

— Integrated Report 2023

ABB

About ABB

ABB's purpose is to enable a more sustainable and resource-efficient future with our technology leadership in electrification and automation.

Building on over 140 years of excellence, our more than 105,000 employees are committed to delivering on our purpose by driving innovations that create success for ABB and all our stakeholders. Together, we address the world's energy challenges, transform industries, reduce emissions, preserve natural resources, promote social progress, and push the frontiers of technology to make things possible that were not possible before.

Our solutions connect engineering know-how and software to optimize how things are manufactured, moved, powered, and operated.

ABB's purpose is why we are in business and our guiding star.

ABB'S PURPOSE

We enable a more sustainable and resource-efficient future with our technology leadership in electrification and automation.

Creating success



**Addressing the world's
energy challenges**



**Transforming
industries**



**Embedding
sustainability**



**Leading with
technology**



Our business areas

To enable ABB to deliver on its purpose and create value for its stakeholders, we build on our decentralized operating model. Our 19 divisions are organized into four business areas: Electrification, Motion, Process Automation and Robotics & Discrete Automation. Our business areas complement each other and pursue opportunities to collaborate. In line with our decentralized

operating model, our divisions are the highest operational level within ABB. This allows them to take decisions close to the customer and to work together to provide the best service to our customers. They drive the success of ABB in their daily business.





Electrification (Global no. 2)

ABB's Electrification business area provides a leading portfolio of products, digital solutions and services to electrify the world in a safe, smart and sustainable way. We collaborate with customers to improve power delivery and security, and enhance energy management, efficiency and operational reliability, as we aspire to enable a low-carbon society. Our portfolio encompasses digital and connected innovations for low- and medium-voltage, including electric vehicle (EV) infrastructure, modular substations, distribution automation, power protection, wiring accessories, switchgear, enclosures, cabling, sensing and control.

Divisions:

- Distribution Solutions
- Smart Power
- Smart Buildings
- Installation Products
- Service



Process Automation (Global no. 2)

ABB's Process Automation business area enables customers to operate some of the world's largest and most complex industrial infrastructures, writing the future of safe, smart and sustainable operations. We offer a broad range of automation, electrification and digital solutions for process and hybrid industries, including industry-specific integrated control and software as well as measurement and analytics solutions and services.

Divisions:

- Energy Industries
- Process Industries
- Marine & Ports
- Measurement & Analytics



Corporate and Other

ABB's E-mobility division, formerly part of the Electrification business area, has since January 2023 been an independent business and a separate operating segment and is reported in Corporate and Other. ABB E-mobility is a global leader in electric vehicle charging solutions, with the highest uptime and largest installed base of DC fast chargers in the market.



Motion (Global no. 1)

ABB's Motion business area keeps the world turning. As the largest supplier of drives and motors globally, we provide customers with the complete range of electrical motors, generators, drives and services, as well as integrated digital powertrain solutions, enabling our customers to save energy every day to empower a low-carbon future. We serve a wide range of automation applications in transportation, infrastructure and the discrete and process industries and through our domain expertise and technology achieve better performance, safety and reliability.

Divisions:

- Drive Products
- System Drives
- Service
- NEMA Motors
- IEC LV Motors
- Large Motors & Generators
- Traction



Robotics & Discrete Automation (Global no. 2)

ABB's Robotics & Discrete Automation business area enables companies to become more resilient, flexible and efficient through our value-added solutions in robotics as well as machine and factory automation. With our integrated automation solutions, our application expertise across a wide scope of industries and our global presence, we deliver tangible customer value. Our focus on innovation includes extensive work in artificial intelligence, as well as an ecosystem of digital partnerships and the expansion of our production and research capabilities.

Divisions:

- Robotics
- Machine Automation

Key figures at a glance

1 For non-GAAP measures, see chapter [Alternative performance measures](#).

2 Constant currency (not adjusted for portfolio changes).

3 EPS growth rates are computed using unrounded amounts.

4 Proposed by the Board of Directors and subject to approval by shareholders at the Annual General Meeting on March 21, 2024, in Zurich, Switzerland.

5 Amount represents total for both continuing and discontinued operations.

6 Figures are adjusted for portfolio changes.

7 Percentages calculated using headcount data.

8 At ABB, senior managers are defined as employees in Hay grades 1–7, including division presidents.

\$ in millions, unless otherwise stated	FY 2023	FY 2022	Change	Comparable ¹
FINANCIAL				
Orders	33,818	33,988	-1%	3%
Order backlog (end December)	21,567	19,867	9%	9%
Revenues	32,235	29,446	9%	14%
Income from operations	4,871	3,337	46%	
Operational EBITA ¹	5,427	4,510	20%	20% ²
as % of operational revenues	16.9%	15.3%	+1.6 pts	
Income from continuing operations, net of tax	3,848	2,637	+46%	
Net income attributable to ABB	3,745	2,475	51%	
Basic earnings per share (\$)	2.02	1.30	55% ³	
Dividend per share (in CHF)	0.87 ⁴	0.84	4%	
Cash flow from operating activities ⁵	4,290	1,287	233%	
Net debt ¹ (end December)	1,991	2,779	-28%	
ENVIRONMENTAL⁶				
Energy consumption (GWh)	1,298	1,413	-8%	
Renewable energy consumption (%)	64	52	+12.0 pts	
Own operations emissions scope 1 and 2 (kilotons CO ₂ e)	151	221	-32%	
Total waste sent to landfill (kilotons)	10.1	10.9	-7%	
SOCIAL				
Total number of employees (FTE)	107,900	105,100	3%	
Women in workforce (%) ⁷	27.4	27.2	+0.2 pts	
Women in senior management positions ⁸ (%) ⁷	21.0	17.8	+3.2 pts	
Community spending	11.5	10.2	13%	

ABB SUSTAINABILITY RATINGS 2023

CDP Climate	CDP Supplier Engagement	CDP Water	S&P Global ESG score	EcoVadis	ISS ESG	MSCI	Sustainalytics
A	A ¹	B	65	Gold 75/100 ²	Prime status B-	AAA	15.4 ³

2 EcoVadis Gold medal issued on February 17, 2023.

3 Low risk exposure and management of material ESG issues is strong.

→ Find out more about our sustainability ratings in our [Sustainability Report 2023](#).

ABB in numbers

>105,000

Employees globally

173

Nationalities

177

Manufacturing sites globally

\$34

billion
Order intake

\$32

billion
Revenues

16.9%

Operational EBITA margin

21.1%

ROCE

\$1.3

billion
R&D investment

>26,000

Number of patents filed

76%

Reduction of scope 1 and 2
GHG emissions since 2019

21%

Women in senior
management positions

0.13

Lost-time Injury
Frequency Rate

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Chairman's letter

After a successful transformation, ABB is in more robust health and better prepared for the future than ever before. Our performance has improved and we have the right operating and remuneration models in place. Going forward, we are well-prepared to realize ABB's purpose of enabling a more sustainable and resource-efficient future with our leading technologies and fulfill our updated financial and sustainability targets.

Dear shareholders,

The past four years have been a transformative time for ABB. While dealing with some of the biggest challenges that a business can face – the pandemic, supply chain disruptions and wars in Ukraine and the Middle East – we have put in place a new operating model, improved our performance and prepared our company to help address humanity's biggest challenge, climate change.

As Chairman, I am extremely proud of what we have achieved. We are delivering on our commitments to stakeholders. We have strengthened our technology leadership in electrification and automation with many new innovations. And we are operating in a more efficient and transparent way, thanks to our decentralized operating model, which gives our divisions full ownership for their respective businesses.

Thanks to our market and technology leadership and our new ways of working, we are able to play an important role in helping to meet the energy and resource needs of a growing global population while preserving the natural environment for future generations. As a global leader with a strong presence in local communities, we are also promoting social progress around the world by being an exemplary employer and responsible corporate citizen.

Delivering on our commitments

Our achievements show that we are heading in the right direction and that we have the right people and organizational structure to take us forward. In 2023, we took advantage of the positive market environment and strong secular demand drivers to further boost our order backlog while delivering record levels for revenues, Operational EBITA and margin with a significantly improved cash flow delivery. In light of this strong result and in line with our policy of paying a rising sustainable dividend per share over time, we will be proposing a dividend of CHF 0.87 per share to be voted on at the Annual General Meeting on March 21, 2024.

We are confident about ABB's prospects, hence our ambitious new financial and sustainability targets that we presented at our Capital Markets Day in November 2023. Our purpose of enabling a more sustainable and resource-efficient future through our technology leadership in electrification and automation fits perfectly with the needs of our customers and society. We are ideally positioned to support the energy transition and help our customers move to low-carbon and circular business models.

Creating value now and in the future

We are actively managing our business portfolio to ensure that our divisions fit with our company purpose and deliver on our commitments to stakeholders. Our divisions must also be able to create more value by being part of ABB than they would elsewhere and serve markets that are profitable and growing.

Divisions that do not fulfill these criteria – even if they are strong businesses – are either restructured or earmarked for exit. In the past three years, we have sold two high-performing businesses and spun off our successful Turbocharging division (Accelleron). This has allowed us to more closely align the group with our purpose and position us in higher growth markets.

We have also transformed the way that mergers and acquisitions are done at ABB, empowering our divisions to go out and find targets that will defend their leading market positions and performance. In the past three years, we have seen several small division-led acquisitions. Going forward, we aim to make five to ten small to mid-sized bolt-on acquisitions per year, with six transactions closed in 2023 and several further that we could announce in early 2024.

Leading by example

ABB's primary contribution to a low-carbon, resource-efficient future is developing and deploying leading technologies to help our customers optimize, electrify and decarbonize their operations. We owe our success to our people, suppliers and the communities in which we operate. We have more than 105,000 employees around the world and a supply chain

“As a technology leader in electrification and automation, ABB is ideally placed to support the energy transition and help our customers move to low-carbon and circular business models.”

PETER VOSER | CHAIRMAN

consisting of thousands of companies, each of which has its own suppliers.

To secure ABB's long-term future, we need to lead, both in the market and by example. As a business that means reducing our own greenhouse gas emissions and adopting circular business practices. As an employer it means providing a safe, fair and inclusive working environment, in which our people can build their careers and are able to contribute to a better future. As a customer, it means helping our suppliers adapt to the fast-changing economic, regulatory and social environment that has driven ABB's own transformation. As a leading global company it means being actively engaged in our communities through projects and programs that provide education and training, support diversity and inclusion, and help communities to develop, thrive and contribute to wider societal goals.

Committed to ethical business practices

Underpinning everything we do is our commitment to embedding a culture of integrity and transparency throughout our value chain. In 2023, we updated our ABB Code of Conduct and our Supplier Code of Conduct as well as our Human Rights policy, which reflects our commitment to upholding the highest standards along our value chain. We also enhanced our anti-bribery and corruption controls in line with a three-year Deferred Prosecution Agreement (DPA) with the United States Department of Justice and Securities and Exchange Commission. ABB's Board of Directors is responsible for overseeing compliance with the requirements of the DPA, instituted a year ago, which include the engagement of an independent Board counsel expert.

Facing the future with confidence

In 2023, we have made strides in many areas. As Chairman of ABB since 2015, I am convinced that our company is better prepared for the future than it has ever been.

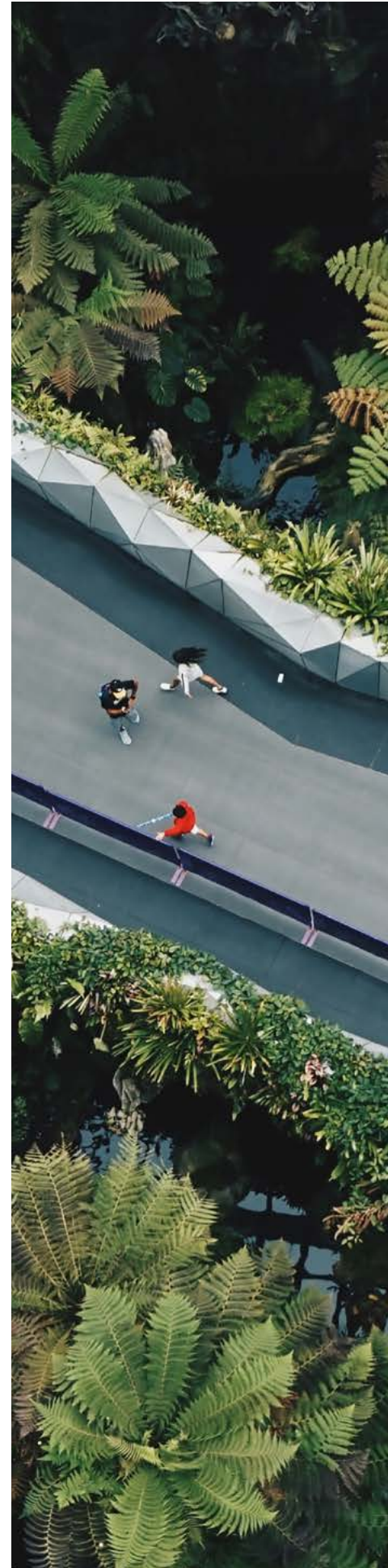
On behalf of the Board of Directors, I want to thank our customers, employees, investors, partners, suppliers, and other stakeholders for your commitment and trust. You give us the confidence to strive for success, overcome adversity and contribute to a more sustainable, prosperous society. We look forward to continuing the journey with you in 2024 and beyond.

Best regards,



PETER VOSER

Chairman of the Board of Directors





CEO interview

ABB's purpose and the ABB Way operating model are key to our Group's success. As Björn Rosengren explains, in 2023, they enabled us to deliver a record high Operational EBITA margin and present ambitious financial and sustainability targets at ABB's Capital Markets Day in November 2023.

Björn, 2023 was an eventful year. What stood out most for you?

I did a lot of travelling and spoke to many of ABB's customers, employees, investors, partners and other stakeholders around the world. What I heard gave me confidence that our market offering is fully aligned with long-term customer needs and secular trends.

In 2023, it was encouraging to see increases in investments in energy efficiency and decarbonization. That's especially true across the world's three largest economies – the United States, the European Union and China.

The good news is that, according to the International Energy Agency (IEA), it is still possible to limit global warming to 1.5°C above pre-industrial levels with existing technologies. If the world ramps up renewables, improves energy efficiency, cuts methane emissions, and expands electrification, the IEA estimates that we can deliver more than 80 percent of the emissions reductions needed by 2030.

That, of course, shows that ABB is in a unique position to seize the opportunities ahead. We are working with our customers to electrify, optimize and decarbonize their operations. In the process, we are accelerating the energy transition and helping to build a low-carbon society. Most importantly, ABB is at the heart of developing technologies to enable a net-zero future.

How did ABB perform in 2023?

We delivered a strong performance. Orders were slightly down but up on a comparable basis, and we delivered higher revenues, a record high operational EBITA margin and strong margin improvements in all four business areas. We expanded our earnings per share, cash flow and ROCE (Return on Capital Employed).

We were fortunate to be operating in a strong market environment, but I think that this result also confirms that we are in the right market segments and that our ABB Way operating model with its focus on continuous improvement is working.

We also made significant progress towards achieving our sustainability goals. In 2023, we reduced greenhouse gas (GHG) emissions in our own operations by 32 percent and helped our customers avoid 74 megatons of emissions through our energy efficiency and carbon reduction technologies. We also reduced lost time caused by injuries (LTIFR) by 9 percent to industry-leading levels and increased the number of women in senior management positions to 21.0 percent, up from 17.8 percent a year ago.

I am truly proud of the ABB team for delivering such good results and creating value for all our stakeholders. I want to thank everyone for a very strong performance in 2023.

In November, you announced ambitious financial and sustainability targets at ABB's Capital Markets Day. What makes you so optimistic about ABB's prospects?

ABB has a clear purpose. We want to use our technology leadership in electrification and automation to enable a more sustainable and resource-efficient future. Over the past three years, we have transformed ABB. Today, our Group is decentralized and purpose-driven – and we have demonstrated to the markets that we can deliver on our promises. We have achieved a lot: we reshaped our portfolio, addressed profitability and embedded a culture of continuous improvement in the company.

These changes put us in a stronger position to address key global trends and opportunities – like the shrinking labor force, the accelerating need for automation, energy security and efficiency, and the energy transition. That is why we have been able to set ambitious new financial and sustainability targets. Among our key financial targets, we have lifted our target for long-term comparable revenue growth to 5–7 percent (from 3–5 percent) and raised our operational EBITA margin target to 16–19 percent (from ≥15 percent). For a complete list of our new targets, see chapter Outputs and outcomes. To guide our ambition of enabling a low-carbon society, we have set new 2030 and 2050 net-zero-aligned targets for our own operations and our value chain. We are aiming to help our customers avoid 600 megatons of GHG emissions through products sold from 2022 to 2030. We also expanded our focus on preserving resources to include water, biodiversity and sustainable land-use.

ABB wants to lead with a strong culture of integrity and transparency across our entire value chain. We have now rolled out our updated Code of Conduct and Supplier Code of Conduct, which is part of our procurement terms and conditions. We also updated our Human Rights policy, which reflects our commitment to upholding the highest standards along our value chain.

You like to say that innovation is in ABB's DNA. Did ABB come up with any breakthrough innovations in 2023?

One that I am very excited about is ABB Dynafin™, a revolutionary new electrical propulsion system for ships that mimics the movement of a whale's tail. ABB Dynafin™ has a rotating wheel

“Around 55 percent of our R&D employees are focused on digital and software development. We already have more than 100 AI-focused projects across the ABB Group.”

BJÖRN ROSENGREN | CEO

with vertical blades, which makes it possible to propel and steer the ship at the same time.

It is truly ground-breaking both in terms of operational efficiency and maneuverability. And because ABB Dynafin™ is an electrical propulsion system, it can be powered by any energy source, including zero-emission batteries or fuel cells, further contributing to decarbonize shipping.

Another important innovation was our new IE5 SynRM Increased Safety motor for hazardous area industries. This latest addition to our portfolio of energy efficient motors and drives reduces energy losses by up to 40 percent compared to commonly used IE3 induction motors. It also runs at lower temperatures than standard designs, prolonging the life of the motor and reducing maintenance needs; it also does not contain rare earth materials.

Finally, I want to mention the expansion of our large robot range. In 2023, we launched four new models and 22 variants that offer customers superior performance and up to 20 percent energy savings thanks to the lighter robot design and use of regenerative braking.

You have chosen a different digital strategy than some of your peers. Why do you think yours is the right strategy for ABB and how will you ensure that as technology evolves you are not left behind?

With our decentralized business model, our divisions have full ownership of their resources and strategies, which also includes their respective digital strategies. This allows them to build on their proximity to customers to develop more customer-focused offerings and gives them the freedom to work with other divisions within ABB as well as external partners.

We create customer value through embedded software in our products. The majority of our products are digitally enabled, as well as almost half of our services. Around 55 percent of our employees in research and development (R&D) are focused on software development and our ABB Ability™ portfolio of digital solutions is continuously expanding.

How are the rapid advances in artificial intelligence affecting ABB's business?

We are certain that generative artificial intelligence (AI) has tremendous potential for our business. We have already identified more than 100 AI-focused projects across our Group. For example, our Robotics division produces AI-enabled robots with integrated vision, which can work safely and autonomously in warehouses. In our Process Automation business area, we continue to progress towards autonomous operations, for which AI is an important enabler. We also use AI for preventive maintenance and are working with our long-standing strategic partner Microsoft to unlock further customer value from operational data.

Looking at the global market environment, how concerned are you about the weakness of the Chinese economy?

Unfortunately, China did not develop as we had hoped in 2023. We had expected that the lifting of COVID-19 restrictions would trigger a recovery, however, that did not materialize. One key reason is the continuing decline in the country's property market, which hit residential and commercial construction hard. On top of that, order growth in China was hampered by customers normalizing order patterns in response to a normalization of supply chains during the year. This impacted several of our businesses, most notably Robotics & Discrete Automation.

While it is difficult to predict how the Chinese economy will develop, we are convinced that China will remain an important market for ABB. China is our second-largest market – we employ 15,000 people there, covering the full range of our business activities, from R&D and manufacturing to sales and service. Our technology has an important role to play in addressing some of China's most important challenges. We can help the country meet its dual-carbon goal, further decarbonize industry and transport, and address labor shortages with our robotics and automation solutions. We will continue our strategic focus of serving our customers in the country with locally manufactured products and solutions, as we do in all our markets.

Last year, you carved out E-mobility as a standalone business. Are you still planning an initial public offering?

Our ambition to separately list ABB E-mobility remains unchanged. The new management is currently concentrating on driving performance, including some reorganization to deliver a more focused portfolio. We expect to be in a position to move ahead with a potential initial public offering (IPO) when these measures have been implemented successfully and the financial markets are constructive. Most importantly, we remain confident about the growth prospects in this field.

ABB continued to buy businesses last year and sold the Power Conversion division, marking the end of the announced divisional exits.

How have these portfolio moves worked out?

We have a clear strategy for our active portfolio management: we regularly assess our business portfolio to ensure that our divisions fit with our company purpose and strategic focus. We acquire businesses to secure a continued leading technology and market position. In 2023, we made six acquisitions across our four business areas. The divisions continue to build up their acquisition target pipelines and during 2023, we completed the acquisitions of the Siemens low-voltage motor business led by the NEMA Motors Division, strengthened our smart home technology portfolio with the acquisition of EVE systems led by the Smart Buildings Division, and completed four other smaller bolt-on acquisitions primarily related to software and AI technology.

We also made a number of venture capital investments, which can be seen as an extension of our R&D. One is WindESCo, a US-based analytics software provider that is improving the performance and reliability of wind turbines. ABB is a leading supplier of wind converters for medium and low-voltage turbines and thanks to our investment, we will be able to offer customers a package that combines converters with performance monitoring. Another investment was Pratexo, an edge-to-cloud platform innovator that is improving the security, autonomy and resilience of decentralized electrical networks.

We also completed the sale of our Power Conversion division in 2023, which completes all divisional divestments announced at the end of 2020. We now have 19 high-performing divisions, and approximately 70 percent of our revenues come from businesses with a growth mandate. We will continue to optimize the businesses and product groups within our divisions.

We aim to make five to ten small to mid-sized acquisitions a year and target to add 1–2 percent growth from acquisitions through the economic cycle.

In 2023, you delisted ABB securities from the New York Stock Exchange. Has that had any impact on your business in the United States?

The delisting from the New York Stock Exchange (NYSE) had no impact on our business or operations. With 26 percent of annual Group revenues and more than 40 manufacturing and distribution facilities, the United States continues to be our largest market.

We remain fully committed to our US customers, employees, investors, partners, suppliers and other stakeholders. We are investing \$170 million to increase capacity in the US to continue to grow our local-for-local footprint and serve our largest market.

We took the decision to delist from the NYSE because ABB's shares are mostly traded on the SIX Swiss Exchange and via electronic trading platforms. Consequently, we considered it excessive for ABB to have three stock exchange listings. ABB's shares are still listed on the SIX and Nasdaq Stockholm, which reflects our Swiss and Swedish heritage. ABB securities in the US are still traded on the over-the-counter (OTC) market. Once this trade falls below a certain level, we intend to apply for deregistration with the US Securities and Exchange Commission (SEC) and for termination of our equity reporting obligations under the US Securities Exchange Act.

You have now been ABB's CEO for four years. What are you most proud of and what is next for you personally?

What's important is that our ABB Way operating model is here to stay. With our performance improvements over the past four years, we have demonstrated that the ABB Way is the right model for our company and that the way forward is to continue to drive a decentralized culture.

From my side, I am happy with the changes and progress made at ABB so far and I am keen to continue the improvement journey. Working for ABB has been one of the best experiences of my life. We have a great team of talented and motivated people, world-class businesses, fantastic technologies and we are making an important contribution to a sustainable future. I want to thank the entire ABB team for their commitment and strong performance in 2023, and also all our customers, employees, investors, partners, suppliers, and other stakeholders for their continued trust and support. We all are looking forward to deepening our successful collaboration in 2024.

Important milestones in 2023



\$170 million

investment announced in various sites in the US to meet increasing demands for electrification and automation solutions, creating approximately 400 new jobs

\$893 million

of shares repurchased via our share buyback programs

\$280 million

investment announced in European robotics hub in Sweden, expanding production capacity by 50%

Net-Zero

science-based targets submitted to SBTi (Science-Based Targets initiative) for validation. Committed to a 100% reduction in scope 1 and 2 emissions and 90% reduction in scope 3 by 2050

AAA

 MSCI ESG rating

upgraded from AA, ranking ABB in top 10% of industry peers



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Unveiled ABB Dynafin™, a revolutionary new electrical propulsion concept for ships that mimics the movement of a whale's tail. The new concept is expected to **reduce propulsion energy consumption by up to 22 percent** compared to conventional shaft-line systems, contributing to the shipping industry's ambition of significantly reducing greenhouse gas emissions.

—
Acquired Germany-based Eve Systems, strengthening ABB's smart home technology portfolio. The combined offer will **accelerate ABB's delivery of safe, smart and energy-efficient homes and buildings**. Authorities are looking to incentivize retrofitting of existing building stock, as buildings account for approximately 30 percent of global carbon emissions (direct and indirect energy emissions including materials and construction).

—
Expanded partnership with battery developer Northvolt to provide electrification and automation technologies for the world's largest battery recycling facility, Revolt Ett. The **recycling site will process 125,000 tons of end-of-life batteries and battery production waste each year**, helping Northvolt achieve its goal of reducing the carbon footprint of its batteries by 90 percent by 2030.



—
Became official charging partner of Formula E, the all-electric motorsport world championship series. The technology partnership **enables ABB to showcase its ground-breaking electric vehicle charging technology** in cities around the world.

—
Delisted ABB's American Depositary Shares (ADSs) from the New York Stock Exchange and converted to a sponsored Level I ADR program on the US over-the-counter market. Decision to delist was because ABB considered it excessive to have three stock exchange listings. ABB's shares are still listed on the SIX Swiss Exchange and Nasdaq Stockholm, which reflects the Group's Swiss and Swedish heritage.

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Updated our Code of Conduct and our Supplier Code of Conduct to reflect ABB's Sustainability Agenda with its foundation of integrity and transparency embedded throughout its value chain. The new Supplier Code of Conduct is included in ABB's procurement terms and conditions. We have also updated our Human Rights policy.



—
Completed the divestment of the Power Conversion division for \$505 million to AcBel Polytech Inc. With this transaction, ABB has completed all divisional portfolio divestments announced at the end of 2020.

—
Completed acquisition of Siemens' low-voltage NEMA motor business, as announced in 2022. The business employs around 600 people and generated revenues of approximately \$63 million in 2021. The global NEMA motor industry, roughly \$2.7 billion in size, comprises industrial electric motors primarily used within North America.

—
In 2023, **nine venture capital investments** were undertaken by ABB, including an investment in US-based **Wind-ESCo**, an **analytics software provider for wind turbines**, enabling ABB to offer customers a package that combines converters with performance monitoring. In another minority investment, **ABB strengthened the partnership with Pratexo** to co-develop edge computing solutions to improve security, autonomy, and resilience for decentralized electrical networks.

The ABB share

Shareholder information

In 2023, the price of ABB Ltd shares listed on the SIX Swiss Exchange (SIX) increased 33 percent, while the Swiss Market Index (SMI) increased 4 percent. The price of ABB Ltd shares on the Nasdaq Stockholm increased 41 percent, compared to the OMX Stockholm 30 Index, which increased 17 percent. Total shareholder return (including dividends) of ABB Ltd shares listed at SIX was 37 percent during 2023.

On May 23, 2023, ABB's American Depositary Shares (ADSs) were delisted from the New York Stock Exchange (NYSE) and converted to a Level I ADR program, which gives US investors a continued investment option on the US over-the-counter (OTC) market, in addition to the ordinary ABB share. Once the 12-month US Average Daily Trading Volume (ADTV) in ABB ADSs has fallen to less than 5 percent ADTV worldwide, we intend to apply for deregistration with the Securities and Exchange Commission (SEC) and for termination of its equity reporting obligations under the Exchange Act.

Trading volumes have adjusted to a lower level, which is supportive of future deregistration. We have continued to see strong interest in ABB from the US investment community which currently represents approximately 26 percent of our shareholders.

In 2023, approximately 28 percent, 27 percent, 26 percent of shares issued were held in Switzerland, Sweden and the United States, respectively. The ten largest individual shareholders accounted for approximately 39 percent of the share capital on the same date. At December 31, 2023, 75 percent of the shareholder base was made up of institutional investors with retail investors reaching 18 percent. On December 31, 2023, members of the Group Executive Committee owned a total of 945,871 shares in ABB. Members of the Board of Directors owned a total of 826,286 shares in ABB. Total ownership of ABB shares by the Group Executive Committee and the Board corresponds less than 1 percent of the capital and voting rights.

KEY DATA

	FY 2023	FY 2022	FY 2021
Dividend per share (CHF)	0.87 ¹	0.84	0.82
Votes per share	1	1	1
Basic earnings per share (\$)²	2.02	1.30	2.27
Total ABB stockholders' equity per share (\$)³	7.28	6.85	7.96
Dividend payout ratio (%)⁴	51%	70%	40%
Weighted-average number of shares outstanding (in millions)	1,855	1,899	2,001

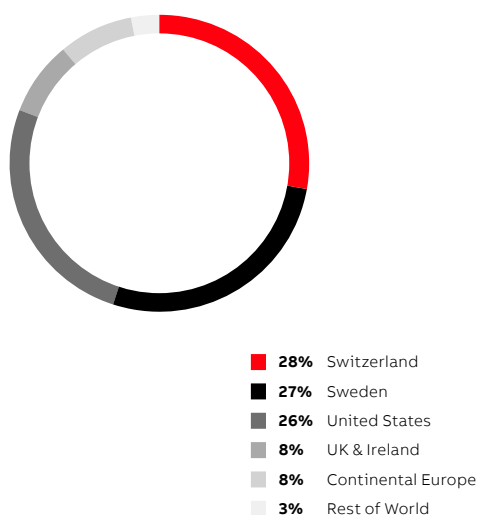
¹ Proposed by the Board of Directors and subject to approval by shareholders at the Annual General Meeting on March 21, 2024.

² Calculation based on weighted-average number of shares outstanding.

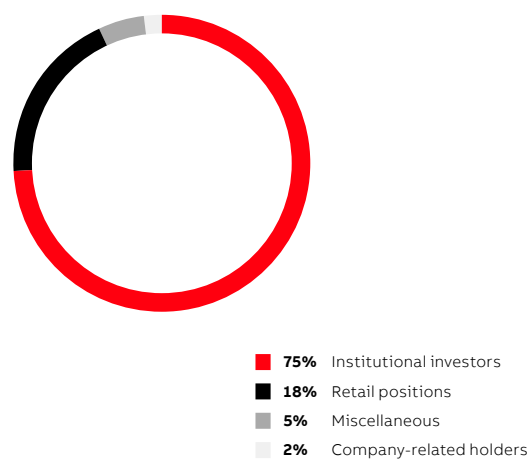
³ Calculation based on the number of shares outstanding at December 31, 2023.

⁴ Dividend per share (converted to US dollars at year-end exchange rates) divided by basic earnings per share.

DISTRIBUTION OF SHAREHOLDINGS BY COUNTRY

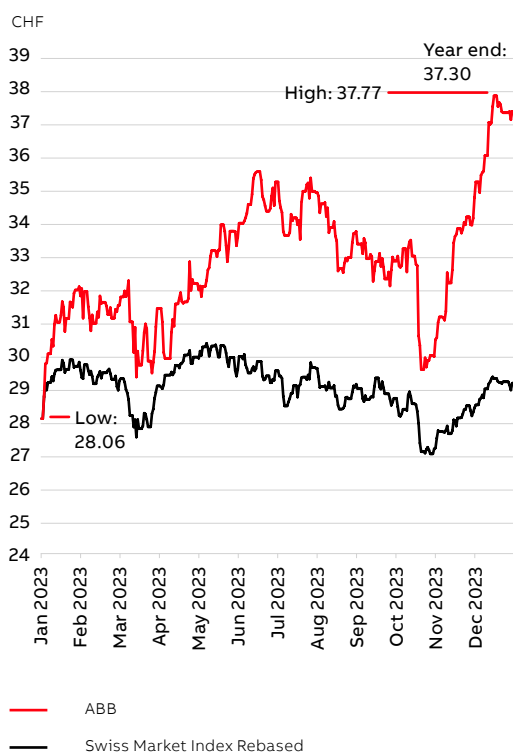


BREAKDOWN OF SHAREHOLDERS BY TYPE



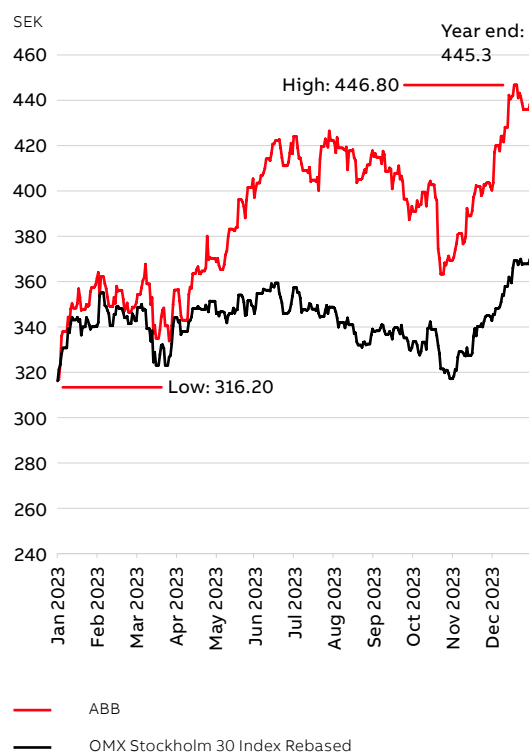
ZURICH

Average daily traded number of shares: 3.29 million



STOCKHOLM

Average daily traded number of shares: 0.75 million



Source: FactSet.

ABB as an investment

Our global number 1 and 2 positions in key electrification and automation segments strategically position us to capitalize on long-term megatrends characterized by the energy transition, energy security and efficiency, as well as the need for an increasingly flexible and efficient manufacturing set-up. Our equity story is based on five pillars:

01 Market leader with world-class technology

Our market-leading position is based on cutting-edge technology, our ability to scale and decades-long domain expertise, all of which create high barriers to market entry for potential competitors.

Our four business areas all have a global number 1 or 2 position in their respective market segments. This gives us strong economies of scale and high pricing power, which results in higher profitability that enables us to continue investments in R&D to defend our leading

market positions in electrification and automation. Our cutting-edge technology creates superior customer value by optimizing, electrifying and decarbonizing their operations.

Being present in various verticals for many decades has enabled us to build up unique domain expertise as well as a large installed base and strong long-term relationships with end-customers and channel partners. Our deep understanding of customer needs and operations is at the root of ABB's success.

VALUE FROM SOFTWARE



Increase the digital content in our products to support gross margin and industry leadership in technology

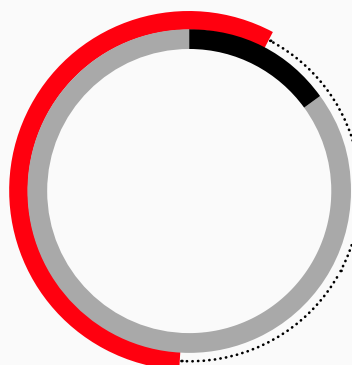


Embedded software enables differentiation



Continue to develop Industrial Software and Digital services organically and make bolt-on acquisitions:

- Invest to create synergies with our offering
- Return on investment
- Growth



■ Software or digitally enabled products and services

■ 84% Products and solutions

■ 16% Services

~55%

of R&D employees focused on digital and software development¹

¹ Management estimates

02 ABB Way – accountability, transparency and speed

In our decentralized operating model, decisions are made close to customers in our divisions, which have full ownership and accountability for their respective businesses. Select common processes ensure that each division benefits from being part of the Group. Our leaders are encouraged to cooperate where there are synergies and it makes sense for the business.

Lastly, our strong performance management system ensures performance can be tracked quickly and easily with standard key performance indicators (KPIs) to facilitate speed. Each division is given a strategic mandate, which translates into strategic priorities and appropriate targets that are supported by incentives.



Leveraging on our decentralized operating model



Select common processes in the ABB Way



Strong performance management system

03 Increasing growth rates

We expect through-cycle average revenue growth of 5 to 7 percent on a comparable basis and 1 to 2 percent inorganic growth. Higher growth will be driven by a focused portfolio, which has been aligned to more attractive growth markets and new ways of working. Our divisions are empowered to drive growth and

investments based on their strategic mandates. A key focus of ABB's transformation has been to align our business with global megatrends, including the shrinking labor force, accelerating automation, energy security and efficiency, and the energy transition.

TARGETS

5–7% average

Comparable revenue growth through economic cycle

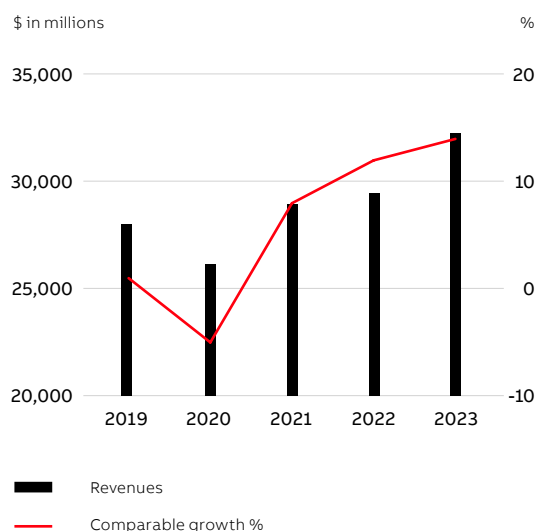
Excluding FX impacts, acquisitions and divestments
(up from 3-5%)

1–2% average

Acquired revenue growth through the economic cycle

Target is the net of acquisitions and divestments
(unchanged)

REVENUES



THREE KEY GROWTH ENABLERS

Focused portfolio
around sustainability and resource-efficiency through electrification and automation

New ways of working
with divisions accountable for growth and decision-making closer to the market

Accelerating sustainability requirements for electrification and automation

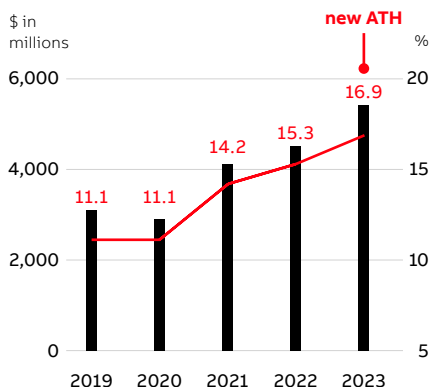
04 Improving performance

We are improving financial performance and in 2023 we achieved new all-time-high (ATH) levels for several KPIs. Our new ways of working are yielding results.

We are actively enabling a low-carbon society as well as working with our customers and suppliers to implement sustainable practices

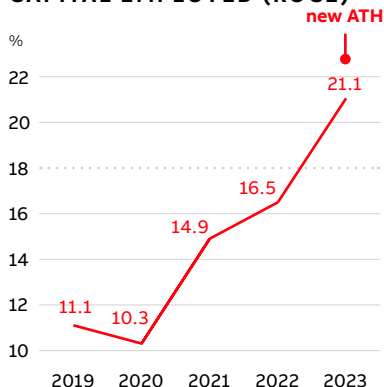
across our value chain and the lifecycle of our products and solutions. We are equally committed to driving social progress, along with our suppliers and in our communities.

OPERATIONAL EBITA



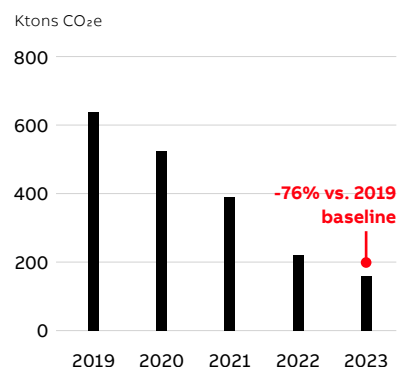
■ Operational EBITA
— Operational EBITA margin %
● All-time-high (ATH)

RETURN ON CAPITAL EMPLOYED (ROCE)



— ROCE
..... Target range >18%
● All-time-high (ATH)

SCOPE 1&2 GHG EMISSIONS



■ Scope 1&2 GHG emissions

IMPROVED PERFORMANCE LEADING TO MORE AMBITIOUS TARGETS

16–19%

Operational EBITA margin (annual)
up from >15%

>18%

ROCE (annual)
Excluding transformational deals
up from 15–20%

~100%

FCF conversion to net income (annual)
unchanged

At least high single-digit %

EPS growth through economic cycle (Basic EPS)
up from Basic EPS growth > revenue growth

Net-Zero by 2050

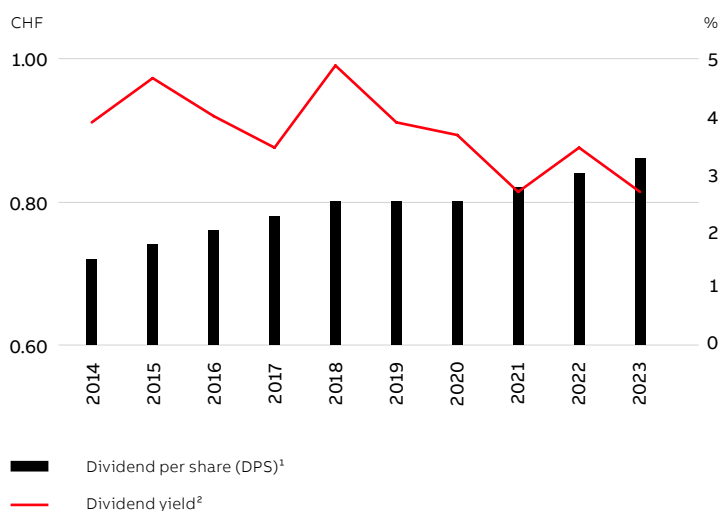
100% reduction in scope 1 and 2 emissions and 90% in scope 3
new

05 Rewarding shareholders

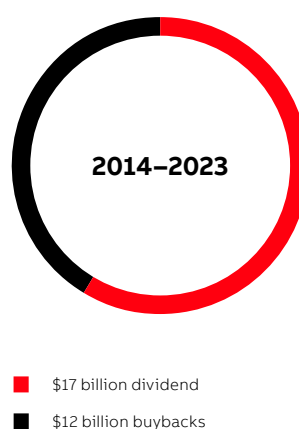
The creation of sustainable long-term shareholder value is a key priority. Our compensation programs and policies are designed to encourage performance improvement without taking excessive risks. The Company's shareholding requirements for Executive Committee members are aligned with market practice and result in a wealth at risk for each Executive Committee member which is aligned with shareholder

interests. Our strong balance sheet provides the capacity and flexibility for both solid cash distribution while still ensuring the financial strength to invest in organic and acquired growth. We are committed to a rising sustainable dividend per share (DPS) over time. Additionally, our capital allocation priorities also state that we distribute any excess cash to our shareholders via buybacks.

DIVIDENDS AND SHARE BUYBACKS



>\$29 billion cash returned to shareholders over last 10 years



CAPITAL ALLOCATION PRIORITIES

1. Fund organic growth, R&D, CapEx at attractive returns
2. Rising, sustainable dividend per share over time
3. Value-creating acquisitions
4. Returning additional cash to shareholders via share buybacks

ABB invested \$770 million in capital expenditures (CapEx). Non-order related R&D investment was \$1,317 million in 2023 or 4.1 percent of revenues for the year. The declared dividend amounted to \$1,706 million. With respect to the year ended December 31, 2023, ABB's Board of Directors has proposed to distribute a dividend to shareholders in the amount of CHF 0.87 per share. This is subject to approval by shareholders at the Annual General Meeting on March 21, 2024. The proposal is in line with our dividend policy to pay a rising, sustainable dividend per share over time.

In April 2023, we launched a new share buyback program of up to \$1 billion. Together with the prior share buyback program, which ran from April 2022 to March 2023, we repurchased a combined value of \$893 million during the year 2023. We plan to continue our share buybacks for the full-year 2024 in line with our capital allocation priorities to return excess cash to shareholders through buybacks.

¹ 2023 dividend per share of CHF 0.87 is proposed by the Board of Directors and subject to approval by shareholders at the Annual General Meeting on March 21, 2024.

² Calculated based on the share price at December 31.



02 Value creation

- 23 Our value creation model
- 26 Our business environment
- 32 Our inputs for value creation
- 34 Our strategic direction and the ABB Way
- 38 Risks and opportunities

Our value creation model

By combining our technology leadership in electrification and automation with our decentralized ABB Way operating model, we create holistic value for our stakeholders while enabling a more sustainable and resource-efficient future.

Our value creation model provides a comprehensive summary of the holistic value we generate for all stakeholders across ABB's entire value chain. It outlines the inputs that ABB needs to create value and illustrates how we transform these inputs into outputs and outcomes through our decentralized operating model, the ABB Way.

The value we create for our stakeholders measures our success as a purpose-led company:

- by delivering leading financial performance, through world-class technology,
- by enabling a low-carbon society,
- by preserving resources,
- by promoting social progress,
- by embedding a culture of integrity and transparency along the extended value chain.

Each of these outcomes and related outputs is explained in more detail in the chapter [Outputs and Outcomes](#).

With our holistic approach to value creation, we also consider the complexities of the external environment. These include risks, opportunities and exposure to key megatrends, as well as how ABB impacts and is impacted by our stakeholders.

To track and manage the inputs we use and the value we create, we leverage a broad set of qualitative and quantitative key performance indicators (KPIs).

VALUE CREATION AT ABB

We understand value creation as the positive transformation of our financial and non-financial inputs into outputs and outcomes that fulfill our purpose of enabling a more sustainable and resource-efficient future. By focusing on holistic value creation, we deliver meaningful progress for our stakeholders, the environment and our organization. In everything we do, we reflect on how ABB impacts and is impacted by our society and the environment.

OUR VALUE CREATION MODEL

The ABB Way

Financial

- Total stockholders' equity: \$13,410 mn
- Total liabilities: \$26,794 mn



Intellectual

- Percentage of R&D employees in software development: ~55%
- R&D spend: 4.1% of revenues in 2023
- Number of new venture-capital investments: 9



Natural

- Energy consumption: 1,298 GWh in 2023
(64% of which come from renewable energy sources)
- Water withdrawal: 2,545 kilotons in 2023

**Manufactured**

- Book value of property, plants and equipment: \$4,142 mn
- Number of manufacturing sites: 177 (number of countries with manufacturing sites: >40)
- Share of local-for-local production: ~95% Europe, ~85% China & ~75% USA



Human

- Diverse workforce: 107,900 employees representing 173 nationalities as of December 31, 2023
- Average hours of training per year and employee:^{1,2} 6.8
- Safety observation tours rate: 5.34



Social and relationship

- Customer base evenly distributed among the three regions
- Numerous partnerships with universities and research institutions

- Digitalization & AI
- Demographics
- Economic shifts
- Sustainability



We deliver leading financial performance

- Comparable revenue growth: 14%
- Operational EBITA margin: 16.9%
- ROCE: 21.1%
- FCF conversion to net income: 99%
- EPS: \$2.02, +55% year-on year



We create value through world-class technology

- Percentage of orders from products that are digital or digitally enabled: 55%³
- Number of priority patents, utility models and design applications filed in 2023:⁴ Over 650



We enable a low-carbon society

- Reduction of ABB's scope 1 and 2 emissions: 76% since 2019
- Reduction of ABB's up- and downstream scope 3 emissions:⁵ Stayed flat since 2022
- Megatons of avoided customer emissions through products sold in 2023: 74 Mt



We preserve resources

- Reduction in the amount of waste sent to landfill: 40% since 2019
- Percentage of ABB's products and solutions assessed against its Circularity Approach: 31%



We promote social progress

- Employee engagement score: 77/100 in 2023
- Proportion of women in senior management positions⁶: 21% as of December 31, 2023
- Community spending: \$11.5 mn donated and ~4,800 person-days volunteered in 2023
- Lost-time injury frequency rate (LTIFR): 0.13



We embed a culture of integrity and transparency

- Trust KPI – the rate of severity level 1 and 2 investigations where the reporter disclosed their identity: 60%⁷
- Engagement KPI – the volume of unique visitors on the Integrity Awareness Portal for integrity learnings: 80% of employees with online access.⁷

- Collaborative partnerships
- Customers
- Employees
- Governments and civil society
- Investment community
- Suppliers



This infographic is interactive.
Click on a section to learn more about it.



This icon on the subsequent pages signifies your location within the value creation model.

- 1 Includes tools such as My learning, Harvard Spark, Harvard Manager Mentor and LinkedIn Learning and covers both leadership and functional/technical learnings, for internal employees.
- 2 Learning hours reported in 2022 were affected by an error in the data extraction from the LinkedIn learning platform. The error generated an overestimation of hours from that platform. It has been corrected.
- 3 Management estimate based on 2022 orders.
- 4 Including patents, utility model and design applications.
- 5 Based on representative scenario, see also our [Sustainability Report 2023](#) for more details.
- 6 At ABB, senior managers are defined as employees in Hay grades 1–7.
- 7 Year 1 & 2 & 3 (January 1, 2021, to December 31, 2023).

Our business environment

As a global company operating in a dynamic business environment, we need to consider a wide range of economic, environmental, political and social developments. To keep up-to-date, we closely monitor evolving risks and opportunities and maintain a continuous dialogue with our stakeholders. In line with ABB's strategic direction, we continuously finetune our offering to reinforce our technology leadership in electrification and automation and position ABB to capitalize on global megatrends.

Megatrends



You are here
in the value
creation model

Global megatrends are shaping our world. Inherently complex and interconnected, they transcend borders and markets and are transforming our societies. For businesses, governments and countries, megatrends pose both opportunities and challenges. At ABB, we believe that by relentlessly focusing on our purpose and continuing to deliver a leading offering in electrification and automation, we are well positioned to capitalize on key megatrends and deliver superior value for our stakeholders in the long-term.

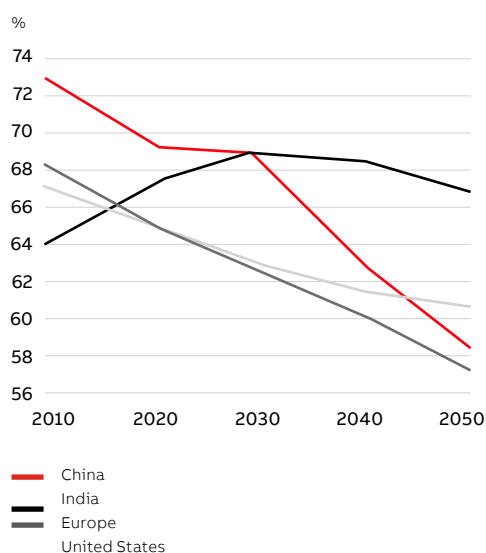
At ABB, we take a broad view of external developments including economic and geopolitical shifts. The key megatrends shaping our environment, industries and markets are demographics, digitalization & artificial intelligence (AI), economic shifts and sustainability.

Demographics

By 2030, the world population is expected to grow by 8 percent to a total of 8.5 billion people¹. At the same time, thanks to continued economic development, the middle class is expected to expand to more than half (~56 percent) of the world's population. The impacts will be a further rise in urbanization and an increase in demand for often already constrained resources (e.g., natural, energy, infrastructure) as cities expand and living standards improve. Moreover, demand for highly qualified workers continues to increase and is expected to exceed labor supply, as working age population growth across several geographies is projected to remain stable or begin to decline as population ageing accelerates.

To manage these shifts, businesses need to become more efficient and flexible in the way they operate and deliver their products and services. At ABB, our substantial investments in research and development (R&D) and manufacturing capacity allow us to work hand-in-hand with our customers to rethink their value chains, building on our leading automation and robotics offering.

SHARE OF WORKING AGE POPULATION (15–64) IN SELECTED COUNTRIES/REGIONS¹



Digitalization & AI

While AI has become increasingly prevalent in people's lives over the past year, the advance of technology has long been moving us towards a future in which the physical and digital worlds merge. Across industries, digitalization is increasing productivity and resource efficiency, and making manufacturing more flexible, while improving quality and simplicity.

In response to the shrinking labor force and the lack of qualified and experienced workers, demand for autonomous operations continues to increase. At the same time, emerging technologies and increasing digital connectivity are fueling the world's data growth and consequently the need to process and make sense of such data – demand for data centers is expected to increase by a CAGR of ~10 percent until 2030².

As a global technology leader, our Robotics & Discrete Automation and Process Automation business areas use AI, digital connectivity and software to make robots smarter, accelerate automation and generally push the frontiers of technology. Our Electrification and Motion business areas provide many of the key technologies that data centers need to meet the increasing processing power required for AI applications.

Economic shifts

In our global business environment, the COVID-19 pandemic brought supply chain resiliency to the top of the agenda of executives across industries. Businesses invested heavily to rethink and diversify their strategies up- and downstream, coming out of the pandemic stronger. However, the world has remained an uncertain and highly volatile place as underscored by

KEY MEGATRENDS SHAPING OUR ENVIRONMENT



Demographic

Shrinking labor force
Increasing global consumption



Digitalization & AI

Accelerating automation
Higher data processing needs



Economic shifts

Security of energy supply
Resilience of supply chains



Sustainability

Energy transition
Higher energy efficiency



ABB



Electrification – the world going electric
supports

~50%
of customer offering

Emission reduction, energy efficiency
supports

~35%
of customer offering

Automation
supports

~40%
of customer offering

Energy security
supports

~20%
of customer offering

¹ UN World Population Prospects 2022, S&P Global

² Grand view research, Data center market size, share and growth

the wars in Ukraine and the Middle East with significant impact across our economies – be it the energy crisis in Europe and its knock-on effect particularly on Small and Medium Enterprises (SMEs) or the disruption of trade flows in the Red Sea, impacting 12 percent of global trade. Global gross domestic product (GDP) growth has yet to recover and is slowing down compared to before the COVID-19 pandemic, accompanied by high (but slowly declining) inflation, high interest rates, and persistent recession risk across major economies. For businesses across industries this translates into a different, less certain mid-term outlook and means reconsidering investments in new capacity, uncertainty regarding customer demand and recalibrating assumptions of future growth markets.

ABB has a long tradition of local-for-local manufacturing and extensive expertise in enabling companies to become resilient, flexible and efficient through our process automation, robotics as well as machine and factory automation solutions. As we continue to operate in economic uncertainty and businesses address the risk associated with single sourcing and manufacturing hubs and require more flexibility, better planning, monitoring and management capabilities, ABB is well positioned to help our customers to make their value chains more resilient.

Sustainability

In the face of climate change, our society faces an urgent and pressing need to transition to a low-carbon society and preserve natural resources. At the same time, governments and businesses are under pressure to provide secure access to electricity to off-grid communities as well as to expand infrastructure and services to

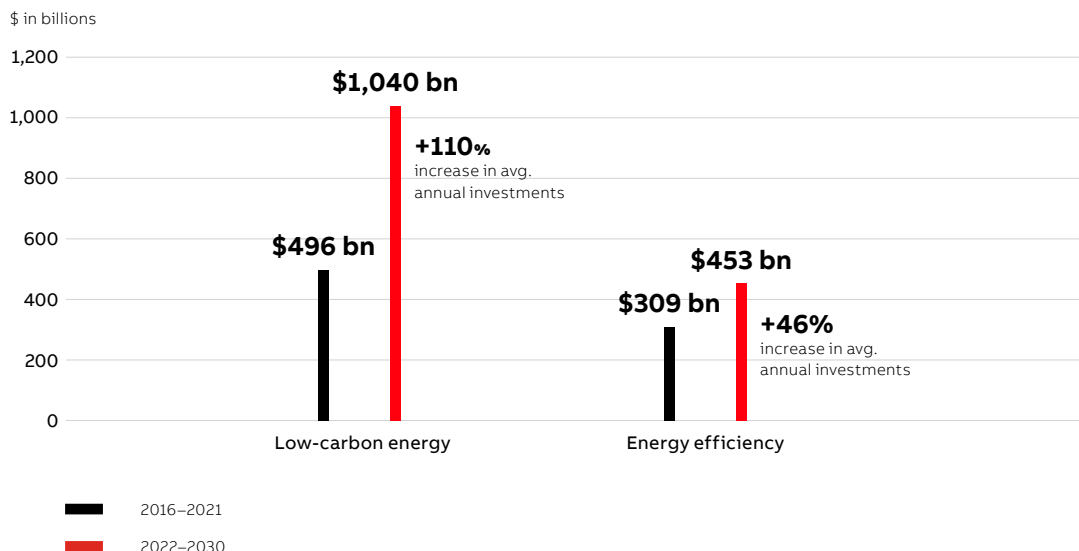
meet the needs of growing populations, which expect higher living standards. To enable an equitable transition, countries and businesses require solutions that are more energy efficient, that are powered by renewable or low-carbon energy sources, and that enable production with fewer inputs.

While growing populations and rising urbanization are putting pressure on infrastructure and increasing energy consumption, governments are setting clear climate objectives, and incentivizing investments in the expansion and upgrading of the energy system. To further accelerate the adoption of low-carbon solutions, carbon pricing schemes are increasingly being used to encourage investment in energy efficiency and new forms of energy. Even though the cost of capital remains high in today's inflationary environment, the most recent study by the International Energy Agency (IEA) predicts that annual investments in low-carbon technology will increase on average by 110 percent per year by 2030, while investments in energy efficiency are expected to increase by 46 percent annually over the same period.

With ABB's technology leadership in electrification and automation, we are creating superior value for our stakeholders as well as driving and supporting the shift to a more sustainable and resource-efficient future. Approximately 50 percent of our offering supports the trend toward electrification and about 35 percent directly enables higher energy efficiency, strongly positioning us to help companies reduce and avoid emissions, cut resource use and move toward circular business models.

STRONG GROWTH IN INVESTMENTS IN LOW-CARBON ENERGY SUPPLY AND ENERGY EFFICIENCY¹

¹ IEA World Energy Outlook 2023, Announced Pledges Scenario



Stakeholder engagement and material topics



You are here
in the value
creation model

Our value creation model underscores ABB's commitment to create superior value for all our stakeholders in the short-, medium-, and long-term. We relentlessly execute on our strategic direction in alignment with the ABB Way and foster a close dialogue with key stakeholder groups to continuously shape our position and policies, finetuning our decentralized ABB Way operating model. Through both business as usual and topic-specific strategic discussions, we are better able to understand our stakeholders' diverse perspectives on economic, environmental, social and governance matters. Their valuable insights help ABB to further shape our strategic direction and the way we manage risks and pursue opportunities.

Stakeholder engagement

Engaging with our stakeholders plays a foundational role in defining ABB's strategic direction and driving our business. We are committed to consistent, transparent communication with our key stakeholder groups, including collaborative partnerships, customers, employees, governments and civil society, our investment community, and suppliers. We aim to build trust and foster long-term responsible business practices and relationships with our stakeholders. Stakeholders shape our business environment and influence the way ABB operates; they are also impacted by what we do and the value we create.

Stakeholder voices provide a unique perspective on market trends, innovations and technologies to help us better understand how these are perceived across industries and geographies.

We regularly engage with our main stakeholders in the normal course of business through various channels and as part of our materiality assessment. We strive to address their concerns and embed their input into our decision-making processes.

Material topics for value creation

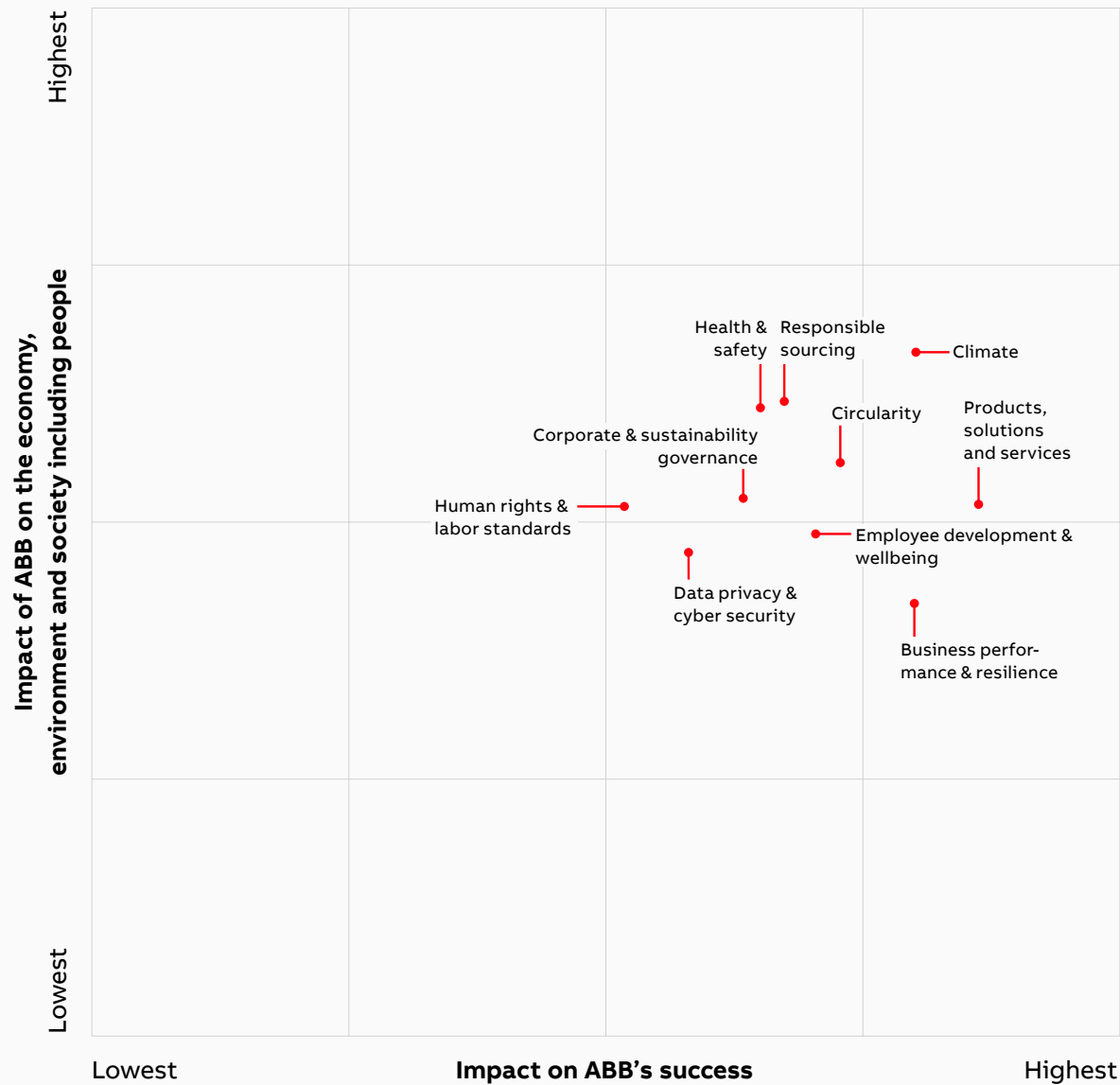
In 2023, ABB conducted its first double materiality assessment, reflecting both an impact (inside-out) and a business (outside-in) perspective. This allowed us to get a clearer picture of our actual or potential impacts on the economy, the environment, society and people, as well as to understand the business implications emerging from risks and opportunities related to our material topics. The methodology took into consideration the following regulatory requirements and guidance of reporting standards: European Sustainability Reporting Standards (ESRS), the provisions of the amended Swiss Code of Obligations related to transparency on non-financial matters, the Global Reporting Initiative (GRI) Standards, the Integrated Reporting Framework (<IR> Framework), the IFRS Sustainability Disclosure Standards,

Stakeholder group	Primary engagement channels
Collaborative partnerships	<ul style="list-style-type: none"> Memberships in associations and initiatives Technology, research and innovation partnerships with leading companies, start-ups and universities/technical institutes
Customers	<ul style="list-style-type: none"> Customer requests Customer service and relationships Customer trade shows Partnerships, including on sustainability
Employees	<ul style="list-style-type: none"> Annual performance reviews and employee engagement survey Collective bargaining associations Dialogue with the ABB Employees Council Europe, the representative body of all ABB employees in Europe Global network of employee resource groups promoting D&I in the workplace Learning and development opportunities
Governments and civil society	<ul style="list-style-type: none"> Direct dialogue and meetings with regulators and community representatives Donations and volunteering Engagement with government agencies and other stakeholders to demonstrate the value of our products Participation in international initiatives to address global issues Strategic partnerships
Investment community	<ul style="list-style-type: none"> Annual general meeting Investor roadshows, conferences and capital markets days One-on-one meetings Reporting, press releases, investor webcasts, investor relations website
Suppliers	<ul style="list-style-type: none"> Co-development initiatives Early engagement during new product development Monitoring through our Sustainable Supply Base Management (SSBM) program On-site evaluations and audits Town hall and supplier day events Trainings and engagement in special projects on sustainability performance

the Sustainability Accounting Standards Board (SASB) Standards and the Task Force on Climate Related Financial Disclosures (TCFD) Recommendations. To conduct our materiality assessment, we solicited feedback from approximately 60 key internal stakeholders covering global and local perspectives at different levels of the company as well as functional and subject matter experts. In addition, we reached out to more than 1,400 external stakeholders:

collaborative partners, customers, employee representatives, government and civil society, our investment community, as well as suppliers. The results of our dialogue on material topics with our internal and external stakeholders are summarized in our materiality matrix 2023, which identifies 10 material topics.

ABB’S DOUBLE MATERIALITY MATRIX 2023



→ More information about the process and results of our materiality assessment can be found in our [Sustainability Report 2023](#).

Contribution towards the United Nations' Sustainable Development Goals

ABB has always been a strong advocate of the United Nations' Sustainable Development Goals (SDGs). Following the update of our materiality assessment in 2023, we mapped the topics that we identified in our double materiality assessment against the 169 sub-targets of the SDGs. This process allowed us to identify four SDGs on which we have the greatest impact.

The selection of these four SDGs is fully aligned with ABB's purpose of enabling a more sustainable and resource-efficient future with our technology leadership in electrification and automation. While ABB contributes most to the four SDGs below, we recognize the importance of the other SDGs and endeavor to contribute to their achievement whenever and wherever possible.

SUSTAINABLE DEVELOPMENT GOALS



Ensure access to affordable, reliable, sustainable and modern energy for all.

ABB enables access to affordable and sustainable energy through our portfolio of electrification, automation and energy-efficient solutions.



Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

ABB contributes to decent work and economic growth by providing safe and fair employment, paying taxes and supporting local communities.



Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

ABB's innovative technologies actively contribute to sustainable industrialization and give us, our business partners and our customers the ability to move, work and live more sustainably.



Take urgent action to combat climate change and its impacts.

By reducing our own GHG emissions, empowering customers to avoid emissions and integrate renewables, and working with suppliers and partners to reduce their carbon footprints, ABB is enabling decarbonization and climate action.

SUSTAINABLE DEVELOPMENT GOALS

ABB supports the Sustainable Development Goals

Our inputs for value creation

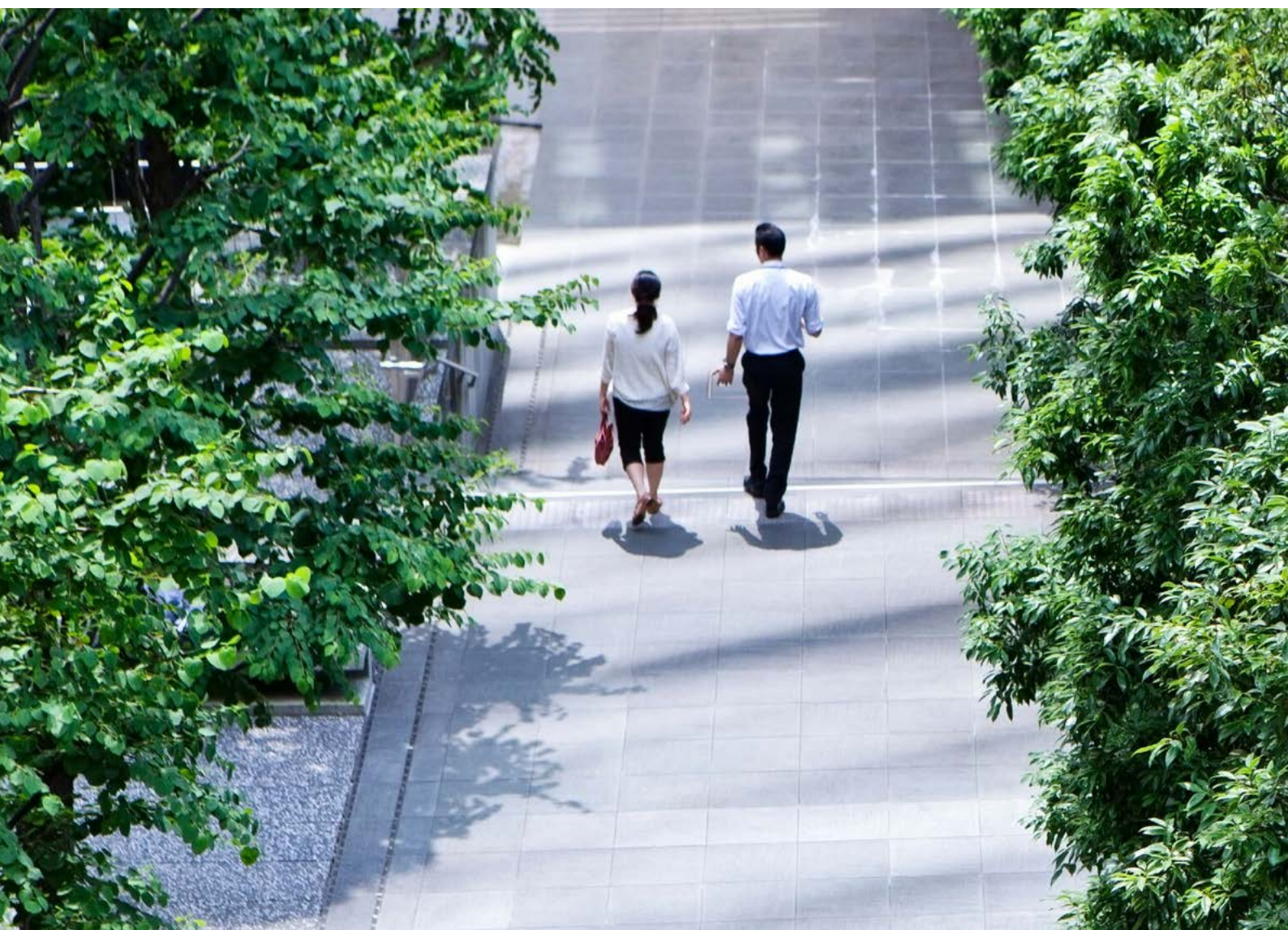
ABB's main inputs for creating long-term value for our stakeholders can be categorized into six main groups: financial, intellectual, natural, manufactured, human and social & relationship. Additional details on the crucial inputs, including both financial and non-financial aspects, are provided through a combination of qualitative and quantitative data across the input groups.



You are here
in the [value
creation model](#)

To drive sustainable value creation at ABB, we need to ensure that our inputs are not only balanced, but also complementary: we leverage our market leading position and access to financial inputs to continuously invest in research and development (R&D), our people, acquisitions and partnerships, and our manufacturing footprint and capabilities, including more sustainable

and resource-efficient operations. Through the combined use of all our inputs, we increase both our financial output – which again allowed us to raise our financial targets in late 2023 and return cash to our shareholders – and our contributions to a sustainable society, for which we were also able to increase our ambition level in 2023.





Financial input

Financial inputs are the sum of funds available to ABB, represented in our value creation model as \$13.4 billion in total stockholders' equity and \$26.8 billion in total liabilities. They enable ABB to invest in intellectual, natural, manufactured, human, and social and relationship inputs, and to transform them into outputs and outcomes.



Intellectual input

Intellectual inputs encompass R&D, innovation, intellectual property as well as the collective knowledge of our employees, all of which give us a competitive advantage that is not fully recognized on the balance sheet. Our annual R&D investment amounts to approximately 4 percent of revenues and we further complement this with venture capital investments in technology start-ups, focused on digital and software. This has supported the development of cutting-edge technology, which enables us to create superior value for our customers by optimizing, electrifying and decarbonizing their operations. Advanced software is a key differentiator of our digital offering and about 55 percent of our approximately 7,500 employees in R&D are active in software development and we have more than 100 projects relating to Artificial Intelligence (AI) in progress across ABB.



Natural input

Natural inputs include the natural resources, energy and materials used to provide services and products to our customers. We strive to produce and deliver our products, solutions and services in the most efficient way possible, using natural resources only as necessary. For the year ending December 31, 2023, our total energy consumption was 1,298 GWh, down from 1,413 GWh in 2022. This is a direct result of our continuous efforts to reduce emissions across our sites and switch to renewable energy sources. Similarly, we continue to focus on our water withdrawal particularly in water-stressed areas, reducing our water withdrawal from 2,815 to 2,545 kilotons compared to the prior reporting year.



Manufactured input

Manufactured inputs include the tools, machines, plants, infrastructure and buildings that we need to produce our products and provide our services. As of December 31, 2023, net property, plant and equipment amounted

to \$4,142 million, which was primarily invested in our 177 manufacturing sites in over 40 countries. Our focus on "global reach with local presence" allows us to quickly scale innovations across our markets. Moreover, our long tradition of local-for-local manufacturing allows us to remain close to customers, exemplified by approximately 95, 85 and 75 percent of products and solutions sold in Europe, China and the United States, respectively, being produced locally. We invest approximately \$800 million annually in capital expenditure (CapEx) to ensure that our manufacturing capabilities can support our organic growth ambitions and secure our efficient production.



Human input

The health, wellbeing, intellectual engagement, motivation and competence of our more than 105,000 employees representing 173 nationalities, as well as their ability to do their jobs well and fulfill their personal potential, are essential to our ability to create value. With our "Learn, Connect, Grow" framework at the heart of our people strategy, our employees spend on average 6.8 hours per year on training across our various learning platforms. In 2023, this also included newly launched mandatory integrity-focused learning modules, accompanied by a strengthened emphasis on the tone of integrity set by top-level executives and middle management. Moreover, with a focus on providing a safe working environment in which our employees can learn, connect and grow, we further increased our rate of safety observation tours at our sites from 5.28 to 5.34.



Social and relationship input

Social and relationship inputs are the relationships we have with our stakeholders, including collaborative partnerships, customers, employees, governments and civil society, the investment community and suppliers. Having served various industry and market verticals for decades, we have developed unique domain expertise, a large installed base and long-term relationships with end customers and channel partners. This has enabled us to build a deep understanding of customer needs and operations. We always strive to maintain close relationships with our customers to ensure that we provide them with the highest value possible. As a respected technology leader in electrification and automation, we also engage in partnerships with universities and research institutions to leverage our resources to create value. We had numerous partnerships with universities and research institutions in 2023.

Our strategic direction and the ABB Way

ABB's strategic direction is deeply rooted in our purpose and designed to achieve our overarching objective of creating superior value for all our stakeholders. It is realized through the ABB Way, our decentralized operating model.

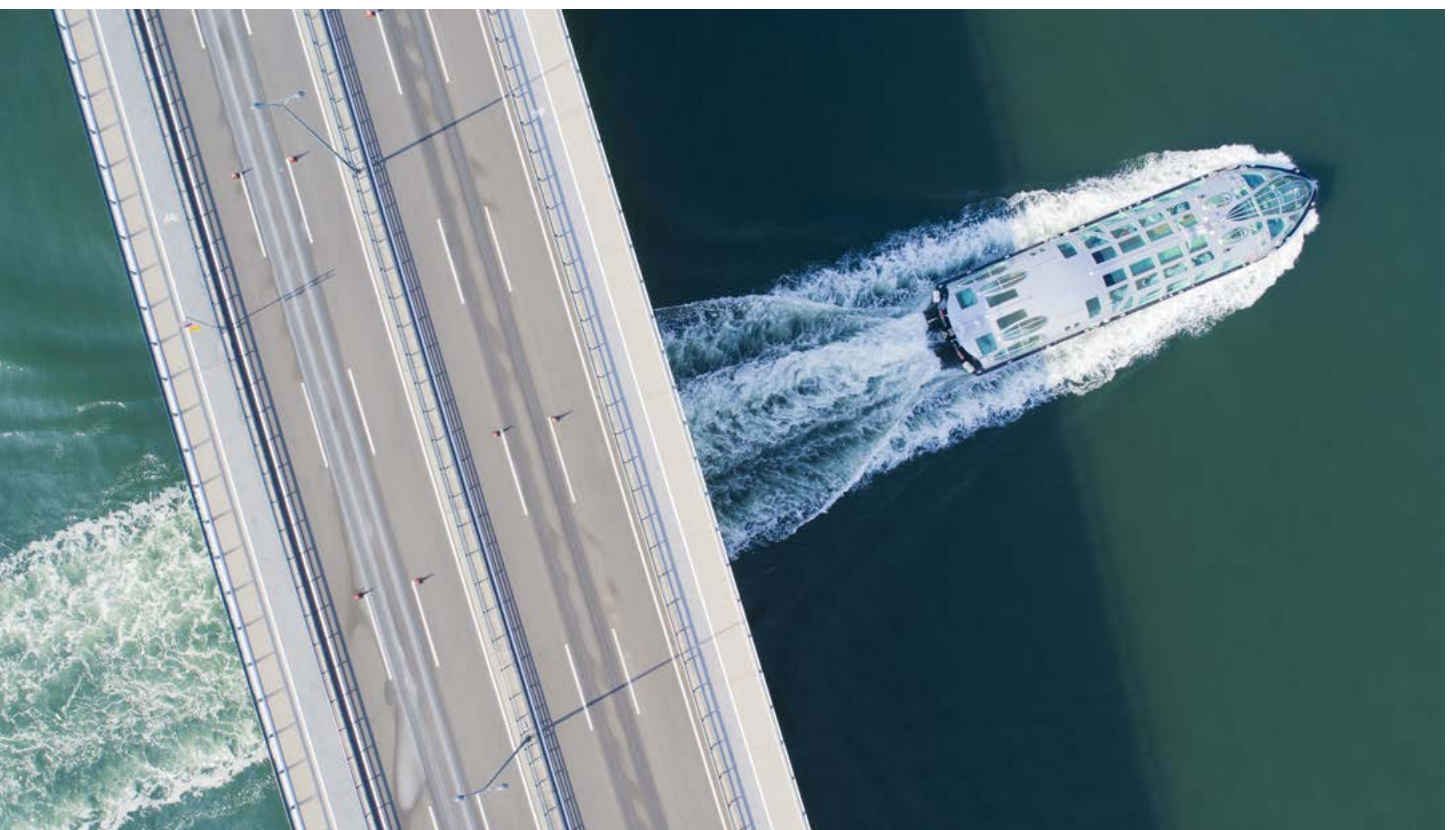
Strategic direction for value creation



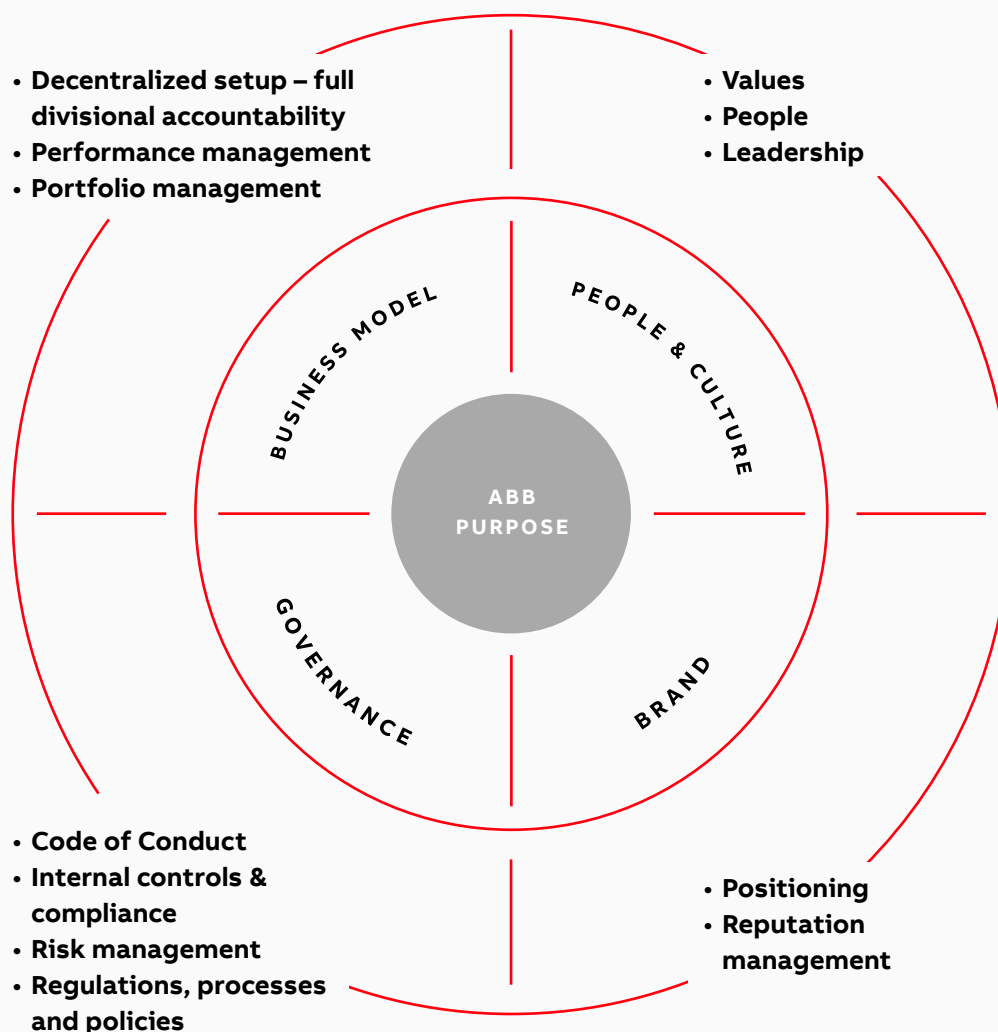
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creation model

Building on our decentralized operating model, ABB's strategic direction is set at the Group level. However, as the highest operating level at ABB, our divisions have full ownership and accountability for their respective strategies, performance and resources and are expected to make strategic and operational decisions in line with our strategic direction, including:

- allocating capital systematically for organic (including R&D and CapEx) and inorganic growth (e.g., bolt-on acquisitions), aligned with ABB's purpose;
- increasing ABB's exposure to high-growth, profitable markets that are benefiting from key megatrends;
- striving for market leadership positions in all our businesses and enhancing our technology and digital leadership through software-enabled products and solutions and stand-alone software and digital services;
- building resilience to successfully manage a global business in an increasingly volatile world; and
- embedding sustainability in all our processes and across our value chain.



THE ABB WAY



How we create value the ABB Way

With our purpose at its core, the ABB Way defines “how” we create superior value for our stakeholders through our business areas, divisions and lean corporate center. It has four components: our business model, as well as our approach to developing our people and culture, maintaining good governance, and nurturing our brand.

Owned and controlled by ABB’s Executive Committee and mandatory for all divisions, the ABB Way serves as the “glue” that holds the Group together and empowers our divisions with full ownership and accountability for their respective strategies, performance and resources. It provides select standardized policies, processes and systems (including portfolio and performance management), supports a strong culture of governance and integrity, and enables us to build and protect our brand and reputation.

Business model

ABB’s business model determines how we govern our portfolio of 19 divisions, manage performance and drive value creation for all our stakeholders. Our business model ensures that under ABB’s decentralized structure with full divisional accountability, all divisions follow the Group’s strategic direction and pursue opportunities to cooperate, leveraging synergies to best serve our customers and create competitive advantages. ABB’s belief that “smart leaders collaborate” is deeply embedded in our business model; we consider it an enabler for future growth and efficiency in operations.

→ See [Our business areas](#) for more detail.

DIVISIONAL STRATEGIC MANDATES

Stability

- Restructure
- Transform offering/
business model

Profitability

- Improve margin/return
- Moderate investment
in growth
- Select technology add-on
acquisitions

Growth

- Growth above market while
keeping high/return level
- Invest strongly in organic
growth (e.g., digital, R&D,
sales/service, capacity)
- Actively pursue acquisitions:
including technology
additions, larger market
consolidation moves and
penetration of new market
segments



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Performance management

We aim to consistently improve our performance and deliver on our objective of superior value creation. Building on our “continuous improvement mindset”, we translate our strategic priorities into short- and long-term targets. Both financial performance and progress on sustainability are addressed by these targets and supported by appropriate incentives.

To plan, measure, monitor and review progress against our short- and long-term targets, ABB leverages an established scorecard system and a holistic set of KPIs, covering, among others, the core KPIs included in ABB’s financial target framework: revenue growth, Operational EBITA margin, Return on Capital Employed (ROCE), Free Cash Flow (FCF) conversion to net income, and Earnings per Share (EPS) growth. Furthermore, incentives are leveraged to maintain a strong link between strategy and compensation programs. This also includes reinforcing our commitment towards sustainability, which is considered in both the Long-Term Incentive Plan (LTIP) for around 100 executives, including Executive Committee members and (one measure) and the Annual Incentive Plan (AIP) (at least two sustainability-related goals in the individual component) for Executive Committee members.

Portfolio management

ABB actively and systematically manages its business portfolio: value creation is focused both on organic and inorganic investments to further increase ABB’s exposure to megatrends, fill technology gaps, complement or expand our

offering in high-growth segments, gain access to new geographies, and boost economies of scale through consolidation. Our capital allocation for investments in organic and inorganic growth follows a clear, two-pronged approach to maximize value creation; strategic mandates are leveraged to determine whether a division should focus on accelerating growth, whereas clear portfolio assessment criteria are used to facilitate decisions on portfolio moves.

ABB assigns each division a strategic mandate – stability, profitability or growth – that reflects on its performance and translates into strategic priorities for each division. As part of our portfolio assessment approach, we review divisions’ performance and strategic mandates from a Group perspective. To reflect on our revised financial and sustainability targets, we further evolved our portfolio assessment approach and also fully embedded sustainability into our methodology through a distinct sustainability lens. Our ambition is to transition divisions to a growth mandate, enabling them to operate at best-in-class performance and to actively pursue value-creating, bolt-on acquisitions in addition to organic growth.

The strategic mandates also imply that the majority of ABB’s bolt-on acquisitions should be made by divisions with a growth mandate, aiming for five to ten small- to mid-sized acquisitions per year. Regardless of the acquisition size, the targets must match ABB’s assessment criteria in order to demonstrate that ABB is a better future owner and can deliver superior value creation. Similarly, existing businesses or

→ See the chapter [Targets and performance overview](#) for a comprehensive overview.

→ See the chapter [Performance-based compensation](#) for more details on our compensation programs.

ACQUISITION CRITERIA

STRATEGIC

Fit with ABB's purpose

- Electrification & automation
- Sustainability & resource-efficiency
- Technology leadership

Business attractiveness

- Market growth and market profitability
- Contribute to ABB's ability to hold a no. 1-2 market position
- Financial performance of the target

1–2%

Acquired average growth through economic cycle

parts of divisions that structurally no longer fit the assessment criteria become exit candidates.

People & culture

ABB's four values – courage, care, curiosity and collaboration – are the cornerstones of our culture and reflect the attitudes and behaviors required to drive our decentralized company with its empowered divisions. Our values guide us in building a safe, fair, equitable and inclusive work environment, enabling us to attract, retain and develop talent.

We foster a culture of life-long learning and empower our people to manage their own careers within ABB by providing them with tools and resources to "Learn, Connect, Grow". All open job positions up to Executive Committee level are posted internally on our open job market and anyone may apply. Our people strategy also enables employees to integrate learning into their work and personal life through networking and connecting with peers, and to identify and pursue growth opportunities across ABB. Leadership development continues to be a key focus area for ABB. Our leadership teams review the strengths and development needs of their team members and support their development to ensure a long-term approach towards building strong and diverse leaders who enable us to continue to push the boundaries of technology and deliver on our purpose.

Governance

ABB's comprehensive governance framework is designed to safeguard our company, people, assets and reputation from potential harm,

enabling ABB to achieve our objective of creating superior value for all our stakeholders. The framework encompasses strong risk and compliance management and adequate processes, policies and controls, which respond to regulatory requirements. Furthermore, the framework embeds integrity as the foundation for everything we do and defines how we work, collaborate and do business across our organization. Our revised Code of Conduct articulates integrity as our core principle. It guides our employees to follow the law, act honorably and treat each other with respect. In doing so, we gain the trust of our stakeholders, including customers, business partners, shareholders and the communities and societies we serve. Integrity underpins our uncompromising commitment to adhere to the highest standards of ethical business conduct and professional behavior.

Brand

Our ABB brand is an expression of our purpose and unites us as a company. Through a single voice, it enables us to articulate our distinct identity as a technology pioneer, differentiates us from peers, and positions us as a leader in the market. Our brand also enables us to better attract talent and investors and enforces accountability to match our words with our actions. To our stakeholders, the ABB brand is a sign of trust and superior value.

→ For more information about our people-related performance, please refer to the chapter [We promote social progress](#).

→ For an overview of our governance framework, please refer to chapter [Good Governance](#).

Risks and opportunities

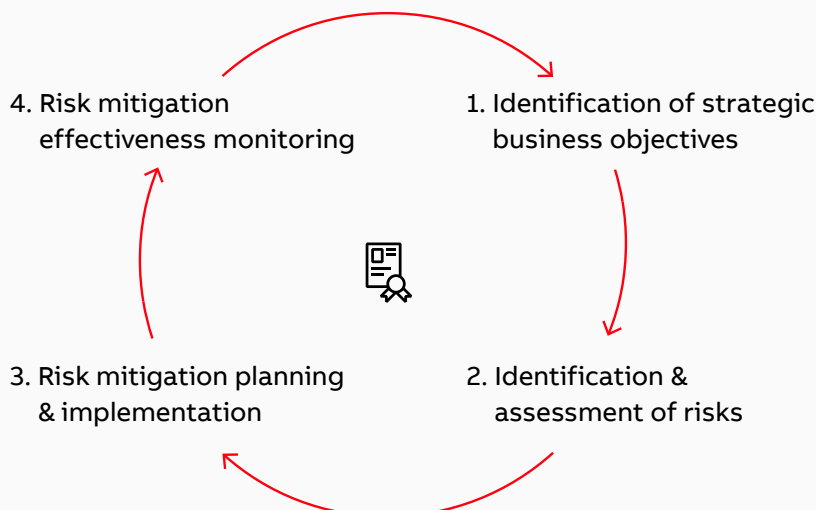
The proactive management of risks is an integral part of how we do business. Our defined risk management framework enables us to identify and assess risks early and ensures that we have appropriate responses to manage and mitigate their effects across all levels of ABB. At the same time, we seek to turn the risks we face into potential opportunities and strive to manage both risks and opportunities in a responsible way. This approach supports the creation and protection of value for ABB, our stakeholders and society.

Enterprise risk management

The enterprise risk management (ERM) process is a holistic approach to identifying risks that could adversely impact the achievement of ABB's strategic business objectives and lead to a material financial impact. The ERM process is embedded in our ABB Way operating model and encompasses all levels of our organization. It provides our leadership, including our Executive Committee and the Finance, Audit and Compliance Committee (FACC) of the Board of Directors, with a comprehensive overview of the most critical risks faced by our business. This information informs our overall strategy and risk discussions and allows us to make better-informed decisions to protect value and take calculated risks to create value, in a rapidly evolving societal and business environment.

The ERM process is cyclical and based on the ongoing identification, assessment, mitigation and monitoring of the most critical risks affecting ABB. Our detailed methodology starts with the identification of our strategic business objectives. Next, we identify the most critical risks which could prevent us from achieving these objectives and lead to a potential material financial impact in the next five years. These risks are then assessed in terms of their potential impact, likelihood and speed of occurrence. Specific responses to address these risks are then planned, implemented and continuously monitored to ensure they remain effective. The ERM process categorizes risks as strategic, financial or operational:

ABB'S ENTERPRISE RISK MANAGEMENT PROCESS



IT SECURITY INCIDENT IN MAY

In May 2023, ABB became aware of an IT security incident impacting certain company IT systems. As a result of the incident, ABB started an investigation, notified certain law enforcement and data protection authorities, and worked with leading experts to determine the nature and scope of the incident. ABB also took steps to contain the incident and further enhance the security of its systems. Based on its investigation, ABB determined that an unauthorized third-party accessed certain ABB systems and exfiltrated certain data. Following a review of the data, where necessary ABB has provided notifications to individuals and organizations. To date, ABB has no evidence to suggest that any information has been misused as a result of this incident. ABB will continue to monitor this.

1. Strategic:

Strategic risks can relate to any of the following: macroeconomic factors; market and technological developments; competitor and industry shifts; environmental, social and governance aspects; geopolitical developments; and/or portfolio management topics. These factors can have both negative and positive impacts on our business and create significant business opportunities.

2. Operational:

Operational risks can relate to any of the following: engineering, manufacturing, project management and productivity topics; health, safety and environment management; integrity and compliance aspects; supply chain management; cyber and information security threats; and/or talent attraction and retention. These factors can have adverse impacts on the day-to-day operations of our business as well as positive impacts by being sources of competitive advantage.

3. Financial:

Financial risks can relate to any of the following: risks arising from ABB's international financial activities; fluctuations in currency or

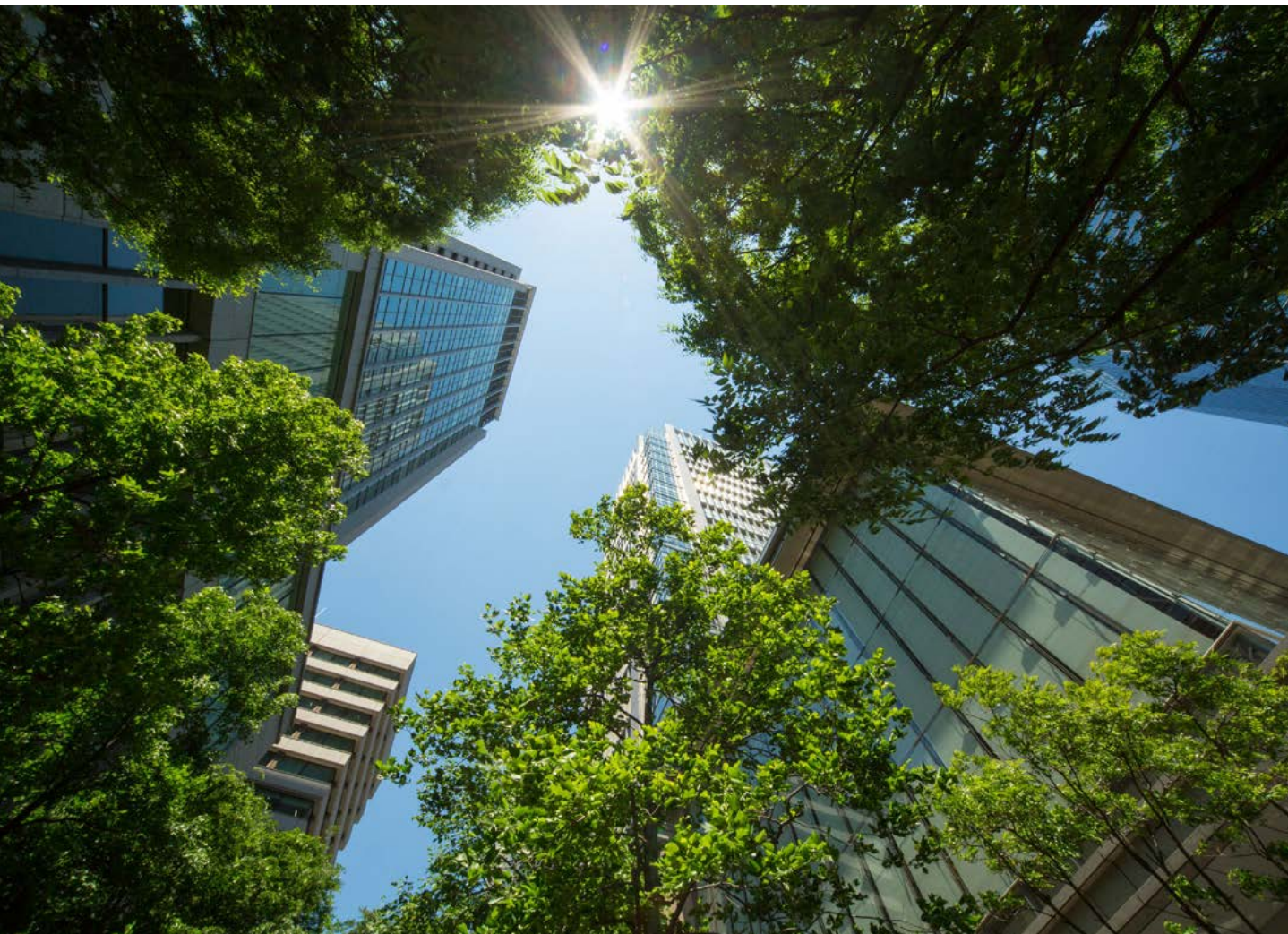
interest rates; volatility in commodity prices; accounting and financial reporting requirements; financial planning, analysis and management aspects; and/or compliance with tax obligations. These factors are key to ensuring ABB has appropriate finance structures in place and that all financial compliance requirements enabling us to meet our capital needs are met.

We strive to turn risks into opportunities not only to minimize their downsides but to create value for ABB and our stakeholders, wherever possible. Our decentralized business model allows us to stay agile, quickly adjust to changing environments, stay close to market developments and foster innovative responses to risks. As highlighted by the results of this year's double materiality assessment, many of the identified material topics offer potential positive impacts and opportunities to further create value for ABB, our stakeholders and society. For more details refer to the [Stakeholder engagement and material topics](#) section.

Below are the top five enterprise risk clusters facing ABB over the next five years as identified in the 2023 ERM process from across ABB:

TOP FIVE ENTERPRISE RISK CLUSTERS 2023

Top five risk clusters	Examples of reported risks	Examples of risk responses
Cyber security incidents	Potential cyber incidents involving ABB or third parties due to a global increase in sophisticated cyberattacks, high interconnectivity and cyber dependency across the supply chain and increasing process digitalization combined with a complex IS landscape.	<ul style="list-style-type: none"> Cyber security assessments and findings remediation & tools to identify and prevent cyberattacks. Onboarding of IT assets to global security solutions and business continuity and disaster recovery planning.
Geopolitical instability	Increased geopolitical tensions resulting in global targeted technology decoupling, protectionism, trade restrictions, "friendshoring", new regulations and employee security implications.	<ul style="list-style-type: none"> Evaluation and quantification of exposure to and dependency on leading geographical markets. Design of a balanced supplier base across geographies and further shift to local supplier strategy.
Economic slowdown	Potential recessions across leading economies, increase in inflation and interest rates globally and a deterioration of macroeconomic factors in China could all lead to a drop in demand and reduced financial performance.	<ul style="list-style-type: none"> Identification of growth areas, revenue opportunities and cost reduction measures. Assessment of short-, mid- and long-term economic developments to identify market and demand shifts.
Lack of qualified/available human resources	Potential shortage of the right skilled resources or inability to retain those skilled resources due to fierce global market competition for talent, aging workforces, technical expertise erosion and fast-changing skill sets.	<ul style="list-style-type: none"> Agile manpower planning with the use of talent agencies and external service providers. Development of people strategies, early talent programs and recognition of key individuals.
Availability of components and raw materials	Possible shortages of components and raw materials due to high dependency on few suppliers, supply chain shortages or inability to adapt to or comply with changes in import regulations.	<ul style="list-style-type: none"> Development of alternative materials with the support of R&D. Extensive activity to minimize single source components.



Sustainability risks and opportunities

Risks and opportunities related to sustainability are of particular interest to ABB due to their potential impact on our value creation. Alignment with our Sustainability Agenda calls for diligent identification and monitoring of such risks and opportunities.

Our financial performance is closely linked to sustainability issues. A subtle change in climate, the environment, regulation and social trend factors can affect our business environment and operations. That is why at ABB we embed sustainability in everything we do and engage with our stakeholders every step of the way.

The key risks associated with the material topics from our double materiality assessment are described in the “material and non-material topics description” section of the Sustainability Report. Of these risks, those specifically relating to climate change (physical and transitional) are discussed in more detail in the TCFD Recommendations report in the Sustainability Report.

TCFD report summary

→ Our full TCFD report 2023 can be found in our [Sustainability Report 2023](#).

ABB is particularly well positioned to help address challenges related to climate change. The urgent need for energy-efficient and low-carbon products and solutions offers a huge opportunity for our business to contribute to a more resilient society. For 2023, we submitted our second report in line with TCFD Recommendations to disclose our activities towards climate change mitigation, the reduction of negative environmental impacts, and how climate change affects our financial position and overall business strategy. Starting from the financial year 2024, companies listed in Switzerland will be required to report in line with TCFD Recommendations following the Swiss Ordinance on Climate Disclosures.

Governance

Our Board of Directors reviews and approves the Sustainability Agenda and related targets, including climate targets. The ABB Group Executive Committee validates the Sustainability Agenda and its implementation. It is responsible for reviewing strategic targets, including climate-related targets as well as for ensuring that a sustainability culture is embedded in our business decision making. The Sustainability Council is the operational body that oversees implementation of the Sustainability Agenda, reviews developments and monitors progress toward targets, including climate targets.

Risk management

We are constantly monitoring and assessing climate-related financial risks and have identified the following main risk categories as relevant to ABB:

- physical risks: e.g., increased frequency of extreme weather events, such as floods or storms, affecting our direct operations and supply chain; and
- transitional risks: e.g., policy, legal and market risks resulting from a transition to a lower-carbon economy.

We have started working on financial quantification of these risks, commencing with physical risks affecting our operational sites. Climate-related risks also apply to our suppliers and customers across the value chain. Upstream business continuity risks related to climate change, such as extreme weather conditions affecting our suppliers, are covered through comprehensive monitoring and development of our supply base. Our Sustainable Supply Base Management (SSBM) program helps us assess and improve the sustainability performance of our suppliers. For own sites, ABB has well-developed emergency response programs in place to manage potential impacts from climate change, such as storms or floods.

Opportunities

ABB capitalizes on climate-related opportunities and seeks to build climate resilience through our ABB Way operating model. We can reduce direct operating costs by increasing resource efficiency and shifting towards renewable energy sources. We can also leverage market opportunities by investing in innovative technological developments matching our customers' needs and providing low emissions products and services. Our end-to-end energy management solutions such as smart energy, building automation and mobility systems assist consumers to accelerate their sustainability journey.

Impact on our business resilience and strategy

We analyze risk exposure to our operations and consider three climate change scenarios to better understand the potential implications of different temperature increases in the future. We are currently working on enhancing our analysis to include all our sites and suppliers. Thanks to our technology leadership in electrification and automation, we can also help our customers and suppliers reduce their GHG emissions with our solutions for smart buildings, urban infrastructure, clean energy, energy efficiency and electric mobility.



03 Outputs and outcomes



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Targets and performance overview

We have established a set of short-, mid- and long-term targets, supported by appropriate incentives, to manage our performance and achieve our strategic priorities. These targets encompass both financial performance and progress on sustainability. The table below shows the summary of our progress toward our targets.

WE DELIVER LEADING FINANCIAL PERFORMANCE

Targets	Prior cycle targets ¹	2023 Status
Revenue growth	4–7% annual average through economic cycle ²	14%
Operational EBITA margin	≥15%	16.9%
ROCE (return on capital employed)	15–20%	21.1%
Free cash flow (FCF) conversion to net income	~100%	99%
Basic EPS (earnings per share) growth	Growth > revenue growth	55%

WE ENABLE A LOW-CARBON SOCIETY

Targets	Baseline (year) ³	2023 Status
Reduce own scope 1 and 2 CO ₂ e emissions by at least 80% by 2030 and by 100% by 2050	636 kilotons CO ₂ e (adjusted for portfolio changes) (2019)	151 kilotons CO ₂ e
Reduce scope 3 CO ₂ e emissions by 25% by 2030 and by 90% by 2050 (representative scenario) ⁴	76,834 kilotons CO ₂ e (2022)	76,665 kilotons CO ₂ e
Reduce scope 3 CO ₂ e emissions by 25% by 2030 and by 90% by 2050 (strict scenario) ⁵	392,188 kilotons CO ₂ e (2022)	436,346 kilotons CO ₂ e
Ambition to avoid 600 megatons CO ₂ e emissions throughout lifetime of products sold from 2022 to 2030 ⁶	65 megatons CO ₂ e (2022)	74 megatons CO ₂ e

WE PRESERVE RESOURCES

Targets	Baseline (year) ³	2023 Status
Cover at least 80% of ABB's portfolio of products and solutions with our Circularity Approach by 2030 ⁷	n.a.	31% (share of ABB's products and solutions assessed) ⁸
Send zero waste to landfill while reducing waste generation by 2030	16.8 kilotons (2019), equivalent to 8.8% of total waste (adjusted for portfolio changes)	10.1 kilotons, equivalent to 6.3% of total waste

WE PROMOTE SOCIAL PROGRESS

Targets 2023	Baseline (year) ³	2023 Status
Zero harm to our people and contractors – we aim for a gradual reduction in lost time from incidents (LTIFR)	0.24 (2019) ⁹	0.13
Increase proportion of women in senior management roles ¹⁰ to 25% by 2030	11.7% (2019)	21.0%
Achieve a top-tier employee engagement score	71/100 (2019)	77/100
Expand programs for community engagement	n.a.	As part of the improvement process started in 2022, in 2023 we assessed our community engagement positioning and revised and expanded the scope of action, now focused on education, emergency and disaster relief, community empowerment, and environment and conservation.

¹ Our updated targets can be found on page 54.

² Calculated to exclude FX impacts and transformational acquisitions and divestments, includes bolt-on acquisitions and divestments within divisions.

³ Where baseline applies.

⁴ Representative scenario: Energy loss used as basis for calculations.; for further details and explanation see our [Sustainability Report 2023](#).

⁵ Strict scenario: Energy input used as basis for calculations; for further details and explanation see our [Sustainability Report 2023](#).

⁶ This ambition is not part of the committed targets.

⁷ Based on revenues from hardware-based products and solutions, where granularity of financial systems allows. Service revenues are excluded.

⁸ The circularity score of the assessed products and solutions is to be calculated once a representative share of the portfolio has been assessed.

⁹ Baseline 2019 excludes the Power Grids business and the Turbocharging division.

¹⁰ At ABB, senior managers are defined as employees in Hay grades 1–7.

WE EMBED A CULTURE OF INTEGRITY AND TRANSPARENCY ALONG THE EXTENDED VALUE CHAIN

Targets 2030	Baseline (year)¹	2023 Status
Global framework for assessing and mitigating third-party integrity risks through risk-based due diligence and life cycle monitoring	n.a.	<p>This target measures the implementation of a global framework for assessing third-party integrity risks. It is an ongoing and critical organization-wide, integrity-based enhancement, which strengthens how we onboard and manage the life cycle of our relationships with suppliers, sales channels and customers.</p> <p>Framework established and operational. Integrity due diligence and risk management enhancements for suppliers (buy-side) and sales channels (sell-side) launched globally.</p>
Global Integrity Program underpinned by accountability for integrity and an adaptive risk management strategy gained from insights through targeted learnings, transparent reporting and monitoring	n.a.	<p>This target measures the implementation and effectiveness of our Global Integrity Program through how we drive individual accountability for integrity and adapt our risk management strategy to real-time data insights gained from integrity-based learnings, reporting and monitoring.</p> <p>1. Trust KPI – the rate of severity level 1 and 2 investigations where the reporter disclosed their identity:</p> <ul style="list-style-type: none"> Year 1 (January 1, 2021, to December 31, 2021): 57% of reporters; Year 1 and 2 (January 1, 2021, to December 31, 2022): 60% of reporters; Year 1, 2 and 3 (January 1, 2021, to December 31, 2023): 60% of reporters. <p>2. Engagement KPI – the volume of unique visitors on the Integrity Awareness Portal for integrity learnings:</p> <ul style="list-style-type: none"> Year 1 (January 1, 2021, to December 31, 2021): 25% of employees with online access; Year 1 and 2 (January 1, 2021, to December 31, 2022): 69% of employees with online access; Year 1 & 2 & 3 (January 1, 2021, to December 31, 2023): 80% of employees with online access.
At least 80% of supply spending in focus countries ² covered by Sustainable Supply Base Management (SSBM) by 2030	n.a.	Using a risk-based approach, a mid-term 2025 target has been set, focusing on high-risk suppliers in focus countries. ²
At least 80% of spending on high-risk suppliers in focus countries ² covered by SSBM by 2025		In 2023, we reached 42% of spend on high-risk suppliers in focus countries ² covered by SSBM.
Linking sustainability targets to executives' variable pay	<p>Under the Annual Incentive Plan (AIP), a safety goal was included within the individual measure for some member of ABB's Executive Committee (EC). The individual measure had a weighting of 20 percent of the executive's target AIP (2019).</p> <p>Under the Long-Term Incentive Plan (LTIP), two performance measures with equal weighting of 50 percent were considered, namely average earnings per share and relative total shareholder return. The LTIP was awarded to around 100 executives, including Executive Committee members and division presidents. Vesting under the LTIP was subject to the achievement of the plan specific targets over a period of three years (2019).</p>	<p>Under the AIP, at least two sustainability-related performance goals are included within the individual measure for each member of ABB's EC. The individual measure has a weighting of 20 percent of the executive's target AIP.</p> <p>One of the three performance measures under ABB's LTIP is based on achievement of a corporate sustainability target and carries a weighting of 20 percent. The LTIP is awarded to around 100 executives, including EC members and division presidents. Vesting under the LTIP is subject to the achievement of the plan specific targets over a period of three years.</p>

¹ Where baseline applies.² Current focus countries are Argentina, Brazil, Bulgaria, China, Colombia, India, Indonesia, Malaysia, Mexico, Peru, Poland, Saudi Arabia, South Africa, Thailand, Türkiye and Vietnam.

We deliver leading financial performance

Through our focused portfolio of sustainability and resource-efficient products, solutions and services, we generate increasing growth and profitability, driven by improvements in the quality of our revenues and the exposure of our decentralized divisions to high-growth markets. Strong financial performance allows for solid and attractive shareholder returns and sustains our long-term value creation for all our stakeholders.



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In 2023 we delivered a strong operational result as we executed on our strong order backlog which was built up during a period of a strained value chain, inflation and an energy crisis. It was also another year of robust price execution where the linked benefits more than offset the inflation in labor costs while the margin was further supported by lower inflation-affected input costs and freight. In the wake of normalizing value chains, price management progressively returned to be customer value driven. The energy crisis triggered a series of customer investments throughout the year and further highlighted their need to ramp up investments in energy efficiency and transition to renewable energy sources. During the year we saw high customer activity in the areas of LNG and hydrogen, highlighting how relevant our offering and technologies are to address these energy challenges.

The ABB Way operating model facilitates more efficient ways of working which, combined with a strong market situation, led to increased operational results. We delivered record segment profit (Operational EBITA) and continued to see our divisions progress through their strategic mandates of stability and profitability before growth. With approximately 70 percent of division revenues now covered under a growth mandate we are increasingly shifting our focus to growth.

We continued to be active in portfolio management and completed the sale of our Power Conversion Division in July, marking the completion of the three announced divisional exits.

Active portfolio management continues to be part of our performance culture and is an integrated part of the responsibilities of divisional management teams. This includes identifying areas for inorganic growth through acquisitions related to new segments, new market access, better economies of scale or filling technology gaps. The divisions also assess, based on systematic portfolio reviews, whether, ultimately, their division is the best owner of their different businesses. During 2023, we also continued to make strategic venture capital investments focused in the areas of digital capabilities and software, completing nine new investments during the year and a number of follow-on investments in existing ventures. The divisions continue to build up their acquisition target pipelines and, during 2023, we completed the acquisitions of the Siemens low-voltage motor business led by the NEMA motors division, strengthened our smart home technology portfolio with the acquisition of EVE systems led by the Smart Buildings Division, and completed four other smaller bolt-on acquisitions primarily related to software and AI technology. As part of our future strategy, we continue to aim to complete five to ten small to mid-size bolt-on acquisitions each year. On the divestment side, the Energy Industries Division completed the divestment of its technical engineering consultancy business in the United Kingdom and the Smart Buildings Division divested their industrial plugs and sockets product line.

Orders and revenues

1 For non-GAAP measures see chapter [Alternative performance measures](#).

→ For additional information and analysis about individual business area revenues and order performance, refer to the relevant sections of the business analysis in our [Financial Report 2023](#).

Orders

In 2023, total orders decreased 1 percent (increased 3 percent comparable¹) compared with 2022. Excluding the impact of exchange rates and portfolio changes, three out of four business areas contributed to the order growth from last year's high level. Order momentum was strongest in the systems- and project-related business, driven predominantly by the medium-voltage segment and process-related industries. This offset softening from last year's high order level in the short-cycle businesses, which was mainly evident in the residential construction segment and across the board in discrete manufacturing outside of the automotive industry, where customers normalized order patterns in the face of shortening delivery lead times. Growth rates were highest in the Process Automation business area even without the Turbocharging division (Accelleron), which was spun off in October 2022. While the absence of the Turbocharging division has impacted the order growth across the business area by 12 percent, the comparable order growth without the Turbocharging division was up by 24 percent. The Electrification business area was flat (increased 3 percent comparable¹) and the Motion business area reported mid-single digit growth. The former was impacted by the sale of the Power Conversion business in July 2023. Robotics & Discrete Automation reported a steep decline in orders of 26 percent (25 percent comparable¹), which were hampered by customers normalizing order patterns in a period of shortening delivery lead times, with added pressure from weakness in the underlying Robotics market in China outside the automotive segment.

In 2023, orders increased 5 percent in the Americas (7 percent comparable¹), with orders growing in the U.S., Canada, and Chile. The increase in the U.S. includes two large orders totaling \$435 million with a multi-year fulfillment period. In Europe, orders decreased 3 percent (1 percent comparable¹). Orders were higher in Norway and the United Kingdom while they declined in Switzerland and Poland. Despite the impact of an order reversal of approximately \$170 million recorded in 2022, orders decreased in Germany as well. In Asia, Middle East and Africa, orders decreased 4 percent (increased 4 percent comparable¹). Order growth in India, Saudi Arabia and other markets more than offset the decline in China.

Revenues

In 2023, revenues increased by 9 percent (14 percent comparable¹). The normalization of supply chains facilitated conversion of order backlog into strong revenue growth during the year. All business areas reported revenue growth, benefiting from increased volumes and positive price development. Growth was highest in the Robotics & Discrete Automation and Motion business areas. The increase in the Robotics & Discrete Automation business area reflects improved order backlog execution as supply chain constraints eased in 2023, as well as the negative impact early in 2022 of a COVID 19 shutdown in China. The Electrification business area achieved a high single-digit growth rate despite the adverse impact from the divestment of the Power Conversion division in July 2023 which impacted growth rates in the business area by 2 percent. The Process Automation business area saw mid-single digit growth in local currencies despite the spin-off of the Turbocharging division in October 2022, which had a negative impact on revenue growth in the business area of approximately 11 percent.

In 2023, revenues increased 16 percent in the Americas (18 percent comparable¹), where revenues in the United States increased 17 percent (21 percent comparable¹). Revenues in the Americas also experienced strong growth in Canada, Brazil, Argentina and Chile. In Europe, revenues increased 12 percent (14 percent comparable¹) and were higher across all business areas. Revenue growth was the highest in Italy, Türkiye, Sweden, Norway and the United Kingdom. In Asia, Middle East and Africa, revenues were flat (increased 8 percent comparable¹) compared to 2022. Revenues grew strongest in India and Saudi Arabia while they decreased in China and South Korea. The spin-off of the Turbocharging division in October 2022 also had a negative impact of 3 percent on the revenue growth in Asia, Middle East and Africa, 2 percent in Europe and 1 percent in the Americas.

GROWTH

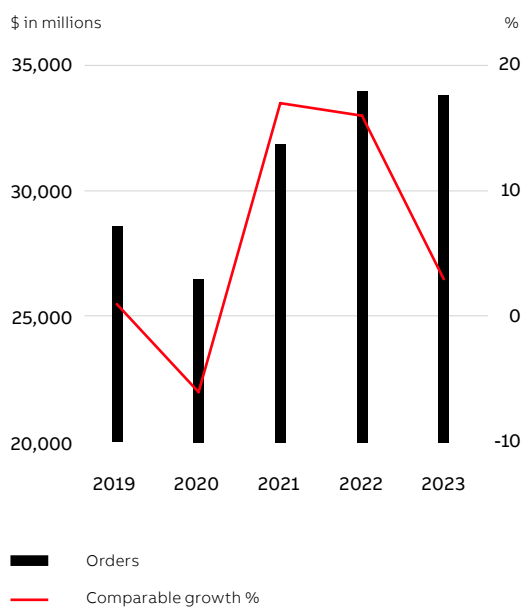
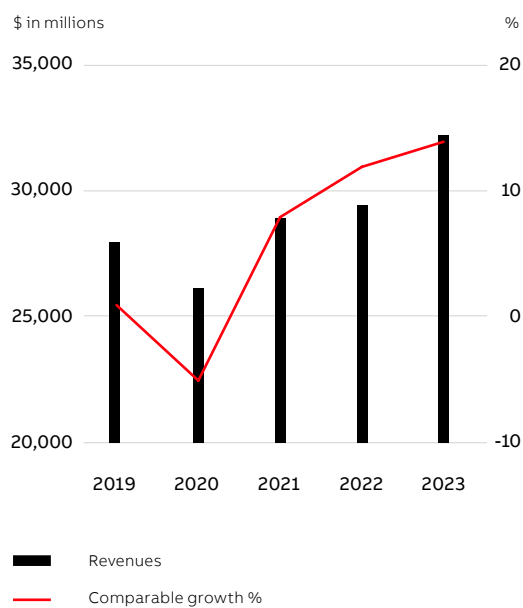
	FY 2023	FY 2023
Change year-on-year	Orders	Revenues
Comparable	3%	14%
FX	-2%	-2%
Portfolio changes	-2%	-3%
Total	-1%	9%

ORDERS BY REGION

(\$ in millions, unless otherwise indicated)	FY 2023	FY 2022	Change	
			US\$	Comparable ¹
Europe	11,458	11,778	-3%	-1%
The Americas	12,437	11,825	5%	7%
Asia, Middle East and Africa	9,923	10,385	-4%	4%
ABB Group	33,818	33,988	-1%	3%

REVENUES BY REGION

(\$ in millions, unless otherwise indicated)	FY 2023	FY 2022	Change	
			US\$	Comparable ¹
Europe	11,568	10,285	12%	14%
The Americas	11,090	9,573	16%	18%
Asia, Middle East and Africa	9,577	9,588	0%	8%
ABB Group	32,235	29,446	9%	14%

ORDERS**REVENUES**

Earnings

¹ Constant currency (not adjusted for portfolio changes).

² For non-GAAP measures see chapter [Alternative performance measures](#).

Gross profit

Gross profit increased by 15 percent (16 percent in constant currency¹) to \$ 11,214 million in 2023, resulting in a gross margin improvement of 180 basis points to 34.8 percent. Gross profit improved in all business areas, with Electrification, Motion and Robotics & Discrete Automation reporting high double-digit growth driven by both volume and price. Process Automation improved by at a high-single digit rate despite the exit of the high-margin Turbocharging division (Accelleron) driven by positive mix and project selectivity.

Income from operations

Income from operations in 2023 amounted to \$4,871 million, representing a strong increase of 46 percent from \$3,337 million in the prior year. The improvement was primarily driven by stronger operational performance. Additional support to the improvement rate was due to 2022 being burdened by non-operational items which included costs of approximately \$315 million relating to the legacy Kusile project as well as restructuring and restructuring related expenses of approximately \$250 million due to the exit of the full train retrofit business in non-core operations, as well as charges related to the exit of the Russia business. Results in 2023 were also supported from gains of \$101 million from selling businesses, including the divestment of the Power Conversion business.

Operational EBITA²

In 2023, Operational EBITA increased by 20 percent (20 percent in constant currency) to \$5,427 million and the Operational EBITA margin² was up by 160 basis points to 16.9 percent. The main drivers for the improvement were positive impacts from successful price management and operational leverage on higher volumes, which more than offset inflation mainly in labor costs but to some extent also in commodities. Selling, general and administrative expenses declined in relation to revenues to 17.2 percent from 17.4 percent in 2022. Operational EBITA in Corporate and Other amounted to -\$430 million, of which -\$167 million related to the E-mobility business which was negatively impacted by inventory related provisions as well as technology investments geared towards a more focused product strategy to secure a continued market leading position.

Net finance expenses and non-operational pension credits

The net finance expenses increased by \$52 million to \$110 million in 2023. In 2023, both interest income and expense reflected increases in market interest rates especially for the U.S. dollar and Euro. Interest expense on our external debt was higher both due to higher debt levels but also higher interest rates on floating rate obligations. Non-operational pension credits declined by \$98 million to \$17 million compared to the same period last year, mainly driven by higher interest costs on the benefit obligations.

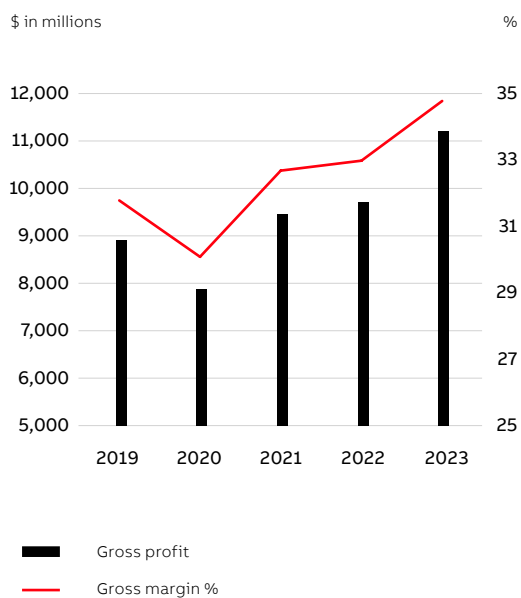
Income tax

Income tax expense was \$930 million with an effective tax rate of 19.5 percent down from 22.3 percent in 2022. The tax rate in 2023 was positively impacted by a favorable resolution of a prior year tax matter relating to the divestment of the Power Grids business of approximately 4 percentage points. Some additional tailwind was due to non-deductible regulatory penalties related to the legacy Kusile project which increased the tax rate in 2022.

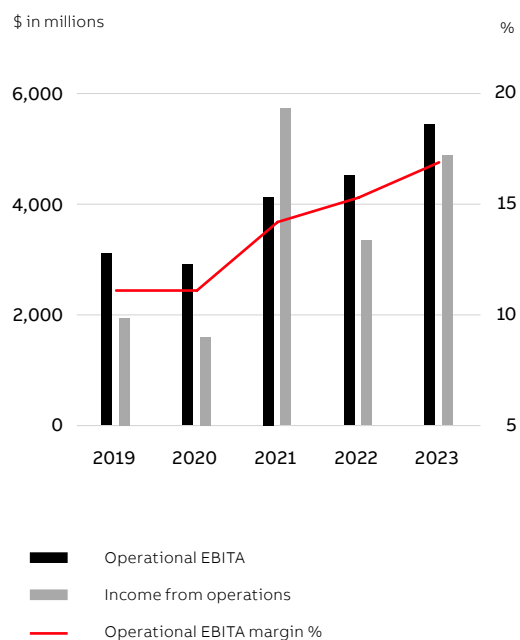
Net income and earnings per share

Net income attributable to ABB was \$3,745 million and increased significantly by 51 percent. Basic earnings per share was \$2.02 and increased by 55 percent. The increase was driven by improved operational performance as well as lower adverse impacts from non-operational items than in 2022 discussed above.

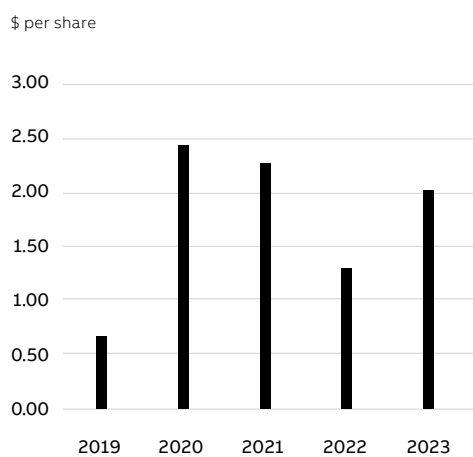
GROSS PROFIT AND GROSS MARGIN



INCOME FROM OPERATIONS AND OPERATIONAL EBITA



BASIC EPS



Balance sheet and cash flow

¹ For non-GAAP measures see chapter [Alternative performance measures](#).

Net working capital

Net working capital amounted to \$3,257 million, increasing slightly year-on-year from \$3,216 million driven mainly by an increase in receivables on the back of higher revenues, which was however largely offset by customer advances. Net working capital as a percentage of revenues¹ decreased from 11.1 percent at the end of 2022 to 10.2 percent at the end of 2023.

Capital expenditures

Purchases of property, plant and equipment and intangible assets amounted to \$770 million in 2023 compared with \$762 million in the same period last year.

Cash flows

Cash flows from operating activities in 2023 provided net cash of \$4,290 million, representing a significant increase of \$3,003 million compared with 2022. The increase was driven by positive cash generation across all four business areas on the back of higher earnings due to strong operational performance as well as a lower build-up of net working capital in 2023 compared to 2022. In addition, in 2022, we had lower cash flows partially due to payments of approximately \$315 million in relation to regulatory penalties for the legacy Kusile project as well as costs relating to business restructurings and other business portfolio transactions.

Free cash flow¹ increased by \$3,015 million to \$3,667 million, and FCF conversion to net income¹ was at 99 percent.

Return on Capital Employed

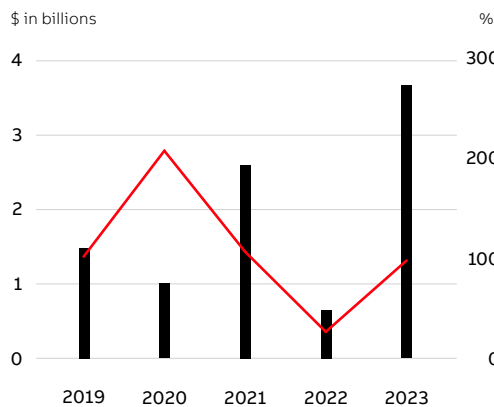
The Group's benchmark for the measurement of returns is Return on Capital Employed (ROCE)¹ which increased by 460 basis points from 16.5 percent to 21.1 percent in 2023. Main driver of the improvement was higher Operational EBITA compared with 2022. Additionally, in 2022, the Group's ROCE was hampered by approximately 130 basis points due to the 19.9 percent ownership interest in Hitachi Energy which was sold in December 2022.

Net debt¹

Net debt amounted to \$1,991 million at the end of 2023, down from \$2,779 million, year-on-year. Net debt to EBITDA ratio¹ decreased to 0.35 from 0.67 last year. During 2023, although we continued to return high amounts of cash to shareholders in the form of dividends and purchases of treasury stock, we significantly grew cash from operating activities and this allowed net debt, as presented in the table below, to decrease by \$788 million. The effect of exchange rate movements increased net debt by approximately \$433 million. In 2023, we received net proceeds of \$553 million for the sales of businesses. We generated cash flows from operating activities during 2023 of \$4,290 million and sold treasury stock in relation to our employee share plans for \$154 million. We also issued shares in our subsidiary ABB E-mobility to third parties in private placements for \$328 million. These items were mostly offset by amounts for purchases of treasury shares of \$1,258 million, as well as \$1,713 million for the payment of the dividend to our shareholders. We made net purchases of property, plant and equipment and intangible assets of \$623 million and made payments of dividends to noncontrolling shareholders totaling \$93 million.

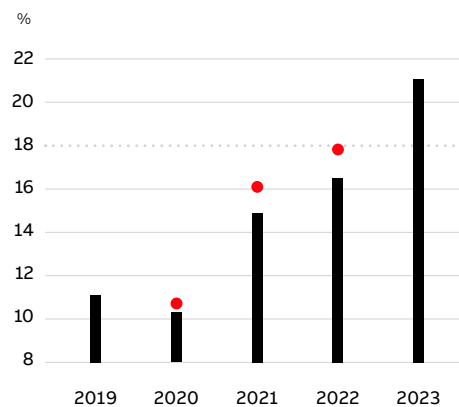
(\$ in millions, unless otherwise indicated)	December 31	
	2023	2022
Short-term debt and current maturities of long-term debt	2,607	2,535
Long-term debt	5,221	5,143
Total debt	7,828	7,678
Cash & equivalents	3,891	4,156
Restricted cash – current	18	18
Marketable securities and short-term investments	1,928	725
Cash and marketable securities	5,837	4,899
Net debt (cash)	1,991	2,779

FREE CASH FLOW AND CONVERSION RATE



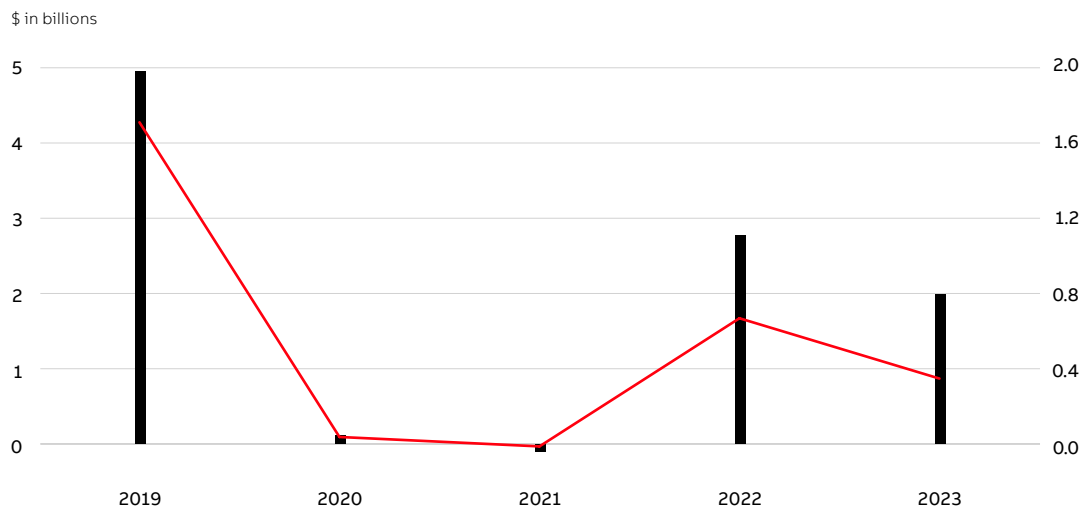
Free cash flow
% of net income

RETURN ON CAPITAL EMPLOYED (ROCE)



Return on Capital employed ROCE
Impact of PG JV ownership interest
Target range >18%

NET DEBT



Net debt
Net debt/EBITDA ratio

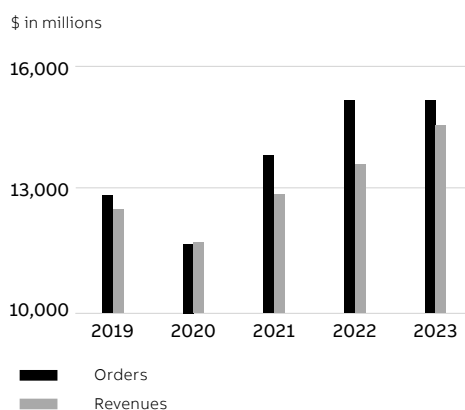
Performance of business areas

ELECTRIFICATION

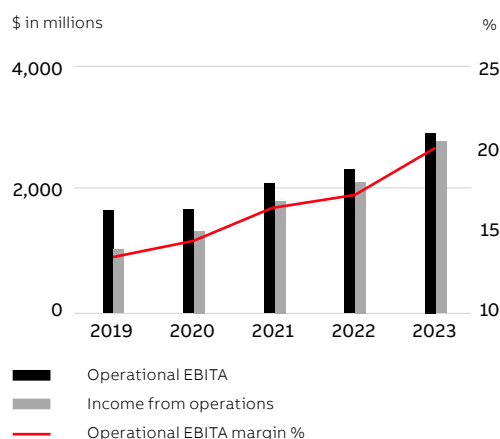
KEY FIGURES

(\$ in millions, unless otherwise indicated)	FY 2023	FY 2022	Change	
			US\$	Comparable
Orders	15,189	15,182	0%	3%
Order backlog	6,808	6,404	6%	14%
Revenues	14,584	13,619	7%	10%
Operational EBITA	2,937	2,343	25%	
as % of operational revenues	20.1%	17.2%	+2.9 pts	
Cash flow from operating activities	3,211	2,115	52%	
No. of employees (FTE equiv.)	50,300	50,600	-1%	

ORDERS AND REVENUES



INCOME FROM OPERATIONS & OPERATIONAL EBITA

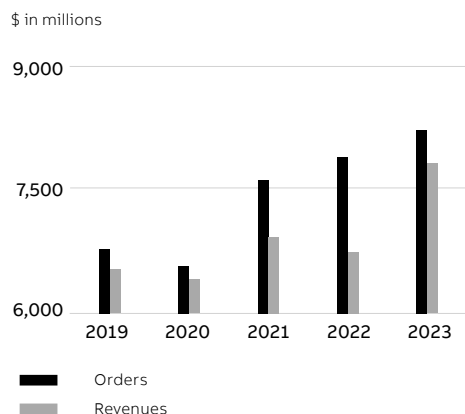


MOTION

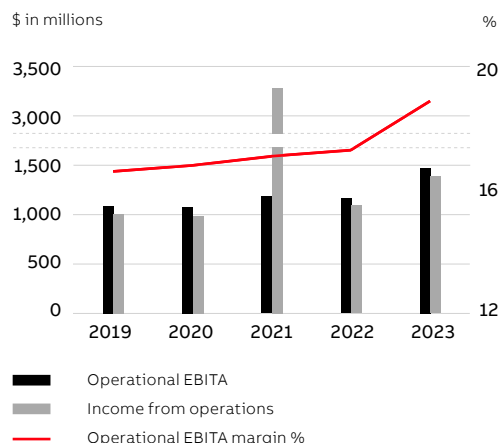
KEY FIGURES

(\$ in millions, unless otherwise indicated)	FY 2023	FY 2022	Change	
			US\$	Comparable
Orders	8,222	7,896	4%	4%
Order backlog	5,343	4,726	13%	8%
Revenues	7,814	6,745	16%	15%
Operational EBITA	1,475	1,163	27%	
as % of operational revenues	18.9%	17.3%	+1.6 pts	
Cash flow from operating activities	1,532	853	80%	
No. of employees (FTE equiv.)	22,300	21,100	6%	

ORDERS AND REVENUES



INCOME FROM OPERATIONS & OPERATIONAL EBITA

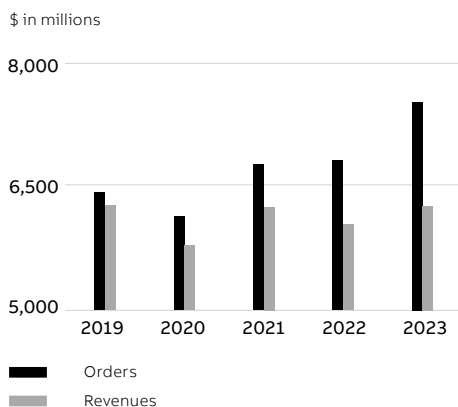


PROCESS AUTOMATION

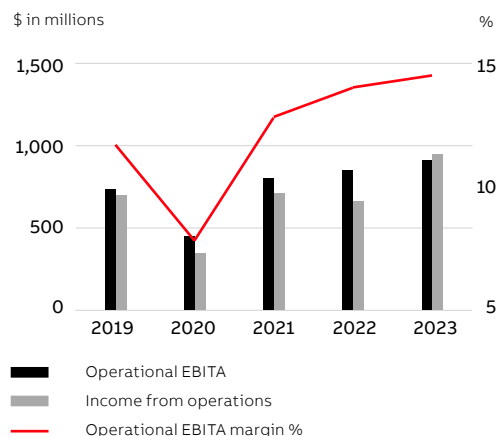
KEY FIGURES

(\$ in millions, unless otherwise indicated)	FY 2023	FY 2022	Change	
			US\$	Comparable
Orders	7,535	6,825	10%	24%
Order backlog	7,519	6,229	21%	19%
Revenues	6,270	6,044	4%	16%
Operational EBITA	909	848	7%	
as % of operational revenues	14.5%	14.0%	+0.5 pts	
Cash flow from operating activities	1,002	675	48%	
No. of employees (FTE equiv.)	21,100	20,100	5%	

ORDERS AND REVENUES



INCOME FROM OPERATIONS & OPERATIONAL EBITA

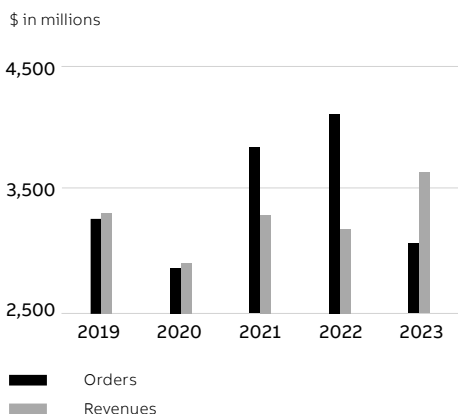


ROBOTICS & DISCRETE AUTOMATION

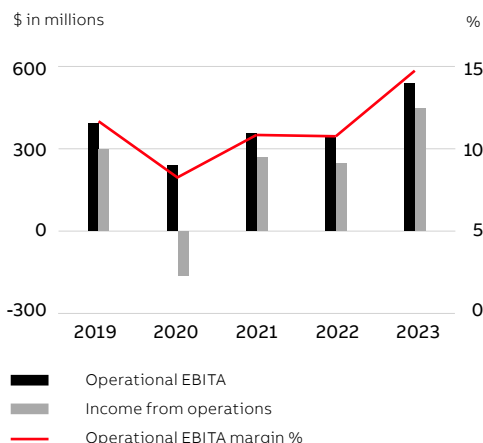
KEY FIGURES

(\$ in millions, unless otherwise indicated)	FY 2023	FY 2022	Change	
			US\$	Comparable
Orders	3,066	4,116	-26%	-25%
Order backlog	2,141	2,679	-20%	-20%
Revenues	3,640	3,181	14%	14%
Operational EBITA	536	340	58%	
as % of operational revenues	14.7%	10.7%	+4.0 pts	
Cash flow from operating activities	436	214	104%	
No. of employees (FTE equiv.)	11,300	10,700	5%	

ORDERS AND REVENUES



INCOME FROM OPERATIONS & OPERATIONAL EBITA



Outlook and new financial targets

Looking to 2024, the geopolitical situation adds uncertainty, however we currently expect another year of good performance. We expect a positive book-to-bill and revenues to be supported by execution of parts of the \$21.6 billion order backlog. In the projects- and systems business we expect continued high customer activity, although we face high comparables from last year when large orders came through at a very high level. In total, order growth year-on-year should show stronger momentum in the latter part of the year when comparables ease.

We expect to improve on comparable revenues as well as on Operational EBITA margin, and cash flow should benefit from continued strong operational performance and our continued focus on net working capital efficiency.

In full-year 2024, we expect a positive book-to-bill, comparable revenue growth to be about 5 percent and the Operational EBITA margin to slightly improve from the 2023 level of 16.9 percent.

CHANGED

5–7% average

Comparable revenue growth
through economic cycle

Excluding FX impacts, acquisitions
and divestments

16–19%

Operational EBITA margin
(annual)

1–2% average

Acquired revenue growth
through the economic cycle

Target is the net of acquisitions
and divestments

>18%

ROCE
(annual)

Excluding transformational deals

**At least high
single-digit %**

EPS growth through economic cycle
(Basic EPS)

UNCHANGED

~100%

FCF conversion to net income
(annual)

**Dividend policy
unchanged**

at rising sustainable dividend
per share over time

We create value through world-class technology

We are continuously evolving our offering in order to remain a relevant and trusted partner to our customers. Technology and innovation are key to our stakeholder value creation and long-term success. We invest heavily in research and development and can count on a highly skilled and motivated workforce. We are committed to staying ahead by developing world-class technologies that help our customers address the world's energy challenges, transform industries to reach new levels of performance and embed sustainability in everything we do so we can leave behind a healthier and more prosperous world for future generations.

Our approach to R&D



You are here
in the [value creation model](#)

At ABB, our R&D is driven by our 19 divisions and focused on developing and commercializing technologies that are of strategic importance to our future growth. As of December 31, 2023, we had approximately 7,500 employees working in R&D centers across more than 30 countries in six continents, of which about 55 percent were focused on digital and software development. Women make up 14.0 percent of our R&D professionals, an increase of 0.4 percentage points since December 2022, in line with our strategy to increase the share of women in our workforce, including in technical areas¹. Every year, we invest a significant proportion of our revenues in R&D. In 2023, we invested \$1,317 million or approximately 4.1 percent of our 2023 consolidated revenues in R&D activities in our continuing operations. This represented an increase of 13% year on year. We also spent \$55 million on order-related development activities. These are customer- and project specific efforts that we undertake to develop or adapt equipment and systems to the unique needs of our customers in connection with specific orders or projects. We make significant investments in future-oriented activities and opportunities and spend it wisely according to individual business' needs.

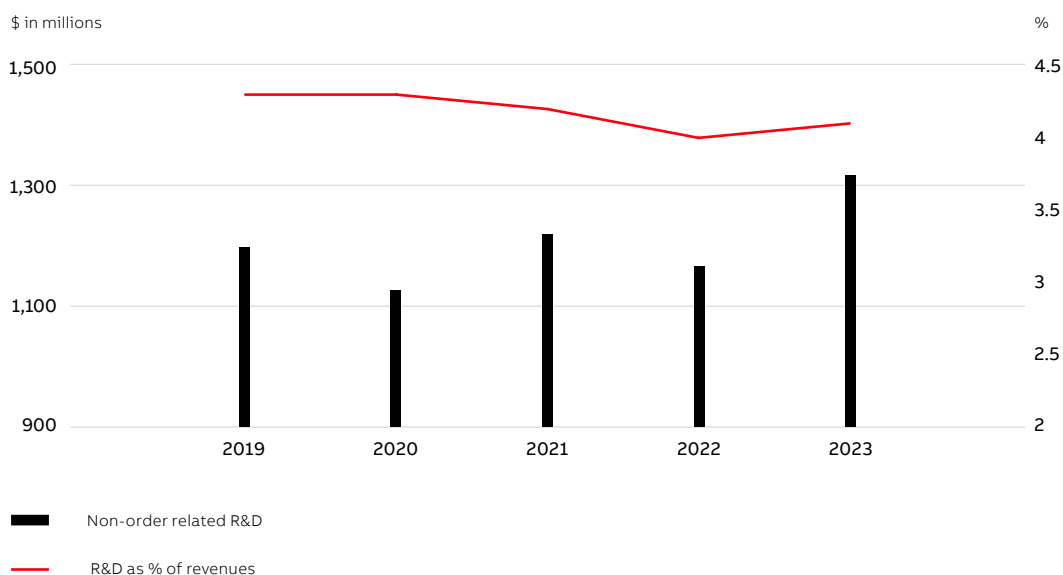
Since 2019, we have invested more than \$6.0 billion in R&D representing an annual average of 4.2 percent of revenues. R&D spend by division ranges from 1 to 13 percent of revenues, as each division is different and has different investment needs to maintain market leadership.

In addition to continuous product development and order-related engineering work, our R&D laboratories develop platforms for technology applications in our businesses. Our main digital platform is ABB Ability™, which is also the brand name of our digital solutions offerings. We seek to maintain a balance between short- and long-term R&D programs and optimize our return on investment (ROI). We keep control of our innovations by holding patents, copyrights and other intellectual property protections.

To complement our business-focused product development, our businesses invest jointly in collaborative research activities covering multiple technology areas including artificial intelligence (AI), software, sensors, control and optimization, mechatronics and robotics, power electronics, communication technologies, materials and manufacturing, electrodynamics and electrical switching technologies. In this way, we advance technologies that are used in our products and common technology platforms and apply them to multiple product lines.

Universities are incubators of future technology and one task of our R&D teams is to transform university research projects into industry-ready technology platforms. We collaborate with multiple universities and research institutions to build research networks and foster new technologies. We believe these collaborations shorten the amount of time required to turn basic ideas into viable products. They also help us to recruit and train new personnel.

¹ See also chapter [We promote social progress](#).

OUR R&D INVESTMENTS OVER THE PAST FIVE YEARS

Our university collaborations include long-term, strategic relationships with leading institutions in various countries around the world.

To enhance our innovation efforts and gain speed, we partner with other leading companies which have complementary competencies, and we invest in and collaborate with start-ups around the world through our venture capital arm, ABB Technology Ventures, and our start-up collaboration hub, SynerLeap. We act as a catalyst to push innovative entrepreneurs to success and bring benefits to ABB customers and society in the wider sense.

In 2023, we made 9 venture investments, and invested \$70 million across our four business areas. The investments were driven by the divisions and focused primarily on digital capabilities that will create synergies with our offering of digitally enabled products and services.

One such investment was in US-based Wind-ESCo, an analytics software provider for wind turbines. This partnership will enable ABB to offer customers a package that combines converters with performance monitoring. In another minority investment, we strengthened our partnership with Pratexo to co-develop edge computing solutions to improve security, autonomy and resilience for decentralized electrical networks.

ABB and Microsoft are collaborating to integrate generative AI into our industrial digital solutions, enhancing safety, intelligence and sustainability. This partnership deployed Copilot capabilities, improved user interaction with ABB Ability™ Genix and maximized contextualized data for efficiency and sustainability. ABB harnessed Microsoft Azure OpenAI Service to strengthen ABB Ability™ Genix.



Patents

Intellectual property rights are crucial to protect the assets of our business.

Over the past ten years, we have added a substantial number of new applications to our existing first patent filings and we will continue to seek patent protection for our technologies, products and solutions. As of December 31, 2023, we have a portfolio of approximately 26,000 pending patent applications and granted patents, of which approximately 5,700 are pending applications. This portfolio includes approximately 3,600 utility models and design rights, of which approximately 170 are pending applications. In 2023, we filed over 650 priority patents, utility model and design applications, each covering a unique invention or unique angle on an invention. Additionally, we filed approximately 1,900 secondary patents, utility model and design applications, each extending the coverage of a previously filed priority application.

Based on our existing intellectual property strategy, we believe that we have adequate control over our core technologies. The “ABB” trademarks and logo are protected in all of the countries in which we operate. We proactively assert our intellectual property rights to safeguard the reputation associated with ABB’s technology and brand. While these intellectual property rights are fundamental to all of our businesses, there is no dependency of the business on any single patent, utility model or design application.

Innovations 2023

Innovation is key to staying ahead and maintaining our position as a global market and technology leader. It serves as an accelerator for sustainable development by providing better solutions to help our customers address the world's energy challenges, transform industries to reach new levels of performance, and embed sustainability in everything we do. We aim to leave behind a healthier and more prosperous world for future generations, in line with our purpose of enabling a more sustainable and resource-efficient future. Key initiatives and innovations in 2023 included:

Electrification



Electrification Start-up Challenge

In 2023, we hosted our fourth annual ABB Electrification Start-up Challenge. The competition recognizes innovative start-ups that are working on electrification solutions to address the world's energy challenges. Four winners were chosen from the 130 applicants from 30 countries and awarded a collaboration project with ABB worth \$30,000 to develop a proof of concept and launch a common solution for ABB's global customer base. The winning solutions included:

- new control logic hardware and software architecture for ABB's Battery Energy Storage System to create a fully AI-driven virtual power plant;
- a cybersecurity assessment and reporting tool for electrical substations providing a low-touch solution to instantly identify and protect against vulnerabilities and threats across operational technology;
- a patented manufacturing process to eliminate short circuits, which compromise the performance of organic photovoltaics in low light; and
- a system-level microgrid metering and monitoring solution to enable energy management while addressing key technical challenges like sensor accuracy, improved energy efficiency and reliability.



High-tech service capabilities and delivery

ABB's innovative Electrification Service remote support solutions have been further enhanced with Service Assist. It is an intuitive virtual assistant that provides quick access to interactive troubleshooting guides and documentation powered by augmented reality (AR). If further assistance is needed, clients can connect with an ABB technical expert through Remote Assistance for Electrical Systems which places AR instructions into the operator's field of view to enhance voice instructions.

Together with our partners and Microsoft, our R&D team is leveraging AR and virtual assistance to offer our customers new service models.

Motion



IE5 SynRM Increased Safety motor

For the first time, customers operating in hazardous area industries can now ensure safety of people & equipment and boost their energy efficiency by deploying motors that offer up to 40 percent lower energy losses compared to commonly used IE3 motors. To ensure an environmentally friendly design, the motors do not contain magnets or rare earth metals. Efficiency is quickly demonstrated in terms of the total cost of ownership and significant reductions in greenhouse (GHG) emissions that last throughout the motor's long service life.



Top Industrial Efficiency option

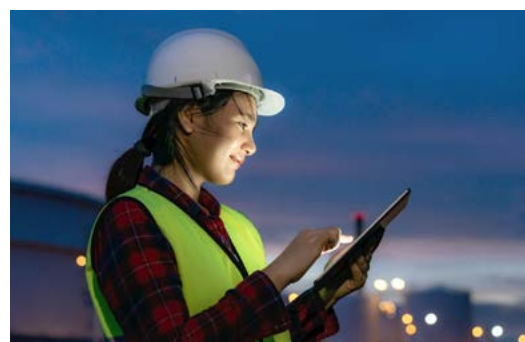
Customers who take advantage of our Top Industrial Efficiency (TIE) option for large motors and generators have a contractual guarantee that they will receive the most efficient solution, with no compromise on reliability, complexity or specification compliance. By assuring the highest level of efficiency, the TIE option delivers significant reductions in GHG emissions, lowers the total cost of ownership, and prolongs the lifetime of the motor or generator through optimal design and maintenance.

Process Automation



ABB Dynafin™

In 2023, ABB introduced ABB Dynafin™, a new electric propulsion concept in the marine industry. The new concept mimics the movements of a whale's tail for ultimate efficiency, enabling new vessel designs. With ABB Dynafin™, we aim to contribute to the shipping industry's ambition of significantly reducing GHG emissions.



Partnership on artificial intelligence

ABB and Microsoft announced a collaboration to bring generative AI capabilities to industrial applications. Together, we are working on the implementation of generative AI technology to help industrial companies unlock insights hidden in operational data. This will provide industry executives, functional specialists and shop-floor engineers with real-time actionable insights for better decision-making and increased productivity.

Such insights have the potential to significantly extend asset lifespan and minimize unplanned downtime. In addition, industrial customers will benefit from advanced monitoring and optimization insights into industrial GHG emissions and energy usage, helping industries achieve their sustainability and energy transition objectives.

Robotics & Discrete Automation



Robot family

In 2023, we expanded the environmental benefits of our Robotics & Discrete Automation portfolio offerings. ABB Robotics is broadening its robot range with four new models and 22 variants, offering more choice, increased coverage and greater performance. The improved energy efficiency is driven by ABB's OmniCore™ controller and lighter robot design with an enhanced range, delivering superior performance and up to 20 percent energy savings. The next generation models include the IRB 6710, IRB 6720, IRB 6730 and IRB 6740, suitable for payloads ranging from 150 to 310 kilograms, with a reach from 2.5 to 3.2 meters, offering customers greater choice as well as significant performance and energy efficiency improvements.



RobotStudio®

ABB's RobotStudio® software is a powerful tool that offers a wealth of possibilities for programming, designing and testing robots in a virtual environment without disturbing real-time production. One of the features of RobotStudio® is automatic collision-free path planning. This feature requires much less programming of intermediate steps – only the final position needs to be given – and the robot will swiftly follow the most efficient path while automatically avoiding all obstacles. Energy consumption is reduced by up to 30 percent.

OUTLOOK

We will continue to focus on technology leadership and further invest in our R&D capabilities, patents and trademarks. We plan to steadily increase the share of our revenues resulting from digital or digitally enabled products. One of our planned actions for 2024 includes the fifth ABB Electrification Start-up Challenge which will run until April 2024. Other business areas will also announce further start-up challenges in the coming months.

We enable a low-carbon society

Enabling a low-carbon society is at the center of our purpose and value proposition and a key pillar of our Sustainability Agenda. In this chapter, we report on our efforts and achievements in helping customers reduce and avoid emissions through our products, solutions and services, as well as the progress we have made in reducing emissions in our own operations and in those of our suppliers.



Electrification

EcoVadis supplier program launched

We required 200 of the most impactful suppliers in our Smart Power division, representing over 80 percent of the division's annual spending, to implement an EcoVadis ESG score-card. EcoVadis is one of the most widely used external providers for monitoring sustainability practices in the supply chain. 90 percent of suppliers successfully completed the process.



Motion

Geothermal power in Indonesia supplied with highly efficient generators

ABB generators will be used for the first geothermal power plant in East Java, Indonesia, to be completed in 2025. The highly efficient generators will enable the plant to minimize losses and optimize utilization of the geothermal energy source. Based on Indonesia's current average energy mix, the site will save around 200,000 tons of GHG emissions annually. On top of that, ABB will use Greenforge® steel for the rotor, which is forged in a process that is 96 percent fossil-fuel free.



Process Automation

Enabling energy-efficient operations for offshore wind turbine installation vessels

Our integrated power, control and propulsion technology will be at the core of the two new wind turbine installation vessels built by Yantai CIMC Raffles Offshore Ltd. for Havfram Wind. These vessels, which will be among the most energy-efficient designs to operate in the offshore wind industry, will support this growing segment, contributing to the increased access to wind as a clean energy source.



Robotics & Discrete Automation

ABB's B&R division installs new heat pump system to replace natural gas at its printed circuit board plant in Austria

With an investment of approximately €2.5 million, B&R no longer requires natural gas and saves more than 1,800 MWh of gas and 450 tons of GHG emissions per year at its printed circuit board plant in Eggelsberg, Austria. This is made possible by new air-source heat pumps with natural refrigerants. In addition, waste heat from the machines is used for heating the 10,000m² production hall and 5,500m² of office space.



ABB's own emissions

All of our divisions and business areas are actively working to reduce scope 1 and 2 emissions. In doing so, they are not only contributing to a more sustainable future, but also mitigating climate risks to our business and realizing cost savings.

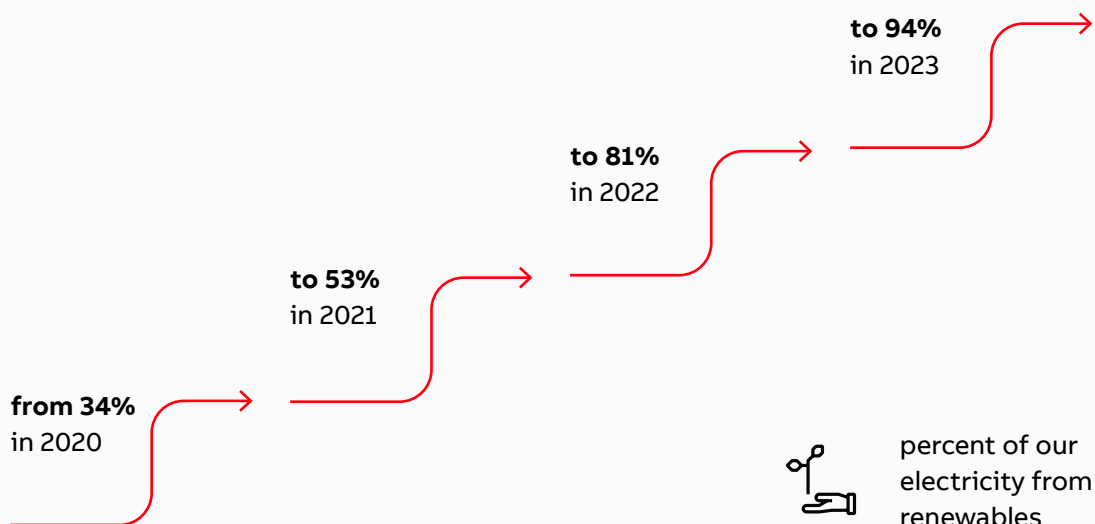
In 2023, we made good progress towards our target of reducing scope 1 and 2 emissions by 80 percent by 2030, compared to the base-line of 2019. We also announced a new target of reaching net-zero in our own operations by 2050. These targets are aligned with the Science-Based Targets initiative (SBTi) Net-Zero Standard and have been submitted to the SBTi for validation.

In 2023, we achieved a reduction of 76 percent in our scope 1 and 2 emissions compared to 2019. We reduced our energy consumption by 21 percent compared to 2019 and will continue to invest in measures to reduce energy consumption further. This includes investments in heat pumps, energy-efficient lighting and upgraded heating, ventilation and air conditioning (HVAC) equipment or building automation systems. At the end of 2023, 64 percent of our energy consumption and 94 percent of our electricity came from renewable sources.

We continued to work towards our 2030 commitment with the Climate Group. Our progress is as follows:

- RE100: 100 percent of our electricity from renewable energy sources
 - Status 2023: 94 percent
- EV100: 100 percent electric vehicle fleet
 - Status 2023: 20 percent
 - As per December 31, 2023, we had over 2,400 chargers installed at approx. 190 locations worldwide. This means 37 percent of our global sites offer EV charging stations.
- EP100: 100 percent increase in energy productivity measured as energy consumption in relation to economic output as compared to 2019
 - Status 2023: 66 percent

SHARE OF RENEWABLE ELECTRICITY



CASE STUDY

ELECTRIFICATION



Mission to Zero™ journey

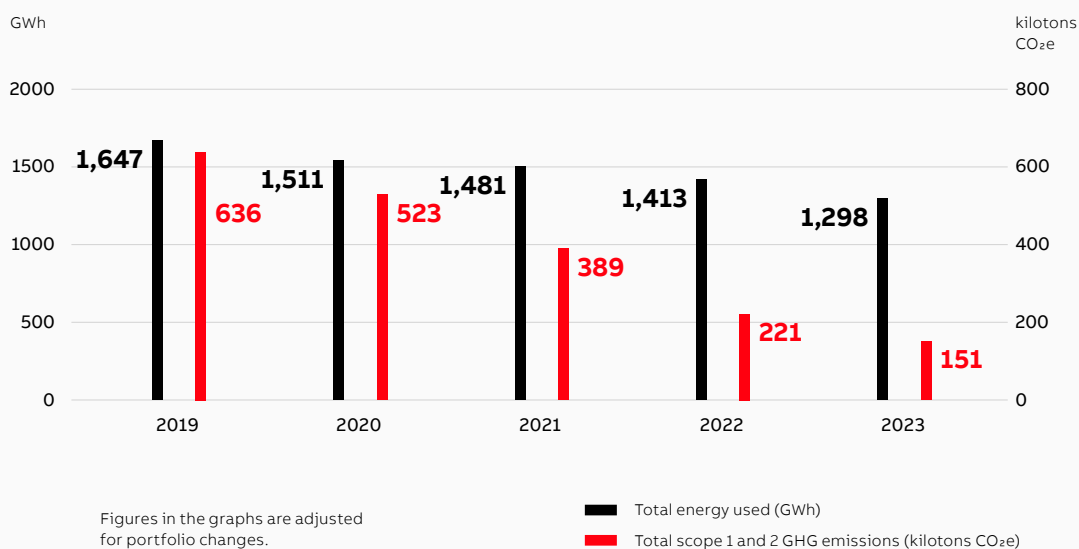
Buildings are responsible for approximately 40 percent of the world's energy consumption and 30 percent of global GHG emissions. We already have the technology needed to eliminate building emissions. Smart energy and asset management can make buildings energy efficient and low carbon. Therefore, we started our Mission to Zero™ program in 2019 – our journey towards significantly reducing GHG emissions of ABB sites, while supporting customers to reduce their GHG emissions, in line with our overall emissions reduction targets. Ours is a scalable program of smart building solutions combined with on-site or locally sourced renewable energy generation and storage. ABB's Mission to Zero™ program continued to make progress, with nine sites added in 2023:

- Frosinone, Italy
- Nashik, India
- Nogales, Mexico
- Santa Palomba, Italy
- Schaffhausen, Switzerland
- Senatobia, Mississippi, USA
- Vaasa, Finland
- Xiamen, China
- Xinhui, China

With these additional sites, our Mission to Zero™ program now encompasses 14 ABB sites. They contribute to our sustainability targets by using innovative and ambitious measures to improve environmental sustainability. Our facility in Xiamen, China, for example, boasts 100,000 m² of solar panels – the largest such array at ABB – while our Mission to Zero™ site in Nashik, India, has been certified as water positive.

At ABB, we are committed to writing the future of safe, smart and sustainable electrification for everything from industry and buildings to infrastructure and transportation. We use intelligent systems for energy distribution, building automation, HVAC control, battery solutions, and motors and switches to help our sites achieve Mission to Zero™ status.

TOTAL ENERGY USED AND TOTAL SCOPE 1 & 2 GHG EMISSIONS



ABB's value chain emissions

Our ambition for a low-carbon society extends to our customers and suppliers, with whom we work closely to reduce emissions throughout our value chain. Together, we are working towards greener emissions profiles to meet the expectations of markets, which are becoming more and more environmentally conscious.

We conduct Life Cycle Assessments (LCAs) to identify opportunities for emissions reductions in the value chain and achieve our targets. Information gained through LCAs is used for our Environmental Product Declarations (EPD). These are standardized documents validated by industry experts to declare quantitative information of a product's environmental impacts and allow to compare footprints of products on the market.

Customer emissions

As an industry leader, we help our customers reduce or avoid GHG emissions through the use of ABB products and solutions. We have three vectors through which we contribute to the energy transition:

- increased efficiency through automation, high efficiency motors and drives, and industrial software;
- substituting fossil-fuel combustion for processes and propulsion by electrification; and
- detection and avoidance of leakages of GHGs like methane and other harmful substances.

At ABB, by far the largest contribution we can make to a low-carbon society is in our customers' operations. The lion's share of our overall value chain GHG emissions is in our scope 3 downstream emissions from the use of sold products.

To help our customers reduce and avoid emissions, we provide end-to-end support, which includes product-related trainings and sharing of experiences. We listen carefully to customer feedback and adapt our strategies and operations to best serve their needs.

As part of our efforts to enable a low-carbon society, we announced new SBTi Net-Zero Standard aligned targets for 2030 and 2050 at our Capital Markets Day on November 30, 2023. These include new targets for our scope 3 emissions, which we aim to cut by 25 percent by 2030, and by 90 percent by 2050, both versus a 2022 baseline. These targets were also submitted to the SBTi for validation. In 2023, our Scope 3 emissions increased versus 2022 with key drivers being the increase in sales and in grid electricity emission factors.

Avoided emissions

Our energy-efficient motors and drives and automation and control systems help to reduce and avoid emissions in industries, buildings, infrastructure and transport. Using the latest guidance published by the World Business Council for Sustainable Development (WBCSD),

→ For details, please refer to our [Sustainability Report 2023](#).

CASE STUDY

PROCESS AUTOMATION



ABB to help Northvolt save energy and GHG emissions at the world's largest battery recycling facility

ABB and Northvolt are strengthening their long-standing collaboration in the field of green batteries. Since 2017, ABB has been delivering electrification and automation equipment to power Northvolt's Ett gigafactory for lithium-ion batteries in Sweden.

This partnership was expanded in 2023, with ABB providing process electrification to power the world's largest battery recycling facility, Revolt Ett, being built by Northvolt. The company plans to reduce the carbon footprint of its batteries to 10 kg CO₂e per kilowatt hour (kWh) by 2030, compared to an industry reference of 98 kg CO₂e per kWh. ABB's switchgear and variable speed drives will match the speed of the processes taking place in the factory, ramping power up and down as required, saving energy, improving performance and lowering maintenance.

we have strengthened the way we track and quantify our customers' avoided emissions. Avoided emissions describe the volume of GHG emissions our customers can avoid by using ABB products as compared to other available solutions, and cover the full product lifecycle. Given our business model centered around electrification of processes, leading to decarbonization and energy efficiency, this is an important way to measure ABB's positive impact.

In 2023, the products we sold to customers helped them avoid 74 megatons of emissions. This fits our ambition to support customers in avoiding 600 megatons of GHG emissions from 2022 to 2030, based on all the products we expect to sell over that period.

Supplier emissions

Our business areas and divisions are exploring ways of reducing GHG emissions with our suppliers around the globe. One key action is to improve the transparency of product-related emissions by providing more granular environmental product declarations to our customers. To support such efforts, we bring our suppliers and customers together to share their ambitions and plans to reduce GHG emissions. At a recent robotics supplier day in Shanghai, China, a customer described their ambition to create

true net-zero products, without off-setting schemes, by 2030, inspiring our suppliers to develop their own carbon-reduction plans.

Using lower-carbon transport, lower-carbon materials and materials that weigh less are key to reducing emissions, as is increasing the share of recycled materials in our products. Initiatives to source materials closer to manufacturing locations also have a significant impact on emissions from transport. Continued tracking of transport emissions on a per shipment basis provides us with the required insights to make informed and timely decisions.

As part of our ambitions to reduce our scope 3 emissions, we work with our suppliers to reduce GHG emissions indirectly linked to ABB through our supply chain. In 2023, we started providing information and training sessions to our suppliers and collecting information via our supply chain GHG emissions reduction program. This has provided us with an understanding of the maturity of our suppliers and where to prioritize our engagement to reach our target. We use the EcoVadis ESG platform to track suppliers that have publicly announced emissions reduction targets, that have set SBTi targets, and that are on track to meet their targets.

CASE STUDY

MOTION



ABB's synchronous condensers stabilize UK's power grid and enable shift towards low-carbon society

Traditionally, fossil-fuel powered turbines have provided the spinning inertia vital to maintain stable power networks in the UK. With the shift from fossil fuels to more renewable energy, the inertia in the grid is decreasing. ABB provides high-inertia synchronous condenser systems to Statkraft, a leading company in hydropower internationally and Europe's largest generator of renewable energy. They supply around one percent of the UK's projected inertia requirement for 2025, restoring the inertia that would be provided by five coal-fired power stations, saving UK consumers around \$122 million over six years.

OUTLOOK

We will continue to focus on reducing GHG emissions directly and indirectly across our value chain. Building on our most recent achievements, we are:

- seeking validation of our scope 1, 2 and 3 emissions targets from the SBTi
- intervening to reduce emissions in our value chain
- tracking progress towards our targets
- calculating and reporting on avoided emissions using the latest guidance from the WBCSD

We preserve resources

We collaborate with our stakeholders to safeguard natural resources in our value chain by embedding circularity principles in our operations and products, increasing recycling and reusability rates, and reducing waste and water use. We are committed to preserving biodiversity and to using land responsibly. Our progress is summarized in this chapter.



Electrification

Protecting against wild-fires and extreme weather

Extreme weather and wild-fires can cause large-scale power outages and are prompting utilities to improve grid resilience by moving equipment underground. ABB's Elastimold® switchgear prevents outages caused by flooding. To meet rising demand, we are investing more than \$40 million in a new manufacturing facility for Elastimold® solutions in the US. Our watertight solutions are extensively tested to ensure ingress protection for underground power lines. To prevent wildfire ignition, we have developed a fire mitigation fuse that contains sparks within the device.



Motion

Embedding circularity by recycling old motors and drives

Building partnerships is key to moving towards circular business models. We partner with recycling companies, like HKS and Mirec in the Netherlands or Stena in Sweden, to take back and recycle old equipment. In 2023, we entered into new partnership with Germany's Remondis, which recycles old, inefficient motors in a sustainable way, and sends the retrieved metals to selected companies that ABB can use as suppliers to manufacture new, energy-efficient motors. The process saves on raw materials, energy and avoids GHG emissions compared to sourcing new metals, which is evidenced through sustainability certificates. With this offering, ABB is able to provide solutions across the full lifecycle of motors, while moving toward a circular business model.



Process Automation

Helping New Zealand increase the resilience of its water infrastructure

Wellington Water manages the infrastructure for six New Zealand councils, supplying water to about 436,000 people. In close collaboration with ABB, the resilience of its water infrastructure was brought to the next level with smart flow meters that track water flow in real time, and are designed to ensure a long, maintenance-free life under arduous conditions. With pumping accounting for the lion's share of a utility's energy consumption, we also implemented variable frequency drives to deliver crucial efficiency gains. For this collaboration, ABB won the 2023 Global Water Awards in the category "Smart Water Project of the Year".



Robotics & Discrete Automation

ABB tests the world's most remote robot in an Amazon reforestation project

ABB Robotics collaborated with non-profit organization Junglekeepers in a pilot project to demonstrate the potential of robotics and cloud technology in reversing deforestation. Using solar power, our YuMi® robot automated seed planting, making reforestation in the Amazon faster, more efficient and scalable. The project was made possible by RobotStudio® cloud technology; ABB experts simulated, refined and deployed robotic programming in real-time from 12,000 km away in Sweden.



Circularity

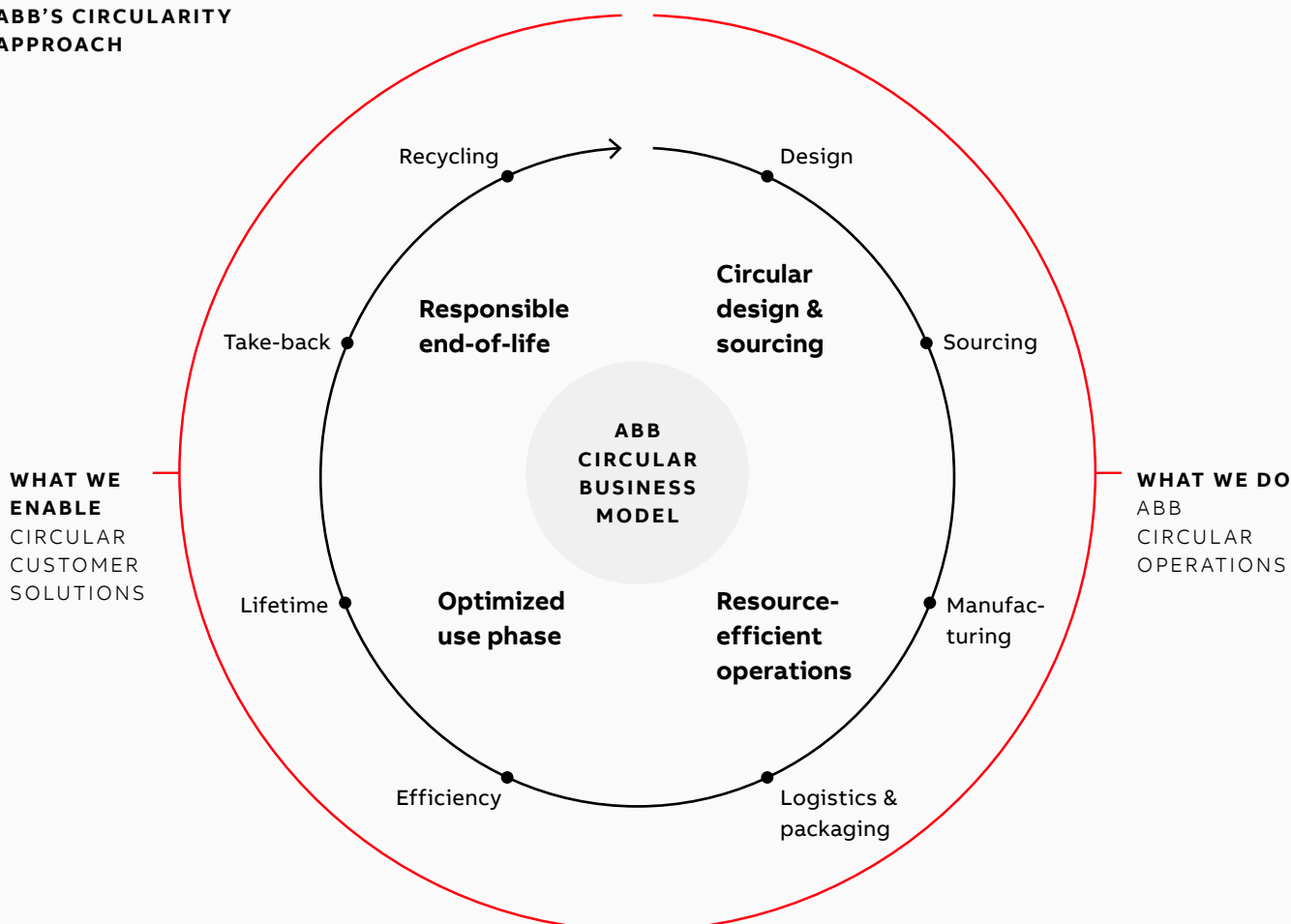
At ABB, we are stepping up efforts to support the transition to a circular economy. Our goal is to minimize resource consumption and waste generation while promoting the efficient use of materials and reducing our environmental footprint. Embedding circularity principles in our offerings is a key element of our Sustainability Agenda.

By 2030, at least 80 percent of ABB's products and solutions will be covered by our Circularity Approach and evaluated against a clear set of key performance indicators (KPIs). These correspond to each stage of the product lifecycle, from design and sourcing, to product manufacturing, use and end-of-life. Enhancing our products in this way also extends the life of customer products that integrate our own. Our take-back services lead to modernization, refurbishment, re-use or recycling of products and components.

We facilitate this process by providing instructions for responsible end-of-life treatment. In 2023, we enhanced our Circularity Approach and our four business areas began assessing their products and solutions and setting baseline circularity scores for their portfolios. By the end of 2023, 31 percent of our product portfolio had been assessed against the guidelines of our Circularity Approach.

This transition is taking place not only in our customer solutions, but also in our operations. ABB is taking a company-wide approach to preserve the earth's resources for future generations. Resource efficiency is at the center of the development of all our offerings and we aim to use sustainable materials wherever possible. During the production process, we try to eliminate or recycle waste generated by our processes and packaging.

ABB'S CIRCULARITY APPROACH





Safe use of materials

To reduce and, where possible, eliminate the use of hazardous materials from our operations, we rely on the ABB List of Prohibited and Restricted Substances. This list applies to every aspect of our operations, including procurement, product development, production processes, products, packaging materials, service activities and construction sites. This is a heavily regulated area of activity and we update the list twice a year in keeping with local and international regulations and legislation. ABB's four business areas have full ownership of their respective product material compliance obligations, which include the European Union's requirements for chemicals and products listed in the Substances of Concern in Products (SCIP) database.

We have developed a companion guide to the list to help ABB's suppliers meet their obligations, which include partnering with us to identify and prevent restricted substances from entering ABB's supply chain. In addition, ABB's Global Terms and Conditions for suppliers and our Supplier Code of Conduct address prohibited and restricted substances in the context of regulatory compliance.

In 2023, ABB's business areas continued to collect material compliance information on more than 50,000 articles and end products acquired from their supplier base. This information is securely stored in dedicated databases and is used for customer communications and product compliance statements.

CASE STUDY

ELECTRIFICATION



ABB's first platinum "zero waste to landfill" rating

Our Frosinone site in Italy has been recognized as a zero waste to landfill (ZWTL) site, according to the UL2799A Environmental Claim Validation Procedure for Zero Waste Classifications. Frosinone has achieved Zero Waste to Landfill Operations Platinum status, 100% diversion, with 9% thermal processing with energy recovery. Nine percent of the waste is thermally processed for energy recovery and the site has closed-loop recycling of thermoset waste. Approximately 80 tons of plastic that would have been sent for waste-to-energy are returned to ABB's supply chain for the manufacturing of products thanks to the closed-loop recycling of thermoset waste. Educating staff to develop an understanding and commitment towards more sustainable waste management was made a priority. Frosinone's goal was to go beyond individual actions and achieve a cultural shift across the site. Collaboration is key to the effective implementation of circularity programs. ZWTL engages staff working across the life cycle of products – from production staff and product engineers in Frosinone to product design teams at different ABB locations.

As part of its Mission to Zero™ journey, ABB's Frosinone site has improved the energy efficiency of each circuit breaker by 25 percent and has reduced its scope 1 and 2 GHG emissions per product by 33 percent compared to a 2019 baseline. It sources 100 percent of its electricity from certified renewable sources.

Waste, water and biodiversity

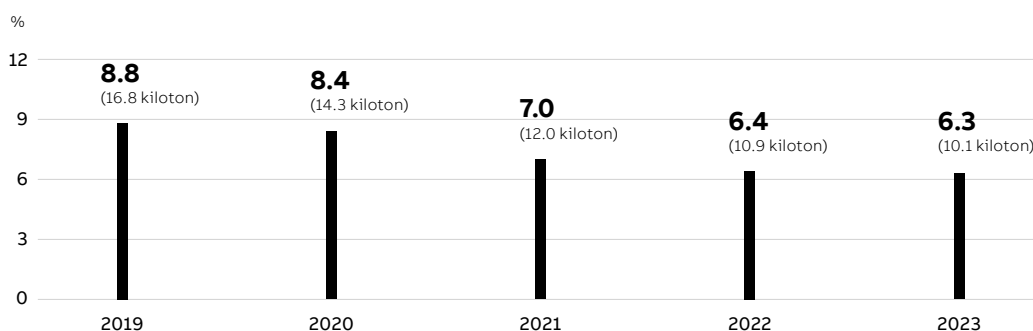
Managing the use of natural resources in a responsible way is a priority for ABB. Especially critical is the safeguarding of water as an essential resource as well as ensuring good waste management and reduction, given the planetary boundaries that the ecosystem is facing. We have waste reduction programs at our sites throughout the world. In 2023, we reduced the amount of waste that ABB generates by 6.2 percent to 167 kilotons compared to the previous year. In 2023, 86 percent of our waste was recycled and 6.3 percent sent to landfill, down from 6.4 percent in the previous year.

We have identified water and wastewater as a growth segment for ABB and offer wastewater solutions to reduce water extraction and freshwater pollution. The ABB Water Care program improves our clients' processes related to water and wastewater. It ensures optimal and reliable plant performance, extends the operating life of automation and electrical assets, and protects equipment and intellectual investments. The use of energy efficient motors and drives, as well as monitoring solutions, can save money and reduce the risk of downtime, which is fundamental in the water sector.

In relation to our own operations, we use the World Resources Institute's Aqueduct global water risk tool to assess our exposure to water risks. In 2023, 34 percent of ABB's locations faced an enhanced level of water stress. We are constantly improving water usage and efficiency and were able to reduce water withdrawal by 6.7 percent from 2022 to 2023. Our ABB water management standard ensures prevention and mitigation of potential negative impacts through monitoring and action plans. Through water recycling initiatives and improved water management, we are targeting additional 30% reduction in water consumption by 2030.

Use of natural resources can also have a direct effect on biodiversity and natural habitats. Given the rising importance of biodiversity and its interconnected relevance, also in conjunction with the discussion around climate change, we have identified and included biodiversity and land use as impacts in our 2023 double materiality assessment and will be establishing a strategic approach towards managing these topics, guided by the recently published Recommendations of the Taskforce on Nature-related Financial Disclosures.

NON-HAZARDOUS WASTE TO LANDFILL



OUTLOOK

In our ongoing efforts to preserve resources, we continue to assess our product portfolio against ABB's Circularity Approach, increase water efficiency and biodiversity. Moving forward, we will:

- increase the percentage of our product portfolio covered by our Circularity Approach
- identify further opportunities to align our products with circularity principles
- continue to focus on solutions that reduce waste generation at our sites
- reduce water consumption in water-stressed areas where we and our customers operate
- use fauna and flora assessments to identify biodiversity interventions at and around our sites.

We promote social progress

We promote social progress for the benefit of our employees, customers, stakeholder groups and communities worldwide. We achieve this through our health and safety programs, by championing diversity and inclusion in the workplace and community engagements. We are committed to employee wellbeing and development and exploring new initiatives to create positive impact in our communities. Our support for social progress is underpinned by respect for people and human rights.



Electrification

ABB's Iberville facility in Quebec is recognized for health & safety innovation

For three years running, the ABB Iberville team has been recognized by Multi-Prévention ASP, a Quebec-based occupational health and safety association, for making health, safety and environment (HSE) an integral part of their work culture. The team's signature initiative "Dragon's Den" involves production employees who identify and present safety proposals to a jury of HSE professionals. In 2023, MultiPrévention ASP asked the Iberville team to present their safety strategies to other companies in the region to help advance their HSE journeys and cultures.



Motion

ABB engages with a community in Spain for World Environment Day

Nearly 200 adults and children – including those of our employees – came together to better understand climate change and how we can all contribute to a more sustainable future. Through recreational activities and games, participants explored the link between the greenhouse effect and climate change and were shown how through small actions, such as saving water and energy, we can make a big difference.



Process Automation

ABB's extended carbon capture collaboration with Imperial College London supports the future workforce and the energy transition

We signed a 10-year contract with Imperial College London to continue our carbon capture technology partnership. A dedicated carbon capture plant at Imperial College is training engineers and scientists of the future, with 4,500 students already having gained hands-on experience of ABB's technology solutions in the plant since 2012. The plant is equipped with ABB's distributed control system and over 250 instruments, measuring temperature, pressure, GHG emissions and flow.



Robotics & Discrete Automation

ABB expands its STEM automation offering

Our new IRB 1090 robot, authenticated by STEM.org, is designed to upskill students for the future of work. This industrial education robot, powered by ABB's OmniCore controller, includes the latest advancements in robotics such as feeding regenerative braking energy back into the factory grid. A total of 100 free RobotStudio® premium licenses are included in the purchase of an IRB 1090 robot.



Health and safety

At ABB, our occupational health and safety centers ensure the wellbeing of our diverse workforce around the globe. Our talented and skilled employees are our most valuable asset and providing a safe and healthy work environment is a fundamental responsibility of ABB.

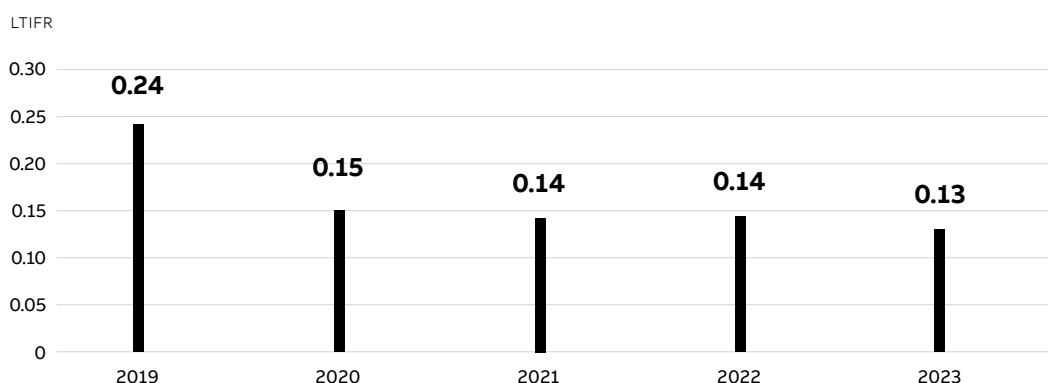
In June 2023, we updated our Health, Safety, Environment (HSE) and Security policy to reinforce ABB's commitment to putting health, safety, the environment and security at the center of our activities. This commitment encompasses material sourcing, product design, operations and services. To realize global leadership in our operations, we have launched our Guiding Principles for Resilient Operations. These support our HSE & Security Management System, which is based on internationally recognized standards, principles and commitments. All divisions are required to implement the ABB Way Management System for Corporate HSE & Security. The following three guiding principles set a framework underpinned by a set of behaviors we strive to follow at every level of our organization to achieve our objectives:

- lead with care: leaders create an environment where colleagues feel cared about and safe to speak up;
- engage and involve: everyone collaborates and draws on each other's knowledge and strengths to ensure colleagues feel included and encouraged to contribute to our programs and HSE & Security performance; and
- learn and improve: everyone is encouraged to learn about and support continuous improvement both as individuals and as a team and organization.

Each division is encouraged to develop safety programs that are appropriate for their operations. We coordinate preparations and responses to emergency situations, conduct internal safety inspections, and obtain third-party verifications for our health, safety and wellbeing reporting. We have well-defined procedures to investigate work-related injuries and incidents and act promptly to mitigate negative impacts. We continuously strive to further reduce health and safety hazards.

Thanks to our health and safety measures, we continue to see a downward trend in our lost-time injury frequency rate (LTIFR) to industry-leading levels. In 2023, we recorded 376 workplace-related injuries and one workplace-related fatality. An investigation into the fatal incident is currently underway, and we will draw on the lessons learned to prevent any future recurrence. Considerations about health, safety, the environment and security are at the heart of all our activities, including materials sourcing, product design, operations and services.

SAFETY AT ABB LOST-TIME INJURY FREQUENCY RATE (LTIFR)



Diversity and inclusion

→ At ABB, senior managers are defined as employees in Hay grades 1–7.

We take pride in the diversity of our workforce and seek to create an inclusive culture in which people feel empowered to share their ideas and perspectives. In this way, we encourage creative thinking which drives innovation – the key to ABB’s growth and success. We believe in diversity across all dimensions and that our differences make us stronger. That is why progress in diversity and inclusion (D&I) is embedded in our long-term objectives.

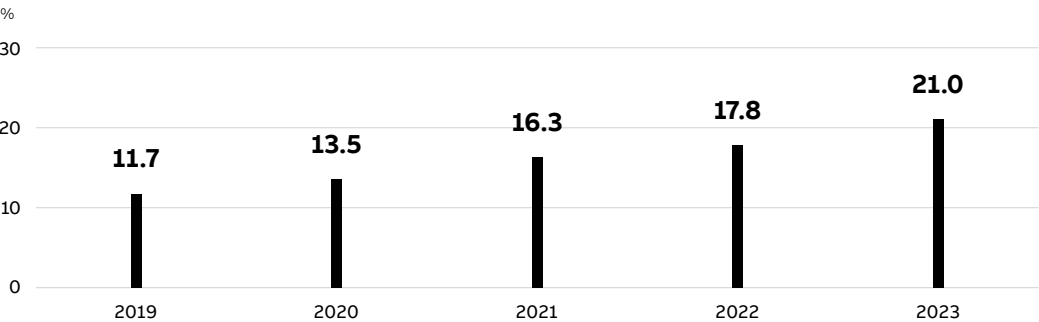
Our 2030 sustainability target is to double the proportion of women in senior management roles to 25 percent compared to 2019. This is also a target in our wider Global D&I Strategy 2030. In 2023, ABB increased the proportion of female senior managers to 21.0 percent, up from 17.8 percent in 2022.

We have also developed internal targets for D&I supported by a broad portfolio of actions:

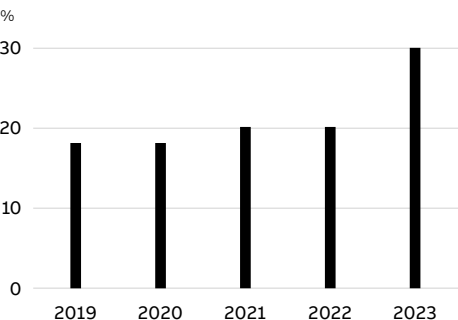
- achieve equal gender balance among our early talent hires;
- provide broad access for our people to employee resource groups (ERGs); and
- improve our inclusion scores in our annual employee Engagement Survey.

Our aim is to create a welcoming environment in which people have a sense of belonging and can realize their full potential, both as individuals and collectively. With a workforce spanning five generations, we foster collaboration through employee resource networks, various mentorship models, collaborative workshops and age-diverse teams. We facilitate leadership trainings and we have put in place targeted development activities to ensure a stronger gender balance at all levels including an increased leadership pipeline. We have reviewed our processes and policies and piloted LGBTQ+ reverse mentoring programs to improve understanding and inclusion in the workplace. To support the mental and physical wellbeing of our people, we are improving accessibility in our premises and providing professional support. We also offer individual learning pathways, unconscious bias trainings, and research-backed resources to systematically drive awareness, engagement and progress. We will continue to explore opportunities to facilitate diversity and inclusion, striving for an environment where every employee knows their uniqueness is an asset that adds value to our company. This creates shared value in the workplace, marketplace and community.

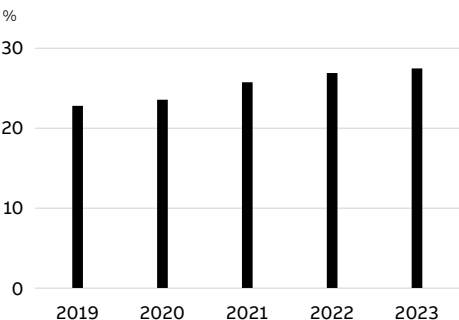
WOMEN IN SENIOR MANAGEMENT



WOMEN ON THE BOARD



WOMEN IN TOTAL WORKFORCE



Employee development and wellbeing

Investing in the professional and personal development of our people is a key element of our long-term success. It supports the satisfaction and wellbeing of our employees, nurtures motivation and innovation, and facilitates talent attraction and retention.

We have multiple tools in place that enable our employees to make their voices heard. Our annual employee Engagement Survey helps managers better understand the experiences of our employees at ABB and how they feel about their jobs and the company. The survey also gives employees a channel to highlight opportunities for improvements in the workplace and ask for support to achieve the goals of their team or manage challenges that they may face. As the foundation of our organization, the perspectives of our employees influence our business strategy and operations.

In 2023, our employee engagement score was 77 out of 100, up from 71 in 2019. In total, 84 percent of employees, nearly 89,000 people, responded to the survey, which represents a significant increase since 2019, when response rate was at 65 percent. The results are benchmarked by our external survey provider against a broader set of companies that ask similar

survey questions. This allows us to monitor our ambition of achieving a top-tier score. Our 2023 results highlight strengths in our safety climate, integrity and role clarity. The survey also showed that, while we have made good progress on removing barriers to execution, there is still room for improvement.

The actions we take to promote employee development and wellbeing are principally conducted on a local basis. For example, in the United States, our “HSE Week” in October 2023 offered live sessions on mental health and wellbeing, among other topics. We also provide competitive benefits such as paid parental leave for employees worldwide and a global Employee Assistance Program (EAP). We strive to give our employees the skills they need to adapt to change and stay competitive in a constantly evolving business environment. This includes our talent management approach: “Learn, Connect, Grow”.

We encourage corporate volunteering for the benefit of our employees and impacted communities. In 2023, ABB employees dedicated 4,800 days for volunteer work. A strong focus was again on supporting educational initiatives, particularly in technology-related disciplines.

77/100

Employee engagement score in **2023**

71/100

Baseline 2019

84%

Response rate **2023**

CASE STUDY ELECTRIFICATION



ABB Canada partners with trade school to train first all-women cohort

Since 2015, ABB has partnered with 60 trade schools offering electrical and construction training programs across Canada. As well as educational resources for teachers, the ABB School Program provides schools with training content and product samples, and ABB representatives visit schools to provide installation training for our products. As part of this program, ABB was proud to sponsor the first all-female cohort pursuing the Diploma of Vocational Studies in Electricity in Canada at the École professionnelle de métiers (EPM) in Saint-Jean-sur-Richelieu, Quebec. The 22 women graduated in April 2023 with the skills needed to repair, modify and maintain equipment and machinery used in residential, commercial and industrial buildings.

Human rights and labor standards

ABB is committed to respect the dignity and human rights of all people. Our goal is for human rights to be well-understood and well-integrated into our operations and our value chain. We adhere to international frameworks to identify human rights risks and potential impacts and to implement appropriate measures to mitigate adverse impacts. These frameworks and tools include: the United Nations' Guiding Principles on Business and Human Rights (UNGPs), OECD Guidelines for Multinational Enterprises on Responsible Business Conduct, ILO Core Conventions on Labour Standards including ILO Convention No. 138 on minimum age for admission to employment and ILO Convention No. 182 on the worst forms of child labor, and ILO-IOE Child Labour Guidance Tool for Business. With respect to child labor, these frameworks and standards include those which the Swiss Ordinance on Due Diligence and Transparency in relation to Minerals and Metals from Conflict-Affected Areas and Child Labour (DDTrO) specifies as internationally recognized equivalent regulations. As a result of our compliance with these frameworks and standards, we are exempted from the specific due diligence and reporting obligations of the DDTrO in regard to child labor.

Our Code of Conduct, Supplier Code of Conduct and our Human Rights Policy establish our commitments to human rights and expectations for each individual working at ABB or engaging with ABB's business. For more information about the update of the ABB Code of Conduct and Supplier Code of Conduct in 2023 see the following chapter.

In a fast-changing global value chain, we recognize that continuous improvements and adaptation are essential. In 2023, following consultations with internal and external stakeholders, we updated our Human Rights Policy to better reflect our stakeholders' expectations and to ensure compliance with international frameworks and recent legislation. This update included a review of our human rights due diligence (HRDD) framework and salient human rights risks by each of our business areas, allowing us to identify opportunities for improvement in our human rights management processes. Consistent with the requirements of the UNGPs, the six elements of our HRDD framework are:

- policy commitment;
- risk and impact assessment;
- risk-based measures;
- embedding in our business processes;
- tracking and communication; and
- providing access to grievance and remedy.

The scope of our assessment included all internationally recognized human rights as per the Universal Declaration of Human Rights.

We mapped our full value chain to identify human rights risks and prioritized risks based on severity and likelihood. Human rights risks identified by internal and external stakeholders as part of our materiality assessment were incorporated into the analysis. As a result of this work, we updated our salient human rights issues as follows:

- child labor,
- corruption and bribery ,
- environmental issues impacting human rights,
- fair employment,
- health and safety,
- human trafficking and modern slavery,
- impact on communities and land rights, and
- information security and data privacy.

Our roadmap for improvement focuses on communication of our updated Human Rights Policy and building a broader understanding of our salient risks and mitigation actions, strengthening risk identification and management processes, and monitoring performance. In case of any violation of human rights or codes of conduct, we take steps to ensure adequate remediation and consequences in line with applicable contracts and laws.

We maintain an operating model that brings human rights accountability and expertise to all ABB divisions to ensure adequate monitoring and management of our most salient issues at the highest operating level.

In 2023, 4,412 employees completed general human rights e-learning courses, and we provided targeted training for management and certain job roles, for a total of 1,006 participants. In addition, we trained 100 percent of security management specifically exposed to human rights

risks, and 43 new Human Rights Champions to further embed human rights expertise in our businesses. Total hours of instructor-led human rights training amounted to 1,840 hours. Our human rights self-assessment process reviews own operational sites periodically and 78 sites in 39 countries undertook human rights self-assessments in 2023.

Human rights concerns, such as harassment, discrimination, forced labor and child labor, that are reported via our Business Ethics Help-line are included in the statistics about cases reported in the Section Integrity. In 2023, we did not receive any reports of child labor or

threats to freedom of association with respect to our employees. Two cases of attempted forced labor were reported by ABB service employees related to their treatment by customers. These cases were resolved satisfactorily following intervention by appropriate management and the customers' commitment to respect ABB's policies regarding working conditions. For information about findings of non-conformance within our supply chain, please refer to the [Responsible Sourcing](#) section of this report.

OUTLOOK

Maintaining a respectful, inclusive and diverse working environment while promoting the wellbeing of our people, maximizing safety, and investing in professional and personal development will remain key to the success of ABB's value proposition. To further progress on our targets related to promoting social progress, we will:

- further embed the Guiding Principles for Resilient Operations into our HSE & Security processes;
- use our updated Human Rights Policy and Due Diligence framework to deepen engagement with our stakeholders and better embed human rights considerations in daily business decisions, with the aim to further promote respect for human rights and effectively prevent and mitigate potential impacts;
- continue to increase the number of women in senior management including in P&L roles;
- revise the proposed Community Engagement Framework to maximize synergies and enable more impactful outcomes to communities. Our social investments will be focused on ensuring equitable access to education, providing emergency and disaster relief, supporting the environment and conservation, and leveraging technology and innovation to empower communities and enable the energy transition.

We embed a culture of integrity and transparency along the extended value chain

At ABB, integrity and transparency define how we do business. They are the foundation of our Sustainability Agenda and underpin our value creation. We recognize the importance of doing business ethically and maintaining ethical business relationships. In 2023, we updated our Code of Conduct and Supplier Code of Conduct and implemented processes and programs to strengthen our integrity culture and enhance risk monitoring. In this chapter, we highlight key actions taken in 2023 to strengthen a culture of integrity and transparency along our extended value chain.



You are here
in the [value creation model](#)

Code of Conduct

We launched an updated Code of Conduct to reflect the fast-changing world in which we are operating as well as our Sustainability Agenda.

Integrity Circles and workplace behavior learnings

We introduced manager-led circle discussions around integrity topics and workplace behavior learnings to create a company culture that is in line with our ABB values.

Integrity Committees

Our business areas and divisions have established Integrity Committees in which senior and middle management demonstrate their commitment to integrity.

Data analytics and integrity risk monitoring

ABB uses various tools and platforms to track progress and drive performance in regard to our integrity approach. Our continuous monitoring platform allows us to analyze potential integrity risks based on continued risk assessment and lessons learned from past cases.

Our integrity analytics report provides insights into progress related to our integrity programs such as engagement with our integrity learnings. Through our Real-Time Case Investigation Dashboards, insights into integrity-related case metrics can be generated by a broad audience and the Legal & Integrity community can leverage greater access to analyze root causes and lessons learned.

Integrity

We continuously work on improving and enhancing our Global Integrity Program through controls, processes and a culture that deters bribery and corruption. Our five core Integrity & Regulatory Affairs procedures include oversight and

responsibilities, as well as procedures related to third-party management, data privacy, conflicts of interest and global trade. We have defined five integrity principles that guide everything we do at ABB:

1

We behave and do business in an ethical way

2

We work in a safe and sustainable way

3

We build trust with all stakeholders

4

We protect ABB's assets and reputation

5

We speak up and do not retaliate

In 2023, we focused on enhancing and innovating our policies, processes and trainings.

Our [ABB Code of Conduct](#) represents our individual and collective commitment to uphold the highest standards of business ethics throughout our global value chain. It guides our employees, business partners and suppliers to do business with integrity. In 2023, we issued an updated Code of Conduct under the tagline "We speak the same Code". The update addressed the key operational integrity risks of Anti-Bribery & Anti-Corruption (ABAC) as well as workplace behavior issues reported in 2022. As before, our Code of Conduct is available in the ABB Code of Conduct mobile app to provide employees and external stakeholders with quick and easy access to the Code and related resources. The app design allows users to navigate easily through the Code's focus areas, take short integrity training courses, seek help if they encounter an integrity issue, and report integrity concerns to ABB's business ethics helpline.

Our [ABB Supplier Code of Conduct](#) was also updated in 2023 and explains in detail what we expect of our suppliers. The updated version addresses latest changes in regulatory requirements such as the German Supply Chain Act (Lieferkettengesetz, LkSG) and the Swiss Ordinance on Due Diligence and Transparency in relation to Minerals and Metals from Conflict-Affected Areas and Child Labour (DDTrO). It also aligns our Supplier Code with international human rights and environmental guidance and

conventions, takes account of stakeholder expectations and emphasizes the role of suppliers in preventing and mitigating sustainability risks, especially when it comes to upholding human rights and reducing GHG emissions.

Our Supplier Code is part of our procurement terms and conditions as well as our supplier qualification, development and evaluation requirements. The updated implementation guide for the Supplier Code provides suppliers with hands-on advice on how to fulfill ABB's requirements and facilitates the effective implementation of the Supplier Code of Conduct.

Our Global Integrity Program includes integrity and communications training. The training modules are delivered in a virtual, e-learning format as well as face-to-face. We actively promote self-driven learning for all employees, supplemented by bespoke and role-specific mandatory training for those that face higher integrity risks in their roles. In 2023, we created an "Integrity Learning Toolkit", which includes mandatory case study discussions on key topics in our Code of Conduct for all managers with their direct reports ("Integrity Circles"), along with a strongly encouraged e-learning module. This "Code of Conduct package" is complemented by an "Anti-bribery and anti-corruption package" including general awareness training and targeted modules for at-risk functions, and a "workplace behavior package," which is mandatory for all ABB employees and promotes a culture of mutual respect, tolerance, and collaboration.

Alongside these integrity-focused learning modules, managers at all levels of the company are modeling integrity behaviors and holding team discussions to ensure that their people understand what is expected of them when it comes to ethical conduct and treating people with respect. Newly established Integrity Committees in all business areas and divisions support this approach. In addition, our “Straight Talk” series continues as an impactful platform for sharing real-life integrity successes and failures at ABB, consolidating lessons learned and supporting our speak-up culture. It serves as a strong complement to our training program and has continued to be well received throughout ABB as a transparent method for communicating integrity learnings.

To track the effectiveness of our integrity-related initiatives, we utilize data analytics and conduct transaction monitoring. Our Integrity Analytics Report, a live dashboard available throughout ABB via our integrity web portal, provides insights into our integrity metrics. To offer insight into ongoing and closed cases, multiple real-time and quarterly Investigation Dashboards are made available to the appropriate stakeholders.

In 2023, our trust and engagement KPIs were as follows:

Trust KPI – the rate of severity level 1 and 2 investigations where the reporters disclosed their identity: 60 percent as compared to 60 percent in the period 2021–2022.

Engagement KPI – the volume of unique visitors on the Integrity Awareness Portal for integrity learnings: 80 percent of employees, as compared to 70 percent in the period 2021–2022.

CASE STUDY

PROCESS AUTOMATION



How Process Automation makes integrity part of its daily operations

ABB’s principles of integrity and transparency apply across the entire Group. Our business areas and divisions take active ownership and responsibility for integrity in their daily business. In Process Automation, our commitment to integrity is a cornerstone of our business agenda. We continuously implement activities throughout the organization to further drive a culture of integrity in everything we do. For example, in 2023, we launched a monthly internal update highlighting key milestones in our integrity and transparency journey. In addition, we hosted Integrity Awareness Weeks across our organization, which included a series of discussions covering the topics of the ABB Code of Conduct.

Moreover, as part of the Deferred Prosecution Agreement entered into with US authorities on December 2, 2022, ABB has implemented a work plan which is based on the elements of a Corporate Compliance Program, as included in DOJ and SEC’s “A Resource Guide to the US Foreign Corrupt Practices Act”. The work plan includes a component to sustainably implement integrity into daily operations.

As part of our daily operations, we drive cross-functional dialogue and collaboration on key integrity topics among our teams, including Legal & Integrity, Risk Management, Human Rights and Sustainability. This is crucial to ensure alignment on these topics, particularly when working on complex projects.

Anti-Bribery & Anti-Corruption

ABB has a “zero tolerance” policy towards unethical business behavior including any form of bribery or corruption. Having a robust anti-bribery and anti-corruption control framework and strong ethical culture is essential for ensuring that we comply with our legal responsibilities and preserve our license to operate.

Our ABAC training program centers on the upskilling of employees in gatekeeper functions and customer facing roles across ABB. The ABAC training program aims to enhance core ABAC competencies while highlighting the critical role these individuals play in upholding our integrity culture and compliance obligations.

Our actions to enhance our culture of integrity continue to focus on:

- remediating the root causes of misconduct, firstly through internal control enhancements at the local level where they occurred, and secondly through global process enhancements;
- applying learnings to drive company-wide cultural changes and individual accountability for integrity;

- innovating ABB’s monitoring and testing activities and the platforms/tools we use for strong risk management and integrity assurance, including our continuous monitoring platform, aimed at attempting to detect ABAC and fraud risks by leveraging risk algorithms as applied to company data points across many company systems.

In 2023, we enhanced and innovated a number of company policies and procedures to further mitigate ABAC risks. We completed the first year of our Deferred Prosecution Agreement (DPA) with the United States Department of Justice (DOJ) and Securities and Exchange Commission (SEC) pursuant to a rigorous workplan focused on these enhancements and innovations. Under the DPA, for a three-year period, we will self-report on continual enhancements to our integrity program to ensure that our controls, processes and culture serve as effective deterrents to bribery and corruption.

Our integrity program goes beyond ABAC and workplace behavior and includes trade and anti-trust as well as data privacy and cyber security.

ABAC FRAMEWORK

Area of Risk	Donations & Sponsorships	Gifts, Travel & Hospitality	Third Party Management	Books & Records / Internal Controls	Facilitation and Safety Payments	Conflicts of Interest and HR Payments	M&A and Joint Ventures	Tender Risk Review and Project Review
ABAC Program Objectives	Ethical business	Stakeholder trust	Transparent value chain	Protect license to operate	Speak-up culture			
ABAC Program	Organization, Roles & Responsibilities	Policies and Procedures	Risk Management & Oversight	Communication, Training and Awareness	Risk Assessments	Data Analytics and Monitoring	Reporting Channels	
Core Governing Policy & Procedures embedding ABAC controls	Code of Conduct							
	Global Policies and Procedures							
Local requirements (country-specific)	Beyond the global ABAC program represented, ABB's business areas, divisions, and some countries also have policies, procedures and controls that provide further risk migration.							

Trade compliance program

We act in a global environment and comply with applicable trade laws and regulations, including those relating to import and export controls, trade sanctions and customs procedures, and we expect our business partners to do the same. As reflected in ABB’s Code of Conduct, ABB’s Trade Compliance framework includes our Global Trade Compliance Procedure (GTCP), specific instructions and guidance documents for the business to embed trade compliance

requirements into day-to-day processes. The extensive network of trade officers work together with other functions across the organization providing advice, raising awareness by delivering training, disseminating regulatory updates and in general, supporting the implementation of processes and controls intended to mitigate trade risks.

Antitrust compliance program

ABB's antitrust compliance program is guided by a suite of guidance notes, procedures and internal controls specifically addressing ABB's global antitrust risks. These are integrated into ABB's culture and internal controls through dedicated training of legal and business communities, the provision of specific expert antitrust advice as well as regular internal exchange forums to raise awareness of antitrust topics of relevance to our operations. Our antitrust experts work closely with our colleagues from

ABB's business ethics helpline to facilitate the identification, investigation and remediation of any antitrust concerns. Importantly, a strong antitrust ethos permeates ABB's mergers & acquisitions activities, including through the performance of due diligence prior to investments, acquisitions or joint ventures, to support healthy and compliant company growth.

Data privacy and cyber security

We ensure the protection of customer, employee and other individual privacy and personal data, and implement robust measures to protect their rights and safeguard against cyber threats. Respecting the right to data protection is a priority for us and we have adopted global data protection standards to ensure a high, standardized level of protection for personal data. We monitor and review compliance

with ABB's data protection policies and applicable data protection laws, by means of data protection audits, assessments and other controls. All ABB employees are made aware of the basics of data privacy, and specialized training is provided for selected job functions.

Grievance and remediation

At ABB, we are committed to a culture of ethics and transparency and encourage our people to speak up. We offer multiple channels for our stakeholders to report integrity violations and non-compliance with our Code of Conduct. We intend to make this process as straightforward and seamless as possible. Confidential reporting processes are available for both employees and our broader community of stakeholders, including options for anonymous reporting. Our commitment to non-retaliation applies anytime someone has raised a potential integrity concern either in good faith or through cooperation in an investigation.

ABB's business ethics helpline permits web and phone reporting and is operated by an independent service provider, which forwards the report to a dedicated investigations team within

the Legal & Integrity function at ABB headquarters or, in EU countries where required by law, to a local representative of the chosen ABB partner company. All reports are subject to appropriate investigation and are brought to full closure using systematic processes and tracking systems so that due process is followed across our internal investigations. An employee or stakeholder who files a report can follow-up on the status of their report and continue to engage with the ABB investigator using a personal PIN. The helpline permits reporting on conduct relating to all aspects of the ABB Code of Conduct, including corruption, fraud, trade compliance, antitrust, data privacy, workplace behavior, human rights, environment, occupational health and safety violations, workplace violence, and more.



Cases reported in 2023

We have seen an increase in total concerns reported to our business ethics helpline since 2022. We attribute this to an increased confidence in our reporting and allegation management processes coupled with more in-person interactions in the wake of the pandemic. In 2023, the allegations reported were structured into the following categories (as well as more detailed subcategories within each of these) to ensure appropriate attention, resourcing and internal escalation:

- Antitrust & Fair Competition
- Bribery benefiting ABB
- Commercial integrity & Regulatory
- Fraud: Non-Self-Dealing
- Fraud: Self-Dealing
- HSE & Security
- Human Resources
- Non-Integrity Issue
- Other Integrity Issue

The following table provides an overview of number of allegations related to integrity concerns and employment actions – in addition to myriad, non-disciplinary remedial actions – resulting from integrity violations pursuant to ABB’s root-cause analysis and accountability processes:

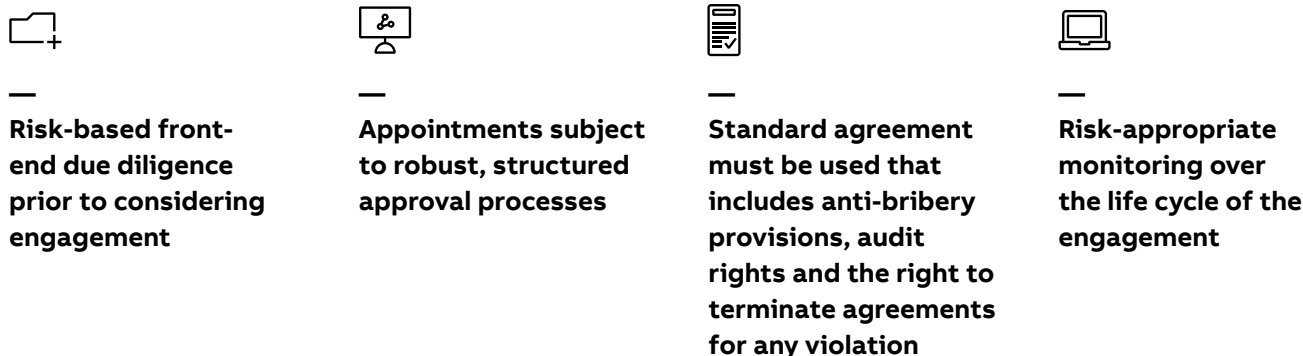
Integrity concerns	In 2023
Allegations reported	1894
Allegations closed	1187
Allegations substantiated	341
Verbal warnings	35
Written warnings	107
Employment separations	100
Demotions, suspensions or other financial penalties	11

Responsible sourcing

Our Supplier Code of Conduct makes clear that all third parties with which we do business are expected to adhere to the same ethical standards as ABB. In November 2023, we published an updated edition of the Supplier Code of Conduct along with an implementation guide to address the latest relevant international frameworks, standards and legislation governing ethical and sustainable business practices. To prevent human rights violations in our supply chain, we substantively revised the section on “Human rights and decent work” in our Supplier Code and included more specific requirements regarding modern slavery, discrimination and diversity, as well as the rights of local communities and vulnerable groups. Furthermore, a section on “Climate and environment” was added to reflect our intensified efforts to mitigate climate change. We have expanded the list

of potential environmental impacts to include topics of growing interest to our stakeholders, such as GHG emissions, circularity, biodiversity and deforestation. The updated Supplier Code explicitly requires suppliers to disseminate and enforce these requirements across their own supply chains and to report any suspected violations. We provided ABB personnel with training sessions on the updated Supplier Code in 2023 and will start trainings for our suppliers on these updates in 2024.

We use our “Third Party Management” program to assess and manage risks as well as to onboard and monitor engagement with third parties across the entire value chain, including upstream (suppliers) and downstream (sales). It involves the following elements:



As part of our Sustainable Supply Base Management (SSBM) program, we assess suppliers for their sustainability performance every year and mitigate risks identified. This involves a supplier self-assessment during the onboarding process, and subsequent further due diligence in case of high-risk scores, including mandatory onsite audits in focus countries. In 2023, we adjusted the SSBM Country Specific Protocol

to permit audits of temporary labor suppliers. Several pilots have already been deployed and the resolution of identified cases related to labor law violations is under way. At the end of 2023, 42 percent of our spending on high-risk suppliers in focus countries was covered by our SSBM program, and 88 percent of identified risks were closed.

→ Divided over different training programs

Tracking responsible sourcing	2023	2022
Suppliers assessed on site (number)	118	58
High-risk supply spending in focus countries covered by SSBM (%)	42	22
Risk closure rate (%)	88	87
Contracts terminated	7	7
Employees trained on responsible sourcing (SSBM) ¹	959	26
Supplier teams trained on responsible sourcing	95	54

→ Read more in our
[ABB Policy on Conflict Minerals 2023](#).

Conflict minerals and child labor

Our ABB Way operating model requires that all materials intended for our products and services are sourced and procured ethically. ABB is a member of the Responsible Minerals Initiative and commits to sourcing minerals and metals responsibly, as described in the ABB Policy on Conflict Minerals. We have established a “Conflict Minerals Compliance Program” based on the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict Affected and High-Risk Areas and other appropriate international standards. ABB does not source from smelters and refiners in conflict affected or high-risk areas (CAHRAs) unless they have implemented OECD aligned programs. Every year, we file a Conflict Minerals Report with the United States Securities and Exchange Commission (SEC). Last year, we extended our Conflict Minerals program beyond 3TG (Tin, Tungsten, Tantalum and Gold) to include Cobalt. Due diligence on further minerals will continue in 2024.

In response to the new requirements established by Art. 964j–l of the Swiss Code of Obligations and the Swiss Ordinance on Due Diligence and Transparency in relation to Minerals and Metals from Conflict-Affected Areas and Child Labour (DDTrO), we have assessed our respective risk exposure and reached the following conclusions:

- The quantities of minerals and metals in scope of the aforementioned regulations which ABB imported into or processed in Switzerland in 2023 are substantially below applicable thresholds. Hence, ABB is exempted from specific due diligence and reporting obligations under the DDTrO in regard to conflict minerals.
- No cases of child labor came to light in our analyses of our global supply chains in 2023 and nor was there any reason to suspect that we caused or contributed to the use of child labor either in our own operations, or in our direct suppliers’ operations, as was the case in previous years. In 2023, we again assessed our human rights processes and policies and identified areas of improvement. This led to the updating of our Supplier Code of Conduct and Human Rights Policy as well as our Human Rights Due Diligence framework. We are now compliant with ILO Conventions 138 and 182 as well as the ILO-IOE Child Labour Guidance Tool for Business of December 15, 2015, and the UN Guiding Principles on Business and Human Rights. The aforementioned frameworks and standards include those which the DDTrO specifies as internationally recognized equivalent regulations for child labor. As a result of our compliance with these frameworks and standards, we are exempted from specific due diligence and reporting obligations under the DDTrO in regard to child labor.

OUTLOOK

Integrity and transparency are the foundations of our Sustainability Agenda. In 2024, we will further strengthen our approach and focus in particular on the following initiatives:

- After updating our Code of Conduct and Human Rights Policy in 2023, we will drive implementation and listen to signals.
- Conduct in-depth trainings on specific topics such as modern slavery and child labor.
- Enhance due diligence incorporating further minerals.
- Using our human rights roadmap, we will investigate technological solutions and artificial intelligence to strengthen the risk mapping of our value chains.



04 Good governance

85	Corporate governance
86	Board of Directors
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Corporate governance

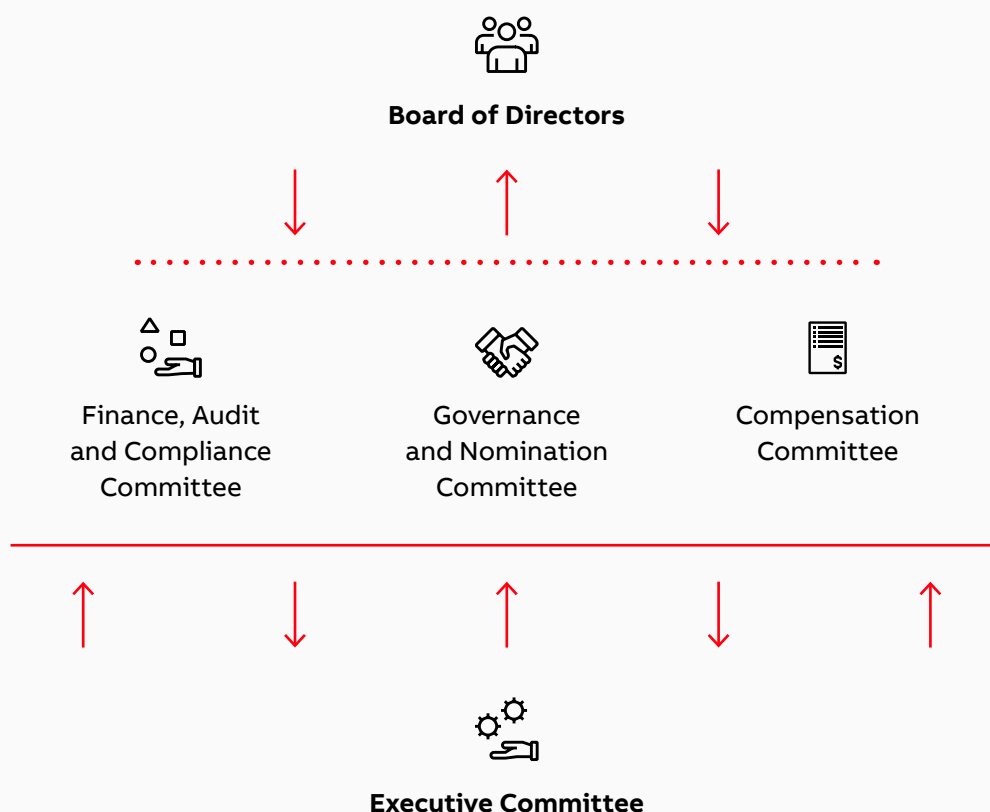
ABB is committed to the highest international standards of corporate governance. This is reinforced in its structure, processes and rules, as outlined in more detail in ABB's Corporate Governance Report.

→ More information about our sustainability governance structure can be found in our [Sustainability Report 2023](#).

ABB complies with all relevant frameworks, including the Swiss Code of Obligations, the Swiss Code of Best Practice for Corporate Governance and the rules of the capital markets where its shares are listed. Governance principles are also anchored in various ABB corporate documents, such as its Articles of Incorporation, its Board Governance Rules and its policies and procedures.

Strong corporate governance is not only necessary to ensure compliance with applicable legal requirements but is indispensable for creating sustainable value. We are convinced that our established governance culture helps ABB successfully manage its business and realize opportunities for the benefit of all of its shareholders. This applies in particular to sustainability. ABB has a robust sustainability governance structure from its Board of Directors through to its operating divisions.

ABB GOVERNANCE STRUCTURE



Board of Directors

ABB's Board of Directors is responsible for the strategy of the company. It is a truly diverse board: seven of its ten members have been elected in the past eight years and all of them represent a broad variety of geographical, business, management and cultural experience.

While the Board takes decisions as a whole, its three committees – the Finance, Audit and Compliance Committee, the Governance and Nomination Committee and the Compensation Committee – support it with high-level expertise and by ensuring an efficient mode of operation. Special attention is paid to sustainability aspects: oversight of ABB's Sustainability Agenda (including corporate social responsibility, health, safety and environment) is the responsibility of the Governance and Nomination Committee, while the Compensation Committee ensures that ABB's executive compensation policies are appropriately aligned to its

Sustainability Agenda. Ultimate responsibility for ABB's Sustainability Agenda, its sustainability targets and its annual Sustainability Report lies with the entire Board of Directors.

MEMBERS OF THE BOARD (2023–2024 BOARD TERM)

	Board experience	Corporate officer experience			Other business experience								
Board member	ABB Board tenure (years)	Other public board experience	CEO	CFO	Operations	Risk management	Sustainability	Digital / technology	Global experience	Country of origin / nationality	Gender	Non-executive	Independent
Peter Voser	9	●	●	●	●	●	●	●	●	CH	M	Yes	Yes
Jacob Wallenberg	25	●	●		●	●	●	●	●	SE	M	Yes	Yes
Gunnar Brock	6	●	●		●	●	●		●	SE	M	Yes	Yes
David Constable	9	●	●		●	●	●		●	CA, US	M	Yes	Yes
Frederico Curado	8	●	●		●	●	●	●	●	BR, PT	M	Yes	Yes
Lars Förberg	7	●	●			●	●		●	CH, SE	M	Yes	Yes
Denise Johnson	1	●			●	●	●	●	●	US	F	Yes	Yes
Jennifer Xin-Zhe Li	6	●		●	●	●	●	●	●	CN, CA	F	Yes	Yes
Geraldine Matchett	6		●	●		●	●		●	CH, UK, FR	F	Yes	Yes
David Meline	8	●		●		●			●	CH, US	M	Yes	Yes

OUR BOARD MEMBERS
(AS OF DECEMBER 31, 2023)



Peter R. Voser

- Chairman of ABB's Board of Directors since 2015
- Chairman of the Governance and Nomination Committee
- Swiss citizen



Jacob Wallenberg

- Member of ABB's Board of Directors since 1999 and Vice-Chairman since 2015
- Member of the Governance and Nomination Committee
- Swedish citizen



Gunnar Brock

- Member of ABB's Board of Directors since 2018
- Member of the Finance, Audit and Compliance Committee
- Swedish citizen



David Constable

- Member of ABB's Board of Directors since 2015
- Member of the Compensation Committee
- Canadian and US citizen



Frederico Fleury Curado

- Member of ABB's Board of Directors since 2016
- Chairman of the Compensation Committee
- Brazilian and Portuguese citizen



Lars Förberg

- Member of ABB's Board of Directors since 2017
- Member of the Governance and Nomination Committee
- Swedish and Swiss citizen



Denise Johnson

- Member of ABB's Board of Directors since 2023
- Member of the Finance, Audit and Compliance Committee
- US citizen



Jennifer Xin-Zhe Li

- Member of ABB's Board of Directors since 2018
- Member of the Governance and Nomination Committee and Compensation Committee
- Canadian citizen



Geraldine Matchett

- Member of ABB's Board of Directors since 2018
- Member of the Finance, Audit and Compliance Committee
- Swiss, British and French citizen



David Meline

- Member of ABB's Board of Directors since 2016
- Chairman of the Finance, Audit and Compliance Committee
- US and Swiss citizen

Executive Committee

Each member of the Executive Committee is appointed by the Board of Directors. The Board has delegated the executive management of ABB to the CEO, who – together with the other members of the Executive Committee – is responsible for the company's operational business.

In line with the Board's leading example, ABB's Executive Committee strives to be equally diverse, not only in business and management experience, but also when it comes to geographical and cultural backgrounds.



**OUR EXECUTIVE COMMITTEE MEMBERS
(AS OF DECEMBER 31, 2023)**



Björn Rosengren

- Chief Executive Officer since 2020
- Swedish citizen



Timo Ihamuotila

- Chief Financial Officer since 2017
- Finnish citizen



Carolina Granat

- Chief Human Resources Officer since 2021
- Swedish citizen



Karin Lepasoon

- Chief Communications and Sustainability Officer since 2022
- Swedish citizen



Morten Wierod

- President of the Electrification business area since 2022 (President of the Motion business area from 2019 to 2022)
- Norwegian citizen



Tarak Mehta

- President of the Motion business area since 2022 (President of the Electrification business area from 2019 to 2022; member of the Executive Committee since 2010)
- US and Swiss citizen



Peter Terwiesch

- President of the Process Automation business area since 2015
- German and Swiss citizen



Sami Atiya

- President of the Robotics & Discrete Automation business area since 2019 (member of the Executive Committee since 2016)
- German citizen

On October 30, 2023, ABB announced that Mathias Gaertner had been appointed General Counsel and Company Secretary and a Member of the Executive Committee. He will join ABB in 2024 from global construction materials company Holcim. Mr. Gaertner is a German citizen.

An aerial photograph of a winding asphalt road through a dense forest. The trees are in various stages of autumn, with some showing vibrant yellow and orange leaves, while others remain green. The road curves from the bottom left towards the top right. A small red car is visible on the road, positioned between the two main sections of the image.

05 Performance based compensation

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Extracts from Compensation Committee Chair Letter

Our focus at the Compensation Committee remains to ensure that the compensation structure at ABB drives value creation for our shareholders, represents a motivating package for our executives, and ensures alignment with best-practice corporate governance standards and with ABB's Sustainability Agenda.

Summary of changes in policies and disclosures

In response to valuable feedback from our stakeholders, you will find the 2023 Annual Incentive Plan (AIP) targets for the CEO disclosed in [ABB's Compensation Report 2023](#), providing additional level of transparency on the alignment between pay and performance that we seek to ensure at ABB.

Furthermore, we will extend our malus and clawback policy, which is currently applied to our Long-Term Incentive Plan (LTIP) with a clawback period of five years, to future AIP launches (i.e., from 2024) for all EC members, with a clawback period of three years, in line with market practice.

Finally, we have introduced an additional disclosure – the ratio of the annual total compensation of our CEO to the median annual total compensation of all permanent ABB employees in Switzerland. Details can be found in the section “Annual total compensation ratio” of [ABB's Compensation Report 2023](#).

Sustainability impact on executive compensation

We will maintain the strong link between our Sustainability Agenda and compensation programs, such that all EC members continue to have a sustainability performance measure in their LTIP, with a material weighting of 20 percent. Details related to the sustainability target for the 2024 LTIP are disclosed in [ABB's Compensation Report 2023](#).

In addition, all EC members shall have two or more goals relating to sustainability in the individual component of their AIP.

2023 results and compensation policy outcomes

2023 was a year of solid operational and financial performance. Overall, most key financial, sustainability and operational targets were met or excelled. ABB (the Company) delivered a strong operational EBITA margin, increased its revenues, and improved productivity in 2023. The Company also made significant progress in reducing its environmental footprint and contributing to a more sustainable environment. For more information on ABB's 2023 sustainability achievements please refer to sections "Outputs and outcomes" of this Report.

Board of Directors (Board)

The aggregate Board compensation for the 2023–2024 term (CHF 4.38 million) is in line with the maximum amount (CHF 4.4 million) approved at the 2023 Annual General Meeting (AGM). There has been no change to the individual Board member fees since 2015.

At the AGM on March 21, 2024, shareholders will be asked to vote on the maximum aggregate compensation for the Board for its 2024–2025 term and on the maximum aggregate compensation for the EC in 2025. The former is again unchanged compared to the prior year, while the latter shows an increase from the level requested for the prior year, primarily influenced by the change in composition of the EC.

Executive Committee

The aggregate EC total compensation was CHF 40.6 million in 2023, driven largely by the strong performance related variable pay awards. This is below the maximum amount (CHF 45.9 million) approved at the 2022 AGM. Two of the nine EC members in place received a salary adjustment in March 2023, which ranged from 3.6 to 8.3 percent, for exceptional performance and/or broadened responsibilities. This corresponded to an average 1.3 percent increase on the annual aggregate base salaries for EC members in post in March 2023. The average award for the current EC members under the AIP for 2023 was 143.3 percent (out of a maximum of 150 percent), compared to 118.3 percent in 2022. The average weighted achievement level of the 2020 LTIP, which vested in 2023, was 189.5 percent (out of a maximum of 200 percent), driven by solid evolution of our Earnings Per Share (EPS) during the period, and a maximum vesting under the relative Total Shareholder Return (TSR) performance measure.

The Compensation Report 2023 will also be submitted for a non-binding, consultative vote by shareholders. We have pursued an open and regular dialogue with our stakeholders, as we continue to improve our compensation system. On behalf of the Compensation Committee, I thank all shareholders for their continued trust in ABB and for their consistently supportive feedback.

FREDERICO FLEURY CURADO

Chairman of the Compensation Committee
Zurich, February 22, 2024

Governance

Board compensation

Compensation for the 2023–2024 term of office

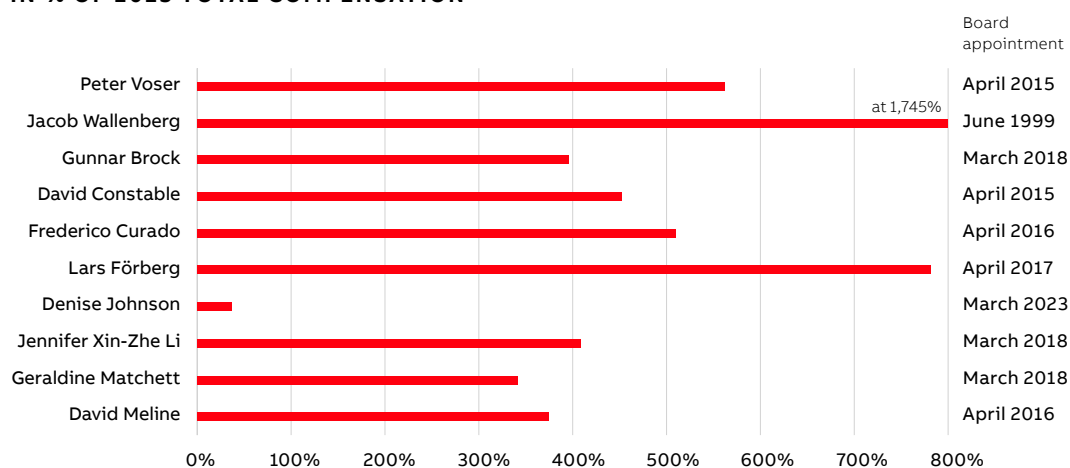
The aggregate Board compensation for the 2023–2024 term of office (CHF 4,380,000) was within the maximum amount (CHF 4,400,000) approved at the 2023 Annual General Meeting (AGM).

Share ownership of Board members

Except for one member, who joined the Board in 2023, all other Board members held ABB shares at December 31, 2023, worth at least 300 percent of their 2023 Board compensation.

EXHIBIT 1: BOARD MEMBERS SHAREHOLDING (AT DECEMBER 31, 2023) IN % OF 2023 TOTAL COMPENSATION*

* Based on share price of CHF 31.24, the 2023 LTIP reference price, and shares held at December 31, 2023.

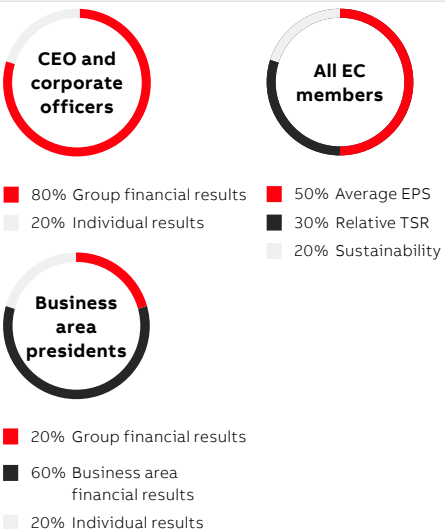


Executive Committee compensation

Compensation structure

The elements of the EC members' compensation structure, including the purpose, the link to strategy and applicable performance indicators are summarized in the following table:

EXHIBIT 2: EC COMPENSATION STRUCTURE AS FROM 2023

	Fixed compensation – base salary and benefits	Variable compensation – short term incentive (AIP)	Variable compensation – long term incentive (LTIP)	Wealth at risk/ Share ownership
Purpose and link to strategy	Facilitates attraction and retention of talented EC members; base salary compensates for the role and relevant experience; benefits protect against risk	Rewards annual Company, business area, functional and individual performance. Aligned with the Company's Annual Performance Plan	Rewards Company performance over a three-year period and encourages creation of long-term, sustainable value for shareholders. Aligned with the Company's Long-Term Performance Plan	Aligns individual's personal wealth at risk directly to the ABB share price, and EC members' interests with those of shareholders to maintain focus on ABB's long-term success
Operation	Salary in cash, benefits in kind, and pension contributions	Annual awards, payable in cash after a one-year performance period; malus and clawback to be implemented from 2024	Annual grants in shares which may vest after three years, and are subject to performance conditions; malus and clawback provisions in place	Individuals are required to hold ABB shares
Opportunity level (as % of base salary)	Based on scope of responsibilities, personal experience, and skillset	Minimum 0% Target 100% Maximum 150%	CEO Minimum 0% Target 150% Maximum 300% Other EC members* Minimum 0% Target 150% Maximum 300%	CEO 500% of annual salary (net of taxes) Other EC members 400% of annual salary (net of taxes)
Performance indicators	Changes to base salary consider individual performance, future potential, broadening of responsibilities, and external benchmarking	 <p>CEO and corporate officers</p> <ul style="list-style-type: none"> 80% Group financial results 20% Individual results <p>All EC members</p> <ul style="list-style-type: none"> 50% Average EPS 30% Relative TSR 20% Sustainability <p>Business area presidents</p> <ul style="list-style-type: none"> 20% Group financial results 60% Business area financial results 20% Individual results 		Exposure to ABB share price

* EC members with legacy employment contracts have a Target LTIP grant of 100 percent, and Max LTIP opportunity of 200 percent. The higher LTIP opportunity for the newer EC members is largely offset by lower pension and other benefit costs.

Total EC compensation for 2023

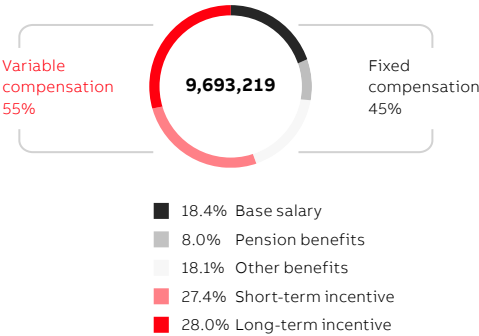
The aggregate EC compensation for 2023 (CHF 40,642,468) was within the maximum amount approved at the 2022 AGM (CHF 45,900,000).

The largest portion of the CEO's 2023 total compensation was delivered via performance driven variable compensation (55 percent),

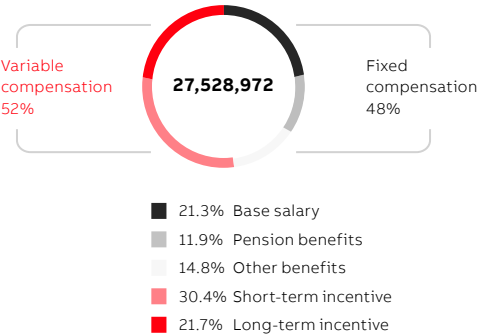
represented by short-term and long-term incentives. For the other EC members, on an aggregate level, variable compensation represented 52 percent of their 2023 compensation. The following chart shows the composition of the 2023 total compensation for the EC members at December 31, 2023.

EXHIBIT 3: 2023 TOTAL COMPENSATION MIX (IN CHF) FOR THE CEO AND OTHER EC MEMBERS ON AGGREGATE LEVEL*

CEO



Other EC members



* Composed of actual base salary, 2023 AIP, 2023 LTIP grant, pension, and other benefits. 2023 AIP represents accrued short-term incentive for the year 2023, which will be paid in 2024, after the publication of ABB's financial results. The sum of percentage figures may differ from 100 percent due to rounding with one decimal.

Realized variable compensation in 2023

Realized variable compensation considers the AIP award and the LTIP award at the end of their respective performance cycles, reflecting actual AIP payment and LTIP vesting, based on achievement of the respective plan performance measures.

The outcome of the 2023 AIP was above the target for all current EC members (143.3 percent on average), and the LTIP that vested in 2023 (2020 LTIP) exceeded the target level, with a final vesting level of 189.5 percent of target.

→ Target AIP award corresponds to 100 percent of base salary.

* On an aggregate level, while individual outcomes range from 120 to 150 percent.

EXHIBIT 4: 2023 AIP OUTCOME COMPARED TO TARGET

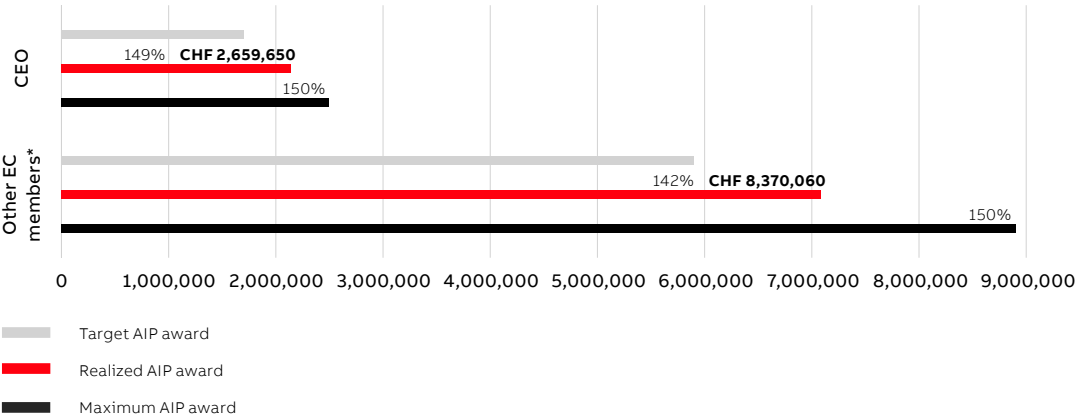
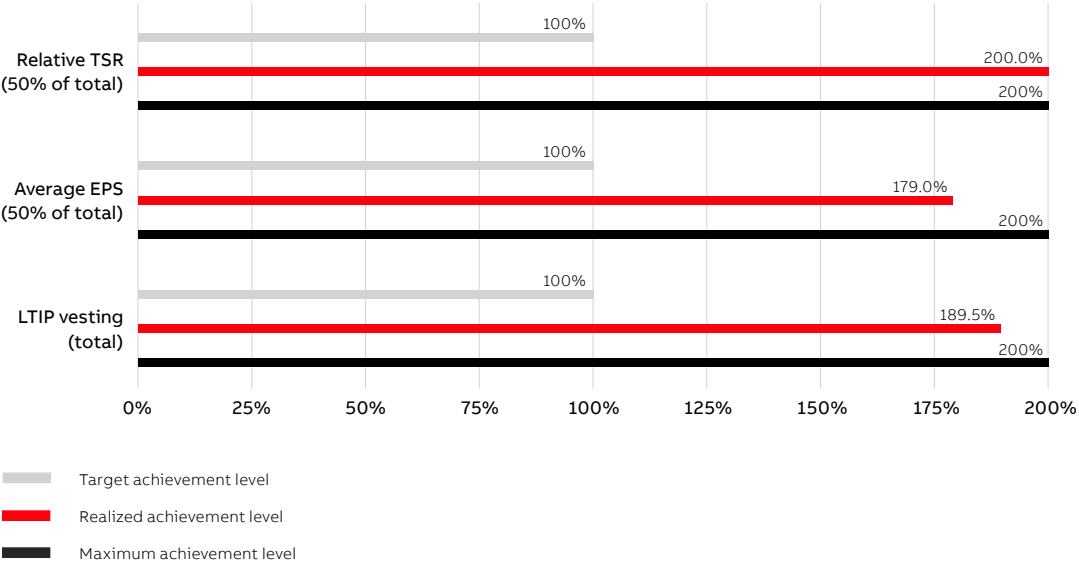


EXHIBIT 5: 2020 LTIP OUTCOME COMPARED TO TARGET



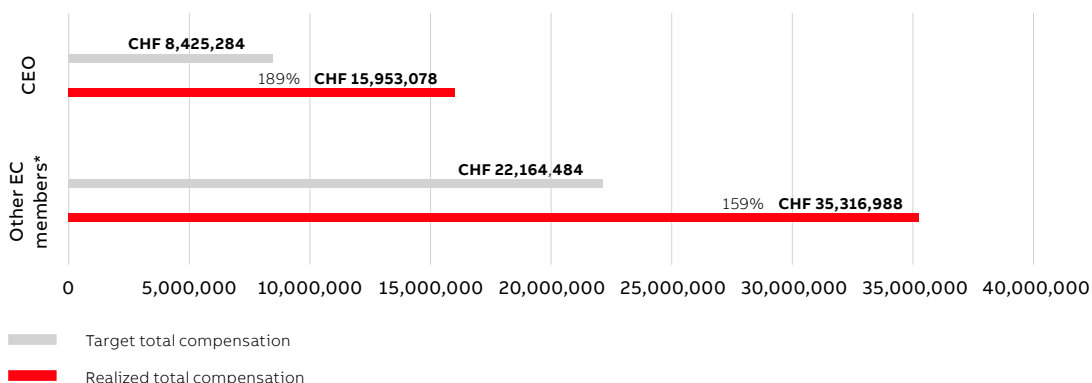
Realized total compensation in 2023

Considering the stated variable components above, the realized total compensation in 2023 was above the target total compensation for all EC members, driven by strong performance in 2023 and the high level of achievement against the targets for the 2020 LTIP, which vested in 2023.

Further details related to the realized compensation of each EC member and each compensation component are specified in [ABB's Compensation Report 2023](#) in Exhibit 48.

EXHIBIT 6: REALIZED TOTAL COMPENSATION IN 2023 COMPARED TO TARGET TOTAL COMPENSATION

* On an aggregate level, while individual outcomes range from 117 to 189 percent.



Share ownership of EC members

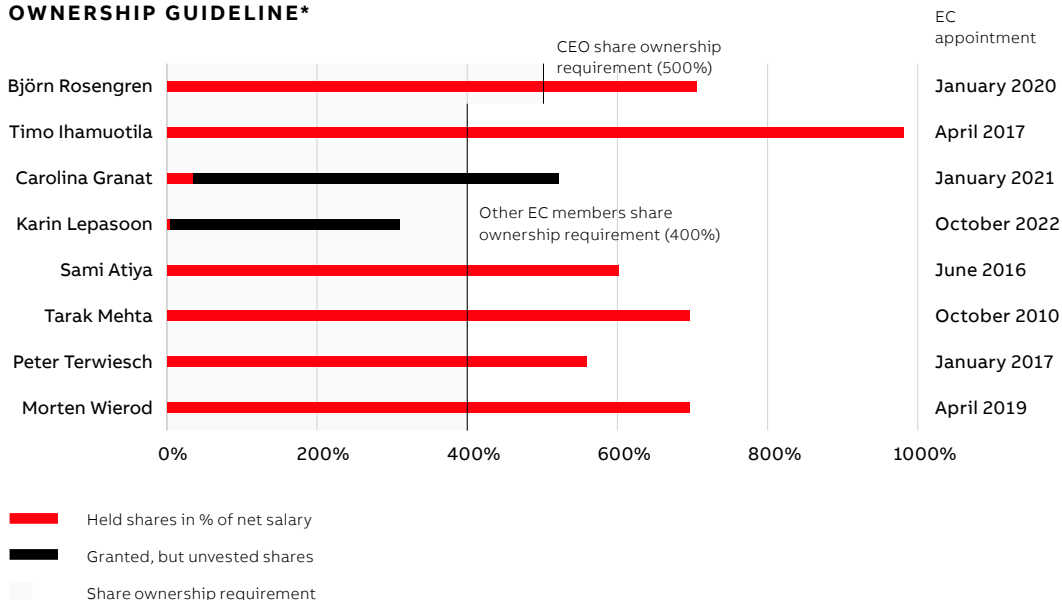
EC members may not sell their shares (except to meet tax and social security costs related to share vesting) until they achieve the required share ownership level.

Six out of eight EC members exceeded their share ownership requirement. The other two members have been appointed to the EC in the last three years.

When considering the number of granted, but unvested, ABB shares of EC members at December 31, 2023, it is expected that the remaining two most recently appointed EC members who do not currently meet their share ownership requirement are projected to do so in 2026, after vesting of the 2023 LTIP grant, and in 2027, after vesting of the 2024 LTIP grant, respectively.

EXHIBIT 7: EC SHAREHOLDING COMPARED TO SHARE OWNERSHIP GUIDELINE*

* Based on share price of CHF 31.24, the 2023 LTIP reference price, and shares held at December 31, 2023. Future allocation of granted, but unvested, shares is based on target achievement level and relevant plan specific settlement: default settlement of the final 2021 LTIP, 2022 LTIP and 2023 LTIP awards is 100 percent in shares. The value of shares is compared against the annual base salary net of taxes, at December 31, 2023.



Sustainability-related considerations in ABB's compensation

There are a range of sustainability-related considerations which play an important role in our compensation philosophy, including the desire to foster a strong link between ABB's Sustainability Agenda and the variable compensation for the EC and senior management, as well as the general ambition to reinforce its social contract with its employees.

Impact of sustainability performance on variable compensation

Given sustainability is an integral part of ABB's strategy and plans, there is a strong, direct link between the Sustainability Agenda and executive incentives through ABB's key variable compensation programs such as AIP and LTIP.

Regarding the AIP, all EC members have two or three sustainability goals (out of a maximum of three) in the individual component of their respective plans.

In 2023, all EC members had an environmental goal (scope 1 and 2 greenhouse gas (GHG) emissions reduction). Most of the EC members had a social goal, which for the CEO and business area presidents was safety, and for most corporate officers was an increase in the proportion of women in senior management roles (female leaders), while the CFO had a governance goal (related to internal controls).

In addition, all EC members had an integrity goal designed to help deliver ABB's obligations under the Deferred Prosecution Agreement (DPA) in line with our commitments to the US Department of Justice.

Regarding the LTIP granted to ABB's senior management in 2023, including the EC, a Company-wide sustainability performance measure with a weighting of 20 percent forms part of the performance measures.

- For the 2023 LTIP, the sustainability performance measure was the Company's GHG emissions reduction at the end of the three-year performance period (2023–2025), compared to the 2019 baseline.
- To support our strong ambition to our long-term GHG emissions reduction, the sustainability measure for the 2024 LTIP will again be GHG emissions reduction at the end of the three-year performance period (2024–2026), compared to the 2019 baseline.

Details of the long-term GHG emissions reduction targets can be found in [ABB's Sustainability Report 2023](#).

Programs for ABB employees

In addition to the offer of fair and competitive compensation to our employees, ABB also strives to offer additional programs to reinforce its social contract with its employees.

Selected key programs and their links to our Sustainability Agenda are summarized in the Exhibit 8 below.

EXHIBIT 8: SELECTED PROGRAMS FOR EMPLOYEES

Program	Operation and purpose	Link to ABB's Sustainability Agenda
Employee Share Acquisition Plan (ESAP)	Offered to ca. 100,000 employees in over 60 countries, providing the opportunity to purchase shares in ABB one year after the start of a plan, at a price which will be fixed at the beginning of each annual plan cycle, and become ABB shareholders. The opportunity for share ownership is the same for permanent full-time and permanent part-time employees at ABB. This is the case in all ABB locations where ESAP is offered.	Supports social goals by aligning employees' interests with the interests of shareholders and maintaining focus on the long-term success of the Company.
Parental Leave	A global and gender-neutral program, offered to all employees, which sets out a minimum standard on paid parental leave that supports all family types. The primary caregivers receive 12 weeks of paid leave and the secondary caregivers four weeks following the birth of a child or when becoming a new parent by adoption or surrogacy.	Supports social goals, promotes wellbeing and the ABB value of "Care".
Employee Assistance	A global program, offered to all employees. The program supports the employee's wellbeing by offering paid counseling on emotional health, family concerns and workplace concerns.	Supports social goals, promotes wellbeing and the ABB value of "Care".
Car or Transportation Allowance	Offered to selected employees based on business need or market practice, with any car provision being progressively migrated to e-vehicles or transportation allowances which can be used to contribute to public transport, cycle or other transport needs.	Supports environmental goals by addressing changed needs related to mobility and providing greater flexibility to opt for more environmentally friendly solutions.



06 Appendix

- 101** EU Taxonomy disclosures summary
- 103** Alternative performance measures
- 106** Key terms
- 108** About this report
- 109** ABB annual reporting suite 2023 and financial calendar

EU Taxonomy disclosures summary

At ABB, we are determined to shape our future in an environmentally sustainable way by investing in environmentally sustainable activities. The European Union (EU) has taken the lead in standardizing sustainability-related data and defining criteria for environmental sustainability. As part of the European Green Deal, the EU aims to become climate-neutral and to reduce GHG emissions to net zero by 2050. With the Action Plan on Financing Sustainable Growth, the European Commission intends to reorient the European economic and financial system towards more sustainable technologies and businesses. The EU Taxonomy is the cornerstone of the EU's Green Deal and Sustainable Finance Action Plan, as it aims to direct capital flows specifically into sustainable projects and companies.

The EU Taxonomy is a classification system for economic activities that are environmentally sustainable. It establishes six environmental objectives:

- Climate change mitigation
- Climate change adaptation
- Sustainable use and protection of water and marine resources
- Transition to a circular economy
- Pollution prevention and control
- Protection and restoration of biodiversity and ecosystems.

The EU Taxonomy distinguishes between «Taxonomy-eligible» and «Taxonomy-aligned» economic activities.

An economic activity is considered «eligible» if it is described in the adopted Delegated Acts, whereas an eligible activity is only considered environmentally sustainable and thus «aligned», if it meets the following conditions:

- Makes a substantial contribution to one of the environmental objectives by complying with the substantial contribution criteria defined for the activity;
- Meets the “Do No Significant Harm” criteria, having no negative effect on any of the other five environmental objectives;

- Complies with the minimum safeguards related primarily to human rights and social and labor standards.

How ABB adopted the EU Taxonomy

Year	Progress in adopting the EU Taxonomy
2021	We conducted a first eligibility analysis of our products, sites and activities and reviewed them against the economic activities defined by the Taxonomy in all the countries in which we operate. We involved the expertise of our product managers, real estate managers, sustainability managers, financial controllers, R&D controllers, and environmental managers across all levels of our organization and solicited advice from external consultants.
2022	Relevant Taxonomy-aligned activities were identified across the Group, with alignment results published for the first time.
2023	A thorough review was conducted in 2023 to accommodate the changes introduced by the new Taxonomy activities that were added in 2023 and amended DNSH criteria.

Economic activities of ABB in the context of the EU Taxonomy

Most of our eligible products and services are considered “enabling activities”, as defined by the Taxonomy Regulation,¹ meaning economic activities that “directly enable other activities to make a substantial contribution” to one of the environmental objectives.

A selection of our activities in Electrification, Motion, Process Automation and Robotics & Discrete Automation business areas, together with our Real Estate activities, are eligible to contribute to the environmental objective of climate change mitigation. In addition, some of our activities are eligible under the environmental objective of transition to a circular economy.

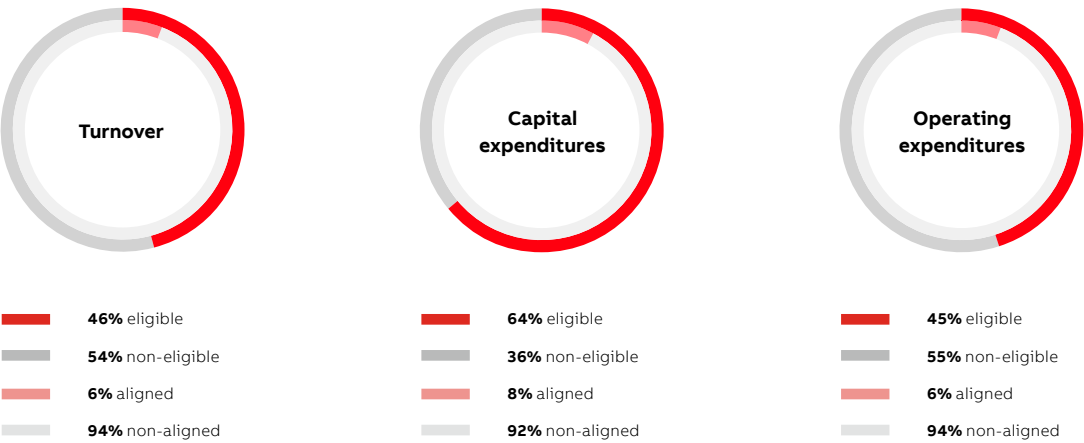
The full regulatory disclosure of ABB's Taxonomy-eligible and -aligned activities can be found in the EU Taxonomy section of our [Sustainability Report 2023](#).

¹ According to Article 16 of Regulation (EU) 2020/852, an economic activity shall qualify as contributing substantially to one or more of the environmental objectives “by directly enabling other activities to make a substantial contribution to one or more of those objectives, provided that such economic activity: (a) does not lead to a lock-in of assets that undermine long-term environmental goals, considering the economic lifetime of those assets; and (b) has a substantial positive environmental impact, on the basis of lifecycle considerations.”

Assessment results under the EU Taxonomy
The EU Taxonomy requires the disclosure of the amounts of eligible and aligned activities in three KPIs: turnover, capital expenditure (CapEx), and operating expenditure (Opex).

In 2023, 46% of ABB revenues were Taxonomy-eligible, out of which 6% were Taxonomy-aligned. A more detailed breakdown is offered in the chart below.

**2023 ABB ASSESSMENT RESULTS UNDER THE EU TAXONOMY:
TURNOVER, CAPEX, OPEX KPIS**



It is noted that changes may be made to the lists of our economic activities in the future, as the rules around the Taxonomy evolve. Additionally, wording and terminology used in the EU Taxonomy are still subject to some uncertainty in interpretation, which may lead to changes in

subsequent reporting once clarifications would be provided by the EU. For more details on our Taxonomy disclosures, see the EU Taxonomy section of our [Sustainability Report 2023](#).



Alternative performance measures

→ For a full reconciliation of ABB's non-GAAP measures, please refer to Supplemental Reconciliations and Definitions, in the ABB Q4 2023 Financial Information on <https://global.abb/group/en/investors/quarterly-results>

The following are definitions of key financial measures used to evaluate ABB's operating performance. These financial measures are referred to in this Annual Report and are not defined under United States generally accepted accounting principles (US GAAP).

While ABB's management believes that the non-GAAP financial measures herein are useful in evaluating ABB's operating results, this information should be considered as supplemental in nature and not as a substitute for the related financial information prepared in accordance with US GAAP.

COMPARABLE GROWTH RATES

Growth rates for certain key figures may be presented and discussed on a "comparable" basis. The comparable growth rate measures growth on a constant currency basis. Since we are a global company, the comparability of our operating results reported in US dollars is affected by foreign currency exchange rate fluctuations. We calculate the impacts from foreign currency fluctuations by translating the current-year periods' reported key figures into US dollar amounts using the exchange rates in effect for the comparable periods in the previous year.

Comparable growth rates are also adjusted for changes in our business portfolio. Adjustments to our business portfolio occur due to acquisitions, divestments, or by exiting specific business activities or customer markets. The adjustment for portfolio changes is calculated as follows: where the results of any business acquired or divested have not been consolidated and reported for the entire duration of both the current and comparable periods, the reported key figures of such business are adjusted to exclude the relevant key figures of any corresponding quarters which are not comparable when computing the comparable growth rate. Certain portfolio changes which do not qualify as divestments under US GAAP have been treated in a similar manner to divestments. Changes in our portfolio where we have exited certain business activities or customer markets are adjusted as

if the relevant business was divested in the period when the decision to cease business activities was taken. We do not adjust for portfolio changes where the relevant business has annualized revenues of less than \$50 million.

OPERATIONAL EBITA MARGIN

Operational EBITA margin

Operational EBITA margin is operational EBITA as a percentage of operational revenues.

Operational EBITA

Operational earnings before interest, taxes and acquisition-related amortization (operational EBITA) represents income from operations excluding:

- acquisition-related amortization (as defined below),
- restructuring, related and implementation costs (as defined below),
- changes in the amount recorded for obligations related to divested businesses occurring after the divestment date (changes in obligations related to divested businesses),
- gains and losses from sale of businesses (including fair value adjustment on assets and liabilities held for sale, if any),
- acquisition- and divestment-related expenses and integration costs,
- certain other non-operational items, as well as
- foreign exchange/commodity timing differences in income from operations consisting of: (a) unrealized gains and losses on derivatives (foreign exchange, commodities, embedded derivatives), (b) realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized, and (c) unrealized foreign exchange movements on receivables/ payables (and related assets/liabilities).

Certain other non-operational items generally includes: certain regulatory, compliance and legal costs, certain asset write downs/impairments and certain other fair value changes, changes in estimates relating to opening balance sheets of acquired businesses (changes

in pre-acquisition estimates), as well as other items which are determined by management on a case-by-case basis.

Operational EBITA is our measure of segment profit but is also used by management to evaluate the profitability of the company as a whole.

Acquisition-related amortization

Amortization expense on intangibles arising upon acquisitions.

Restructuring, related and implementation costs consists of restructuring and other related expenses, as well as internal and external costs relating to the implementation of Group-wide restructuring programs.

Operational revenues

We present operational revenues solely for the purpose of allowing the computation of the operational EBITA margin. Operational revenues are total revenues adjusted for foreign exchange/commodity timing differences in total revenues of: (i) unrealized gains and losses on derivatives, (ii) realized gains and losses on derivatives where the underlying hedged transaction has not yet been realized, and (iii) unrealized foreign exchange movements on receivables (and related assets). Operational revenues are not intended to be an alternative measure to total revenues, which represent our revenues measured in accordance with US GAAP.

NET WORKING CAPITAL AS A PERCENTAGE OF REVENUES

Net working capital as a percentage of revenues is calculated as net working capital divided by adjusted revenues for the trailing 12 months.

Net working capital is the sum of (i) receivables, net, (ii) contract assets, (iii) inventories, net, and (iv) prepaid expenses; less (v) accounts payable, trade, (vi) contract liabilities and (vii) other current liabilities (excluding primarily: (a) income taxes payable, (b) current derivative liabilities, (c) pension and other employee benefits, (d) payables under the share buyback program, (e) liabilities related to certain other restructuring-related activities and (f) liabilities related to the divestment of the Power Grids business); and including the amounts related to these accounts which have been presented as either assets or liabilities held for sale but excluding any amounts included in discontinued operations.

Adjusted revenues for the trailing 12 months

includes total revenues recorded by ABB in the 12 months preceding the relevant balance sheet date adjusted to eliminate revenues of divested businesses and the estimated impact of annualizing revenues of certain acquisitions which were completed in the same trailing 12-month period.

FREE CASH FLOW CONVERSION TO NET INCOME

Free cash flow conversion to net income is calculated as free cash flow divided by adjusted net income attributable to ABB.

Adjusted net income attributable to ABB

is calculated as net income attributable to ABB adjusted for: (i) impairment of goodwill, (ii) losses from extinguishment of debt, and (iii) gains arising on the sale of the Power Conversion division, the equity-accounted investment in Hitachi Energy Ltd., and the Power Grids business, the latter being included in discontinued operations.

Free cash flow is calculated as net cash provided by operating activities adjusted for: (i) purchases of property, plant and equipment and intangible assets, and (ii) proceeds from sales of property, plant and equipment.

RETURN ON CAPITAL EMPLOYED

Return on capital employed (ROCE) is calculated as operational EBITA after tax, divided by the average of the period's opening and closing capital employed, adjusted to reflect impacts from the timing of significant acquisitions/divestments occurring during the period.

Capital employed is calculated as the sum of adjusted total fixed assets and net working capital (as defined above).

Adjusted total fixed assets is the sum of (i) property, plant and equipment, net, (ii) goodwill, (iii) other intangible assets, net, (iv) investments in equity-accounted companies, and (v) operating lease right of-use assets, less (vi) deferred tax liabilities recognized in certain acquisitions.

Notional tax on operational EBITA is computed using an adjusted group effective tax rate multiplied by operational EBITA.

Adjusted Group effective tax rate is computed by dividing an adjusted income tax expense by an adjusted pretax income. Certain amounts recorded in income before taxes and the related income tax expense (primarily due to gains and losses from sale of businesses and in 2022, regulatory penalties in connection with the Kusile project) are removed from the reported amounts when computing these adjusted amounts. Certain other amounts recorded in income tax expense are also excluded from the computation to determine the adjusted Group effective tax rate.

NET DEBT

Net debt is defined as total debt less cash and marketable securities.

Total debt is the sum of short-term debt and current maturities of long-term debt, and long-term debt.

Cash and marketable securities is the sum of cash and equivalents, restricted cash (current and non-current) and marketable securities and short-term investments.

NET DEBT/EBITDA RATIO

Net debt/EBITDA ratio is defined as net debt (as defined above) divided by EBITDA.

EBITDA is defined as income from operations for the trailing 12 months preceding the balance sheet date before depreciation and amortization for the same trailing 12-month period.

NET FINANCE EXPENSES

Net finance expenses is calculated as interest and dividend income less interest and other finance expense.

BOOK-TO-BILL RATIO

Book-to-bill ratio is calculated as orders received divided by total revenues.

Key terms

A

ABB Way

The ABB Way is the common operating model for our divisions, business areas and lean corporate center. It defines “how” we create value. It is built around our purpose and consists of four elements: business model, governance, people & culture and brand.

B

Business areas

ABB has a decentralized business model with 19 divisions grouped into four business areas: Electrification, Motion, Process Automation, and Robotics & Discrete Automation. They complement each other, cooperate and find synergies to create competitive advantages and best serve our customers.

C

Circular economy

In contrast to a linear “take-make-waste” model of production and consumption, the circular economy aims to keep resources in use by designing products for durability, reusability and recyclability. At ABB, circular economy approaches are at the center of the second pillar of our Sustainability Agenda, “preserving resources”. By 2030, we aim to have at least 80 percent of ABB’s products and solutions covered by our Circularity Approach and evaluated against a clear set of key performance indicators (KPIs), corresponding to each stage of the product lifecycle.

D

Divisions

Our 19 divisions represent the highest level of operating decisions within ABB with full ownership and accountability for their respective strategies, performance and resources, as they are closest to our markets and customers. They are grouped into four business areas.

G

Greenhouse gas emissions

Greenhouse gas emissions (GHG) emissions refer to all emissions that have a warming effect on the earth’s surface by trapping heat in the atmosphere. The **Greenhouse Gas Protocol**, which sets global standards to measure and manage GHG emissions, covers seven GHGs: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), as well as gases used in industry, including hydrofluorocarbons (HFCs), per-fluorocarbons (PCFs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃). CO₂, CH₄, and N₂O are released during the combustion of fossil fuels, such as coal, oil, or natural gas. All GHG emissions can be calculated as CO₂-equivalents (CO₂e), which is the metric measure used at ABB to calculate our overall emissions and progress towards our emissions reduction targets.

H

Headcount vs. FTE

Headcount and FTE (full-time equivalent) are both methods that are used to count members within an organization. The key difference is that headcount represents the total number of employees that are working at an organization at any given time, regardless

of their work status being full-time or part-time. It is mainly used in social reporting. While FTE is a metric that is notably used in financial reporting to calculate the total number of full-time hours being collectively worked across an organization, this way making employed persons comparable although they may work a different number of hours per week. For example, if an organization considers 40 hours per week as full-time, a part-time worker employed for 20 hours a week, is counted as 0.5 FTE or as 1 headcount.

M

Materiality/material topics

Materiality refers to the process of identifying the most important topics to be managed and included in reporting. ABB’s material sustainability topics were identified in 2020 through a comprehensive stakeholder engagement process and updated with a double materiality lens in 2023. Based on this analysis, we present an overview of material topics for value creation in the chapter “Material topics”, reflecting both the impact that ABB has on the economy, environment and society including people, and the impact that sustainability has on ABB’s business success.

N

Net zero versus carbon neutral

“Net zero” means that any GHG released into the atmosphere is balanced by an equivalent amount being removed. “Carbon neutral” means that carbon emissions can be offset by a reduction in emissions or a removal of carbon from the atmosphere, for instance through carbon sinks, which absorb more carbon than they emit. At ABB, we have established net-zero

targets. By 2050, ABB targets reducing absolute scope 1 and 2 emissions by 100 percent, and scope 3 emissions by 90 percent.

P

Purpose

ABB's purpose is to enable a more sustainable and resource-efficient future with our technology leadership in electrification and automation. This is why we are in business and is the guiding star for ABB's direction and strategy. Our purpose is based on five themes: creating success for all our stakeholders, addressing the world's energy challenges, transforming industries, embedding sustainability in everything we do, and leading with technology.

S

Science-based targets

Greenhouse gas reduction targets, set by companies, that are in line with what the latest climate science deems necessary to meet the goals of the Paris Agreement, which aims to limit "the increase in the average global temperature to well below 2 °C above pre-industrial levels" and "pursue efforts to limit the temperature increase to 1.5 °C."

Scope 1 GHG emissions

Direct emissions from company-owned and controlled resources, for example, emissions from combustion in owned or controlled boilers, furnaces, vehicles.

Scope 2 GHG emissions

Indirect emissions from the generation of purchased energy (electricity, steam, heat, cooling) from a utility provider.

Scope 3 GHG emissions

All other indirect emissions that are not included in scope 2, occurring in both the upstream and downstream value chain. According to the GHG Protocol, scope 3 emissions are separated into 15 categories, and include, for example, purchased goods and services, business travel and commuting, or use of sold products.

Sustainability

Sustainability or sustainable development can be defined as "meeting the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland Report, 1987). Sustainability is commonly based on three dimensions: economic sustainability, environmental sustainability and social sustainability. At ABB, we strive to embed sustainability in everything we do. Sustainability is core to our company's purpose, strategic direction, operating model (the ABB Way), objectives, and is a key part of the value that we create for our stakeholders.

Sustainability Agenda

In 2020, ABB defined a clear approach to contribute to a more sustainable society. The three pillars of our Sustainability Agenda are "enabling a low-carbon society", "preserving resources" and "promoting social progress", sustained by the foundation of "embedding a culture of integrity and transparency along the extended value chain".

V

Value creation

The process that results in increases, decreases or transformations of inputs and related outputs and outcomes caused by our business activities in the-, medium- and long-term. We not only focus on maximizing shareholder value but work holistically to create financial and sustainability-linked value for all our stakeholders, for ABB, society and the environment. We are convinced that this is not only the right thing to do, but also in the interest of our long-term business success.

About this report

“Integrated Reporting provides an adequate framework to portray our value creation story under the ABB Way and communicate how everything our divisions and business areas do comes together under the common ABB brand. It’s about a strategic approach towards creating and sharing holistic value with our stakeholders.

ABB’s senior management bodies, including our Board of Directors, take responsibility for the accuracy and integrity of the information disclosed within the 2023 ABB Integrated Report, which addresses matters that have or may have a material effect on our value creation model. We believe this report is presented in all material aspects in accordance with the <IR> Framework.”

**– Peter Voser, Chairman
Björn Rosengren, CEO**

ABB’s Integrated Report highlights progress against our priorities and demonstrates how we create value holistically for our stakeholders in the short-, medium- and long-term. As our primary report at ABB Group level, this Integrated Report is crafted for the audience of each of our key stakeholders. That includes our shareholders, customers, suppliers, partners and employees. This report integrates the most important material information about our company’s financial and sustainability performance. It is published in conjunction with our additional, separate reports. The reporting period and scope of the data in this report covers our operations worldwide and provides an overview of financial and sustainability-linked performance for the full calendar year 2023 or reflects the status as of December 31, 2023.

Our Integrated Report contains four main sections:

- Value creation
- Outputs and outcomes
- Good governance
- Performance-based compensation

As a global company with stock exchange listings in Switzerland and Sweden, we adhere to internationally recognized standards and frameworks. This Integrated Report is based on elements of the International Integrated Reporting Framework. Our financial statements are prepared in accordance with US GAAP. In addition to performance measures prepared in accordance with recognized accounting standards, we use alternative (non-GAAP) measures deemed useful in evaluating ABB’s operating results. Please refer to “Supplemental Reconciliations and Definitions” in [ABB’s Q4 2023 Financial Information](#).

Our sustainability reporting is prepared in line with the following internationally recognized standards and legal provisions:

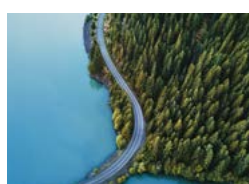
- GRI Standards;
- TCFD Recommendations;
- SASB disclosures;
- UN Global Compact;
- EU Non-Financial Reporting Directive (NFRD);
- EU Taxonomy regulation; and
- Swiss Code of Obligations Art. 964a ss.

The Integrated Report represents an executive summary of the additional separate reports. The full disclosures in line with the Sustainability Frameworks mentioned above can be found in the Sustainability Report. For a full picture of our performance and the value we have created, please consult our entire [annual reporting suite on the ABB website](#).

Our Integrated Report is translated into German, and only the original English version is binding. For environmental reasons, only a few copies of the Integrated Report are printed. All other reports are published as PDF only.

ABB annual reporting suite 2023 and financial calendar

The ABB reporting suite incorporates disclosures of our activities and performance throughout the year. Each of our reports is made electronically available on our [website](#). These include:



Integrated Report 2023

English (PDF)

German (PDF)



Financial Report 2023

English (PDF)



Corporate Governance Report 2023

English (PDF)



Compensation Report 2023

English (PDF)



Sustainability Report 2023

English (PDF)



SEC Filings

Form 20-F (PDF)

Form 20-F (iXBRL)



ESEF version

ESEF version (XHTML)

FINANCIAL CALENDAR AND KEY DATES FOR INVESTORS

Event	2024
Annual General Meeting, Zurich	March 21
Q1 2024 results	April 18
Q2 2024 results	July 18
Q3 2024 results	October 17
Event	2025
Q4 and FY 2024 results	January 30

Caution concerning forward-looking statements

The Integrated Report 2023 includes “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. We have based these forward-looking statements largely on current expectations, estimates and projections about the factors that may affect our future performance, including global economic conditions as well as the economic conditions of the regions and the industries that are major markets for ABB. The words “believe,” “may,” “will,” “estimate,” “continue,” “target,” “anticipate,” “intend,” “expect,” “plan” and similar words and the express or implied discussion of strategy, plans or intentions are intended to identify forward-looking statements. These forward-looking statements are subject to risks, uncertainties and assumptions, including among other things, the following: (i) business risks related to the global volatile economic environment; (ii) costs associated with compliance activities; (iii) difficulties encountered in operating in emerging markets; (iv) risks inherent in large, long term projects served by parts of our business; (v) the timely development of new products, technologies, and services that are useful for our customers; (vi) our ability to anticipate and react to technological change and evolving industry standards in the markets in which we operate; (vii) changes in interest rates and fluctuations in currency exchange rates; (viii) changes in raw materials prices or limitations of supplies of raw materials; (ix) the weakening or unavailability of our intellectual property rights; (x) industry consolidation resulting in more powerful competitors and fewer customers; (xi) effects of competition and changes in economic and market conditions in the product markets and geographic areas in which we operate; (xii) effects of, and changes in, laws, regulations, governmental policies, taxation, or accounting standards and practices and (xiii) other factors described in documents that we may furnish from time to time with the US Securities and Exchange Commission, including our Annual Reports on Form 20-F. Although we believe that the expectations reflected in any such forward-looking statements are based on reasonable assumptions, we can give no assurance that they will be achieved. We undertake no obligation to update publicly or revise any forward-looking statements because of new information, future events or otherwise. In light of these risks and uncertainties, the forward-looking information, events and circumstances might not occur. Our actual results and performance could differ substantially from those anticipated in our forward-looking statements.

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