

Work Group 3 Webinar

Scope 3 Purchased Goods & Services and
Capital Goods: Excel Tool, User Guide,
Methodology

JULY 21, 2020

RICK LOVE, RAYTHEON

WG3



IAEG[®]

INTERNATIONAL AEROSPACE
ENVIRONMENTAL GROUP[®]

COMPLIANCE REMINDERS 1 OF 2

1

Conduct all IAEG[®] work in compliance with IAEG[®] governance requirements and policies, including the antitrust compliance policy.

2

Distribute an agenda before all meetings, and abide by the agenda. Distribute timely and accurate minutes after all meetings.

3

Have no conversation or other exchange that even appears to be leading to:

- Discussion of prices or pricing policy; or
- Other restraints on competition of any kind.

4

IAEG[®] activities may not include collection or dissemination of:

- Prices or pricing methods; or
- Use of named suppliers in specific business transactions

COMPLIANCE REMINDERS **2 OF 2**

5

Before starting a project involving collection or dissemination of competition sensitive data, antitrust legal review is required.

The project must be designed to avoid adverse impacts on competition.

6

Do not disclose:

- Export controlled technical data
- Member proprietary information (unless under Board approved NDA)

7

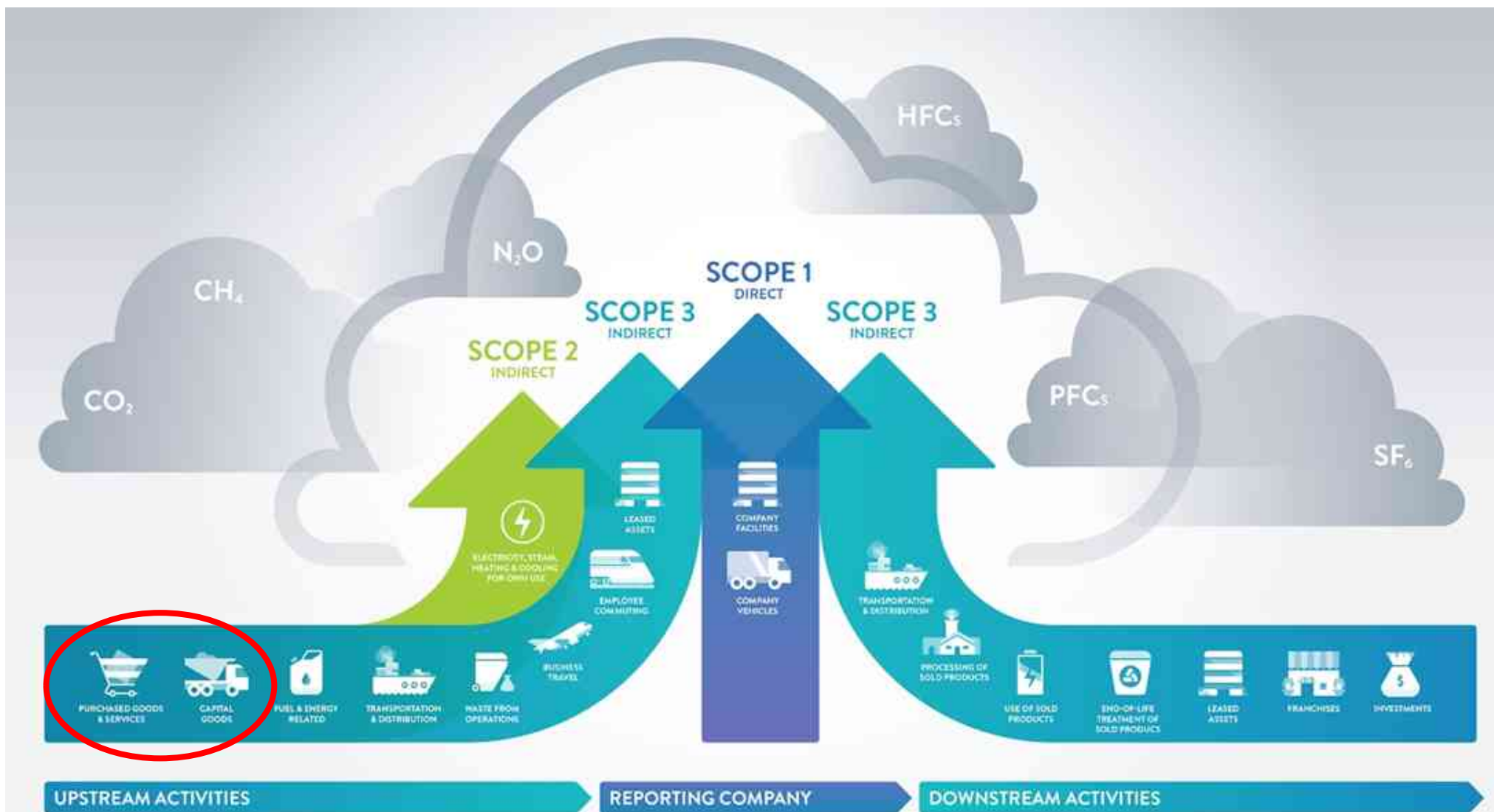
Do not request or collect:

- Personal data about individuals participating in IAEG activity except in compliance with the privacy policy.

8

These Guidelines apply to informal conversations as well as formal IAEG[®] activities.

GHG EMISSIONS SCOPES



SCOPE 3 VALUE CHAIN EMISSIONS IAEG GUIDANCE

Upstream			Downstream		
Emission Category	Relevance	Guidance Provided	Emission Category	Relevance	Guidance Provided
Purchased Goods & Services	Potentially Relevant	No	Downstream Transportation & Distribution	Potentially Relevant	Yes
Capital Goods	Potentially Relevant	No	Processing of Sold Products	Not Relevant	No
Energy and Fuel Related Activities	Not Relevant	No	Use of Sold Products	Relevant	No
Upstream Transportation & Distribution	Potentially Relevant	Yes	End of Life Treatment of Sold Products	Potentially Relevant	No
Waste Generated in Operations	Not Relevant	No	Downstream Leased Assets	Not Relevant	No
Business Travel	Potentially Relevant	Yes	Franchises	Not Relevant	No
Employee Commuting	Potentially Relevant	Yes	Investments	Not Relevant	No
Upstream Leased Assets	Not Relevant	No	Other	N/A	No

EXAMPLES OF PG&S AND CG CATEGORIES

Purchased Goods & Services (PG&S)

Examples:



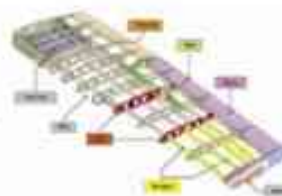
Standard parts



Systems assy.



Structure parts or assy.



Software



Avionics & electronics



Office consumables

Capital Goods (CG)

Examples:



Production equipment



Industrial buildings



Vehicles



Real-Estate



Office furniture & IT equipment

THE DELIVERABLES

Calculation tool

User Guide

Methodology

WG3 2020/02/14 V.1.1

User guide for Purchase Goods and Services and Capital goods GHG emissions accounting

February 14th, 2020

Carbone 4
Stéphane Amant
Rodrigo Baranna

CCG
Pascal Geneviève
Alex Jordan
Jeff Tétreault

WG3 2020/03/25 V.1.1

IAEG Methodology for quantifying Emissions of Purchased Good & Services and Capital Goods

March 25th 2020

Carbone 4
Stéphane Amant
Rodrigo Baranna

CCG
Pascal Geneviève
Alex Jordan
Jeff Tétreault

Aerospace Industry Tool for Calculating Scope 3 Emissions of Purchased Goods & Services and Capital Goods

Authors
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Erin.Williamson@ngc.com

Version 1.0

Date March 25, 2020

Version control

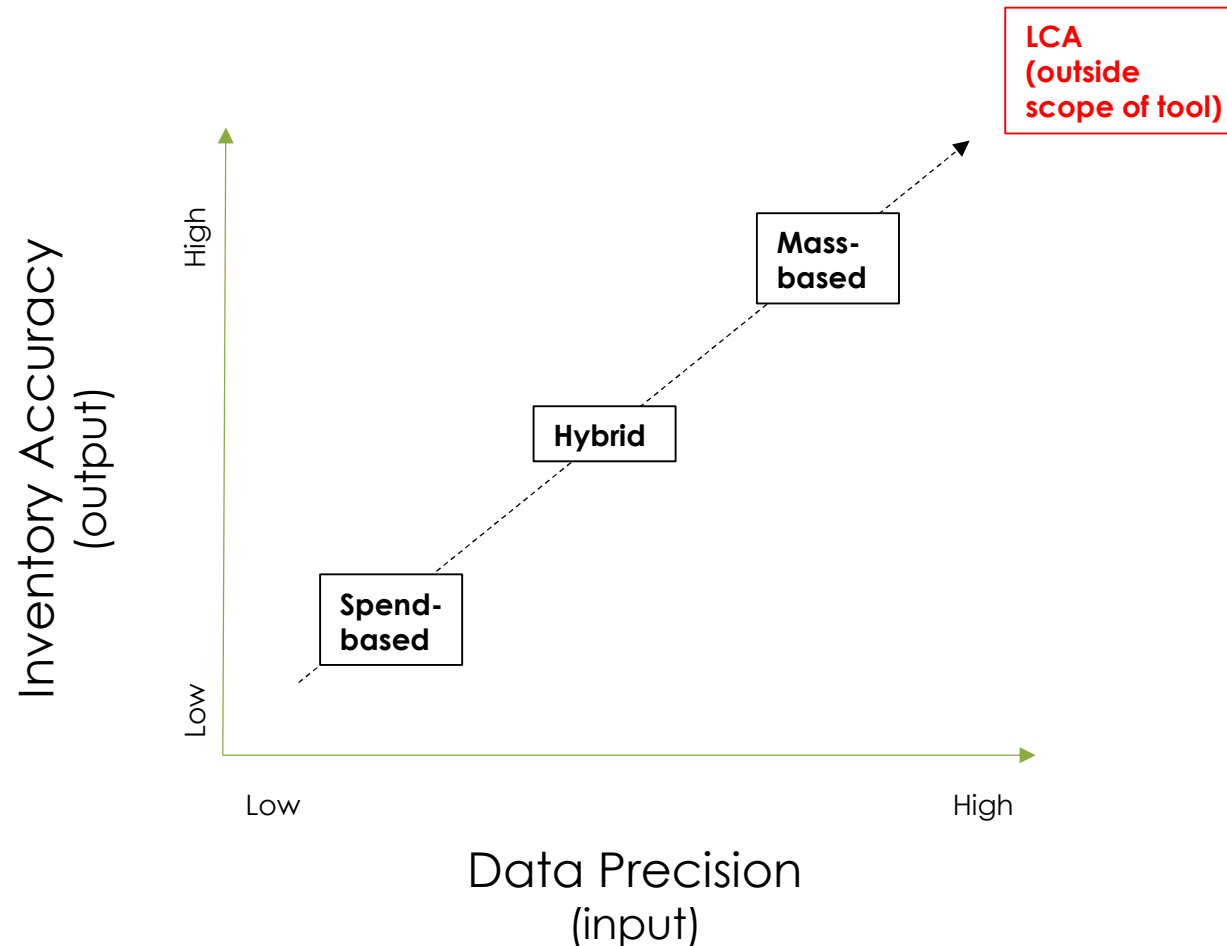
Version	Date	Updates	Responsible
1.0	25/03/2020	Creation	Carbone 4 and CCG

Objectives of this tool

For the aerospace and defense industry, both "Purchase of Goods & Services" and "Capital Goods" categories are among the most material Scope 3 categories. For that reason, a dedicated methodology was developed for assessing GHG emissions associated with PG&S and CG, according to a number of requirements proposed by IAEG. This tool was designed to provide users with the ability to make a first assessment through a simple implementation of this methodology. Therefore Version 1 of this tool integrates basic functionalities that enables the user to run computations. As such, it is not perfect and will need refinement in the future to better serve the needs of IAEG members.

[Read me](#) [Decision tree](#) [Import data](#) [Results Overview](#) [GHG emissions calculations](#)

SPEND VS. MASS METHODOLOGY



Data Input Sources

- Tool requires input for annual procurement in mass (kg) and/or spend (\$/€)
- Data should cover as close to 100% of annual procurement as possible
- May require collaboration with Supply Chain function to map procurement categories to tool
- Mass-based input data will result in more accurate output than spend-based due to emission factors

SOURCES OF INFORMATION FOR THE TOOL

- **Emission factor (EF) databases selection**

- The following criteria were used to select the EF databases:
 - Whenever possible, use **public sources**;
 - Whenever possible, use **cradle-to-gate EF**;
 - Databases **updated** within the last 5 years (where possible);
 - **Geographical scope**: US, Europe, Japan, Brazil, or China;
 - **Environmentally Extended Input-Output** (EEIO) tables for spend-based approach.

Database or Source	Type of EF	Geography	Last update	Source
DoD	Spend-based	USA	2014	DoD Sustainability Assessment Guidance - Appendix I Scoring Factors
EIO-LCA	Spend-based	USA	2007	Carnegie-Mellon University
USEEIO	Spend-based	USA	2017	US EPA
Base IMPACTS ®	Mass-based	Europe / World	2018	ADEME
Base Carbone ®	Spend-based and mass-based	France / Europe	2019	ADEME

GROUPS, CATEGORIES AND EMISSION FACTORS

Table 2: Categorization of PG&S

Group	Category	Spend-Based EF	Mass-Based EF
Assembly and structural components	Metallic components	X	X
	Non-metallic components	X	X
Manufactured components and materials	Metallic components	X	X
	Non-metallic components	X	X
	Electrical and electronic equipment	X	X
Raw materials	Metallic raw materials	X	X
	Non-metallic raw materials	X	X
	Gases and chemicals	X	-
Services	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	-

TOOL DEMONSTRATION



BENEFITS OF THE TOOL

- Applicability from entry level user to advanced user
 - Spend based
 - Hybrid
 - Mass based
- Not a precise tool, but accurate enough to provide user with ability to determine how their inventory is apportioned across different categories of supply
- Provides user organisation with information to focus improvement activity
- Provides a consistent approach across the aerospace and defence industry
- Purchasing categories that are commonly used across aerospace and defence
- Can be partly customised for advanced users e.g. own emissions factors or purchasing categories
- Maintenance process so IAEC can update emissions factors annually without need for consultancy input
- User data retained within their own firewalls
- Enable industry to respond to evolving carbon legislation and stakeholder expectation e.g. CDP, DJSI, EU Taxonomy Regulation, Science Based Targets

TOOL TESTING AND PATHWAY TO APPROVAL

- Phase 1 pilot Nov 2019-Jan 2020 (WG3 User testing)
 - User experience
 - Functionality
 - Comparability
- Phase 2 pilot (July 2020-Dec 2020) (Full IAEG membership)
 - Provide introductory webinar (recorded and made available for IAEG members)
 - Users test the tool for various functionality
 - Collect feedback in survey and review
 - Adjust tool as needed
- Seek WRI GHG Protocol Accreditation (early 2021)
- Seek IAEG full Board approval (April 2021)
- Annual maintenance process in place: WG3 will review the tool for updates to data sources and inputs before annual reporting cycle in accordance with documentation (ongoing)

NEXT STEPS (THROUGH DEC. 2020)

- Review User Guide for steps to test tool
- Document challenges, feedback, etc.
- WG3 will send SurveyMonkey link to capture feedback

Questions can be directed to WG3: Erin.Williamson@ngc.com

Documents found on IAEG.com [here](#):

- Clean Excel copy of tool
- User Guide
- Methodology

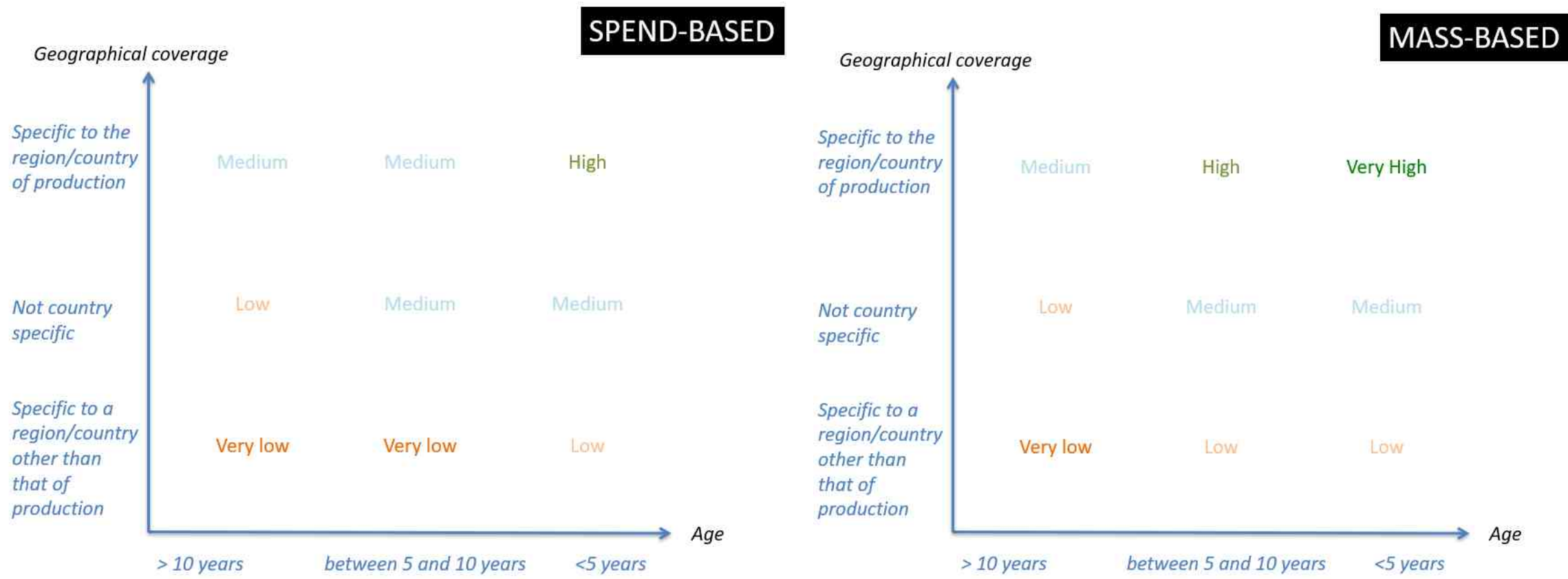
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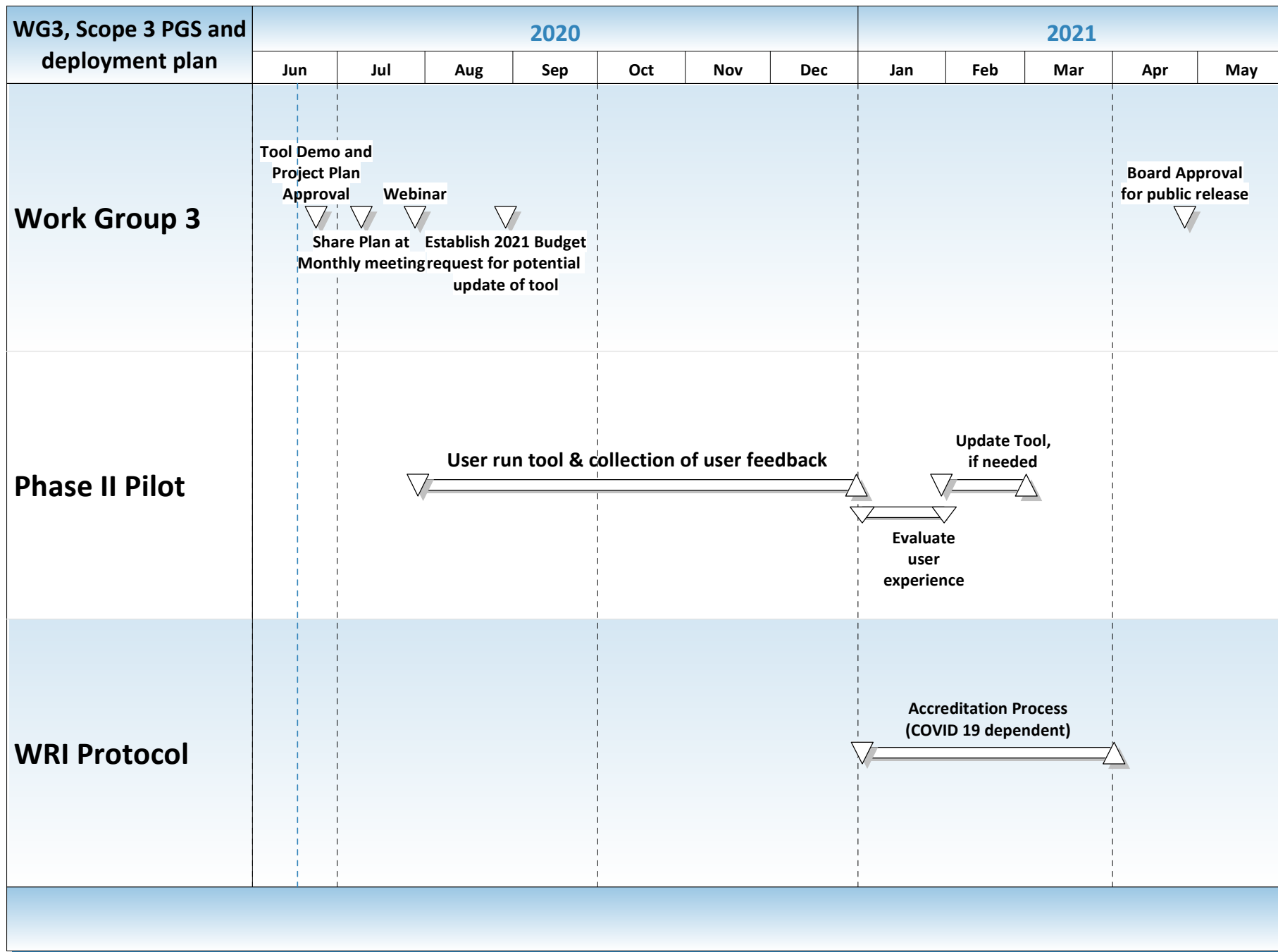
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BACKUP



OVERVIEW OF METHODOLOGIES





TOOL SCREENSHOTS: READ ME TAB

How to use the tool ?

0. Read the **Read Me** tab first !!

Unless you wish to adjust or add some new data for the assessment, always start from a blank tool to reduce the number of potential errors. To do so, always conserve the original blank file and make a working copy for the assessment.

*Unless indicated, only the white boxes can be filled by the user
The light blue boxes contain context-dependent drop-down menus to enable the selection of the right option
All other boxes shall not be modified by the user, even in the orange tabs*

1. In the **Decision Tree** tab, answer the questions by 'Yes' or 'No' to know which Level is the most relevant.
2. In the **Import data** tab, specify name(s) and contact(s) of people in charge of the assessment, the reporting year and the currency used.
3. In the **Import Data** tab, fill in the required information for each group, both for PG&S and CG
 - a. in the table, fill in columns 'Expenditure ID' and 'Expenditure label' according to what corresponds to your company. Consider only the first line of the table to start with.
 - b. In the "approach" column, select "spend-based" or "mass-based" according to the data available
 - c. in the 'Group' column, select the right group in the scrolling list that appears when clicking on the icon
 - d. in the 'Category' column, select the right category in the scrolling list that appears when clicking on the icon
 - e. in the 'Subcategory' column, select the right subcategory in the scrolling list that appears when clicking on the icon
 - f. please proceed the same way for all items, using subsequent lines
 - g. put the value in the 'Value' column, taking care of respecting the unit specified on the right
 - h. for each line, please indicate data source, contacts and assumptions (if any) in columns V to X.
 - i. go to the next line and proceed from the b/ point until you've completed the information for both PG&S and CG
4. Go into the **Results Overview** tab to get the results, through 2 tables containing the figures for each category and 2 figures displaying main results under two different forms

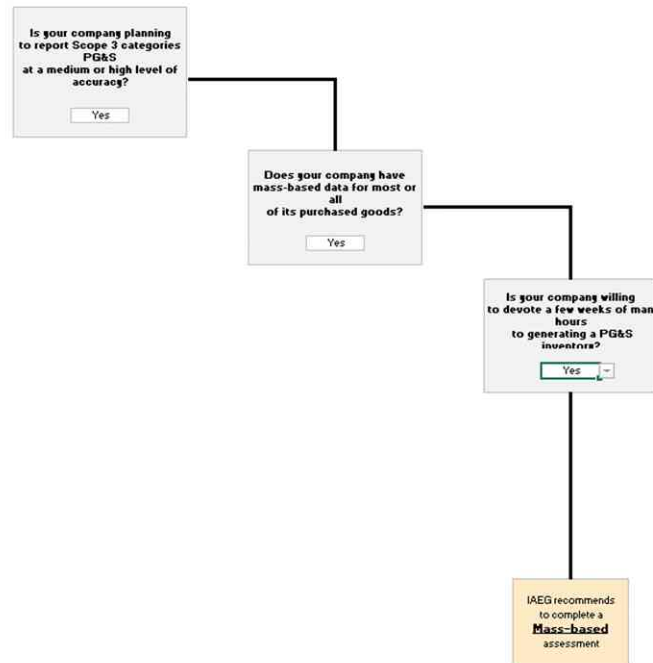
Brief description of the tabs

Read Me	General information and user instructions
Decision Tree	List of questions to select the most suitable level of assessment
Import data	Tab to collect the information required for the assessment, to track the source and nature of the information, to ensure traceability for subsequent users
Results Overview	Tab presenting the results (2 tables and 2 figures)
GHG emissions calculations	Tab where GHG emissions are computed
	Tab with conversion calculations for inflation adjustment

TOOL SCREENSHOTS: DECISION TREE

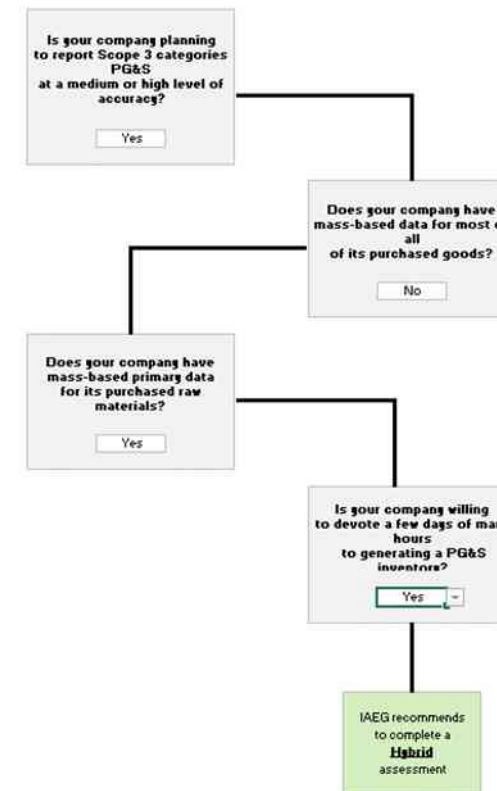
Please answer the questions below to define your assessment level

Mass-based methodology recommended



Please answer the questions below to define your assessment level

Hybrid methodology recommended



TOOL SCREENSHOTS: IMPORT DATA

Reporting information

Reporting year	2019
Currency	kUSD

Purchased Goods & Services

To insert rows in the table below, please follow the steps below:

- 1) Select row 48;
- 2) Insert rows above;
- 3) Copy any row already filled;
- 4) Paste on the added rows.

General considerations about the inventory boundaries
 (ex: you can specify here some particular exclusions)

Expenditure ID	Expenditure label	Approach	Group	Category	Subcategory	Level	Value	Unit
1	Steel aircraft body material	Mass-based	Manufactured components and materials	Metallic manufactured components	Steel - Galvanisation steel sheet	3	1,000.00	kg
2	Carbon fiber	Mass-based	Assembly and structural components	Non-metallic assembly and structural components	Carbon fiber, high strengths, long fibers - Thermocompression	3	6,000.00	kg
3	Spacecraft composites	Spend-based	Assembly and structural components	Non-metallic assembly and structural components	Composite-based structural product, unknown material and/or mass	2	1,500.00	kUSD
4	Exterior coating	Spend-based	Raw materials	Gases and chemicals	Paint and coating	3	200.00	kUSD
5	Consulting Services	Spend-based	Services	Professional services and consulting	Business support services	3	300.00	kUSD
#####								

