

Valmet



Annual Review

Progress in operations
and sustainability **2021**



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

We aim to become the global champion in serving our customers.

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Photo: Neles

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Important notice

On July 2, 2021, Valmet announced that the Boards of Directors of Valmet Oyj and Neles Corporation have signed a combination agreement and a merger plan to combine the two companies through a merger.

The merger of Valmet and Neles Corporation ("Neles") and the merger consideration securities have not been and will not be

registered under the U.S. Securities Act of 1933 (the "U.S. Securities Act"), and may not be offered, sold or delivered within or into the United States, except pursuant to an applicable exemption of, or in a transaction not subject to, the U.S. Securities Act.

The information in this report is not directed to, or intended for distribution to or use by, any person or entity that is a citizen or resident of, or located in, any locality, state, country or other

jurisdiction where such distribution or use would be contrary to law or regulation or which would require any registration or licensing within such jurisdiction and it does not constitute an offer of or an invitation by or on behalf of, Valmet, or any other person, to purchase any securities.

A portrait of a middle-aged man with short, light brown hair, wearing round-rimmed glasses, a dark blue suit jacket, a white dress shirt, and a patterned tie. He is looking slightly to the right of the camera with a neutral expression. The background is a blurred office setting with windows and greenery.

Strong year for Valmet with a major strategic step forward

During the year, Valmet was able to grow all its businesses.



Valmet continued its strong performance and consistent development of its operations in 2021. During the year, Valmet was able to grow all its businesses. The very active market demand for our board and paper making technologies continued. We also made several important pulp technology delivery agreements, for example, in Finland, Brazil and China. The market for our services and automation solutions recovered compared to last year and both businesses returned on growth track.

In 2021, Valmet's orders received increased by 30 percent to EUR 4,740 million, and our order backlog at the end of the year was EUR 4,096 million. Net sales increased by 5 percent and amounted to EUR 3,935 million. The comparable EBITA margin was at an all-time high 10.9 percent.

Solid current market and new opportunities in emerging sectors

E-commerce, emerging markets growth, rising living standards and the shift to renewable materials are supporting the demand of Valmet's process technologies, automation and services for pulp, paper and energy sectors. Valmet has an excellent position in the growing market for the conversion of renewable raw materials into sustainable end products, and we are continuously developing and introducing innovations for our customers.

For example, in addition to our traditional markets, there are new emerging opportunities in cellulose-based and recycled textile production, in which Valmet's current pulp and board making technologies can be adapted. As the first important steps in this sector, Valmet made an agreement to supply drying technology to a planned renewable textile fibre factory in Finland, and to supply the main equipment for a planned textile recycling plant in Sweden in 2021. We can also provide textile fiber producers with the full scope of automation solutions and services.

Merging Neles to Valmet a major strategic step

In July 2021, Valmet and Neles announced that the companies had signed a combination agreement and a merger plan to combine the two companies through a merger. The pending combination will be implemented as a statutory absorption merger, whereby Neles will be merged to Valmet. Following the combination, Valmet is expected to become a stronger globally leading company with a unique offering to process industries around the world, consisting of process technologies, services and automation, including automation systems and flow control solutions. The merger is intended to create a platform for further growth of the automation business. The completion of the merger is pending the needed regulatory approvals and is targeted to take place on April 1, 2022.

During the year, we also continued to strengthen Valmet with smaller business acquisitions. In 2021, we especially developed our environmental systems offering with two purchases.

Ambitious climate program introduced, with concrete targets and action plans

In March 2021, Valmet introduced a climate program with concrete targets for our entire value chain, including the supply chain, our own operations and the customer use of our technologies. I have been delighted to see strong commitment to and enthusiasm for this program among Valmet employees, and that we have been able to create concrete roadmaps for achieving the set targets by 2030. Many of Valmet's customers have set CO₂ reduction targets for their own operations, and thus the interest, support and expectations towards our program and our ability to support our customers in their own efforts through this program have been high.

In 2021, Valmet continued to receive recognition for the progress of its sustainability work in various sustainability ratings and was included for the eighth consecutive year in the Dow Jones World and Europe Sustainability Indices.

Moving forward together with the committed Valmet team

The uncertainty in the markets will continue in 2022. The Valmet team has continued to show exceptional resilience and commitment to serve our customers and ensure successful project deliveries in all circumstances. We will continue on this path, prioritizing the safety of our employees and customers, while ensuring the best possible customer experience, both on site and remotely.

I warmly thank all Valmet employees around the world for their excellent work and our partners for their good cooperation during the year. I wish to express my appreciation to all our customers for the trust you have shown in Valmet.

Pasi Laine

President and CEO

Key events in 2021

Q1



Renewcell selects Valmet as the main equipment supplier for its textile recycling plant

January 29, 2021 | Renewcell and Valmet signed a contract for Valmet to deliver the main equipment for Renewcell's planned 60,000-tonne capacity textile recycling plant in Sundsvall, Sweden. This is a major milestone in the establishment of the first commercial-scale textile recycling plant of its kind in the world, which is scheduled to begin operations in the first half of 2022.

Main process islands and automation delivery for Metsä Fibre's Kemi bioproduct mill

February 19, 2021 | Valmet and Metsä Fibre finalized the agreement for the key technology delivery covering all main process islands and automation systems for Metsä Fibre's Kemi bioproduct mill in Finland. The new bioproduct mill will have an annual pulp production capacity of 1.5 million tonnes. It will also produce various other bioproducts. The new totally fossil fuel free mill is scheduled to start up in the third quarter of 2023.



Photo: Metsä Fibre

Valmet introduces its climate program – Forward to a carbon neutral future

March 10, 2021 | Valmet introduced its climate program – Forward to a carbon neutral future – on the company's Capital Markets Day. Valmet's climate program includes ambitious CO₂ emission reduction targets and concrete actions for the whole value chain, including Valmet's own operations, the supply chain, and the use of Valmet's technologies by its customers.



Forward to a carbon neutral future

Q2



Technology for Spinnova-Suzano joint venture textile fibre factory in Finland

May 17, 2021 | Valmet is to supply drying technology to the Spinnova-Suzano joint venture textile fibre factory in Jyväskylä, Finland. The technology is already utilized today in paper and board making, and it is now adapted for cellulose-based textile fibre production. The construction of the factory has started, and it is expected to be completed at the end of 2022.



Photo: Spinnova

Environmental systems business strengthened with two acquisitions

June 10, 2021 | Valmet entered into agreements to acquire EWK Umwelttechnik GmbH, a German company manufacturing and supplying air emission control systems and after-installation services, and ECP Group, a Finnish manufacturer and maintainer of air emission control systems. These acquisitions complement Valmet's customer offering in environmental technologies and related services.

A major pulp and board technology delivery to Klabin in Brazil

June 11, 2021 | Valmet is to supply a large pulp and paper technology delivery to Klabin in Brazil. The order consists of a paperboard making line, a complete new fiberline, including a new Continuous Cooking G3, and a new bleached chemi-thermomechanical pulp line, all with extensive automation scopes and Valmet Industrial Internet solutions. The start-ups are scheduled for the second quarter of 2023.

Q3



Valmet and Neles to merge, creating a leading company with a unique offering for process industries globally

July 2, 2021 | Valmet and Neles announced that they had signed a combination agreement and a merger plan to combine the two companies. The pending combination will be implemented as a statutory absorption merger whereby Neles will be merged into Valmet. The name of the company will remain Valmet. The Extraordinary General Meetings of both companies resolved to approve the merger in September 2021. The completion of the merger is targeted to take place on April 1, 2022.



Photo: Neles

Key pulp technology delivery to Nine Dragons' new Beihai mill in China

August 23, 2021 | Valmet received several pulp technology orders from Nine Dragons for their pulp, paper and board greenfield project in Beihai City, China. The order consists of two complete fiberlines, two bleached chemithermomechanical pulp lines, a recovery boiler and DeNOx scrubbers. The deliveries will be done in phases, and the start-ups are scheduled for 2023.



Q4



Pratt Industries orders the third OptiConcept M board production line for the USA

October 14, 2021 | Valmet is to supply a repeat order of an OptiConcept M board production line for Pratt Industries in Henderson, Kentucky, USA. This will be the third order of the OptiConcept M board production line for Pratt. The start-up of the production line is scheduled for 2023.

New pilot facility opened in Sundsvall, Sweden

October 19, 2021 | Valmet's new Pretreatment BioTrac pilot facility was started up at Valmet's Fiber Technology Center in Sundsvall, Sweden. The purpose of the pilot facility investment is to strengthen Valmet's research and development capabilities within the field of biomass pretreatment and to respond to new market demands for bioenergy, biofuels, and biochemicals.



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

November 15, 2021 | Valmet has been included in the Dow Jones Sustainability Index (DJSI) for the eighth consecutive year. The company was listed both in the Dow Jones Sustainability World and Europe indices. The Dow Jones Sustainability Index evaluates companies' sustainability performance in environmental, social and governance categories.





➤ This is Valmet





Valmet in brief

Valmet is the leading global developer and supplier of process technologies, automation, and services for the pulp, paper, and energy industries. Valmet's net sales in 2021 were approximately EUR 3.9 billion. Our more than 14,000 professionals around the world work close to our customers and are committed to moving our customers' performance forward – every day. Valmet's head office is in Espoo, Finland, and its shares are listed on the Nasdaq Helsinki.



NET SALES
EUR MILLION

3,935



COMPARABLE
EBITA MARGIN

10.9%



PERSONNEL

14,246



COMPARABLE EBITA
EUR MILLION

429

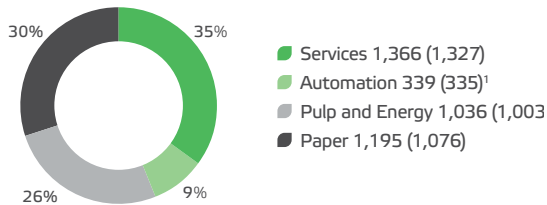


ORDERS RECEIVED
EUR MILLION

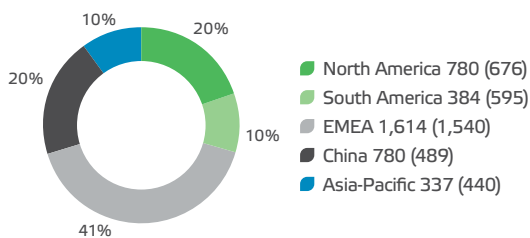
4,740

Key figures

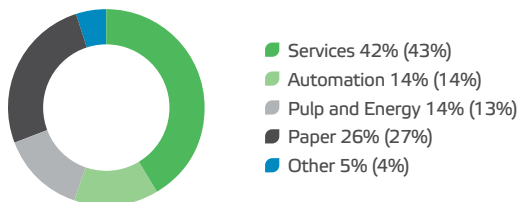
Net sales by business line, EUR million



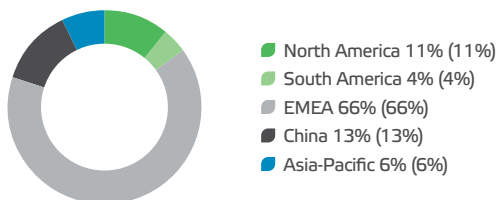
Net sales by area, EUR million



Personnel by business line, %



Personnel by region, %



Financial²

	2021	2020	CHANGE
Orders received, EUR million	4,740	3,653	30%
Services	1,488	1,356	10%
Automation	381	334	14%
Pulp and Energy	1,178	934	26%
Paper	1,694	1,029	65%
Order backlog ³ , EUR million	4,096	3,257	26%
Net sales, EUR million	3,935	3,740	5%
Comparable EBITA ⁴ , EUR million	429	365	18%
% of net sales	10.9%	9.8%	
Operating profit (EBIT), EUR million	399	319	25%
% of net sales	10.1%	8.5%	
Dividend per share, EUR	1.20 ⁵	0.90	33%
Return on capital employed (ROCE) before taxes, EUR million	24%	22%	
Research and development expenses, net, EUR million	82	75	9%

Social

	2021	2020	CHANGE
Personnel ³	14,246	14,046	1%
Total recordable incident frequency (TRIF) ^{3,6}			
Own employees	3.1	3.1	0%
Contractors	6.7	7.8	-14%
Safety committee coverage, % personnel	97	97	0%
Support for non-profit organizations, EUR thousand	309	259	19%
Number of supplier sustainability audits	41	34	21%

Environmental⁷

	2021	2020	CHANGE
CO ₂ emissions ⁸ , 1,000 t	102.7	106.4	-3%
Energy consumptions, GWh	423	378	12%
Water consumptions, 1,000 m ³	1,554	1,408	10%
Waste, 1,000 t	43	44	-4%

¹ Excluding internal net sales.

² Group figures: the formulas for calculation of the key financial figures are presented in the Financial Statements 2021.

³ At the end of the period.

⁴ Comparable earnings before interest, taxes and amortization.

⁵ Board of Directors' proposal.

⁶ TRIF reflects the number of injuries resulting in medical treatment, restricted work or an absence of at least one workday per million hours worked.

⁷ Data for 2021 includes the acquisitions from 2020 for the first time. Acquisitions made in 2021 will be reported from 2022 onwards.

⁸ Scope 1 and 2 (market-based) emissions.

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 14,000 professionals around the world and have customers in 100 countries. We serve our customers with more than 100 service centers, nearly 100 sales offices, more than 40 production units, and 16 R&D centers around the world.

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Market data by area

AREA	MARKET SIZE ¹	MARKET CHARACTERISTICS	VALMET'S POSITION
North America	Target market size: EUR 2.0–2.5 bn	<ul style="list-style-type: none"> • Mature market with large aging installed base creating service demand • Rebuild and new capacity opportunities in board and tissue grades. Capacity closures in printing papers • Continued customer focus on availability, reliability, operating costs and environmental savings in mills • Service, rebuild and upgrade opportunities in pulp 	<ul style="list-style-type: none"> • Net sales: EUR 0.8 bn (20% of total net sales of the company) • Net sales range 2017–2021: EUR 0.6–0.8 bn • Employees²: 1,500 • Leading position in pulp and paper process technology • Well-established position in the services and automation business
South America	Target market size: EUR 1.5–2.5 bn	<ul style="list-style-type: none"> • Service growth driven by demand for more efficient operations, environmental considerations and growing trend of mill maintenance outsourcing • Cyclical process technology project business driven by large pulp mill investments. Continuous opportunities in pulp mill rebuilds and upgrades • Opportunities in board and tissue with new lines and rebuilds • Consolidation of pulp and tissue customers 	<ul style="list-style-type: none"> • Net sales: EUR 0.4 bn (10% of total net sales of the company) • Net sales range 2017–2021: EUR 0.2–0.6 bn • Employees²: 604 • Valmet has a strong position and installed base in pulp mills and services • Continued strong competition from regional players expected in Pulp and Energy, as well as from Andritz in large new pulp mills • Local presence important, especially in Brazil due to customs duties
EMEA (Europe, Middle East and Africa)	Target market size: EUR 5.5–6.0 bn	<ul style="list-style-type: none"> • Valmet's largest area with significant services and technology markets in all Valmet's businesses and a large installed base • Services growth potential through broader service offering, agreements-based business and new value-added solutions to increase customers' productivity and efficiency • Process technology project opportunities in board, tissue, pulp and energy, driven by an increasing focus on sustainability and growth in packaging and tissue consumption 	<ul style="list-style-type: none"> • Net sales: EUR 1.6 bn (41% of total net sales of the company) • Net sales range 2017–2021: EUR 1.5–1.6 bn • Employees²: 9,296 • Leading position in pulp and paper process technology, as well as in biomass boilers in energy • Leading position in the more fragmented services market and in pulp and paper automation
China	Target market size: EUR 2.5–3.0 bn	<ul style="list-style-type: none"> • Growing services market driven by new board and tissue lines, demand for energy savings, efficiency improvements and reliability, and growing trend of mill maintenance outsourcing • Process technology project opportunities in board, tissue, pulp and energy impacted by growing consumption, stricter environmental regulation and demand for clean energy 	<ul style="list-style-type: none"> • Net sales: EUR 0.8 bn (20% of total net sales of the company) • Net sales range 2017–2021: EUR 0.4–0.8 bn • Employees²: 1,911 • Valmet is the leader in pulp and paper process technology and has a strong position in services and the pulp and paper automation market • Strong competition from local and global competitors
Asia-Pacific	Target market size: EUR 2.0–2.5 bn	<ul style="list-style-type: none"> • Large geographical area covering multiple countries with differing market situations and dynamics • Service growth potential in both emerging and mature markets in growing installed base and market share • Process technology project opportunities in rebuilds, grade changes and new capacity in pulp, board and tissue, and in renewable energy projects in selected countries • China's restrictions on imported wastepaper and old corrugated containers, and increasing requirements for environmental permits, impacting investment activity in Asia-Pacific 	<ul style="list-style-type: none"> • Net sales: EUR 0.4 bn (10% of total net sales of the company) • Net sales range 2017–2021: EUR 0.3–0.4 bn • Employees²: 935 • Leading position in pulp and paper process technology, and increasing local presence • Increasing competition from Chinese players moving into the Asia-Pacific region

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

² Includes employees from the Area organization and other employees in the geographical region.

Value creation

INPUTS

Resources we need to create value



Financial

Financial

- Total equity EUR 1,332 million
- Net interest-bearing debt EUR -88 million
- Cash and cash equivalents EUR 517 million



Natural

Natural

- Purchased components (mainly metals-based)
- Purchased raw materials (mainly metals, minerals, polymers and gas)
- Energy consumption 423 GWh
- Water consumption 1,554,000 m³



Human

Human

- Number of employees 14,246
- FTE¹ of subcontractors and supervised workers
- Investment in development and expertise
- Investment in capabilities and competences
- Investment in occupational health and safety



Infrastructure

Infrastructure

- 183 locations in 34 operating countries²
- 45 production units and more than 100 service centers
- 95 sales offices
- Suppliers in more than 50 countries



Intellectual

Intellectual

- Proven customer references
- Technology expertise
- Product portfolio
- 16 technology centers and pilot facilities
- R&D expenses EUR 82 million
- 1,300 protected inventions



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

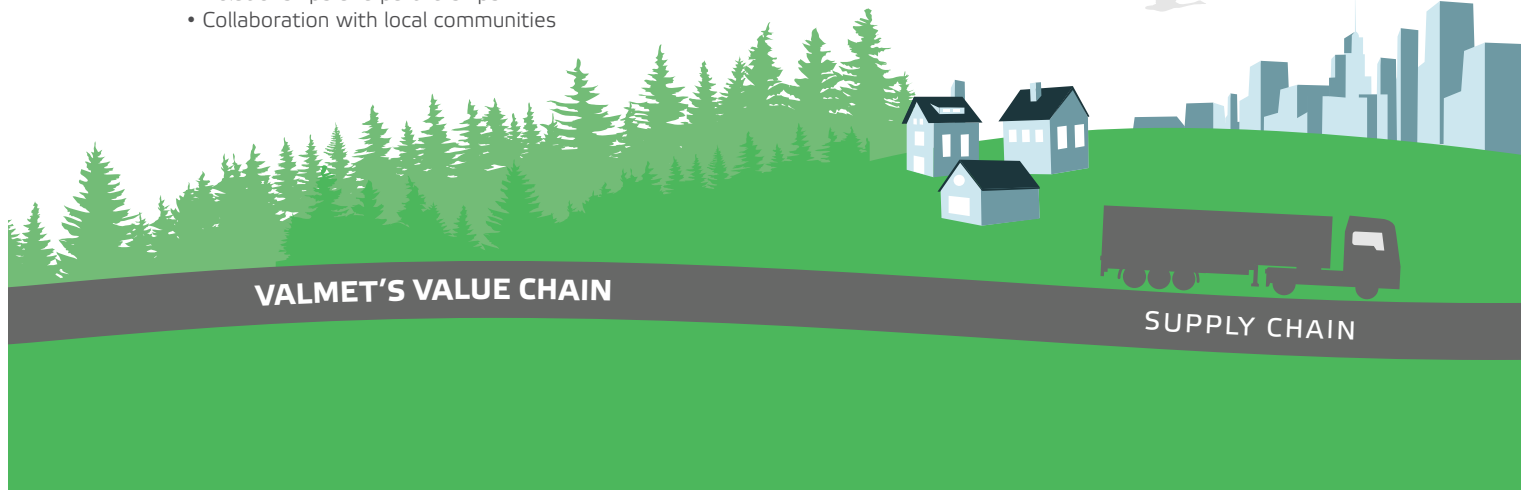
Key processes

- R&D
- Marketing
- Sales
- Engineering
- Procurement
- Production
- Delivery
- Service



Our employees, expertise and experience

Valmet's Way Forward:
Mission, Strategy, Must-Wins,
Vision and Values



OUTPUTS

We develop and supply technologies, automation solutions and services

Process technologies

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

Automation

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

Services

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

Other outputs

CO₂ emissions:

- Scope 1³: 21,500 tCO₂
- Scope 2⁴: 81,200 tCO₂
- Scope 3⁵: 103,700,000 tCO₂

Waste

- Non-hazardous waste 40,330 t
- Hazardous waste 2,420 t

OUTCOMES

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

Economic

- Wages and benefits EUR 948 million
- Payments to suppliers EUR 2,505 million
- Taxes EUR 103 million
- Support for non-profit organizations EUR 0.31 million
- Retained equity EUR 156 million
- Payments to shareholders and creditors EUR 148 million
- More efficient and profitable customer processes

Social

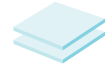
- Direct and indirect employment
- Improved employee competences
- Direct and indirect occupational health and safety
- Customer loyalty
- Trust and reputation
- License to operate
- Influence on operating environment and regulations

Environmental

- More efficient processes enable the use of fewer natural resources and reduce CO₂ 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



Paper



Board



Tissue



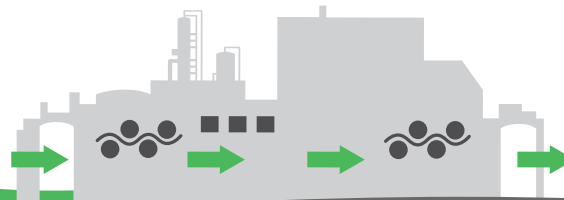
Energy



Biomaterials and fuels



OWN OPERATIONS



USE PHASE OF TECHNOLOGIES



¹ Full-time equivalent.

² Includes technology centers.

³ Scope 1 emissions are direct GHG emissions from sources that are owned or controlled by Valmet, such as fossil fuels burned on site.

⁴ 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.

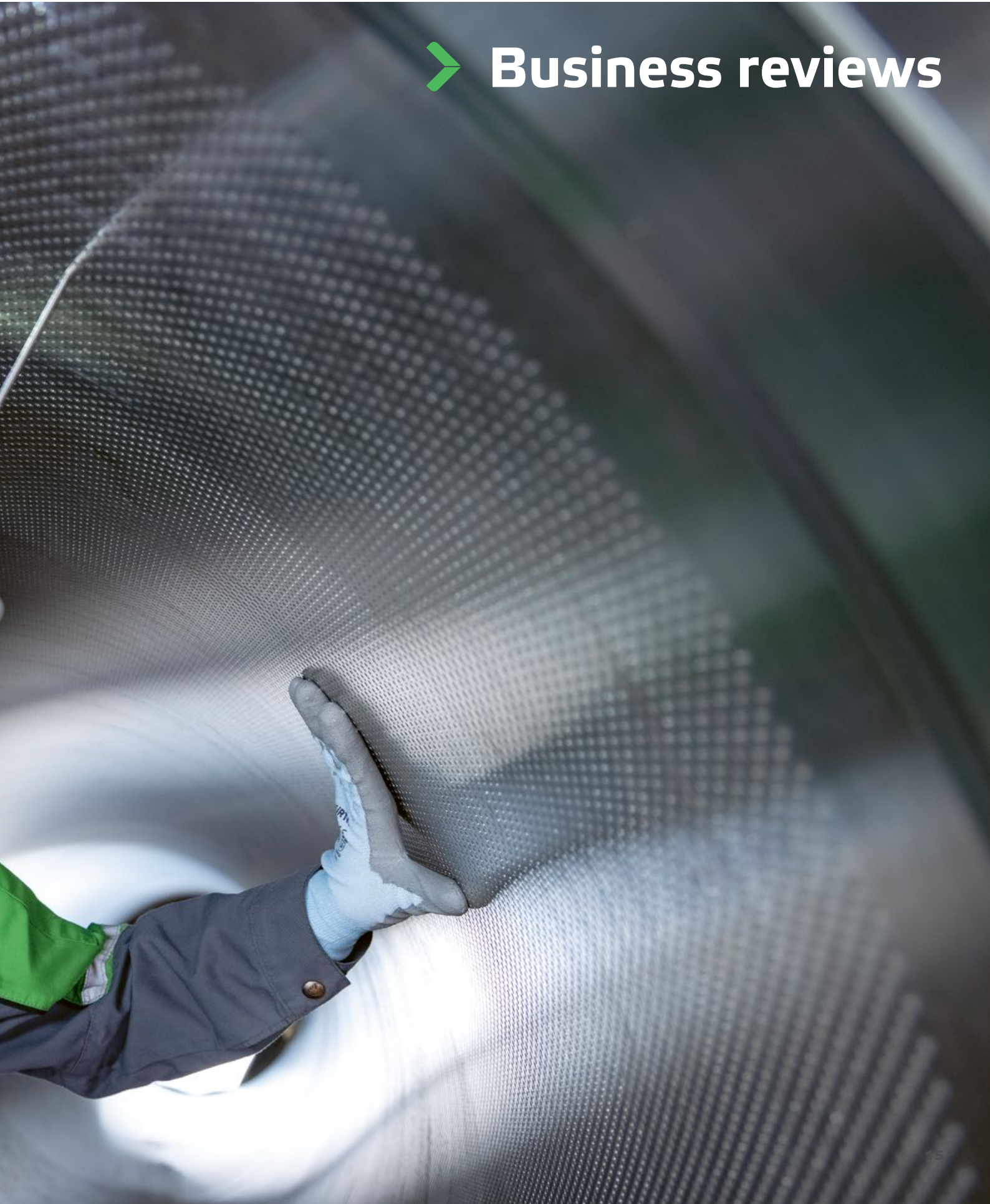
⁵ Scope 3 data covers five selected relevant categories. Category 1: purchased goods and services; category 4: upstream transportation and distribution; category 6: business travel, category 9: downstream transportation and distribution; and category 11: use of sold products. All figures are from December 31, 2021, unless otherwise stated.



READ MORE:
valmet.com/
value-creation



Business reviews



Valmet's business lines

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

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	ORDERS RECEIVED, EUR MILLION
1,366	1,488

#1-2 IN SERVICES

AUTOMATION

Valmet's automation solutions range 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	ORDERS RECEIVED, EUR MILLION
412¹	467²

#1-3 IN AUTOMATION

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	ORDERS RECEIVED, EUR MILLION
1,036	1,178

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

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	ORDERS RECEIVED, EUR MILLION
1,195	1,694

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

¹Including internal net sales.

²Including internal orders received.



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





Market data by business

BUSINESS	MARKET SIZE ¹ & GROWTH ²	MARKET DRIVERS	PRODUCT GROUP	VALMET'S POSITION AND COMPETITION
Services	EUR 8.0 bn ~1-2%	<ul style="list-style-type: none"> Increasing pulp, tissue, board and energy production Customer demand for resource efficiency, productivity, end product quality, Industrial Internet services and reduced environmental impact Customer focus on core, decreasing their own resources and outsourcing of non-core operations Size and gradual aging of installed base and capacity increases Closures and conversions of non-competitive production lines 	Mill Improvements	<ul style="list-style-type: none"> #1-2 Andritz, Bellmer, Voith
			Performance Parts	<ul style="list-style-type: none"> #1-2 Andritz, Kadant, Voith
			Fabrics	<ul style="list-style-type: none"> #6 Albany, Andritz, AstenJohnson, Voith
			Rolls and Workshop	<ul style="list-style-type: none"> #1-2 Andritz, Voith
			Energy and Environmental	<ul style="list-style-type: none"> #3-4 Andritz, Babcock & Wilcox, Sumitomo SHI FW
Automation	EUR 2.1 bn ~1%	<ul style="list-style-type: none"> Aging machines and installed automation systems Investments in new pulp and paper production lines and industrial decarbonization Demand for raw material savings, process efficiencies and sustainability Demand for Industrial Internet-based solutions driven by customer digitalization 	Distributed Control System (DCS)	<ul style="list-style-type: none"> #2-3 in pulp and paper #2 in marine #4 in energy and process industry target segments ABB, Emerson, Honeywell, Siemens, Yokogawa, Wärtsilä
			Quality Management System (QMS)	<ul style="list-style-type: none"> #1-2 in pulp and paper ABB, Honeywell, Voith
			Analyzers and measurements	<ul style="list-style-type: none"> #1 in pulp and paper ABB, Voith
Pulp	EUR 1.5 bn ~1%	<ul style="list-style-type: none"> Growing demand for sustainable packaging, tissue, hygiene products and textiles Increasing environmental awareness and stricter regulations Fiber-based plastic replacement Demand for second generation bioethanol 		<ul style="list-style-type: none"> #1-2 Andritz
Energy	EUR 2.0 bn ~1%	<ul style="list-style-type: none"> Decarbonization in energy production Biomass and residual waste used in heat and process steam production Tightening air emissions legislation and stricter directives 		<ul style="list-style-type: none"> #1-3 One of the few global players in the bioenergy niche Energy: Andritz, Sumitomo SHI FW, regional competitors Marine: Alfa Laval, Wärtsilä, Yara
Board	EUR 1.0 bn ~2-3%	<ul style="list-style-type: none"> World trade, e-commerce and emerging markets growth drive packaging Demand for lightweight board Shift from plastic packaging to renewable materials Conversions from paper to board 		<ul style="list-style-type: none"> #1 Voith
Paper	EUR 0.4 bn. ~-2%	<ul style="list-style-type: none"> Increasing role of digital media decreases demand for print papers Demand for technology-driven efficiency improvements Need for specialty papers 		<ul style="list-style-type: none"> #1 Voith
Tissue	EUR 0.7 bn ~3-4%	<ul style="list-style-type: none"> Increase in purchasing power and rising living standards Urbanization and improved hygiene Fast economic growth in emerging markets Demand for higher quality Consumers' higher hygiene habits 		<ul style="list-style-type: none"> #1 Andritz, Voith/Toscotec

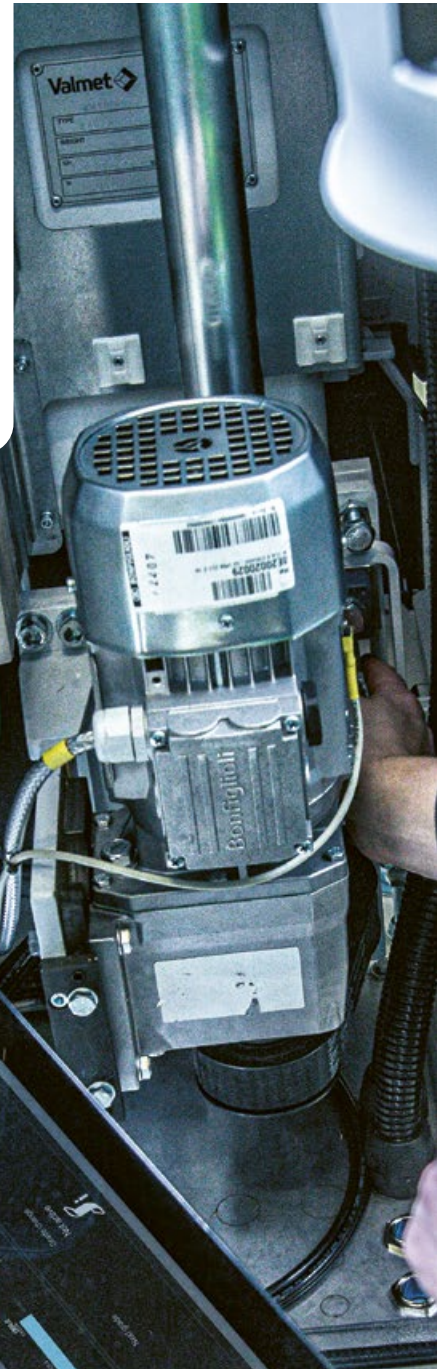
¹ Board, paper, tissue, pulp and energy: Market position and estimated market size calculated as an average during 2019-2021. Automation and Services: Market position and estimated market size calculated from 2021.

² Long-term end market growth.

BUSINESS REVIEW

Services

The Services business line provides customers with flexible and fit-for-purpose services throughout the lifecycle to improve process performance and reliability. In 2021, the demand for our remote services continued to increase, and we opened new service and remote centers to serve our customers even better.





NET SALES
EUR MILLION

1,366

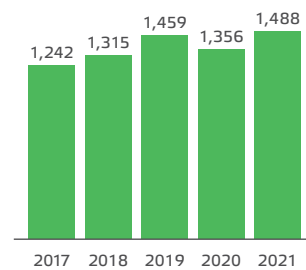
ORDERS RECEIVED
EUR MILLION

1,488

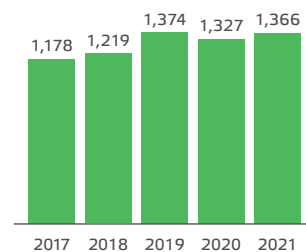
NUMBER OF
EMPLOYEES

5,958

Orders received, EUR million



Net sales, EUR million





Valmet's services are designed to match the customer's specific need, whether it's reduced energy and raw material costs, reduced process variability, optimized quality and production, or enhanced environmental performance. The service solution can be provided as a one-time delivery or as a longer-term partnership through service agreements. During 2021, the COVID-19 pandemic further enhanced the use and development of remote services.

The Services business line provides services and solutions mainly for the pulp, board and paper, tissue, and energy industries. The offering ranges from spare and process parts, workshop and roll 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 150 courses and a variety of trainings. Services are offered globally through more than 100 service centers and approximately 6,000 service professionals.

In recent years, Valmet's customers have increasingly outsourced service and maintenance activities. Demand for services has especially grown in North America and China.

Lifecycle collaboration with customers

Valmet's Services concept 'Valmet's way to serve' focuses on the lifecycle collaboration between the customer and Valmet. The aim is to provide the best customer 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 services and capabilities for customer needs in each phase of the production process lifecycle. When planning the investment, the foundation for optimized operational results for the production process can be set. Services can help accelerate the start-up curve when ramping up the production. By working together in maintenance and operations, the maximized reliability and optimized performance of the production process can be ensured.

In 2021, Valmet introduced Maintenance Operations Agreement as part of "Valmet's way to serve" concept. Valmet offers the service agreement for development and outsourcing of mill and plant maintenance operations for energy, pulp, paper, board and tissue customers.

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.

Services

Market drivers

- Increasing pulp, tissue, board and energy production
- Customer demand for resource efficiency, productivity, end product quality, Industrial Internet services and reduced environmental impact
- Customer focus on core, decreasing their own resources and outsourcing of non-core operations
- Size and gradual aging of installed base and capacity increases
- Closures and conversions of non-competitive production lines

Key innovations in 2021

- Valmet Drone to support safety in field services
- Valmet Winder Diagnostics to optimize winding performance



READ MORE:

valmet.com/servicesbusiness

New service and remote centers

In 2021, Valmet opened a performance center in Appleton, Wisconsin to serve board, paper and tissue markets in North America with Industrial Internet and remote support capabilities. Some of the services and key technologies offered include on-demand remote expert support, remote monitoring and optimization of process performance and reliability, and advanced analytics applications.

Valmet also announced it was investing in a new service center in Guanxi, China and opening a local remote support center in Tokyo, Japan. The service center in Guanxi will serve nearby pulp, board, tissue and paper customers with main focus on roll maintenance, fiber equipment services and field services, including shutdown planning management. The remote support center in Tokyo provides customers in Japan with easy access to remote services, Valmet Industrial Internet (VII) applications and the network of global Valmet Performance Centers.

Long-term collaboration strengthened through service agreements

Valmet supplied and installed the complete containerboard line at Opal's Botany Mill in Australia in 2012 and has had full responsibility for the mill's maintenance operations ever since.

"Valmet's professionals have an in-depth knowledge of our machine's detailed design, and they were heavily involved in the construction of the production line, so it has been natural to utilize their expertise in maintenance operations as well," says **Richard Bell**, Engineering and Maintenance Manager, Opal Paper & Recycling Mill's B9 machine.

Valmet's Maintenance Agreement provides Opal's Botany Mill a good combination of skilled maintenance personnel on site and profound technical support from Valmet's expert network.

"We have achieved new production records for the last four years running, so we're very satisfied with the cooperation. Valmet has full online connectivity with our production line,

which means we get fast and professional troubleshooting support for unexpected technical issues," Bell explains.

Valmet and Opal have also signed a Valmet Performance Agreement to ensure that the set production targets are met.

"Through the Performance Agreement, we seek to further improve our production teams' capability and ensure we get the right combination of services for every stage in our production line's lifecycle," says **Robert Vukasinovic**, General Manager Operations at Botany Mill.

Over the years, Opal's Botany Mill has achieved significant savings in maintenance costs, water consumption and energy usage, as well as the increase of production efficiency.

➤ **READ MORE:**
valmet.com/services-articles





BUSINESS REVIEW

Automation

Valmet's automation solutions range from single measurements to mill- or plant-wide process automation systems to maximize the profitability and sustainability of customers' businesses. The Automation business line is continuously innovating new solutions and launched several new products and applications in 2021.





NET SALES
EUR MILLION¹

412

ORDERS RECEIVED
EUR MILLION²

467

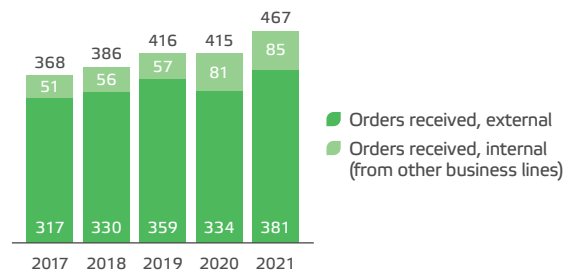
NUMBER OF
EMPLOYEES

1,986

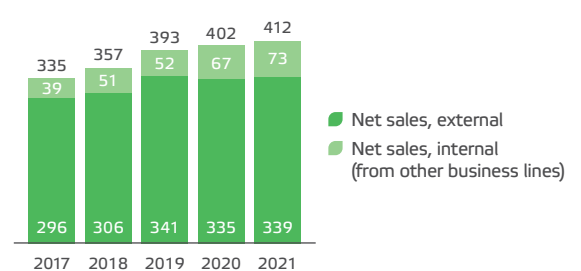
¹ Including internal net sales.

² Including internal orders received.

Orders received, EUR million



Net sales, EUR million





The Automation business line supplies and develops automation and information management systems, applications 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 Control Systems (QCS), analyzers and measurements, Industrial Internet solutions and automation services.

Valmet also offers lifetime systems compatibility and ongoing support, delivered with expertise to customers' process.

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 close to 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 employs nearly 2,000 professionals in more than 30 countries. The most important geographical market for the Automation 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 automation business consists of services.

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

New products and applications

In 2021, Valmet's Automation business line launched several new products and applications.

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 example, our new Valmet Recovery Ash Analyzer offers customers in pulp significant operational savings and improved recovery boiler availability. It helps to reduce unplanned boiler shutdowns, caused by superheater corrosion or boiler plugging, and provides guidance for ash treatment and sootblowing needs.

In 2021, we also introduced a new Valmet Fiberline Analyzer enabling pulp makers to improve total pulp quality management, boost process stability and gain major savings in chemical costs, and an intelligent Valmet Fiber Furnish Control stabilizing refiner

Automation

Market drivers

- Aging machines and installed automation systems
- Investments in new pulp and paper production lines and industrial decarbonization
- Demand for raw material savings, process efficiencies and sustainability
- Demand for Industrial Internet -based solutions driven by customer digitalization

Key innovations in 2021

- Valmet Recovery Ash Analyzer
- Valmet Fiberline Analyzer



READ MORE:

valmet.com/automationbusiness

operation with ensured furnish quality. In addition, we introduced the redesigned Valmet Blade Consistency Measurement for pulp and paper producers, which offers reliable, accurate, and cost-efficient consistency measurement for all applications.

Valmet also expanded its offering for corrugator box plants and launched a new Valmet IQ Speed Booster application, which complements our quality management control concept for corrugators and maximizes production efficiency, with guaranteed quality for corrugated board.

Automation's deliveries in 2021 included the world's first artificial intelligence-based Valmet IQ Web Inspection System for Progroup's paper machine PM2 in Eisenhüttenstadt, Germany with automation and solids measurements for the new regional central wastewater treatment plant under construction in Tampere's Sulkavuori in Finland.

Automation services showed strong demand, supported by recently launched new technologies like the web-based User Interface which can be updated for the Valmet DNA Automation System.

Performance agreement for recovery boiler boosts performance at Eldorado Brasil

During 2020–2021, Valmet extended its performance agreement with Eldorado Brasil, one of the largest pulp mills in the world. Originally, the agreement included a Valmet Industrial Internet (VII) solution to optimize recovery boiler production capacity and chemical recovery with local and remote expert support. After the extension, the agreement also included Recovery Boiler Performance Monitoring to monitor the key performance indicators (KPIs), and Dynamic Centerline Advisor for the recovery boiler to enhance the running models.

The agreement's key performance indicators are sootblowing steam economy, production stability and a 15-month boiler campaign without the need to stop the boiler for washing.

"We strongly believe in this work model, as it brings the supplier closer to our routines and allows operational rationalization. In the case of the recovery boiler, as it is a strategically important area for increasing production

capacity, we were able to increase the burning efficiency while maintaining employee safety," says **João Vitor Oliver**, Chemical Recovery Functional Manager at Eldorado.

"We feel a lot of freedom and openness in addressing points for improvement, and the Eldorado team is always willing to debate, and once agreed, support the implementation of changes. When we work together, it doesn't seem like we're suppliers and customers, but rather a team working for a common goal. This close cooperation has also resulted in the further development of Valmet's application," says **Nathalia Leme**, Valmet's Application Manager.

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valmet.com/automation-articles





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. The start-up of the new pilot facility, expanding the offering with an acquisition, and several delivery projects and new orders were some of the highlights in 2021.





NET SALES
EUR MILLION

1,036

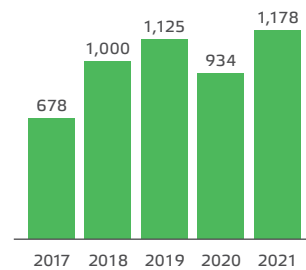
ORDERS RECEIVED
EUR MILLION

1,178

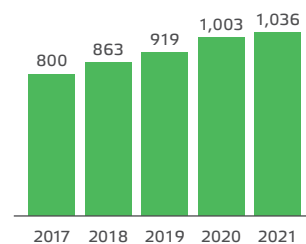
NUMBER OF
EMPLOYEES

1,946

Orders received, EUR million



Net sales, EUR million





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 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 and technology rebuilds. Valmet is a leading global supplier of biomass-based heat and power generation solutions. Valmet also supplies complete medium-scale heat and power plants that use biomass or 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.

New technologies and improving the existing products

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

Valmet has research and development centers (R&D) and pilot machines for both Valmet and its customers. The R&D centers include analytical laboratories that perform physical and chemical analyses of raw materials, products and process liquors. In 2021, Valmet's new Pretreatment BioTrac pilot facility was started up at Valmet's Fiber Technology Center in Sundsvall, Sweden.

Valmet's emission control offering was expanded in 2021 with the acquisition of EWK Umwelttechnik, a German company manufacturing and supplying air emission control systems and after-installation services.

Milestones in delivery projects and new orders

During the year, Valmet delivered key technology for several major pulp mill projects in South America. In Brazil, the first phase of Klabin's Puma II project was started up when Valmet delivered a continuous cooking and fiberline, as well as new board machine.

Pulp and Energy

Market drivers

Pulp

- Growing demand for sustainable packaging, tissue, hygiene products and textiles
- Increasing environmental awareness and stricter regulations
- Fiber-based plastic replacement
- Demand for second generation bioethanol

Energy

- Decarbonization in energy production
- Biomass and residual waste used in heat and process steam production
- Tightening air emissions legislation and stricter directives

Key innovations in 2021

- Chip-to-board concept
- Combo heating for pulp dryer wet end
- Wet ESP for Lime Kiln
- Mega size Waste-to-Energy CFB boiler



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Also in Brazil, Valmet's evaporation and white liquor plants were started up at Bracell's new pulp mill site.

Valmet finalized the agreement with Metsä Fibre for the key technology and automation delivery covering all main process islands for the Kemi bioproduct mill in Finland. Valmet also agreed a major technology upgrade for CMPC Guaíba pulp mill in Brazil, covering most of the process islands and automation.

Valmet stepped into a new business in textile recycling by delivering key technology for Renewcell's new textile recycling plant in Sundsvall, Sweden. It will be the world's first commercial-scale textile recycling plant of its kind. Valmet also received several new orders for biomass boilers and to convert existing boilers to utilize biomass.



Five boiler deliveries to Japan with JFE Engineering

In 2015, Valmet and JFE Engineering signed a long-term cooperation agreement to enable joint growth in the Japanese energy market. The agreement combines Valmet's high efficiency technology solutions with JFE's strong market presence and capability to supply EPC (Engineering, Procurement and Construction) power plants.

With JFE, Valmet has delivered five circulating fluidized bed (CFB) boilers to Japan. The strong demand for biomass-based energy production is driven by Japan's drive for safe and sustainable energy production and supported by a feed-in-tariff (FIT) scheme for renewable electricity.

The boilers range from 75 to 112 MWe and use mainly wood pellets and palm kernel shells as their fuel. Due to Valmet's unique finishing superheater and reheater technology, the boilers are designed for high steam parameters promoting high plant efficiency. The boilers are also equipped with modern flue gas cleaning systems.

The first boiler was started up in 2019, and the last in 2021. Valmet's delivery included the boilers and site advisory services, while JFE was responsible for the construction works. Valmet had several advisors on site to follow and advise on the works and quality assurance, as well as offering support for commissioning and start-up. Despite the cultural differences and the pandemic, the projects were completed successfully in good cooperation with JFE.

The cooperation continues with a new 112 MWe CFB boiler delivery, which will be started up in 2025.



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Photo: JFE



BUSINESS REVIEW

Paper

The Paper business line delivers complete production lines, machine rebuilds and process components for board, tissue and paper production to ensure high process and environmental efficiency, flexibility, reliability and safety. 2021 brought new opportunities in the fiber-based industry and major new orders worldwide.





NET SALES
EUR MILLION

1,195

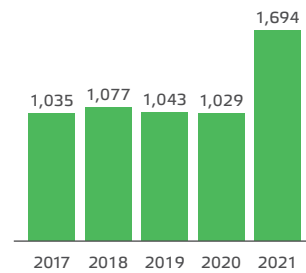
ORDERS RECEIVED
EUR MILLION

1,694

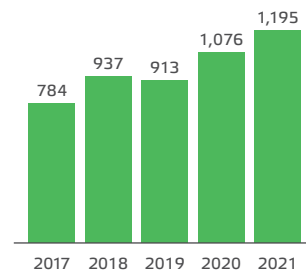
NUMBER OF
EMPLOYEES

3,708

Orders received, EUR million



Net sales, EUR million





The Paper business line supplies board, tissue and paper machinery, 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. Our customers' end-products can be produced with the highest quality and increased competitiveness on the market.

Demand for new board and paper machines has been especially lively in China, and to some extent in Asia-Pacific, Europe, North America and South America. Valmet has been cooperating with its customers in more than 700 board machine, 900 paper machine and more than 200 tissue machine deliveries globally.

Paper machine's lifetime can be several decades

Board, tissue and paper are used for a variety of purposes, including packaging, hygiene, such as 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, as well as automation and Industrial Internet solutions. The lifetime of a paper machine can be several decades. Besides new machines, there is also a market for machine rebuilds and improvements. In addition, converting an existing paper machine to produce a different paper grade or relocating a paper machine is part of our offering.

New opportunities in the fiber-based industry

The demand for board and tissue machines and machine rebuilds has continued to grow due to e-commerce, plastics replacement, improved hygiene standards and urbanization. Orders for traditional paper machines have decreased due to reduced demand for printing and writing paper.

In 2021, the Paper business line received major orders worldwide, such as coated board and fine paper making lines for Fujian Lian-sheng in China and a large pulp and paper technology delivery to Klabin in Brazil. Valmet also announced it would be supplying an extensive tissue machine rebuild for Metsä Tissue's Mänttä mill in Finland, a Valmet Advantage DCT tissue line to Arkhbum Tissue Group in Russia and two lines to Zhejiang Jingxing Paper in China.

In addition, Valmet received new opportunities in the nonwoven industry by presenting new technologies for thermal bonder and winders. Valmet entered the fiber-based industry when it

Paper

Market drivers

Board

- World trade, e-commerce and emerging markets growth drive packaging
- Demand for lightweight board
- Shift from plastic packaging to renewable materials
- Conversions from paper to board

Paper

- Increasing role of digital media decreases demand for print papers
- Demand for technology-driven efficiency improvements
- Need for specialty papers

Tissue

- Increase in purchasing power and rising living standards
- Urbanization and improved hygiene
- Fast economic growth in emerging markets
- Demand for higher quality
- Consumers' higher hygiene habits

Key innovations in 2021

- Microfibrillated Cellulose (MFC) in stock prep business
- Textile fiber drying technology
- Forming with sleeve roll technology
- Valmet 3D Fiber molded fiber technology
- Multilayer headbox technology



READ MORE:

valmet.com/paper

received an order from Spinnova-Suzano's joint venture textile fiber factory in Finland. Valmet will provide drying machines with high-technology air dryers. The technology is already utilized today in paper and board making. Valmet's Paper business line will also supply process equipment for stock preparation for Renewcell's new textile recycling plant in Sweden.

Major board making technology for Klabin in Brazil

Valmet is a key partner for Klabin's large PUMA II investment project in Brazil. Valmet's delivery for the project's first phase in 2019 included the kraftliner machine (PM 27), a new cooking and fiberline and operation simulators.

In the summer of 2021, Valmet announced the delivery of a large paper and pulp technology for the project's second phase. The order consisted of a paperboard making line (PM 28), a complete new fiberline, including a new Continuous Cooking G3, and a new bleached chemi-thermomechanical pulp (BCTMP) line with extensive scopes of automation and Valmet Industrial Internet solutions.

"The paperboard segment has a big growth potential and once again Valmet and Klabin are partners to develop and introduce together highly efficient sustainable solutions. We are providing state-of-the-art technologies to produce high quality kraftliner and coated boards supporting Klabin's strategic targets in this market," says **Celso Tacla**, Area President, South America, Valmet.

In the second phase, the BCTMP and fiberlines will be integrated with the new board making line PM 28. The machine will produce a large variety of board grades from kraftliner to coated boards such as folding box boards (FBB) and liquid packaging boards (LPB) with a reservation to add bio-barrier grades to the portfolio in the future. This combination will increase Klabin's flexibility and reduce its exposure to market volatility.

PM 27 was successfully started up in August 2021. The start-ups of PM 28, the BCTMP line and the fiberline are scheduled for 2023.

▶ **READ MORE:**
valmet.com/board-and-paper-articles





➤ Strategy





Strategy

Valmet's Way Forward is our strategic roadmap, a guide for achieving our vision of becoming the global champion in serving our customers. 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.

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.

Valmet focuses on the pulp, paper and energy industries, where we are committed to improving our customers' performance through our unique offering, which combines process technologies, automation and services.

Our Services and Automation businesses operate in relatively stable markets driven by the size, maturity and operating rates of the installed technology base. Our process technologies, on the other hand, are driven by customers' investments in board, tissue and paper machines, pulp mills, and heat and power boilers.



VALMET'S WAY FORWARD

OUR MISSION

Converting renewable resources into sustainable results

OUR STRATEGY

Valmet develops and supplies competitive process technology, services and automation to the pulp, paper and energy industries

We are committed to moving our customers' performance forward with our unique offering and way to serve

OUR MUST-WINS

- Customer excellence
- Leader in technology and innovation
- Excellence in processes
- Winning team

GROWTH ACCELERATORS

- Field services
- Industrial Internet and digitalization
- Business accelerators

OUR VISION

To become the global champion in serving our customers.

OUR 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

- Resource-efficient and clean world
- Digitalization and new technologies
- Urban, responsible and global consumers

Because our businesses serve a common customer base in our focus industries, we can leverage our full range of products and services to achieve the most benefit for customers. In addition, our Services, Automation and Energy businesses cater to the specific needs of customers in the process, marine and other industries.

Strategy implementation

We implement our strategy through defined Must-Wins. These provide structure and focus for our strategic initiatives, decisions and performance indicators. Our values and sustainability agenda are also closely linked to our Must-Wins. During 2021, Valmet introduced its climate program – Forward to a carbon neutral future – which sets ambitious CO₂ emission reduction targets and establishes concrete actions for the whole value chain. The program is fully integrated into our strategic initiatives.

We are also continuing to implement our growth programs, called “Growth Accelerators,” which were launched in 2018. They focus on opportunities in field services, Industrial Internet and digi-

talization. To keep driving accelerated development of selected businesses, we have also continued our “Business Accelerator” growth program.

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 having strong, capable and committed teams close to customers that can identify and implement optimal solutions comprising process technology, automation and services. During the year, we further developed our “Valmet’s Way to Serve” concept for our Services business and a “Valmet as the automation partner” concept for our Automation business to improve the customer experience.

Efficient internal operations play an important role for 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. 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 on-site 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.

In procurement, we target significant cost savings by further developing our global category management and supplier base. Through initiatives, supply quality and delivery performance, we strive to build sustainability in our supply chain with global reach. For example, to keep our cost structure competitive, we in-



MEGATRENDS



A resource-efficient and clean world
Climate change, environmental awareness and resource scarcity are driving the need to improve resource efficiency and reduce emissions.



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



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



crease our supply flexibility by utilizing supplier innovations and on-boarding suppliers close to key customers, and optimizing our own operations and logistics to respond to changes in demand.

The implementation of a new and centralized enterprise resource planning (ERP) system continued in 2021 across Finland, Sweden, Norway, the UK, Spain and the Netherlands, with rollouts prepared in Valmet's other locations. With this new 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. Our teams have been able to adapt to the changed work environment due to the COVID-19 pandemic, while successfully delivering customer projects and staying connected with colleagues.

Every Valmet employee plays an essential role in turning strategy into reality. In 2021, we continued our global training programs in virtual format, designed to further 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.

Accelerating growth with improved profitability

Since 2018, we have run "Growth Accelerator" programs in field services, the Industrial Internet and digitalization. These programs are founded on our Must-Wins and aim to accelerate our growth with improved profitability.

Field services are an integral part of delivering our distinctive service experience and moving our customers' process reliability and performance forward. By enhancing our maintenance and shutdown services, strengthening our global network of field service experts, and developing our processes and tools both at customer touchpoints and internally, our field services become a competitive differentiator for our Service business.

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 being able 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.

Travel and other restrictions due to the COVID-19 pandemic have helped 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 evolve our way of working and add new competences to successfully carry out fully remote start-ups and maintenance shutdowns supported by our strong local presence and competences close to customers.

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 mainly on commercial activities such as finding new applications and customer segments for existing products and expanding our offering to existing segments. In 2021, a new business was added to the accelerators: Recycled and Cellulose-based Textile Fibers. This new business accelerator complements the original four business accelerators: Filtration; Emission Control; Biomass Concepts; and Nonwovens.

The new Business Accelerator taps into the growing market for sustainable organic textile fibers. Valmet has developed technology for both recycling textile waste and making textile fiber out of biomass or organic waste. In 2021, Valmet announced its contribution and technology deliveries to two major developments in this area, the world's first commercial-scale textile recycling plant in cooperation with Renewcell, and the Spinnova-Suzano joint venture to build a new textile plant producing a unique textile fiber from wood or cellulosic biomass waste.

Financial targets

GROWTH
2X

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

NET SALES 2021,
EUR BILLION
3.9

ROCE
>20%

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

ROCE 2021
24%

PROFITABILITY
10–12%

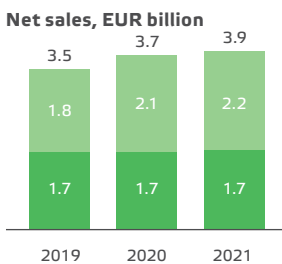
Comparable EBITA target 10–12%

PROFITABILITY 2021
10.9%

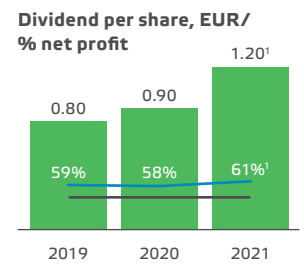
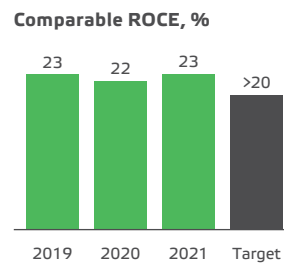
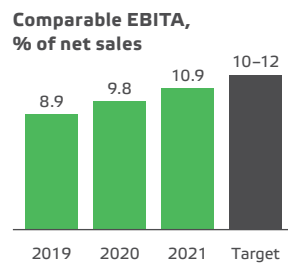
DIVIDEND PAYOUT
≥50%

At least 50% of net profit
¹ Proposal by the Board of Directors

DIVIDEND PAYOUT 2021
61%¹



■ Stable business
■ Capital business



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

¹ Proposal by the Board of Directors.

Progress of Must-Win actions

MUST-WIN



CUSTOMER EXCELLENCE



LEADER IN TECHNOLOGY AND INNOVATION



EXCELLENCE IN PROCESSES



WINNING TEAM



GROWTH ACCELERATORS



BUSINESS ACCELERATORS

WHERE WE ARE TODAY

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 our sales based on a global process, common tools and a strong customer interface built on key account management and customer-specific mill teams.

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.

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.

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.

We have launched a Field Service growth program to develop and grow our on-site services.

We have launched our Industrial Internet services to improve the reliability and performance of our customers' operations, based on a meaningful dialogue with data.

We are building a digital foundation to further drive efficiency, quality and productivity in our operations.

We have launched our Business Accelerator program to drive and support the development and growth of selected businesses. Growth programs are active in the Filtration, Emission Control, Biomass Concepts, Nonwovens, and Recycled and Cellulose-based Textile Fibers businesses.

FOCUS GOING FORWARD



We will continue to implement and develop our way of serving our customers with local presence and a global offering. We build our value proposal on leading technology, combined offering and customer intimacy, continuously developing our sales interface and sales management practices.



We will continue to strengthen our research and development cooperation with key customers, systematically develop and renew our offering, and implement product competitiveness initiatives. We will focus strongly on developing the resource and energy efficiency of our offering.



We will continue to develop our processes and operations by focusing on:

- Project management practices and key projects
- Building a strong quality culture and way of operating to drive our quality performance
- Strengthening existing HSE practices and collaboration with customers and suppliers to improve safety
- Supplier quality and delivery performance, supplier innovations and sustainability in our supplier network
- The rollout of new ERP and realizing its benefits
- Certification of our global management system for quality and HSE management standards.



We will continue to boost performance and engagement through active OurVoice action execution, feedback culture development and a strong emphasis on communication, dialogue and collaboration to adapt to change and stay connected. We will continue to develop our strategic capabilities and our functional and technology competence to support our strategic targets and business growth.



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

- Provide new advanced analytics and remote services that improve the performance and reliability of our customers' operations
- Digitally enhance our customer experience
- Build and leverage digitalization in more efficient and productive operations.



We will focus on developing our Filtration, Emission Control, Biomass Concepts, Nonwovens and Recycled and Cellulose-based Textile Fibers businesses by:

- Expanding our offering for existing customers
- Finding new applications or customer segments for existing products.

STRATEGIC GOALS



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.



Valmet provides leading technology and cost-competitive products and services that reduce customers' operating and investment costs and enable their carbon neutral operations.



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.



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



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



Valmet strives to accelerate growth and profitability improvement through business-specific growth plans and implementation support for businesses with untapped potential.



Photo: Neles



Valmet and Neles to merge

Creating a leading company with a unique offering for process industries globally

In June 2020, after the announcement that Neles would become an independent listed company, Valmet agreed to acquire 14.9 percent of Neles' share capital and votes from Solidium. The transaction between Valmet and Solidium took place on July 1, 2020. The agreed purchase price corresponded to a total transaction value of EUR 179 million at the signing.

In the fall of 2020, Valmet gradually increased its ownership in Neles to 29.5 percent. In September, it approached the Board of Directors of Neles with a proposal to start discussions on a potential statutory merger between the two companies. However, these discussions did not proceed further then, but they were revisited in 2021, leading to the combination agreement and a merger plan in July 2021.

Globally balanced expert organization with approximately 17,000 professionals

In July 2021, Valmet and Neles announced that their respective Boards of Directors had signed a combination agreement and a merger plan to combine the two companies through a merger. The pending combination will be implemented as a statutory absorption merger, whereby Neles will be merged into Valmet. The Extraordinary General Meetings of both companies resolved to approve the merger in September 2021. The completion of the merger is targeted to take place on 1 April, 2022. The planned closing date may be delayed due to the regulatory processes ongoing.

Together, Valmet and Neles expect to create a leading company with a unique offering for process industries globally, with illustrative combined net sales for 2020 of approximately EUR 4.3 billion. In addition, the combined company will have a globally balanced expert organization of approximately 17,000 professionals. On completion, it is estimated that former Neles' shareholders will own approximately 18.8 percent of the shares and votes of the combined company, and former Valmet shareholders will own approximately 81.2 percent of the shares and votes.

The name of the combined company will remain Valmet Oyj, and Pasi Laine will continue as the President and CEO after the completion of the merger. It is planned that Neles will be organized as an independent entity called Flow Control business line.

The Board of Directors of Valmet has together with its management considered appropriate preliminary financial targets for the combined company and agreed on the following framework: net sales for services and automation business to grow over two times the market growth, net sales for capital business to exceed market growth, comparable EBITA margin to be 12–14 percent, comparable return on capital employed (ROCE) before taxes to be at least 15 percent, and dividend payout to be at least 50 percent of net profit.

A solid platform for further growth in automation

The combination of the companies is expected to create a solid platform for further growth in the automation sphere consisting of automation systems, automation products and flow control solutions. The combined company is expected to have a significant position in process-critical valves and valve automation products, pulp and paper automation systems, analyzers and measurements, and new applications, including hydrogen and biomass technologies. It will also have growth potential in these sectors and through the increased penetration into the energy and process industry end markets.

The resulting revenue, technology development and cost synergy potential of the merger is expected to contribute to shareholder value creation. The combination is expected to generate annual run-rate synergies of approximately EUR 25 million, of which approximately 60 percent are expected to be achieved by 2023, and approximately 90 percent by 2024. Total one-off implementation costs related to synergies are expected to be approximately EUR 25 million.

Additionally, the combined company is expected to benefit from Valmet's excellent track record and capability in developing integrated businesses. This is well evidenced in Valmet's successful growth of its Automation business and multiple acquisitions over the past few years.



READ MORE:
valmet.com/merger



Research and development

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





Research and development highlights in 2021

- Building the world's first commercial-scale textile recycling plant
- Drying technology for cellulose-based textile fiber production
- First full mill digitalization and automation underway in Chile
- The first complete mill in virtual reality

Valmet aims to be a technology and innovation leader, and we have clear focus areas in research and development (R&D). Our R&D also plays a key role in Valmet's climate program, which was introduced in 2021. Valmet's offering enhances the efficient usage of raw materials, water and energy. It also promotes the use of renewable materials and reduces emissions.

Our R&D work is carried out mainly in Finland and Sweden by the R&D organizations in our business lines. Our operations also include 16 pilot facilities for customer projects and internal R&D. At the end of 2021, R&D employed a total of 471 people, while R&D expenses for the year amounted to EUR 82 million.

We continuously develop new solutions to improve customers' performance. We launch around 100 new products every year. The products are often created in close cooperation with customers or our network of leading universities and research institutes around the world.

Increased focus on a carbon neutral future

2021 saw several major developments come to fruition, such as our cooperation with Renewcell, a pioneer in alternative renewable textile materials. Their new plant in Sundsvall, Sweden, is the first commercial-scale textile recycling plant in the world. The plant will produce Circulose®, a recyclable raw material made from discarded textiles, using their patented process and tailored equipment from Valmet.

Replacing resource-intensive virgin fiber and fossil-based materials like polyester is an excellent example of how Valmet can contribute to sustainable new circular economies. Valmet's solution itself was a prime example of how to make the best of what you already have.

Efficiency through digitalization

One of the key benefits of digitalization is that it utilizes real-time data and big data analysis to reduce the environmental impacts of our customers' mills and plants. By increasing process reliability and decreasing unplanned maintenance, customers' production is maximised, and their entire equipment range is managed with greater efficiency.

In 2021, Valmet and ARAUCO, a forestry company, signed an agreement to jointly develop the Arauco Mill Line 3 in Chile to become the world's most autonomous pulp mill. The target is to run the entire mill at higher efficiency using Valmet's Industrial Internet (VII) solutions. Our VII solutions combine advanced monitoring and prediction applications, process controls and simulators, along with remote services from Valmet Performance Centers.

New renewable materials

Enabling our customers to convert renewable and recyclable materials into sustainable products and commercial results is the core of Valmet's mission. In 2021, we supplied drying machines for the Spinnova-Suzano joint venture in Jyväskylä, Finland. The drying technology, originally for paper and board making, was further developed by Valmet and adapted for cellulose-based textile fiber production in the future factory.

The customer's new textile factory will produce SPINNOVA® fiber, a sustainable natural textile fiber produced from wood or cellulosic biomass waste, using a patented process that produces no waste or sidestreams. Valmet technologies and expertise help customers like Spinnova-Suzano with breakthrough technology in renewable resources to scale up production to meet commercial demands.

Virtual reality for a better reality

In 2021, Valmet also delivered the world's first fully virtual paper mill to Mondi's new production line in Ružomberok, Slovakia. The virtual mill is a complete digital twin of the mill machinery and surrounding facilities.

Operators enter a 360° virtual learning environment where they can move around and interact with simulated machinery. This learning method helps mill employees internalize lessons through personal experience, significantly improving knowledge retention, mill performance and workplace safety.



Procurement

Supplying for the future with creativity, collaboration and cross-thinking.



Procurement highlights in 2021

- Exceptional savings regardless of abnormal cost inflation
- Continued supply growth in a challenging logistics environment
- Steady process, data and tool development for world-class performance

Our Procurement vision is of a world-class operation that delivers sustainable and competitive results through creativity and collaboration with its suppliers and other functions. Procurement targets a significant improvement in Valmet's profitability, competitiveness, supply chain sustainability and overall delivery efficiency.

Valmet has 20,000 active direct suppliers in more than 50 countries, and we spend 2.5 billion euros in direct and indirect purchases annually. More than half of our purchases come from Finland and Sweden, but the share of sourcing from local suppliers in other countries is increasing.

Traction through decentralization

Central procurement is part of Valmet's Operational Development team. Direct and indirect procurement operates a network of teams distributed throughout our business lines and areas. Altogether, we have some 500 procurement professionals located in five continents in more than 20 countries.

Valmet has procurement teams in several cost-competitive countries identifying and developing cost-effective, innovative suppliers for Valmet. Savings can be significant when purchasing from a supplier in a cost-competitive country. This strategy also augments our ongoing efforts to innovate and continuously improve with our well-established sustainable, high-quality suppliers.

In addition to building a strong supplier base, Procurement continues to advance toward digitalization. With the right systems and tools, we are able to monitor real-time performance and gain new insights into improvement opportunities.

Positive performance in a challenging environment

Many of our procurement performance indicators developed favorably during 2021. Our primary target, procurement savings, saw notable improvement. We consider this our top key performance indicator, because it has a high impact on Valmet's profitability.

Another indicator we saw improve this year is cost-competitive country sourcing. By expanding procurement options to a wider range of countries, we have been able to reduce costs while adding additional flexibility to our supplier network.

Though our overall performance was quite strong, during 2021, we saw a decline in on-time deliveries. However, this is not unique to Valmet. Most international companies have suffered from delays and shortages due to the COVID-19 pandemic.

Targeted mitigation efforts to offset risks

While our annual increase in purchases reflects Valmet's positive growth, 2021 also saw remarkable inflation, particularly in steel and logistics prices, spurred on by a world economy rebounding in an ongoing pandemic. The widely reported shortage of semiconductors also impacted Valmet.

Increased regular follow-up of suppliers, open dialogue and targeted negotiations are some of the ways we have dealt with the supply challenges. When possible, purchases have been moved outside the timeframe of predicted price peaks. Where bottlenecks and shortages prevail, as with semiconductors, our purchasing team is locating and onboarding new sources.

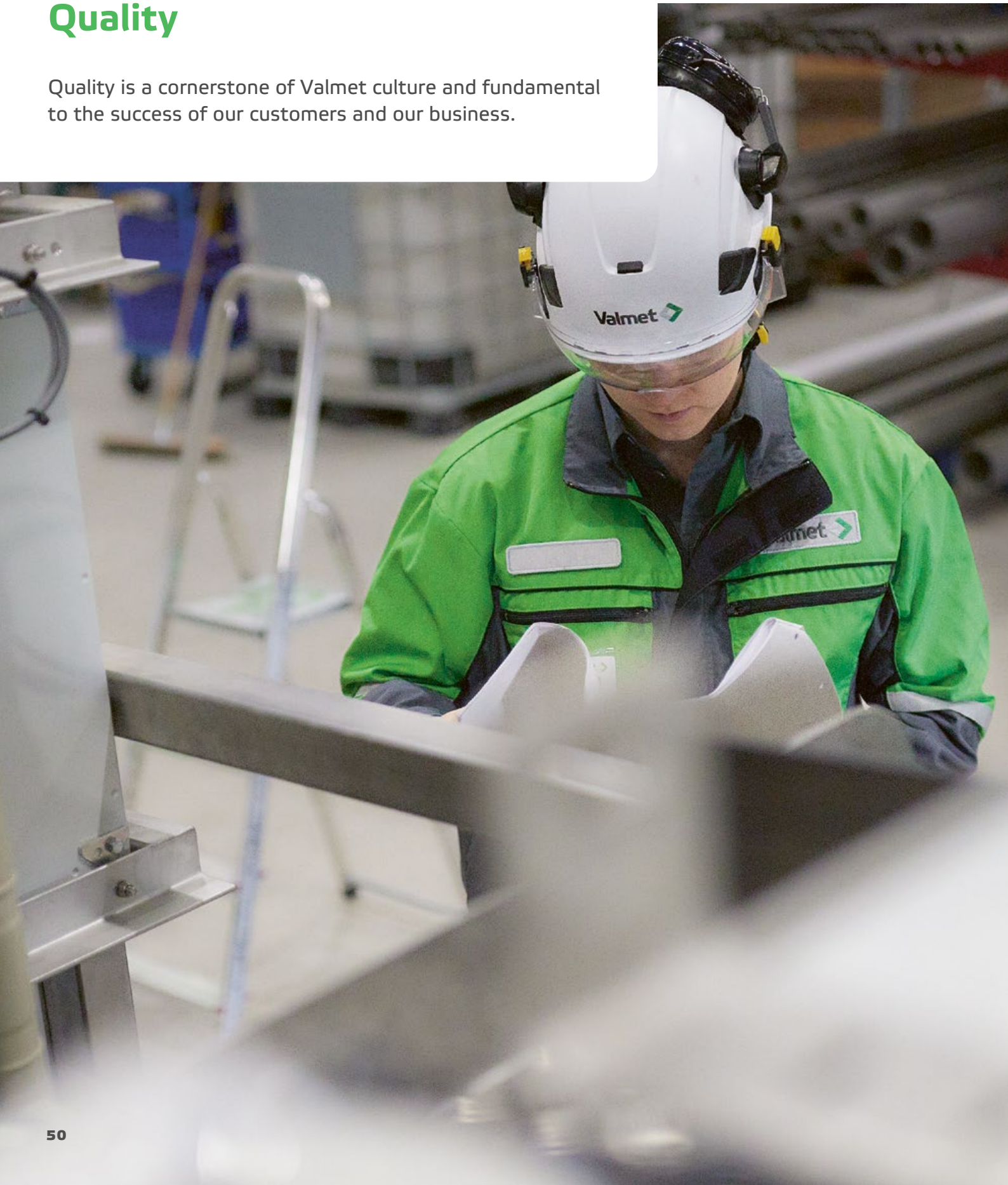
Mitigation efforts are not limited to the buyer side. Some suppliers increased their capacities during 2021 faster than anything we have seen in more than a decade. Our long-term suppliers have also been able to prioritize their deliveries to Valmet. In addition, Valmet warehouses expanded buffers to accommodate potential supply uncertainty. Local buying also took on new urgency to alleviate the bottlenecks in container logistics. By increasing our purchases from carefully selected suppliers in cost-competitive countries, we have been able to counter some of the price increases.

Despite the actions taken by Valmet and its suppliers, on-time delivery performance and overall supply logistics remain very challenging. We will continue to work closely with suppliers to overcome these challenges and establish positive trends.

Read more about our supply chain's CO₂ targets on page 56 and other activities related to sustainable supply chain on page 60.

Quality

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



Quality highlights in 2021

- Global quality governance model
- Systematic quality communication
- Harmonized quality systems and tools
- New definition and process for Cost of Poor Quality
- Focus on quality risk management and problem solving

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

To achieve the high-quality performance outlined in our Quality Policy, we have created and continuously develop our management system to ensure that the whole value chain works in unison for our customers' success. This requires a deep understanding of customer needs and expectations, along with high-quality deliveries that cement positive long-term customer relationships.

Unified quality governance

Valmet's quality governance is carried out at three organizational levels: corporate; business line and area; and most importantly, the local business level. Steered by the Quality Core Team with representatives from all business lines and areas, our governance model ensures the quality performance of all our operations in all locations is continuously improving and meets set targets.

To ensure high quality before, during and after deliveries, we follow documented processes for supplier evaluation, quality assurance and inspections. Valmet supervisors also regularly verify that we conform to customer requirements and support customer satisfaction.

Consolidated certifications and Global Management System (GMS)

One of our more significant quality achievements in recent years was consolidating ISO certifications. The number of individual certificates decreased from 154 to just three. Since December 2018, Valmet has one global certificate for Quality (ISO 9001:2015), Environment (ISO 14001:2015) and Health & Safety (ISO 45001:2018).

We have brought our quality efforts under a single global management. The management system is audited both internally and by authorized external third parties. The audits' results are used as an input for corrective actions and continuous improvement.

Quality strategy with tangible results

Excellence in processes is a Must-Win at Valmet. This includes the promise to constantly improve quality as well as health, safety and environment performance. We achieve this by documenting and communicating quality processes, monitoring these processes with performance indicators and committing to continuous improvement. A primary performance indicator is Cost of Poor Quality (COPQ), measured as a percentage of net sales. It captures all those costs which materialize from not meeting customer expectations the first time. We recently rolled out an improved new definition and process for tracking COPQ. This key performance indicator not only helps us determine the impact of quality on our business but makes the whole concept of quality more concrete for employees and helps prioritize corrective actions.

Throughout 2021, we also increased our focus on the Continuous Improvement (CI) of our operations by developing quality risk management and problem-solving systems, tools and capabilities. We determine CI performance by monitoring the resolution of quality issues and implementation of identified improvement opportunities.

Building a culture of quality

Our strong culture of quality is centered on communication. From documenting processes to training programs, sharing success stories and real-time data, we make sure everyone has the knowledge and resources they need to manage and improve quality. Employees are encouraged to share what quality means for them, and how they make it happen in their daily work as we work together to meet the needs of our customers.

Though tools and processes are necessary for success, quality is ultimately a people issue. At Valmet, we fundamentally improve quality by learning and being proactive. Our goal is for all Valmet employees to take personal responsibility for the quality of their work and for continuous improvement. Through structured, consistent development actions and effective quality tools and processes, we create the building blocks for personal success.



▶ Sustainability





Sustainability is at the core of Valmet's business strategy and operations

1.4

LOST TIME INCIDENT FREQUENCY FOR EMPLOYEES

14%

CO₂ EMISSIONS* REDUCTION FROM 2019 BASELINE

* Scope 1 and Scope 2 (market-based) emissions from own operations.

Our values, Code of Conduct and related policies, and selected globally acknowledged initiatives and principles create the foundation for sustainable performance at Valmet.

The role of our sustainability work is to support growth, reduce risks and enable cost savings. Sustainability is also an integral part of our strategy process and related Must-Wins. It is integrated in our processes through the comprehensive Sustainability360° agenda, which covers the five most material sustainability focus areas in our value chain: a sustainable supply chain; health, safety and environment; people and performance; sustainable solutions; and corporate citizenship.

The sustainability agenda is aligned with the Paris Climate Agreement's 1.5-degree pathway and the United Nations Sustainable Development Goals, and it is executed through concrete three-year action plans.

In 2021, we continued to systematically implement the actions defined in the current action plan for 2019–2021. During the year, we also renewed the Sustainability360° agenda. The renewal included an analysis of the business environment, benchmarks and peer reviews, industry and corporate sustainability trends, future regulatory requirements and stakeholder expectations. Based on this, we have identified new focus areas and updated the material topics for Valmet's value chain. The new agenda was approved by Valmet's Executive team, and we will introduce the renewed agenda with detailed action plans in 2022.

Our continuous progress to integrate sustainability into our business processes, policies and tools has positioned us as the industry leader in sustainability. In 2021, Valmet was included in the Dow Jones Sustainability Indices (DJSI) for the eight consecutive year and was ranked in the top 1 percent in the Ecovadis sustainability assessment. Valmet also received a B rating in CDP's climate program ranking.



Most impactful and relevant UN Sustainable Development Goals for Valmet

6 CLEAN WATER AND SANITATION
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.

7 AFFORDABLE AND CLEAN ENERGY
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 CO₂-free electricity, and improving energy efficiency in its own operations.

8 DECENT WORK AND ECONOMIC GROWTH
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 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.

12 RESPONSIBLE CONSUMPTION AND PRODUCTION
Goal 12: Responsible consumption and production
 Valmet develops process technologies, automation, and services to enable 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.

13 CLIMATE ACTION
Goal 13: Climate action
 Valmet has validated science-based CO₂ emission 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. By 2030, our target is to enable 100 percent carbon neutral production for customers. In addition, our target is to reduce CO₂ 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 to adapt to and mitigate climate change.



Forward to a carbon neutral future

Valmet's climate program includes ambitious CO₂ emission reduction targets and concrete actions across the value chain.

Valmet believes that technology plays a key role in mitigating climate change and global warming in the transition to a carbon neutral economy. In 2021, we introduced our ambitious climate program – Forward to a carbon neutral future – which continues our comprehensive sustainability work.

Valmet's climate program includes ambitious CO₂ emission reduction targets and concrete actions across the whole value chain, including the supply chain, our own operations, and customers' use of technologies. We have made an extensive analysis to measure the main CO₂ impacts from our value chain and defined the actions to reduce emissions, for example, through fossil replacement in energy and electricity. The targets will be achieved without emission compensation, and the program is aligned with the Paris Climate Agreement's 1.5-degree pathway and with the United Nations Sustainable Development Goals.

During the year, the program has progressed well and has received positive feedback internally and externally. The program targets were approved by the Science Based Targets initiative (SBTi), which means that the targets are based on the latest climate science. Valmet also signed a EUR 300 million syndicated revolving credit facility with a margin linked to its climate targets.

SUPPLY CHAIN

Our supply chain accounts for approximately 4 percent of the carbon footprint of our entire value chain. Our target is to reduce CO₂ emissions in our supply chain by 20 percent by 2030¹. We will achieve this with a wide range of actions such as increasing the share of recycled steel in our products, supporting CO₂-intensive suppliers in reducing their emissions, decreasing the weight of our products and introducing alternative materials, and supporting suppliers in optimizing their manufacturing methods. We will also centralize spend to suppliers offering low carbon transportation and continue to develop freight planning.

During 2021, Valmet identified its most CO₂-intensive direct purchasing categories and the most CO₂-intensive suppliers within the categories. As part of this, we developed data quality and coverage by increasing the share of supplier-specific reporting. In the coming years, we will focus on supporting our high emitting suppliers to reduce emissions through training and engagement. We will also increase lower emission transportation modes.



TARGETS BY 2030 FOR THE ENTIRE VALUE CHAIN

SUPPLY CHAIN

-20%

CO₂ EMISSION REDUCTION¹

OWN OPERATIONS

-80%

CO₂ EMISSION REDUCTION¹

USE PHASE OF VALMET'S TECHNOLOGIES

-20%

FURTHER REDUCED ENERGY USE OF VALMET'S CURRENT TECHNOLOGIES¹

100%

CARBON NEUTRAL PRODUCTION²

OWN OPERATIONS

Less than one percent of our value chain's carbon footprint arises from our own operations. Our target is to reduce CO₂ emissions by 80 percent in our own operations by 2030¹. We are driving this transformation by replacing fossil fuels with renewables in our locations, purchasing CO₂-free electricity and district heat, and implementing energy efficiency improvements. We will enhance the use of digital tools and further develop remote working habits that reduce business travel emissions. We will also promote low-carbon commuting.

In 2021, our locations renewed lighting, distribution rooms, heat recovery, air ventilation and other operations to be more energy efficient. In Sweden, we executed energy management audits for all locations to identify future efficiency actions. Several studies are ongoing for the installation of solar energy in our facilities. We have also explored the options for purchasing carbon neutral district heating in the rest of our main locations in Finland and Sweden, similar to Jyväskylä and Järvenpää in Finland, which have been purchasing carbon neutral district heating since 2016. At the end of the year, 20 percent of Valmet's global electricity consumption was CO₂ neutral.

USE PHASE OF VALMET'S TECHNOLOGIES

Most of Valmet's value chain's carbon footprint comes from the use phase of its technologies. Today, our customers' chemical pulp mills provided by Valmet are usually bioenergy self-sufficient already. Furthermore, we enable carbon neutral heat and power production for our customers with our current biomass-based energy solutions. By 2030¹, Valmet's target is to enable 100 percent carbon neutral production for all its pulp and paper customers by developing new process technologies². We are also improving the energy efficiency of our current offering by 20 percent.

Energy efficiency and carbon neutrality-related projects play a key role in our research and development. Our new technologies, products and services contribute to a sustainable carbon-free future. In 2021, we marketed our offering for the reduction of CO₂ emissions for our customers.

Read more in the R&D section, pages 46–47.

¹ Baseline 2019 calculated based on emission data from 2019 and data from acquisitions from 2019 and 2020. Read more in GRI Supplement 2021, page 25.

² Depends how the expected decarbonization of electricity, carbon capture and storage plans move forward, and if energy efficiency targets are met globally.

Progress on Sustainability360° agenda

Sustainable supply chain

TARGETS	KEY ACHIEVEMENTS 2021	KEY TOPICS 2022
We develop our existing processes that create the foundation for a sustainable supply chain	<ul style="list-style-type: none"> 94 percent of new direct suppliers went through the supplier approval process and were automatically screened for sustainability Reached the annual target by conducting 41 supplier sustainability audits with a third-party auditor <ul style="list-style-type: none"> Continued to develop remote and site work supplier auditing process Conducted three audits remotely due to COVID-19 pandemic Continued to focus on ensuring the right timing and good quality of the audit follow-up process and set annual target for the verification rate of agreed corrective actions Launched the supplier sustainability program in North America and South America <ul style="list-style-type: none"> Continued to implement the program in other areas and engaged 100 percent of key suppliers in China, Asia-Pacific, EMEA, North and South America Continued to support suppliers' developments with two sustainability e-learning courses to increase awareness and give practical guidance on more sustainable business practices 	<ul style="list-style-type: none"> Continue supplier sustainability audits while ensuring a high-quality audit follow-up process <ul style="list-style-type: none"> Further develop remote auditing process Continue to follow up the verified corrective actions Pilot site work supplier auditing process Continue to implement the supplier sustainability engagement program globally <ul style="list-style-type: none"> Invite Valmet's most CO₂-intensive suppliers to the program to support them in reducing emissions
We create new approaches to reduce the environmental impacts of our supply chain	<ul style="list-style-type: none"> Set CO₂ emission reduction targets for supply chain, business travel and commuting as part of Valmet's climate program Identified the most CO₂-intensive direct purchasing categories and the most CO₂-intensive suppliers in these categories Actively worked with suppliers to develop environmental reporting and to find ways to further reduce CO₂ emissions together <ul style="list-style-type: none"> Developed data quality and coverage by increasing the share of supplier-specific reporting Increased the use of low-carbon transportation modes to reduce emissions from business travel, commuting, transportation and logistics <ul style="list-style-type: none"> Favored more sustainable transportation and logistics service providers in purchasing decisions Emissions caused by business travel continued to be on a low level due to COVID-19 and an updated travel policy, which highlights Valmet's target to reduce business travel CO₂ emissions Developed employee commuting reporting 	<ul style="list-style-type: none"> Continue to develop lightweight packaging and standardization for more sustainable packaging solutions to reduce CO₂ emissions, increase the share of renewable materials and recycled steel, and decrease the overall use of raw materials Continue to increase the share of lower carbon transportation modes and to reduce emissions from business travel, transportation and logistics Continue to develop the carbon footprint calculations of our supply chain <ul style="list-style-type: none"> Focus on supplier-specific CO₂ reporting Promote low carbon commuting as part of the climate program



Corporate citizenship

TARGETS	KEY ACHIEVEMENTS 2021	KEY TOPICS 2022
We ensure our global social impact compliance through a due diligence framework	<ul style="list-style-type: none"> Continued to implement the long-term social responsibility program Continued to work on social impact due diligence framework <ul style="list-style-type: none"> Conducted a third-party evaluation of Valmet's social impact management framework Promoted human rights e-learning for Valmeteers Continued in-person social impact training sessions 	<ul style="list-style-type: none"> Continue to implement social impact due diligence framework and related action plan based on UN Guiding Principles for Business and Human Rights Continue internal training on social impact with both in-person training and e-learning Continue the third-party evaluation of Valmet's social impact management framework
We are a trusted local partner and promote transparent reporting	<ul style="list-style-type: none"> Sustainability e-learning completed by 80 percent of Valmet white-collar employees Conducted a survey and analysis of the changes in the business environment as part of our sustainability agenda renewal Sustainability recognitions <ul style="list-style-type: none"> Included in Dow Jones Sustainability World and Europe Indices (DJSI) for the eighth consecutive year Received the B rating in CDP's climate program ranking Received the best rating in Ecovadis sustainability assessment Received the best rating in MSCI ESG Ratings Received a Bronze Class distinction in S&P Global SAM's annual Sustainability Yearbook Promoted the updated Code of Conduct training <ul style="list-style-type: none"> The completion rate was 91 percent Further developed climate-related financial disclosure in line with the Task Force on Climate-related Financial Disclosures (TCFD) recommendations <ul style="list-style-type: none"> Conducted climate scenario analysis of our operations and business environment by 2030 with two different scenarios (1.5 °C (RCP2.6) and 4 °C (RCP8.5)) Highlighted sustainability in financial and investor relations activities <ul style="list-style-type: none"> Linked value chain CO₂ targets to loan mechanisms (RCF) Organized a record number of virtual meetings with financial stakeholders Launched Valmet's climate program and set CO₂ reduction targets for the whole value chain <ul style="list-style-type: none"> Validated and approved the targets with Science Based Target initiative Prepared for EU's Taxonomy-related reporting requirements 	<ul style="list-style-type: none"> Annual sustainability reporting according to the GRI Standards Report to leading sustainability ratings Continue to implement social responsibility program Increase stakeholder feedback through stakeholder survey Continue highlighting sustainability in investor relations activities and further develop climate disclosure in line with TCFD recommendations Continue developing CO₂ emission calculation to disclose annual emissions in our future reporting Continue the reporting work for EU's Taxonomy-related requirements



People and performance

TARGETS	KEY ACHIEVEMENTS 2021	KEY TOPICS 2022
We boost employee engagement and develop the best talent	<ul style="list-style-type: none"> Achieved 81 percent response rate for OurVoice engagement survey <ul style="list-style-type: none"> Scored above Global Industry and Industrials norms for Engagement and Enablement indexes Incorporated new question on sustainability into the survey Utilized global training programs to support strategic goals; 153 participants in 2021 Continued with competence transfer programs in selected parts of the business Identified 3,223 successors as key outcome of talent review process 	<ul style="list-style-type: none"> Execute OurVoice actions at the team and organizational levels Use sustainability to drive engagement and attract talent Enhance global training portfolio to strengthen strategic skillsets Continue competence/tacit knowledge transfer programs Increase internal mobility between businesses and geographies Create three-year roadmap for diversity and inclusion
We are a responsible employer and promote diversity	<ul style="list-style-type: none"> Created senior manager role description Continued to prioritize diversity talent in global program nominations Set diversity target for number of women in STEM (science, technology, engineering and mathematics) positions (12 percent by 2023) Published diversity and inclusion e-learning for Valmet line managers Achieved good level of internal mobility (38 percent); increased mobility between businesses and geographies to 7 percent Launched work-life integration framework, an umbrella for Valmet's view on how to integrate work with the rest of life, taking into account different life situations, generations and local preferences 	



Health, safety and environment (HSE)

TARGETS	KEY ACHIEVEMENTS 2021	KEY TOPICS 2022
We invest in safety culture and effective HSE processes and practices	<ul style="list-style-type: none"> Achieved lowest ever LTIF 1.4 and TRIF 3.1 for employees 91 percent of all employees completed the global Safety Dialogue training Set more ambitious CO₂ reduction target for our own operations as part of Valmet's climate program <ul style="list-style-type: none"> Made at least 15 energy efficiency investments Increased carbon neutral electricity consumption to 45 percent in Finland Implemented initiatives to improve travel and lifting safety Continued adoption of the global IT platform for HSE and Continuous Improvement (CI) management Continued to increase the multi-site ISO certifications coverage to 85 locations 	<ul style="list-style-type: none"> Continue the effective HSE management of COVID-19 Integrate the Safety Dialogue training into the onboarding process for new employees Take actions for energy efficiency and to increase carbon neutral energy consumption in locations, as well as to reduce carbon emissions from business travel Continue with contractor and supplier HSE days in all areas Implement initiatives for safe working at height and hand injury prevention at locations and customer sites Support mergers and acquisitions with integration to Valmet HSE systems and culture Increase the ISO 14001:2015 and ISO 45001:2018 certifications of workshops Develop offering of HSE trainings
We collaborate with customers and partners to improve HSE results	<ul style="list-style-type: none"> Continued the effective HSE management of COVID-19 in locations and customer sites Held several contractor and supplier HSE days in China and EMEA Started the development of improved site HSE management process 	



Sustainable solutions

TARGETS	KEY ACHIEVEMENTS 2021	KEY TOPICS 2022
We create technologies and services that enhance renewable raw materials, and water and energy efficiency	<ul style="list-style-type: none"> Identified several new product opportunities utilizing renewable or recyclable materials Launched products and concepts that enhance more sustainable operations: Sleeve roll, Chip to board, Mill-wide optimization and Waste-to-energy optimization Improved material efficiency in several products through product design Launched Industrial Internet solutions which enable efficient and optimized delivery of alternative fuels (LNG, biogas) Developed remote expert support and commissioning engineering capabilities further during the pandemic Technology strategy and long-term technology vision renewed with a focus on the circular economy, resource efficiency, use of renewable materials and move toward a carbon neutral economy Implemented product lifecycle management process with connection to R&D process Calculated lifetime CO₂ emissions (Scope 3 category 11) from technology use phase Set energy efficiency target for our current offering and carbon neutrality target for the new pulp and paper production technologies as part of Valmet's climate program 	<ul style="list-style-type: none"> Increase the use of renewable or recycled materials in product offering Continue to develop solutions to improve energy and raw material efficiency Collaborate with key customers concerning the sustainability benefits of our offering Develop solutions for material recycling Develop intelligent automation and optimization solutions for decentralized, flexible and carbon neutral energy and alternative fuel production Further develop LNG automation solution for marine industry Further develop Waste-to-Energy optimization concept with grate combustion vision software Launch climate program training for sales
We actively promote the sustainability benefits of Valmet's offering to meet customers' needs	<ul style="list-style-type: none"> Several technology events conducted with key customers to identify potential for CO₂ reduction and water savings and carbon neutrality overall Continued to provide sustainability training for sales teams Launched a campaign for the offering on CO₂ emission reduction for paper, board and tissue to help our customers reduce their emissions 	



READ MORE:
valmet.com/sustainability

Sustainable supply chain

In 2021, we continued the execution and development of our existing key processes to enhance sustainability in our supply chain. We conducted supplier sustainability audits on site and remotely and proceeded with the implementation of our supplier sustainability engagement program.

Valmet has fully integrated sustainability into its supply chain processes, and our target is to continuously enhance our supply chain management and the transparency of our value chain.

We want to ensure that we operate responsibly throughout the value chain, and that the materials and components we purchase are in compliance with Valmet's sustainability requirements for our suppliers and with relevant local and global regulations and standards.

We continuously engage our suppliers in developing their own sustainability performance and provide concrete, hands-on support to do so. Valmet has established processes to evaluate, manage and support its suppliers' more sustainable operations in a globally aligned manner through auditing processes and supplier sustainability engagement programs.

Global and extensive supplier network

Valmet has an extensive supplier network, including 20,000 active direct suppliers in more than 50 countries with different

sustainability maturity and risk levels. However, more than half our purchases originate from Finland and Sweden when measured by supplier spend. Most of Valmet's direct purchases come from low-risk countries in terms of sustainability. Our main purchases consist of metals-based products and components, electronics, and different services.

Several potential sustainability risks may occur in our complex supply chains, and we therefore work systematically to ensure responsible business practices in all our partnerships. Our ambition is to support our suppliers' more sustainable operations and to further strengthen our cooperation with them.

Supplier sustainability management process

Valmet has a global four-step supplier sustainability management process. All suppliers are required to sign Valmet's Sustainable Supply Chain Policy, which addresses Valmet's minimum requirements for its suppliers regarding business ethics and compliance, human rights and labor rights, occupational health and safety, environmental management, and sustainable products and services.

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

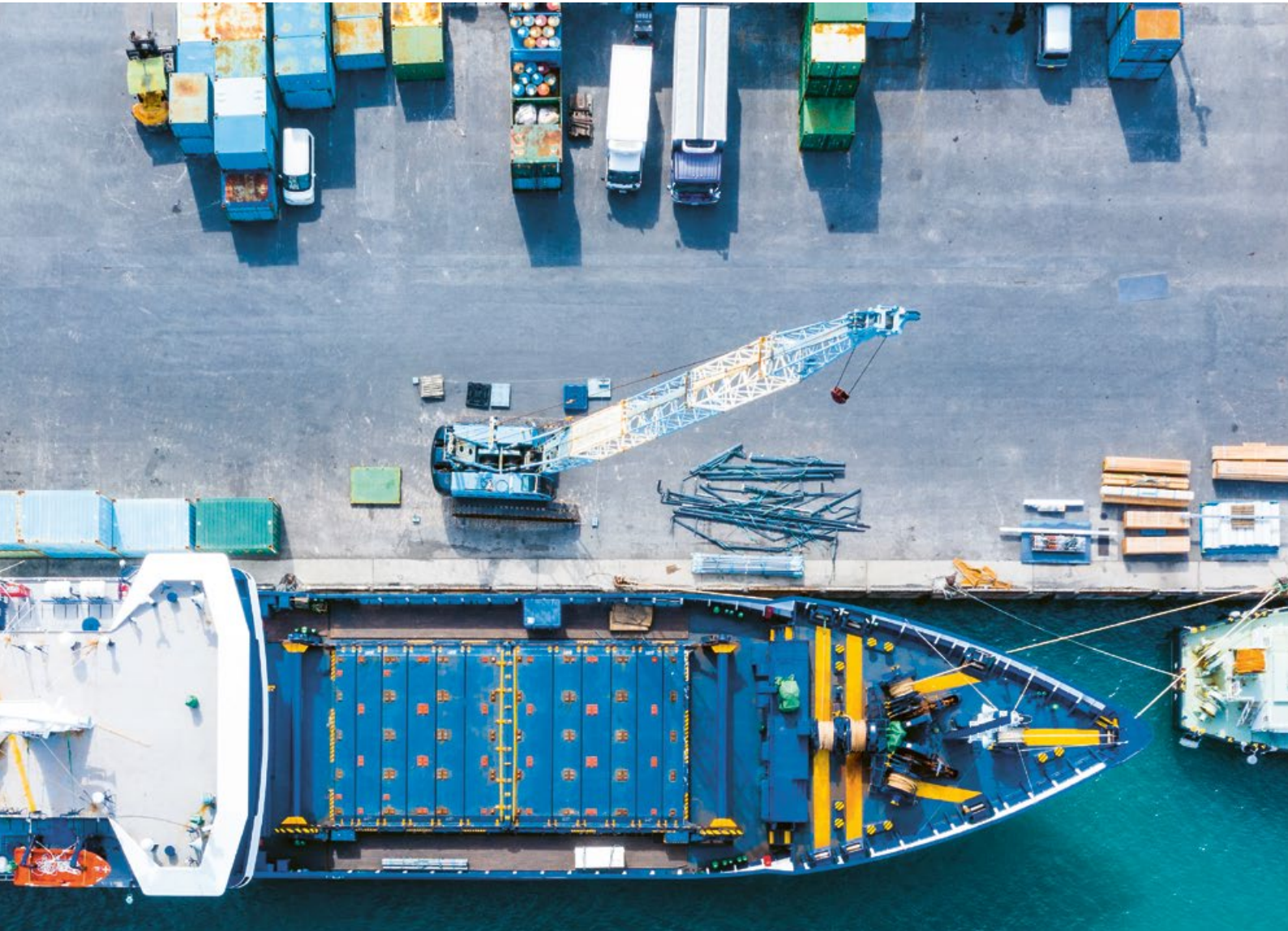
A poor result in the risk assessment leads to a supplier sustainability self-assessment



SUSTAINABILITY AUDITS

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





100%

OF SELECTED
KEY SUPPLIERS
ENGAGED
GLOBALLY

41

SUPPLIER
SUSTAINABILITY
AUDITS
CONDUCTED IN

14

COUNTRIES

**PURCHASES
(10 LARGEST COUNTRIES)**

EUR MILLION	2021
Finland	1,182
China	309
Sweden	290
USA	168
Germany	71
Poland	61
Canada	48
Brazil	45
India	39
Italy	39



In 2021, the sustainability engagement program was launched in North and South America.

We expect all our suppliers to comply with the principles defined in the policy; it is the starting point for all business relationships with Valmet. The policy and risk assessment acts as a basis for self-assessments and sustainability audits.

All suppliers are evaluated through a sustainability risk assessment based on the country of purchase and the purchasing category. The aim is to assess the potential negative impacts and risks related to ethical business practices, environmental performance, health and safety, human rights, and labor practices. If the supplier's risk level is increased, a sustainability self-assessment is also required from the supplier. A low score in the self-assessment will lead to a sustainability audit. Other criteria for audits include a high sustainability risk or a high annual spend.

Ensuring the right timing and good quality of the audit follow-up

The last part of Valmet's global supplier sustainability management process is to ensure that our suppliers operate in compliance with the requirements of our Sustainable Supply Chain Policy and with local and international law. We have conducted sustainability audits globally every year since 2015.

In 2021, we conducted 41 supplier sustainability audits in 14 countries with a certified third-party auditor. Due to the COVID-19 pandemic, we also developed a remote audit framework and arranged three remote supplier sustainability audits. During the year, we 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 health and safety, and environmental management.

Of all corrective actions agreed with suppliers in 2021, 26 percent had been completed and verified by the end of the year. 86 percent of all actions agreed with suppliers as part of the auditing process since 2015 had been completed and verified by the end of 2021.

Supplier sustainability engagement program increases efforts for common sustainability goals

Valmet has around 100 key suppliers, of which ca. 30 percent are identified as possible sources of potential sustainability risks for Valmet based on the country of origin and the purchasing category. To further strengthen the cooperation with these important suppliers, Valmet has created a sustainability engagement program. The program supports and monitors these suppliers' performance and provides hands-on concrete tools and training for them to take the most critical steps to develop their sustainability practices. The program is based on the principles of Valmet's Sustainable Supply Chain Policy, and it is an integral part of our supplier relationship management (SRM) program.

The program was piloted in China in 2018, and it has since been launched in Asia-Pacific and EMEA. In 2021, the program was launched in North and South America. The launch included internal training and conducting a virtual key supplier sustainability day for the participating suppliers, introducing the importance of and approach to sustainability at Valmet and insights and best practices to develop more sustainable business operations. There was a focus on Valmet's new climate program and the growing expectations for companies to transform their operations to reduce emissions and eliminate fossil fuels. As part of the program, supplier-specific targets and KPIs are set, and related actions are followed up for each participating supplier, resulting in visible improvements in their operations.

The suppliers are also offered training and exclusive access to development tools. These include professional training related to the different areas of sustainability, the sharing of inspirational case studies and best practices, and having a dialogue and giving guidance on how to proceed with the issues. The suppliers are also provided access to a capacity-building library with concrete development tools, e-learning and practical handbooks, which aim to increase awareness and give practical advice on how to develop more sustainable business practices.

In the future, the plan is also to invite Valmet's most CO₂-intensive suppliers to join the program to support them in setting and aligning with these emission reduction targets.

The program has given the participating suppliers knowledge and tools to evaluate their sustainability impacts and performance, and to take tangible improvement actions. It has also created added value by engaging new customers, increasing order volumes from existing customers, and enhancing employee engagement and visibly improved operational safety.

Successfully auditing suppliers remotely during COVID-19

Every year, we carry out sustainability on-site audits for our suppliers with a certified third-party auditor. Due to COVID-19, we created a credible approach to conducting audits remotely. For example, Valmet has been active in sustainability remote audits in Brazil.

Luís Fernando Silva, Valmet's Supply Analyst, has been involved in many on-site and remote audits.

"During COVID-19 travel restrictions, the remote auditing has brought us savings in travel time and expenses. Moreover, some suppliers see remote audits as more dynamic, because there are fewer distractions. And if we are missing any information, it is quick to add someone else to the virtual meeting."

Remote audits are organized virtually. The suppliers send specific sustainability-related documents such as licenses and certifications to the auditor beforehand. The audit includes a virtual tour at the supplier's premises, as well

as interviews with suppliers' personnel. Finally, Valmet's contact person, the auditor and the supplier discuss the findings.

In general, Silva sees the remote audits as successful. However, once the travel restrictions are lifted, Valmet will favor on-site audits, because remote audits do not necessarily suit all the suppliers. And as the remote audit provides a single snapshot, it can sometimes be difficult to form the big picture together.

"Of course, meeting people in person is useful, as it is easier to learn more about each other. Hopefully, in the future, we can utilize both remote and on-site audits, as well as hybrid models, whichever works best for the specific case."

➤ **READ MORE:**
valmet.com/supplychain



Health, safety and environment

Nothing is more important to us than that our people and partners come home healthy and safe at the end of every workday. In 2021, we continued our strong COVID-19 management approach, put in place lifting safety improvements and took concrete steps in our own operations toward environmental targets.

We strive to protect people and promote sustainability in all our activities. We do this by investing in a positive safety culture, collaborating with customers and partners, and constantly improving our processes and practices toward our common goal of zero harm.

During 2021, we continued our strong efforts to keep our people, partners and communities safe and healthy during the COVID-19 pandemic, while keeping our operations running and delivering products and services to our customers. Our strict COVID-19 protocols were followed at all our Valmet locations and customer sites. We also supported the global vaccination effort by distributing vaccines through our occupational health services. For example, our occupational health service administered more than 1,000 vaccination doses in Finland. To ensure our travelers were kept healthy and safe while traveling to customer sites, we partnered with global medical and security service providers.

We have made consistent progress in improving health and safety in Valmet, and by the end of the year, our lost time incident frequency rate (LTIF) for our own employees was its lowest ever, at 1.4 (1.5). However, there is more to do. Regrettably, a fatal contractor injury was reported during installation work at Valmet's customer site in India. A thorough investigation was conducted in cooperation with the customer, contractor and the authorities, and corrective actions were taken. The lessons learned were shared with project and site managers globally. Securing contractor safety on customer sites remains a key focus for us.

Valmet designs and operates its facilities to promote the sustainable use of resources, minimize waste and prevent pollution. All production locations act to implement our climate program and reduce water usage and landfill waste. Another focus in 2021 has been the integration of recently acquired businesses with our environmental management practices.

Together we make a difference

We believe that open and continuous communication on HSE issues is the foundation for a strong safety culture. Our global

Safety Dialogue training aims to facilitate these conversations as an ongoing practice in all our teams. It is Valmet's largest training initiative to date, and 91 percent of all our people had participated in it by the end of 2021. We will continue the Safety Dialogue in the future as part of the onboarding process for all new employees. We will also provide managers and their teams with refresher training during 2022, focusing on wellbeing, work-life integration and the key practices in Valmet to promote HSE wherever we work.

We expect everyone in our work community to take responsibility for a safe, healthy and well-managed workplace wherever we operate. Managers at Valmet lead the way, with HSE an integral part of business management, annual plans, business strategy and target setting. To support our HSE efforts, we conduct several global awareness events every year. In 2021, we participated in the WWF Earth Hour for the twelfth consecutive year in 100 locations in 21 countries. We also organized our annual HSE week for the tenth time and renewed the concept by arranging both local activities and virtual events to enable widespread participation globally.

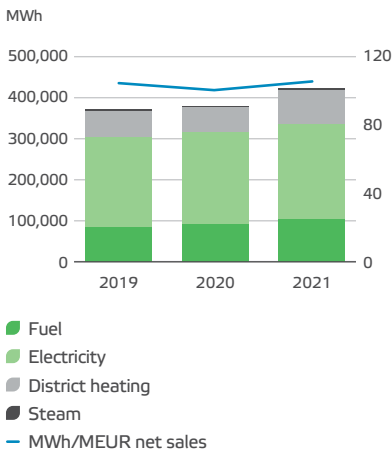
Engaging our partners in an HSE discussion is a critical element of our contractor management approach. Every year, we hold several Contractor HSE days, during which we align safety commitment and expectations with our main site suppliers in various customer delivery projects. During 2021, we also launched a new program of Supplier HSE days in China to share good HSE practices with key manufacturing suppliers. These events are appreciated by our partners, and our plan is to implement them more widely in the coming years.

Lifting safety improvement program

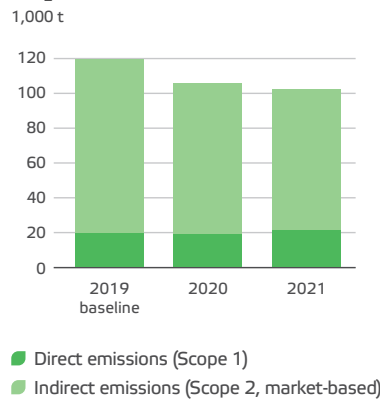
Another major initiative we took in 2021 was to implement a lifting safety improvement program in our roll service workshops. Developed and piloted in China, the program was then rolled out globally. The initiative included the formation of local lifting safety improvement teams, analyzing recent lifting events for root

Health, safety and environmental data

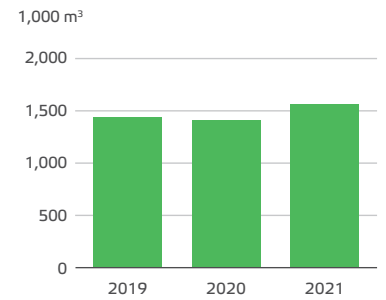
Energy¹



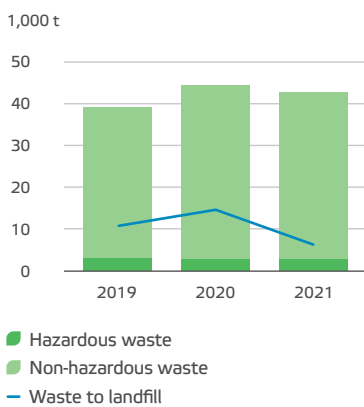
CO₂ emissions^{1,2}



Water consumption¹



Waste¹



MANAGEMENT SYSTEMS (% OF HEADCOUNT)

SHARE OF CERTIFIED OPERATIONS, 2021

86%

ISO 9001:2015
Quality
Management System

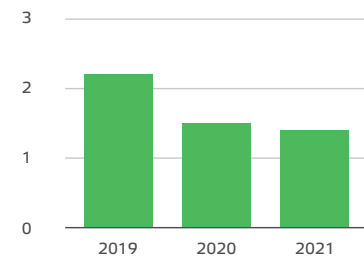
79%

ISO 14001:2015
Environmental
Management System

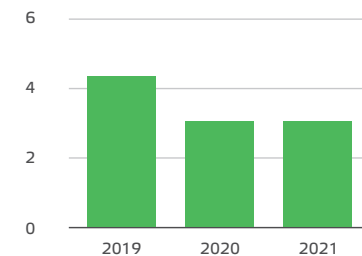
75%

ISO 45001:2018
Occupational
Health and Safety
Management System

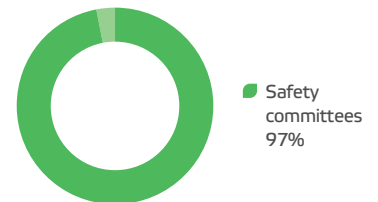
Lost time incident frequency (LTIF)³, own employees



Total recordable incident frequency (TRIF)⁴, own employees



Coverage of safety committees⁵, % of workforce



¹ Data from the 2020 acquisitions are included for the first time in 2021 reporting.

² Baseline 2019 calculated based on emission data from 2019 and data from acquisitions from 2019 and 2020. Scope 2 data from 2020 is restated to include emissions from operations acquired in 2020.

³ LTIF reflects the number of injuries resulting in an absence of at least one workday per million hours worked.

⁴ LTIF+medical treatment and restricted work cases.

⁵ Percentage of workforce represented in formal joint management-worker health and safety committees.

causes, performing equipment inspections, arranging awareness activities, and providing standard instructions and training.

The Pulp and Energy business line also created a lifting safety awareness week for customer project sites, during which inspections and other awareness activities engaged everyone on site to focus on safe lifting. As the next step, we will initiate a working at height improvement program in 2022 for both our workshops and sites. We will also renew our minimum safety standard and life-saving rules.

Our global management system taking us forward

Valmet’s global management system (GMS) provides a platform for continuous improvement, as well as standardized quality and HSE management in all our operations. The targets and improvement initiatives are aligned across all units and locations to drive development toward our strategic HSE objectives. During 2021, a new global process handbook was launched to further support harmonized ways of working. Currently, 85 Valmet locations are included in our global multi-site ISO certification to ISO quality and HSE standards. We progressed well with our certification roadmap and certified nine additional locations to the ISO 45001:2018 and ISO 14001:2015 standards.

For the first time, our health and safety standard certification now covers more than 70 percent of our employees. Our goal is that 90 percent of all employees will work in operations certified by all three standards by 2025 (see the table on page 65 for the current coverage).

In addition to external auditing, all our locations are internally audited regularly to ensure that global processes are implemented systematically everywhere. Due to the COVID-19 pandemic, we have also developed virtual auditing and inspections of both our locations and customer sites.

At the end of 2020, we launched a new global tool for reporting, managing and analyzing HSE and quality events, as well as audits, inspections, risks and lessons learned. During 2021, we supported the use of the tool by giving further training, driving system development and enhancing data analytics. Adoption of the tool has been active across the organization, and at least 33,000 HSE observations were made by our people and partners, and more than 3,250 HSE walks, inspections and conversations were conducted by our managers and reported in the tool. In the future, we will promote the tool’s external reporting portal to engage external stakeholders and develop our HSE analytics dashboards.

ENVIRONMENTAL PROGRAM¹

Target	2025	2030
100% compliance with environmental regulations	100%	100%
ISO 14001:2015 system certification (% employees)	90%	90%
Reduction in waste to landfill (Baseline reference yearly average 2010–2012)	50%	80%
Reduction in water consumption (Baseline reference yearly average 2010–2012)	18%	20%

¹ See Valmet’s climate program for CO₂ emission reduction targets and concrete actions across the value chain.

HEALTH AND SAFETY PROGRAM

Target	2025
Reduction in TRIF – employees (per million workhours, rolling 12 months)	2.5
Reduction in LTIF – employees (per million workhours, rolling 12 months)	1
Reduction in TRIF – external workers whose work and/or workplace is controlled by Valmet (per million workhours, rolling 12 months)	2.5
Reduction in LTIF – external workers whose work and/or workplace is controlled by Valmet (per million workhours, rolling 12 months)	1
Access to local health promotion and wellbeing activities (% employees)	100%
Increase in safety observation reporting (per employee/ year)	4
Increase in management safety walks (per manager/year)	4
ISO 45001:2018 system certification (% employees)	90%
Elimination of life-changing injuries (no. injuries/year to employees and external workers whose work and/or workplace is controlled by Valmet)	0

Making the site safer together

Every year, Valmet holds several Contractor HSE days to align safety commitment and expectations with key site suppliers.

“Contractor HSE days are an excellent forum for sharing good practices and learning from each other, supporting us in reaching the common target of zero incidents on our customer sites,” says **Victoria Larsson**, Valmet’s Vice President for Health, Safety and Environment (HSE).

In February 2021, a Contractor HSE day was organized for the Metsä Board Husum site in Sweden. This time, the event was organized virtually due to COVID-19-related restrictions. Modern tools, video connections and group discussions were used to enable effective collaboration. The advantage of a virtual event was that it enabled more people to participate than a traditional in-person activity.

Participants from Metsä Group, Valmet and multiple supplier companies attended the event. Valmet introduced

its latest HSE developments and encouraged discussions about developing a common safety culture.

The contractors then presented what Valmet best practices they had implemented. A virtual safety walk was also part of the agenda, which enabled the participants to list HSE observations and improvements from the site. At the end of the event, all participants made their safety promise.

“The event received very positive feedback from the participants. People were actively collaborating to take safety forward, and the virtual safety work and virtual groupwork were especially appreciated,” says **Suvi Reinikka**, Global Category Manager for site works and services, Valmet.

➤ **READ MORE:**
valmet.com/hse



14,246
EMPLOYEES GLOBALLY

81%
OUR VOICE RESPONSE RATE

5,958
SPOT AND SPECIAL
REWARDS GRANTED



People and performance

Valmet's more than 14,000 employees come together every day to serve our customers, live our values, deliver business results and keep our workplace safe. Working together continued to be a clear strength for us in 2021.

We have created a strong foundation for people development and top performance, and our people around the world are committed to moving our customers' performance forward.

In 2021, Valmet ran its fifth OurVoice employee engagement survey. Overall engagement and performance excellence levels remained stable compared to previous years, with a slight increase in questions related to company values. The survey was renewed with a new question set, survey platform and benchmarks. The renewed question set was designed to capture key trends, align with new external benchmarks, and incorporate questions on topics important to our company, such as diversity, health and safety, and sustainability. In total, 81 percent of Valmetees participated in the survey.

Working together continued to be the highest scoring item, followed by understanding company strategy and the ability to do interesting work. High marks were also given for the company's ability to keep people safe and healthy. Areas for improvement included support for managing change and maintaining work-life balance, both of which were chosen as global focus areas for the improvement actions based on this 2021 survey.

Team discussions and action planning continues to be an important part of the OurVoice survey cycle. The new OurVoice survey platform supports effective action planning by suggesting the most impactful actions and supporting systematic action plan follow-up. In total, more than 1,200 teams used the platform to set at least one action based on the survey.

Building a high-performance culture

Valmet continues to develop a pay-for-performance culture in line with our remuneration principles of driving high performance, compensation to retain talent with the right fit, and fairness and sustainability. Since implementing a new people management system in 2018, we have been increasingly using data to guide compensation-related decision making through dashboards, process improvements and manager training. The result is a more strategic salary planning process which ensures that salary increases

are targeted at our high performers, especially those at the low end of the salary range.

In 2021, we continued with the spot and special reward program and HighFive feedback, sending more than 12,500 feedbacks and granting 5,958 rewards. Annual review and mid-year review discussions were completed by 98 percent of white-collar employees, with additional target-setting guidance for key roles resulting in higher quality targets overall.

Strengthening the manager role

Valmet's manager role forms the foundation of how we engage, develop and drive the performance of individuals and teams across the company. In 2021, we took steps to further develop managerial and leadership skills by creating a senior manager role description and introducing a leadership index as part of the OurVoice 2021 renewal.

General managerial skill development continued through online learning and best practice sharing. For online learning, we kicked off a three-part compensation and benefits training, introduced a diversity and inclusion e-learning, and arranged access to a new virtual learning library with 16,000+ online courses. For best practice sharing, we introduced content on resilience and change, remote work, and work-life integration. In-person Forward for Managers training programs were mostly postponed in 2021.

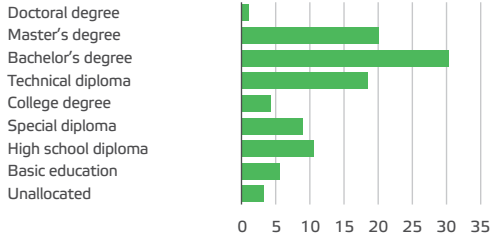
Finding the right balance

Work situations differed across the company in 2021, with some employees fully remote, some hybrid and some in the office, in our production facilities or on customer sites. Different work situations require managers, teams and individuals to place more emphasis on staying engaged and connected and maintaining balance. To support managers and employees in these areas, we embedded additional opportunities for dialogue into the strategy team discussions and annual review discussions; we launched a new site on work-life integration with materials on staying connected, adapting to change, managing workload, professional growth, life goals and healthy lifestyle; and we focused on self-leadership skill



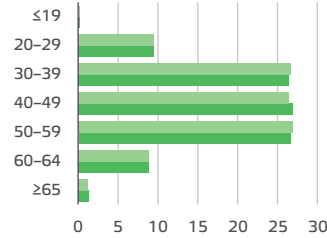
PERSONNEL DATA

Education structure, %



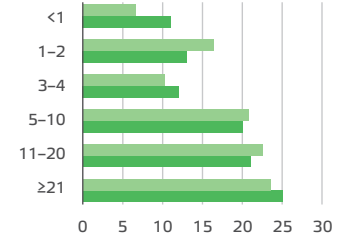
■ 2021

Age structure, %



■ 2020 ■ 2021

Service years, %



■ 2020 ■ 2021

development with new e-learnings on self-care, stress, work-life balance and time management.

Additionally, work-life integration was identified as a global focus area following the OurVoice 2021 survey, for which actions will be executed during 2022. One of the first actions identified is to include a new question on work-life integration in the 2022 annual review discussion process to encourage active dialogue between managers and their team members on the topic.

Building capabilities for the future

Ensuring we have the right resources in the right place at the right time is critical to our success. In 2021, we included a specific section in the strategy planning process on competences and resources, allowing management teams to identify the capabilities needed to execute our strategy. The key outcomes of the work were used as input for resource planning and to set talent development and talent acquisition priorities, including university partnerships and trainee programs.

Valmet ran four global training programs in 2021 – Champions in Services, Leading through Lean, Excellence in Project Management and Innovation Pathways. The programs were complemented by active internal mobility, a global mentoring program with 70 pairs, and a variety of business line and area-specific development programs on topics such as tacit knowledge transfer, leadership, remote and matrix management, chief engineer competence development, Industrial Internet, and process technology.

Developing a strong talent pool

It is important for us to create opportunities for people to grow and develop within Valmet. We use our talent review process to identify, evaluate and develop managerial, successor and high-potential resources. This year, we took steps to create data-led insights on how our talent and successor pools are developing, and how well we have been able to support talents and successor candidates in growing to their full potential.

Our efforts to promote Valmet as an attractive employer continue to pay off. Valmet was included in employer ranking surveys in many of our key markets. We were named the second most attractive employer among engineering professionals in Finland. The increasingly active job market, especially toward the end of the year, prompted us to re-evaluate and accelerate our recruitment process. In 2021, we launched a new careers webpage, introduced a recruitment dashboard and new ready-made templates, held best-practice sharing sessions for recruiters, and renewed our orientation e-learning – all to ensure a smooth onboarding and the best possible welcome to the Valmet team.

Champions in Services – a global training program to target business growth

Champions in Services focuses on developing Valmet’s strategic capabilities, supporting the growth of Valmet’s Automation and Services businesses and enabling the implementation of Valmet’s Way to Serve. The program was organized in a virtual format in 2021.

Champions in Services brings Valmet’s services professionals together to understand the full potential of our stable businesses and create growth by learning together. The program focuses on areas such as growing markets, portfolio management, digitalization and managing the customer experience. A program highlight is working with real-life customer cases and creating a great customer experience.

“Champions in Services is Valmet’s most significant training program for driving business growth. The program worked well in a virtual format, and in the future, we are planning a hybrid model, leveraging the benefits from both virtual and in-person learning. The participating customers were also

very pleased with the outcomes of the program, and the discussions with Valmet’s experts led on many occasions to real project negotiations and even execution,” says **Santeri Heinonen**, Valmet’s Senior Manager, Global Talent Development.

Gregory Fralic, Valmet’s Senior Application Specialist in the Industrial Internet team, was one of the program’s 36 participants.

“Since the training, I’ve since focused more in customer research at the beginning of the sales phase and on emphasizing customer value instead of the technical solution alone. I have also started to collaborate more with other business lines.”

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valmet.com/people-and-performance





Corporate citizenship

Valmet operates in more than 30 countries and has a wide network of partners and stakeholders globally. We want to be a respected corporate citizen and continuously develop our processes and operations globally. During 2021, we continued our social responsibility program, proceeded with our social impacts' management and developed our reporting.

As a global company and a recognized sustainability leader in our industry, we collaborate with stakeholders in a highly multi-cultural environment and enhance sustainable business practices throughout our value chain. We aim to ensure that all our operations comply with laws and regulations in a socially responsible and globally aligned manner. Our growing presence in emerging markets emphasizes our responsibility toward local communities.

With global operations, we provide employment and business opportunities and indirectly build well-being in local societies. By delivering more sustainable and cost-competitive solutions and services to our customers, we can generate added value for our shareholders and support the global efforts to combat climate change.

Social responsibility work continued

Valmet strives to be a responsible corporate citizen by understanding the needs and expectations of local communities. We participate in selected local programs around the world based on our Guidelines for Sponsorships and Donations. As part of its social responsibility program, Valmet continued to support Save the Children's Child Sensitive Social Protection Project in Dungaarpur, India. The cooperation started in the beginning of 2020. The project aims to increase school attendance, reduce child labor and develop the circumstances of poor and vulnerable children. All these objectives perfectly align with our key theme, Equal Opportunities for Wellbeing.

During the year, Valmet also continued its traditional support for non-governmental humanitarian organizations working locally in youth activities, environmental protection, and research and education. Our seasonal donation is annually selected by our employees, and in 2021, it was directed to Plan International.

Due diligence framework to manage social impacts

Valmet is committed to the United Nations (UN) Guiding Principles on Business and Human Rights, and we express our engagement in our Human Rights Statement.

We have a comprehensive due diligence framework to monitor and manage social impacts related to our own operations and our supply chain. In addition to human rights statement, it includes social impact assessments and their findings, action plan creation and monitoring progress. Valmet annually communicates the progress and provides a remedy if required. The social impact management is also integrated into other processes such as the country sustainability risk assessment, the global supplier sustainability management process, and the sustainability agenda review process.

We have a location-specific social impact assessment process for high-risk locations. Valmet has conducted three local assessments in its own operations in Thailand, Indonesia and China, which were carried out by an independent third party. The findings were mainly related to health, safety and environmental management, and sustainable supply chain management. The corrective actions regarding the findings have been completed and verified.

In 2021, we conducted a third-party evaluation of our social impact management framework, which includes a review of our social impacts management process and salient issues, as well as benchmarks, analysis and developing the assessment of potential negative indirect impacts on nearby communities. The target is to ensure full alignment with the United Nations' Guiding Principles on Business and Human Rights. The work will continue in 2022.

Active engagement with stakeholders

We promote transparency in our communications and actively engage with our stakeholders. For example, we communicate about our development through the company website, reports and stakeholder events. Sustainability topics are also part of our customer and other stakeholder surveys.

In 2021, we conducted a survey as part of our sustainability agenda renewal to gather perspectives and feedback on our sustainability work from internal and external stakeholders.

The most significant topics raised were climate change and reducing CO₂ emissions, the energy, water, chemical and raw material



**Support for non-profit organizations, %
EUR 309,368 in total**



- Youth activities 69%
- Science, research and education 19%
- Others (community, culture, sports) 13%

**INCOME TAXES
(10 LARGEST COUNTRIES)**

EUR MILLION	2021
Finland	32.5
China	12.1
Sweden	12.1
USA	11.2
Brazil	8.1
Canada	3.5
Germany	2.4
Japan	2.1
Poland	1.4
Italy	0.9

Valmet is a global leader in sustainability

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



efficiency of technology, and the health, safety and wellbeing of employees. Valmet received excellent feedback on its commitment to sustainability, as well as for introducing the new climate program in the beginning of 2021. The majority of the respondents assessed Valmet's sustainability performance as excellent or very good.

We also analyzed the changes in the business environment as part of our sustainability agenda renewal. According to the analysis, the key drivers for Valmet's sustainability approach are sustainable finance and taxonomy, climate change mitigation, business ethics and due diligence, adapting to changing regulation, and supporting the circular economy and biodiversity.

Position among the world's sustainability leaders

Valmet reports to several third-party sustainability ratings. Over the years, we have been recognized for our actions and strategy in mitigating climate change, and for our management and reporting of sustainability actions.

In 2021, Valmet was included for the eighth consecutive year in the Dow Jones Sustainability Index (DJSI), a comprehensive ranking which evaluates companies' ESG (Environmental, Social, Governance) performance. Valmet also received the best ratings in the EcoVadis sustainability assessment and the MSCI ESG Ratings, as well as the Bronze Class distinction in S&P Global SAM's annual Sustainability Yearbook. Valmet also reports to 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. In 2021, Valmet received the B rating in CDP Climate.

Financial community's increased interest in sustainability

The financial community's interest in sustainability and responsible (ESG) investing has continued to increase. We have therefore included information in our investor relations communication on our approach to sustainability and our role in responding to sustainability-related global challenges such as climate change and replacing fossil-based raw materials with renewables. In 2021, we organized a record number of virtual meetings with our financial stakeholders to introduce our role and progress in the transition to a carbon neutral economy.

We continued to develop our climate-related financial disclosures in accordance with Task Force on Climate-related Financial Disclosures (TCFD) reporting. In 2021, we analyzed the potential long-term climate-related risks and opportunities and the financial impact on our value chain with different scenarios to support strategy and the capability of adapting to and mitigate climate change. The full TCFD report is available on Valmet's website.

Valmet also prepared for the EU's Taxonomy-related reporting requirements on climate change adaptation and mitigation and will continue the work in 2022.

DISTRIBUTION OF ECONOMIC VALUE ADDED TO OUR STAKEHOLDER GROUPS

Direct economic value generated

EUR 3,977 million



Economic value distributed



Operating costs: **EUR 2,621 million**
Employee wages and benefits: **EUR 948 million**
Payments to providers of capital: **EUR 148 million**
Payments to government: **EUR 103 million**
Support for non-profit organizations: **EUR 0.31 million**



Retained in business

EUR 156 million

Collaboration with Save the Children

Valmet supports Save the Children's Child Sensitive Social Protection Project in Dungarpur, Rajasthan, India, where COVID-19 significantly disrupted children's education in 2021.

COVID-19 has created severe challenges not only regarding children's learning, but also their health, nutrition and protection, which the schools support. Since many parents have lost their jobs, the risk of child labor has also increased as families search for additional sources of income.

Due to the pandemic, social protection has become more important than ever in India.

"The situation in India has hit everyone hard, but children have been affected most and have been exposed to vulnerabilities in many different ways, because many have lost the possibility of an education and been engaged in child labor. Even in this crisis with all its restrictions, we haven't sat still," says **Neema Pant**, Save the Children's

Project Manager at the Dungarpur Child Sensitive Social Protection project.

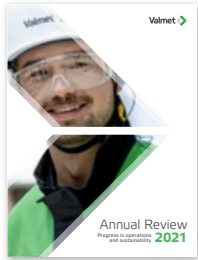
Save the Children's project activities have been adjusted to meet the current needs of the children and their families.

"Our project team has especially focused on identifying children who are at risk of being engaged in harmful child labor. The team has also shared information on the COVID-19 situation within communities and organized additional "catch-up" classes for both teachers and children to support their learning and safe return to school," says **Katja Selkimäki-Gray**, Save the Children's Portfolio Manager for Asia.

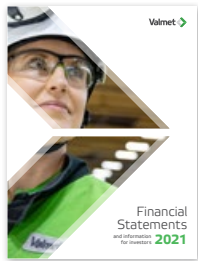
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valmet.com/corporate-citizenship



Valmet reports 2021



ANNUAL REVIEW 2021
The report covers Valmet's market environment and the progress of its strategy, operations and sustainability in 2021.



FINANCIAL STATEMENTS 2021 AND INFORMATION FOR INVESTORS
The report includes Valmet's Financial Statements for 2021 and information about its share, shareholders and management.



GRI SUPPLEMENT 2021
The report includes Valmet's sustainability reporting indicators and principles, and its alignment with the Global Reporting Initiative (GRI) Standards framework in 2021.



REMUNERATION REPORT 2021
The report covers Valmet's remuneration principles and remuneration in 2021.



CORPORATE GOVERNANCE STATEMENT 2021
The report covers Valmet's governance principles and activities, Board of Directors and management in 2021.

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Miltton Oy

PAPER

Maxioffset 300 g
Maxioffset 140 g

PRINTING

Grano Oy





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