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INTERNATIONAL AEROSPACE  
ENVIRONMENTAL GROUP<sup>®</sup>

# **Aerospace Industry Tool for Calculating Scope 3 Greenhouse Gas Emissions of Purchased Goods & Services and Capital Goods: User Guide**

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*24 July 2025*

*Version 3.0*

This document is released for purpose of supporting voluntary accounting and reporting of greenhouse gas (GHG) emissions associated with purchased goods and services and capital goods across the aerospace industry.

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## Version History

Date	v#	Modified By	Section, Page(s) and Text Revised
24/07/2025	3	Accenture & IAEG WG3 Members	Entire Document Revised

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## 1 Glossary

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<b>Acronym</b>	<b>Definition</b>
<b>BoM</b>	<b>Bill of Materials</b>
<b>CG</b>	<b>Capital Goods</b>
<b>EF</b>	<b>Emission Factor</b>
<b>GHG</b>	<b>Greenhouse Gases</b>
<b>IAEG</b>	<b>International Aviation Environmental Group</b>
<b>ISO/TR</b>	<b>International Organization for Standardization/Technical Report</b>
<b>PG</b>	<b>Purchased Goods</b>
<b>PG&amp;S</b>	<b>Purchased Goods &amp; Services</b>
<b>PP&amp;E</b>	<b>Plant, Property, &amp; Equipment</b>
<b>WG3</b>	<b>IAEG Work Group 3</b>

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## 2 Introduction

### 2.1 Context

As described in “GHG Reporting Guidance for the Aerospace Industry, a Supplement to the GHG Protocol Corporate (Scope 1 and 2) and Value Chain (Scope 3) Accounting and Reporting Standards”, the International Aerospace Environmental Group (IAEG) identified both “Purchase of Goods and Services” (PG&S) and “Capital Goods”(CG) categories as potentially relevant Scope 3 categories for member companies and their value chain partners. IAEG consequently decided to develop relevant methodology and guidance materials to allow aerospace and defense companies to report greenhouse gas (GHG) emissions for these categories.

This document provides guidance for assessing GHG emissions inventories associated with PG&S and CG. An overview of the methodology is presented, followed by step-by-step instructions on how to apply the methodology in conjunction with a simplified calculation tool (the “tool”) specifically developed for aerospace-related PG&S and CG GHG emissions accounting.

### 2.2 Definitions

#### 2.2.1 Purchased goods and services

The GHG Protocol Corporate Value Chain Accounting Reporting Standard<sup>1</sup>, defines PG&S as “*this category includes emissions from all purchased goods and services not otherwise included in the other categories of upstream scope 3 emissions (i.e., category 2 through category 8)*”.

#### Examples of PG&S:

- Aluminium
- Titanium Casting
- PVC pipe
- Nylon
- Advertising

Purchased goods are typically items that are directly related to making the final product (such as intermediate goods) or non-product-related inputs (such as office supplies or manufacturing spare parts).

Services are defined as intangible products used in the conception of the final product or service offered by the company.

Companies should follow their own financial accounting procedures to determine whether to account for a purchased product as a capital good or as a purchased good or service. Companies should not double count emissions between both categories.

Note: Accounting conflicts might arise between the default choices allocated to the different types of products in this methodology and the company’s procedures. In such situations (i.e., a given machinery or vehicle considered as a PG rather than a CG), the user should inform IAEG Work Group 3 (WG3) of the mismatch to help with methodological/tool improvement and, in the meantime,

<sup>1</sup> <https://ghgprotocol.org/standards/scope-3-standard>

reporters should carefully select what seems to be the most appropriate category for the specific good, and document any assumptions associated with the allocation.

### 2.2.2 Capital Goods

The GHG Protocol Corporate Value Chain Accounting Reporting Standard, defines CGs as *“final products that have an extended life and are used by the company to manufacture a product, provide a service, or sell, store, and deliver merchandise. In financial accounting, capital goods are treated as fixed assets, for instance as plant, property, and equipment (PP&E).”*

#### Examples of CG:

- Equipment
- Machinery
- Buildings
- Facilities
- Vehicles

As mentioned in the PG&S subsection, companies should follow their own financial accounting procedures to determine whether to account for a purchased product as a capital good or as a purchased good or service. Companies should not double count emissions between both categories.

Accounting conflicts might arise between the default choices allocated to the different types of products in the methodology and the company’s procedures. In such situations (i.e., a given machinery or vehicle considered as a PG rather than a CG), the user should inform IAEG Work Group 3 (WG3) of the mismatch to help with methodological/tool improvement and, in the meantime, reporters should carefully select what seems to be the most appropriate category for the specific good, and document any assumptions associated with the allocation.

### 3 Methodology overview

#### 3.1 Available approaches

Two estimation approaches are available to users of the tool for estimating PG&S and CG Scope 3 impacts: **spend based** and **mass based**.

- The **Spend-based** approach enables users to estimate GHG emissions based solely on the company's expenditure data (i.e., purchase orders, general ledger, etc.). Spend-based estimations are generally considered more straightforward and less effort intensive since PG&S and CG expenditure data are usually readily available in companies. However, results obtained using this approach generally tend to have a lower accuracy than mass-based or life cycle assessment approaches.
- The **Mass-based** approach allows users to base their calculations mostly on physical characteristics such as the mass breakdown of products to achieve a more accurate GHG assessment. The mass-based approach is usually effort intensive since data on the mass breakdown of products is generally not as readily available as spend-based data and generating it usually requires more resources. On the upside, this approach is generally considered to be more accurate than the spend-based one.

A third and even more accurate calculation option is a life cycle assessment (LCA) for each product. However, a LCA is usually highly resources and time intensive and requires special software and/or information technology tools.

The choice of approach depends in part on the company's experience, or maturity, with GHG emissions quantification because the analyses for these different approaches involve varying levels of complexity. Figure 1 compares the approaches in terms of complexity and maturity.

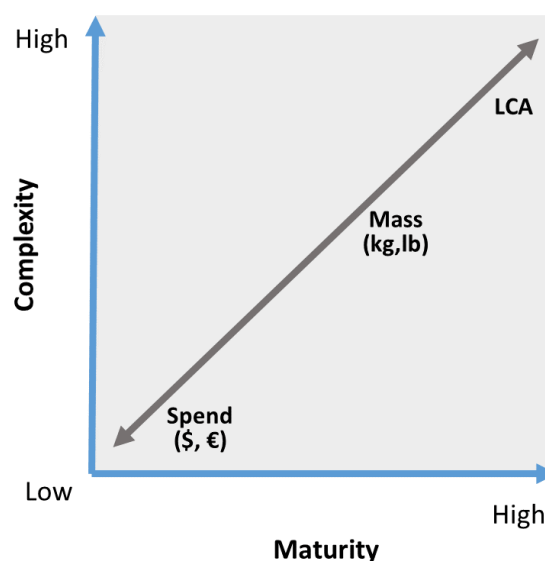


Figure 1: Schematic of the available approaches with respect to maturity and complexity

### 3.2 Main features of the methodology

The goal of this methodology is to offer aerospace companies a way of quantifying GHG emissions while accounting for the varying operational capabilities among companies. A three-approach methodology was developed where users of the methodology are invited to choose among three ways to calculate their emissions. The selection of the appropriate approach depends on the familiarity of the user with Scope 3 accounting, the level of accuracy required, the data available to the user and the human resources available for data collection.

The three approaches are “Spend-based”, “Hybrid” and “Mass-based”.

- The Spend-based approach enables users to estimate GHG emissions based solely on the company’s expenditure data (i.e., purchase orders, general ledger, etc.).
- The Hybrid approach allows users to use a mix of both expenditure data and physical data for their analysis.
- The Mass-based approach allows users to base their calculations mostly on physical characteristics such as the mass breakdown of products to achieve a more accurate GHG assessment.

Table 1 provides an overview of key features to facilitate the comparison between each approach’s strengths and weaknesses.

Approach	Spend-based	Hybrid	Mass-based
Accuracy	Low	Medium	Medium - High
Granularity	Low	Low-medium	Medium - High
Data input complexity	Low	Medium	High
Estimated level of effort	A few hours	A few days	A few weeks

Table 1: overall presentation of the three approaches

### 3.3 Purchased Goods & Services categories for the purpose of GHG accounting

Purchased goods and services are classified into 16 categories relevant to the aerospace and defense industry value chain, organized into 4 general groups. The categories are the same across all 3 approaches of this methodology, but the granularity and type of Emissions Factor (EF) in each category vary between approaches.

Table 2 shows the organization of groups / categories and subcategories as well as the type of EF that is available for each subcategory.

<b>Group</b>	<b>Category</b>	<b>Spend-Based EF</b>	<b>Mass-Based EF</b>
<i>Assembly and structural components</i>	Metallic components	X	X
	Non-metallic components	X	X
<i>Manufactured components and materials</i>	Metallic components	X	X
	Non-metallic components	X	X
	Electrical and electronic equipment	X	X
<i>Raw materials</i>	Metallic raw materials	X	X
	Non-metallic raw materials	X	X
	Gases and chemicals	X	-
<i>Services</i>	Professional services and Consulting	X	-
	Financial services and insurance	X	-
	Travel services	X	-
	Telecom services and IT support	X	-
	Materials handling	-	X
	Research, development and testing services	X	-
	Repair and overhaul (of product)	X	-
	Miscellaneous	X	X

Table 2: Categorization of PG&S

### 3.4 Capital Goods Categories for the purpose of GHG accounting

Table 3 shows the organization of proposed groups / categories and subcategories for CG.

<b>Group</b>	<b>Category</b>	<b>Spend-Based EF</b>	<b>Mass-Based EF</b>
<i>Capital goods</i>	Buildings	X	X
	Industrial equipment	X	-
	Fleet	X	X
	Telecom equipment and IT hardware	X	X

**Table 3: Categorization of CG**

## 4 Step By Step guide

This section provides the instruction to guide the user with the tool. In each section, references are made to the corresponding sheet in the Excel tool.

### 4.1 Getting familiar with the tool – “Read me” sheet

The user should consult the “Read me” sheet before starting an assessment as it contains all the necessary basic information to start using the tool. It indicates:

- The **content**, version and objectives of the tool;
- The **significance** of the color code and tabs;
- **Input cells** and **restricted** (calculated) cells

### 4.2 Color Code of 2025 Emission Factors update

Color code used in the 2025 EF update	
	EF update comes from the same database as precedent version of this tool. Following an update, Base Impacts and Base Carbone EF now constitute the Base Empreinte. In this version, these databases are considered unchanged.
	No update of the EF (EF has not been updated in the original database and is not available in another)
	EF update found in another database.
	EF added for list of commodities proposed by IAEG.
	EF calculated by IAEG.
	EF more than 5 years.

Color code used in the GHG emissions calculations tab	
	No emission factor associated with a sub-category.
	Emission factor sourced from the IAEG Emission Factors Database.
	Sub-category activity data paired with an IAEG database emission factor.
	Emission factor obtained from the supplier emissions tab.
	Activity data associated with an emission factor obtained from the supplier's emission database for the respective sub-category.
	Activity data has been entered, but the associated emission factor is missing.

#### Color Coding of the Read Me tab

The color code of the 2025 update of the tool takes into consideration that:

- Emission factors sourced from the same database as in V2.
- Emission factors from V2 database remained due to lack of available updated data.
- Emission factors updated using a new data source introduced after V2.
- Emission factors newly introduced based on the 2025 IAEG commodities list.
- Emission factors derived through internal calculation (detailed in the Methodology Guide)
- Data highlighted in red refers to a base year older than 5 years.

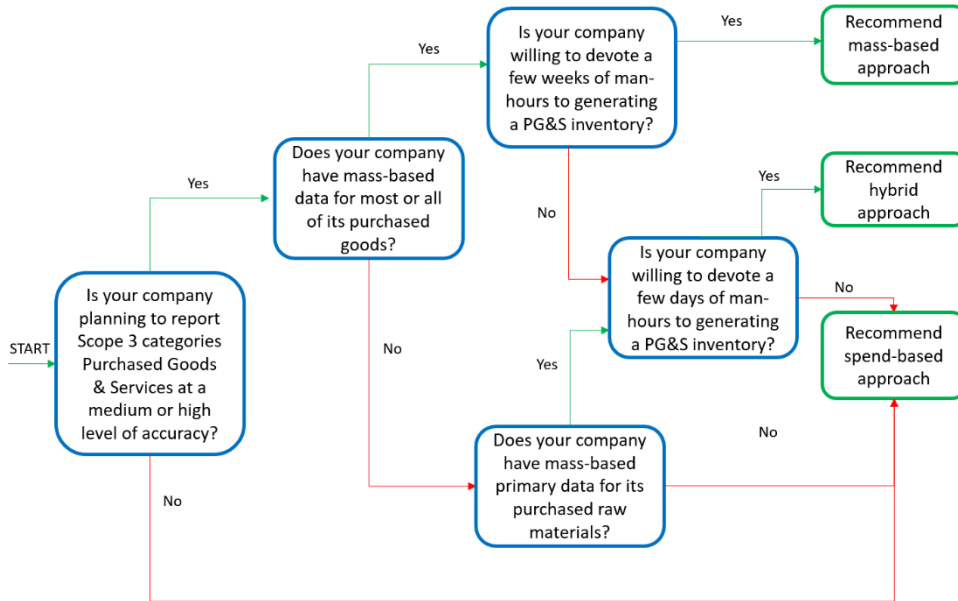
The color code of the GHG Emissions Calculations tab:

- There is no emission factor associated with a selected sub-category.
- The emission factor is sourced from the 2025 IAEG Database.
- A new data activity is associated with an emission factor obtained from the ‘Emissions Factors’ tab for the respective sub-category.
- A new emission factor has been obtained from the ‘Supplier Emissions’ tab.
- A new data activity is associated with an emission factor obtained from the ‘Supplier Emission’ tab for the respective sub-category.
- A new data activity has been integrated but is not associated with any emission factor for the respective sub-categories.

### 4.3 Identifying the relevant assessment approach – “Decision tree” sheet -

Choosing the appropriate approach for each company depends on several factors: the familiarity of the user with Scope 3 accounting, the level of accuracy required, the data available to the user and the availability of the resources to collect data.

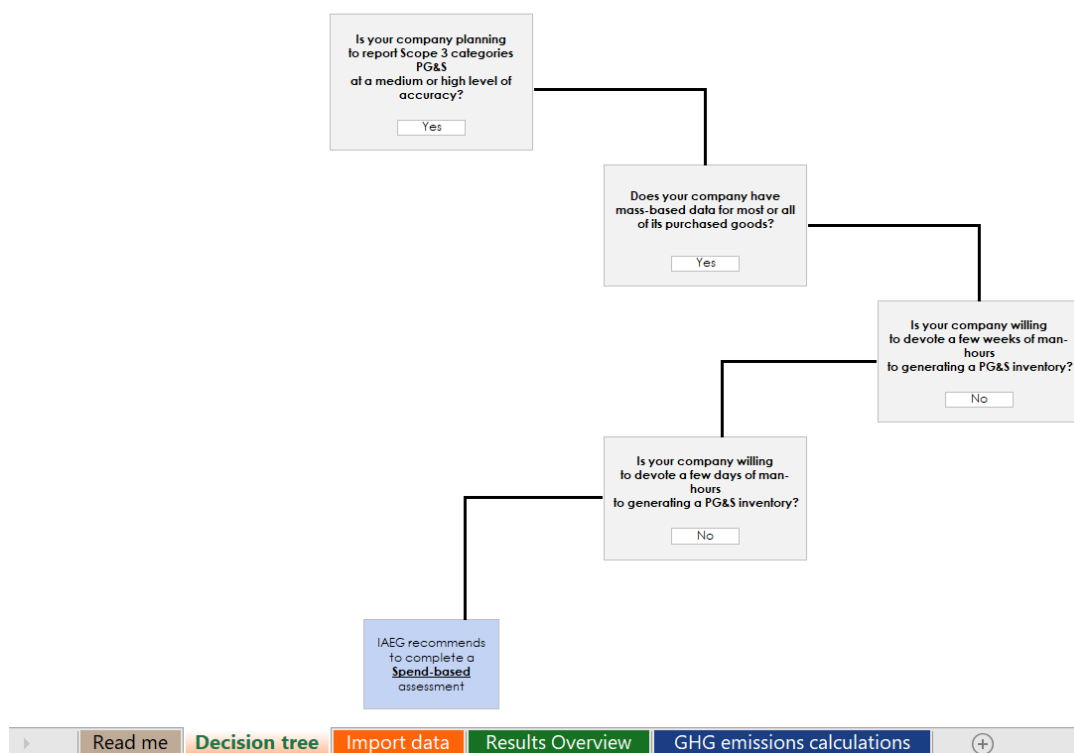
The user should determine the assessment approach best suited for their needs, available resources, and available data based on the decision tree shown below.



Decision tree for the selection of the appropriate assessment approach

In the Decision Tree sheet, answer the questions by “Yes” or “No” to identify the most relevant approach to the reporting company’s situation. Specify the year for which the analysis will be conducted.

Please answer the questions below to define your assessment level **Spend-based** methodology recommended



Decision tree as displayed in the tool

## 4.4 Data collection

### 4.4.1 Identifying Data source

To complete an assessment of Scope 3 emissions for PG&S and CG, the user needs to first dedicate time to **data collection**. As presented in the previous paragraphs, the information needed for the calculations is either derived from spend-based or mass-based data.

Spend-based data is likely to be located in internal purchase databases within the company. The target dataset should account for 100% of Enterprise spending (or as close as possible), representing all in-scope company entities as per the GHG Protocol's definition of operational boundary.

Mass-based data are generally owned by dedicated teams within the company, such design, procurement, or production departments, as they often record information on raw materials or aerostructures.

### 4.4.2 Ensuring materiality in data collection

Aerospace reporters should aim to account for all PG&S and CGs goods from their operations. However, as explained in ISO/TR 14069, organizations often have incomplete records of purchased goods. Therefore, ensuring the completeness of the data collection is often a challenge, especially when dealing with PG&S and CG.

To ensure an adequate level of accuracy, the reporting company should identify subcategories that are likely to be the most significant or material from a GHG emissions standpoint. Significant GHG emissions are defined in ISO14064:2018 whereas materiality is defined in the GHG Protocol Corporate Value Chain Accounting and Reporting Standard. For a company with limited or no previous experience in PG&S GHG emissions estimation, performing an initial assessment of the PG&S through the spend-based approach could help identify which emissions subcategories are significant or material. Should the reporting company decide to exclude sources of emissions, it must justify its decisions and demonstrate that the total economic value or total mass is inferior to a pre-defined exclusion threshold.

The reporting company should clearly describe which PG&S subcategories are considered in the analysis. Similarly, it should state and justify the ones that are excluded and the extent to which it affects the total GHG emissions.

To ensure data quality, please refer to the Chapter on "Managing Inventory Quality" (Chapter 7) of the GHG Protocol Corporate Standard which gives guidance on how to plan and implement a GHG Data Quality Management System.

#### **4.4.3 Data tracking**

The reporting company should keep records of the raw data used for the analysis to support any audit or verification process, and to promote comparability of results across successive years. Note that the accuracy of the overall analysis is highly dependent on the accuracy and completeness of the collected input data.

The reporting company should especially keep a copy of the methodology, and the tool used for assessing emissions from PG&S and CG.

The data that may be reviewed by an auditor includes:

- Emission factors value, units, sources and years.
- Emission factors computation formula (if they are computed);
- Spend or mass-based inputs.

### **4.5 Filling with the inputs – “Import data” sheet**

#### **4.5.1 Mapping categories**

As a first step, it is recommended that the user become familiar with Table 2 and Table 3. For more detailed information on available emission factors (EFs), the user can also refer to the GHG emissions calculation sheet of the tool.

**Version 3.0 Error! Reference source not found.Error! Reference source not found.**

Aerospace Industry Tool for Calculating Scope 3 Greenhouse Gas Emissions of Purchased Goods & Services and Capital Goods: User Guide

Users must then determine a mapping from each internal purchasing category to an appropriate corresponding subcategory of the IAEG Scope 3 methodology. This mapping activity is initially done the first time the methodology is used and is a prerequisite for the first assessment of PG&S and CG emissions. This process should be repeated in subsequent assessments on a case-by-case basis, when the purchasing databases evolve or when new subcategories are added to the methodology.

The following subsection provides detailed instructions on the matching step.

In the **Import Data** tab, fill in the required information for each group, both for PG&S and CG.

1. Fill in columns 'Expenditure ID' and 'Expenditure label' with the relevant information from the reporting company PG&S database. Expenditure ID may be a unique identifier per line item such as (1), or PGS1, etc. Expenditure label may be the purchasing category label assigned in the reporting company's expenditure data or supply chain report.

Expenditure ID	Expenditure label	Approach
1	X	Spend-based
2	X	Spend-based
3	X	Mass-based

Screenshot of the tool focusing on Expenditure ID and Expenditure label

2. In the 'Approach' and 'Group' columns, select the associated approach and the category that maps to the expenditure from the drop-down menu

Expenditure label	Approach	Group
X	Spend-based	Raw materials
X	Spend-based	Manufactured components and materials
X	Mass-based	Services

Screenshot of the tool focusing on "Approach" and "Group" column

*Note: if any of the drop-down menu does not appear at some point in the process, restart from the "Group" or Category" cell.*

- In the 'Category' column, select the category that best fits the expenditure in from the drop-down menu

Approach	Group	Category
Spend-based	Raw materials	Non-metallic raw materials
Spend-based	Manufactured components and materials	Electrical and electronic equipment
Mass-based	Services	Travel services

Screenshot of the tool focusing on "Category" column

- In the 'subcategory' column, select the subcategory that best fits the expenditure in from the drop-down menu, considering the associated region that best fits the emission factor.

Group	Category	Subcategory
Raw materials	Non-metallic raw materials	Drinking water - Europe
Manufactured components and materials	Electrical and electronic equipment	Electrical cable - America
Services	Travel services	Travel services - Global or unspecified region

Screenshot of the tool focusing on "Subcategory" column

- In the 'Value' column, enter the value in the unit specified in the "unit" column. The unit column is pre-populated based on the selection of Approach in column G.

Subcategory	Level	Value	Unit
Drinking water - Europe	2	1 000,00	kUSD
Electrical cable - Europe	0	2 000,00	m
Travel services - Global or unspecified region		3 690,00	kUSD

Screenshot of the tool focusing on "Value" column

Note: In some cases, the mention "Please add the region-specific supplier emission factor or choose a different region available in the IAEG database.", this indicates that the chosen emission factor from the associated region, in the subcategory cell is not available in the 2025 IAEG Database. The user might choose an emission factor from another region based on available data. The available emission factor and associated region are in the GHG Emission Calculation tab in white color.

Subcategory	Level	Value	Unit
Drinking water - Europe	2	1 000,00	kUSD
Electrical cable - America		2 000,00	Please add the region-specific supplier emission factor or choose a different region available in the IAEG database.
Travel services - Global or unspecified region		3 690,00	kUSD

Screenshot of the tool focusing on "Unit" column

6. For each item, fill in the required information in the tables on the right. The information in these tables will facilitate the tracking and mapping of sources, with the aim that it is easily reproducible thereafter. This concerns data sources, contacts, assumptions, etc.

Data source	Contact	Assumptions (if any)

Screenshot of the tool focusing on “Data source”, “contact” and “assumption” columns

#### 4.5.2 Category and subcategory examples

The following section represents examples provided by WG3 members to facilitate mapping of common purchasing categories to Groups and Categories provided in this tool. These examples should be considered as representative guidance only, and each reporting company should proceed with mapping in accordance with its own internal policies and procedures.

##### 4.5.2.1 Standardized goods

The Aerospace & Defense components manufacturing industry has extensive standards that are an integral part of the purchasing process. These apply to a wide range of goods and are based on industry or US Government Specifications. These include fasteners (screws, nuts, bolts...), hoses, clamps, seals, brackets, etc.

The standardization of these goods may simplify reporting efforts by providing information relating to its material composition. Over the years, users may also use the standardized identification of these parts to keep track of how they are categorized in the tool.

Fasteners, as an example, are metal based goods and should be classified accordingly in the IAEG tool

- **Category:** Assembly and structural components
- **Sub-category:** Metal based assembly and structural component for aircraft/space vehicle and missiles

##### 4.5.2.2 Complex goods

When dealing with complex goods, users should identify the main material making up the good and select this category in the IAEG tool. The assistance of procurement, supply chain, or engineering colleagues may be required to do this approximation as accurately as possible.

Landing Gear Systems are an example of a complex component likely to be encountered by users of the tool. These systems include elements like hydraulics, structural sections, energy absorption systems, brakes, wheels, and tires. While several materials are used, high-strength steel and titanium alloys are in greatest presence. Hence, the selection in the tool would go as follows:

- **Category:** Manufactured components and materials
- **Sub-category:** Metal based manufactured components for aircraft (other than engines)

**4.5.2.3 Industrial equipment**

Certain capital goods such as machine tooling or assembly and transportation jigs are internal purchasing categories that can account for a significant part of a company’s annual spending. The IAEG tool has therefore identified subcategories for these materials:

- **Category:** Industrial equipment
- **Sub-Category:** Machines and industrial equipment

**4.6 Filling with the inputs – “Supplier Emission” sheet**

As for “Import Data”, as a first step, it is recommended that the user become familiar with Table 2 and Table 3. For more detailed information on available emission factors (EFs), the user can also refer to the GHG emissions calculation sheet of the tool.

The following subsection provides detailed instructions on the matching step.

In the **Supplier Emission** tab, fill in the required information for each group, both for PG&S and CG. And the assessment due date, reporting year period and owner of the assessment must be indicated.

1. Fill in columns ‘Approach’, ‘Group’, ‘Category’ and ‘Sub-category’ from the drop-down menu, with Supplier Emission information.

Purchased Goods and Services			
Approach	Group	Category	Sub-Category
Spend-based	Services	Travel services	Travel services - Europe
Mass-based	Assembly and structural components	Non-metallic assembly and structural components	Carbon fiber, high strengths, long fibers - Pultrusion - Europe

Screenshot of the tool focusing on Approach, Group Category and subcategory columns

2. In the ‘Country’ column, indicate the country associated with the Emission factor. And in the ‘Supplier EF Name’ indicate the name of the Emission Factor associated.

Sub-Category	Country	Supplier EF name
Travel services - Europe	France	Emission factor Name 1
Carbon fiber, high strengths, long fibers - Pultrusion - Europe	UK	Emission factor Name 2

Screenshot of the tool focusing on “Country” and “Supplier EF name” column

3. In the ‘Value Carbon Impact’ column, enter the EF value, select the associated unit.

Supplier EF name	Value Carbon Impact (KgCO2e/unit)	Emissions unit	Unit	Ref. EF unit
Emission factor Name 1	400	kgCO2e	RUSD	kgCO2e/RUSD
Emission factor Name 2	300	kgCO2e	ton	kgCO2e/ton

Screenshot of the tool focusing on “Value Carbon Impact” column

4. Please fill in with the same process the capital goods data.

Capital goods						
Approach	Group	Category	Sub-Category	Country	Supplier EF name	
Mass-based	Capital Goods	Fleet	Heavy-duty vehicles and mobile machinery - Asia	China	Emission Factor 1	

Screenshot of the tool focusing on Capital Goods Table

### 4.7 Back-end calculations – “GHG emissions calculation” sheet

The “GHG emissions calculations” tab performs the GHG emissions calculations based on the data entered in the “Import data” tab. The values entered in the “Import data” tab are multiplied by the appropriate EF to derive a subcategory’s emissions in metric tons of CO2. The applicable subcategories are shown in blue and subcategories that are not filled in on the “Import Data” tab remain greyed out.

The values calculated in “GHG emissions calculations” then are used to build the graphs in the “Results Overview” tab. Please note that no action is required from the user for this tab to work properly.

### 4.8 Reviewing the results – “Results overview” sheet

Once all data has been entered, go to the **Results Overview** tab to view the results.

#### 4.8.1 Associated emissions and share of total emissions

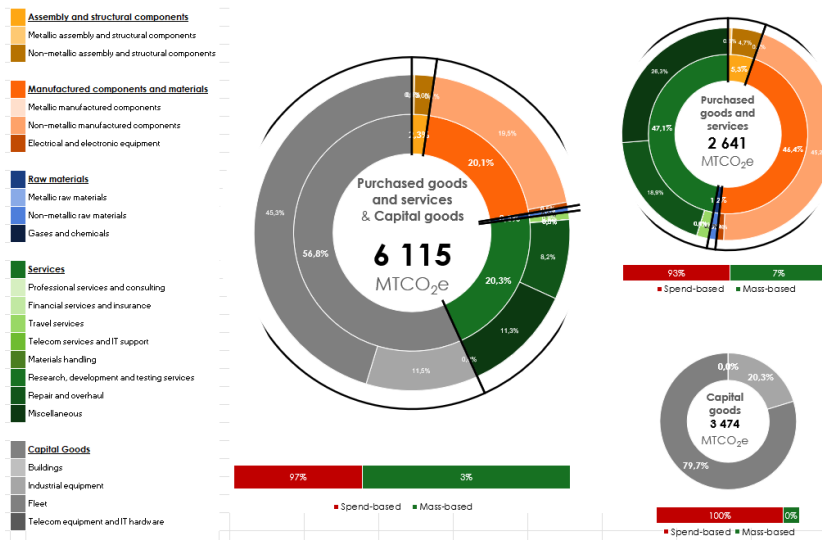
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In the first section of the results tab, a table displays the results of the data according to the information entered in the “import data” tab. The categories of PG&S and CG are presented by their groups to allow the user to better understand the most important categories of emission within each group.

Group / Category	Emissions (MTCO <sub>2</sub> e)	Share of total emissions (%)	Category rank
<b>Assembly and structural components</b>	<b>140</b>	<b>5,3%</b>	—
<i>Metallic assembly and structural components</i>	16	0,6%	8
<i>Non-metallic assembly and structural components</i>	124	4,7%	4
<b>Manufactured components and materials</b>	<b>1 226</b>	<b>46,4%</b>	—
<i>Metallic manufactured components</i>	4	0,2%	9
<i>Non-metallic manufactured components</i>	1 194	45,2%	1
<i>Electrical and electronic equipment</i>	28	1,1%	7
<b>Raw materials</b>	<b>31</b>	<b>1,2%</b>	—
<i>Metallic raw materials</i>	0	0,0%	10
<i>Non-metallic raw materials</i>	31	1,2%	6
<i>Gases and chemicals</i>	0	0,0%	10
<b>Services</b>	<b>1 243</b>	<b>47,1%</b>	—
<i>Professional services and consulting</i>	0	0,0%	10
<i>Financial services and insurance</i>	0	0,0%	10
<i>Travel services</i>	49	1,3%	5
<i>Telecom services and IT support</i>	0	0,0%	10
<i>Materials handling</i>	0	0,0%	10
<i>Research, development and testing services</i>	0	0,0%	10
<i>Repair and overhaul</i>	500	19,3%	3
<i>Miscellaneous</i>	694	26,3%	2
<b>Total Purchased Goods and Services</b>	<b>2 641</b>	<b>100,0%</b>	
<b>Capital Goods</b>	<b>3 474</b>	<b>100,0%</b>	—
<i>Buildings and industrial plants</i>	0	0,0%	4
<i>Industrial equipment</i>	704	20,3%	2
<i>Fleet</i>	2 770	79,7%	1
<i>Telecom equipment and IT hardware</i>	1	0,0%	3
<b>Total Capital Goods</b>	<b>3 474</b>	<b>100,0%</b>	
<b>Total emissions</b>	<b>6 115</b>		

**Associated emissions and share of total emissions table**



**Associated emissions and share of total emissions graphs**

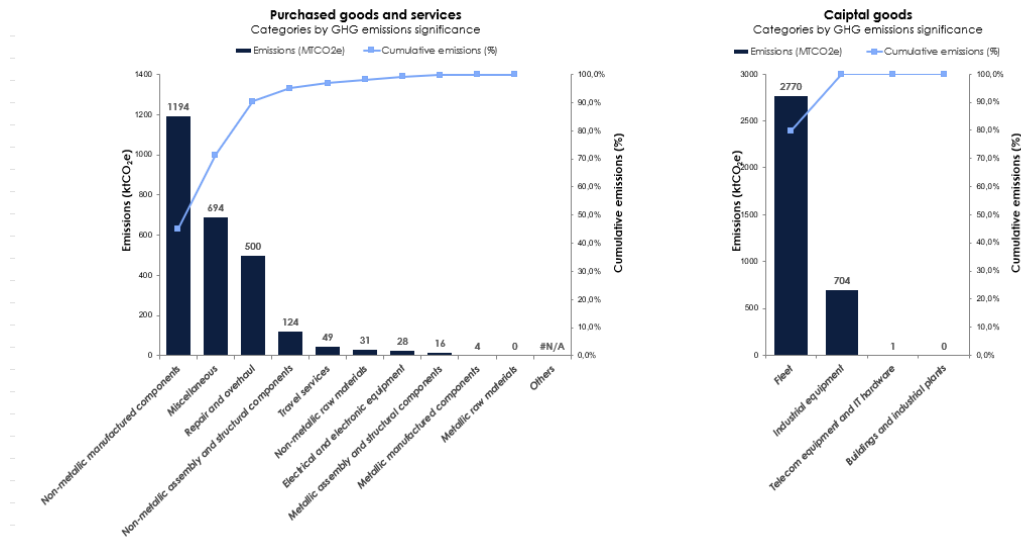
This first section also contains three charts to help the user visualize the source of their emissions. The first pie chart displays data for both PG&S and CG. The second and third pie charts display the same

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 data separately. Beneath each pie chart is a stacked bar which provides information on the percentage of total emissions derived from spend-based and mass-based EF.

### 4.8.2 Distribution of GHG emissions by degree of decreasing significance

In the second section of the results tab, a table displays the results of the data by decreasing share of the total emissions to allow the user to better understand the most impactful categories of emission in their overall inventories.

The second section also contains two charts to help the user visualize the impact of their total emissions from each category. The graphs display the data for PG&S and CG separately. The bars indicate total emissions per category mapped on the primary y-axis, while the line indicates cumulative emissions represented by the categories on the chart mapped on the secondary y-axis.



## 5 Conclusion

This guide describes how to perform an assessment of GHG emissions from PG&S and CG for aerospace and defence companies. By following the instructions, the user will be carried through each step of the process, including the use of the Excel tool developed in support of the methodology.