FORLIANCE
GROWING CLIMATE ACTION

CORPORATE CARBON FOOTPRINT 2024

RAMPA GmbH & Co. KG

October 2025

SUMMARY

The subject of this report is the Corporate Carbon Footprint of RAMPA GmbH & Co. KG.

Object of consideration and methodology

The assessment covers the year 2024. The complete RAMPA GmbH & Co. KG was defined as the object of this assessment. To create a holistic assessment of all emissions, all relevant emissions of scopes 1, 2 and 3 were recorded. Beyond direct emissions, the company's *upstream* and *downstream* value chain was, therefore, also considered.

The methodological basis for the analysis performed is the "Greenhouse Gas Protocol Corporate Accounting and Reporting Standard" (GHG Protocol).

Results 2024

The total greenhouse gas emissions caused by RAMPA GmbH & Co. KG in the year 2024 amounts to 583.97 t CO_2e (*market-based approach*).

Of this total, 13.88% can be attributed to emission sources that the company either owns or directly controls (Scope 1), 0.14% to E-mobility in Scope 2, and 85.98% to all other emission sources that arise as a result of the company's activities but are owned or controlled by a third party (Scope 3, e.g. business travel, employee commuting).

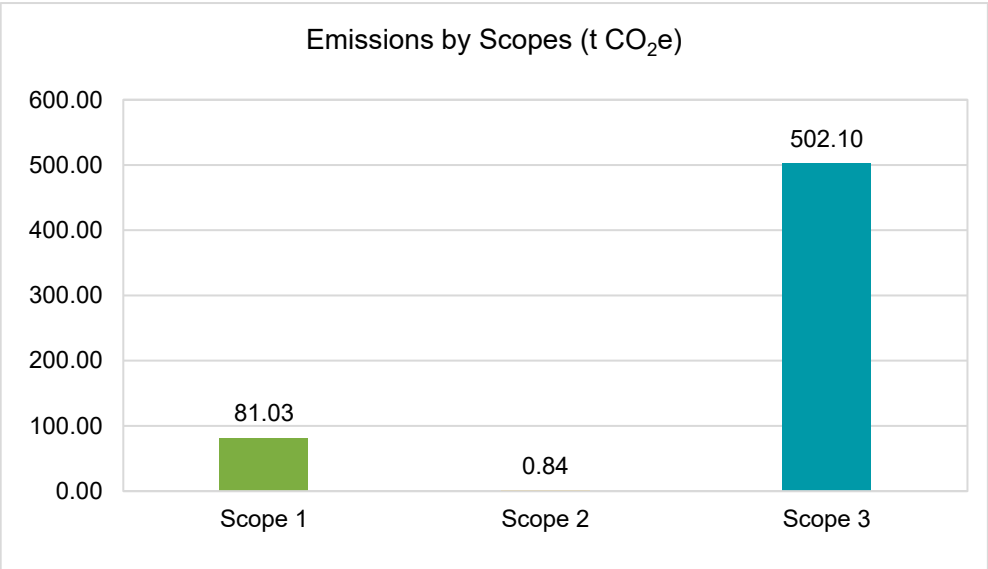

Figure 1: CO_2e emissions by scope (year 2024)

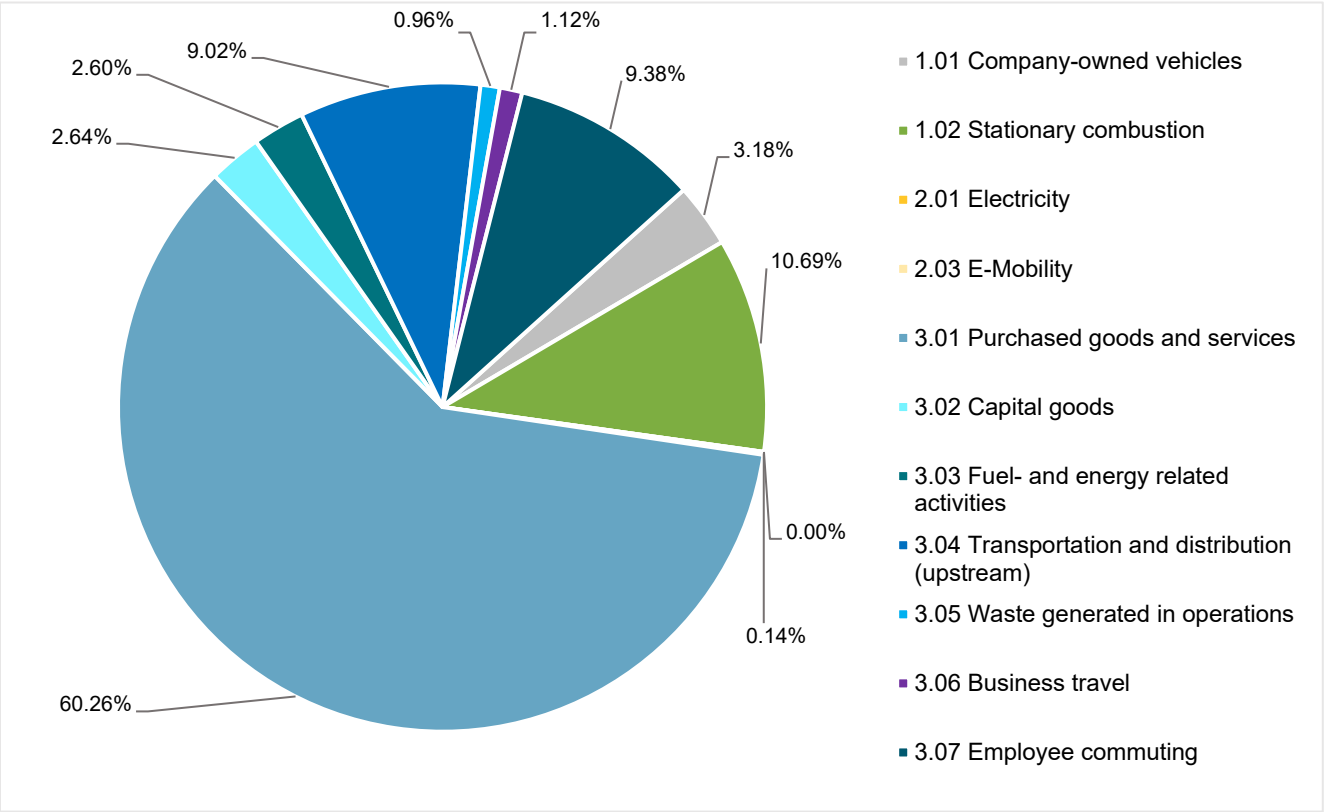

Figure 2: CO_2e emissions by category (year 2024)

Emission Hotspots

The emission hotspots are depicted in Figure 2. The three identified emission hotspots account for 79.98% of the total emissions.

1. Purchased goods and services (351.90 t CO_2e; 60.26%)
2. Stationary combustion (62.45 t CO_2e; 10.69%)
3. Transportation and distribution (*upstream*) (52.69 t CO_2e; 9.02%)

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Glossary

BEIS	Department for Business, Energy and Industrial Strategy
CCF	Corporate Carbon Footprint
CDP	Carbon Disclosure Project
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalents
DNK	Deutscher Nachhaltigkeits Kodex (The Sustainability Code)
GHG	Greenhouse Gas
GRI	Global Reporting Initiative
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
UBA	Umweltbundesamt (German Environment Agency)
UNFCCC	United Nations Framework Convention on Climate Change
WBCSD	World Business Council for Sustainable Development
WRI	World Resources Institute

1 INTRODUCTION

About RAMPA GmbH & Co. KG

RAMPA is a professional partner for connecting technology, where quality comes first. The high-quality inserts provide the required stability and long-term load-bearing capacity for structures in wood, metal and plastic. As a C-component supplier, RAMPA provides its customers with a reliable supply of connecting and fixing elements for wood applications such as threaded sleeves, threaded inserts, screw-in nuts and pan-head screws. Connections that are extremely strong and can also be undone several times can be created with these RAMPA elements (RAMPA 2021).

Subject of the report

The subject of this report is the Corporate Carbon Footprint (CCF) of RAMPA GmbH & Co. KG. A CCF is a core component of any profound climate strategy, as the CCF represents the central metric in terms of status quo, reduction targets, reduction measures, emission scenarios, and efficiency metrics.

The aim of the assessment is to determine the amount of greenhouse gas emissions caused by the company to subsequently develop a strategy for long-term reduction. The knowledge gained will be used to understand the company's impact on the global climate and to demonstrate to employees, partners, and other stakeholders a responsible role in the company's commitment to sustainability.

The assessment covers the year 2024. The complete RAMPA GmbH & Co. KG was defined as the object of consideration. In terms of a holistic approach, all relevant emissions of scopes 1, 2 and 3 are to be recorded. In addition to the direct emissions, the company's *upstream* and *downstream* value chain should also be considered. This has now happened for the fifth year in a row, which allows conclusions to be drawn about the development of emissions.

The methodological basis for the analysis performed is the "Greenhouse Gas Protocol Corporate Accounting and Reporting Standard" (GHG Protocol), one of the most widely recognized international accounting standards for corporate GHG emissions.

2 METHODOLOGY

With the aim of achieving a high degree of comparability, transparency and traceability of the results obtained, the carbon footprint was calculated according to the methodological specifications of the Greenhouse Gas Protocol (GHG Protocol) standard.

2.1 Greenhouse Gas Protocol

The GHG Protocol, developed by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD), is the most widely used international standard for the accounting and reporting of corporate CO_2 emissions. The GHG Protocol Standard is internationally considered a best practice standard and is also recommended in the context of national and international CSR reporting. Both the Global Reporting Initiative (GRI) and the German Sustainability Code (DNK) explicitly mention the GHG Protocol as an accounting standard. According to the GHG Protocol, 92% of Fortune 500 companies reporting to the CDP reported in accordance with the GHG Protocol in 2016.

The addition of the "Corporate Value Chain (scope 3) Accounting and Reporting Standard" to the "Greenhouse Gas Protocol Corporate Accounting and Reporting Standard" provides practical guidelines for the accounting and reporting of emission sources in scopes 1-3.

2.2 Greenhouse Gas Emissions and Global Warming Potential

This Corporate Carbon Footprint includes the greenhouse gases carbon dioxide, methane, nitrous oxide, perfluorocarbon, chlorofluorocarbons, sulphur hexafluoride and nitrogen trifluoride (GHG Protocol), which are taken into account by the UNFCCC and the Kyoto Protocol. Since their respective Global Warming Potentials (GWP) differ considerably, they are converted to CO_2 equivalents (CO_2e) for the sake of better comparability. Table 1 lists the greenhouse gases with their respective global warming potential in CO_2e over a period of 100 years. The aim of taking all greenhouse gases into account is to provide a meaningful representation of the company's impact on anthropogenic climate change.

Greenhouse gas	**GWP**
Carbon dioxide (CO_2)	1
Methane (CH_4)	27.9
Nitrous oxide (N_2O)	273
Perfluorcarbon (PCFs)	7,430 – 12,400
Chlorofluorcarbons (HFCs)	4.84 – 14,600
Nitrogen trifluoride (NF_3)	17,400
Sulphur hexafluoride (SF_6)	25,200

Table 1: Greenhouse gases and their global warming potential according to UNFCCC/Kyoto-Protocol

2.3 Accounting principles

Generally, a carbon footprint is made up of two central components. One part is generally described as activity data or consumption data. This includes, for example, data such as kilometers traveled per means of transport, electricity usage, heating fuel consumption, or quantities of goods consumed.

On the other hand, there are emission factors. Emission factors enable the conversion of activity data into reliable emission values. As there is usually no on-site measurement of the emissions caused (primary data), secondary data (activity/consumption data) must be multiplied by emission factors. Emission factors represent the amount of greenhouse gas emissions caused in relation to a specific unit (e.g., per kilometer, per kWh, per kg). The activity data combined with the emissions factors enable the calculation of the total greenhouse gas emissions emitted.

Activity data x emission factor = total amount of GHG emissions

Example: 10,000 kilometers by car x 0.163 kg CO2e/passenger kilometer = 1,630 kg CO_2e

If direct data on the emissions caused are available, these are to be preferred. In the ideal case, all market participants report their directly measured emissions and make this information (publicly) available. In this way, one would be able to calculate highly precise and complete corporate carbon footprints.

3 PROCESS

3.1 Preparation of the assessment

The accounting process was built on the experience of the initial assessment for the last four reporting years (2020, 2021, 2022 and 2023) and further discussions.

3.2 Organizational boundaries

The organizational boundaries have not been changed compared to the base year.

The **operational control approach** continues to be applied:

> „*A company has operational control over an operation if the former or one of its subsidiaries […] has the full authority to introduce and implement its operating policies at the operation. This criterion is consistent with the current accounting and reporting practice of many companies that report on emissions from facilities, which they operate (i.e., for which they hold the operating license). It is expected that except in very rare circumstances, if the company or one of its subsidiaries is the operator of a facility, it will have the full authority to introduce and implement its operating policies and thus has operational control. Under the operational control approach, a company accounts for 100% of emissions from operations over which it or one of its subsidiaries has operational control.*“ (GHG Protocol Corporate Standard: S. 18)

The setting of these organizational accounting boundaries subsequently has an impact on the allocation of emissions to different emission scopes and thus responsibility. By choosing this accounting approach, direct emissions from energy consumption in rental properties, for example, are assigned to the scope 1 and 2 emission areas and not to the scope 3 area (more details on scopes see section 3.3).

3.3 Operational boundaries

Within the described organizational boundaries, emissions of scopes 1, 2 and 3 are to be covered. The aim is to take full account of all emission sources, if these can be determined in accordance with the principles of relevance, completeness, consistency, transparency, and accuracy.

The principle of scopes is based on the distinction between direct and indirect emission sources:

- **Direct emissions:** Emissions from sources that the company either owns or directly controls.
- **Indirect emissions:** Emissions that arise from activities of the company but occur at sources owned or controlled by another company.

Based on this, a distinction is made between three scopes. According to the GHG Protocol, all emissions from scope 1 and 2 must be included in the calculation and accounting of a CCF, while the inclusion of scope 3 emissions is voluntary but recommended.

- **Scope 1**: All emissions that occur directly within the company. In other words, emissions from sources that the company either owns or directly controls.
- **Scope 2:** All indirect emissions generated for the company's energy supply. In other words, emissions from purchased electricity and thermal energy.
- **Scope 3:** Any other emissions that arise as a result of the company's activities but are owned or controlled by a third party.

Figure 3 clearly illustrates the distinction between scopes 1-3 and shows examples of emission sources from the respective scopes.

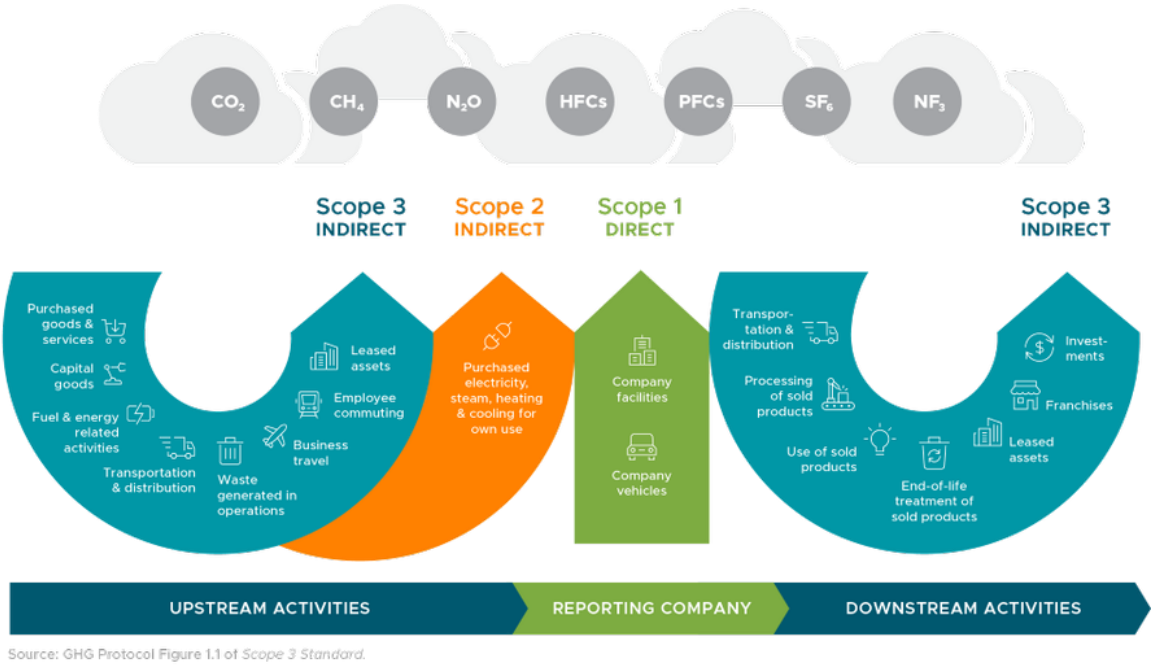

Figure 3: Overview of scopes and emission sources according to the methodology of the GHG Protocol (Source: based on GHG Protocol)

3.4 Emission sources RAMPA GmbH & Co. KG

The following emission sources were determined for RAMPA GmbH & Co. KG (see Table 2):

Scope	Category	Emission source	Relevant?	Emission source – specific example
1		Stationary combustion	Yes	▪ Heating agent, fuel e.g., for generators, machines
1		Company-owned vehicles	Yes	▪ Vehicle fleet (incl. leased vehicles)
2		Electricity usage	Yes	▪ Electricity usage
2		E-Mobilität	Yes	▪ Electric mobility

3	.1	*Upstream*	Purchased goods and services	Yes	▪ Raw materials ▪ Trade goods ▪ Packaging ▪ Oil ▪ Water supply
3	.2		Capital goods	Yes	▪ Projector ▪ Notebook ▪ Server room cooling
3	.3		Fuel- and energy-related activities	Yes	▪ Indirect (*upstream*) emissions
3	.4		Transport and distribution	Yes	▪ Logistics service providers (*upstream* and *downstream*)
3	.5		Waste generated in operations	Yes	▪ Wastewater ▪ Residual waste ▪ Waste paper ▪ Plastic/yellow bag ▪ Organic waste
3	.6		Business travel	Yes	▪ Air travel ▪ Car ▪ Railroad ▪ Taxi/Uber ▪ Overnight stays
3	.7		Employee commuting	Yes	▪ Auto, Train, Public transportation, etc. ▪ Homeoffice
3	.8		*Upstream* leased assets	Yes	▪ As part of the operational control approach, energy emissions from leased assets fall under Scopes 1 and 2
3	.9	*Downstream*	*Downstream* transportation and distribution	No	
3	.10		Processing of sold products	No	
3	.11		Use of sold products	No	
3	.12		End-of-life treatment of sold products	No	
3	.13		*Downstream* leased assets	No	
3	.14		Franchises	No	
3	.15		Investments	No	

Table 2: Considered emission sources RAMPA GmbH & Co. KG

The relevance analysis and thus the decision to include emission sources in the accounting process was made in exchange with RAMPA and was based on the experience of FORLIANCE. Omitted emission sources are discussed under 4.2.

3.5 Reporting period

The reporting period refers to the year 2024.

3.6 Data collection process

The data collection was carried out by RAMPA GmbH & Co. KG. The corresponding data collection sheets were set up by FORLIANCE based on the data collection of the previous year. The data on employee mobility was queried and collected by RAMPA. Review and verification of the collected data was done by FORLIANCE.

4 ACTIVITY DATA

As described, data was collected through individualized data collection sheets and submitted according to the previous year to allow for comparison.

4.1 Data format

Most of the data was submitted in the requested form. Only a few data points were converted/edited to represent the appropriate counterpart to the respective emission factor.

4.2 Omitted emission sources

The following emission sources were not considered:

- Purchased goods and services, except for raw materials and trade goods, including packaging (e.g., office equipment).
- *Downstream* emissions

Raw materials, merchandise and packaging were included in the purchased goods category. Other consumables were not accounted for. Scope 3 *downstream* emissions were also not included in this footprint. The footprint focuses on sources that RAMPA can influence to implement mitigation measures. Omitted emission sources may be added in the future. Comparison to previous years is possible.

Rationale for the exclusion of individual categories from Scope 3 (as of September 2025)

For the following categories, RAMPA feels compelled to exclude them from the accounting.

Category 9: *Downstream* transportation and distribution

The category "*Downstream* Transport and Distribution" refers to the transport and distribution of products after they have left the RAMPA factory. At RAMPA, all transports shipped under the delivery condition "ex works" are attributed to the customers, as they are responsible for the transport and the resulting emissions. In terms of emissions, however, RAMPA takes into account all deliveries with franking "free of charge". In these cases, RAMPA chooses the transport company and thus has an influence on the selection of the transport partner. The emissions from these free home deliveries are recorded and taken into account in the "*Upstream* Transport and Distribution" category. Since all other transports are outside the direct sphere of influence of RAMPA, they are not taken into account in the calculation of Scope 3 emissions.

Category 10: Processing of sold products

With its fasteners, RAMPA supplies an intermediate product that is used in a wide range of end products in different industries. Due to the wide range of possible uses and the supply to various branches of industry, it is not possible for RAMPA to make a well-founded statement about the emission costs that arise during the further processing of the products. Since the processing is in the hands of the respective end customers and strongly depends on the specific industrial processes, about which RAMPA does not have detailed information, an accurate quantification of emissions in this category is not feasible.

Category 11: Use of sold products

RAMPA supplies a large number of customers from a wide range of industries with its products. Due to the wide range of applications and the considerable diversity of its customers, it is not possible for RAMPA to track or quantify the use of its products in a systematic manner. The individual application types of fasteners vary greatly and are beyond RAMPA's direct sphere of influence. For these reasons, a well-founded recording of the emissions caused by product use is not feasible.

Category 12: End-of-life treatment of sold products

RAMPA supplies its products to a wide range of customers and industries, often passing them on to end customers via distributors. Due to the great diversity of the clientele and the complex distribution chains across different dealers, it is not possible for RAMPA to obtain reliable information about the disposal of the products at the end customers. The useful life, the different disposal practices and the dispersion of the products make it impossible to track and quantify the associated emissions.

Category 13: *Downstream* leased assets

RAMPA does not own any assets or assets that are subleased to third parties. The Company does not engage in any *downstream* leasing activities that could involve leasing equipment or products from RAMPA to external parties.

Category 14: Franchises

RAMPA does not operate a franchise model and is not involved in any franchise activities.

Category 15: Investments

RAMPA's business model does not include any financial holdings or investments that would fall within the scope of this category. The "Investments" category is primarily relevant for financial institutions and companies that pursue active investment strategies.

4.3 Data consolidation

The provided data was reviewed and verified for plausibility by FORLIANCE.

4.4 Data quality

The overall process of data collection has resulted in an extensive data catalog. Since data quality has a significant impact on the accuracy of the result, the data collected are qualitatively assessed by FORLIANCE in the following. The following categorization of activity data uses the following categories:

- High level of data accuracy (+); based on e.g., billings & real consumption data
- Moderate level of data accuracy (O); based on e.g., data extrapolation
- High level of data inaccuracy (-); based on e.g., estimates

The categorization is based on FORLIANCE's many years of experience.

SCOPE 1			
Emission source	**Quality**	**Original source**	**Comments**
Company-owned vehicles	+	Real consumption data	The kilometers driven were transmitted accurately. The data quality can be classified as high.
Stationary combustion	+	Real consumption data	The data was submitted as total kWh consumed. No conversion was necessary. Therefore, the data quality is rated as high.

SCOPE 2			
Emission source	**Quality**	**Original source**	**Comments**
Electricity usage	+	Real consumption data	The total quantity in kWh was transmitted. A conversion was not necessary. The data quality is rated as high.
E-Mobility	+/O	Real consumption data	The total quantity was transmitted in km. A conversion was not necessary since there are suitable emission factors. Nevertheless, kWh values are preferable. The data quality is rated as high to medium.

SCOPE 3			
Emission source	**Quality**	**Original source**	**Comments**
Purchased goods and services	+	Real consumption data	The raw material, trade goods as well as packaging were completely transmitted. The total quantity was given in kg. This made the data ideal for processing. The data quality is therefore rated as high.
Capital goods	+	Real consumption data	The data was delivered very accurately and no conversions had to be made. The data quality can be classified as high.
Fuel-and energy-related activities	+	Real consumption data	See scope 1 and 2.
Transport and distribution (*upstream*)	+	Real consumption data	The data was delivered very accurately and no conversions had to be made. The data quality can be classified as high.
Waste generated in operations – water/waste	O	Real consumption data	Data was submitted as total liters of waste and m3 of water consumed. A conversion was necessary. Therefore, the data quality is rated as medium.
Business travel	+	Real consumption data	The data was supplied very accurately, and no conversions had to be made. The data quality can be classified as high.
Employee commuting	+	Survey results	By means of a survey, data was collected on the mobility of employees in terms of distance to work, the means of transport used and the number of working days. The data quality can be classified as high.
Home office	+	Survey results	The data for home office hours was submitted by RAMPA on a country-specific basis. As a result, the data quality can be classified as high.

Table 3: Data quality

Data Quality – Conclusion

Overall, the data quality can be described as very good. Nevertheless, there is room for improvement regarding e-mobility and waste data. Kilowatt or weight data would be more meaningful compared to distance and volume data, as the conversion would be omitted.

Overall, the data submitted and processed, in combination with the emission factors (see Emission Factors section), allow a robust statement on the magnitude of total emissions as well as on the emission focal points. Thus, this balance represents a good basis for the next steps within the framework of a climate protection strategy.

5 EMISSION FACTORS

In addition to the activity data, the assessment of greenhouse gas emissions requires emission factors that enable the conversion of the activity data into emissions. For this purpose, the selection of the correct factor for each data item is of great importance. Therefore, emission factors were reviewed, evaluated, and selected in the analysis based on different criteria. These include:

- Technology: Is the correct technology depicted?
- Time: Is the correct time period represented?
- Geography: Is the correct geographic reference represented?
- Completeness: Is the value representative?
- Reliability: Are the sources and methods reliable and verified?

If it was necessary for the selection and evaluation of the emission factor, further qualitative information was requested in addition to the activity data (composition, origin, age, etc.). These criteria also lead to the following categorization:

- High accuracy (+)
- Medium accuracy (O)
- High inaccuracy (-)

The categorization is based on FORLIANCE's many years of experience.

Main sources

The main database sources for this assessment are the following:

- **Department for Business, Energy & Industrial Strategy (BEIS)**. UK Government GHG Conversion Factors for Company Reporting. 2024.
- **Ecoinvent 3.10.1.**
- **HP**. Product Carbon Footprint (PCF) Report. 2024.
- **Umweltbundesamt (UBA)** – several research papers and reports.

All sources are of high quality, are internationally recognized, and are maintained by public agencies as well as not-for-profit organizations. Nevertheless, these factors must also be partially converted and adjusted to form a matching counterpart to the corresponding activity data point.

5.1 Emission factor quality

The following table presents the quality of the emission factors (see Table 4).

SCOPE 1			
Emission source	**Quality**	**Original source**	**Comments**
Company-owned vehicles	+	BEIS	The factors represent the direct emissions from vehicle use. Further life cycles are not taken into account. The quality of the factors is rated as high.
Stationary combustion	+	BEIS	The activity data allowed an accurate assessment of emissions. Specific emission factors could be used. The quality of the factors can be rated as high.

SCOPE 2			
Emission source	**Quality**	**Original source**	**Comments**
Electricity usage	+	UBA	A precise selection of the emission factors was possible. Specific emission factors could therefore be used. The quality is therefore classified as high.
E-Mobility	+	BEIS	The activity data allowed an accurate assessment of emissions. Specific emission factors could be used.

SCOPE 3			
Emission source	**Quality**	**Original source**	**Comments**
Purchased goods and services	+/O	BEIS, Ecoinvent 3.10.1	For a large part of the data, a precise selection of emission factors was possible. Therefore, specific emission factors could be used. The quality of the factors can be rated as high to medium.
Capital Goods	+/O	BEIS, HP	For a large part of the data, a precise selection of emission factors was possible. Therefore, specific emission factors could be used. The quality of the factors can be rated as high to medium.
Fuel-and energy-related activities	+	UBA, BEIS	A precise selection of emission factors was possible. Therefore, specific emission factors could be used. The quality of the factors can be rated as high.
Transport and distribution (*upstream*)	+	BEIS	A precise selection of the emission factors was possible. Specific emission factors could therefore be used. The quality of the factors is rated as high.
Waste generated in operations – water/waste	+	Ecoinvent 3.10.1	A precise selection of emission factors was possible. Therefore, specific emission factors could be used. The quality of the factors can be classified as high.
Business travel	+	BEIS	A precise selection of emission factors was possible. Therefore, specific emission factors could be used. As a result, the quality of the factors can be rated as high.
Employee commuting	+	BEIS, UBA	The activity data enabled an accurate assessment of emissions according to vehicle size and fuel type. Specific differentiations could also be made for other modes of transport. Therefore, specific emission factors could be used. The quality of the factors can be classified as high.
Home office	O	BEIS, UBA	Country-specific electricity data was used. The emission factors for electricity and heating consumption were calculated by FORLIANCE, based on UBA reports. Therefore, the quality of the factors can be classified as medium.

Table 4: Emission factor quality

Conclusion on emission factor quality

Overall, the quality of the emission factors can be rated positively. In general, it was possible to rely on high-quality emission factors. It should be noted that the selection of emission factors is always indirectly related to the available activity data.

If emission factors are adjusted during subsequent assessments, these adjustments should also be implemented retroactively for the current assessment. Consistency should be maintained here.

6 RESULTS

The results presented hereinafter refer to RAMPA GmbH & Co. KG. The scope and period of the assessment were described. The results of the Corporate Carbon Footprint for RAMPA are presented below according to the scopes (see section 3.3).

6.1 Total emissions RAMPA GmbH & Co. KG

According to the requirements of the GHG Protocol, a distinction has been made since 2015 between the market-based approach and the location-based approach (see Excursus GHG Protocol Scope 2 Reporting). RAMPA was able to submit supplier-specific emission values for the accounting year 2024, so that the emissions were accounted for according to the contractually guaranteed electricity mix. This approach is called the market-based approach.

Market-based approach

According to the ***market-based approach***, total GHG emissions for RAMPA for the year 2024 amount to

583.97 t CO_2e.

Location-based approach

According to the ***location-based approach***, total GHG emissions for RAMPA for the year 2024 amount to

765.92 t CO_2e.

Classification

It is difficult to classify the amount of greenhouse gas emissions caused. Comparison with other companies is fundamentally difficult due to insufficient comparative data and reference values (intensity values). If the emissions reported are compared with the emissions of an average German in 2024 (10.3 t CO_2e per year; Statista 2024), the emissions caused by RAMPA correspond to the amount of greenhouse gas emissions caused by 57 German citizens in one year.

Excursus: GHG Protocol Scope 2-Reporting

The GHG Protocol requires dual reporting for scope 2 emissions with respect to purchased electricity and clear documentation of the accounting method used. Two reporting methods are to be used for purchased electricity:

1. *Market-based approach*: Emissions are accounted for according to the contractually agreed electricity mix.
2. *Location-based approach*: Emissions are accounted for according to the local average emissions of the respective electricity mix (e.g., German electricity mix)

6.2 Emissions by scope

Further analysis of the results follows the ***market-based approach***. In the first step, the results are presented according to the principle of scopes (see Figure 4).

The scope 1 emissions of RAMPA GmbH & Co. KG sum up to 81.03 t CO_2e (13.88% of total emissions). Scope 2 emissions amount to 0.84 t CO_2e (0.14% of total emissions). Scope 3 emissions are significantly higher at 502.10 t CO_2e (85.98% of total emissions).

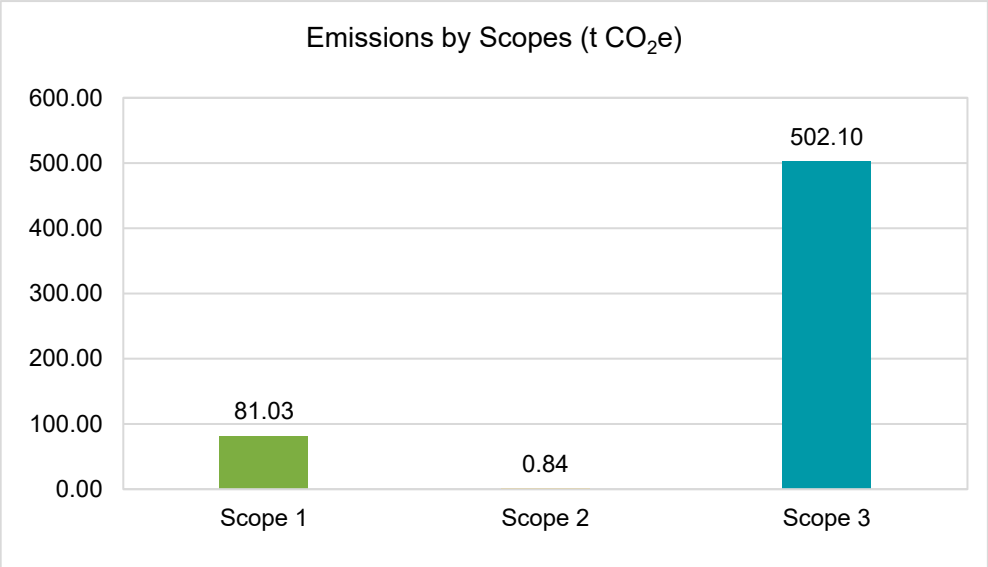

Figure 4: CO_2e emissions by scope (year 2024)

The presentation of emission sources by scopes and their subcategories is based on the methodological requirements of the GHG Protocol and serves the transparency of corporate carbon footprints. For a simplified understanding, the presentation according to emission sources within the scopes is useful. This results in the following categories (see Table 5 and Figure 5):

	Emission sources	t CO_2e	%
Scope 1	**Stationary combustion**	**62.45**	**10.69**
	Company-owned vehicles	18.58	3.18
Scope 2	Electricity usage	0.00	0.00
	E-Mobility	0.84	0.14
Scope 3	**Purchased goods and services**	**351.90**	**60.26**
	Capital goods	15.40	2.64
	Fuel- and energy-related activities	15.17	2.60
	Transportation and distribution (*upstream*)	**52.69**	**9.02**
	Waste generated in operations	5.61	0.96
	Business travel	6.56	1.12
	Employee commuting (including home office)	54.77	9.38

Table 5: Emissions by source

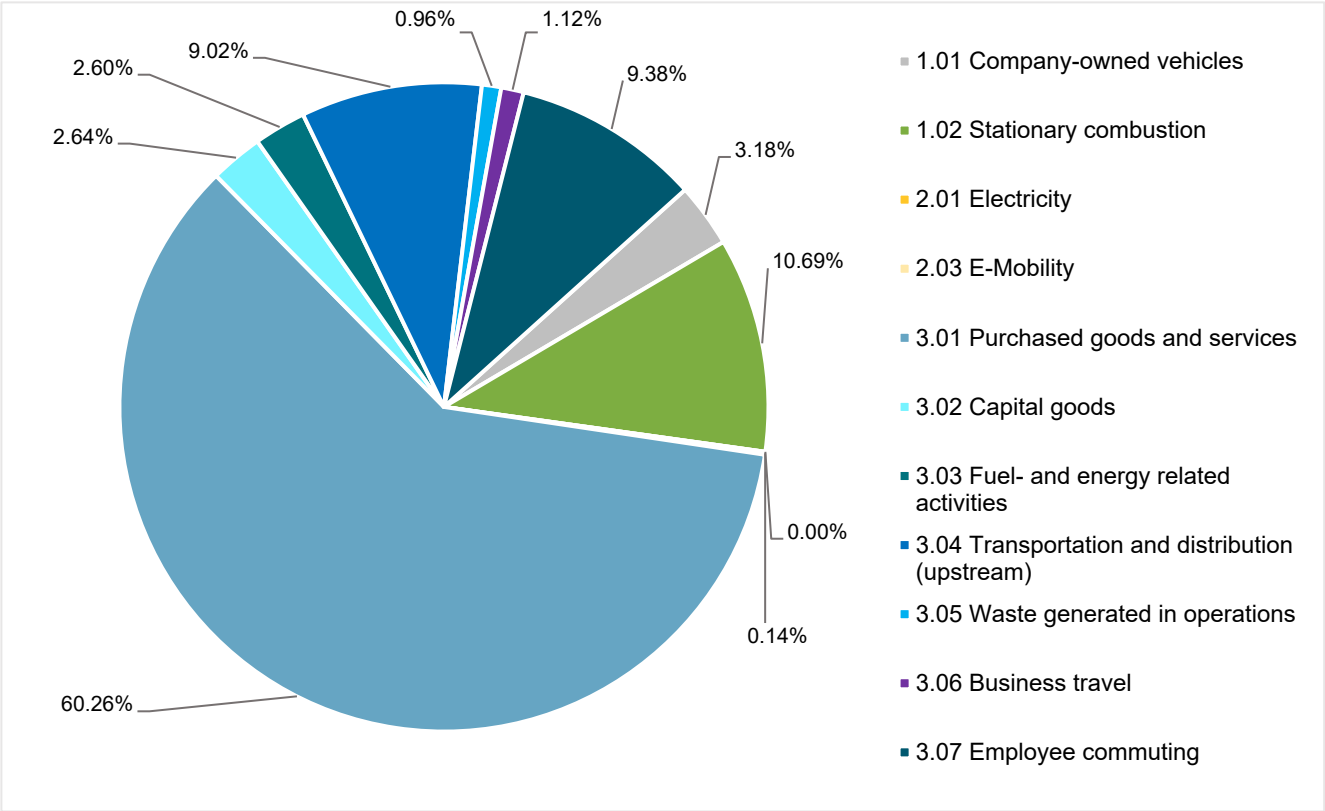

Figure 5: Percentual distribution of emissions by category (Year 2024)

Emissions-Hotspots

From this plot (see Table 5 and Figure 5), the emission hotspots are very clear. The three identified emission hotspots account for 79.98% of the total emissions.

1. Purchased goods and services (351.90 t CO_2e; 60.26%)
2. Stationary combustion (62.45 t CO_2e; 10.69%)
3. Transportation and distribution (*upstream*) (52.69 t CO_2e; 9.02%)

6.3 Detailed examination of the emission hotspots

A client specific breakdown of emissions allows for a detailed overview by location or subcategory. In the following, the emission hotspots are highlighted in more detail.

Differentiation of emissions due to purchased goods

The purchased goods were grouped and listed in Table 6 with the corresponding quantities and emissions. The overview shows that the purchased raw material represents the largest emission item. The free-cutting steel is a major contributor to the emissions. It should be noted, however, that the emission intensity (kg CO_2e/kg material) of Nylon is significantly higher than that of steel. In the case of merchandise, most emissions are caused by the steel purchased.

Classification	kg	t CO_2e
Raw material	**48,455.00**	**130.99**
Machining steel	39,814.00	83.98
Stainless steel	4,127.00	20.87
Brass	4,514.00	26.14
Trade goods	**93,870.00**	**210.89**
Trade goods steel	87,800.00	185.21
Trade goods brass	351.00	2.03
Trade goods stainless steel	3,283.00	16.61
Trade goods zinc	2,317.00	5.94
Trade goods plastic	119.00	1.11
Packaging	**3,727.85**	**6.62**
Packaging cardboard	2,625.15	3.13
Packaging foils	1,102.70	3.49
Oils	**2,359.19**	**3.31**

Table 6: Emissions of purchased goods and services.

Differentiation of emissions due to transport and distribution

Emissions from transport and distribution were divided into process-related *upstream* and *downstream* transport. That is, into the transport of raw materials from the supplier to RAMPA and into the transport of finished products from RAMPA to the customer.

Methodologically, it should be noted here that the GHG Protocol does not understand *upstream* and *downstream* emissions in process terms, but in monetary terms. The criterion is the purchase and sale of services. Since transportation is not carried out by RAMPA, but service providers were contracted, all emissions belong to Scope 3, *upstream*.

The *upstream* and *downstream* transport was divided into sections, as individual sections were covered by different means of transport. This specification can also be found in Table 7. It is striking that the highest emissions in *upstream* transport are attributable to sea freight, although trucks are more emission-intensive (emissions per ton-kilometre (kg CO_2e/tkm) are higher) modes of transport than ships. In the case of *downstream* transport, the distance travelled by truck is the biggest contributor to emissions.

The process-related *downstream* transport emissions were differentiated according to the means of transport as well as their delivery conditions in order to be able to better allocate the responsibility for emissions incurred. RAMPA informed in this context that the delivery condition *“ex works” (original: Ab Werk)* means that the decision of the mode of transport as well as the costs are borne by the customer. In case of the delivery condition “*free delivery” (original: Frei Haus),* the responsibility, the decision as well as the costs lie with RAMPA itself. Therefore, in this case only the emissions for free domicile were accounted for and listed as emissions in the overall result.

It should be noted that part of the process-related *downstream* transport has already been compensated by RAMPA's selection of service providers. The resulting emissions are methodically still part of the balance but would not have to be compensated anymore. This is the climate-neutral transport of GLS (9.79 t CO_2e). A corresponding certificate was submitted to FORLIANCE.

Classification	t CO_2e	Specification	t CO_2e
Upstream Transport (Scope 3, *upstream*)	27.71	Truck > 12t (without DB Schenker)	24.09
		DB Schenker Truck	1.15
		DB Schenker Air freight	1.11
		DB Schenker Sea freight	1.35
Downstream Transport (Scope 3, *upstream*)	24.98	Truck > 12t (without FedEx®)	13.16
		FedEx® Air freight	0.18
		FedEx® Truck	1.42
		DHL Shipping	0.44
		GLS Shipping (CO_2e compensation)	9.79

Table 7: Emissions of transport and distribution

Differentiation of emissions due to electricity usage

The energy-related emissions are shown in Table 8.

Büchen	t CO_2e
Stationary combustion (Scope 1)	62.45
Electricity usage (Scope 2)	0.00
Energy-related emissions (Scope 3)	10.31

Table 8: Emissions of energy usage

7 DEVELOPMENT & ANALYSIS

This chapter serves to compare the last and current assessments. The main changes are to be highlighted and examined in more detail.

7.1 Development of emissions in comparison

Compared to the previous year, total emissions decreased by 51.29%. This is due to a 52.84% reduction in Scope 3 emissions. This significant reduction can be seen in almost all major Scope 3 categories, but mainly in the categories purchased goods and transport. The only category that had an emissions increase, and by a significant percentage (273.56%), is capital goods. However, this represents only 2.64% of the total footprint. Scope 2 emissions decreased slightly (1.48%), while Scope 1 emissions decreased significantly by 39.25%.

The following factors, among others, have influenced this:

- The concept of the so called “KfW-40 Gewerbeneubau”, a building code for new energy efficient commercial constructions promoted by the German bank KfW, has been fully implemented in 2024.
- In the summer of 2024, the existing gas heating system with ventilation system for heat generation in the building was replaced by an efficient hybrid dark radiant heating system in the existing building.
- The shutdown of the Schwarzenbek site.

	2023	2024	Development	
	t CO_2e	t CO_2e	t CO_2e	%
Total	1,198.86	583.97	**-614.89**	**-51.29%**
Scope 1	133.37	81.03	**-52.34**	**-39.25%**
Stationary combustion	108.93	62.45	-46.48	-42.67%
Company-owned vehicles	24.44	18.58	-5.86	-23.97%
Scope 2	0.86	0.84	**-0.01**	**-1.48%**
Electricity usage	0.00	0.00	0.00	
E-Mobility	0.86	0.84	-0.01	-1.48%
Scope 3	1,064.63	502.10	**-562.53**	**-52.84%**
Purchased goods and services	741.52	351.90	-389.62	-52.54%
Capital goods	4.12	15.40	11.28	273.56%
Fuel- and energy-related emissions	45.94	15.17	-30.77	-66.97%
Transport and distribution (*upstream*)	195.53	52.69	-142.84	-73.05%
Waste generated in operations	8.05	5.61	-2.44	-30.32%
Business travel	6.67	6.56	-0.11	-1.69%
Employee commuting (including home office)	62.80	54.77	-8.03	-12.78%

Table 9: Development of emissions in comparison

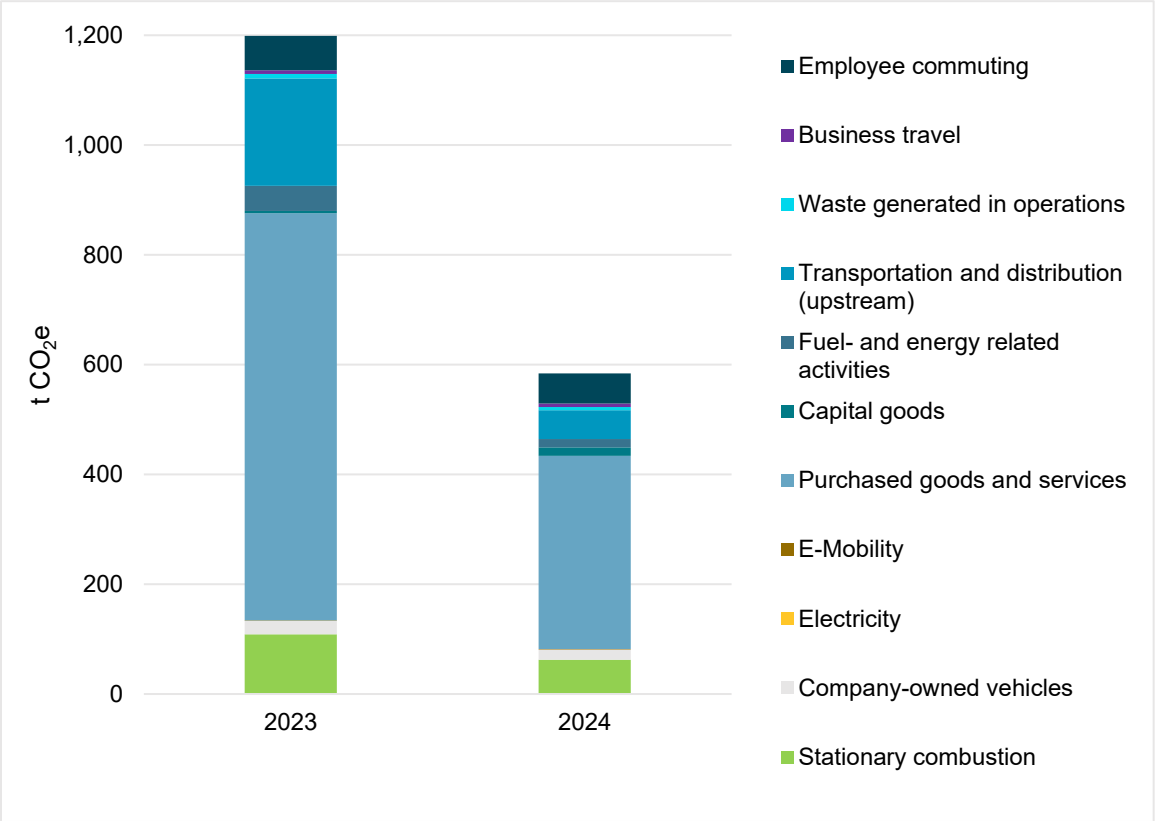

Figure 6: Development of emissions in comparison

7.2 Analysis of the emission development

The following section takes a closer look at the reasons for the significant changes compared to the base year.

Development of energy related emissions

Energy consumption, as previously mentioned, has significantly decreased. Fleet emissions have fallen by 23%, and there is a clear trend toward the use of electric mobility, which has increased by 31%. A corresponding emissions development can be seen in the Scope 3 area, energy-related emissions.

	2023	2024	Development		
Differentiation	**Amount**	**Amount**	**Amount**	**%**	**t CO_2e**
Natural gas (Schwarzenbek, kWh)	113,103.00	0.00	-113,101.00	-100.00%	-100.00%
Natural gas (Büchen, kWh)	482,381.00	341,428.00	-140,953.00	-29.22%	-29.23%
DE Mix / green electrcity (Schwarzenbek, kWh)	7,608.00	0.00	-7,608.00	-100.00%	
DE Mix / green electrcity (Büchen, kWh)	521,867.00	426,104.00	-95,763.00	-18.35%	
Vehicle fleet car - medium diesel (vkm)	146,220.00	102,871.00	-43,349.00	29.65%	-29.26%
Vehicle fleet car - medium gasoline (vkm)	0.00	7,297.00	7,297.00		
E-Mobility (vkm)	52,781.00	68,983.00	16,202.00	30.70%	.1.48%

**Kilometers that cause additional energy consumption, outside of electricity consumption at the company premises*

Table 10: Development of Scope 1 and 2 consumptions in comparison

Development of purchased goods and services

Emissions in the purchased goods category have decreased significantly (52.54%). The lower emissions are mainly due to the lower purchase volume. The global emission factors for 2024 also contributed to this, as they reflect lower emissions compared to the previous year. This is particularly evident in the steel and brass sectors. Exceptions are the emission factors for cardboard and plastic, which rose by 49% and 2% respectively compared to the previous year.

	2023	2024	Development		
Differentiation	**kg**	**kg**	**kg**	**%**	**t CO_2e**
Raw material	**123,332.00**	**48,455.00**	**-74,877.00**	**-60.71%**	**-60.58%**
Machining steel	102,446.00	39,814.00	-62,632.00	-61.14%	-61.33%
Stainless steel	9,817.00	4,127.00	-5,690.00	-57.96%	-58.39%
Brass	11,069.00	4,514.00	-6,555.00	-59.22%	-59.78%
Trade goods	**176,615.86**	**93,870.00**	**-82,745.86**	**-46.85%**	**-47.52%**
Trade goods steel	164,052.89	87,800.00	-76,252.89	-46.48%	-46.75%
Trade goods brass	3,572.94	351.00	-3,221.94	-90.18%	-90.31%
Trade goods stainless steel	3,767.49	3,283.00	-484.49	-12.86%	-13.75%
Trade goods zinc	5,180.36	2,317.00	-2,863.36	-55.27%	-55.69%
Trade goods plastic	42.18	119.00	76.82	182.12%	181.93%
Packaging	**2,926.52**	**3,727.85**	**801.33**	**27.38%**	**145.36%**
Packaging cardboard	2,772.62	2,625.15	-147.47	-5.32%	41.04%
Packaging foils	153.90	1,102.70	948.80	616.50%	630.90%
Oils	**3,252.60**	**2,359.19**	**-893.41**	**-27.47%**	**27.47%**

Table 11: Development of purchased goods and services in comparison

Development of transport and distribution (*upstream*)

Compared to the previous year, the distances travelled and thus also the associated emissions have been significantly reduced. Particularly noteworthy here is *upstream* transport, i.e. transport for the procurement of goods.

		2023	2024	Development		
		tkm	**tkm**	**tkm**	**%**	**t CO_2e**
Upstream	Air freight (without DB Schenker)	6,860.41	0	-6,860.41	-100.00%	-100.00%
	Sea freight (without DB Schenker)	5,923,879.19	0	-5,923,879.19	-100.00%	-100.00%
	Truck > 12t (without DB Schenker)	212,123.96	63,368.03	-148,755.92	-70.13%	-67.92%
	Truck > 12t **vkm** (without DB Schenker)	10.00	0	-10.00	-100.00%	-100.00%
	DB Schenker Truck		*			
	DB Schenker Air freight		*			
	DB Schenker Sea freight		*			
Downstream	Truck > 12t (without FedEx®)	52,556.11	34,602.55	-17,953.57	-34.16%	-29.31%
	FedEx® Air freight	*	*			-70.03%
	FedEx® Truck	*	*			69.12%
	GLS Shipping (CO_2e compensation)	*	*			-32.71%
	DHL Shipping		*			

**The well-to-wheel (WTW) emissions calculated by the transporter were used instead of calculating the tkm.*

Table 12: Development of transported tkms and vkms in comparison

Development of business travel

Business trips have been slightly reduced compared to the previous year, resulting in a small reduction in emissions. Compared to the previous year, there is a reduction of 1.69%. Within this category, the increase in emissions caused using these modes of transport should be highlighted: passenger cars medium diesel, passenger cars small gasoline, taxi/uber and flights > 3,700 km per route.

	2023	2024	Development		
Differentiation	**Amount**	**Amount**	**Amount**	**%**	**t CO_2e**
Car - Medium Diesel (vkm)	2,494.00	3,696.00	1,202.00	48.20%	49.01%
Car – Medium Gasoline (vkm)	2,271.00	108.00	-2,163.00	-95.24%	-95.27%
Car - Small Gasoline (vkm)	48.00	283.00	235.00	489.58%	501.73%
Train - Long distance (pkm)	4,885.00	4,141.00	-744.00	-15.23%	-15.21%
Taxi/Uber (pkm)	106.00	191.00	85.00	80.19%	80.18%
Flight < 750 km per route (pkm)	1,786.00	1,364.00	-422.00	-23.63%	-23.63%
Flight 750 – 3,700 km per route (pkm)	6,373.00	6,304.00	-69.00	-1.08%	-1.08%
Flight > 3,700 km per route (pkm)	13,512.00	15,611.00	2,099.00	15.53%	15.53%
Hotel (N° overnight stays)	36.00	16.00	-20.00	-55.56%	-65.88%

Table 13: Development of traveled pkms and vkms, as well as the number of overnight stays, in comparison

8 CONCLUSION & OUTLOOK

The aim of RAMPA GmbH & Co. KG was to have the GHG emissions from 2024 accounted for and compare them with those from 2023.

According to the *market-based approach*, the total greenhouse gases caused by the entire company in 2024 amount to **583.97 t CO_2e.** This includes Scope 1, 2 and 3 emissions. This is a total reduction of emissions of **51.29%** in comparison to 2023**.** The main reasons for this are the decrease in energy consumption and the significant drop in purchased goods, combined with a reduction in the transport services for these goods.

The data collection was carried out by RAMPA. FORLIANCE evaluated and processed the incoming data. The data quality can be classified as good. The quality of the emission factors was rated as positive.

Process

RAMPA has now had a corporate carbon footprint assessed for the fifth time in a row. This ongoing process allows for a direct comparison of the accounting years.

Recommendations

To consolidate efforts toward decarbonization, FORLIANCE recommends:

- Comparison of the CCF with other years
  - This allows the forecasting of a general trend
  - The regular review of emissions also enables the rapid identification of emission hotspots and corresponding intervention options

- Verification of the data of significant emission changes
  - Only by comparison with the previous year is a change in emissions visible. Significant changes should be reviewed

- Compensation of non-avoidable emissions
  - This is achieved by investing in high-quality climate protection projects, so that climate neutrality can be achieved in the long term.

9 ANNEX

Emission details

Scope	Emission source according to GHG Protocol	Own category	Specifics	t CO_2e	%
Scope 1	1.01 Company-owned vehicles	Car - Medium	Diesel	17.29	2.96%
Scope 1	1.01 Company-owned vehicles	Car - Medium	Petrol	1.29	0.22%
Scope 1	1.02 Stationary combustion	Natural gas	Old building: Direct	61.43	10.52%
Scope 1	1.02 Stationary combustion	Natural gas	New building: Direct	1.01	0.17%
Scope 2	2.01 Electricity	Green electricity	New building: Direct	0.00	0.00%
Scope 2	2.03 E-Mobility	Car - Small	Electricity	0.84	0.14%
Scope 2	2.03 E-Mobility	Car - Medium	Electricity		
Scope 3 (*upstream*)	3.01 Purchased goods and services	Machining steel	Raw material	83.98	14.38%
Scope 3 (*upstream*)	3.01 Purchased goods and services	Stainless steel	Raw material	20.87	3.57%
Scope 3 (*upstream*)	3.01 Purchased goods and services	Brass	Raw material	26.14	4.48%
Scope 3 (*upstream*)	3.01 Purchased goods and services	Steel	Trade goods	185.21	31.71%
Scope 3 (*upstream*)	3.01 Purchased goods and services	Brass	Trade goods	2.03	0.35%
Scope 3 (*upstream*)	3.01 Purchased goods and services	Stainless steel	Trade goods	16.61	2.84%
Scope 3 (*upstream*)	3.01 Purchased goods and services	Zinc	Trade goods	5.94	1.02%
Scope 3 (*upstream*)	3.01 Purchased goods and services	Nylon (Plastic)	Trade goods	1.11	0.19%
Scope 3 (*upstream*)	3.01 Purchased goods and services	Paper	Packing cartons	3.13	0.54%
Scope 3 (*upstream*)	3.01 Purchased goods and services	Plastic	Packing foil	3.49	0.60%
Scope 3 (*upstream*)	3.01 Purchased goods and services	Oils	Oils	3.31	0.57%
Scope 3 (*upstream*)	3.01 Purchased goods and services	Water supply		0.08	0.01%
Scope 3 (*upstream*)	3.02 Capital goods	Total excluding laptops		14.70	2.52%
Scope 3 (*upstream*)	3.02 Capital goods	HP EliteBook 865 G10	PCF_HP EliteBook 865 G10_2024.pdf	0.22	0.04%
Scope 3 (*upstream*)	3.02 Capital goods	HP ProBook 455 G10	PCF_HP ProBook 455 G10_2024.pdf	0.48	0.08%
Scope 3 (*upstream*)	3.03 Fuel- and energy related activities	Car - Medium	Diesel	4.22	0.72%
Scope 3 (*upstream*)	3.03 Fuel- and energy related activities	Car - Medium	Petrol	0.36	0.06%
Scope 3 (*upstream*)	3.03 Fuel- and energy related activities	Natural gas	Old building: Indirect	10.15	1.74%
Scope 3 (*upstream*)	3.03 Fuel- and energy related activities	Natural gas	New building: Indirect	0.17	0.03%
Scope 3 (*upstream*)	3.03 Fuel- and energy related activities	Green electricity	New building: Indirect	0.00	0.00%
Scope 3 (*upstream*)	3.03 Fuel- and energy related activities	Car - Small	Electricity	0.28	0.05%
Scope 3 (*upstream*)	3.03 Fuel- and energy related activities	Car - Medium	Electricity		
Scope 3 (*upstream*)	3.04 *Upstream* transportation and distribution	Transport Procurement	Truck >12 t generic	24.09	4.13%
Scope 3 (*upstream*)	3.04 *Upstream* transportation and distribution	Transport Procurement	DB Schenker Truck	1.15	0.20%
Scope 3 (*upstream*)	3.04 *Upstream* transportation and distribution	Transport Procurement	DB Schenker Air freight	1.11	0.19%
Scope 3 (*upstream*)	3.04 *Upstream* transportation and distribution	Transport Procurement	DB Schenker Sea freight	1.35	0.23%
Scope 3 (*upstream*)	3.04 *Upstream* transportation and distribution	Transport Distribution	DHL Shipping	0.44	0.08%
Scope 3 (*upstream*)	3.04 *Upstream* transportation and distribution	Transport Distribution	Truck >12 t (excluding FedEx®)	13.16	2.25%
Scope 3 (*upstream*)	3.04 *Upstream* transportation and distribution	Transport Distribution	GLS Shipping (CO_2e Compensation)	9.79	1.68%
Scope 3 (*upstream*)	3.04 *Upstream* transportation and distribution	Transport Distribution	FedEx® Truck	1.42	0.24%

Scope 3 (*upstream*)	3.04 *Upstream* transportation and distribution	Transport Distribution	FedEx® Air freight	0.18	0.03%
Scope 3 (*upstream*)	3.05 Waste generated in operations	Wastewater treatment		0.10	0.02%
Scope 3 (*upstream*)	3.05 Waste generated in operations	Residual waste		2.98	0.51%
Scope 3 (*upstream*)	3.05 Waste generated in operations	Paper waste		0.17	0.03%
Scope 3 (*upstream*)	3.05 Waste generated in operations	Plastic waste		2.35	0.40%
Scope 3 (*upstream*)	3.05 Waste generated in operations	Bio waste		0.00	0.00%
Scope 3 (*upstream*)	3.05 Waste generated in operations	Metal scrap	Recycling		
Scope 3 (*upstream*)	3.05 Waste generated in operations	Brass shavings	Recycling		
Scope 3 (*upstream*)	3.05 Waste generated in operations	Stainless steel chips	Recycling		
Scope 3 (*upstream*)	3.05 Waste generated in operations	Steel chips	Recycling		
Scope 3 (*upstream*)	3.06 Business travel	Car - Small	Petrol	0.04	0.01%
Scope 3 (*upstream*)	3.06 Business travel	Car - Medium	Petrol	0.02	0.00%
Scope 3 (*upstream*)	3.06 Business travel	Car - Medium	Diesel	0.62	0.11%
Scope 3 (*upstream*)	3.06 Business travel	Taxi		0.03	0.00%
Scope 3 (*upstream*)	3.06 Business travel	Train – Long distance		0.02	0.00%
Scope 3 (*upstream*)	3.06 Business travel	Flight < 750 km		0.37	0.06%
Scope 3 (*upstream*)	3.06 Business travel	Flight 750 – 3,700 km		1.17	0.20%
Scope 3 (*upstream*)	3.06 Business travel	Flight > 3,700 km		4.08	0.70%
Scope 3 (*upstream*)	3.06 Business travel	Hotel stay	Germany	0.17	0.03%
Scope 3 (*upstream*)	3.06 Business travel	Hotel stay	Poland	0.01	0.00%
Scope 3 (*upstream*)	3.06 Business travel	Hotel stay	Austria	0.01	0.00%
Scope 3 (*upstream*)	3.06 Business travel	Hotel stay	Switzerland	0.01	0.00%
Scope 3 (*upstream*)	3.07 Employee commuting	Home office – Energy mix DE	52.34%	0.46	0.08%
Scope 3 (*upstream*)	3.07 Employee commuting	Home office – Green electricity	47.66%	0.00	0.00%
Scope 3 (*upstream*)	3.07 Employee commuting	Home office - Heat		4.72	0.81%
Scope 3 (*upstream*)	3.07 Employee commuting	E-Bike		0.11	0.02%
Scope 3 (*upstream*)	3.07 Employee commuting	Motor bike		0.92	0.16%
Scope 3 (*upstream*)	3.07 Employee commuting	Public transportation		0.48	0.08%
Scope 3 (*upstream*)	3.07 Employee commuting	Train – Short distance		0.86	0.15%
Scope 3 (*upstream*)	3.07 Employee commuting	Moped / Scooter		0.06	0.01%
Scope 3 (*upstream*)	3.07 Employee commuting	Car - Small	Diesel	0.29	0.05%
Scope 3 (*upstream*)	3.07 Employee commuting	Car - Small	Petrol	9.42	1.61%
Scope 3 (*upstream*)	3.07 Employee commuting	Car - Medium	Diesel	12.11	2.07%
Scope 3 (*upstream*)	3.07 Employee commuting	Car - Medium	Petrol	17.62	3.02%
Scope 3 (*upstream*)	3.07 Employee commuting	Car - Large	Diesel	2.67	0.46%
Scope 3 (*upstream*)	3.07 Employee commuting	Car - Large	Petrol	4.96	0.85%
Scope 3 (*upstream*)	3.07 Employee commuting	E-Scooter		0.11	0.02%
				583.97	**100%**

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