

Measuring your corporate carbon footprint: standard data to share with your value chain partners



Disclaimer

This document is provided “AS IS” with no warranties whatsoever, including any warranty of merchantability, noninfringement, fitness for particular purpose, or any warranty otherwise arising out of this document. GS1 Italy disclaims all liability for any damages arising from use or misuse of this document, whether special, indirect, consequential, or compensatory damages, and including liability for infringement of any intellectual property rights, relating to use of information in or reliance upon this document.

GS1 Italy retains the right to make changes to this document at any time, without notice. GS1 Italy makes no warranty for the use of this document and assumes no responsibility for any errors which may appear in the document, nor does it make a commitment to update the information contained herein.

GS1 and the GS1 logo are registered trademarks of GS1 AISBL.

Summary

About us	4
Purpose and objectives	6
Focus on the dataset	8
Methodologies	11
Standard dataset	13
Compiling consumption data / CO₂e emissions data for Scopes 1 and 2	15
Compiling activity data / CO₂e emissions data for freight and people transportation	18
Allocation drivers	22
Sharing these Guidelines and dataset	25
Examples	27
Annex	30
Inputting waste and water data	31
Acknowledgements	32

| About us

We are the barcode people, for a global language in digital transformation.

GS1 is a non-profit organisation that develops the most trusted standards for communication between businesses worldwide. In Italy, GS1 has gathered 40,000 active ventures in all of the main industry sectors.

For 45 years, we have improved relationships among businesses, associations, institutions and consumers. We innovate data management processes throughout the entire supply chain.

The barcode: the product's digital twin

GS1's mission to enhance visibility, efficiency and sustainability through supply chains dates back to 1973, upon the launch of the barcode. BBC defined the barcode as one of the "50 things that made economy global".

Now more than ever, businesses must guarantee immediate access to exhaustive and reliable information for their consumers.

GS1 standards, ECR shared processes and the services that GS1 makes available help businesses

- Enable the creation of a **single, global and verifiable product identity**.
- Digitise contents in order to create a **digital twin** for the product.
- Connect data **throughout the entire supply chain from each and every source**.
- Enable a **seamless** online/offline experience.
- Make the identification of **sustainable choices easier**.

| Purpose and objectives

Environmental sustainability is an imperative pre-condition in today's world, and consumers, investors and the European Union are keenly aware of this issue. Against this backdrop, a company's ability to measure the climate impact (CO₂e emissions) of its operations has become an essential part of its informed decisions and is a core indicator for measuring and reporting on its commitment to sustainability.

Climate data are becoming progressively more important in companies, and their scope extends beyond the perimeter of the organisation's direct operations. Industry studies¹ show that, in the consumer goods sector, more than 90% of the emissions for which a company is responsible are not generated within its perimeter in a strict sense, but originate along the value chain more broadly (these are known as "Scope 3 emissions" in the GHG Protocol²). As a consequence, direct and indirect suppliers in the supply chain are now increasingly involved in collecting and reporting on sustainability data and the actions they are taking to reduce their carbon footprint.

At GS1, our central role has always been to facilitate data sharing between companies in the same value chain, offering instruments that enable information to be transferred efficiently and in a standard format.

Today, the wealth of information shared between trading partners is expected to evolve and also include data on sustainability. For this reason, after publishing "[Measuring your corporate carbon footprint: how to obtain reliable well-structured data](#)", a document that explains how to design a data collection process that ensures reliable and high-quality measurements, GS1 Italy decided to continue on this path of working side-by-side with companies. We started by taking an **end-to-end view of the value chain** and applying a **collaborative approach**, both typical elements in all Efficient Consumer Response (ECR) operations. Then, with the help of the companies belonging to the work group and the GreenRouter team, we **identified and shared a set of standard environmental data** that each supplier could produce to calculate its carbon footprint, a value that it would then report to its customers, many of whom are involved in gathering Scope 3 data.

The purpose of this document is to guide companies in the use of this standard environmental dataset, providing examples to help them understand and correctly interpret the information to register. The main **outcome is to optimise and standardise the suppliers' work to collect and report on these data and to promote a flow of structured and uniform data on the customers' side.**



¹ CDP data analyzed by the Oliver Wyman Forum

² www.ghgprotocol.org

| Focus on
| the dataset

Sustainability is a vast and complex topic, and can be approached from various angles. In order to reach a mutually agreed solution, we decided that it would be best to proceed by steps in a ‘modular’ manner. We hence decided to concentrate on an initial perimeter pertinent to the environment in general and climate more specifically, and then over time expand the dataset to bring in further aspects of sustainability.

The first step was thus to define the basic information within the climate data perimeter, which is part of the wider environment sphere, and work on the quality of this information and the method to exchange data between the value chain actors.

To achieve this outcome, we felt it would be useful to run through the concepts of Scope and CO₂ equivalent (CO₂e) emissions and elaborate on them within a simplified view of the value chain. The climate-changing effect of all greenhouse gases listed in the Kyoto Protocol (carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons, sulphur hexafluoride (SF₆) and perfluorocarbons) is expressed in terms of CO₂e emissions. The contribution of each gas is weighted against the value of CO₂.

The concept of Scope was applied in the GHG Protocol and is now adopted worldwide. CO₂e emissions are classified into three Scopes:

- **Scope 1** emissions are direct emissions from mobile sources (e.g. means of transport used to carry goods or people) or stationary sources (e.g. production sites, offices and warehouses) owned or controlled by an organisation.
- **Scope 2** emissions are indirect emissions from electricity, heat and steam consumed by an organisation.
- **Scope 3** emissions are indirect emissions resulting from an organisation’s activities which occur at sources that it does not own or control; i.e. these are all the other indirect emissions along the value chain, from raw materials to the disposal of products.

Additionally, Scope 3 emissions represent 11.4 times the company’s direct emissions on average (source CDP³).

Within the value chain, in function of what is defined as the business perimeter (i.e. what falls under Scopes 1 and 2), everything else falls by default under Scope 3.

As a value chain involves many actors, it is easy to see that a company’s Scope 3 emissions are relative. In other words, it is plain that any given company’s Scope 1 and Scope 2 emissions will be Scope 3 emissions for an upstream or downstream company in the same value chain.

³ Source [CDP](#)

In practice along the value chain



For retailers, Scope 3 emissions are mainly but not exclusively Scope 1 & 2 emissions from manufacturers and third-party logistics.



For manufacturers, Scope 3 emissions are mainly but not exclusively Scope 1 & 2 emissions from suppliers and third-party logistics.



For third-party logistics, Scope 3 emissions are mainly but not exclusively Scope 1 & 2 emissions from carriers and sub-carriers.

The purpose of these Guidelines is to propose a common language that can be adopted across the board in a value chain, making the process of sharing climate data that much simpler.

We have identified three basic elements in this language. These are a standard dataset, a series of recognised reference methodologies and the allocation drivers.

I Methodologies

Organisations normally refer to international standards when selecting which aspects they will report on, the most suitable methods to calculate their CO₂e emissions and how that will communicate the results. The principle international bodies responsible for this matter (for example ISO, WRI⁴ and WBCSD⁵) are in agreement about promoting the GHG Protocol and ISO 14064, which thus remain the primary references for the method used to calculate emissions. In particular, ISO 14064 provides a clear certification framework that enables a third party to carry out the checks on whether an organisation is compliant with these standards.

The information gathered and organised into the dataset were designed to be in line with the main requests set out in the various standards and reference methodologies.

According to the GHG Protocol classification, the information to be included in the standard dataset refers to Scopes 1 and 2 and to the following Scope 3 categories:

- 4-Upstream transportation and distribution.
- 6-Business travel.
- 7-Employee commuting.
- 9-Downstream transportation and distribution.

For further information on the main regulations and guidelines, see the document [“Measuring your corporate carbon footprint: how to obtain reliable well-structured data”](#) - Chapter 1.

⁴ World Resources Institute

⁵ World Business Council for Sustainable Development

I Standard dataset

We have defined a series of consumption and activity data that can be used to share CO₂e emission figures along the value chain.

Each section of the dataset contains a field where companies can insert their CO₂e emissions directly if they have already calculated this value internally.

The aspects considered in this dataset version are:

- **Consumption data and CO₂e emissions data relating to Scopes 1 and 2 (Excel sheet “Consumption&Emissions-Scopes1&2”)⁶**

This section includes data on electricity consumption, fuel consumption (from stationary or mobile sources) and refrigerant leaks. Direct emissions from industrial, chemical and physical processes are currently excluded, as are LULUCF emissions⁷. Indirect emissions from purchased heat and steam are also excluded.

- **Data on transport activity and CO₂e emissions (Excel sheet “Transport Activity&Emissions”)⁸**

This section includes data on the transport of freight and people, relating to all forms of transport (by ship, airplane, road, train...). More precisely, this category includes emissions from upstream and downstream transportation and distribution, employee commuting and business travel⁹. If your company uses its own vehicles, the resulting CO₂e emissions will be included in its Scope 1 emissions, otherwise, they will fall under its Scope 3 emissions.

The worksheet can be used to collect and share data relating to the entire organisation or to specific homogeneous subsets (for example, subdivided by temperature, business unit and so on). If you use the worksheet to collect data by subsets, check that the values collected through the various datasheets add up to the total consumption and/or emissions for the organisation. Furthermore, you must be able to break down each worksheet by customer, according to the chosen allocation driver of reference. Another suggestion is to give the files names that help to identify the various subsets and to verify that the data received are complete (for example, refrigerated_temperature_consumption_and_emissions_1 of 2).

⁶ ISO 14064-1 Categories 1 and 2

⁷ Emissions from Land Use, Land-Use Change and Forestry

⁸ ISO 14064-1 Category 3

⁹ GHG Protocol Scope 3 emissions categories 4, 9, 7 and 6

Compiling consumption data / CO₂e emissions data for Scopes 1 and 2 (Excel sheet “Consumption&Emissions-Scopes1&2”)

Input data that relate to the year. You can use the table for the total aggregated value of the company’s various operating sites and also to gather data relating to a single site (e.g. office, warehouse, salespoint, etc.). If you are inputting data for single sites, the data gathered at each site can then be aggregated to give the overall value.

The definition of a reporting perimeter and information on how to manage the data collected, together with potential estimates and exclusions, can be found in the document [“Measuring your corporate carbon footprint: how to obtain reliable well-structured data”](#) – Chapters 5 and 6.1.

Consumption and CO₂e emissions data relating to a company’s Scope 1 and Scope 2 emissions are classified into four sections:

0. Master Data.
1. CO₂e Emissions relating to Electricity Consumption.
2. CO₂e Emissions relating to Fuel Consumption.
3. CO₂e Emissions relating to Refrigerant Leaks.

Use the worksheet to gather data on each operating site (or sub-group). Data on consumption or CO₂e emissions for single operating sites (or sub-groups) collected through questionnaires can be aggregated into an end dataset used for sharing data.

Each section has a field where you can input the total CO₂e emissions directly if your company has calculated them internally; otherwise input the consumption data, and these will be used to calculate your company’s CO₂e emissions.

0. Master Data

Complete this section with reference information identifying the reporting company, plus several “macro” variables that can be used to compare emissions from one year to another, and to break the emissions down by customer (here, by customer, we mean the recipient of the data).

Master data	Company name*
	Number of operating sites
	Address*
	Town/City*
	Province/County - Country*
	Volume of goods per year

In addition to the information marked with an * in the above table, you are asked to indicate the **Number of operating sites** where data have been collected. By way of example, operating sites can be head offices, offices, plants, warehouses, salespoints, etc...

Also indicate the **Volume of goods per year**, which is the total outgoing quantity of goods in (gross) tonnes. The total sum should refer to:

- Total weight of goods sold, or
- Total weight of goods produced (outgoing), or
- Should the dataset refer to a single operating site, indicate the total outgoing (or incoming) goods for that site. In this case, please keep to the same definition, so that data can be compared and the results aggregated.

1. CO₂e Emissions relating to Electricity Consumption

In this section, input data about your company’s consumption of electricity.

1. CO₂e Emissions relating to Electricity Consumption	Total CO₂e emissions from electricity consumption
	Total electricity consumption:
	Of which purchased from the electricity grid
	Of which produced by solar power systems for self-consumption
	Of which purchased from certified renewable sources

Companies that have already calculated their CO₂e emissions internally can input this value directly (**Total CO₂e emissions from electricity consumption**). The unit of measurement is tonne of CO₂e emitted and the value to insert relates to the year. In this case, indicate the emission factor used for the calculation (for example Defra-2021, IEA...). Indicate also whether the inserted value for your CO₂e emissions includes ‘FERA’¹⁰, which are upstream emissions of purchased electricity and distribution leakage.

If you are instead inputting consumption data, insert the value corresponding to **Total electricity consumption**, and then give the breakdown into:

- **Of which purchased from the electricity grid:** the amount of energy consumed which comes from the national electricity grid.
- **Of which produced by solar power systems for self-consumption:** the amount of energy consumed by the company which was produced by its own photovoltaic facilities (this value does **not** include energy sent to the electricity grid, for example through net metering).
- **Of which purchased from certified renewable sources:** the amount of energy consumed that comes from renewable energy sources certified to guarantee their origin, and which have an appropriate certificate (for example, Guarantees of Origin GOs).

The sum of the three items above must correspond to the company’s **Total electricity consumption**. The unit of measurement is kWh, and the value input relates to the year.

¹⁰ Fuel - and Energy - Related Activities, GHG Protocol, Category 3

2. CO₂e Emissions relating to Fuel Consumption

In this section, input the amount of fuel purchased directly by the company and used in its vehicles (for example, company fleet, forklift trucks, goods vehicles...) or for heating the operating sites.

2. CO₂e Emissions relating to Fuel Consumption*	Total CO₂e emissions from fuel consumption
	Fuel type
	(Select fuel type)
	Other: Specify _____

Companies that have already calculated their CO₂e emissions internally can input this value directly in the field **Total CO₂e emissions from fuel consumption**. The unit of measurement is tonne of CO₂e emitted and the value to input relates to the year. Indicate the parameter used for the calculation (e.g. Defra-2021 conversion factor, based on the EN 16258 standard...).

If you are instead inputting consumption data, insert the type of fuel, the amount of fuel consumed and select the unit of measurement (m³ or l).

The unit of measurement for methane gas, for example, is cubic metre (m³) and the value to input is the fuel consumed in the year.

If the company completing the worksheet uses its own fleet to transport goods or people, input data on fuel consumption or directly the CO₂e emissions in this section, if available; otherwise input its activity data in the "Transport Activity&Emissions" worksheet.

3. CO₂e Emissions relating to Refrigerant Leaks

In this section, you can determine the atmospheric emissions of refrigerants used in air-conditioning and refrigeration.

3. CO₂e Emissions relating to Refrigerant Leaks	Total CO₂e emissions from refrigerant leaks
	Quantity of refrigerant recharged
	(Select refrigerant type)
	Other: Specify _____
	Quantity of refrigerant lost
	(Select refrigerant type)
Other: Specify _____	

As with fuel, if your company already keeps track of refrigerant leakage and calculates the corresponding emissions, you can input the CO₂e emissions value directly in the field **Total CO₂e emissions from refrigerant leaks**. The provenance of the emission factor used for the CO₂e conversion must also be inserted (e.g. IPCC v5).

Otherwise, you can add the recharged amount of refrigerant used by the company. This quantity represents the refrigerant leakage. If your company is able to measure these leaks directly, you can input the amount in the field '**Quantity lost**'. You must also indicate the type of refrigerant, for example R404A or another refrigerant. The measurement unit is kg, and the value to input are the kg lost per year.

Compiling activity data / CO₂e emissions data for freight and people transportation (Excel sheet “Transport Activity&Emissions”)

The set of data on activities and CO₂e emissions relating to the transport of goods and people is subdivided into three sections, one for each transport category potentially used in a company:

- **Upstream or downstream freight transport:** the transport and/or distribution of products purchased or sold by the organisation. This category can include the various flows of transport between suppliers, the company’s own operational hubs, and the flows towards the end user.
- **People transport - business travel:** transport of company employees travelling for business purposes, including visiting customers and attending conventions, trade fairs and so on.
- **People transport - commuting:** transport of company employees travelling to and from their workplace and home.

Here again, input data that relates to the year. The definition of a reporting perimeter and information on how to manage the data collected, together with potential estimates and exclusions, can be found in the document [“Measuring your corporate carbon footprint: how to obtain reliable well-structured data”](#) - Chapter 5.

You can input the total CO₂e emissions directly if your company has calculated them internally; otherwise input the consumption data, and these will be used to calculate your company’s CO₂e emissions.

If your company has its own fleet of vehicles to transport goods or people and you have not inserted the relevant data in the Excel sheet “Consumption&Emissions-Scopes1&2”, you can input these data in this Excel sheet “Transport Activity&Emissions”, indicating that you have chosen this option (answer yes or no in the box provided). If your company has its own fleet and also uses third-party transport services, please make a copy of the worksheet and complete one for each option.

Freight transport

In this section, you can input the total CO₂e emissions for freight transport directly into the field **Total CO₂e emissions from freight transport**. You should also specify:

- The total value of CO₂e emissions in tonnes for the year.
- The method used to calculate this value (e.g. GLEC, EN/ISO).
- The type of calculation/approximation applied (e.g. use of default values such as GLEC values, modelling or the use of primary data such as fuel consumption).

If you include data on activities linked to freight transport, you can input the various values in the table for each flow of movement indicated.

The flows refer to typical value chain segments concerning outward bound goods moving downstream from the factory. You can also include ‘personalised’ flows, for example relative to e-commerce transport, or in-bound travel flows (e.g. from supplier to factory).

Each travel flow is associated to a method of transport. If different transport methods are used in the same journey, you can duplicate the corresponding row and input the data for each transport modality.

Type of flow	Mode of transport	No. journeys	Average km per journey	Weight transported per journey (tonnes)	Tonnes-km
Plant - Warehouse					
Plant - Customer					
Warehouse - Transit Point/Hub					
Warehouse - Customer					
Transit Point/Hub - Customer					
Transit Point 1 - Customer					
Transit Point 2 - Customer					
Transit Point 3 - Customer					
Warehouse - Salespoint					
Other flows (e.g. e-commerce)					

Insert the following values:

- **Mode of transport:** input the primary mode of transport for this segment (e.g. train, road, ship, airplane).
- **No. journeys:** input the number of journeys for the year.
- **Average km per journey:** input the average number of kilometres travelled for this travel flow.
- **Weight transported per journey (in tonnes):** input the total weight transported within this travel flow in tonnes of goods.
- **Tonnes-km:** if you have this information, input the tonnage per kilometre, which is the measurement unit representing the transport of one tonne of goods over one kilometre.

These values are used to make a simple calculation of the tonnes of CO₂e emissions emitted during freight transport.

More information on defining the business perimeter and on gathering activity data can be found in the document [“Measuring your corporate carbon footprint: how to obtain reliable well-structured data”](#) - Chapter 6.2

People transport - business travel

In this section, input data on business travel within the people transport category.

If your company has already calculated its carbon footprint, you can input this data in tonnes of CO₂e emissions directly in the field **“Total CO₂e emissions from business travel”**. You should also specify the methodology used in the calculation and the parameters or emission

factors applied.

If you are also including activity data on business travel, complete the relative table.

For each vehicle category (**Type of transport**), input the following values:

- **Fuel:** select one of the options in the drop-down menu.
- **Total km per year:** input the total number of kilometres travelled per type of transport.
- **No. journeys:** input the total number of journeys travelled using this type of transport.

Type of transport	Fuel	Total km per year	No. journeys
Motorbike	<i>(Select fuel type)</i>		
Car	<i>(Select fuel type)</i>		
Train	<i>(Select fuel type)</i>		
Bus/Underground	<i>(Select fuel type)</i>		
Airplane	<i>(Select fuel type)</i>		
Other: Specify _____	<i>(Select fuel type)</i>		

More information on defining the business perimeter and on gathering activity data can be found in the document [“Measuring your corporate carbon footprint: how to obtain reliable well-structured data”](#) – Chapter 6.3.

People transport - commuting

In this section, input data on how people commute to and from work, within the people transport category.

If your company has already calculated its carbon footprint, you can input this data in tonnes of CO₂e emissions directly in the field **‘Total CO₂e emissions from commuting’**. For completeness, also specify the methodology used in the calculation and the parameters or emission factors applied.

If you are also including activity data on commuting, complete the relative table.

For each vehicle category (**Transport type**), input the following values:

- **Fuel:** select one of the options in the drop-down menu.
- **Average daily km:** input the average number of kilometres travelled by each member of staff, given by adding together their outward and return journeys.
- **No. employees:** input the number of company employees who travel to their workplace.
- **No. WFH (working from home) days per week:** input the average number of days when the employee does **not** go to his or her workplace

but works from home (e.g. two days a week).

- **Average travel time:** input the average travel time per member of staff, obtained by adding together the time it takes to travel to and from work (this value is not required if you have input the average number of kilometres).

Type of transport	Fuel	Average daily	No. employees	No. WFH (working from home) days per week	Average travelling time
On foot/Bicycle	<i>None</i>				
Motorbike	<i>(Select fuel type)</i>				
Car	<i>(Select fuel type)</i>				
Train	<i>(Select fuel type)</i>				
Bus/Underground	<i>(Select fuel type)</i>				
Other: Specify _____	<i>(Select fuel type)</i>				

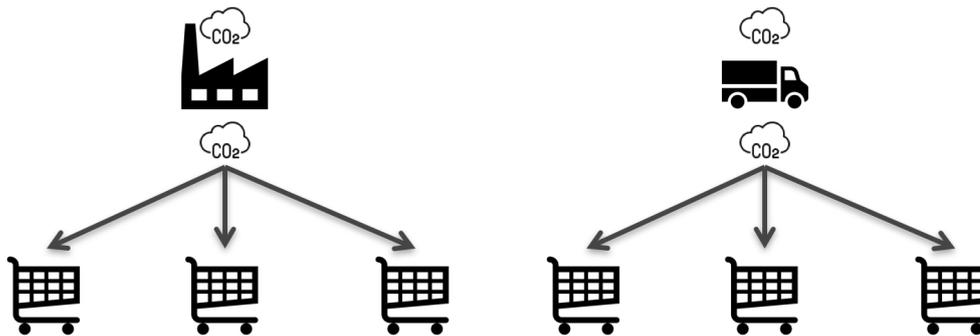
More information on defining the business perimeter and on gathering activity data can be found in the document [“Measuring your corporate carbon footprint: how to obtain reliable well-structured data”](#) – Chapter 6.3.

I Allocation drivers

Allocation drivers are another key element in the process of sharing climate data along the value chain. Basically, it involves allocating the CO₂e emissions relating to an individual company in the value chain among its customer companies on the basis of the same parameter.

For example, a third-party logistics (3PL) provider works for several companies and often transports goods for various companies on the same vehicle. Or, similarly, a supplier sells its goods (finished and/or semi-finished products) to different customer companies belonging to the same value chain, up to the large-scale distribution actors. This means that a company's total consumption and activity data must refer to the specific activities that actually take place with their customers.

By setting allocation drivers, a company receiving the dataset will only receive data relating to its own business activity, and it also prevents double counting within the value chain.



The primary allocation driver is the tonnes of goods moved. The parameter referring to goods exchanged between two companies can thus be related to the total tonnage produced or moved by the supplier (of goods or transport services).

It is also possible to allocate emissions according to more specific allocation drivers. For suppliers of goods, we recommend using:

- Tonnes of goods.
- Pallets.
- Packaging units.

Potentially, as the data collection process is perfected, it could be possible to make more specific distinctions, for example by plant, product line or even single stock-keeping unit (SKU). However, compared to today's dataset, this would require collecting data to a greater level of detail upstream and then elaborating them in a more sophisticated way. Even so, the current standard dataset is a good starting point, as the quality is perfectly acceptable.

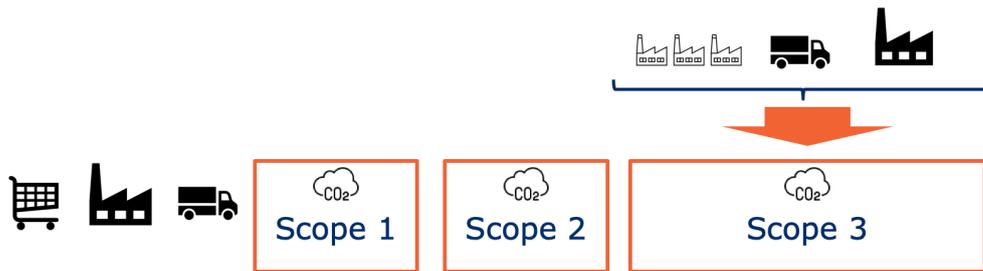
With regards to suppliers of transport services, the allocation drivers we recommend using are:

- Tonnes of goods.
- Tonnes per km.
- Packaging units.

Here also, greater detail is potentially possible, for example, isolating consumption and activity data for given warehouse areas or transport journeys for a specific customer. Such high precision in allocating these results implies making changes upstream to collect more detailed data and elaborate them in a more complex manner than how the data is currently recorded.

| Sharing these Guidelines
| and dataset

The standard dataset can be used every time that producers, retailers and logistics operators ask their suppliers for data on consumptions or CO₂e emissions. (By suppliers, we mean producers and/or suppliers of goods, 3PL providers/carriers/suppliers of services in general).



This tool is useful whenever a company asks its suppliers for consumption/activity data (and will then calculate the measurements internally), and also when the data requested is directly related to CO₂e emissions (and the supplier is required to make the calculations itself).



Depending on the case in question, various conditions may arise, and these will be examined more closely below.

A supplier preparing a set of data to share with a customer company can use the most appropriate allocation driver (e.g. tonnes of goods) to allot the emissions on the basis of the activity resulting from a specific supplier-customer relationship. For example, if company A supplies the same product to customers B, C and D in equal quantities by weight, it will split the consumption or CO₂e emissions value into three equal parts. Each customer company will record, in its Scope 3 data, 33% of the CO₂e emissions or consumption (Scopes 1 and 2) belonging to supplier A.

I Examples

Below are several examples of situations/relationships that can arise in the value chain. The purpose is to give a more thorough explanation concerning the modalities and dynamics of using the shared set of climate-related data.

Example 1 - Partial set of consumption/activity data

The supplier is unable to produce data on its final CO₂e emissions, and only has a set of sometimes partial consumption data.

The worksheet proposed should still be compiled, and data ‘normalised’ by making hypotheses/assumptions about the flows and activities that ideally should be declared, along with the underpinning logics. Typical examples include:

- I don't have the consumption of electricity in one or more sites, but I know the cost. If I use the euro/kWh ratio for that country, I can estimate my yearly consumption.
- I don't have the consumption of methane in one or more sites (e.g. offices or shops) but, if I use the yearly usage/sqm ratio, I can extrapolate it from a similar site for which I have this information.
- I don't have the gross weight transported in my computer system, but I can use an incremental parameter and, starting from the net weight, I can go on to estimate the gross weight.
- I know the total weight and shipments (which I can get from my company enterprise resource planning (ERP) system), but I don't have details about the kilometres or modes of transport. I can work with my logistics services providers to identify homogeneous classes of travel flows and give them realistic values extrapolated from their operational management systems, including the mix of transport modes for a single travel flow, if needed.
- I don't know what type of transport is used by all the staff, just for some of them. I can take a sample of the data I do have and project the total by calculating the percentage proportion over the total number of employees.
- Etc.

On the basis of this information, ideally set out formally, you can complete the worksheet, and then work with the receiving company to decide whether to integrate or normalise these data further.

The minimum requirement is to cover all the items listed, so that the emissions can be calculated and then, using a subdivision parameter, allocated proportionally on the basis of the receiving company's activity. The receiving company must be certain that the data it is given always relate **exclusively to its volume of goods purchased**, and these alone are used to calculate the CO₂e emissions for which it is responsible.

Example 2 - Full set of consumption/activity data

The supplier is unable to produce data on its final CO₂e emissions, but has a complete set of structured consumption data.

Compile the worksheet proposed, indicating the modality used to allocate activities proportionally to the total, and be ready to provide evidence on the sources used.

Typical examples are:

- I can provide data on the electricity consumption at my operating sites, and can split it by customer/receiving company. I must make sure to document how I do this, whether by extrapolating data, reading energy usage invoices, or using an energy management system (EMS) or files supplied by my energy provider.
- I can provide data on refrigerant leaks at my warehouses and split them by customer/receiving company. I can document how I do this, whether by reading technical assistance invoices or using files supplied by the service provider.
- I can provide data on journeys, gross weight and tonnes per km for shipments by single customer. I will make a concerted effort to set out the source/s of this information, typically a transport management system (TMS).
- I can provide data on journeys, type of vehicles and annual consumption for my company fleet. I will make a concerted effort to set out the source/s of this information, typically the fleet management system, or obtained from the leasing company or the firm managing the company's fuel cards.

Example 3 - Full set of CO₂e emissions data

The supplier can produce data on its final CO₂e emissions split by customer (receiving company).

Compile the worksheet proposed only for the CO₂e part that relates to customer X, indicating the modality used to allocate activities proportionally to the total, and be ready to provide evidence on the sources used.

Typical examples are:

- I can provide structured data on CO₂e emissions from standard reports and extrapolated data, using a calculation tool or internal computer system. I can use this information to compile the worksheets and provide details on the methods of calculation and allocation, if necessary.
- My company calculates its corporate carbon footprint (CCF) independently. I will use these results to compile the worksheet. I can include a copy of my CCF results (with or without ISO 14064 certification, as required), and details of the customer allocation logic applied.

I Annex

Inputting waste and water data (Excel sheet “Waste&Water”)

This worksheet section shows how, by compiling the table below, you can map the production of waste in your company and its water consumption. The data in the table are often needed when drawing up company sustainability reports.

Waste

Input the type of waste produced by your company directly in the table, using kg per year as the unit of measurement. The main waste categories used in the worksheet are listed here:

- Plastics
- Cartons
- Metals
- Wood
- Organic waste

You can also add a category not included in the default list. The table below relates to one of the categories in the standard dataset.

Plastics
<i>Destined for recycling</i>
<i>Destined for reuse</i>
<i>Destined for disposal</i>
<i>Other destinations_____</i>

Alongside the waste type, you can also indicate its destination (expressed in kg per year). Here also, if the destination is not in the default list, you can add another one.

Water

This section also includes water usage.

Water
Of which well water
Of which from water utilities
Of which from recovery systems (e.g. rainwater)

Water consumption can be expressed either in litres per year or in cubic metres (m³) per year. You can also specify the quantities subdivided by source of water consumed.

- **Well water**, taken directly from the water table or from springs.
- **Water from water utilities**, water purchased from water companies.
- **Recovery water**, taken for example from rainwater harvesting systems or other water recovery systems.

I Acknowledgements

We would like to thank the companies in the working group for their corporate testimonials and GreenRouter team for the support in the realisation of the dataset and this document.

BARILLA
BAULI
BENNET
BOLTON GROUP
CAB LOG
CAMEO
COCA-COLA HBC ITALIA
CONAD
CONAD NORDOVEST
COOP ITALIA
COOP NORDOVEST
CRAI
D.IT - DISTRIBUZIONE ITALIANA
DESPAR ITALIA
DHL
ERIDANIA ITALIA
ESSELUNGA
FATER
FERRERO
ITALTRANS
LOGISTICA UNO
LUIGI LAVAZZA
METRO ITALIA
MONDELÉZ ITALIA
NESTLÉ ITALIANA
NUMBER1
PARMALAT
RED BULL
S.C. JHONSON ITALY
SELEX GRUPPO COMMERCIALE
STEF
UNILEVER ITALIA

We are the barcode people, ours is the global language for digital transformation.

In 1973, the NPO GS1 gave the world barcodes. Today, it develops the globally most common standards for company-to-company communication.

GS1 in Italy brings together 40.000 companies from convenience goods, health, banking, public authorises and logistics.

More than ever before, companies must give consumers prompt, complete and reliable information. Using GS1 Italy's standard systems, shared ECR systems and research observatories, companies can create exciting consumer experiences, increase transparency, reduce costs and make sustainable choices. In short, digital transformation is simpler and faster with GS1.

GS1 Italy

Via Paleocapa, 7
20121, Milano
T +39 02 7772121
E info@gs1it.org

gs1it.org

