Bystronic

Sustainability Data and Performance Calculation Methodology 2024

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Owner: Bystronic Sustainability

Table of Contents

1 Introduction 4
1.1 Purpose of the document 4
1.2 Scope and Boundaries 4
1.3 Targets, base year, and transparency 4
1.4 Data recalculation 4
2 Adherence to GHG protocol principles 4
2.1.1 Data relevance 4
2.1.2 Data completeness 5
2.1.3 Data consistency 5
2.1.4 Data transparency 5
2.1.5 Data accuracy 6
3 Sustainable solutions data 8
3.1 Decarbonization data 8
3.1.1 Energy data 8
3.1.2 Operations carbon footprint data (Scope 1 & 2) 9
3.1.3 Value chain carbon footprint data (Scope 3) 12
3.2 Resource Efficiency & Circular economy 19
3.2.1 Waste management data 19
3.2.2 Water management data 20
3.2.3 Water risk data 20
3.2.4 Air pollution data 20
3.2.5 Refurbishment data 20
4 Employee general data 21
5 Engaged people data 21
5.1 Diversity, equity & inclusion data 21
5.2 Workplace occupational & psychological safety data 22
5.2.1 Occupational safety data 22

5.2.2 Psychological safety data 23
5.3 Talent management data 23
6 Responsible business data 25
6.1 Good corporate governance data 25
6.2 Customer care and safety 25
6.3 ESG ratings 26

1 Introduction

1.1 Purpose of the document

This document supports the information presented in Bystronic annual report 2024 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 30 sales companies located in 27 countries. Changes in scope in 2024 are mentioned in the annual report chapter "Group structure". Restructuration applied in 2024 with the closure of Bystronic Automation Technology S.p.A., San Giuliano Milanese, and a significant reduction of the number of employees. However, these changes started in late Q4 2024, and in that sense did not affect the Co2e emission calculation for 2024.

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 three years prior to the reporting year will be included (e.g., in the 2024 report, figures from 2023, 2022 and 2021 are also published to indicate significative trends).

1.4 Data recalculation

In case of a significant change in the organization (a 5 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: 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. Another check is done with the financial value related to sold machines.
- Scope 3.1: 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. Another check is done on the total purchase weight.

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

Time series inconsistency have been found. Errors are corrected:

In 2021, Sales entity fleet emissions was first based on number of salespeople and technicians and assumptions on distance per year done in car by these employees. Since then, the data collection improved, and these estimations are replaced by real fuel consumption generating significant (positive and negative) changes in the Co2e emissions.

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.

Before 2024, our manufacturing plants in Shenzhen, Tianjin and Shanghai (China) were accounted with the same global grid emission factor for China. In 2024, a dedicated grid emission factor has been applied to each manufacturing plant based on regional values available in Ecoinvent platform. This brought also a significant change in CO2e emissions (increase for our Tianjin manufacturing plant but decreasing for our Shenzhen manufacturing plant).

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 disclosed ESG data.

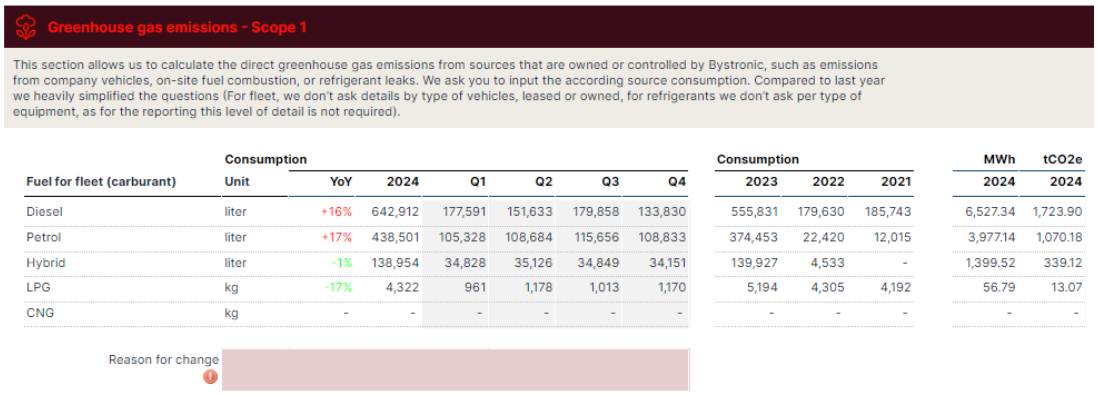
Since 2024, this data is available in the annual report to be published in Q1 2025. This is a significant step in both visibility and priority.

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.

In 2024, to improve the accuracy and the availability of the data, a quarterly ESG data collection has been put in place. This requires more involvement from the 75 people collecting the ESG data, and it also increase the accuracy of the provided data.

The web interface was simplified, displays the past consumptions and directly calculates the energy and CO2e emissions, improving awareness and accuracy.



Greenhouse gas emissions - Scope 1

This section allows us to calculate the direct greenhouse gas emissions from sources that are owned or controlled by Bystronic, such as emissions from company vehicles, on-site fuel combustion, or refrigerant leaks. We ask you to input the according source consumption. Compared to last year we heavily simplified the questions (For fleet, we don't ask details by type of vehicles, leased or owned, for refrigerants we don't ask per type of equipment, as for the reporting this level of detail is not required).

		Consumption						Consumption			MWh	tCO2e
Fuel for fleet (carburant)	Unit	YoY	2024	Q1	Q2	Q3	Q4	2023	2022	2021	2024	2024
Diesel	liter	+16%	642,912	177,591	151,633	179,858	133,830	555,831	179,630	185,743	6,527.34	1,723.90
Petrol	liter	+17%	438,501	105,328	108,684	115,656	108,833	374,453	22,420	12,015	3,977.14	1,070.18
Hybrid	liter	-1%	138,954	34,828	35,126	34,849	34,151	139,927	4,533	-	1,399.52	339.12
LPG	kg	-17%	4,322	961	1,178	1,013	1,170	5,194	4,305	4,192	56.79	13.07
CNG	kg	-	-	-	-	-	-	-	-	-	-	-

Reason for change

Example of Jedox web portal to collect the quarterly ESG data

Since 2021 a dedicated contact in IT was trained on CO2e emissions accounting and is assisting on calculation on top of the sustainability person. The quality of the Scope 1 and 2 emissions data is there for improving year over year. For the calculation of Scope 3, different sources of required data make it more complex to maintain a high-quality data.

Scope 3 categories 6 and 7 are now supported by data collection at entity level. This helps to create company averages commuting distance and distribution as well as business trip average distances.

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 number 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 CONSUMPTION	YoY	2024	2023	2022	2021
Total energy consumption (MWh)	**-3%**	**38,509**	**39,576**	**41,664**	**43,861**
Fuel for fleet (diesel, petrol, LPG)		15,139	14,268	15,042	14,949
Stationary energy for buildings (natural gas, fuel oil)		6,398	8,183	9,297	10,014
District heating		2,490	2,905	2,246	2,226
Non renewable electricity		8,168	7,708	7,680	14,759
Renewable electricity		6,314	6,513	7,399	1,912
Energy intensity per net sales (MWh/million CHF)		**59.4**	**42.6**	**41.0**	**46.7**
Share of renewable electricity consumption		44%	46%	49%	11%
Share of renewable energy consumption		**16%**	**16%**	**18%**	**4%**

Energy data is collected quarterly 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.
- 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.

The energy consumption decrease in 2024 is the result of a mix between increase of fuel for fleet consumption related to more sales activities and more electricity consumption in Chinese plants due to more manufacturing activities compensated by less heating needs

related to milder winter and less electricity (including renewable) use in Europe related to less manufacturing activities.

3.1.2 Operations carbon footprint data (Scope 1 & 2)

GREENHOUSE GAS EMISSIONS (GHG) SCOPE 1&2	YoY	2024	2023	2022	2021
SCOPE 1 & 2 (market-based - tCO_2e)	**-4%**	**10,127**	**10,510**	**11,413**	**12,028**
Scope 1: direct emissions		5,559	6,126	7,110	6,678
Scope 2: Energy indirect emissions (market-based)		4,567	4,384	4,303	5,350
Scope 2: Energy indirect emissions (location-based)		5,174	5,164	5,254	6,340
Fuel for fleet (diesel, petrol, LPG)		4,035	3,871	4,236	4,197
Stationary energy for buildings (natural gas, fuel oil)		1,428	1,836	2,119	2,265
Refrigerants		97	419	755	216
Scope 1: direct emissions	**-9%**	**5,559**	**6,126**	**7,110**	**6,678**
District heating		761	840	840	841
Non renewable electricity		3,807	3,543	3,464	4,509
Renewable lectricity		-	-	-	-
Scope 2: energy indirect emissions (market-based)	**4%**	**4,567**	**4,384**	**4,303**	**5,350**
Scope 1 & 2 intensity per net sales (tCO_2e/million CHF)		15.6	11.3	11.2	12.8
GHG emissions per energy consumption (tCO_2e/MWh)		26%	27%	27%	27%

Bystronic's carbon footprint in 2024 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.

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.

3.1.2.3 Global warming potential and applied methods

Global warming potential is given in the form of CO_2 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 3.11 UPR, IPCC and our own calculation.

The increase in 2024 of Fuel for fleet emissions is related to more sales and technicians' activities as well as more companies disclosing real fuel measurement rather than estimations.

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 3.11 UPR, IPPC and our own calculation.

The decrease in 2024 of Natural gas emissions is related to less heating needs in Europe related to milder winter and limited manufacturing activities in European manufacturing plants (work time down to 60% during certain period). A change to central heating in Switzerland headquarters stopped the use of natural gas there.

3.1.2.5.3 Refrigerant losses

Refrigerant emission factors are taken from IPCC 2021 (AR6).

In the 2024 financial year, refrigerant losses were reduced at all Bystronic locations compared to previous years. A transition towards refrigerants with lower GWP is also visible (R513A).

3.1.2.6 Scope 2 indirect emissions

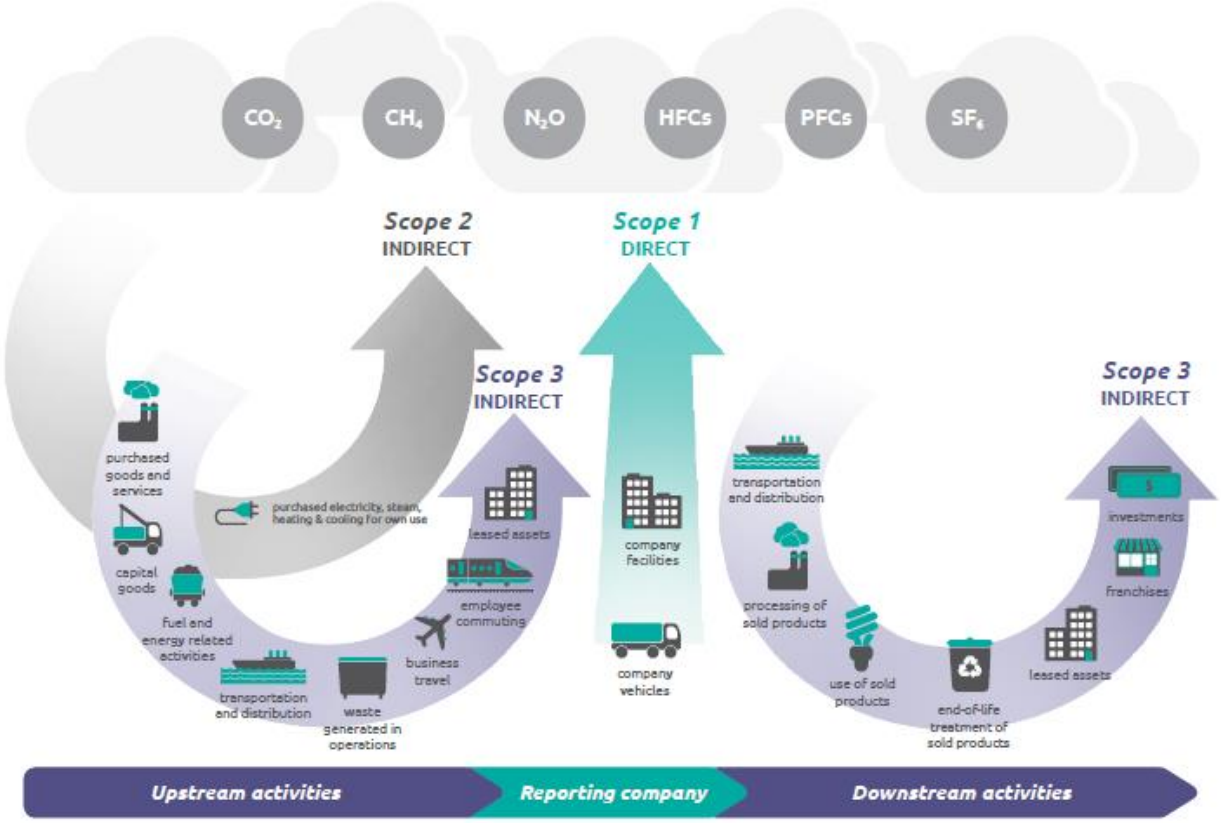
Scope 2 includes emissions from the consumption of purchased heat and purchased electricity.

In the 2024 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 (Electricity emission factors Scope 2-3).
- 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. This is the case for our manufacturing plant in Gotta (Germany) and in Niederönz (Switzerland).

In the 2024 financial year, district heating was recorded at six Bystronic locations like the years before. No major changes: our manufacturing plant in Tianjin (China) had a milder winter and sales entity in Australia has now 2 buildings to heat which explains the increase. District heat emission factors are taken from the database Probas.

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 2024, all Scope 3 categories have been calculated at the corporate level.

GREENHOUSE GAS EMISSIONS (GHG) SCOPE 3	YoY	2024	2023	2022	2021
Scope 3, Total emissions (tCO2e)	**-9%**	**1,015,518**	**1,117,132**	**1,391,743**	**1,578,340**
Cat 1 - Purchased goods & services		224,629	302,927	338,080	302,812
Cat 2 - Capital goods		444	557		
Cat 3 - Fuel- and Energy-Related Activities Not Included in Scope 1 or Scope 2		2,190	1,970		
Cat 4 - Upstream Transportation and Distribution		2,603	2,884		
Cat 5 - Waste generated in operations		130	157		
Cat 6 - Business travel		6,078	4,078		
Cat 7 - Employee commuting		8,617	10,049		
Scope 3, Upstream emissions		**244,691**	**322,623**		
Cat 9 - Downstream Transportation and Distribution		12,926	14,593		
Cat 11 - Use of sold products - customer country grid emission factor method		754,581	776,783	1,010,486	1,216,225
Cat 12 - End-of-life treatment of sold product		3,320	3,133		
Scope 3, Downstream emissions		**770,827**	**794,509**		

3.1.3.1 Boundaries of scope 3 carbon footprint data

The biggest contributors of emissions (>93% of total CO2e emissions):

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

Regarding Category 11, 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).

Status on Nitrogen:

Nitrogen is part of indirect use-phase emissions for the cutting systems. So, the reporting is optional. We had extensive discussions with R&D and concluded to leave Nitrogen out of the reporting. The main reason is that Bystronic does not produce, nor provide Nitrogen to the customer. Therefor Bystronic is not able to reduce the CO2e emissions related to Nitrogen consumption for the machine use.

However, to reduce Nitrogen-related CO2e emissions at customer site, Bystronic has a partnership with Nitrogen-generator providers and proposes such appliance working hand-in-hand with our cutting systems.

3.1.3.2 Assurance of operations carbon footprint data (Scope 3)

Bystronic Scope 3 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.

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

This category represents around 22% of total Scope 3 emissions in 2024.

Purchased goods data is available in a central procurement SAP database. For 2 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.

The decrease in emissions is related to the decreased purchased in 2024.

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

This category represents less than 0.1% of total Scope 3 emissions in 2024.

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 the annual report:

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

The additions, disposals, and reclassifications of each of these categories are sum up, converted into units than 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)

3.1.3.5 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 2024.

The calculation is based on reported market-based Scope 1 and 2 emissions (Fleet, Stationary energy) and energy consumption combined with Ecoinvent V3.10 (grid EF Scope 2-3) & V3.11 (Fuel) 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].

The light increase is related to the use of operation country grid emissions factor (Scope 3) rather than an average grid emission factor for all electricity consumption used in 2023.

3.1.3.6 Cat 4 - Upstream Transportation and Distribution (Spend-based method)
This category represents less than 0.3% of total Scope 3 emissions in 2024.

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].

The light increase in 2024 emissions is mainly explained by long distance supply brought overseas.

3.1.3.7 Cat 5 - Waste generated in operations (Waste-type-specific method)
This category represents less than 0.1% of total Scope 3 emissions in 2024.

The calculation is based on waste disposal company data and converted to GHG emissions with Ecoinvent V3.11 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 V3.11 emission factor based on End-of-life treatment of the material [kg CO2eq/ton].

The decrease in 2024 emissions is mainly explained by the decrease of number of sold machines.

3.1.3.8 Cat 6 - Business travel (Hybrid method)

This category represents less than 0.3% of total Scope 3 emissions in 2024.

In 2024, the Jedox web portal started to collect this data from few companies. This data collection will further improve and help to get the right data year over year.

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)
- 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]) * ADEME Base-Carbon V17 emission factor based on car or airplane groups [kg CO2eq/km].

The increase versus 2023 is related to a change in statistics related to the increased road distance based on some companies.

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

This category represents less than 1% of total Scope 3 emissions in 2024.

In 2024, the Jedox web portal started to collect this data from few companies. This data collection will further improve and help to get the right data year over year.

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].

The decrease versus 2023 is mainly explained by the fact that in 2023 the calculation was based on only 1 manufacturing plant data and statistics, whereas in 2024 feedback from 5 more entities have been collected.

3.1.3.10 Cat 8 - Upstream leased assets - Not applicable

This category is reported under Scope 1 & 2.

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

This category represents less than 1% of total Scope 3 emissions in 2024.

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 sold 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].

The decrease in 2024 emissions is mainly explained by the decrease of number of sold machines associated with the increase of machines send by container overseas (versus by truck on the ground).

3.1.3.12 Cat 10 - Processing of sold product – Not material

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

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

This category represents around 74% of total Scope 3 emissions in 2024.

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 measurements 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

The decrease in 2024 emissions is mainly explained by the decrease of number of sold machines.

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

This category represents less than 1% of total Scope 3 emissions in 2024.

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]

3.1.3.15 Cat 13 - Downstream leased assets - Not material

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

3.1.3.16 Cat 14 - Franchises - Not applicable

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

3.1.3.17 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

RESOURCE OUTFLOWS	YoY	2024	2023	2022	2021
Waste: total amount in manufacturing plants (tons)	**-31%**	**2,288**	**3,323**	**3,860**	**4,267**
Non hazardous waste		2,241	3,266	3,785	4,266
Metals		1,593	2,400	2,989	3,253
Wood		176	375	465	575
Paper & Cardboard		102	117	137	218
Plastics		4	6	6	7
Domestic		346	354	176	156
Special non hazardous waste		18	13	11	4
Hazardous waste & toxic material		47	57	75	1
Waste by disposal methods (%)					
Landfill		1%	1%	1%	
Incineration		4%	11%	12%	
Recycled (share of metal waste - mostly recycled)		70%	72%	77%	76%
Other disposal methods		26%	17%	10%	
Waste intensity per net sales (tons/million CHF)		**2.9**	**3.6**	**3.8**	**4.5**

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 quarterly 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.

Disposal methods are based on local partner data. This data is not always available and therefore we still need to improve the completeness of the data. However more than 70% of the waste is metal and mostly recycled.

3.2.2 Water management data

WATER MANAGEMENT	YoY	2024	2023	2022	2021
Water consumption in manufacturing plants (m^3)	**0%**	**23,562**	**23,664**	**12,274**	
Water withdrawal		24,259	23,664	12,274	
Water discharged		697			
Water Intensity per Net sales (m^3/CHFm)		36.3	25.4	12.1	

Water withdrawal and consumption data includes our manufacturing locations' data and partly sales entity locations. We progress year over year on the completeness of the data.

Local HSE Manager quarterly 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.

Water risk in manufacturing plants (Source: Aqueduct water risk atlas)	Water Risk Atlas
Bystronic Tube Processing S.p.A. - Italy - Lombardia	Medium - High (2-3)
Bystronic Automation Technology S.p.A. - Italy - Lombardia	Low - Medium (1-2)
S.C. Bystronic Laser S.R.L. - Romania - Brașov	High (3-4)
Bystronic Benelux B.V. - Netherlands - Zuid-Holland	Low (0-1)
Bystronic Laser AG - Switzerland - Bern	Low (0-1)
Bystronic Maschinenbau GmbH - Germany - Thüringen	Low - Medium (1-2)
Bystronic Co., Ltd. Tianjin Branch - China - Tianjin	Extremely High (4-5)
Bystronic Co., Ltd. Shanghai - China - Shanghai	High (3-4)
Bystronic Co., Ltd. Shenzhen Branch - China - Guangdong	Medium - High (2-3)
Bystronic Inc. - United States - Illinois	Medium - High (2-3)
Sales entities	

3.2.4 Air pollution data

The calculation is based on data for fleet fuel consumption (Diesel, Petrol, Hybrid, LPG) and heating fossil consumption (Natural gas, Fuel oil, Diesel) collected through the web portal associated with NOx and PM10 emission factors.

NOx [kg] = Sum of fuel [liters, kg, and km] * NOx corresponding emission factor [kg/l, kg or km]

PM10 [kg] = Sum of fuel for fleet consumption [liters and km] * PM10 corresponding emission factor [kg/l , kg or km]

3.2.5 Refurbishment data

Refurbished machines	2024	2023	2022	2021
Number of refurbished machines	57	85	98	87

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.

	Note	YoY	2024	2023	2022	2021
Board of Directors			**8**	**8**	**7**	**7**
Male			6	6	6	7
Female			2	2	1	-
Employees In The Extended Executive Committee (EEC)		**-23%**	**10**	**13**	**13**	**13**
Male			90%	92%	85%	85%
Female		25%	10%	8%	15%	15%
<30			0%	0%		
30-50			30%	23%	46%	46%
>50			70%	77%	54%	54%
Employees reporting directly to the EEC	1	**-11%**	**83**	**93**	**96**	**90**
Male			78%	76%	78%	79%
Female		-8%	22%	24%	22%	21%
<30			4%	2%		
30-50			61%	57%		
>50			35%	40%		
Employees in management positions up to N-3	1	**-2%**	**257**	**262**		
Male			81%	80%		
Female		-4%	19%	20%		
EMEA			11%	13%		
Americas			55%	53%		
APAC			9%	12%		
China			25%	22%		
<30			0%	1%		
30-50			67%	67%		
>50			32%	32%		

5.2 Workplace occupational & psychological safety data

5.2.1 Occupational safety data

Workplace & psychological Safety

	YoY	2024	2023	2022	2021
TRI Rate of recordable injuries (# Injuries / 200,000 hours)	**-18%**	**1.59**	**1.94**	**1.40**	**1.59**
Number of recordable injuries in manufacturing plants		25	35	27	31
Number of high-consequence recordable injuries			-	1	
Fatalities		-	1	-	-
Number of worked hours in manufacturing plants		3,136,998	3,603,464	3,863,592	3,911,171
Number of lost days due to recordable injuries		374	354	147	-

Psychological safety	**2024**	**2023**	**2022**	**2021**
Psychological safety survey result (Scale 1 to 100)	No survey	81	No survey	80

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

Survey results	**2024**	**2023**	**2022**	**2021**
Employee NPS	No survey	6	No survey	31
Voluntary turnover rate	9.0%	8.9%	5.4%	6.8%
Employee engagement score	No survey	77	No survey	82
Training and education	**2024**	**2023**	**2022**	**2021**
Number of training hours	74,104			
Average training hours by employee	23			
Male	26			
Female	10			
Employee Turnover				
Total employee turnover rate	17%	16%	17%	13%
Total employee turnover	492	461	464	440
Male	79%	83%		
Female	21%	17%		
Americas	18%	15%		
EMEA	60%	65%		
APAC	8%	5%		
China	13%	15%		

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

Responsible procurement	2,024	2023	2022	2021
Purchase share of Suppliers in EcoVadis platform	0	10%	5%	
EcoVadis OEM score (scale 1 to 100)	46	46	35	
Number of incidents reported to Bystronic's Business Ethics Hotline	4	4	-	
Number of corruption incidents	-	-	-	
Number of human right identified issues in supply chain	-	-		

Improve customer safety while using our machines

Customer care & safety	2,024	2023	2022	2021
Number of customer requests in CRM (maintenance, issues, installation)	100,864	105,000	100,000	98,000
Annual fines and penalties	-	-	-	-
Number of customer injuries reported	2	1	1	3

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 feedback 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

ESG ratings (on year-1 disclosure)	2,024.0	2023	2022	2021
Bystronic rating index (Score)	**58%**	**53%**	**44%**	**33%**
CDP rating score (Scale D- to A)	B	B	C	D
Sustainalytics risk rating score (Scale SEVERE to NEGLIGEABLE)		MEDIUM	MEDIUM	SEVERE
ISS rating score (Scale D- to A+)	C-	C-	D+	D
MSCI rating score (Scale CCC to AAA)	BBB	BBB	BB	B

In 2024, we updated the following international rating questionnaires:

- CDP
- ISS
- MSCI
- Ethos: A-