CEO message

Dear Stakeholders,

One year into ABB's 2030 sustainability strategy, we are off to an excellent start in the pursuit of our ambitious targets. Compared with our baseline year of 2019, we have cut our greenhouse gas (GHG) emissions by 39 percent and reduced lost time from injuries by 44 percent. Last year, we recorded no work-related fatalities for the first time since 2011. We also increased the number of women in senior management positions to 16.3 percent, up from 13.5 percent a year ago, in line with our goal of having 25 percent of senior management roles filled by women by 2030.

Alongside these headline achievements, we made strong progress in laying the foundations to embed sustainability across all of our Divisions as well as our value chain. Our 2030 GHG emissions reduction target was validated by the Science Based Targets initiative (SBTi) as being in line with the 1.5°C goal of the Paris Agreement. We also joined the SBTi's Business Ambition for 1.5°C, an urgent call to action from a global coalition of United Nations agencies and business and industry leaders, in partnership with the "Race to Zero" campaign. Our participation in this initiative reinforces our longstanding support for the 10 core principles of the Global Compact, which covers human rights, labor, environment, anti-corruption and other societal goals.

Reducing customer emissions

While we are on track to achieve carbon neutrality by 2030, our greatest contribution to sustainable development is through our offerings to customers. By 2030, our target is to help our customers reduce their annual GHG emissions by at least 100 megatons, equal to the annual emissions of 30 million combustion cars.

In 2021, we identified a basket of products, services and solutions from our portfolio that deliver substantial reductions in GHG emissions of our customers. Based on sales of ABB offerings from this basket in 2021, we calculated that they will enable our customers to reduce their GHG emissions by 11.5 megatons after the first year. The methodology for this assessment has been verified by a third party. We are well on the way to enabling our

customers to deliver annual savings of 100 megatons of GHG emissions by 2030. In the coming years, we expect savings of GHG emissions from our offerings to increase as new products and solutions are added to the basket.

ABB has assessed the extent to which our activities are reflected in the European Union's new classification system for sustainable economic activities, known as the "EU taxonomy." We found that 36 percent of our revenue in 2021 was eligible under the objective of "climate change mitigation." We consider this to be a significant underestimate of the contribution that our products, solutions and services make in reducing our customers' carbon footprint and in aligning their activities with the EU taxonomy. We estimate that a further 31 percent of ABB's revenue could be attributed to solutions that are indirect enablers of climate change mitigation, which would mean that 67 percent of our revenue comes from solutions that mitigate climate change (see ABB's EU taxonomy disclosure).

Towards circular business models

A second goal of our 2030 sustainability strategy is to preserve resources at every stage of the value chain. In December 2021, we unveiled a new company-wide approach to drive circularity in our own, our customers' and our suppliers' operations. By 2030, at least 80 percent of ABB's products and solutions will be evaluated against a clear set of key performance indicators (KPIs), corresponding to each stage of the product lifecycle. We will also send no waste to landfill, wherever this is compatible with local conditions. Today, 40 percent of our around 440 sites around the world are already sending zero waste to landfill.

Along with the actions we are taking to reduce carbon emissions and preserve resources, we aim to promote social progress across our value chain as well as in the more than 100 countries where ABB is present. Our human rights training program is embedding awareness and expertise in all our businesses across the globe. We now run community engagement programs in more than 40 countries where we do business, providing support for education, diversity and inclusion, poverty alleviation and disaster relief.

We continued to train, coach and assess selected high-risk suppliers on sustainability topics, keeping us on track towards our goal of covering 80 percent of supply chain spend in focus countries by 2030.

Building safe, equitable and inclusive working environments

Our highest priority at ABB is the safety of our people. In 2021, we reduced the number of lost-time injuries per 200,000 hours worked to 0.14 from a 2019 baseline of 0.25. Our high level of preparedness also helped us protect most of our people from COVID-19 and keep our operations running. Tragically, we lost several colleagues to COVID-19. On behalf of ABB, I extend our deepest sympathies to their families.

As part of our commitment to establish a more inclusive and equitable working environment, we not only increased the proportion of women in senior management

positions, as mentioned above, but we also launched a new gender-neutral parental leave program for all employees around the world.

To drive the achievement of our sustainability goals, we are progressively integrating KPIs for sustainability into our performance management planning. Our Business Areas now report on these in conjunction with their financial KPIs. Sustainability KPIs are also part of our senior management incentives, and a selection of KPIs is included in our quarterly financial reports.

Finally, we launched our Sustainability Changemaker Award, inviting our people to submit ideas and innovations that support the achievement of our 2030 sustainability goals.

On behalf of the ABB Executive Committee, I want to thank our people for their excellent performance in 2021 and all of our stakeholders for their collaboration, support and trust. Together, we are leading the way to a sustainable future.

Best regards,

Björn Rosengren
Chief Executive Officer

Sustainability at ABB

About ABB

ABB is a leading global technology company that energizes the transformation of society and industry to achieve a more productive, sustainable future. By connecting software to its electrification, robotics, automation and motion portfolio, ABB pushes the boundaries of technology to drive performance to new levels. With a history of excellence stretching back more than 130 years, ABB's success is driven by about 105,000 talented employees in over 100 countries.

What sustainability means to ABB

Sustainability is central to ABB's Purpose and the value that we create for our stakeholders. To us, sustainable development means progress towards a healthier and more prosperous world, today and for future generations.

A sustainable society balances the needs of society, the environment and the economy. ABB achieves this by embedding sustainability in our value chain and by pushing the boundaries of technology to provide our customers with solutions that help preserve the earth's natural resources while contributing to an economically vibrant, low-carbon society.

Our focus on sustainability includes our commitment to responsible business practices. ABB's corporate governance and operating model are underpinned by integrity and transparency. Promoting social progress for our people and in the communities in which we operate is central to our Purpose and our identity as a company.

ABB's 2030 sustainability strategy positions our company to address the world's greatest challenges. As a technology leader, we focus on those areas where we can make the biggest impact: enabling a low-carbon society, preserving resources and promoting social progress, while complying with relevant regulations and applying our own standards wherever we operate. To meet our 2030 sustainability targets, we are taking action across the value chain because we believe we can have a greater impact by acting in coordination with our customers, suppliers and other stakeholders.

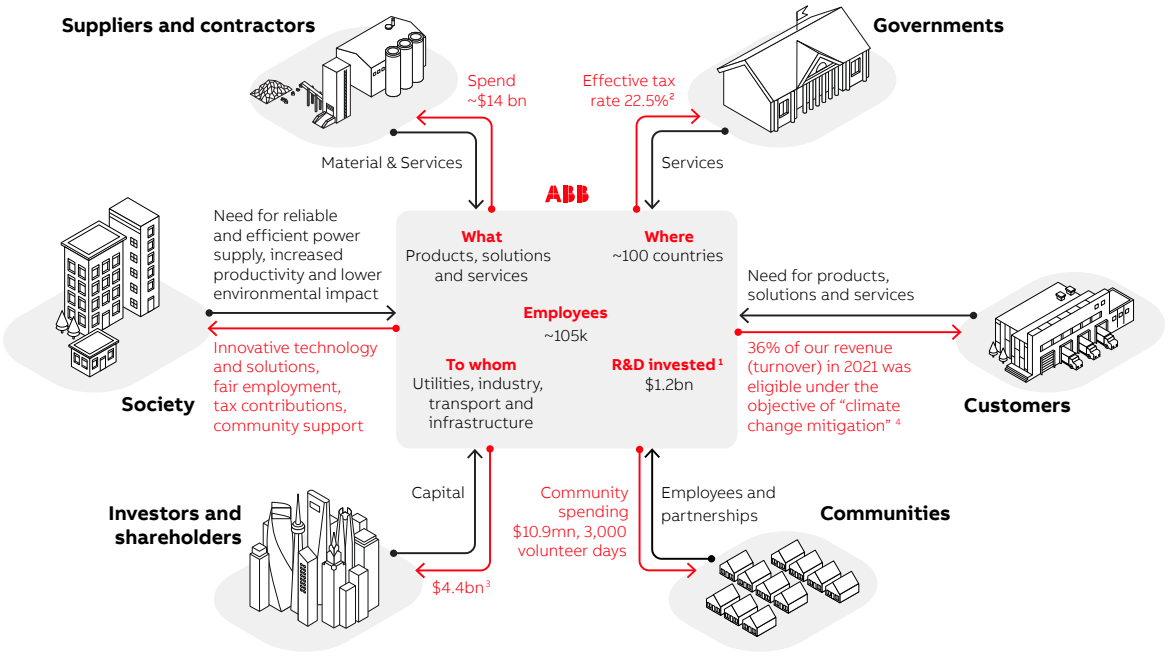
ABB has also assessed how its strategy and business could be affected by climate change. Based on the various scenarios, we consider it most unlikely that climate change would pose an existential threat to our business.

In 2021, we initiated our 2030 sustainability strategy by establishing new sustainability governance structures, by beginning to work towards our new targets, and by carrying out pilot studies for additional new targets. In the course of the year, concerted efforts were made to build awareness among our stakeholders of the scope of our ambitions.

Business model and value chain

Our operating model, the ABB Way, has our Purpose at its core and serves as a framework for implementing our strategy. By pushing the boundaries of technology and embedding sustainability in everything we do, we are raising the performance of our market-leading and empowered businesses to new heights. Alongside our values, governance framework and strong brand, the ABB Way is making ABB a more transparent and efficient company, driving a performance culture and creating value for all of its stakeholders.

ABB value chain



1 Non-order related R&D expenses
2 Adjusted Group effective tax rate, adjusted primarily to exclude gains and losses on sale of businesses
3 Consists of $2.7bn for the share buyback program and $1.7bn dividend payments
4 See chapter on EU taxonomy

Sustainability governance

With the organizational changes made in 2021, accountability for the implementation of Group requirements for health, safety and the environment (HSE) was transferred to the Business Areas and Divisions. The ABB Group Sustainability and HSE & Security functions are responsible for the development and coordination of the Group's policies and programs that address matters related to health, safety, the environment and corporate responsibility. These functions report directly to the Chief Communications and Sustainability Officer, who is a member of the Executive Committee.

Sustainability governance

Board of Directors

The **Governance and Nomination Committee** is responsible for overseeing corporate social responsibility (including health, safety and environment as well as sustainability), while ultimate responsibility for ABB's sustainability strategy, its sustainability targets and its annual Sustainability Report lies with the entire **Board of Directors**. The **Compensation Committee** ensures that ABB's remuneration policies are linked to the achievement of its sustainability targets.

Sustainability Board (full Executive Committee)

Implementation of the strategy is led by ABB's **Sustainability Board**, comprising the full Group Executive Committee. The Sustainability Board oversees policies and programs, reviews developments, and monitors progress towards targets.

HSE Council

The four Business Area HSE managers and the corporate HSE & Security function work together in an **HSE Council** that convenes twice yearly. The council reviews the function's steering committees, approves and monitors the common Annual Plan, and assesses risks and opportunities for the company. The work of the HSE Council is overseen by the HSE & Security Board, which meets twice yearly to perform a management review and consists of the four Business Area Presidents, the CEO, the Chief Communications and Sustainability Officer and the Head of Corporate HSE & Security.

Sustainability Council

The Sustainability Board is advised by a **Sustainability Council**, consisting of the Group Head of Sustainability and representatives from our four Business Areas. The Sustainability Council's purpose is to ensure alignment across Business Areas on the strategic direction of sustainability, common topics and sharing of best practices.

Business-level performance management

Efforts within the Business Areas are supported by a strong set of policies and procedures, along with sustainability leads in each Business Area and Division, responsible for driving the sustainability agenda and for representing the Division in Business Area and Group-wide discussions.

Topic-specific work groups

Thematic work groups are appointed by the Sustainability Council to provide expertise and develop methodologies on topics and initiatives linked to the sustainability targets. The work groups ensure their operational definition and implementation action plans. They share best practices and propose relevant KPIs.

Remuneration and incentives

In 2021, as in prior years, safety was one of the KPIs in our management incentives. As of 2021, additional sustainability KPIs are progressively being incorporated into our senior management incentives. For further information, please refer to "Senior Management Sustainability Incentives" in this report.

Division-level implementation

Based on the Group's and Business Areas' policies and procedures, each Division has developed its own sustainability governance and organizational model, suited to its operational approach. In some Divisions, a network of "sustainability champions" was formed and cross-Division workstreams have been created to ensure alignment and the sharing of best practices and to coordinate sustainability programs.

ABB employs a worldwide network of HSE and sustainability specialists, who report to each of the Business Areas and support the Sustainability and HSE & Security functions. In each of the regions in which ABB operates, ABB employs HSE & Security advisors or managers. The country and regional specialists are supported by sustainability officers and health and safety advisors. Overall, the sustainability network is supported by some 600 full-time and part-time employees. The impact of ABB's sustainability network has been expanded by our new strategy, which mobilizes ABB employees and all functions across our four Business Areas and throughout our corporate organization to act on our sustainability initiatives on a global basis.

In 2021, the Sustainability Council focused on deploying the action plans linked to the major targets of ABB's 2030 sustainability strategy - in particular, ABB's goals for carbon neutrality, on developing ways to measure ABB's contribution to reducing our customers' GHG emissions, and on further embedding circular economy principles within our businesses.

In 2021, our Sustainable Supply Base Management (SSBM) system replaced our Supplier Sustainability Development Program (SSDP). The process is governed by a steering committee and a working group comprised of representatives from the Business Areas and the Sustainability function. For further information, please refer to Responsible Sourcing in this report.

Contribution to the Sustainable Development Goals (SDGs)

Adopted by the member states of the United Nations in 2016, the 17 SDGs were developed as a blueprint for achieving peace and prosperity by 2030. ABB continues to align its sustainability strategy with the SDGs on which we can have the greatest impact.

In 2021, ABB contributed to the global effort to meet the SDGs by supporting policies that promote the electrification of land-based and marine transport systems, improvements in energy efficiency in industry and buildings, and industry-specific sustainable technologies. For example, we are promoting high electric charging infrastructure targets (including for e-trucks) in the revision of the EU's Alternative Fuels Infrastructure Regulation (AFIR), which is currently in the legislative process.

ABB also worked within industry associations to accelerate sustainable development. For instance, ABB is using its position as Chair of the Sustainable Mobility Task Force at Orgalim, Europe's technology industry association, to promote ambitious decarbonization and electrification commitments for road transport. ABB also participated in sector-specific working groups on energy, mobility, buildings and industry, which supported a major study on fighting climate change in Germany. ABB additionally became a founding member of the Zero Emission Transportation Association, an advocacy organization in the United States.

In 2021, as the world's major economies launched plans for sustainable development in the post-COVID-19 era, ABB engaged in an assessment of the associated risks and opportunities. Initiatives assessed included Next Generation EU, the EU's Green Deal policy initiatives, and the Infrastructure Investment and Jobs Act in the US, among others.

STRATEGY PILLAR OVERVIEW

We enable a low-carbon society

With our leading technologies, we are partnering with our customers and suppliers to reduce their emissions, and we are working to achieve carbon neutrality in our own operations by 2030.

Target overview

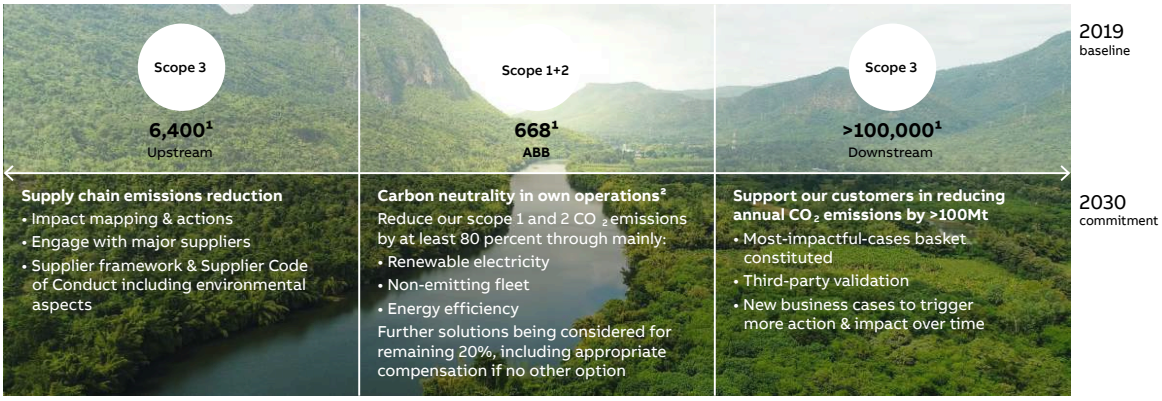
- **Supporting customers** to reduce their annual GHG emissions by **>100 Mt**
- Reducing **ABB's own GHG** emissions by **at least 80 percent**
- Engaging systematically with impactful suppliers on **GHG emissions reduction**

Ahead of the COP26 climate conference in November 2021, ABB CEO Björn Rosengren joined the WEF Alliance of CEO Climate Leaders in signing an open letter to governments proposing bold actions to achieve a net-zero economy by 2050. With our science-based emissions reduction targets, we are part of the United Nations Global Compact's Business Ambition for 1.5°C, as well as the UN-backed Race to Zero.

We have committed to three initiatives of the Climate Group of global companies – EV100, RE100 and EP100. In line with these commitments, by 2030 we will electrify our fleet of more than 10,000 vehicles, source 100 percent of our electricity from renewables, and improve energy productivity across our operations. In 2021, we refitted three major ABB facilities under the Mission to Zero™ program to reduce their carbon footprints and have plans to refit a growing list of sites by 2024. We are also on track to electrify our vehicle fleet, and we are engaging our suppliers on ways to evaluate and reduce their emissions.

While these are critical initiatives, we make our biggest impact through the leading technologies we provide to our customers. These technologies are driving the energy transition and reducing the energy consumption of industries, buildings, infrastructure and transport. Together, these sectors account for nearly 75 percent of global energy consumption.

Commitment to reducing emissions across the value chain



1 Greenhouse gas (GHG) emissions (kilotons CO_2 equivalent)
2 Identified areas where we can reduce our Scope 1 and 2 CO_2 emissions by at least 80 percent, and we continuously work on opportunities to do more

In 2022, we will further develop the action plans of each of our Divisions for reducing our Scope 1 and 2 GHG emissions. Additionally, we will continue to expand and refine the range of high-impact products, services and solutions from our portfolio that deliver significant reductions in GHG emissions for our customers. A working group is currently determining the steps necessary to achieve effective results on the supply side and engaging with selected suppliers.

ABB's activities aimed at enabling a low-carbon society support the achievement of the United Nation's Sustainable Development Goals, in particular, goals 6, 7, 9, 11, 12, 13 and 17.

CUSTOMER EMISSIONS

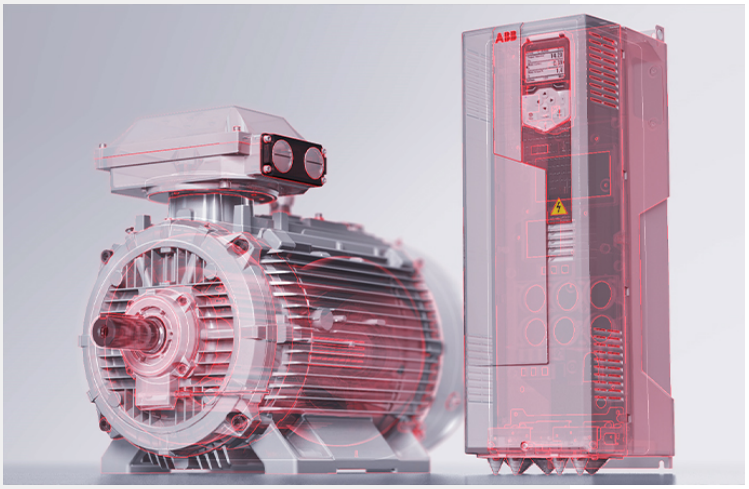
Supporting our customers in reducing their annual greenhouse gas emissions

Target: By 2030, we will support our customers in reducing their annual GHG emissions by at least 100 megatons

We are aiming to enable our customers to reduce their annual GHG emissions by an amount equivalent to that generated by 30 million internal combustion cars. These indirect, downstream GHG emissions represent by far ABB's largest potential impact on climate change.

CASE STUDY

Driving efficiency improvements for industry, cities and transport



ABB's Motion Business Area enables its customers to reduce their carbon emissions with a complete range of high-efficiency motors and drives. Found in a broad range of applications in industry and buildings, electric motors account for 45 percent of the world's consumption of electricity, meaning that even small efficiency improvements offer the potential for huge energy savings.

In Switzerland in 2021, Model Group, a manufacturer of paper packaging, deployed energy-efficient motors and drives from ABB to upgrade its paper machines. Papermaking is an energy-intensive process, and by replacing 36 motors and drives in its factory with new, IE4 super-premium-efficiency models and multidrives, Model Group has reduced its energy consumption by nearly 900,000 kWh per year – equivalent to the power consumption of about 200 single-family homes.

ABB Motion's work with Yara, a mineral fertilizer producer in Norway, illustrates another way we are helping customers save energy. Yara has begun to refit its largest production site with high-efficiency motors and drives from ABB; it has upgraded roughly 1,000 of the facility's motors so far. In the project's next phase, another 2,500 motors will be replaced with ultra-premium-efficiency IE5 SynRM motors and drives. The annual power savings at the company's site in Porsgrunn are expected to be on the order of 32 to 40 GWh, resulting in an annual CO_2 emissions reduction of 12 to 19 kilotons.

With these technologies, ABB is driving major efficiency improvements for industry, cities and transport. In 2021, ABB Motion launched the Energy Efficiency Movement. The goal of this multi-stakeholder initiative is to raise awareness of how advanced technologies can mitigate climate change and propel collective action to reduce global energy consumption.

We intend to achieve this target by equipping our customers with innovative solutions from all areas of our business. Our portfolio includes such energy-efficient innovations as robots equipped with regenerative braking and software for smart energy management, electric propulsion systems that can substantially reduce the emissions of ships, and cutting-edge technologies to detect methane leaks. Our advanced automation, digitalization and electrification solutions support traditionally energy-intensive industries on their journey to more sustainable operations.

Among our most important technologies for reducing energy consumption are our intelligent **motion** solutions, including **variable speed drives** for electric motors, which enable significant electricity savings. We also facilitate the reduction of emissions from cars, buses and heavy trucks with our market-leading portfolio of infrastructure solutions for AC and DC electric vehicle charging. And, crucially, we support the energy transition with technologies that integrate power from intermittent renewable sources into the electricity grid.

CASE STUDY

Automated solutions that boost productivity and reduce emissions

ABB's Process Automation Business Area's integrated automation, electrification and digitalization solutions have a central role to play in enabling more sustainable operations in the heavy industries. For customers in process, marine and hybrid industries, Process Automation's offerings – which include such ABB technologies as distributed control systems, marine propulsion, high-power rectifiers and data analyzers – enable their operations to be more productive while reducing environmental impacts.

In 2021, Process Automation's Process Industries Division launched ABB Ability™ eMine – a purposeful approach and an integrated portfolio of electrification and digital systems to electrify mining processes, from hoisting and grinding to hauling and material handling. As an example of what it achieves, the pilot technology eMine™ FastCharge is set to be the world's fastest and only fully automated charging system for mining trucks, offering up to 600 kW of power when it comes to the market. Process Automation is working closely with original equipment manufacturers Stäubli and MEDATech to ensure the requisite infrastructure is available for the sector to electrify a wide range of equipment, from drills to excavators and loaders. This infrastructure also includes solutions such as the eMine™ Trolley System, which can reduce diesel consumption, and thus GHG emissions, by up to 90 percent with trolley-assisted hauling, compared to diesel-only operations.

Drawing on ABB's 130 years of experience in the mining industry, eMine™ provides integral design planning that serves to maximize the value of electrification. By fully integrating electrification and digital systems from the mine to the port, eMine™ reduces CO_2 emissions as well as costs, promotes health and safety, and improves mine performance. It is underpinned by ABB Ability™ MineOptimize, a platform that optimizes the design of the plant or mine and facilitates the transition to the digital, CO_2-free mine of the future.

As an example of how Process Automation is making shipping more sustainable, the Business Area's Marine & Ports Division is working to deliver an integrated electric propulsion system and advanced vessel control technology for the pioneering eWolf tugboat being built for Crowley Maritime in the United States. Commissioned to support ship arrivals and departures in California's Port of San Diego, the eWolf will be the first all-electric, battery-powered harbor tug ever built and operated in the US, and the third of its kind in the world. The solution will include a 6 MWh energy storage system, providing power to the propulsion system almost instantaneously, making ship-assist operations more efficient and emission-free. The battery lets the tug complete a full day of typical work before needing to recharge, while the vessel's all-electric propulsion system is expected to eliminate the equivalent of over 3,100 metric tons of CO_2 emissions over its first 10 years of use.

In 2021, we identified a basket of these and other high-impact products, services and solutions from our portfolio that deliver substantial reductions in GHG emissions for our customers. Based on sales of ABB offerings from this basket in 2021, we calculated that they will enable our customers to reduce their GHG emissions by 11.5 megatons after the first year. The methodology for this assessment has been verified by a third party. Assuming a conservative 10-year lifetime for these offerings, the 11.5 megatons of annual savings would lead to a cumulative reduction of more than 100 megatons of GHG emissions over the 2021-2030 period from products sold in 2021 alone.

Applying the same logic to our 2030 target of 100 megatons of GHG emissions saved annually by our customers, the total impact of our products sold in 2030 will represent an emissions saving of over 1000 megatons (using the same 10-year average lifetime). In the coming years, we expect savings of GHG emissions from our offerings to increase as new products and solutions are added to the basket.

The process of estimating emissions reductions related to the use of our products, services and solutions is not without its challenges. The precise impact of ABB's solutions on GHG emissions depends heavily on the operational profile of a particular customer's assets. In 2022, we will seek to improve our estimates, not only by developing stronger internal GHG measurement methodologies, but also by working with our customers to facilitate the joint management of emissions data. To understand the methodology for calculating this target, please view the page "**2030 targets explained** " in this report.

CASE STUDY

Innovative charging infrastructure that brings e-mobility to the masses

ABB Electrification's E-mobility Division is a world leader in electric vehicle charging infrastructure, offering a full range of charging and electrification solutions for electric and hybrid-electric cars, buses, vans and trucks. ABB entered the e-mobility market in 2010 and as of December 31, 2021, has sold more than 500,000 electric vehicle chargers across more than 85 markets; these include over 25,000 DC fast chargers and 500,000 AC chargers, including those sold through Chinese EV charging company, Chargedot, in which ABB holds a majority stake.

As governments around the world enact policies that favor electric vehicles and charging networks in order to combat climate change, ABB in 2021 launched the world's fastest all-in-one electric car charger, the Terra 360, which can add up to 100 kilometers of range to a vehicle in less than three minutes. To meet the growing demand for EV charging infrastructure that is fast, convenient and easy to use, the Terra 360 can simultaneously charge up to four vehicles, making it ideal for charging private vehicles as well as fleets of cars, vans and trucks.

ABB's high-power chargers are being deployed around the world through the company's partnerships with international charging operators such as IONITY and EVgo. Capable of charging both commercial and passenger vehicles that use any of the major charging standards, ABB's high-power chargers will support the new GRIDSERVE Electric Highway charging network now being built in the United Kingdom.

In 2021, ABB Electrification entered an agreement with Norway's largest grocery wholesaler, ASKO, and its owner, NorgesGruppen, to supply charging infrastructure for its growing fleet of electric trucks. ASKO plans to achieve zero-emission distribution of its groceries by 2026. The first ABB HVC 150C (150 kW) high-power chargers are already in operation at ASKO's distribution center in Oslo, charging two battery-electric trucks, with many more to come. Deploying the ABB Ability™ offering of digital solutions and services, the chargers offer web-enabled connectivity that allows network operators to perform remote monitoring and configuration of charge points, thereby minimizing downtime and increasing efficiency. Norway has itself installed more than 1,000 ABB fast chargers during the last decade as part of its EV infrastructure.

The successful transition from traditional combustion engine vehicles to electric vehicles will depend on the deployment of reliable, widespread charging infrastructure. But building new charging stations can also require new connections to electric grids. Solutions from ABB can strengthen the distribution network by integrating renewables, energy storage and energy management, which can then be coupled with future-proof EV chargers that will be ready for the next generation of electric vehicles.

To help our customers leverage the full benefits of our products and services for their operations, we stay in close communication with them whenever possible. Our EnergySave Calculator is among the engagement tools that ABB relies on for this purpose. It helps customers calculate how much energy and money they could save by using variable speed drives from ABB. EnergySave offers a user-friendly way to compare modern AC drive controls with traditional flow control methods found in a range of applications, such as pumps, fans and compressors. The algorithms deployed by the calculator are refined and enhanced on an ongoing basis, with input from pump and fan manufacturers, to ensure a high level of accuracy.

CASE STUDY

Enabling the manufacture of vital low-carbon technologies

ABB's Robotics & Discrete Automation Business Area serves a diverse range of industries, from automotive and electronics to logistics, with innovative solutions that help reduce GHG emissions. It achieves this by enabling higher productivity, reductions in production waste, and improvements in product quality and durability.

In 2021, Robotics & Discrete Automation's state-of-the-art PixelPaint robotic non-overspray technology was recognized with an Innovation and Entrepreneurship in Robotics & Automation Award for Outstanding Achievement. PixelPaint's inkjet technology conserves resources by eliminating overspray. By increasing the productivity of customized paint jobs by 20 to 100 percent, it significantly reduces the CO_2 emitted from painting processes used by the automotive industry.

The Business Area's pioneering robotics, machine automation and digital services also enable a low-carbon society by allowing ABB's customers to efficiently produce some of the key technologies needed to reduce emissions and save energy and resources. For instance, automated production processes developed by ABB and Absolicon have radically reduced the cost of producing high-quality solar collectors, making it possible for solar energy to compete with conventional heating. At Absolicon's factory in Härnösand, Sweden, a robotic production line now uses two ABB robots to produce a solar collector panel every six minutes; previously, the line produced only three units a day using manual methods.

The project's next phase will supply complete robotic production lines to manufacturers across the globe to help make sustainable solar energy a viable form of heating worldwide. The first installation has already been delivered to a customer in China, and framework agreements for new production lines have now been signed with businesses in a dozen countries.

In 2021, ABB Robotics & Discrete Automation partnered with Intelligent City, which is seeking to transform the world's foremost source of greenhouse gas emissions – the construction industry. On the company's shop floor in Vancouver, Canada, ABB robots process, handle and assemble large sections of timber in a production line for prefabricated structural modules that can be used to construct buildings up to 18 stories tall. This solution also makes use of ABB's RobotStudio offline programming software to plan tasks and movements and to design the factory and the production line.

Robotic automation offers significant potential to enhance productivity, efficiency and manufacturing flexibility throughout the construction industry, including automating the fabrication of modular homes and building components off-site, robotic welding and material handling on building sites and robotic 3D printing of houses and customized structures. As well as making the industry safer and more cost effective, robots are improving sustainability and reducing environmental impact by enhancing quality and cutting waste.

ABB EMISSIONS

Achieving carbon neutrality across our operations

Target: By 2030, we will achieve carbon neutrality across our own operations

We have committed to neutralizing ABB's carbon footprint by 2030. From 2019 to 2021, we already reduced our own GHG emissions by 39 percent. In 2021, we reduced our GHG emissions by 28 percent. Our 2019 baseline for our Scope 1 and 2 GHG emissions was 668 kilotons, and we have already identified areas where we can reduce these direct and indirect emissions by at least 80 percent by 2030. These areas include the use of renewable energy, electrifying our entire vehicle fleet, and implementing energy-efficiency measures at our sites. Further solutions for the remaining emission will be explored. In the event that no other solutions are found, we will look for appropriate offset options.

In 2021, we worked to translate ABB's target of carbon neutrality in our own operations and our commitments to the EV100, RE100 and EP100 initiatives, among others, into specific programs and KPIs, for implementation by our Group's Business Areas and Divisions. In addition, we created an ABB-wide carbon emissions baselining and forecasting roadmap, which sets forth expected progress on a year-by-year basis at a granular level.

CASE STUDY

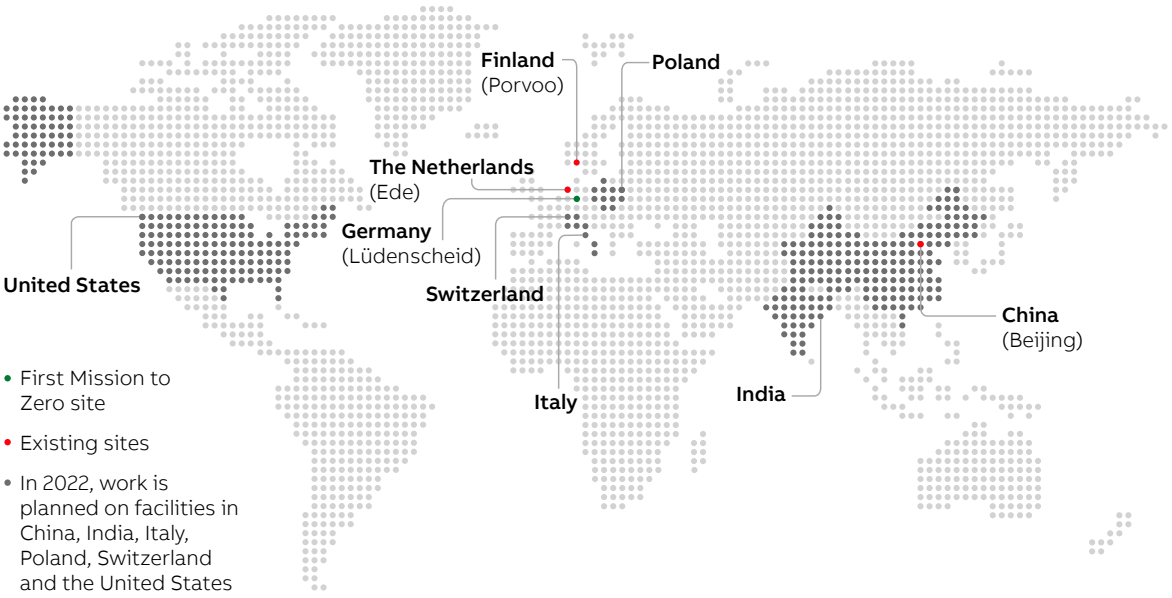
An innovative arrangement to reduce ABB's carbon emissions

ABB India's Distribution Solutions facility in Nashik (built in 1978) developed and implemented a unique project in 2021 to reduce the site's carbon emissions, by installing four photovoltaic power plants, with a capacity of 1,400 kWp, generating enough energy to cover up to 40 percent of the site's electricity needs.

This installation, carried out in different steps and completed in November 2021, has already saved 1,570 tons of GHG emissions in 2021. ABB will enhance this project by deploying a digital building and energy management solution, to further optimize and minimize energy consumption and costs.

In the course of making a major contribution to ABB's commitment to achieve carbon-neutral operations by 2030, the facility became the first of the approximately 10,000 factories that lie within the Nashik Industrial Area to be recognized with a gold certification by the Indian Green Building Council.

Mission to Zero sites



In 2021, we continued to improve the energy efficiency of ABB sites around the world. More than 100 energy-efficiency projects were implemented in 2021 across ABB, saving 17.5 GWh of energy. Additional energy reviews and audits at both the Business Area level and Group level are underway or scheduled. The results will be used to implement operational and infrastructure changes to reduce energy consumption. Related projects include installing energy management and monitoring systems, building on-site capacity to generate renewable energy, upgrading motors and drives, making changes to production processes and simply upgrading to LED lighting. Also in 2021, the ABB Real Estate function's energy savings program reaped a total of 83.5 GWh per year and $18.5 million in savings[1] between 2018 and 2021 from 243 completed, ongoing and

1 The reported figures should be considered as an indication of the potential impact resulting from EE-projects within ABB worldwide and not as resulting from project-specific measurement and verification (M&V) activities.

planned energy-saving projects in ABB buildings worldwide. Even considering the decreasing emission intensity of the energy purchased globally by ABB, these projects enable us to cut our GHG emissions by 22.2 kilotons[2] per year.

ABB electricity consumption and share of green electricity in 2021

We increased our share of certified green and self-generated solar electricity

from **31%** in **2020**

to **51%** in **2021**

In total, ABB consumed

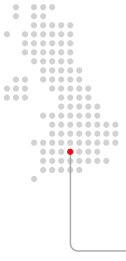
3,500,000
gigajoules (GJ)
of electricity in **2021**

The process of electrifying vehicle fleets across our Group is well underway. ABB is on track to fulfill its commitment to the EV100 initiative to electrify its fleet of more than 10,000 vehicles by 2030, with actions currently ongoing across the world, including Sweden and the United Kingdom. In 2021, 44 percent of ABB's global new vehicle orders were for either EVs or plug-in hybrid vehicles (PHEVs).

Sweden and United Kingdom fleet conversion

512
company cars

180
fully electric
15
plug-in hybrid



38%
of fleet electrified

United Kingdom

Sweden

60%
of fleet electrified

666
company cars

139
fully electric
263
plug-in hybrid

Similar initiatives are being planned or are underway at many additional ABB sites.

2 Regardless of the related energy source, the CO_2 emissions resulting from energy savings are estimated at a given emission intensity of 0.266 kilotons CO_2 per GWh – the average emission intensity of the ABB Group in 2020 (Source: ABB Sustainability Report 2020).

Our direct emissions of GHGs from on-site handling of sulfur hexafluoride (SF_6), as well as leakage of SF_6 from our production processes, were also addressed in a dedicated, global program. In total, we reduced ABB's direct emissions of SF_6 by 32 percent over the past year. In 2021, we emitted 2.21 tons of SF_6, down from 3.26 tons in 2020.

CASE STUDY

Blazing a trail to the low-carbon future

In 2019, ABB launched the Mission to Zero™ program at its Lüdenscheid, Germany site to meet the rising demand for sustainable, future-proof smart buildings. Mission to Zero provides comprehensive consulting and delivery services, technology, and financing for facilities seeking to reduce emissions and achieve carbon-neutral operations.

The program continues to expand, with three additional sites added in 2021 – Beijing (China), Porvoo (Finland) and Ede (Netherlands) – all of which are running ABB digital and smart energy management solutions. At present, and in addition to Nashik (India), the program is onboarding ABB sites in Dalmine and Frosinone (Italy), Senatobia, Mebane, Jonesboro and Vega Baja (USA), Xiamen (China) and Schaffhausen (Switzerland). While these examples illustrate how the Mission to Zero program will play a key role in helping ABB meet its commitment to carbon-neutral operations by 2030, its ultimate goal is to build on that success and make it available to our customers and suppliers in support of the global effort to mitigate climate change.

The Mission to Zero program builds on that success and seeks to deploy replicable, scalable and profitable solutions worldwide, which can also be integrated with third-party solutions. The program enables commercial and institutional buildings to be smarter, safer and more sustainable via a bundled modular offering of digital products and solutions that are easy to install and operate. Since many customers lack expertise in energy management, ABB offers an end-to-end approach and one-stop shopping for building automation and smart energy management solutions. These include ABB Ability™ Building Ecosystem, NeoGear low-voltage switchgear solutions and ABB Ability Energy and Asset Manager.

EMISSIONS IN THE SUPPLY CHAIN

Engaging with our suppliers to reduce their emissions

Target: We engage with our suppliers to amplify our impact in reducing emissions across the supply chain

To enable a low-carbon society, we also need to reduce emissions in our supply chain. When developing our science-based target, we estimated GHG emissions in our supply chain and are now working with our commodity experts and suppliers to develop a systematic approach to reduce these emissions. We have set a science-based target to cut our overall Scope 3 emissions by 15 percent by 2030, which will include important contributions from our suppliers.

Over the course of the year, ABB's four Business Areas began preparing to engage with suppliers on the topic of emissions. These preparations included forming dedicated teams and establishing priorities and action plans. Mapping potential impacts of commodities and processes in our supply chain, identifying the current performance of major suppliers, and evaluating their existing or planned emission reduction programs will form the basis for further discussions and help us finalize our overall emissions reduction goal. Furthermore, ABB has built up its internal capacity to conduct comprehensive life cycle assessments (LCAs). These LCAs are revealing the total contribution of raw material sourcing to the overall carbon footprints of our products, while also pointing out where we can conduct meaningful interventions with suppliers.

ABB's supply chain emissions reduction efforts have implications for our business. Above all, they will lead to further review and evaluation of our suppliers' positions and actions on sustainability topics. Eighty percent of our supply chain emissions (Scope 3) come from raw materials (62 percent) and transport (15 percent). The most important materials for our business are steel, aluminum, plastics and copper, in that order.

For more information about ABB's comprehensive approach to supplier engagement, please refer to "**Responsible Sourcing**" in this report.

03
Preserving resources

STRATEGY PILLAR OVERVIEW

We preserve resources

To help preserve the earth's resources for future generations, ABB has defined a systematic, company-wide approach to circularity. We seek to minimize the quantity of resources consumed and to keep resources in use across the value chain.

Target overview

- Covering **at least 80 percent** of ABB products and solutions with **circularity approach**
- Sending **0 waste** from own operations to landfill
- Ensuring **80 percent** of supply spend in focus countries is covered by **SSBM**

By 2030, at least 80 percent of our products and solutions will be covered by our circularity approach and evaluated according to a set of KPIs, corresponding to each stage of the product lifecycle.

In our own operations, we will also send zero waste to landfill or to incineration without energy recovery, wherever this is compatible with local conditions and laws. Today, 40 percent of around 440 ABB sites around the world are already sending zero waste to landfill.

At the same time, we are making a concerted effort to identify our use of restricted or hazardous substances, which we aim to reduce and, where possible, eliminate from our operations.

ABB's circularity approach will be extended to our suppliers as well. Through a range of initiatives that we are implementing across our supply chain, we will ensure that the materials we use form part of our circularity approach, among other objectives. For further information on other objectives related to our supply chain, please refer to "Responsible Sourcing" in this report.

Our approach is built on principles that will drive circularity in our own operations and simultaneously enable our customers to become more circular. By 2030, we will additionally seek to develop innovations that will enable new, circular business models. These innovations will address all stages of a product's lifecycle. All of our KPIs in this area will be based on a clear and transparent scoring system that considers eight circularity levers – two for each stage of the product lifecycle. This systematic, holistic approach will allow for continuous improvement and tracking of progress.

For 2022, our main objective is to start the implementation of our circularity approach as follows:

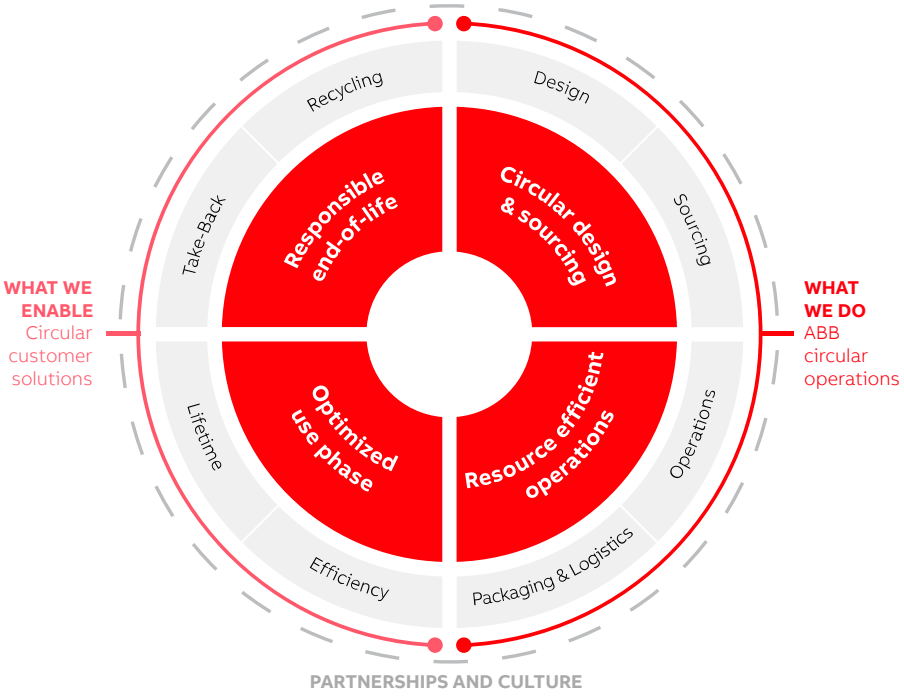
- Set up common governance rules for our circularity approach
- Continue mapping our initial baseline
- Expand our assessment of each of the eight circularity levers across all four Business Areas and set priorities in each Division

CIRCULARITY

Circularity approach

Target: 80 percent of ABB products and solutions are covered by our circularity approach

ABB circularity approach



Our comprehensive circularity approach is built around a framework that drives circularity in our own operations and enables our customers to become more circular. By 2030, we aim to innovate towards new circular business models, covering all stages of the product lifecycle:

- We consider the entire product lifecycle at the design and sourcing stage. Our goal is to develop products and solutions that can be produced in a resource-efficient manner that minimizes the use of virgin or hazardous materials. At the same time, we ensure that our product design takes various aspects of circularity into account, such as extended lifetime, repairability, modularity and recyclability, among others.
- In the production phase, we work to eliminate or recycle any waste generated by our processes and packaging.

- Once our products are in service, we help our customers maximize the efficiency and lifetime of their equipment.
- At the end of the product lifecycle, we seek to ensure that products can be refurbished whenever possible, or dismantled and recycled. Steel, aluminum, copper and plastics make up the majority of materials used in our products. Most of these materials are reclaimable at the end of a product's life, and we design our products with this in mind.

Examples of how we cover the four stages of the circularity approach at ABB

Product design and sourcing

In order to make our product design and sourcing processes more circular, in 2021, we continued to implement a series of projects intended to identify fully renewable, recyclable or biodegradable resource inputs for our manufactured products. At ABB's site in Porvoo, Finland, we are using post-consumer recycled (PCR) plastics for the manufacture of box supports and distance rings for our System Ideal range of flush-mounted electrical boxes. The System Ideal components are made of up to 50 percent recycled plastic, depending on the application. Thanks to circular product designs like System Ideal, in 2021, the total weight of recycled materials used in Porvoo was 64,000 kg, resulting in a reduction of some 96,000 kg of GHG emissions. We will continue to develop and release new products made from PCR plastics. Also in 2021, at our site in Ede in the Netherlands, in partnership with Ultrapolymers BC, we began to use PCR plastics for the production of surface-mounted junction boxes. By the third year of this project, we expect that each kilogram of recycled plastics used will result in an associated CO_2e reduction of 1.5 kg.

Production and packaging

In 2021, we carried out initiatives to make our production and packaging more circular. At our Ede site, for example, we made changes to ensure that input materials are reused to the fullest possible extent in our production processes. The materials left behind from our injection-molding processes are now shredded and reused; excess materials that fail to meet our production standards – such as those generated when the production equipment first starts up – are collected and shredded for reuse in non-critical items, such as marking jigs. At our Busch-Jaeger sites in Germany, we collected over 150 tons of plastic production waste and sent it for recycling by a partner, Geba Compounding, after which 43 percent was reused for production.

Water is necessary in many of our production processes and, in 2021, we continued to optimize our sites' use of this vital resource. In India, for example, our site in Nelamangala, Bangalore, has put in place water reduction, water recycling and rainwater harvesting processes, among other conservation measures. The site's water management system was assessed by The Energy and Resources Institute (TERI) and certified as a "Water Positive" factory. Water-saving initiatives such as these resulted in a reduction of

12 percent in ABB's total water withdrawals. Forty-seven percent of our water withdrawals were from stressed watersheds and amounted to 1,252 kilotons for the year, down 1.3 percent from 2020.

Packaging materials represented another focus area in 2021. Initiatives such as ABB Process Automation's "Think Outside the Box" program reduced the amount of cardboard used at the Business Area's site in Ossuccio, Italy, by an estimated 16.9 tons over the past year. Efforts to procure sustainably produced cardboard, certified by the Forest Stewardship Council (FSC), will result in facilities such as ABB Electrification's plant in Frosinone, Italy, using these materials exclusively starting in 2022.

Use phase

Once our products have been placed in service, we offer our customers a number of options to extend the lifecycle of their equipment. Retrofits, for example, extend the service life of existing drives and allow customers to replace only the essential components. By retaining the equipment's original cabinets and cabling, electrical components and automation systems, retrofits enable customers to modernize their machinery with a minimum of investment, waste and interruption to normal operations.

Digitalization plays an important role in augmenting the positive impact of our products and solutions. Our digital solutions enable our clients to extend the lifetime of their assets through optimization, remote operations and preventative maintenance. For example, one of our digital solutions, ABB Ability™ Genix, brings together the combined power of industrial analytics and artificial intelligence to help our customers unlock the value of contextualized data, improve industrial productivity and achieve operational excellence.

We also continued to explore new circular business models, such as outcome-based service models. Through this approach, customers could contract with ABB to deliver a specified level of cost savings, energy efficiency, water efficiency or raw material efficiency, among other actionable outcomes that relate to our domain expertise.

End-of-life phase

In 2021, we worked to incorporate products at the end of their lifecycle into our circularity approach by joining forces with sustainable recycling specialists and other partners. For example, in the Netherlands, ABB and HKS Metals forged a partnership that helps close the loop in the lifecycle of an electric motor. Through this agreement, HKS will collect and recycle obsolete ABB electric motors and then send the recovered raw materials to smelters across Europe to be melted down and made available to ABB for reuse in new products – including new motors.

In Sweden, ABB, Stena Recycling and SCA are also working together on motor recycling. Through this partnership, 11 tons of decommissioned motors have been processed by Stena Recycling. Nearly 100 percent of the material weight of these motors has been recycled, avoiding an estimated 34 tons of GHG emissions. In addition, an estimated 326 MWh of energy and more than 100,000 cubic meters of water were saved by not having to mine new metals.

In Italy, we collaborated with INTERSEROH TSR Italy for the collection and management of our products at the end of the lifecycle. Through this collaboration, ABB Electrification's Smart Power Division can guarantee its customers that, when they replace an ABB product at the end of its lifecycle with a new ABB product, the discarded ABB product will be collected and more than 80 percent of its components will be recycled. Additionally, INTERSEROH TSR Italy will issue the customer a certificate of proper waste management, specifying the calculated amount of avoided GHG emissions.

Over the last 25 years, thousands of used robots have been given a second life by ABB's remanufacturing teams, which refurbish and upgrade them. Peripheral equipment, such as controllers and manipulators, is also refurbished to "like-new" condition at ABB's Global Remanufacture & Workshop Repair Centers. Remanufacturing enables existing robot users to sell redundant robots to ABB rather than scrapping or mothballing them. A lifecycle assessment undertaken in 2021 revealed that the process of refurbishing a robot releases roughly 75 percent fewer GHG emissions compared with manufacturing a new robot.

CASE STUDY

Reinvigorating old equipment with new retrofit solutions

As part of ABB's commitment to cover 80 percent of products and services with its circularity approach by 2030, we are working closely with partners, customers and suppliers to extend the useful service life of equipment.

As an example of this approach, in 2021, ABB Motion's Services Division worked with Mondi SCP, the largest wood processor and producer of pulp and paper in Slovakia, to implement a retrofit solution for the ACS600 drive units used in Mondi's paper machines. The units were at the end of their lifecycle, so ABB's engineers helped Mondi determine the optimal scope and timing for a program of modernization, based on the condition of the existing drives. Together, the two teams agreed on which hardware solutions and control system updates to deploy before setting a detailed schedule for the installation. The retrofit solution was then carried out in just one week.

By offering thoughtfully tailored retrofits to extend the lifecycle of existing drives, ABB enables its customers to replace only the necessary components, while retaining most of their existing infrastructure, cabinets and cabling, electrical equipment and automation systems. Older generations of multidrives can be updated to the latest ACS880 technology, which is compatible with nearly any industrial process, automation system, user group or business requirement. The approach minimizes the costs of modernization, while limiting any interruption to operations. Best of all, it extends the useful life of valuable assets and enables greater circularity when it comes to managing the lifecycle of the equipment.

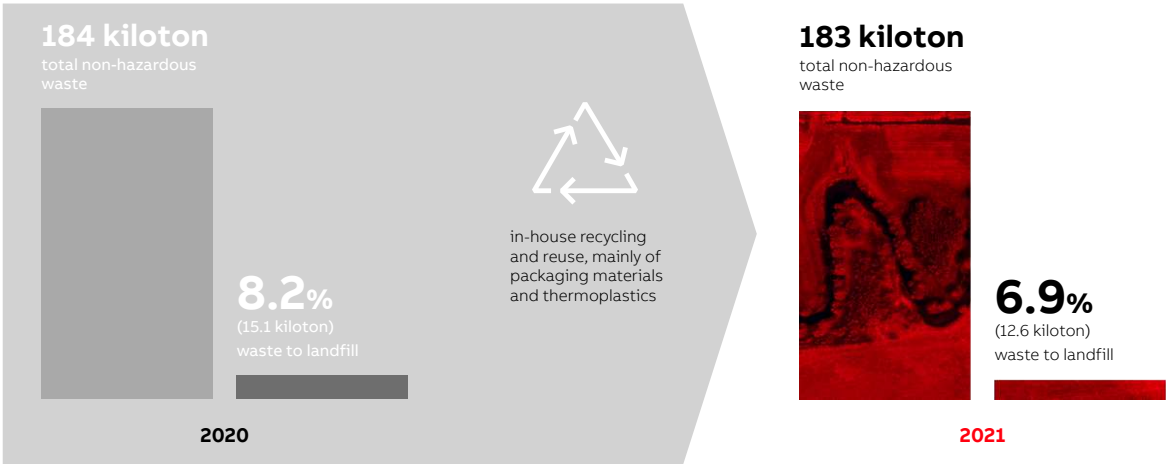
WASTE

Zero waste

Target: Zero waste from our own operations will be disposed of in landfills, wherever this is compatible with local conditions and regulations

We are committed to eliminating the impact of ABB's waste on the environment. We are working towards this target by means of a wide range of waste reduction and recycling programs at our sites around the world.

Total waste to landfill



Globally, we now have 185 sites that send zero waste to landfill, with around 255 making progress towards this goal. Over the past year, through in-house recycling and reuse, mainly of packaging materials and thermoplastics, we reduced the amount of waste that ABB generates by 2,300 tons.

We implemented more than 40 recycling and waste reduction projects in 2021. These projects reduced the waste we generate annually by 140 tons, while delivering annual savings of some $100,000. More than 40 percent of these projects have a payback period of less than two years.

Initiatives such as switching from polyurethane-based packaging to paper, as was done at our Ossuccio site in 2021, are helping us become a zero-waste enterprise. This one initiative alone eliminated 35 tons annually of non-recyclable waste produced from hazardous chemicals. In the United States, several ABB sites have opted to pay a premium to send their waste to an energy-recovery facility instead of the local landfill. Such initiatives demonstrate that we are willing to pay more to uphold our commitment to operating in an environmentally responsible manner.

CASE STUDY

Frosinone joins growing group of ABB zero-waste facilities

In 2020, ABB Smart Power's low-voltage circuit breaker factory in Frosinone, Italy, achieved its goal of disposing zero production waste to landfill. In operation since 1969, the 150,000-square-meter facility with more than 800 employees implemented a whole-factory program to do its part in meeting ABB's commitment to zero waste to landfill at all of its sites by 2030.

The site is recognized as a lighthouse plant by the Italian government, together with two other Electrification sites in Italy (Dalmine and Santa Palomba), and serves as a model for innovative digital transformation and Industry 4.0. In both its operations and its products, the Frosinone facility promotes smart, digital, connected operations that increase efficiency across the full value chain. To make the facility's production even more sustainable, the team established thorough waste-sorting and identification procedures at the key points where waste originated. The site now features roughly 150 differently-labeled production waste containers, and there are separate containers for paper and plastic waste at each workstation. Staff training was critical to making the project a success, as it empowered colleagues to make waste separation decisions and engaged them fully in the initiative.

In achieving zero production waste to landfill well ahead of ABB's commitment, as well as going beyond the European Union's Circular Economy Package target of no more than 10 percent to landfill by 2035, the facility demonstrated that fast and effective progress in preserving resources is well within reach.

RIGHT MATERIALS

Eliminating unsafe materials from our operations

The ABB List of Prohibited and Restricted Substances serves as our guide in reducing and, where possible, eliminating our use of hazardous materials. This list applies to all our operations, including procurement, product development, production processes, products, packaging materials, service activities and construction sites. We update the list twice a year in keeping with international regulations, in particular the EU REACH regulation.

To help suppliers meet their obligations – which include partnering with us to identify and prevent restricted substances and conflict minerals from entering ABB's supply chain – we have developed a companion guide to the above-mentioned list. 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 2021, we launched 16 new projects to reduce and phase out hazardous substances. Due to the variety and specialized nature of our Group's products and processes, the reduction of hazardous substances is typically addressed on a site-by-site basis.

Under our new business model, described in ABB's 2020 Sustainability Report, our Business Areas assumed full ownership of their respective product material compliance duties. These include ensuring that ABB complies with EU requirements for chemicals and products listed in the Substances of Concern in Products (SCIP) database. One example of the success of this approach is the screening program developed by ABB Electrification and its suppliers, which monitors and eliminates hazardous substances from components supplied to ABB. In 2021, through this program, we gathered data on more than 370,000 components and worked with more than 10,000 active suppliers to satisfy our mutual obligations under the European Union's REACH and RoHS regulations.