BUSINESS	MARKET SIZE <sup>1</sup>	MARKET DRIVERS	PRODUCT GROUP	VALMET'S POSITION	COMPETITION
Services	EUR 8.0 bn	<ul style="list-style-type: none"> <li>Increasing pulp, tissue, board and energy production, and capacity utilization</li> <li>Customer demand for resource efficiency, productivity, end-product quality, Industrial Internet services and reduced environmental impact</li> <li>Customer focus on core operations, decreasing their own resources and outsourcing of non-core operations</li> <li>Size and gradual aging of installed base and capacity increases</li> <li>Closures and conversions of uncompetitive production lines</li> </ul>	Board, Paper and Tissue Solutions	#1-2	Pulp and Paper: Albany, Andritz, AstenJohnson, Bellmer, Kadant, Voith
			Performance Parts		
			Fabrics		
			Rolls and Workshop Services		
Flow Control	EUR 14.0 bn	<ul style="list-style-type: none"> <li>Large installed base with demand for valve maintenance and repair</li> <li>Investments in new projects and renewal investments to add capacity, upgrade and replace</li> <li>Growing sustainability requirements for customers' products and processes, e.g., biofuels and needs to mitigate emissions in production</li> <li>Growing automation levels and digitalization are driving investment in more automated valves/control valves and services</li> </ul>	Pulp and Energy Solutions	#1 in pulp and paper #5-10 in refining and chemicals #5-10 in metals and mining #1-2 in industrial gases	Circor, Crane, Emerson, Flowserve, IMI, Rotork, Samson, Velan
			Distributed Control Systems (DCS)		
			Quality Management System (QMS)		
			Analyzers and Measurements		
Automation Systems	EUR 2.1 bn	<ul style="list-style-type: none"> <li>Aging machines and installed automation systems</li> <li>Investments in new pulp and paper production lines and industrial decarbonization</li> <li>Demand for raw material savings, process efficiencies and sustainability</li> <li>Demand for Industrial Internet-based solutions driven by customer digitalization</li> </ul>	Distributed Control Systems (DCS)	#1-3 in pulp and paper #2-4 in energy and process industry target segments	ABB, Emerson, Honeywell, Siemens,
			Quality Management System (QMS)		
Pulp	EUR 2.0-3.0 bn	<ul style="list-style-type: none"> <li>Growing demand for sustainable packaging, tissue, hygiene products and textiles</li> <li>Increasing environmental awareness and stricter regulations</li> <li>Fiber-based plastic replacement</li> <li>Demand for second-generation bioethanol and biochemicals</li> <li>Decarbonization in energy production</li> <li>Biomass and residual waste used in heat and process steam production</li> <li>Stricter air emissions legislation and directives</li> </ul>	Analyzers and Measurements	#1 in pulp and paper #2	ABB, Honeywell, Voith
			Analyzers and Measurements		
Energy	EUR 1.5-2.0 bn	<ul style="list-style-type: none"> <li>Decarbonization in energy production</li> <li>Biomass and residual waste used in heat and process steam production</li> <li>Stricter air emissions legislation and directives</li> </ul>		#1-3	Valmet is one of the few global players in the bioenergy niche Andritz, Sumitomo SHI FW, regional competitors
Board	EUR 1.3 bn	<ul style="list-style-type: none"> <li>World trade, e-commerce and emerging markets growth drive packaging</li> <li>Demand for lightweight board</li> <li>Shift from plastic packaging to renewable materials</li> <li>Conversions from paper to board</li> </ul>		#1	Voith
Paper	EUR 0.2 bn	<ul style="list-style-type: none"> <li>Increasing role of digital media decreases demand for print papers</li> <li>Demand for technology-driven efficiency improvements</li> <li>Need for specialty papers</li> </ul>		#1	Voith
Tissue	EUR 1.5 bn	<ul style="list-style-type: none"> <li>Increase in purchasing power and rising living standards</li> <li>Urbanization and improved hygiene</li> <li>Fast economic growth in emerging markets</li> <li>Demand for higher quality</li> </ul>		#1	Andritz, Tosco, PCMC

<sup>1</sup> Board, Paper, Tissue, Pulp, Energy, Services, Automation systems and Flow Control: Market position and estimated market size based on CMD 2023 materials; Flow Control market size based on target market.

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# Strategy

# Strategy

Valmet develops and supplies competitive and reliable process technologies, services and automation to the pulp, paper and energy industries. Our automation business covers a wide base of global process industries. We are committed to moving our customers' performance forward with our unique offering and way to serve. In 2023, significant strategic steps were completed when Valmet acquired Körber Group's Business Area Tissue, the leading supplier of tissue converting machinery and services, and NovaTech Automation's Process Solutions business, a company specializing in process control and optimization solutions for batch, continuous and hybrid processes.

Valmet's Way Forward is our strategic roadmap, a guide for achieving our vision of becoming the global champion in serving our customers and moving the industries forward. It identifies megatrends and lays out our mission and strategic goals, along with the initiatives we undertake to achieve them.

Valmet's mission is to help our customers convert renewable resources into sustainable results. This defines our core purpose and drives our solution development. With Valmet's solutions, our customers can create sustainable and environmentally responsible products from renewable and recyclable raw materials to contribute to a carbon-neutral circular economy.

**MISSION**  
Converting renewable resources into sustainable results.

**STRATEGY**  
Valmet develops and supplies competitive and reliable process technologies, services and automation to the pulp, paper and energy industries.  
Our automation business covers a wide base of global process industries.  
We are committed to moving our customers' performance forward with our unique offering and way to serve.

**CONTINUOUS IMPROVEMENT AND RENEWAL**  
**MUST-WINS**  
➤ Customer excellence  
➤ Leader in technology and innovation  
➤ Excellence in processes  
➤ Winning team  
**BUSINESS ACCELERATORS**

**VISION**  
To become the global champion in serving our customers and in moving the industries forward.

**VALUES**  
➤ **Customers** – We move our customers' performance forward  
➤ **Renewal** – We promote new ideas to create the future  
➤ **Excellence** – We improve every day to deliver results  
➤ **People** – We work together to make a difference

**MEGATRENDS**  
➤ Climate change and resource-efficient world  
➤ Digitalization and new technologies  
➤ Urban, responsible and globally connected people

Megatrends impact Valmet's global business environment, generating new opportunities and exposing potential risks. We have identified three key megatrends in the areas of resource efficiency, digitalization and consumer behavior that influence our strategic choices.

In 2023, we further strengthened our business through acquisitions. We acquired Körber Group's Business Area Tissue and NovaTech Automation's Process Solutions business. We also entered into agreements to acquire Siemens AG's Process Gas Chromatography business and Demuth, a Brazilian

company specializing in wood handling solutions for the pulp industry. These acquisitions play an important role in our strategy by further strengthening our Process Technologies, Services, and Automation segments, as well as creating further growth possibilities across targeted customer industries.

The integration of Flow Control (formerly Neles) into Valmet was completed during 2023. All the cost synergy actions were implemented during 2022 and 2023. Sales synergies have also developed well. The targeted annual run rate synergies of EUR 25 million were achieved in 2023.

The pulp, paper and energy industries form a common customer base for all Valmet's businesses, and we are committed to improving our customers' performance by leveraging our unique offering, combining process technologies, automation and services. Valmet also serves a wide base of other global process industries with its globally leading automation and flow control solutions.

Our Services and Automation segments form a significant part of Valmet, and they are characterized by predictable and growing demand and long-term customer relationships, with recurring business driven by the installed base and customer operating rates. These businesses provide resilience to business cycles and make Valmet's net sales growth more stable. On the other hand, our Process Technologies segment is driven by customers' investments in board, tissue and paper machines, pulp mills, and heat and power boilers. This segment is stable in the long-term, but more cyclical in the short-term. Consequently, the development of this segment should be observed with a longer-term time horizon.

### Strategy implementation

We implement our strategy through defined Must-Wins. These provide structure and focus for our strategic initiatives, decisions and performance indicators. Our Sustainability agenda is an integral part of our Must-Wins. Valmet's Climate Program – Forward to a carbon neutral future – is part of our Sustainability agenda and sets ambitious CO<sub>2</sub> emissions reduction targets and establishes tangible actions for the whole value chain. The Climate Program implementation is fully integrated into our strategic initiatives.

To keep driving accelerated development of selected businesses, we are continuing to implement our growth program, called "Business Accelerator," which was launched in 2020.

### Further developing customer excellence

Our "Customer excellence" Must-Win focuses on providing the best customer service and delivering solutions that bring

customers the most benefit. This is achieved by strong, capable and committed teams close to customers that can identify and implement optimal solutions comprising process technology, automation and services. We have continued to develop our "Valmet's way to serve" approach for our Services business and a "Valmet as the automation partner" approach for our Automation systems business to improve the customer experience.

Efficient internal operations play an important role in the customer experience. To achieve customer excellence, we systematically develop our sales capabilities and common processes to drive efficient growth and ensure a positive customer experience from the very first touchpoint. We continue to enhance our local sales and service presence to strengthen key account management, as well as to increase our efforts in segments with high growth potential and segments where Valmet needs a stronger presence.

### Customer-driven solutions

Valmet's "Leader in technology and innovation" Must-Win is central to our Climate Program and our customers' sustainability progress. The innovative products and services we develop aim to reduce our customers' operating and investment costs, improve performance, and enable carbon -neutral operations.

We are continuously renewing our existing product portfolio and developing new solutions, often in close collaboration with customers, that improve our customers' sustainability

and performance, creating new revenue streams, both for our customers and Valmet.

Being a leader in technology and innovation is also about optimizing cost structures to boost our competitiveness – and Valmet's profitability. We achieve this through modularization, standardization and design optimization. In turn, this gives us flexibility and new opportunities to improve our supply chain and onsite work.

### Efficient global processes

Our "Excellence in processes" Must-Win focuses on increasing our efficiency and cost-competitiveness by improving our operations. We have continued to globally unify our processes as part of our global management system implementation.

Our global project management and project delivery initiative aims to continuously improve gross profit. We are strengthening project management and execution by developing project and site management competences and utilizing common tools and processes.

To improve the quality of our products, processes and services, we proactively manage and continuously improve quality throughout our internal operations and global supply chain. This includes strengthening our safety culture, our collaboration with customers and partners, and our practices to minimize our environmental footprint and protect people from harm.

## MEGATRENDS



### Climate change and resource-efficient 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 high-impact new technologies are driving efficiency and new business models.



### Urban, responsible and globally connected people

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

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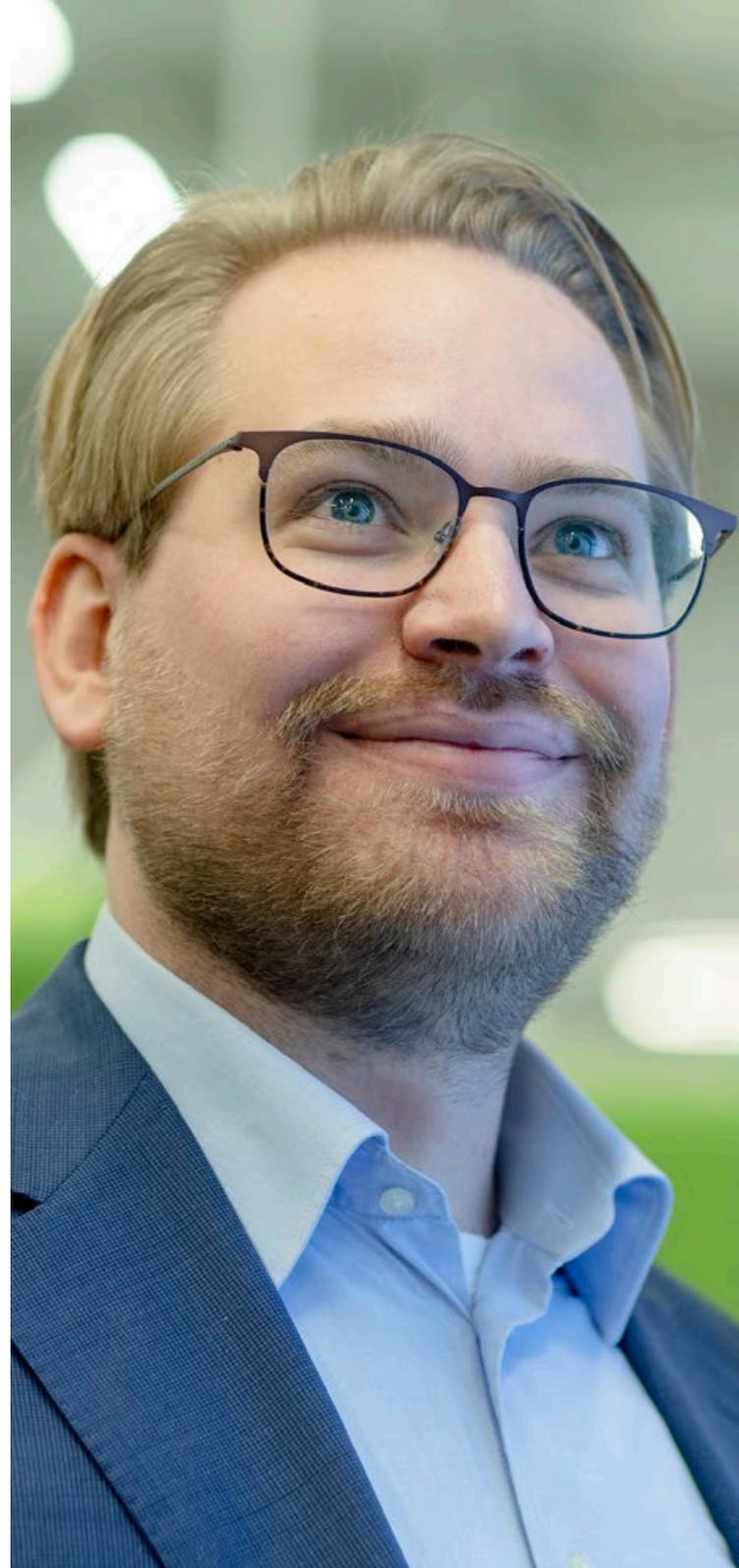
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Throughout our supply chain, we target significant cost savings by further developing global category management and our supplier base. Through initiatives to improve supplier quality and delivery performance, we increase the efficiency of our supply chain. To keep our cost structure competitive, we collaborate closely with our suppliers to increase our supply flexibility by utilizing supplier innovations and onboarding suppliers close to key customers, and by optimizing our own operations and logistics, we aim to quickly respond to changes in demand.

The implementation of a centralized enterprise resource planning (ERP) system continued in 2023 across the USA, Canada, China, Croatia, Türkiye, the United Arab Emirates, Germany and Sweden, with rollouts prepared in Valmet's other locations. With an ERP system, we are targeting benefits through the unification of key processes and ways of working across Valmet.

**Performance-driven teams close to customers**

Our "Winning Team" Must-Win seeks to ensure that Valmet's capabilities are globally balanced, and that we build engaged and performance-driven teams close to our customers. Using the results of Valmet's OurVoice employee survey, we implement targeted actions and systematically strengthen employee engagement.

Every Valmet employee plays an essential role in turning strategy into reality. In 2023, we continued our global training programs, designed to further strengthen the execution of our strategy, as well as to drive continuous renewal and improvement within the organization.

We also continued to develop our renewed approach to strategic resource planning, which will serve as a foundation for future strategic competence and workforce development.

**Business Accelerator**

In the spring of 2020, we introduced a new growth program called "Business Accelerator" for selected businesses. The focus of this program is on the one hand on finding new applications

and customer segments for existing products and expanding our offering to existing segments, and on the other, on developing new technologies and offerings for emerging new market segments. In 2023, growth programs are active in the Industrial Internet, Emission Control, Biomass Concepts, Recycled and Cellulose-based Textile Fibers, and 3D/Molded Fiber businesses.

The 3D/Molded fiber Business Accelerator is tackling global environmental challenges by creating sustainable solutions for the world's packaging needs. The novel molded fiber products are manufactured from wood fiber with the objective of replacing plastic. In 2023, Valmet and Metsä Group's innovation company Metsä Spring continued the operations at the 3D fiber product pilot plant in Äänekoski, Finland.

Valmet has developed technology for both recycling textile waste and making textile fiber from biomass or organic waste, thus helping the textile industry to become more sustainable. In 2023, we delivered the main equipment for Renewcell's textile recycling plant at the Ortvik industrial site in Sundsvall, Sweden. We also delivered the drying technology to Spinnova-Suzano joint venture textile fibre factory in Jyväskylä, Finland.

In our Industrial Internet offering, we combine our expertise in process technology, automation and services with data-driven solutions to boost the performance of our customers' mills and plants. We are also developing our digital channels and services to offer a great experience throughout the customer journey. In addition to giving us the ability to serve our customers more effectively, digitalization opens new opportunities to optimize our operations as we launch new digital platforms and tools to drive internal efficiency, quality and productivity.

The COVID-19 pandemic helped us to accelerate the deployment of our remote services and Industrial Internet solutions with our customers, as well as expand our own digital toolkit to better support remote working opportunities. We continue to add new capabilities to successfully carry out remote services and remotely supported start-ups and maintenance shutdowns.

# Progress of Must-Win actions

MUST-WIN	WHERE WE ARE TODAY	FOCUS GOING FORWARD	STRATEGIC GOALS
 <p><b>Customer excellence</b></p>	<p>We are implementing our further developed services, automation and process technology concepts based on our unique offering and continuous customer collaboration over the lifecycle. We are managing sales based on global processes, common tools and a strong customer interface built on key account management and customer-specific mill teams.</p>	<ul style="list-style-type: none"> <li>➤ We will continue to implement and develop our way of serving our customers with a strong local presence and a global offering. We will build our value proposal on leading technology, a combined offering and customer intimacy, continuously developing our sales interface and sales management practices.</li> </ul>	<ul style="list-style-type: none"> <li>➤ <b>Valmet deploys strong, capable, and committed teams close to our customers. We serve our customers with our full offering by combining process technology, automation and services.</b></li> </ul>
 <p><b>Leader in technology and innovation</b></p>	<p>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.</p>	<ul style="list-style-type: none"> <li>➤ We will continue to strengthen our research and development cooperation with key customers, systematically developing and renewing our offering, and implement product competitiveness initiatives. We will focus strongly on developing the resource and energy efficiency of our offering.</li> </ul>	<ul style="list-style-type: none"> <li>➤ <b>Valmet provides leading technology and cost-competitive products and services that reduce customers' operating and investment costs and enable their carbon-neutral operations.</b></li> </ul>
 <p><b>Excellence in processes</b></p>	<p>We are using a harmonized global process to systematically develop our project management capabilities. We focus on improving the quality of our products, services and processes, based on continuous improvement and Lean practices. We use 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.</p>	<ul style="list-style-type: none"> <li>➤ We will continue to develop our processes and operations by focusing on:                             <ul style="list-style-type: none"> <li>• Project management practices and key projects</li> <li>• Building a strong quality culture and way of operating to drive our quality performance</li> <li>• Strengthening existing HSE practices and collaboration with customers and suppliers to improve safety</li> <li>• Supplier quality and delivery performance, supplier innovations and sustainability in our supplier network</li> <li>• The rollout of an ERP and realizing its benefits</li> <li>• Certification of our global management system for quality and HSE management standards.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>➤ <b>Valmet operates with efficient and harmonized processes with increasing cost-competitiveness. In the process technology business, we are increasing our flexibility to respond to cyclical demand. Quality and health and safety are constantly improving.</b></li> </ul>
 <p><b>Winning team</b></p>	<p>We are strengthening our high-performance culture through performance management and developing engagement and managerial skills. We focus strongly on capability development through strategic resourcing process development, active internal job rotation and targeted local competence development.</p>	<ul style="list-style-type: none"> <li>➤ We will promote active dialogue to boost engagement, a feedback culture to drive performance and our shared values, and pride in what we do to create energy in the organization. We will continue to develop our strategic capabilities and our functional and technical competences to support our strategic targets and business growth.</li> </ul>	<ul style="list-style-type: none"> <li>➤ <b>Valmet has engaged and performance-driven teams living Valmet's shared values. Competences are globally balanced and close to customers.</b></li> </ul>
 <p><b>Business accelerators</b></p>	<p>The focus of this program is on finding new applications and customer segments for existing products, expanding our offering to existing segments, and developing new technologies and offerings for emerging new market segments. Growth programs are active in the Industrial Internet, Emission Control, Biomass Concepts, Recycled and Cellulose-based Textile Fibers and 3D/Molded Fiber businesses.</p>	<ul style="list-style-type: none"> <li>➤ We will focus on developing our Industrial Internet, Emission Control, Biomass Concepts, Recycled and Cellulose-based Textile Fibers and 3D/Molded Fiber businesses by:                             <ul style="list-style-type: none"> <li>• Expanding our offering for existing customers</li> <li>• Finding new applications or customer segments for existing products</li> <li>• Developing new technology and offerings for emerging new market segments</li> <li>• Improving our customers' business to be more sustainable and emission-free.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>➤ <b>Valmet strives to accelerate growth and profitability improvement through business-specific growth plans and implementation support for businesses with untapped potential.</b></li> </ul>

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# Research and development

Innovation, cooperation and technology leadership for a carbon-neutral future.

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 and help respond to important global megatrends: enhancing the efficiency of raw materials; water and energy; promoting the use of renewable raw materials; and reducing emissions.

Research and development (R&D) work is carried out mainly in Finland and Sweden by the R&D organizations in our business lines. Valmet operates 32 R&D centers that are also pilot facilities for customer projects and internal testing. At the end of 2023, Valmet R&D employed 551 people, while R&D spend for the year totaled EUR 114 million, with over 700 active R&D projects.

**Going beyond circularity**

We continuously develop new solutions to improve customers' sustainability and performance. Our products are often created in close cooperation with customers or our network of leading universities and research institutes around the world.

Through the Beyond Circularity program launched in 2022, Valmet actively promotes the development of sustainable technology. Through our own investments, combined with funding from Business Finland, the program improves Valmet's ability to support the green transition in our customers' industries and helps accelerate the implementation of Valmet's Climate Program.

## Research and development highlights in 2023

- Beyond Circularity program proceeding
- EUR 175 million loan agreement with the European Investment Bank (EIB)
- Additive Manufacturing Technology Center in Tampere, Finland, inaugurated
- Industrial internet: Mill-Wide Optimization for pulp and paper launched
- Carbon-neutral production enabled for pulp and paper industry customers

The multi-year program builds on collaboration to reach a mission that is beyond a single player. Valmet is creating a new green transition ecosystem to generate value and growth for its participants, encouraging the best national and international partners in the field to join.

In 2023, we rapidly expanded our network of partners in the ecosystem, establishing more partners than originally targeted. In addition to expanding our competences to new areas, the program helps create new jobs as we contribute to impactful solutions for a sustainable future. Internally, Valmet grew the portfolio of topics that the program is addressing.

In 2023, Valmet signed a EUR 175 million loan agreement with the European Investment Bank (EIB) to fund our R&D activities in 2023 through 2026. The financing will help Valmet develop technologies that replace fossil fuels with renewables as part of the EIB's dedicated package of support to REPowerEU — the EU plan to eliminate dependence on fossil fuel imports.

### From innovation to commercial production

Through research and development, Valmet continuously develops innovations to speed up the green transition. In the new 3D fiber packaging product, we have combined our technology expertise seamlessly with the fiber material knowhow of Metsä Group's innovation company Metsä Spring. Their Muoto™ packaging solutions are sustainable alternatives to plastics for many everyday applications, including food packaging.

The Metsä Spring collaboration continued apace throughout 2023 and is one of the biggest ongoing projects for Valmet R&D. The productization of the commercial sized production line is ongoing for the first industrial investment.

Valmet's new Additive Manufacturing Technology Center was inaugurated in Tampere, Finland in September 2023. The target of the investment is that in the future, Valmet could utilize 3D printing for R&D purposes in product design and for the production of spare and machine parts.

### Sustainable biochemicals gains momentum

Valmet joined forces in 2022 with Circa Group, a converter of waste and non-food biomass into advanced bio-based chemicals, to industrialize the production of sustainable biochemicals. Our experience with fluidized bed boilers and biomass-to-energy solutions will significantly contribute to realizing and optimizing the biochemical production process at scale. In 2023, Valmet also completed a catalytic pyrolysis pilot plant in Tampere, Finland.

Bio-based solvents replace harmful petroleum-based solvents used in a wide variety of industries. By providing experience and expertise to companies like Circa, Valmet furthers its goal of converting renewable resources into sustainable results.

### Driving autonomy and sustainability

In our Industrial Internet offering, we combine our expertise in process technology, automation and services with data-driven solutions to boost the performance of our customers' mills and plants. In 2023, we launched our Mill-Wide Optimization for pulp and paper. The autonomous operations framework was the highlight at our Valmet Customer Days.

The role of Valmet R&D in our Climate Program was also highlighted at the 2023 Customer Days event. In the Climate Program Valmet R&D is responsible for that our technology supports sustainability also in its use phase and innovation projects are provided to support the program. For the use phase, Valmet R&D has two targets: energy efficiency improvement; and carbon-neutral production solutions for customers. In 2023, it was announced that the second target had already been achieved.

### Vision and roadmap for artificial intelligence

In 2023, the world saw major advances in artificial intelligence, with new models and practical use cases especially utilizing the generative artificial intelligence (Gen AI) and large language models (LLM). Valmet also began its own work to assess and plan for generative AI.

We are preparing to use AI for internal and external use cases, prioritizing internal use in these early stages. A steering team was created in 2023 to guide this work over the coming years.

We also started to create a vision and roadmap for 2024 and beyond, as well as to collect potential business cases in coordination with business lines as we evaluate ideas, internal technical capabilities and ramp up internal communications about our AI journey in Valmet.

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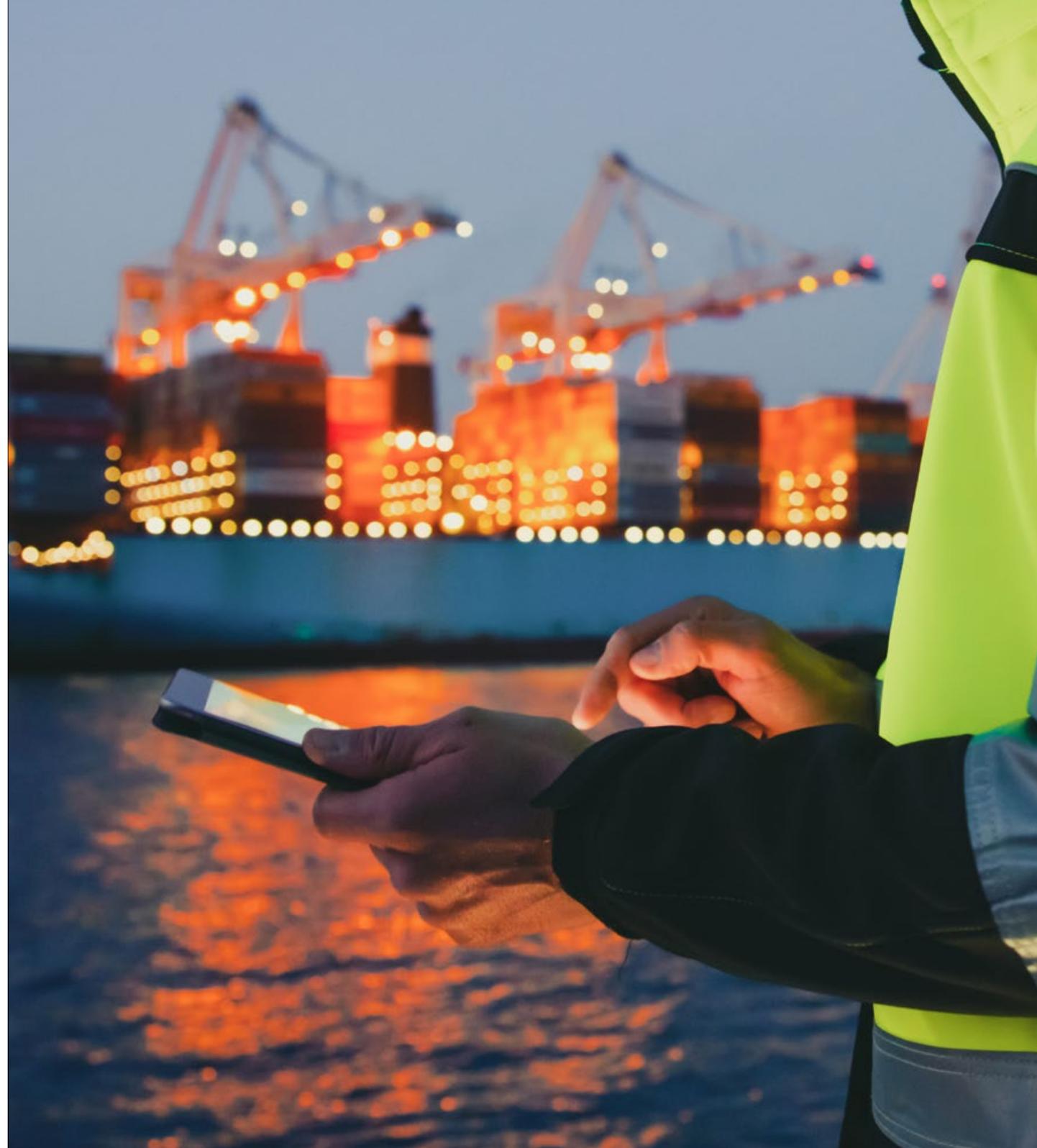
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# Supply chain

Sustainable supply through collaboration and creative thinking.

Valmet's supply chain directly contributes to the company's profitability, cash flow, competitiveness and sustainability. The aim is to have a world-class supply chain operation that efficiently delivers sustainable and competitive results through close collaboration with suppliers.

Valmet has over 20,000 active suppliers in 60 countries and spends over EUR 3 billion in direct and indirect purchases annually. Valmet's procurement, logistics and warehouse workforce totals 1,200 employees globally, located in over 25 countries on six continents.

### Stable operations with continuous improvement

2023 was a year of stabilizing and returning to continuous improvement. While 2022 was a year of lingering pandemic measures, severe cost inflation and logistics bottlenecks, Valmet supply chain operations saw remarkable change in 2023. Bottlenecks and widespread cost inflation vanished.

In addition to a return to reliability, Valmet logistics costs reduced substantially compared to the pandemic years, particularly for container and air freight. This further helped Valmet achieve record procurement savings in 2023.

Valmet's supply chain organization transitioned smoothly to more normal operating conditions after three years of abnormality. This allowed Valmet in 2023 to focus again on category management and supplier development, automating operative procurement process steps, engaging suppliers for reducing CO<sub>2</sub> emissions, and developing supply chain tools.

## Supply chain highlights in 2023

- Record procurement savings
- Return to normal bottleneck-free supply chains
- Accelerated efforts to expand Climate Program

### Industry-wide challenges with electronics components

Major changes and conflicts across the geopolitical landscape continued throughout 2023. However, Valmet was able to apply lessons learned from the pandemic to minimize the impact of these conflicts. The purchase of electronic components, however, remained challenging in 2023.

Compared to the pre-pandemic years, some components still had notably long lead times. The entire electronics industry was dealing with limited supplies and sub-optimal lead times. This was keeping prices high for many components, with high premiums on fast deliveries.

Valmet de-stocked electronics purchases in 2023. This was possible thanks to the higher volumes acquired in the previous year to ensure availability.

### Refocusing on stock management

Growing stock levels have been a general trend across many industries over the last three years. Purchase volumes were kept high to mitigate supply chain disruptions. At the same time, slowing turnover due to lower demand as global economies struggled during the pandemic and war in Ukraine further increased stock.

Valmet business lines maintained high stocks through 2022–2023 to help manage risks from continued supply chain disturbances. In late 2023, the trend was reversed. The company began reducing stocks and initiated efforts to identify long-term solutions that help keep stocks lower while maintaining resilience to major supply disruptions.

In 2023, Valmet's supply chain started reassessing safety stock levels and developing new ways to measure and monitor stock turnover. This work will continue into 2024 as Valmet focuses on improving stock turnover at its hundreds of stock locations globally.

### Supplier development and improving sustainability

While Valmet supply chain total spending was on a par with 2022, the total number of suppliers reduced in 2023 due to ongoing consolidation efforts, particularly for indirect procurement. The company's long-standing supplier policy, which has been increasingly important in recent years, is to have a minimum of two interchangeable suppliers, preferably in different countries. This remains an important preventive measure for long-term stability but does not hinder overall supplier consolidation efforts.

In addition to consolidation, ensuring a sustainable supply chain continues to be a top priority for Valmet. In 2023, with nearly all pandemic restrictions lifted, Valmet was able to proceed with the planned supplier engagement actions for its Climate Program. In 2023, dozens of suppliers were engaged through the program, more than tripling the number of new engagements compared to the previous year.

Supplier engagement includes sustainability training, face-to-face discussions, and concrete action planning. Several suppliers have reported actions taken in 2023 to reduce their CO<sub>2</sub> emissions. Valmet's target is to achieve a 20 percent reduction in CO<sub>2</sub> emissions from its supply chain by 2030 compared to 2019.

> **READ MORE:**  
[Climate program](#)  
[Sustainable Supply Chain](#)

## PURCHASES (10 LARGEST COUNTRIES)

EUR MILLION	2023
Finland	1,385
China	351
USA	313
Sweden	302
Germany	214
Brazil	167
India	98
Poland	95
Italy	67
Canada	66

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# Quality

Quality is a cornerstone of Valmet culture and is fundamental to the success of our customers and our business.

Valmet supplies customers with sustainable solutions based on high-quality technology, processes and services. Our quality function aims to strengthen customer satisfaction and loyalty through continuous improvement across the value chain.

### Quality control through metrics

One of Valmet's key quality performance indicators is Cost of Poor Quality (COPQ), measured as a percentage of net sales. While absolute COPQ for Valmet as a whole remained steady, we have set high expectations for all business lines to improve COPQ.

In 2023, challenges in specific customer projects slowed progress towards COPQ targets in the process technology segment. However, we also saw improvement in many business lines throughout the year, including Automation Systems and Services. The Flow Control business line became part of Valmet in the spring of 2022, and despite being a new business line, it performed exceptionally well during 2023, far exceeding the COPQ targets and helping maintain a steady company-level COPQ for the year.

Valmet monitors many quality metrics such as the Continuous Improvement incident completion rate. To make these metrics more transparent and easier to use, Valmet started redefining several indicators in 2022, and the work continued in 2023. In addition, during 2023, we continued building a quality dashboard, targeted for completion in 2024. The dashboard will give Valmet an easily accessible, clear view of all quality metrics. In addition, behind the dashboard is a centralized



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## Quality highlights in 2023

- Continuous Improvement metrics on target and improving
- Quality organization successfully using system-wide data for better insights
- Excellent feedback on efforts to expand quality communications and build awareness

source of detailed, organized data for quick access to an in-depth assessment of quality-related metrics.

### Nurturing a culture of quality

Valmet's culture of quality continues to flourish. Every day, we raise awareness and instill a sense of personal ownership of quality in every Valmet employee. Much of this is achieved through our active quality communications.

Quality communications is implemented through active management communications, videos, newsletters, blogs, posters and many other channels to create engaging stories that are both informative and inspiring. We also use formal training to create a strong focus on quality. Our quality training portfolio has been rolled out and continues to be improved.

Our Global Management System (GMS) with well structured, documented processes is a key element in enabling a strong quality culture at Valmet. The documented processes are leading to better discipline and transparency in our quality work. Through Continuous Improvement from defined feedback loops, we continue to review and analyze potential gaps, and help business lines document their operation-specific processes.

### Increased focus on quality assurance and quality control

The success of the Neles quality integration into Valmet culminated in 2023 with existing certificates being brought under the Valmet global multisite certificate framework.

At Valmet, we understand that our employees make good quality happen. Throughout 2023, we continued to develop ways to raise awareness of everyone's individual role in achieving our quality targets.

The Valmet quality organization also increased its focus on quality assurance and quality control of suppliers, an area identified as needing improvement. The peak years of the COVID-19 restricted supplier quality control efforts, which we aim to accelerate as operations and mobility have returned to normal.

> **READ MORE:**  
[Certified operations](#)

**Every day, we raise awareness and instill a sense of personal ownership of quality in every Valmet employee.**



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# Financial targets

GROWTH

## 2X

- Net sales for Services and Automation segments to grow over two times the market growth
- Net sales for Process Technology segment to exceed market growth

NET SALES 2023,  
EUR BILLION

## 5.5

PROFITABILITY

## 12–14%

- Comparable EBITA: 12–14%

PROFITABILITY 2023

## 11.2%

COMPARABLE ROCE

## >15%

- Comparable return on capital employed (ROCE) before taxes<sup>1</sup>: at least 15%

COMPARABLE ROCE 2023

## 15%

DIVIDEND POLICY

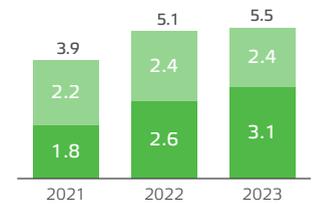
## ≥50%

- Dividend payout at least 50% of net profit

DIVIDEND 2023

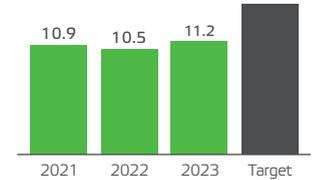
## 70%<sup>2</sup>

Net sales, EUR billion<sup>3</sup>

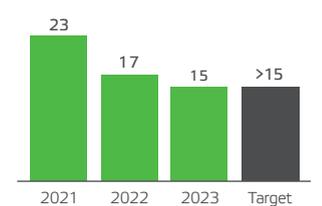


■ Capital business  
■ Stable business

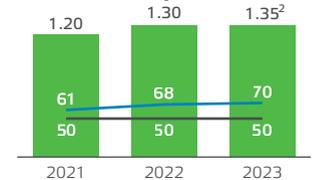
Comparable EBITA,  
% of net sales



Comparable ROCE, %



Dividend per share,  
EUR / % net profit



■ Dividend per share, EUR  
— % of net profit  
— Target ≥50%

<sup>1</sup> Comparable ROCE before taxes, % = ((profit before taxes + interests and other financial expenses +/- items affecting comparability) / (total equity + interest-bearing liabilities (average for the period))) x 100.

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

<sup>3</sup> Year 2021 figures have not been restated to reflect the new segment reporting structure, which Valmet implemented as of January 1, 2022.



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Progress on Sustainability360° agenda

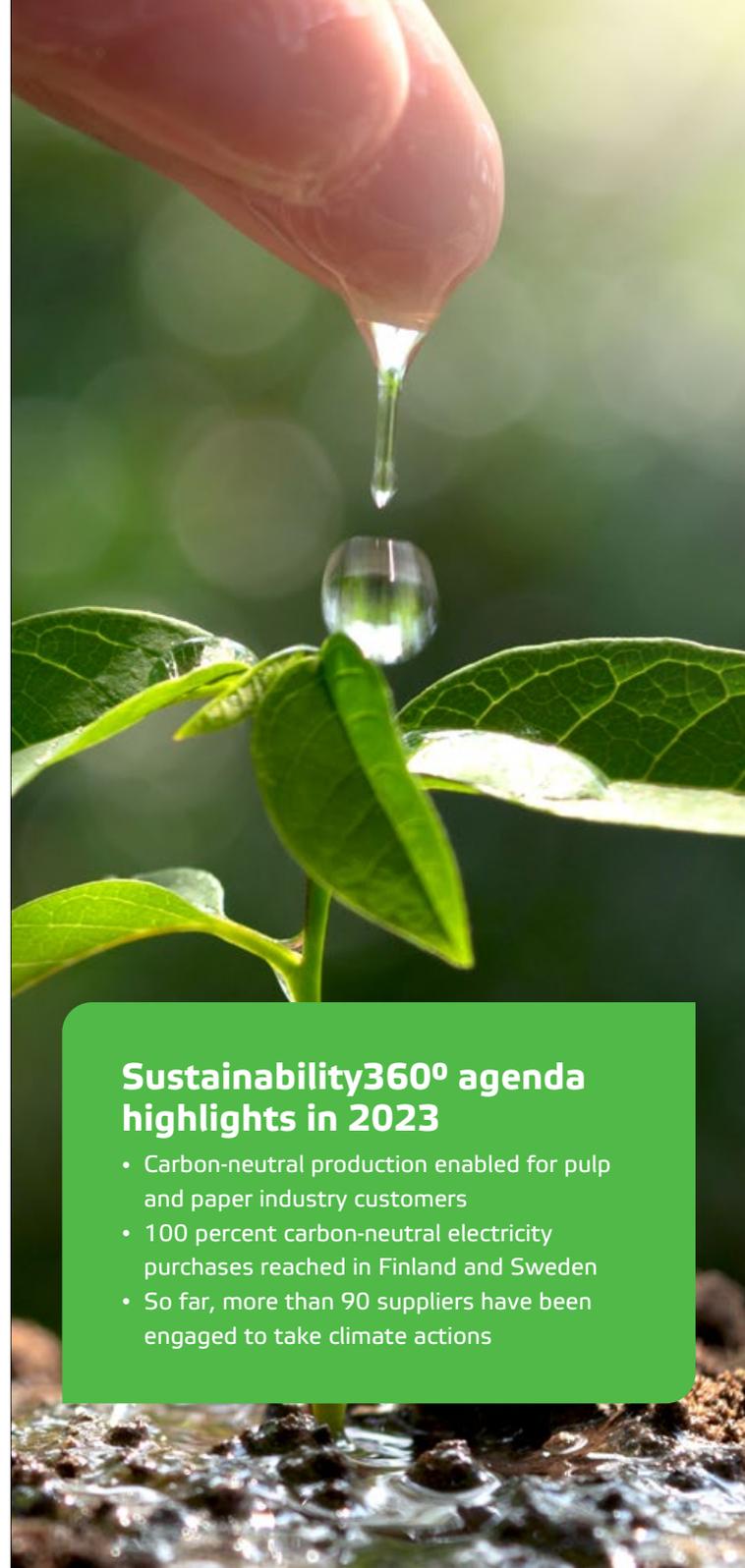
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# Sustainability



### Sustainability360° agenda highlights in 2023

- Carbon-neutral production enabled for pulp and paper industry customers
- 100 percent carbon-neutral electricity purchases reached in Finland and Sweden
- So far, more than 90 suppliers have been engaged to take climate actions

# Sustainability360° agenda

Sustainability is fully integrated into Valmet's strategy and operations through the comprehensive Sustainability360° Agenda. In 2023, we continued our systematic sustainability work towards the set targets and progressed well with our Climate Program as part of the agenda implementation.

Valmet's Code of Conduct, related policies and the comprehensive Sustainability360° Agenda create a solid foundation for sustainable business operations.

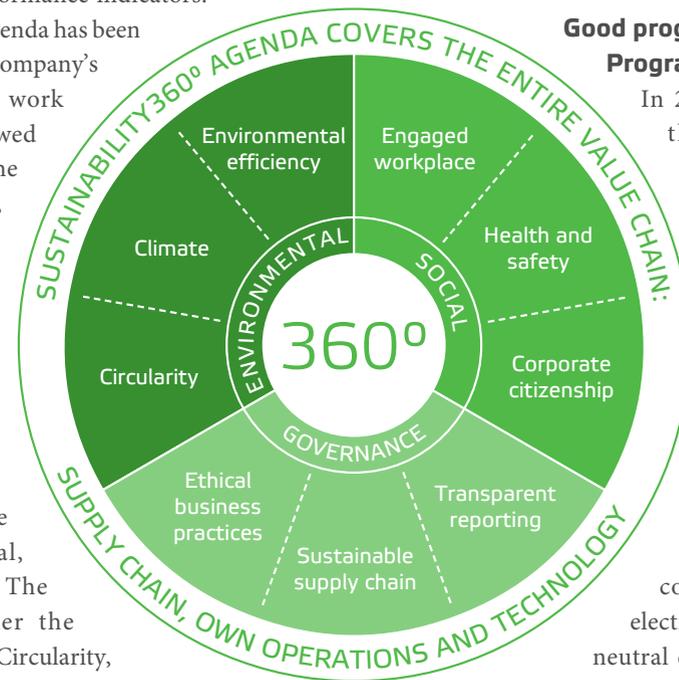
Sustainability is an integral part of our strategy and related Must-Wins that provide structure and focus for our strategic initiatives, decisions and performance indicators.

Valmet's Sustainability360° Agenda has been the backbone for building the company's acknowledged sustainability work over the years and was renewed in 2022. The agenda covers the company's entire value chain, including the supply chain, our own operations, and the use phase of the technologies Valmet provides to its customers.

The Agenda has nine main material topics that are grouped around three focus areas: Environmental, Social, Governance (ESG). The main material topics under the Environmental focus area are Circularity, Climate and Environmental efficiency. Under the Social dimension, we focus on Engaged workplace, Health and safety, and Corporate citizenship. The main material

topics under the Governance focus area are Ethical business practices, Sustainable supply chain and Transparent reporting.

All the main material topics have tangible targets and action plans integrated into the company's annual planning process as part of strategy implementation.



### Good progress in the Climate Program

In 2023, one of the priorities was the implementation of our Climate Program, where we progressed very well. During the year, we achieved our target of enabling carbon-neutral production for our pulp, paper and energy customers, already seven years ahead of our target. In our own operations, we made significant energy efficiency investments to reduce CO<sub>2</sub> emissions in our locations and continued purchasing CO<sub>2</sub>-free electricity, reaching 100 percent CO<sub>2</sub> neutral electricity purchases in Finland and Sweden in 2023. In the supply chain in

2023, we succeeded in engaging around 80 suppliers to take climate actions.

# Most impactful UN Sustainable Development Goals for Valmet

Valmet supports the United Nations (UN) Sustainable Development Goals (SDGs). We have identified the SDGs on which Valmet can have the most positive impact, or where we aim to minimize our negative impact. Our Sustainability360° Agenda and related targets have been aligned with selected SDGs.



## Goal 6: Clean water and sanitation

Efficient water management plays a key role in Valmet's technologies, e.g., evaporation and condensate treatment solutions, ultrafiltration solutions and tissue, and board and paper machines can help customers to recycle process water and reduce freshwater use and water pollution. Improving water efficiency and decreasing water consumption are also part of Valmet's environmental targets for its own operations by 2030.

## Goal 7: Affordable and clean energy

Valmet's energy solutions are based on biomass, waste or a mixture of different fuels. Valmet impacts this goal through energy technologies, e.g., by enabling heat and power production in biomass, waste and multifuel boilers, increasing the use of different fuel mixes, and air emission control systems for pulp mill and power plant flue gases. Valmet is also contributing to this goal by replacing fossil fuels with renewables, purchasing CO<sub>2</sub>-free electricity and improving energy efficiency in its own operations.

## Goal 8: Decent work and economic growth

Valmet's goal is zero harm to people and the environment. Valmet aims for a positive, safe and fair working environment, full and productive employment, and decent work for all. We have a human rights management process for our own operations and the supply chain, e.g., to ensure human rights and protect labor rights. Valmet contributes to global economic productivity through investments in R&D, manufacturing high value-adding and resource-efficient technology, and fostering innovation.

## Goal 12: Responsible consumption and production

Valmet develops process technologies, automation and services to enable the replacement of fossil materials with renewables and to support customers in producing high-value end products. We also aim to improve resource efficiency throughout the value chain to ensure responsible consumption and production processes. Valmet's technologies are designed for maximum resource and raw material efficiency, enabling the circular economy. Lightweight technologies that reduce fiber in board production, hybrid technologies that save fiber in tissue production, high-yield chemical pulp cooking, and fiberlines and power boilers that use residues impact this goal by significantly increasing the efficient use of resources. Valmet has a waste management target for its own operations by 2030. Valmet's sustainable supply chain management also contributes to this goal.

## Goal 13: Climate action

Valmet has validated science-based CO<sub>2</sub> emissions reduction targets and concrete actions for the whole value chain. Valmet contributes to this goal by offering bioenergy self-sufficient chemical pulp mills and enabling carbon neutral biomass-based heat and power production. In 2021, we set the target of enabling 100 percent carbon-neutral pulp and paper production for customers by 2030, and in 2023, we reached that target seven years in advance. In addition, our target is to reduce CO<sub>2</sub> emissions by 80 percent in our own operations and 20 percent in our supply chain by 2030. Valmet has also analyzed the potential long-term climate-related physical and transitional risks and their financial impact on its operations and business environment with different climate scenarios to support strategy and the capability of adapting to and mitigating climate change.



# Progress on Sustainability360° agenda

MATERIAL TOPIC	TARGET	KEY PERFORMANCE INDICATOR	2023 (2022)	PROGRESS DESCRIPTION	RELEVANT SDGS	
<b>Environment</b>						
Climate	20 percent reduction of CO <sub>2</sub> emissions from supply chain by 2030 <sup>1</sup>	CO <sub>2</sub> emissions from purchased goods and services (Scope 3 category 1), 1,000 tCO <sub>2</sub> e	1,736 (2,237)	In 2023, Valmet's absolute CO <sub>2</sub> emissions from direct purchased goods and services decreased by 22 percent.		
		CO <sub>2</sub> emissions from transportation (Scope 3 category 4), 1,000 tCO <sub>2</sub> e	166 (114)	In 2023, Valmet's absolute CO <sub>2</sub> emissions from transportation increased due to mergers. We continued to develop freight planning by referring ocean freight over air transportation. The number and weight of our air shipments decreased by 12.5 percent compared to 2022.		
		Number of suppliers engaged	78 (14)	In 2023, as part of the Valmet Climate Program, we engaged 78 suppliers to support them to reduce energy consumption and CO <sub>2</sub> emissions. All key and main suppliers of physical goods, around 150 suppliers, will be engaged by the end of 2024.		
	80 percent reduction of CO <sub>2</sub> emissions from own operations by 2030 <sup>1</sup>	% reduction in Scope 1 and Scope 2 (market-based) CO <sub>2</sub> emissions, 1,000 tCO <sub>2</sub> e	-51 (-34)	In our own operations, emissions from fuels, heating, and electricity in Valmet's offices and production units around the world have decreased by 41 percent since the baseline year 2019. During 2023, all electricity in Finland and Sweden, representing 60 percent of Valmet's total consumption, was purchased as carbon neutral.		
Environmental efficiency	Enable 100 percent carbon-neutral production for our customers by 2030	% of technologies enabling carbon-neutral production	100	The target of enabling carbon-neutral production for all Valmet's pulp and paper customers – was achieved well ahead of schedule in 2023 for customers with access to fossil-free energy sources. The work continues by developing solutions that do not depend on the energy source and improving the energy efficiency of the current technologies.		
		10 percent reduction in energy consumption from own operations by 2030 <sup>1</sup>	% reduction in energy consumption	-8.6 (-7.7)	Implementation of improvements in energy efficiency continued across Valmet locations, driven through energy management certifications, audits and surveys and focused actions to reduce energy use.	
		75 percent waste from own operations diverted from disposal by 2030 <sup>1</sup>	% waste diverted from disposal	78 (65)	Waste reduction actions continued in locations, with the focus in 2023 on implementing targets and plans in recently acquired and merged operations.	
Circularity	20 percent reduction in water consumption from own operations by 2030 <sup>1</sup>	% water consumption change	+1 (+11)	Water consumption reduction actions continued in locations, with the focus in 2023 on implementing targets and plans in recently acquired and merged operations.		
		35 ecosystem project applications by 2025	Number of ecosystem project applications	21 (10)	As a part of Valmet's Beyond Circularity R&D program, Valmet is creating an ecosystem to innovate, renew and enable customer industries in the shift to carbon neutrality and to facilitate the green transition. In 2023, 21 ecosystem project applications were submitted within the program.	
<b>Social</b>						
Engaged workplace	Increase engagement by 1 percentage point by 2023	OurVoice 2023 Valmet engagement index, % engaged	70 (69)	Valmet carried out its sixth OurVoice employee survey in 2023. In total, 80 percent of employees participated in the survey. Overall employee engagement improving slightly, reaching the goal set for 2023.		
		Increase the share of women in science, technology, engineering and mathematics (STEM) positions to 12 percent by 2023	% of women in STEM positions	11.9 <sup>2</sup> (12.0)		We continued to work towards our target in 2023. During the year, we participated in local events e.g., in Finland, where we participated in several Shaking up tech events held at universities and aimed at inspiring young women and gender minorities to consider technology as a study field and career choice.
		Elimination of high-consequence injuries by 2030	Number of injuries leading to permanent disability or more than 6 months' absence from work	Employees 4 (5) External workers 3 (2)		In 2023, two injury prevention programs were launched on hand safety and working at heights. Our minimum safety standards in 12 high-risk activities were also updated during the year.
Health and Safety	Four HSE walks, inspections and conversations per manager per year in 2025	Number per manager per year	8.7 (4.7)	We have personal targets and provided instruction and training to support managers in more visible safety leadership. The number of HSE walks and other activities that promote a strong safety culture increased significantly.		
		Four HSE event reports per employee in 2025	Number per employee each year	3.2 (2.6)	Everyone is continuously encouraged to keep a strong safety mindset and remain aware of unsafe situations and report them. HSE event reporting increased during the year.	
Corporate Citizenship	Continue implementing social responsibility programs in all Valmet Areas through sponsorships and donations to local communities and affected stakeholders.	Monetary value of sponsorships and donations, EUR k	327 (415)	Valmet's sponsorships and donations and related Social Responsibility programs focus on supporting non-profit organizations, in areas where Valmet operates, in the following key themes: "Towards the future with science," "Protecting the planet for next generations" and "Equal opportunities for wellbeing."		
<b>Governance</b>						
Ethical business practices	100 percent of white-collar employees completed Valmet's Code of Conduct e-learning course by 2025	% of white-collar employees completed the Code of Conduct e-learning course	89 <sup>2</sup> (87)	In late 2023, Valmet updated its Code of Conduct. In 2024, Valmet will focus on promoting and informing about the updated Code and related training to old and new Valmetees to be able to reach the target of 100% by 2025.		
		80 percent of employees work according to certified quality, environment, health and safety management system by 2025	% of employees working in locations certified to the ISO 9001:2015, ISO 14001:2015, and ISO 45001:2018 standards	ISO 9001:2015: 82 (85) ISO 14001:2015: 77 (78) ISO 45001:2018: 75 (75)		In 2023, four new locations were certified and the Flow Control business line certificate merged to Valmet's global multisite ISO certificate, which now covers total 142 locations. However, overall certification coverage decreased due to the integration of uncertified acquired operations.
		One human rights impact assessment per year until 100 percent personnel in high-risk countries covered by 2025	% of personnel covered by human rights impact assessment in high-risk countries	84 (79)		Since 2017, as a part of Valmet's human rights due diligence process, Valmet has conducted five human rights impact assessments in its locations located in high-risk countries. These five impact assessments in Thailand, Indonesia, China, India and latest in Poland covers 84 percent of Valmet's personnel in high risk countries.
Sustainable supply chain	Minimum 40 supplier sustainability audits conducted per year	Number of supplier sustainability audits	43 (45)	We reached the target with 43 conducted supplier sustainability audits with a third-party auditor to monitor suppliers' compliance with Valmet's Sustainable supply chain policy.		
		95 percent of suppliers by spend have signed Valmet's Sustainable Supply chain policy by 2025	% of suppliers by spend signed Valmet's Sustainable Supply Chain policy	91 (82)	We continued to screen our existing suppliers in 2023. By the end of 2023, 91 percent of our existing suppliers had signed the policy.	
Transparent reporting	Dow Jones Sustainability Index membership	Inclusion in Dow Jones Sustainability Index	Yes (Yes)	In 2023, Valmet was included in the Dow Jones Sustainability World and Europe Indices (DJSI) for the tenth consecutive year.		
		Leadership level score in CDP Climate Change	CDP score	A (A-)	Valmet was included on best A -list in CDP's Climate 2023 ranking.	
	EU Taxonomy aligned activities	% of Valmet's net sales (turnover), Capex and Opex taxonomy-aligned	Turnover: 5 (5) Capex: 1 (2) Opex: 1 (2)	In 2023, Valmet had taxonomy-eligible activities in the following economic activities: CCM 3.1 Manufacture of renewable energy technologies, CCM 3.6 Manufacture of other low-carbon technologies, CE 4.1 Provision of IT/OT data-driven solutions, and CE 5.1 Repair, refurbishment and remanufacturing.		

<sup>1</sup> Baseline 2019.

<sup>2</sup> Not including employees from the new Tissue Converting business unit. This applies also to internal mobility and other personnel figures on pages 54–55.

# Environmental

We enhance circularity and environmental efficiency and reduce CO<sub>2</sub> emissions throughout the value chain. Valmet aims to enable fully carbon-neutral production for its customers by 2030.

## Circularity

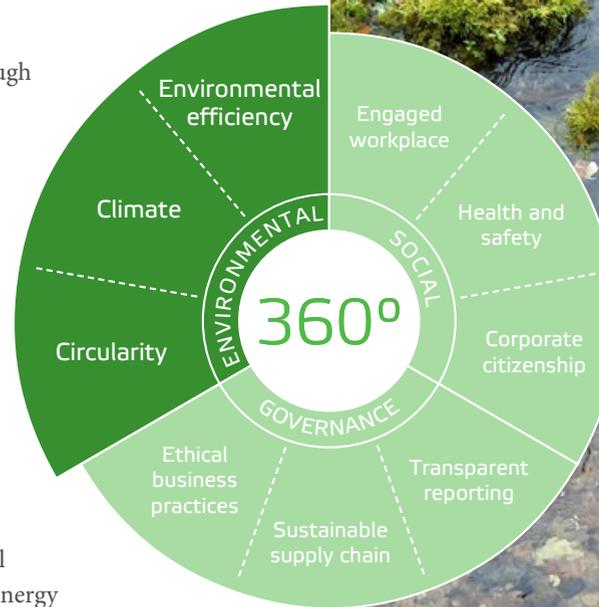
- We enable our customers to apply circularity through longer circulation, closed cycles, and the use of renewable and recycled raw materials.
- We constantly increase the resource efficiency of our own processes and maximize the use of recycled materials in our technology.

## Climate

- Our climate program includes ambitious CO<sub>2</sub> emissions reduction targets and concrete actions for the whole value chain for 2030.
- We aim to reduce CO<sub>2</sub> emissions in our supply chain by 20 percent and in our own operations by 80 percent.
- We also target enabling 100 percent carbon neutral production for our customers and improving the energy efficiency of our current offering by 20 percent.

## Environmental efficiency

- We continuously enhance environmental efficiency in our own operations and with our suppliers.
- Our process technology, automation and services are designed to improve raw material, energy, water and chemical efficiency.



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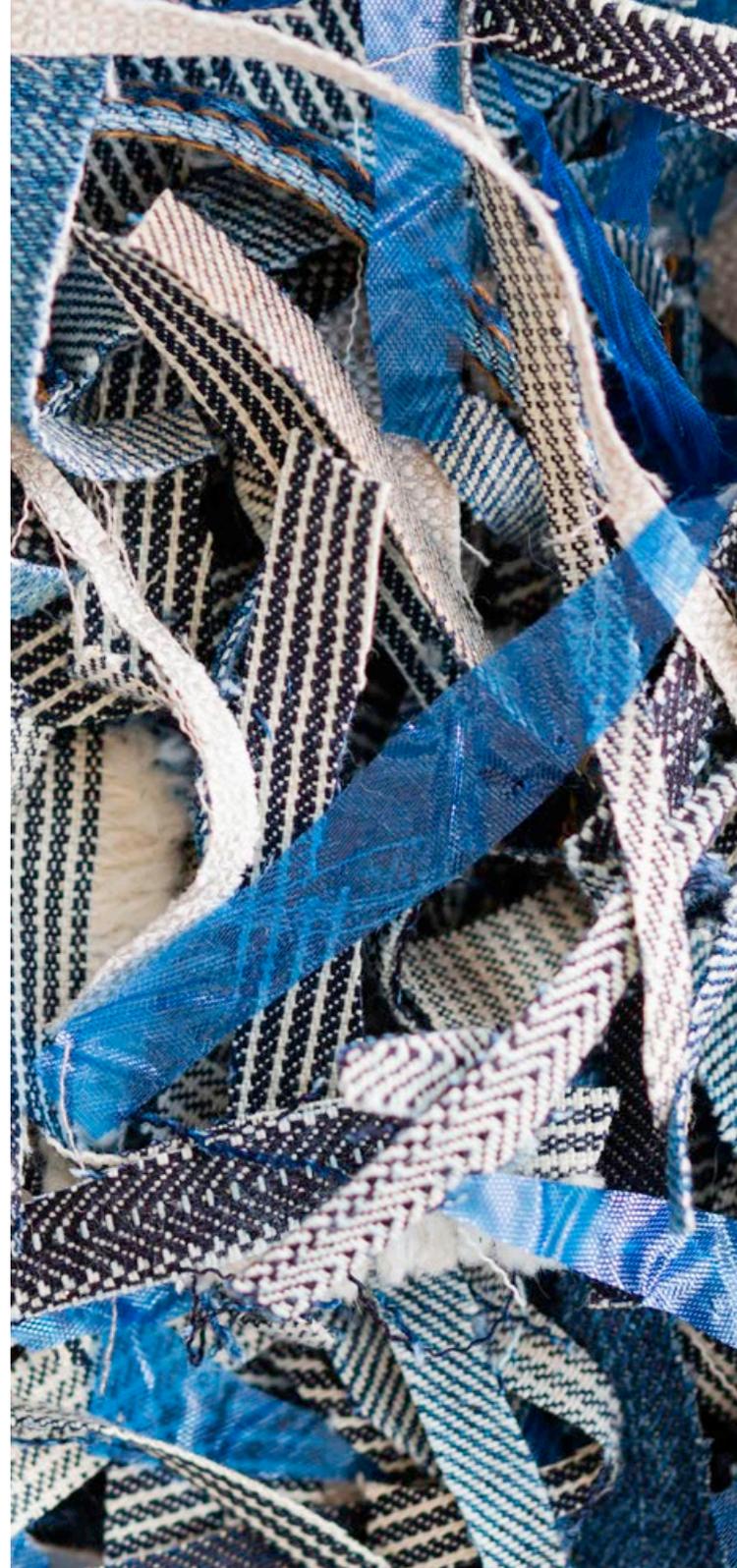
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## ENVIRONMENTAL Circularity

Circularity is essential for creating a sustainable future for us, our stakeholders and society. The fundamental idea of circularity is embedded in our mission: Converting renewable resources into sustainable results. In 2023, we continued to implement Beyond Circularity, the R&D program to accelerate the green transition.

Circularity is an integral part of Valmet's solutions for pulp, paper and energy production. For several decades, Valmet has been systematically enhancing circularity in its customer industries with the help of its process technology, automation solutions and services offering, in its own operations and in its supply chain.

We play a key role in helping our customers adopt circular economy practices in their operations. Furthermore, in 2023, we took various actions to reduce waste, improve recycling and close process cycles in the use phase of our technologies.

### Valmet's solutions for more sustainable textile production and replacing fossil chemicals

With our solutions, customers can use and recover energy, water and chemicals more efficiently or minimize waste by using production sidestreams from other applications, processes or even industries. Our energy technologies enable the conversion of waste to energy, and our comprehensive services and automation help customers utilize these technologies for decades.

Valmet is playing a strong role in the textile industry revolution and sees novel cellulose-based textiles and fiber-to-fiber textile recycling as the solution for more sustainable and circular textile production. Valmet delivered key technology for refining, washing, bleaching and drying to Renewcell's textile recycling plant in Sundsvall, Sweden, started up in 2022. During 2023, the production of the plant was being ramped up, and it is planned to further increase the capacity in stages.

Furthermore, Valmet has focused on commercializing new biomass conversion technologies such as lignin extraction technology for replacing fossil chemicals and pyrolysis for liquid biofuel solutions. For instance, a LignoBoost XS™ plant was delivered to Mercer Rosenthal Lignin Center in Germany, where the extracted lignin is used to develop various bio-based materials that can replace fossil raw materials. The Mercer Lignin Center was inaugurated in August 2023 and is the first facility of its kind in Germany. In addition, several customers in South America have tested lignin extraction with Valmet's transportable LignoBoost pilot during the year.

**Valmet sees novel cellulose-based textiles and fiber-to-fiber textile recycling as the solution for more sustainable and circular textile production.**

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# In 2023, we continued to implement Beyond Circularity, the Valmet-led R&D program and partner ecosystem to accelerate the green transition.

The joint venture between Valmet and Metsä Group's innovation company Metsä Spring creates sustainable solutions for the world's packaging needs. Novel molded fiber products are manufactured from wood fiber from northern woods and are a great option for replacing plastic. Since the demand for molded fiber products is growing fast, this new technology offers Valmet a good opportunity to enter a new market with its molded fiber technology, Valmet 3D Fiber. In 2023, Valmet and Metsä Group's 3D fiber demo plant was announced as Prize Winner in the category of potential innovations in the Quality Innovation Award competition.

## Accelerating green transition with Valmet's R&D Beyond Circularity program

In 2023, we continued to implement Beyond Circularity, the Valmet-led R&D program and partner ecosystem to accelerate the green transition. Circularity is at the core of the program and its ecosystem, and its targets are closely connected with Valmet's technology vision 2030 and Climate Program – Forward to a carbon-neutral future. The program will further strengthen our R&D work to develop process technologies, automation and services that utilize renewable materials, as well as recycled waste and sidestreams.

The program has generated a lot of interest. More than 220 partners have already joined the program's ecosystem, and we're working on 22 joint projects funded by Business Finland or the EU. The program has also progressed at a good speed

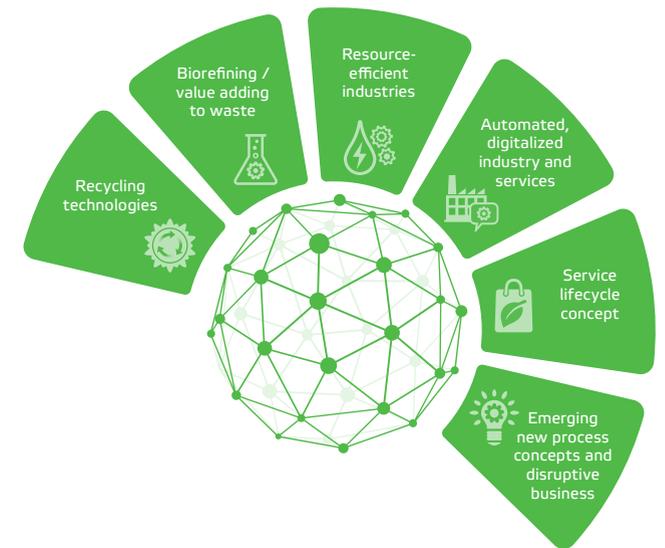
internally at Valmet. More than 80 internal R&D projects from all our business lines have been accepted for the program.

The program is implemented through seven streams: program management, recycling technologies; bio-refining/value adding to waste; resource-efficient industries; automated and digitalized industry and services; service lifecycle concepts; emerging new process concepts and disruptive business. The target of the "Biorefining/value adding to waste" stream, for example, is to develop technologies for turning biomaterials and waste into valuable products and replacing fossil-based raw materials. This is to support our customers in converting biomass into other products such as biofuels, biochemicals and biomaterials. In the "Recycling technologies" stream, we focus on developing recycling technologies and are currently actively working on areas such as textile, plastics and panelboard recycling.

In September 2023, we hosted an ecosystem event "Growing forward together" in Tampere, Finland, with over 180 ecosystem partners, Valmet R&D professionals and stakeholders. The inspiring day included updates about the program, a keynote speech, and a deep-dive panel discussion about ecosystem opportunities and challenges, collaborating at the workshops and networking.

## Circular economy in everyday operations

Valmet offers services and technologies for the pulp, paper and energy industries. By refurbishing, rebuilding and maintaining



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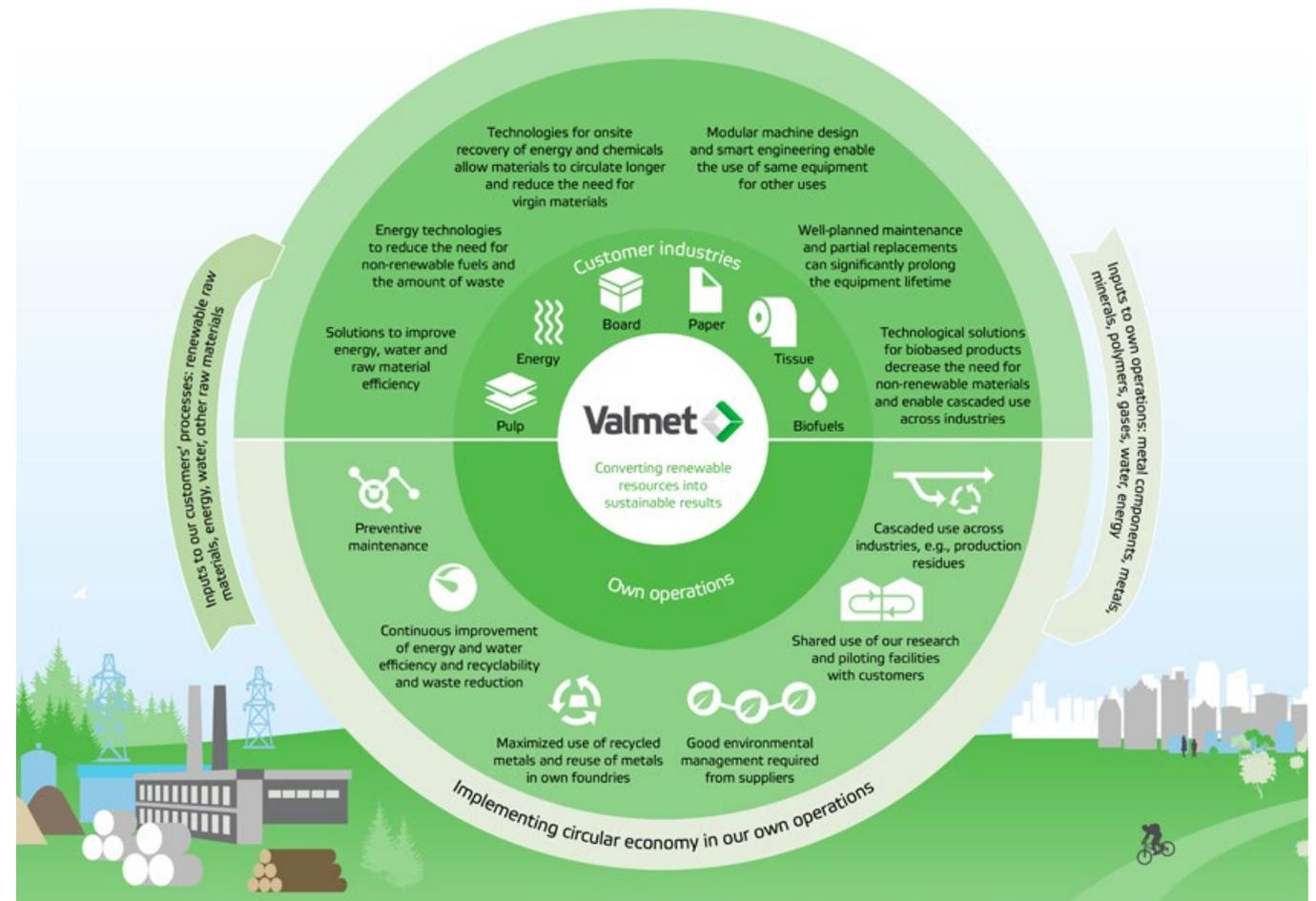
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the equipment, Valmet enables longer lifecycles for customers' equipment and processes. Paper machine modernization, for example, aims to improve the performance of the machines. Extending the lifecycle helps the customer to significantly lower their environmental footprint – at the same time improving operational results.

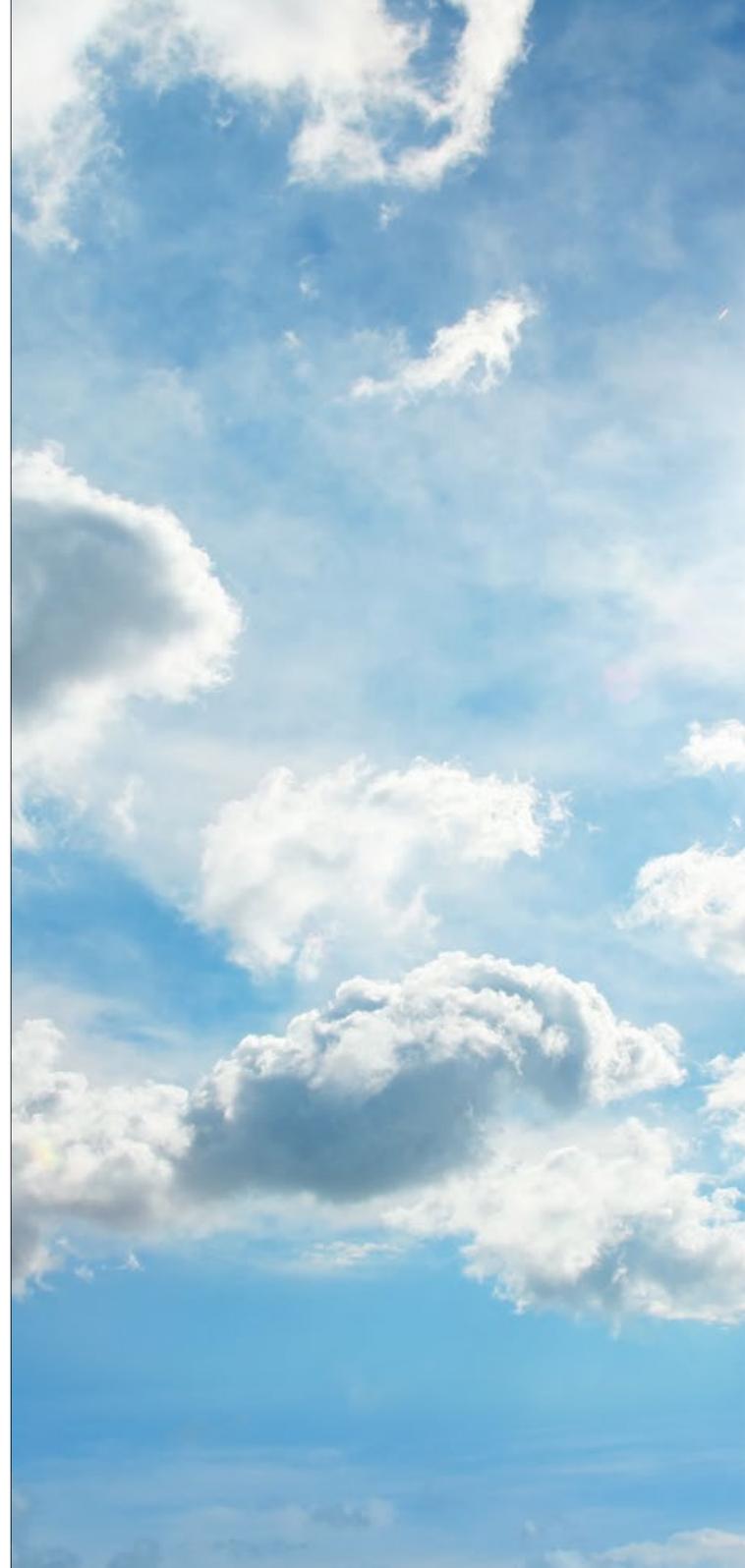
An important part of the circularity work at Valmet is our take back, exchange and reconditioning programs. Our global network of workshop services reconditions everyday rolls, refiners, feeders, shafts and screens, extending the lifecycle for our customers. We also have exchange programs, for example, where winder units are rebuilt and upgraded. In addition, about 1,300 tonnes of refiner segments and 3,000 winder slitters are taken back for recycling each year. In 2023, Valmet successfully undertook industrial-scale pilot recycling of used press felts. During the recycling process, the felts are turned into plastic pellets.

All Valmet foundries have targets for the use of recycled metal. In 2023, the share of recycled steel and iron in Valmet's foundries was 75 percent. During the year, we also continued the cascading of fabrics production sidestreams for reuse in other industries. For example, the plastic pellets produced from used fabrics or production sidestreams can be used in demanding applications such as electronics enclosures, furniture parts and vehicle components. The most sustainable way to handle excess material is to find ways to utilize it as such. An example of such an innovation is the pulling clamps that are used to install shoe press belts on paper and board machines – we now manufacture them utilizing belt production sidestreams. Over the past three years, the amount of waste in Valmet's fabrics production has been reduced by 30 percent.



› GreenAro seeks to replace fossil feedstocks

Replacing fossil feedstocks with renewable carbon sources is a key theme in advancing the green transition within the chemical industry. Photo credit: VTT



## ENVIRONMENTAL

# Climate

Valmet believes that technology plays a key role in mitigating climate change and global warming. During 2023, the company continued to progress well towards the targets set in its Climate Program for the entire value chain by 2030. The target of enabling carbon-neutral production for all Valmet's pulp and paper industry customers was achieved in 2023, ahead of schedule.

Climate change and global warming are significant challenges that are driving companies to rapidly transform and reduce their carbon dioxide (CO<sub>2</sub>) emissions. Valmet's ambitious Climate Program – Forward to a Carbon Neutral Future – was launched in 2021 with concrete targets for the entire value chain to address these challenges.

Using 2019 as the baseline, the program aims to reduce CO<sub>2</sub> emissions by 80 percent in our own operations and by 20 percent in the supply chain by 2030. For the use phase of Valmet's technologies, we target the improvement of the energy efficiency of our current offering by 20 percent. The other target for the use phase – enabling carbon-neutral production for all Valmet's pulp and paper customers – was achieved well ahead of schedule in 2023 for customers with access to fossil-free energy sources. The work continues by developing solutions that do not depend on the energy source.

In 2023, we also continued to strengthen supplier collaboration and engagement and transform our own operations. Valmet's

climate targets have been approved by the Science Based Targets initiative, and Valmet plans to achieve them without emission compensation. The efforts are aligned with the Paris Climate Agreement 1.5-degree pathway and the United Nations Sustainable Development Goals.

### Continued progress in the second full year of the program

The Climate Program has been well received by Valmet's stakeholders. It is an integral part of our Sustainability360° Agenda and is therefore included in the company's strategy and related annual planning.

In 2023, the implementation of the program continued. The comprehensive Climate Program e-learning course for Valmetees, initially launched in 2022, was further promoted during the year. It has received overwhelmingly positive feedback from participants across the organization, supporting them in understanding the impacts of climate change on our business environment and the actions we and our customers are taking to decarbonize the pulp and paper industry.

### Supplier collaboration: the key to full-speed emission reduction

We have defined several actions in Valmet's supply chain to reach the emissions reduction targets set, such as increasing the share of recycled steel in Valmet's products. Two thirds of the steel used in our foundries is already recycled, and about half the steel that our top 10 raw-material suppliers deliver to us is recycled. In 2023, we also continued to develop freight planning to reduce transportation emissions by preferring ocean freight over air transportation, for example. Compared to 2022, the number and weight of our air shipments in 2023 decreased by 12.5 percent.

# During 2023, all electricity in Finland and Sweden, representing 60 percent of Valmet's total consumption, was purchased as carbon neutral.

The highest emitting suppliers among our supplier base have been identified, and as part of Valmet's Supplier Sustainability engagement program, they are being engaged in a CO<sub>2</sub> emissions reduction effort. By the end of 2023, more than 90 suppliers had committed to reducing their emissions. The target is that all key and main suppliers of physical goods, around 150 suppliers, will be engaged by the end of 2024. Suppliers are offered concrete tools such as e-learning material, a CO<sub>2</sub> calculator and a best practice library to support their transition towards low-carbon operations.

## Continued transformation towards low emissions in our own operations

In our own operations, emissions from fuels, heating and electricity in Valmet's offices and production units around the world have decreased more than 40 percent since the baseline year 2019. Valmet is driving quickly toward a low-carbon future by replacing fossil fuels, purchasing CO<sub>2</sub>-free electricity and district heating, implementing energy efficiency improvements in all locations and promoting low-carbon commuting. We also continue to extend the use of digital tools and to further develop remote ways of working that reduce business travel emissions.

During 2023, all electricity in Finland and Sweden, representing 60 percent of Valmet's total consumption, was purchased as carbon neutral. In addition, many individual locations have made the switch to low-carbon electricity and district heating alternatives. Valmet continued multiple energy efficiency investment projects such as LED lighting upgrades and the installation of heat recovery systems.

Behavior matters, and Valmet employees are encouraged to engage in everyday energy saving actions such as turning equipment and lights off, for example, at lunch. Our warehouses and factories are also transitioning into more sustainable operations through the use of biofuelled and electric forklifts, as well as solar panel installations. To promote low-carbon commuting, Valmet enables electric vehicle charging for employees and, starting in Finland and Sweden, a bike benefit. Valmet also provides commuting buses in larger locations in China and Brazil.

## Enabling carbon-neutral processes for customers

Most of the carbon footprint of our value chain comes from the use phase of our technologies. Since the target of enabling carbon-neutral production for all Valmet's pulp and paper customers with access to fossil-free energy sources was achieved in 2023, the focus has been on the customers that still don't use bioenergy or carbon-neutral electricity. Together with the customers, Valmet is trying to find ways to use different energy sources with different equipment and machinery.

The other target for the use phase is to improve the energy efficiency of our current offering by 20 percent. The Valmet delivered Metsä Fibre Kemi bioproduct mill in Finland, which started up in 2023, is a showcase example of an energy-efficient state-of-the-art mill. The steam integration between evaporation and cooking decreases the steam consumption in evaporation by about 10 percent. The pulp dryer has several new features reducing energy consumption, and the energy-

efficient high-power recovery boiler enables the mill to produce 1.5 times more electricity than it needs for its own operations, making it 250 percent self-sufficient in electricity production.

For energy customers, Valmet enables carbon-neutral heat and power production with its biomass-based energy solutions. For chemical pulp mills Valmet offers several solutions that don't require any fossil fuels. The flue gas condensing solutions, delivered, for example, to Helen's Vuosaari powerplant in Finland, combine emissions reduction, heat recovery and water use reduction. In addition, our R&D program Beyond Circularity successfully continued during the year, utilizing a large ecosystem of companies to shift customer industries to carbon neutrality and facilitate the green transition.



➤ **A unique climate action in Tampere, Finland**  
Naistenlahti 3 biopower plant produces carbon-neutral district heating for Valmet's facilities nearby, supporting Climate Program targets.

# Valmet's Climate Program

## TARGETS BY 2030 FOR THE ENTIRE VALUE CHAIN

### SUPPLY CHAIN

**-20%**

CO<sub>2</sub> emissions reduction<sup>1</sup>

#### MAIN ACTIONS

- Actions to reduce emissions in direct purchasing and logistics include
- increased share of recycled steel in products
  - supporting high CO<sub>2</sub> intensive suppliers in reducing emissions
  - redesigning lightweight steel products, introducing alternative raw materials and optimizing component manufacturing methods
  - centralizing spend to selected suppliers offering low-carbon transportation
  - continuing to develop freight planning

### OWN OPERATIONS

**-80%**

CO<sub>2</sub> emissions reduction<sup>1</sup>

#### MAIN ACTIONS

- Actions to reduce emissions include
- replacing fossil fuels with renewables in locations
  - purchasing CO<sub>2</sub>-free electricity and district heat
  - implementing energy efficiency improvements in locations
  - promoting low-carbon commuting and reducing business flights

### USE PHASE OF VALMET'S TECHNOLOGIES

**-20%**

Further reduced energy use of Valmet's current technologies<sup>1</sup>

#### MAIN ACTIONS

- Further enhancing energy efficiency of Valmet's existing pulp and paper technologies by 20 percent as part of Valmet's continuous R&D work

**100%**

Carbon-neutral production

- Providing customers with Valmet's current energy solutions, which enable carbon-neutral energy production by using biomass
- Developing new technologies to enable entirely carbon neutral pulp and paper production when the customer is using carbon-neutral electricity

## KEY ACHIEVEMENTS IN 2023

### SUPPLY CHAIN

- The level of recycled steel has been mapped at Valmet's foundries and at Valmet's biggest plate suppliers, and is already above the global average
- Suppliers with very energy intense operations have been identified and will be engaged to reduce CO<sub>2</sub> emissions. More than 90 suppliers have been engaged so far.
- A specific climate change e-learning has been launched for suppliers to support their transition toward low carbon operations
- The share of lower emission transportation such as sea instead of air transportation has continued to increase
- New supplier innovation process and tool for collecting ideas including CO<sub>2</sub> emission reductions has been deployed globally

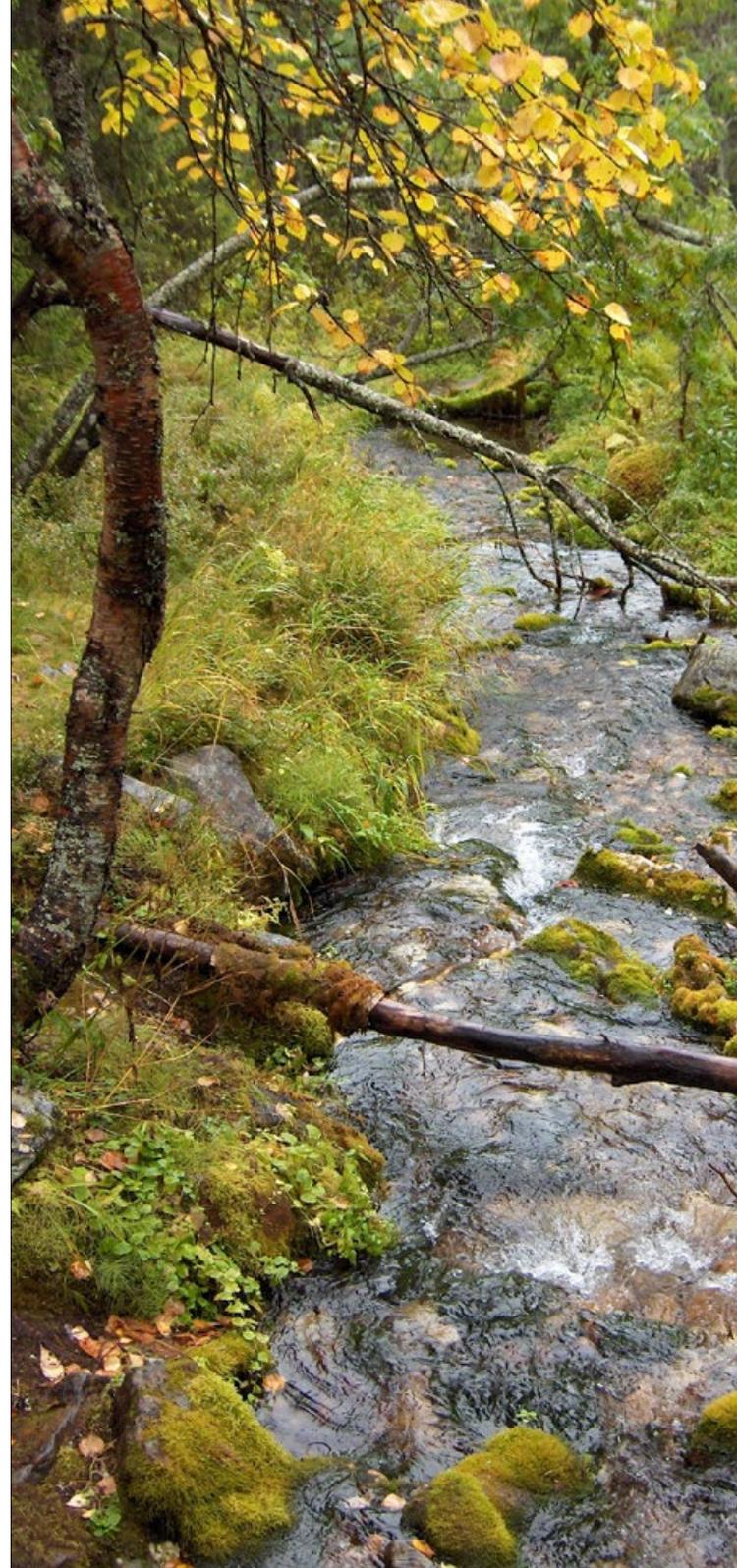
### OWN OPERATIONS

- Valmet reached 100 percent carbon-neutral electricity purchases in Finland and Sweden
- 60 percent of Valmet's annual electricity use is now CO<sub>2</sub>-free as implementation of CO<sub>2</sub>-free electricity purchasing plan has started using guarantees of origin certificates
- Energy audits have been used to discover, plan and implement energy efficiency improvements in Valmet's locations around the world
- Multiple efficiency investment projects have been implemented in selected Valmet locations
- Electric vehicle charging stations for employees have been installed in several Valmet locations

### USE PHASE OF VALMET'S TECHNOLOGIES

- When our Climate Program was launched in 2021, we set the target of enabling 100-percent carbon-neutral production to our pulp and paper customers by 2030 by developing new process technologies and improving the energy efficiency of our current offering. We have progressed well with this target, and today, our technologies already enable carbon-neutral board, tissue and paper production for customers who have access to fossil-free energy sources. But our work does not stop there. We continue to develop solutions that do not depend on the energy source.
- For energy customers, we have already long enabled carbon-neutral heat and power production with our biomass-based energy solutions
- Furthermore, many of our customers' chemical pulp mills using our technologies are bioenergy self-sufficient, promoting carbon-neutral pulp production

<sup>1</sup> Baseline 2019.



## ENVIRONMENTAL

# Environmental efficiency

We continuously enhance environmental efficiency in our own operations, our offering and in our customers' processes: We do more with less.

Doing more with less is at the core of our mission to convert renewable resources into sustainable results. Our process technologies, automation solutions and services are designed to improve customers' raw material, energy, water and chemical efficiency and reduce emissions.

Personal actions matter, and we encourage everyone in Valmet to understand and improve the environmental impact of their work. By promoting best practices and achievements through local environmental events, active internal communications and regular HSE conversations in teams, we raise engagement in efficiency actions.

### Environmental program speeding up progress in Valmet's own operations

We strive to continually improve the environmental footprint of our more than 285 locations. We are on track for our target of 80 percent of employees working in locations certified to the ISO 14001:2015 environmental management system by 2025. In 2023, we certified four more locations to the environmental standard, increasing the total number to 87 locations and the coverage to 77 (78) percent of employees. We firmly believe ISO certification supports the implementation of sound and standardized environmental management practices in our operations around the world.

To guide environmental improvement, we have had an environmental program in place since 2009. It sets ambitious

targets for reducing energy, water and waste in production facilities by 2030. So far, we have achieved a nine percent reduction in energy consumption from our 2019 baseline\*. This development is driven by steady investment in more efficient production processes. We systematically deploy the best available technology such as 3D printing. Expanding from our additive manufacturing technology centers in Sundsvall, Sweden and Helsinki, Finland, we opened a center in Tampere, Finland during 2023, optimizing metal use in new product development. During the last three years 50 projects, such as LED lighting upgrades and heat recovery solutions have received energy efficiency funding, resulting in 3.1 percent annual energy savings.

Process upgrades and optimization also play a role in our efficiency actions. Our fabrics production unit has optimized laser cutting and initiated a cast-to-order project to reduce excess casting width in belt production, improving material efficiency significantly. In our roll workshop in Columbus, the USA, we finalized an upgrade of the covering area in 2023, leading to significant water and energy savings. We also include environmental efficiency requirements in our real estate guidelines for new facilities and renovations.

### Reducing waste to landfill and hazardous substances

We map our waste streams to find circularity opportunities through material reuse, recycling and recovery. Since 2019, we have increased the share of waste reused or recycled to 78 percent from the 2019 baseline of 57 percent. For example, 10,600 tonnes of foundry sand are reused by partners in road construction and land stabilization, and the wood waste of our Helsinki plant is reused to make chipboard for furniture. We are actively shifting to more sustainable packing materials by

\*2019 baseline, including mergers and acquisitions during 2020-2022.

minimizing packaging, reducing plastics and increasing the use of renewable materials.

We operate our facilities to prevent pollution and apply precautionary measures to protect the environment. We continuously monitor and manage the use of hazardous substances, substituting with less hazardous alternatives whenever possible.

**Environmental efficiency plays a key role in the innovation process**

Customer needs and global megatrends such as pursuing a more resource-efficient and cleaner world drive our R&D work. Valmet's process technology, automation and services are designed to improve raw material, energy, water and chemical efficiency and reduce emissions.

Environmental evaluation and criteria are in-built into the R&D and Product and Service lifecycle management processes and into the R&D performance reporting. We work in close cooperation with customers, suppliers, universities, research centers, and other partners and stakeholders when it comes to environmental performance and conduct benchmarking to address customer needs and to progress towards our targets. We utilize feedback and engage the whole value chain in the long-term development of our strategic technology approach, where environmental efficiency is one of the key areas.

In tissue making, for example, we have been able to reduce water consumption by 80 percent over the last 30 years. Through the installation of Valmet's technologies, there are many options for paper producers to lower freshwater consumption and improve wastewater quality. Increasing water efficiency in the industry brings both environmental and socioeconomic benefits. To further reduce the environmental impact of tissue production, Valmet's hybrid technology can offer up to 25 percent fiber savings compared to conventional technology.

**Focusing on resource-efficient solutions**

Valmet launched a R&D program and ecosystem called Beyond Circularity in 2022. It targets the transformation of waste and emissions into valuable resources for sustainable growth and to accelerate the green transition. The program is implemented through seven streams, of which "Resource efficient industries" is one. In this stream, we are researching new technologies to find more energy-efficient solutions. For example, in the POWER Beyond project Valmet is in cooperation with Aalto University and other industrial partners looking to discover ways for making paper machine rolls more energy efficient by reducing friction.

We are also developing solutions to close material loops in industrial processes to enhance material and water efficiency, to utilize low-energy heat lost from industrial processes through extended energy integration, and to use materials with high energy content as energy storage in the industry as a part of smart electricity networks. Additionally, we are developing sustainable new solutions for machine components.

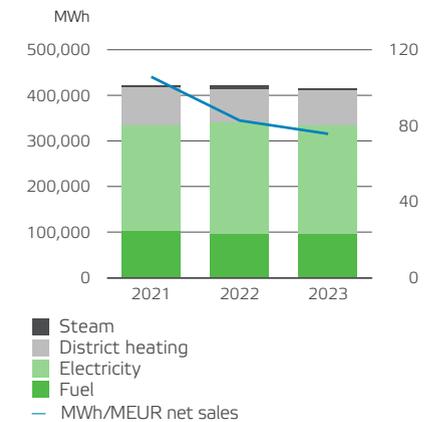
> **READ MORE:**  
[Environmental program](#)



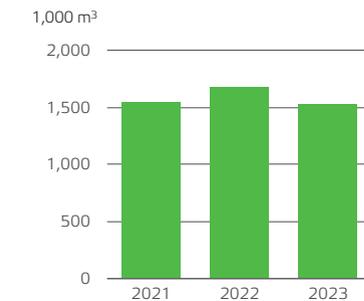
> **POWER Beyond seeks to minimize friction through aerostatic solutions**

In collaboration with partners, Valmet is looking for ways to make paper machine rolls more energy efficient.

**Energy<sup>1</sup>**



**Water consumption<sup>1</sup>**



**Waste reused or recycled, %**



<sup>1</sup> Data from Körber Business Area Tissue acquisition is excluded. Read more about the energy, water and waste data in the [GRI Supplement](#) pp. 26-31.

# Social

We promote an engaging work environment, are committed to the health and safety of our people and partners, and strive to be a responsible corporate citizen.

## Engaged workplace

- We continuously look for ways to increase employee engagement and develop the best talent.
- We value diversity and promote an inclusive and well-managed work environment.

## Health and safety

- We invest in a positive safety culture and leadership.
- We constantly improve our HSE processes and practices toward our common goal of zero harm.
- We collaborate with our customers and partners to improve contractor and customer site safety.

## Corporate citizenship

- We participate in selected local programs under the following themes: Toward the future with science; Protecting the planet for the next generations; and Equal opportunities for wellbeing.
- We work in close cooperation with selected universities and research organizations globally.





SOCIAL

## Engaged workplace

Valmet's more than 19,000 experts around the world work together to live our shared values, execute our must-wins and strategy, and move our customers' performance forward. In 2023, we ran our sixth employee engagement survey, which gives us important feedback to make Valmet an even stronger and more connected work community.

### Dialogue and engagement

Valmet recognizes the importance of active dialogue in the workplace and promotes practices which create dialogue in different forms. We have guidance and agendas to support and encourage regular one-to-one meetings and run structured and documented annual and mid-year review discussions. For team communications, we have guidance for running successful team meetings, as well as annual strategy team discussions, which include a different winning team discussion topic each year. In 2023, the topic was refocusing our work practices to ensure our ways of working support us in working smarter and smoother in the future.

We use the OurVoice engagement survey to systematically drive engagement. Valmet ran its sixth employee engagement survey during the year. In total, 80 percent of employees participated in the survey. The overall results showed a continued positive trend in employee engagement, reaching 70 percent favorable (69%), which is 14 percentage points higher than when Valmet ran its first survey nearly ten years ago. Valmet also follows a performance excellence index, 72 percent (74%), and a leadership index, 77 percent (-). The previous focus areas of support for change and maintaining work-life balance both improved.

Team discussions and action planning are an important part of the OurVoice survey cycle. Every team is tasked with hosting a team discussion to plan actions based on the results. Focus areas are also chosen for each business line, area and Valmet as a whole. The global focus areas relate to the swift handling of customer problems and concerns and senior leadership attention to wellbeing.

**80%**  
OURVOICE RESPONSE RATE

**70%**  
OVERALL EMPLOYEE  
ENGAGEMENT

**Performance culture**

We continuously look for ways to strengthen our high performance culture. We encourage feedback as a tool for development and use our performance reward programs and other short-term incentives to recognize individual and team achievements. We also make targeted process improvements to strengthen our pay for performance practices. For instance, we added color-coded recommendations to the manager view to help guide salary increases to high performers, especially those at the low end of the pay range.

For managers and HR, we continued to promote the completion of a three-part compensation training which covers base salary, job leveling and short-term incentives. Our goal is to improve and align our knowledge and understanding of compensation and benefits topics across the organization. This is important to ensure we follow our remuneration principles of driving high performance, competitive remuneration to retain talent with the best fit, and fairness and sustainability. In 2023, we also initiated a project to support pay equity analysis in preparation for the upcoming EU pay transparency directive.

**Manager development**

The manager role at Valmet works to boost engagement, drive performance, and support the development of teams and individuals. We use the forward for managers trainings to develop managerial skills in line with this role. Forward for managers sessions are intensive, day-long training sessions which focus on Valmet's Way Forward, our manager role and leadership skill development dynamically and interactively. In total, more than 1,800 managers participated in at least one training session during the year. These training sessions are also part of manager onboarding.

In 2023, we renewed our OurVoice leadership index to better understand how well managers fulfill the various elements of the manager role and get feedback for manager development. The leadership index results were at a very good level, with opportunities for learning and development, holding people accountable and acting according to values being the highest scoring items.

11.9%

WOMEN IN STEM POSITIONS

85

NATIONALITIES

**DIVERSITY AND INCLUSION**

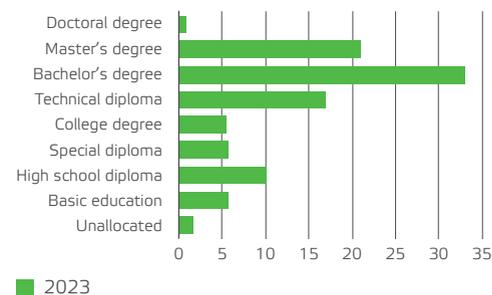
We continuously work to build and develop diverse teams of different backgrounds, genders and cultures. We believe diversity creates a more dynamic and fun work environment and leads to new ideas and more competitive products.

We remain committed to actively promoting STEM (science, technology, engineering and mathematics) as an attractive area of study for girls and women of all ages. In 2023, we took part in several events in Finland and Sweden targeted at women and girls in engineering and started an apprentice program for female engineers in India. Other diversity and inclusion (D&I) initiatives included awareness on unconscious bias in recruitment for managers in North America, an inclusive excellence and empowerment program pilot in India, and "time for diversity" and "respect individuality and value differences" campaigns in South America and China, both of which focus on employee experiences with D&I.

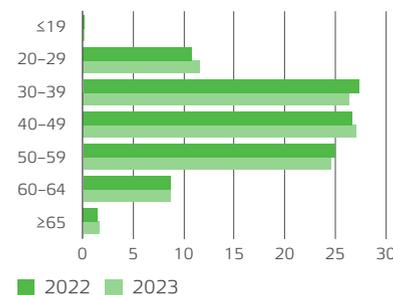
Globally, we incorporated a new D&I question in the OurVoice employee survey. Our three-year D&I roadmap evolved to include a stronger focus on creating common Valmet-level materials to benefit all of Valmet. We also plan to provide training to better equip managers to lead D&I.

**PERSONNEL DATA**

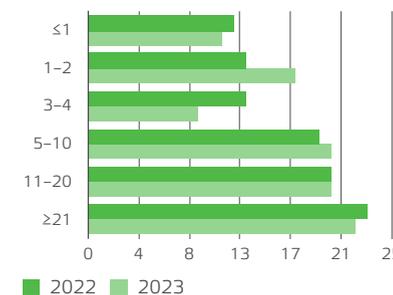
**Education structure, %**



**Age structure, %**



**Service years, %**



**Capabilities, competence and learning**

Valmet's global training programs are designed to strengthen our strategic capabilities and accelerate Must-Win execution. Valmet ran seven global training programs during the year – Forward Together, Leading through Lean, Champions in Services, Innovation Pathways, Sales Journey, Excellence in Project Management, and World Class Supply Chain. In total, close to 700 Valmeteers attended one of the programs.

Global programs are complemented by local and business-specific competence development initiatives, such as technology school in Europe, competence transfer programs in China and Asia-Pacific, and a chief engineer program in paper. In 2023, we stressed the importance of continuous learning to drive personal and organizational success and changed the focus of our mid-year review discussions to learning and development, with questions on development, career aspiration and work-life balance.

**Building a strong talent pipeline**

We work to ensure we have a strong internal and external talent pipeline. We achieve this through active internal mobility, a strong employer brand, a variety of university collaboration and trainee programs, and a well-functioning recruitment process. In addition, we run a talent review process to evaluate potential, identify successor candidates and assess exit risk. In 2023, we recruited more than 2,000 new employees, reached 43 percent internal mobility, and received several employer recognitions, including being named the most attractive employer among engineering professionals in Finland in a study by Universum.

The target of our university and school collaboration is to attract the best talents for Valmet's current and future needs. Our target is to bring in diversity, knowledge, skills and fresh ideas for growth and innovations, and we do this by raising awareness of Valmet as a potential employer, promoting traineeships and job opportunities and ensuring the right competence and talent pipeline for the future. In 2023, we offered a variety of trainee programs, including our popular summer trainee program in Finland, with nearly 500 trainees this year.



**WORK-LIFE INTEGRATION**

At Valmet, we support successful work-life integration throughout a person's career with us. Work-life integration is Valmet's view on creating balance between work and the rest of life, taking into consideration different life situations, generational needs and local preferences. We maintain a toolbox in our intranet with various training and best practice examples to support successful work-life integration.

In 2023, we kicked off a new initiative called Refocus, which is aimed at reviewing and adjusting work practices to ensure they support people in the best possible way. The initiative focuses on learning new habits that support working smarter and smoother together. Refocus concentrates on six core aspects of work life: movement, meeting practices; hybrid work; work-life balance; prioritization; and communication and collaboration tools. Additionally, work-life balance, and specifically "recovery from work" was a topic in this year's mid-year review discussions.

Work-life integration is an area where local influence is often the strongest and most impactful. For example, an Enjoy Life + Health program covering psychological orientation, stress, anxiety and health continued in South America, a bike benefit was introduced in Finland, time management sessions were offered in Japan, and a lunch delivery program was set up in Poland for employees working at the office.



➤ **Forward Together – Valmet's strategic leadership program**  
The program brings senior management and future leaders together to co-create, learn and develop Valmet Forward.



SOCIAL

# Health and safety

Through a safety-first mindset paired with a commitment to robust standards, we strive to ensure everyone returns home healthy and safe every day. In 2023, we launched Life Saving Rules, campaigned for lifting and confined space safety, and further enriched safety culture through new communication and training efforts.

Valmet is committed to protecting the health and safety of its employees, customers, partners, and the communities where we operate. We regularly invest in a positive safety culture,

collaborate with customers and partners to strengthen site safety, and improve safety-related processes and practices.

We achieved the lowest ever Total Recordable Incident Frequency (TRIF) for employees and external workers. At the end of 2023, total recordable incident frequency rate (TRIF) for own employees was 3.0 (3.2 at the end of 2022) and external workers was 4.6 (4.7). We saw fewer high-consequence injuries in 2023, as well as the highest ever health and safety event reporting rates for employees.

### Valmet Life Saving Rules

Since 2012, Valmet has operated with explicitly defined Minimum Safety Standards. These standards encapsulate the main rules that must be followed in daily work to stay safe. We update these rules to further raise safety standards. This included updates in 2022, which we implemented during 2023 through training, safety briefings and global safety audits.

With the aim of eliminating work-related fatalities and life-changing injuries, in 2023, we further introduced non-negotiable Valmet Life Saving Rules, a set of four rules deemed critical to saving lives. They were developed based on injury analysis across Valmet and discussions with local Valmet health and safety committees.

Launched in the fall of 2023 as part of our annual Health and Safety Awareness Week, the Valmet Life Saving Rules are obligatory for all Valmet employees. Through webinars, a new training course and campaigns we will keep these rules at the forefront of every workday.

> **READ MORE:**  
[Health and safety program](#)

Number of health, safety and environmental walks, inspections and conversations, 2023

# 15,500

Health, safety and environmental committee coverage, % of employees, 2023

# 92%

Valmet in brief

President and CEO’s review

This is Valmet

Business reviews

Strategy

Sustainability

Sustainability360<sup>o</sup> agenda

Progress on Sustainability360<sup>o</sup> agenda

Environmental

> Social

Governance

Contacts

**Safety campaigns for lifting and confined spaces**

Every year, Valmet conducts safety campaigns to raise awareness of specific work conditions that present a high risk of injury. In 2023, we had two injury prevention themes, lifting and confined spaces.

The sheer number of lifts and the extreme weights of the loads at Valmet workshops and customer sites make lifting one of the most significant safety risks workers regularly face.

The “Lift safely!” campaign raised awareness of the risks involved in lifting operations. In addition to reiterating minimum safety standards that must always be followed, we highlighted key best practices such as additional planning for non-routine lifts, and lifting-specific authorizations.

The “Be Safe in Every Space” campaign focused on recognizing the sources of potential safety hazards of confined spaces. The campaign included topics like physical restrictions to entry and exit that require special planning, communication and support, and addressing atmospheric hazards like poor ventilation and the presence of toxic or explosive gases. We also highlighted in the campaign the need to obtain a valid work permit before entering a confined space. This critical requirement is included in the Valmet Life Saving Rules.

**Process and practice for improved safety culture**

During 2023, Valmet worked on streamlined new analytics tools for health- and safety-related data. This is a significant development project that will improve our tracking and reporting to better support a proactive safety culture. More easily sharable and comparable statistics will help drive quality and agency across the company.

Better tools, creating impactful communication and sharing best practices played a central role in building our safety culture throughout 2023. In addition to launching new global procedures and templates for minimum safety standards, we focused especially on agency. Through dialogue about roles and

responsibilities, we encourage managers and supervisors to put safety standards and practices to work.

Improving safety dialogue included adding new standard safety content to managerial presentations that are used from the executive level to local teams. The new content, intended to raise awareness of the managers’ role in promoting safety and spark discussions, has been well received. We also saw more sharing of local best practices on how to conduct safety communications with site managers and with teams.

**New training and events for contractor safety**

We continue to get excellent results from our regular contractor health and safety day events. The contractor days in South America showcased a new risk perception laboratory. The lab offers a physical, hands-on yet safe way to explore common safety hazards.

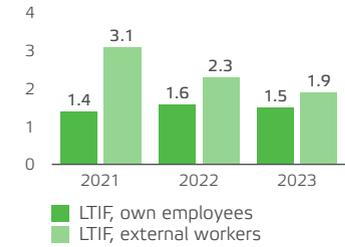
As part of an ongoing effort to ensure site supervisors can create and manage safe site operations, in 2023, we piloted a new contractor safety webinar. We also created a new e-learning course about safety leadership on project sites specifically for Valmet project and site organizations.



> **Significant health and safety improvements over a decade**

Thanks to systematic actions, Valmet has eliminated more than 200 employee injuries from its operations every year.

**Lost time incident frequency, own employees and external workers<sup>1</sup>**



<sup>1</sup> LTIF reflects the number of injuries resulting in an absence of at least one workday per million hours worked.

**VALMET LIFE SAVING RULES**



Protect yourself against falling when working at heights



Never be under suspended loads or lift loads over people



Verify equipment isolation and zero energy before work begins



Obtain a valid work permit before entering a confined space



## SOCIAL

# Corporate citizenship

With operations in over 40 countries and a global network of partners and stakeholders, Valmet bears significant responsibility as a corporate citizen.

Following the expansion of Valmet's global social responsibility program at the end of 2022, we continued to implement the local projects in 2023.

As a global company and a recognized sustainability leader in our industry, we work in a multicultural environment, where companies may have a range of potential social impacts. Our growing global presence emphasizes our responsibility to local communities around the world.

Our corporate citizenship efforts aim to build awareness of Valmet as a positive contributor to the societies where we operate. With global operations, we directly provide employment and business opportunities and indirectly build wellbeing in local communities.

## In 2023, Valmet continued implementing local projects.

### Continued focus on local needs and actions

Valmet expanded its social responsibility program at the end of 2022 with new local projects covering all the geographical areas in which Valmet operates. The program aims to increase the local impact of donated funds, enhance Valmet's visibility in communities and open up more opportunities for local Valmeteers to engage in program activities. The program is based on three themes promoting science, nature and equal opportunities: "Towards the future with science," "Protecting the planet for next generations" and "Equal opportunities for wellbeing."

In 2023, Valmet continued implementing local projects started at the end of 2022. In Thailand, we renovated facilities at three rural schools in collaboration with the Mirror Foundation to enhance the children's learning conditions. In Poland, we donated a school bus to support the important work at the Dąbrówka orphanage, enhancing the children's wellbeing and opportunities for education. In South America, Valmet's support is channeled to two organizations: to Gerando Falcões in Brazil, which organizes sports and games for the disabled, and Gente de la Calle in Chile that brings help for the homeless. In March, Valmet made a donation to the Make-A-Wish® Foundation in North America. The foundation grants wishes to children diagnosed with critical illnesses.

In June 2023, Valmet donated spare parts as humanitarian aid for a power plant customer in Ukraine. The donation was expected to support the continuity of electricity supply, secure essential services and improve the lives of civilians in areas impacted by the war.

**Partnering with universities to drive development**

Valmet has a long history of mutual cooperation with universities in the fields of engineering and mathematics, for example. Valmet's research and development work is complemented by a network of world-leading research facilities and universities. In recent years, that cooperation has intensified, with several Valmet employees completing their doctoral research as a part of their work and personal development. Please check Engaged workplace on page 53 for more information about developing talent.

Valmet is actively expanding its collaboration and engagement with students and universities in Finland and abroad, supporting new trainee programs, establishing a global concept for university cooperation and working with middle schools to raise the profile of engineering studies among students.

For instance, in China, Valmet continued its over 14 years' tradition of granting scholarships to undergraduate students in three industry universities and set up new scholarships for postgraduate students in five industry universities in collaboration with the China Education Development Foundation (CEDF). Through the scholarships, Valmet wants to further support industrial talent development and promote innovation in the pulp, paper and energy industries.



> **Local social responsibility projects around the world**

Valmet donated a car to Dąbrówka Orphanage in Poland as part of the global social responsibility program in the EMEA area.

**INCOME TAXES (10 LARGEST COUNTRIES)**

EUR MILLION	2023
USA	38.9
Finland	38.3
China	13.1
Brazil	12.0
Sweden	6.4
Canada	5.4
Chile	3.6
Italy	2.3
India	2.1
Germany	1.9

**DISTRIBUTION OF ECONOMIC VALUE ADDED TO OUR STAKEHOLDER GROUPS**

Direct economic value generated

**EUR 5,613 million**



Economic value distributed



Operating costs: **EUR 3,796 million**  
 Employee wages and benefits: **EUR 1,292 million**  
 Payments to providers of capital: **EUR 293 million**  
 Payments to government: **EUR 135 million**  
 Support for non-profit organizations: **EUR 0.33 million**



Retained in business

**EUR 96 million**

**Support for non-profit organizations, % EUR 327,208 in total**



- Youth activities 65%
- Science, research and education 17%
- Environmental protection and nature conservation 1%
- Others (community, culture, sports) 16%

# Governance

We follow ethical business practices, ensure a sustainable supply chain and report transparently.

## Ethical business practices

- Our daily operations are guided by Valmet's Code of Conduct and related policies.
- We have integrated sustainability criteria into our compliance and due diligence processes.
- We have a standardized global way of working in accordance with the ISO standards for quality, environment, and health and safety.
- We have a systematic approach to sustainability management.

## Sustainable supply chain

- We have a comprehensive sustainable supply chain process, including supplier risk assessments and audits.
- We continuously work to improve the transparency of our supply chain.
- We have a global supplier sustainability engagement program to drive transformation.

## Transparent reporting

- We are an acknowledged industry leader in sustainability and promote transparent and assured reporting on our progress and impacts.





## GOVERNANCE

# Ethical business practices

We strive to ensure that all operations are carried out in a socially responsible manner. In 2023, we updated our Code of Conduct, launched an Ethics and Compliance network, and conducted a social impact assessment in Poland.

We strive for globally consistent and transparent management practices to enable all our stakeholders to reliably assess the sustainability of our operations and development. Valmet also supports and promotes selected international guidelines and principles and is a signatory of the UN Global Compact.

### Code of Conduct

Our Code of Conduct guides the actions and decisions of both Valmet's employees and its partners. It sets the standards of responsible behavior and creates a uniform foundation for ethical business transactions and work assignments. At the end of 2023, the Code of Conduct was updated, and the implementation will start in 2024.

Our Code of Conduct applies to everyone, everywhere, every day. To reinforce this message, Valmet has an Ethics and Compliance Program in place that focuses on every employee understanding their responsibility in ensuring that Valmet does business ethically and legally. This starts with ethical leadership and leading by example.

The implementation of the program continued in 2023 with the launch of an Ethics and Compliance network, consisting of chosen Valmeteers from all business lines and areas. The network members help disseminate the Ethics and Compliance

message within their own organizations and act as local contacts for Ethics and Compliance topics.

Valmet is committed to complying with all applicable laws and regulations, including applicable sanctions regulations. As one of our main goals is ensuring that we work legally and ethically, in 2023, we made a new Know Your Business Partner process to support this goal. The process helps us act in accordance with applicable regulations and manage risks related to trade sanctions, corruption and other third-party risks.

Valmet runs a global Privacy Program based on European Data Protection Principles and applicable national regulations. The Privacy Program includes awareness training, the creation of common tools and practices, data protection risk assessments, and data protection by design and default implementation.

We have e-learning courses on the Valmet Code, Anti-Bribery and Corruption, Competition Law Compliance, and Data Privacy. By the end of 2023, 89 percent of Valmet employees had completed the mandatory Code of Conduct e-learning course.

### Comprehensive human rights due diligence

We respect human rights as set out in the Universal Declaration of Human Rights and international conventions. Valmet is furthermore committed to the United Nations Guiding Principles on Business and Human Rights and expresses its engagement in its Human Rights Statement.

We have comprehensive due diligence processes to monitor and manage social impacts related to our own operations and our supply chain. The due diligence processes include location-level social impact assessments, the supplier sustainability

management process, sustainability impact assessments and their findings, action plan creation and monitoring progress.

A sustainability impact assessment is carried out in the event of a significant change in Valmet's business operations, such as establishing a new legal entity in a new country, expanding operations in an existing country, expanding existing operations significantly or expanding operations to manufacturing. The target is to identify local sustainability risks related to our business operations and to ensure we can operate in accordance with our Code of Conduct and related policies.

The location-specific social impact assessment process ensures our social policies and procedures are effective and adequate. Valmet has been focusing on its locations in high-risk countries and has conducted impact assessments in Thailand, Indonesia, China and India since 2018, and most recently in Poland in late 2023. Majority of the findings were related to the position of service providers and sub-contractors, collective bargaining opportunities and wages. Our target is to continue conducting impact assessments to cover our own operations in high-risk countries.

Valmet has identified the following eight salient potential human rights impacts in our own operations and supply chain: occupational health and safety; working conditions; freedom of association and collective bargaining; discrimination; forced labor and child labor in the supply chain; migrant workers; corruption and bribery; access to grievance mechanisms and remedy. This means we safeguard the rights of children and ensure we are not complicit in child or forced labor. We promote decent working conditions for all employees and sub-contractors in accordance with ILO (International Labour Organization) conventions. We also respect our employees' right to freedom of association and collective bargaining and encourage an open and active dialogue with our employees and employee representation bodies.

**Certified operations equal well-managed business**

Valmet's Global Management System (GMS) provides a common platform for quality and HSE management in all operations. We believe that multisite certification of our operations assures our customers and other stakeholders that we have a process-oriented and standardized global way of working in accordance with the international standards for quality (ISO 9001:2015), environment (ISO 14001:2015), and health and safety (ISO 45001:2018) management systems. Our target is that at least 80 percent of our people will work in operations certified to all three standards by 2025. By the end of 2023, that target had already been reached for quality (9001:2015).

We made significant progress toward the 80 percent goal during 2023, as eight locations were added with new or expanded certifications, and Flow Control's certification was merged with Valmet's certification. Altogether, 36 Valmet locations were audited by an external auditor during the year.



> **Valmet's Code of Conduct**

Valmet's Code of Conduct was updated at the end of 2023, and the implementation will start in 2024.

**MANAGEMENT SYSTEMS (% OF HEADCOUNT)**

SHARE OF CERTIFIED OPERATIONS, 2023

**82%**

ISO 9001:2015  
Quality Management System

**77%**

ISO 14001:2015  
Environmental Management System

**75%**

ISO 45001:2018  
Occupational Health and Safety Management System

**Global Management System provides a common platform for quality and HSE management in all operations.**



## GOVERNANCE

# Sustainable supply chain

Ensuring sustainability in our supply chain is essential to implementing Valmet's sustainability agenda. During 2023, we accelerated supplier engagement, started a joint sustainability model for industrial investment projects with customers and prepared for the Carbon Border Adjust Mechanism (CBAM) regulation.

Valmet's supply chain aims to be a world-class operation that delivers sustainable and competitive results through close collaboration with suppliers. As many production phases of Valmet are handled by its suppliers, the supplier network is extensive, with thousands of suppliers around the world. Valmet systematically develops and integrates sustainability into its supply chain processes. Through supplier engagement, we can together continuously develop performance and ensure transparent and sustainable operations.

For identifying, assessing, and managing various sustainability risks, Valmet has a global supplier sustainability management process.

### Ensuring sustainability through screening and auditing

Valmet's supplier sustainability management process is an integral part of Valmet's due diligence process. It includes gates and controls to ensure Valmet cooperates only with suppliers that share the same ethical principles and ideology of responsible business practices. The supplier evaluation process is mandatory in evaluating new suppliers before starting cooperation.

In 2023, 99 percent of new direct suppliers went through the supplier approval process and were automatically screened for sustainability. In addition, all new suppliers are evaluated through a sustainability risk assessment based on the country of purchase and the purchasing category. The outcome determines the actions needed in the remaining steps of the process: self-assessment; and sustainability auditing.

In addition to sustainability screening of new suppliers, we continued to screen our existing suppliers. The target is that 95 percent of suppliers by spend will have signed Valmet's Sustainable Supply chain policy by 2025. By the end of 2023, 91 percent of our existing suppliers had signed the policy.

To ensure compliance with the requirements of our Sustainable Supply Chain Policy and with related local and international laws, we have a systematic auditing framework in place. So far, Valmet has conducted around 400 supplier sustainability audits globally. We conduct a minimum of 40 supplier audits annually. In 2023, we conducted 43 supplier sustainability audits in 15 countries with a certified third-party auditor. In general, most audits take place in countries where the potential negative environmental and social impact is increased, such as China, India, Indonesia, Thailand, Mexico and Brazil.

Valmet has identified increased sustainability risks at customers' sites, where many of our contractors and their subcontractors operate. In 2022, we developed a specific auditing process for site works suppliers to mitigate risks on sites, monitor subcontractors' compliance more efficiently and to further increase the visibility of our supply chain beyond tier 1 suppliers. In 2023, we continued to audit site works suppliers.

We also continued to focus on ensuring the right timing and good quality of the audit follow-up process and the verification of agreed corrective actions. The findings of these audits were mainly related to human and labor rights, and health and safety. Of all corrective actions agreed with suppliers in 2023, 72 percent had been completed and verified by the end of the year. Since 2015, 97 percent of all actions agreed with suppliers as part of the auditing process had been completed and verified by the end of 2023.

**Accelerated supplier sustainability engagement**

To strengthen the cooperation with suppliers in the area of sustainability, Valmet has implemented a Sustainability Engagement Program. The program is based on the principles of Valmet's Sustainable Supply Chain Policy and an integral part of our Supplier Relationship Management (SRM) program.

The program monitors suppliers' performance and provides hands-on support to help them take the most critical steps to improve sustainability practices. In 2022, we started to engage selected suppliers with the most CO<sub>2</sub>-intensive operations in Valmet's Climate Program.

In 2023 we engaged 78 suppliers as part of the Climate Program's supply chain CO<sub>2</sub> emissions reduction activities. So far altogether more than 90 suppliers globally have been engaged, and the target is that all key and main suppliers of physical goods, around 150 suppliers, would be engaged by the end of 2024.

Suppliers are engaged through in-person discussions and sustainability training that encourages them to implement change. Valmet works with suppliers to find ways to improve sustainability and reduce CO<sub>2</sub> emissions. For example, actions may be buying CO<sub>2</sub>-free electricity, increasing the share of recycled materials, or investing in environmentally friendly HVAC systems and more efficient production machinery. After the initial engagement, Valmet conducts regular follow-up discussions.

**VALMET'S GLOBAL SUPPLIER SUSTAINABILITY MANAGEMENT PROCESS**

**Required from all suppliers**

**SUSTAINABLE SUPPLY CHAIN POLICY**

All suppliers are required to sign Valmet's Sustainable Supply Chain Policy



**SUSTAINABILITY RISK ASSESSMENT**

All suppliers are evaluated through a five-level sustainability risk assessment



**Required based on a supplier risk assessment**

**SUPPLIER SELF-ASSESSMENTS**

A poor result in the risk assessment leads to a supplier sustainability self-assessment



**SUSTAINABILITY AUDITS**

A poor result in the self-assessment leads to an audit

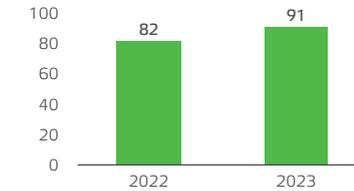


**Major regulatory changes**

During 2023, we also prepared for the new EU Carbon Border Adjust Mechanism (CBAM) regulation, which came into force in October 2023. It is an instrument for mitigating carbon leakage. CBAM aims to put a fair price on the carbon emissions emitted during the production of carbon-intensive goods that are imported to the EU.

Implementation of CBAM includes quarterly reporting obligations to the European Commission of the actual embedded CO<sub>2</sub> emissions of the CBAM goods. For Valmet, it means reporting emissions of the imported steel and aluminum goods from suppliers outside the EU to the EU and internal deliveries between Valmet locations from outside the EU to the EU. The implementation of CBAM was kicked off in 2023. We also see it as a way to further promote the urgent need of reducing emissions within our supply chain, and it will support Valmet in reaching its Climate Program supply chain CO<sub>2</sub> emissions reduction target.

**Suppliers who have signed Valmet's Sustainable Supply Chain policy, % by spend**



**> Collaboration across the value chain**

Valmet and Metsä Group are jointly developing a comprehensive operating model to ensure sustainability in technology and maintenance investments.



## GOVERNANCE

# Transparent reporting

Valmet promotes openness and transparency in its reporting practices. As the regulatory requirements are increasing, the focus on reporting compliance is a priority for Valmet. In 2023, we continued to develop our data capabilities and reporting processes to prepare for future sustainability reporting requirements.

Valmet aims to maintain globally consistent and transparent management and reporting practices. We participate in several third-party sustainability ratings to help stakeholders evaluate our sustainability performance.

### Preparing for future reporting requirements

The sustainability reporting landscape is rapidly changing. More reporting regulation and frameworks have been introduced, and stakeholders expect these new requirements to be followed.

Valmet has been reporting its sustainability performance according to the Global Reporting Initiative (GRI) standards since 2014. Valmet is a committed participant in the UN Global Compact (UNGC) and its Ten Principles on human rights, labor, environment, and anti-corruption. Since 2014, we have reported on our sustainability performance annually in line with the UNGC's Communication of Progress process.

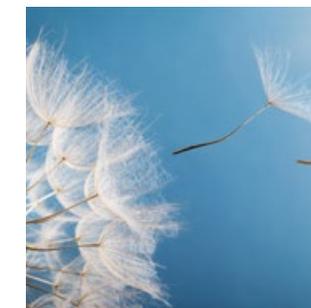
In 2018, we started to report selected sustainability indicators according to the EU Non-Financial Reporting Directive (NFRD). Since 2020, we have also reported climate-related information according to the Task Force on Climate-related Financial Disclosures (TCFD) recommendations. Valmet

reported financial figures according to the EU's taxonomy regulation for the first time in 2021, and the work has continued since.

In 2023, Valmet prepared for the upcoming EU Corporate Sustainability Reporting Directive (CSRD) by conducting a double materiality assessment in which we identified material ESG (Environmental, Social, Governance) topics for Valmet from the impact, risks and opportunities perspective. Based on the material topics, we assessed and analyzed the remaining gaps in our current reporting and created action plans to be compliant with the CSRD-related reporting requirements during 2024.

To support current and future ESG reporting needs, we also started preparing for an ESG data development program with the aim of improving our data capabilities and reporting systems and to assess reporting tools.

> **READ MORE:**  
[Valmet's TCFD report](#)



> **Valmet included in the Dow Jones Sustainability Index for the tenth consecutive year**

The DJSI evaluates companies' ESG performance and the capacity to continuously improve.



## ANNUAL REVIEW 2023

### Valmet in brief

### President and CEO's review

### This is Valmet

### Business reviews

### Strategy

### Sustainability

Sustainability360<sup>o</sup> agenda

Progress on Sustainability360<sup>o</sup> agenda

Environmental

Social

> **Governance**

### Contacts

### Valmet recognized as a sustainability leader

Over the years, Valmet has been recognized as a global leader in multiple rankings. In 2023, Valmet was included in the DJSI World and Europe indices for the tenth consecutive year. In 2023, Valmet received the best ranking in the MSCI ESG Ratings, a gold medal in the EcoVadis sustainability assessment and was included in S&P Global's annual Sustainability Yearbook.

Valmet reports to the CDP, an international non-profit organization that assesses climate-related information from companies to manage their environmental impacts and to help investors better understand the financial risks and opportunities that climate change presents to their portfolio companies. Via the CDP Climate questionnaire, Valmet also reports its annual progress against its Climate Program's CO<sub>2</sub> reduction targets, approved by the Science Based Targets initiative (SBTi). In 2023, Valmet received the A leadership level rating in CDP Climate.

# Valmet participates in several third-party sustainability ratings to help stakeholders evaluate its sustainability performance.

## VALMET IS A GLOBAL LEADER IN SUSTAINABILITY

Member of  
**Dow Jones Sustainability Indices**  
Powered by the S&P Global CSA



# Valmet reports 2023



## FINANCIAL STATEMENTS AND REPORT OF THE BOARD OF DIRECTORS 2023

The report includes Valmet's Financial Statements and Report of the Board of Directors for 2023.



## ANNUAL REVIEW 2023

The report covers Valmet's market environment and the progress of its strategy, operations and sustainability in 2023.



## GRI SUPPLEMENT 2023

The report includes Valmet's sustainability reporting indicators and principles, and its alignment with the Global Reporting Initiative (GRI) Standards framework in 2023.



## CORPORATE GOVERNANCE STATEMENT 2023

The report covers Valmet's governance principles and activities, the Board of Directors and management in 2023.



## REMUNERATION REPORT 2023

The report covers Valmet's remuneration principles and remuneration in 2023.

# Contacts

## VISITING ADDRESS

Valmet Oyj  
Keilasatama 5  
FI-02150 Espoo, Finland

## POSTAL ADDRESS

Valmet Oyj  
PO Box 11  
FI-02151 Espoo, Finland

Tel. +358 (0)10 672 0000

firstname.lastname@valmet.com

**WWW.VALMET.COM**

## MEDIA CONTACTS

media@valmet.com

## INVESTOR RELATIONS

ir@valmet.com

## FOLLOW VALMET ON SOCIAL MEDIA

[linkedin.com/company/valmet](https://linkedin.com/company/valmet)

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**Valmet Oyj**

Keilasatama 5 / PO Box 11

FI-02150 Espoo, Finland

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