

Sustainability Data and Performance Calculation Methodology 2023

Updated: July 2024

Owner: Bystronic Sustainability

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1 Introduction

1.1 Purpose of the document

This document supports the information presented in the [Bystronic Sustainability Data and Performance Report](#) and provides additional details on our sustainability data collection and calculation methodology.

ESG data is presented in support of Bystronic's long-term ambitions and mid-term targets. Therefore, the document follows the same ESG framework structure adopted by Bystronic.

1.2 Scope and Boundaries

Unless otherwise stated, the report covers all Bystronic operations in all countries in which we operate. The data covers 10 development and production sites in Switzerland, Germany, Italy, Romania, the Netherlands, the USA, and China, and 29 sales companies located in 27 countries. Changes in scope in 2023 are mentioned in the [Annual Report 2023](#) (page 98). No change versus 2022 for the calculation of CO₂e emissions.

1.3 Targets, base year, and transparency

In 2022 reporting, Bystronic introduces its ESG long-term ambitions and mid-term quantified targets. The year 2021 will serve as the base year for Bystronic ESG targets across the different areas.

To transparently report on our progress, data for at least two years prior to the reporting year will be included (e.g., in the 2023 report, figures from 2022, 2021 and 2020 are also published to indicate significant trends).

1.4 Data recalculation

In case of a significant change in the organization (a 10 percent change or more in value), the calculation methodology will be adjusted to ensure data accuracy. Historical figures used will be recalculated to ensure our reporting gives a realistic view on our impacts and our progress.

2 Adherence to GHG protocol principles

The five principles of GHG accounting – relevance, completeness, consistency, transparency, and accuracy – form the foundation for accurate and reliable measurement and reporting of greenhouse gas emissions.

2.1.1 Data relevance

In its annual sustainability report, Bystronic evaluates the relevance and significance of climate change and energy to the company and its stakeholders. Furthermore, the carbon footprint as a tool to measure performance relates to the materiality criteria.

A first calculation of scope 3 activities has been applied in 2023. Further attention will be given to the guidance provided by the GHG protocol to ensure that our inventory represents a faithful, true and fair

account of our company's emissions, and adhere to the GHG accounting and reporting principles.

2.1.2 Data completeness

Plausibility of the completeness of our activity data in Scopes 3.1 and 3.11 (most important numbers in CO₂eq emissions in value chain):

- Scope 3.11: For now, the plausibility check of the completeness of the number of sold machines is a comparison between the Annual Revenue change year-over-year and the number of Sold Machines change year-over-year.
- Scope 3.11: For the plausibility check of the completeness of the purchased goods is a comparison between the Annual spend (“Material expense”) available in the annual report and the purchased spend data available in SAP.

In both cases, there are gaps that need further investigations and analysis. This will be done next year to improve completeness of our activity data.

2.1.3 Data consistency

One time series inconsistency has been found:

Before 2023, refrigerants Co₂eq emissions were only calculated for manufacturing plants. In 2023, the sales entities reported refrigerants leaks as well. This raised the CO₂eq emissions sourced by refrigerants. A recalculation will integrate the full coverage in 2021 and 2022.

2.1.4 Data transparency

This document available online is an attempt to improve our transparency as it discloses openly the methods, data sources, and calculation procedures regarding all ESG data available in the sustainability report.

2.1.5 Data accuracy

For the calculation of Scope 1 & 2, all company required data is collected through the Jedox web portal and is directly reported from bills, fuel, gas, electricity consumption, ... So, units, numbers are the main possible mistakes. Some mistakes may also happen in the emissions factor’s selection.

For the calculation of Scope 3, different sources of required data make it more complex to maintain a high-quality data. In the next years we have many initiatives to improve the accuracy of Scope 3 data.

To list a few of them:

- The accuracy of weight data, Country of Origin will be improved in SAP
- The description of SAP categories will be more helpful for the selection of the emission factors
- The product hierarchy will be reviewed to increase the accuracy of sold machines
- The electricity consumption measurement of the machines will be improved
- More data will be collected to improve minor Scope 3 categories

3 Sustainable solutions data

3.1 Decarbonization data

3.1.1 Energy data

Energy data is collected annually through a web interface that stores the data in a central database and makes it available to various dashboards. The monitored energy consumption is structured in four categories:

- Fuel for fleet (diesel, petrol, LPG): manufacturing sites and sales entities.
- Electric cars electricity consumption: manufacturing sites and sales entities.
- Stationary energy for buildings (natural gas, fuel oil): manufacturing sites and sales entities.
- Purchased energy (electricity, district heating): manufacturing sites and sales entities.
- Produced energy (solar panel electricity): manufacturing sites.

Reported total energy consumption and energy intensity include all the above energy sources.

Bystronic also collects information on the percentage of our energy that comes from renewable and non-renewable sources:

- Renewable energy percentage [%] = Amount of renewable energy [kWh] divided by total energy consumption [kWh].
- Renewable electricity percentage [%] = Amount of renewable electricity [kWh] divided by total electricity consumption [kWh].

A key contact in each entity is responsible for completing the web interface annually and explaining the variations.

3.1.2 Operations carbon footprint data (Scope 1 & 2)

Bystronic's carbon footprint in 2023 and in past years has been calculated in accordance with the requirements of the Greenhouse Gas Protocol (GHG Protocol). No emission sources have been excluded for scopes 1 and 2. When calculating the carbon footprint, only the direct emissions were considered, i.e., no emissions from the upstream value chain, i.e., well-to-tank GHG emissions of fuels.

3.1.2.1 Boundaries of operations carbon footprint data (Scope 1 & 2)

In the present and past calculations of Bystronic's corporate carbon footprint, the operational control approach from the Greenhouse Gas Protocol was used. All GHG emissions that result from the business activities of Bystronic, over which it exercises operational control, are included in the system boundaries.

3.1.2.2 Assurance of operations carbon footprint data (Scope 1 & 2)

Bystronic Scope 1 & 2 carbon footprint has been assured by Swiss Climate. Swiss Climate undertook the assurance in accordance with AA1000 Assurance Standard (AA1000AS v3) Type 2 moderate-level assurance.

Key Indicators	Assurance	Unit	YoY	2023	2022	2021	2020
Greenhouse gas emissions (Scope 1&2)							
Scope 1 & 2, Total emissions market-based	Yes	tCO2e	1%	10,789	10,698	12,011	11,021
Science-based target committed reduction versus baseline (must do)		tCO2e	-4.9%	10,882	11,447	Baseline	
Scope 1 & 2, Total emissions location-based	Yes	tCO2e	-1%	11,570	11,649	13,001	11,729
Scope 1, direct emissions	Yes	tCO2e	0%	6,406	6,395	6,661	6,293
Scope 2 Energy indirect emissions - location-based	Yes	tCO2e	-2%	5,164	5,254	6,340	5,435
Scope 2 Energy indirect emissions - market-based	Yes	tCO2e	2%	4,384	4,303	5,350	4,728
Scope 1 & 2, Total emissions per Net sales	Yes	tCO2e/ CHFm	10%	11.6	10.5	12.8	13.8
Scope 1 emissions							
Scope 1 emissions	Yes	tCO2e	0%	6,406	6,395	6,661	
Fuel for fleet emissions	Yes	tCO2e	-2%	4,152	4,239	4,196	
Stationary energy for buildings emissions	Yes	tCO2e	-13%	1,836	2,116	2,250	
Refrigerants emissions	Yes	tCO2e	944%	417	40	216	
Scope 2 emissions							
Scope 2 emissions - Market-based	Yes	tCO2e	2%	4,384	4,303	5,350	
Purchased electricity emissions	Yes	tCO2e	2%	3,543	3,463	4,509	
Purchased heat emissions	Yes	tCO2e	0%	840	840	841	

3.1.2.3 Global warming potential and applied methods

Global warming potential is given in the form of CO₂ equivalents. Only the direct effects of greenhouse gas emissions are considered in the carbon footprint. The results are presented using both the location-based and the market-based approach.

3.1.2.4 Generic and external data sources

Generic data sets (emission factors and conversion factors) were taken from the following sources:

- Database Ecoinvent 3.10: <https://ecoinvent.org/the-ecoinvent-database/>
- Probas : <https://www.probas.umweltbundesamt.de/datenbank/>
- IPCC's Sixth Assessment Report: <https://www.ipcc.ch/>
- Publications of relevant energy suppliers for the emission factor of the purchased electricity product.

In each case, the data set that came closest to the specific situation at Bystronic was selected.

3.1.2.5 Scope 1 direct emissions

Scope 1 includes emissions from the vehicle fleet, stationary energy consumption and refrigerant losses.

3.1.2.5.1 Fuel for fleet emissions

For manufacturing/assembly plants, the Bystronic fleet consist of petrol, diesel, hybrid and electric vehicles, company cars attributed to select employees, trucks and buses, and forklifts. Both emissions from the fuel consumption of vehicles owned by Bystronic and vehicles used in Bystronic's leasing model were considered under Scope 1, following the principles of the operational control approach that was chosen for the selection of organizational boundaries.

For the sales companies, when fuel consumption data is not available, kilometers driven by salespeople and service people were estimated based on a fixed mileage per sales and service person and the number of sales and service people on each site according to the company's internal records.

Fuel consumption and mileage are reported separately because the contact person at each site had the choice to report one or the other data, depending on availability. The web interface was designed to prevent potential duplication of data. Emission factors (per liter or kilometer) were applied according to GHG emissions calculations.

Some sales companies do not have their own or leased fleet: US and Canada sales entities are renting cars from renting agencies. Chinese entity salespeople and technicians use their personal car or taxi and have fuel expenses reimbursed by the company. The CO₂e emissions related to these sources are reported as part of Scope 3 Category 6 “Business Trip” following the GHG protocol.

Emissions from diesel, petrol and LPG consumption are calculated by using emission factors from Ecoinvent 3.10 UPR, IPCC and our own calculation.

3.1.2.5.2 Stationary energy combustion emissions

The following emission sources were identified under Scope 1 stationary energy combustion at the Bystronic sites:

- Natural gas
- Fuel oil

Emissions from stationary natural gas and fuel oil consumption calculated under Scope 1 were calculated regardless of whether the objects were owned or rented by Bystronic. This follows the principles of the operational control approach that was chosen for the selection of organizational boundaries.

Emissions from fuel oil and natural gas consumption are calculated by using emission factors from Ecoinvent 3.10 UPR, IPCC and our own calculation.

3.1.2.5.3 Refrigerant losses

In the 2023 financial year, refrigerant losses were recorded at seven Bystronic locations. Refrigerant emission factors are taken from IPCC 2021 (AR6).

3.1.2.6 Scope 2 indirect emissions

Scope 2 includes emissions from the consumption of purchased heat and purchased electricity.

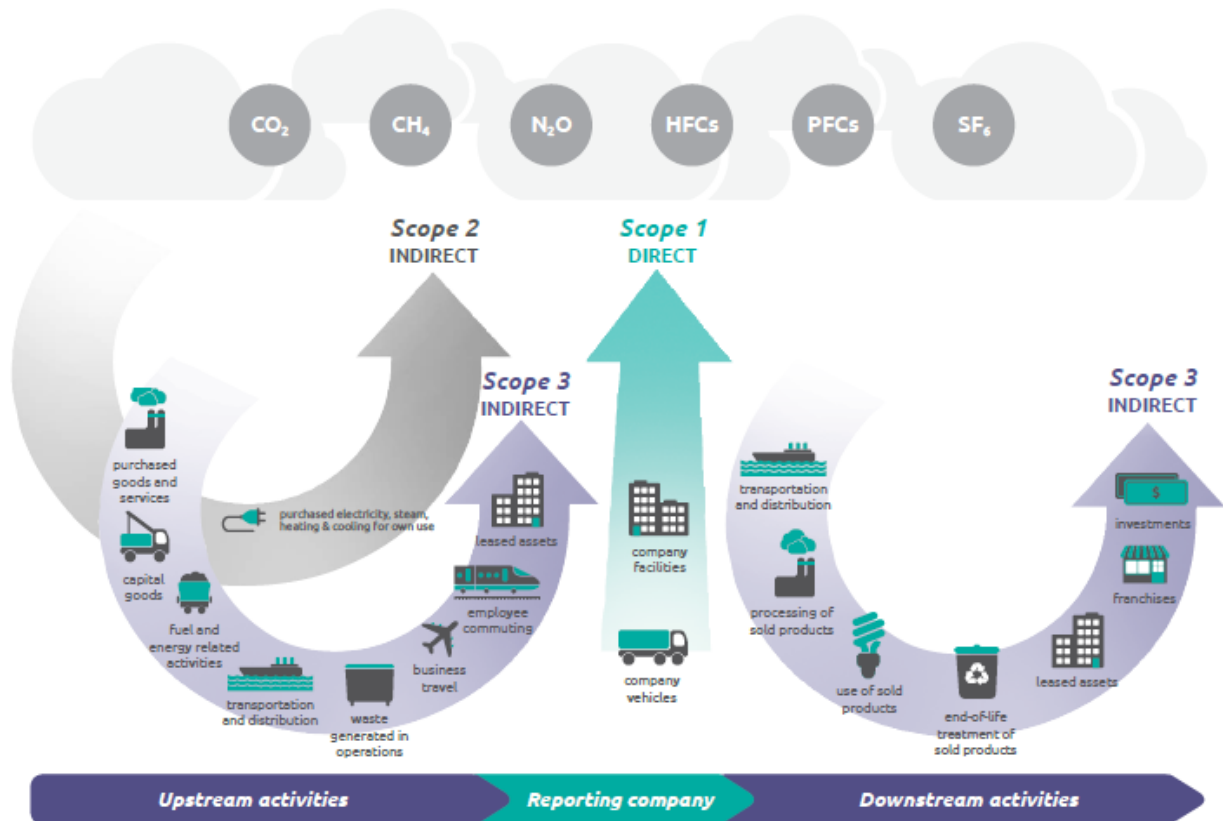
In the 2023 financial year, district heating was recorded at six Bystronic locations. District heat emission factors are taken from the database Probas.

In the 2023 financial year, emissions from electricity consumption have been calculated according to the location-based approach, and according to the market-based approach.

- Location-based calculation method: Electricity emission factors are taken from database Ecoinvent 3.10 UPR.
- Market-based calculation method: renewable electricity instruments/certifications are considered. The emission factors are chosen according to GHG Protocol’s Scope 2 guidance.

- When a location uses renewable electricity, they provide annually to the sustainability team their guarantee of origin for electricity.

3.1.3 Value chain carbon footprint data (Scope 3)



According to [GHG-Reporting Standard](#), scope 3 activities are categorized in 8 upstream and 7 downstream categories.

From 2020 to 2022, based on pre-survey in 2020 realized in one major manufacturing plant, it was strategically decided that 2 categories are taken in account first as they are the biggest contributors of emissions (>93% of total CO₂e emissions):

- Category 1: purchased goods and services
- Category 11: use of sold products

Based on these 2 categories, we set science-based aligned targets on Scope 3 in 2021.

For financial year 2023, all Scope 3 categories have been calculated at the corporate level.

Sustainable products and services

Reduce carbon emissions across all scopes

Key Indicators	Assurance	Unit	YoY	2023	2022	2021	2020
Greenhouse gas emissions (Scope 3)							
Scope 3, Total emissions		tCO2e	-18%	1,137,396	1,391,743	1,578,340	
Science-based target committed reduction versus baseline (must do)		tCO2e	-2.9%	1,489,953	1,534,147	Baseline	
Cat 1 - Purchased goods & services	Yes	tCO2e	-10%	302,927	338,080	302,812	
Cat 2 - Capital goods		tCO2e		557			
Cat 3 - Fuel- and Energy-Related Activities Not Included in Scope 1 or Scope 2	Yes	tCO2e		1,970			
Cat 4 - Upstream Transportation and Distribution	Yes	tCO2e		2,884			
Cat 5 - Waste generated in operations		tCO2e		162			
Cat 6 - Business travel		tCO2e		2,976			
Cat 7 - Employee commuting		tCO2e		10,049			
Cat 8 - Upstream leased assets - Reported in Scope 1 & 2		tCO2e		-			
Scope 3, Upstream emissions		tCO2e		321,526			
Cat 9 - Downstream Transportation and Distribution	Yes	tCO2e		10,899			
Cat 10 - Processing of sold product - Not material (Bystronic product are final products)		tCO2e		-			
Cat 11 - Use of sold products - world grid emission factor method	Yes	tCO2e	-24%	802,093	1,053,663	1,275,528	
Cat 11 - Use of sold products - customer country grid emission factor method	Yes	tCO2e	-23%	773,462	1,010,486	1,216,225	
Cat 12 - End-of-life treatment of sold product		tCO2e		2,877			
Cat 13 - Downstream leased assets - Not material (no leasing assets)		tCO2e		-			
Cat 14 - Franchises - Not applicable (Bystronic does not hold franchises)		tCO2e		-			
Cat 15 - Investments - Not material (equity investment reflected in Scope 1 & 2)		tCO2e		-			
Scope 3, Downstream emissions		tCO2e		815,870			
Scope 1, 2 & 3, Total emissions		tCO2e	-18%	1,148,185	1,402,440	1,590,352	
Share of Scope 3 Cat 1 & Cat 11 in Scope 1, 2, 3 total emissions		%		96%			
Share of Scope 1, 2, 3 total emissions assured by third party		%		98%			
Scope 1 & 2 & 3, Total emissions Intensity per Net sales		tCO2e/ CHFm	-11%	1,234	1,380	1,693	

3.1.3.1 Cat 1: Purchased goods and services (Spend-based method)

This category represents around 26% of total Scope 3 emissions in 2023.

Purchased goods data is available in a central procurement SAP database. For three sites, the data has been collected separately (excel spreadsheet sent by email). The emissions from purchased goods and services are calculated based on monetary data and various direct and indirect purchased goods categories. Scope 3 Category 1 emissions are calculated based on purchased category spent combined with ADEME categories emission factors and converted to GHG emissions.

Scope 3 cat. 1 [kgCO₂eq] = sum of volume purchased [€] in each ADEME category x their respective emission factors [kg CO₂eq / €].

A second method is also used with weight of the purchased goods and associated Ecoinvent V3.10 emission factors:

Scope 3 cat. 1 [kgCO₂eq] = sum of weight of purchased product [kg] in each Ecoinvent category x their respective emission factors [kg CO₂eq / kg].

But as we have quality issue on weight of the purchased material, the result is not yet used for the Scope 3 Cat 1 calculation.

3.1.3.2 Cat 2: Capital goods (Spend-based method)

This category represents less than 0.1% of total Scope 3 emissions in 2023. The calculation is based on actual spend in CHF for various capital goods categories and converted to GHG emissions. The following 3 categories are extracted from the fixed assets list in annual report page 87:

- Factory buildings,
- Plant and machinery,
- Tooling, furniture, vehicles.

The additions, disposals, and reclassifications of each of these categories are sum up, converted into units that can be multiplied with ADEME Basecarbonv17 emission factors. The sum of these emissions is Scope 3 Category 2 emissions.

Scope 3 Category 2 emissions [kg CO₂eq] = Fixed asset costs for factory building [mCHF] / conversion parameters [mCHF/m²] * emission factor [kg CO₂eq/m²] + Fixed asset costs for plant and machinery [mCHF] / conversion parameters [mCHF/kg] * emission factor [kg CO₂eq/kg] + Fixed asset costs for tooling, furniture, vehicles [mCHF] / conversion parameters [mCHF/kg] * emission factor [kg CO₂eq/kg]

For the calculation, assumptions on conversion parameters were necessary:

- Average industrial price /m² in Switzerland: 5000CHF/m² based on research on industrial real estate in Switzerland
- Average machinery price/ kg: 151CHF/kg based on average weight of machinery in our purchased goods
- Average vehicle price/ kg for a vehicle: 36CHF/kg. Car average price (50'000CHF) and a car average weight (1'400kg)

3.1.3.3 Cat 3: Fuel and energy related activities not included in Scope 1 and 2 (Average data method)

This category represents less than 0.2% of total Scope 3 emissions in 2023. The calculation is based on reported market-based Scope 1 and 2 emissions (Fleet, Stationary energy) and energy consumption combined with Ecoinvent V3,10 and ADEME Basecarbonv17 emission factors. The sum of these emissions is Scope 3 Category 3 emissions.

Scope 3 Category 3 emissions [kg CO₂eq] = Fuel energy consumption in operations [kWh] * ADEME energy emission factors for the source [kg CO₂eq/kWh] - the emissions reflected in Scope 1 & 2 [kg CO₂eq] + Purchased energy consumption in operations [kWh] * Ecoinvent "scope 3" electricity emission factors [kg CO₂eq/kWh].

3.1.3.4 Cat 4 - Upstream Transportation and Distribution (Spend-based method)

This category represents less than 0.3% of total Scope 3 emissions in 2023. The calculation is based on weight data of purchased products in central database SAP combined with distance (as the crow flies) between vendor country and manufacturing plants. The transportation mode and the equivalent emission factor from Ecoinvent V3.10 is selected based on main distance contributor sea or road. The sum of these emissions is Scope 3 Category 4 emissions.

Scope 3 Category 4 emissions [kg CO₂eq] = sum of the weight data of purchased products [ton] * distance (as the crow flies) between vendor country and manufacturing plants [km] * transportation mode emission factor from Ecoinvent V3.10 selected based on main distance contributor sea or road based on mapping table [kg CO₂eq/km.ton].

3.1.3.5 Cat 5 - Waste generated in operations (Waste-type-specific method)

This category represents less than 0.1% of total Scope 3 emissions in 2023. The calculation is based on waste disposal company data and converted to GHG emissions with Ecoinvent V3.10 waste treatment emission factors by waste category (Metal, wood, paper & cardboard, plastic, organic, electric and electronic, hazardous waste). The sum of these emissions is Scope 3 Category 5 emissions.

Scope 3 Category 5 emissions [kg CO₂eq] = sum of weight of material [ton] * Ecoinvent V3.10 emission factor based on End-of-life treatment of the material [kg CO₂eq/ton].

3.1.3.6 Cat 6 - Business travel (Hybrid method)

This category represents less than 0.3% of total Scope 3 emissions in 2023. The calculation is based on :

- Estimations of GHG emissions related to business trips distances from sales and maintenance people using either rented cars, personal cars or taxis (not reported in Scope 1)
- Credit card owners' GHG emissions reported by Cornercard for the headquarters
- Estimation of GHG emissions related to business trips (road distance) based on main manufacturing plant data
- Estimation of GHG emissions related to business trips (flight distance) based on main manufacturing plant data

The sum of these emissions is Scope 3 Category 6 emissions.

Scope 3 Category 6 emissions [kg CO₂eq] =sum of distance estimation of business trips [km] (and [km.passenger]) * Ecoinvent V3.10 emission factor based on car or airplane groups [kg CO₂eq/km].

3.1.3.7 Cat 7 - Employee commuting (Average-data method)

This category represents less than 1% of total Scope 3 emissions in 2023. The calculation is based on actual number of employees, assumptions for distances travelled to work, share of remote work, and means of transportation, and main manufacturing plant data on employee commuting.

Scope 3 Category 7 emissions [kg CO₂eq] = sum of distance estimation of commuting [km] * ADEME

Base-Carbon V17 emission factor based on commuting group type [kg CO₂eq/km].

3.1.3.8 *Cat 8 - Upstream leased assets - Not applicable*

This category is reported under Scope 1 & 2.

3.1.3.9 *Cat 9 - Downstream Transportation and Distribution (Spend-based method)*

This category represents less than 1% of total Scope 3 emissions in 2023. The calculation is based on weight data of Bystronic products combined with distance (as the crow flies) between manufacturing plants and the country of the customers. The transportation mode and the equivalent emission factor from Ecoinvent V3.10 is selected based on main distance contributor sea or road. The sum of these emissions is Scope 3 Category 9 emissions.

Scope 3 Category 9 emissions [kg CO₂eq] = sum of the weight data of purchased products [ton] * distance (as the crow flies) between manufacturing plants and customer country [km] * transportation mode emission factor from Ecoinvent V3.10 selected based on main distance contributor sea or road based on mapping table[kg CO₂eq/km.ton].

3.1.3.10 *Cat 10 - Processing of sold product – Not material*

This category is not material: Bystronic products are typically final products.

3.1.3.11 *Cat 11 - Use of sold products (Direct use-phase emissions)*

This category represents around 70% of total Scope 3 emissions in 2023.

The main emissions of our products during their use phase relate to the direct emissions associated with their electricity consumption during operation.

Inclusion based on the GHG protocol:

- lifetime energy consumption of sold products and solutions
- refrigerant gas (only leakage).

The emissions are calculated based on agreed “Virtual Customer” behavior models – the models themselves are based on user data and realistic assumptions. The energy measurement are integrated into these models to obtain a lifetime energy consumption of a given machine, and these consumptions are recorded within a database containing the energy consumption of each products. Based on the energy consumption by machine type and power, and based on refrigerant lifetime leakage assumption, the Co₂e emissions are calculated like this:

Scope 3 cat. 11 [kg CO₂eq] = Sum of sold machine lifetime energy consumption [kWh] * customer local grid CO₂eq-emission factor [kg CO₂eq/kWh] + Sum of emissions related to refrigerant leakage (estimation) [kg CO₂eq].

The sold machines, associated power, and customer country data are extracted from corporate database and spreadsheets send by 2 manufacturing plants not included in the database. These emissions were

calculated using ecoinvent V3.10 (for electricity) and IPCC 2021 (AR6) (for refrigerants) emission factors.

Scope 3 Cat. 11 was calculated with 2 methods related to grid emission factors:

1. World grid emission factor: an average world emission factor for electricity grid medium voltage from Ecoinvent V3.10 is used for all sold machines
2. Customer country grid emission factor: for each customer, the country is identified and a specific medium voltage electricity grid emission factor from Ecoinvent V3.10 is applied per sold machine

3.1.3.12 Cat 12 - End-of-life treatment of sold product (Average-data method)

This category represents less than 1% of total Scope 3 emissions in 2023. The calculation is based on Life Cycle Assessment of the machines, total weight of sold machines, combined with end-of-life treatment emission factor from Ecoinvent V3.10.

Scope 3 cat. 12 [kg CO₂eq] = Sum of sold machines weights [ton] *EOL treatment emission factor [kg CO₂eq/ton]

3.1.3.13 Cat 13 - Downstream leased assets - Not material

This category is not material: Bystronic does not lease assets to third parties to a material extend.

3.1.3.14 Cat 14 - Franchises - Not applicable

This category is not applicable: Bystronic does not hold franchises.

3.1.3.15 Cat 15 - Investments - Not material

This category is not material: equity investment are reflected in Scope 1& 2.

3.2 Resource Efficiency & Circular economy

3.2.1 Waste management data

Waste data includes our manufacturing locations' data. Sales entity locations are excluded from the report because their waste/water amounts are estimated to be significantly smaller than the figures of our manufacturing locations.

Local HSE Manager annually inputs the waste amounts and treatment methods to a web portal. The data is reviewed by the sustainability team.

Six non-hazardous waste categories are reported:

- Metal scrap: waste streams are mostly directed to recycling.
- Wood: waste streams are mostly directed to recycling.
- Cardboard and paper: waste streams are mostly directed to recycling.
- Plastic: waste stream is split into recycling, incineration.
- Domestic: waste stream is split into recycling, incineration, composting, and landfill depending on location.
- Special waste: waste stream is directed to adequate treatment centers, depending on location.

One hazardous waste category is reported:

- Hazardous and electronic and electrical waste: waste stream handling split into recycling, incineration and other adequate treatments depending on location.

3.2.2 Water management data

Water withdrawal data includes our manufacturing locations' data. Sales entity locations are excluded from the report because their water amounts are estimated to be significantly smaller than the figures of our manufacturing locations.

Local HSE Manager annually inputs the waste amounts and treatment methods to a web portal. The data is reviewed by the sustainability team.

3.2.3 Water risk data

An analysis of the water risks has been done in the geographical areas where Bystronic has manufacturing plants. This analysis is based on the [Water risk atlas website](#).

3.2.4 Refurbishment data

Three manufacturing plants provide data on refurbished machines. The manufacturing plant contact submit the number of refurbished machines into the web portal.

Refurbished spare parts are centralized in SAP. The contact in the Global Services team in charge of spare parts provides annual number and value of the refurbished spare parts.

4 Employee general data

The Human Resource team (HR) collects employee data in the corporate HR central database. This data is presented in the report according to GRI disclosure standards. Some data is not yet available: distribution by age group and headcount by contract type.

5 Engaged people data

5.1 Diversity, equity & inclusion data

The Human Resource team collects employee data in the corporate HR central database. This data is presented in the report according to GRI disclosure standards.

5.2 Workplace occupational & psychological safety data

5.2.1 Occupational safety data

Occupational safety data is collected annually through a web interface that also stores it and calculates KPIs in a central database. It is then available for dashboards. The scope of occupational safety data is currently all manufacturing plants. Plant safety managers submit the required data, explanation, and description of the type of recordable injuries. The number and calculation of worked hours by manufacturing plant are also indicated. The central platform then calculates the rate of recordable injuries and other safety indicators based on the collected data in accordance with GRI disclosure standards.

We currently calculate:

- Rate of recordable injuries: A recordable injury is a work-related injury that results in any of the following: fatality, loss of consciousness, day(s) away from work, restricted work activity or job transfer, diagnosis of cancer or chronic irreversible disease, punctured eardrum, fractured or cracked bones, medical treatment beyond first aid. Recording is simply the act of tracking an on-the-job injury or illness. As Bystronic is present in many countries, the recording of incidents differs from one country to another. The rate of recordable Injuries is defined as the total number of recordable work-related injuries divided by the number of hours worked, multiplied by 200,000. This rate is one of the key indicators for health and safety materiality. 200,000 represents the hours that 100 employees work on average during a 40-hour week, 50 weeks per year.
- Number of lost days due to recordable injuries: calculation is based on number of downtime hours due to recordable injuries reported on the web portal by each manufacturing plant and divided by 8 hours per day. The calculation is centrally made by the web portal.

5.2.2 Psychological safety data

Psychological safety data is the result of specific answers provided by employees throughout the entire company through a survey that is conducted every two years. The result is the average score, on a scale of 100, associated with the following statements:

- I would feel safe to openly discuss a mistake I made.
- I feel safe to talk to my colleagues about their behavior.
- I feel safe to talk to my direct manager about his/her behavior.

5.3 Talent management data

Talent management data is the result of specific employee indicators gathered from the employee survey, which is conducted every 2 years, and from the HR central database:

- Employee NPS: The Employee Net Promotor Score (eNPS) shows the extent to which employees promote Bystronic as a good employer. The score is determined as follows: % promoters (employees who rate their own satisfaction with Bystronic as 9 or 10 on a scale of 0-10) minus % detractors (employees who rate their own satisfaction with Bystronic between 0 and 6 on a scale of 0-10). This score predicts how likely employees are to become ambassadors of their organization.
- Employee engagement score: Engagement is the degree to which employees are inspired and energized by their work. It also refers to their positive connection to an organization. Engaged employees experience their work as meaningful and rewarding; are proud of their jobs; and feel that they fit in the organization. They are willing to go the extra mile because they love what they do and where they work. The Employee Engagement Score tells how enthusiastic the employees are about their work and how connected they feel to the organization. The score ranges from 0 (the most negative assessment) to 100 (the most positive assessment) and is an average of the scores of the many related questions in the survey.
- Voluntary employee turnover: Voluntary employee turnover refers to the ratio between the number of employees who voluntarily canceled their permanent contract with Bystronic AG or a subsidiary of Bystronic AG during a calendar year compared to the average number of employees in that calendar year. The average number of employees is calculated by taking the simple average between the headcount at the beginning of the calendar year (January 1) and at the end of the year (December 31). This indicator is sourced from the HR central database.

6 Responsible business data

6.1 Good corporate governance data

[Ecovadis](#) provides a platform that allows us to get sustainability data from suppliers. Current KPI is the number of suppliers in Ecovadis' platform and the number of suppliers present on a risk monitoring platform.

[EIQ](#), an end-to-end supply chain ESG due diligence platform, helps companies monitor and manage the supply chain ESG risks in real time, enhance responsible sourcing, and comply with due diligence regulations. Comprised of Sentinel, Product Risk Ratings, Geography Risk Ratings, Segmentation, Digital Learning and LRQA's Equivalency (EQ) Process, EIQ enables a tailored risk-based program aligned with the supply chains of each individual business. As part of our contract with LRQA, EIQ provides monitoring on ESG risk for 2'000 suppliers in our supply chain.

6.2 Customer care and safety

In 2023, we introduced an upgraded CRM system that integrates data from our marketing, sales, and service departments to ensure a smooth and seamless customer experience. Around 100'000 feedbacks are reported each year.

Monitored data includes:

- Net Promoter Score (NPS) of our customers
- Feedback from our detractors, we were able to pinpoint common issues
- Fines and penalties
- Customer injuries

6.3 ESG ratings

In 2023, we updated the following international rating questionnaires:

- CDP
- Ecovadis
- ISS
- MSCI
- Sustainalytics