



# Scope 3 Technical Working Group Meeting

**Group A  
Meeting 5  
Inventory quality reporting**

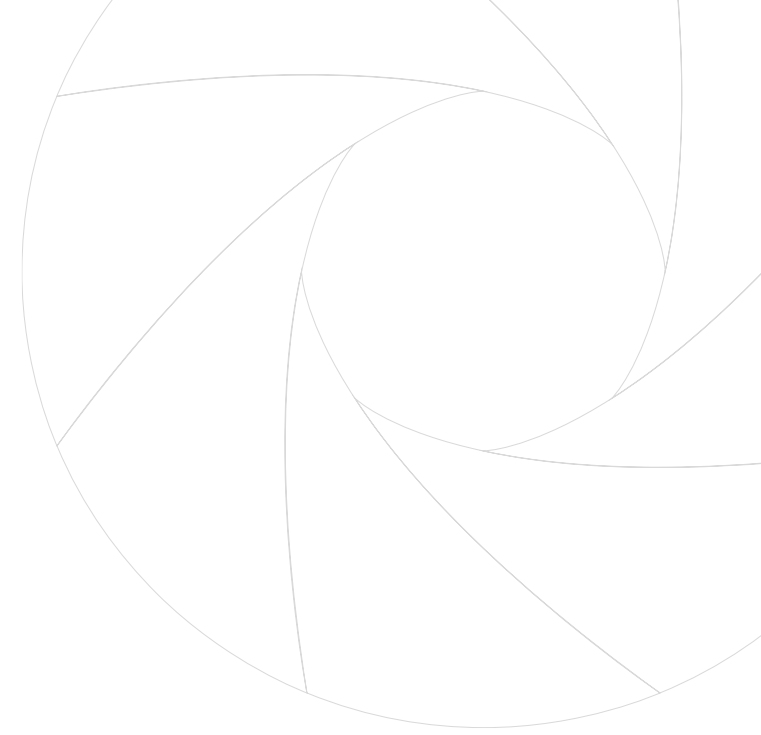
January 30<sup>th</sup>, 2025



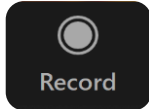
# Agenda

- Attendance and housekeeping (5 min)
- Recap of previous discussions (10 min)
- Setting up the discussion (10 min)
- Data specificity (30 min)
- Break (5 min)
- Calculation methods for category 11 (20 min)
- Mapping the methods (30 min)
- Next steps (5 min)

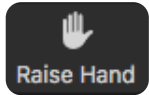
# Housekeeping



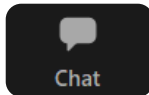
## Welcome and Meeting information



This meeting is recorded.



Please mute yourself by default and unmute when speaking  
Please use the Raise Hand function to speak during the call.



You can also use the chat function in the main control.



Recording, slides, and meeting minutes will be shared after the call.

## Housekeeping

- TWG members should **not disclose any confidential information** of their employers, related to products, contracts, strategy, financials, compliance, etc.
- In TWG meetings, **Chatham House Rule** applies:
  - “When a meeting, or part thereof, is held under the Chatham House Rule, participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed.”
- **Compliance and integrity** are key to maintaining the credibility of the GHG Protocol
  - Specifically, all participants need to follow the **conflict-of-interest policy**
  - **Anti-trust rules** have to be followed; please avoid any discussion of competitively sensitive topics\*

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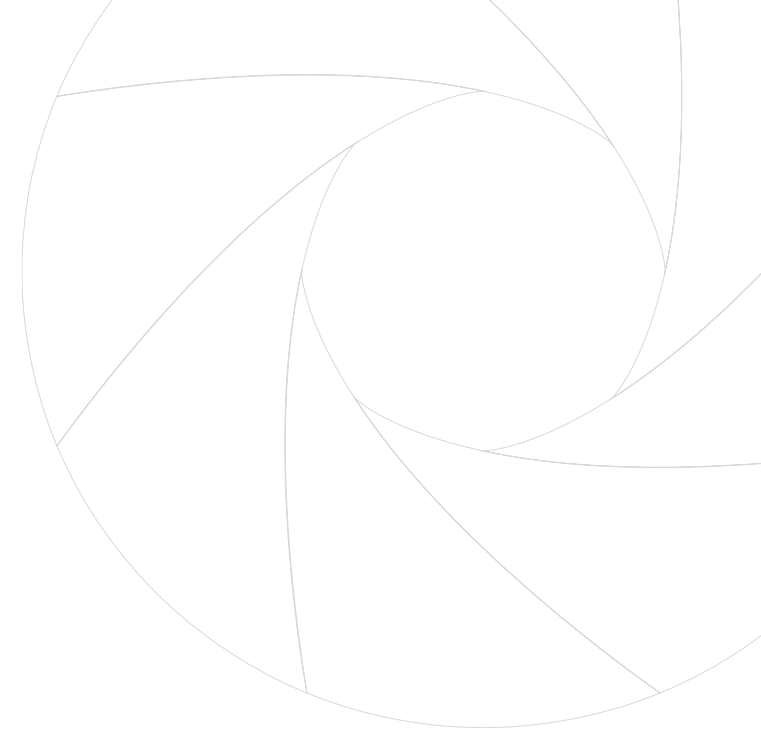
\* Such as pricing, discounts, resale, price maintenance or costs; bid strategies including bid rigging; group boycotts; allocation of customers or markets; output decisions; and future capacity additions or reductions

## Decision-Making Criteria

- Evaluating options: Describe pros and cons of each option relative to each criterion. Qualitatively assess the degree to which an option is aligned with each criterion through a green (most aligned), yellow (mixed alignment), orange (least aligned) ranking system. Some criteria may be not applicable for a given topic; if so, mark N/A.
- Comparing options: The aim is to advance approaches that ideally meet all decision criteria (i.e. maximize pros and minimize cons against all criteria). If options present tradeoffs between criteria, the hierarchy should be generally followed, such that, for example, scientific integrity is not compromised at the expense of other criteria, while aiming to find solutions that meet all criteria.

<i>Illustrative example</i>	<b>Option A: Name</b>	<b>Option B: Name</b>	<b>Option C: Name</b>
<b>1A. Scientific integrity</b>	<ul style="list-style-type: none"> <li>• Pros</li> <li>• Cons</li> </ul>	<ul style="list-style-type: none"> <li>• Pros</li> <li>• Cons</li> </ul>	<ul style="list-style-type: none"> <li>• Pros</li> <li>• Cons</li> </ul>
<b>1B. GHG accounting and reporting principles</b>	<ul style="list-style-type: none"> <li>• Pros</li> <li>• Cons</li> </ul>	<ul style="list-style-type: none"> <li>• Pros</li> <li>• Cons</li> </ul>	<ul style="list-style-type: none"> <li>• Pros</li> <li>• Cons</li> </ul>
<b>2A. Support decision making that drives ambitious global climate action</b>	<ul style="list-style-type: none"> <li>• Pros</li> <li>• Cons</li> </ul>	<ul style="list-style-type: none"> <li>• Pros</li> <li>• Cons</li> </ul>	<ul style="list-style-type: none"> <li>• Pros</li> <li>• Cons</li> </ul>
<b>2B. Support programs based on GHG Protocol and uses of GHG data</b>	<ul style="list-style-type: none"> <li>• Pros</li> <li>• Cons</li> </ul>	<ul style="list-style-type: none"> <li>• Pros</li> <li>• Cons</li> </ul>	<ul style="list-style-type: none"> <li>• Pros</li> <li>• Cons</li> </ul>
<b>3. Feasibility to implement</b>	<ul style="list-style-type: none"> <li>• Pros</li> <li>• Cons</li> </ul>	<ul style="list-style-type: none"> <li>• Pros</li> <li>• Cons</li> </ul>	<ul style="list-style-type: none"> <li>• Pros</li> <li>• Cons</li> </ul>

# Recap of previous discussions



## Group A: Inventory quality – scope of work

1. Identifying what scope 3 inventories are used for
  - Clarifying the relationship between data quality and various inventory objectives
2. Define how to more effectively present / communicate the inventory's quality
  - Consider additional requirements to enhance the usability and transparency of scope 3 inventories
3. Address how to define the inventory quality based on the input data
  - Consider developing more prescriptive allocation rules
  - Consider developing a hierarchy of data and/or calculation methods
  - Consider additional guidance on the transfer of data across the value chain and integrating of product level data into scope 3 calculations
4. Consider whether and how to restrict inventory quality
  - Consider constrains or minimum requirements to inventory quality
  - Consider requirement to improve inventory data quality improvements over time
  - Consider requirement to perform hotspot analysis



## Main outcomes of meetings #2-4

1. Regarding the revision of inventory quality reporting requirements, the TWG prefers **Option 3: Disaggregated reporting of scope 3 emissions based on quality**
  - With this option, an inventory would be itemized (disaggregated) by tier based on data quality
2. The group did not reach consensus on a principle for the differentiation of the tiers
3. The TWG has a shared vision for the preferred qualities of a solution:
  - Minimize/remove subjective choices for the preparer
  - Allow for easy interpretation of the inventory by users
  - Be easy to implement by preparers
4. The Secretariat called for proposals from the TWG members. Proposals were discussed in meeting #4

## Conclusions of the conversations

- Two dimensions were identified to be reflected in a solution: data quality (accuracy/precision) and actionability.
- Supplier-specificity seems to reflect actionability but lacks representation of quality
- Uncertainty assessment reporting reflects quality, but not necessarily actionable and feasible for implementation. Suggested as an additional build-on
- Verification enhances confidence in reported numbers, but may be not reflective of high quality nor be widely feasible
- Classifying data quality using the calculation methods potentially offers multi-dimensionality, and is familiar for preparers
- Approaches that include principal disaggregation based on calculation methods have received more support

## Feedback from meeting #4

### Received feedback

- Value of the review of the proposals and receiving feedback on them
- Potentially premature polling: more information might be needed; no proposals are complete as they are
- Concerns about requiring data verification & certification

### Secretariat response

- Previous meeting was a first step in the development of the final proposal
- Considerations of the last meeting are taken into the following meetings for co-creation, combining elements and advancing the proposal further

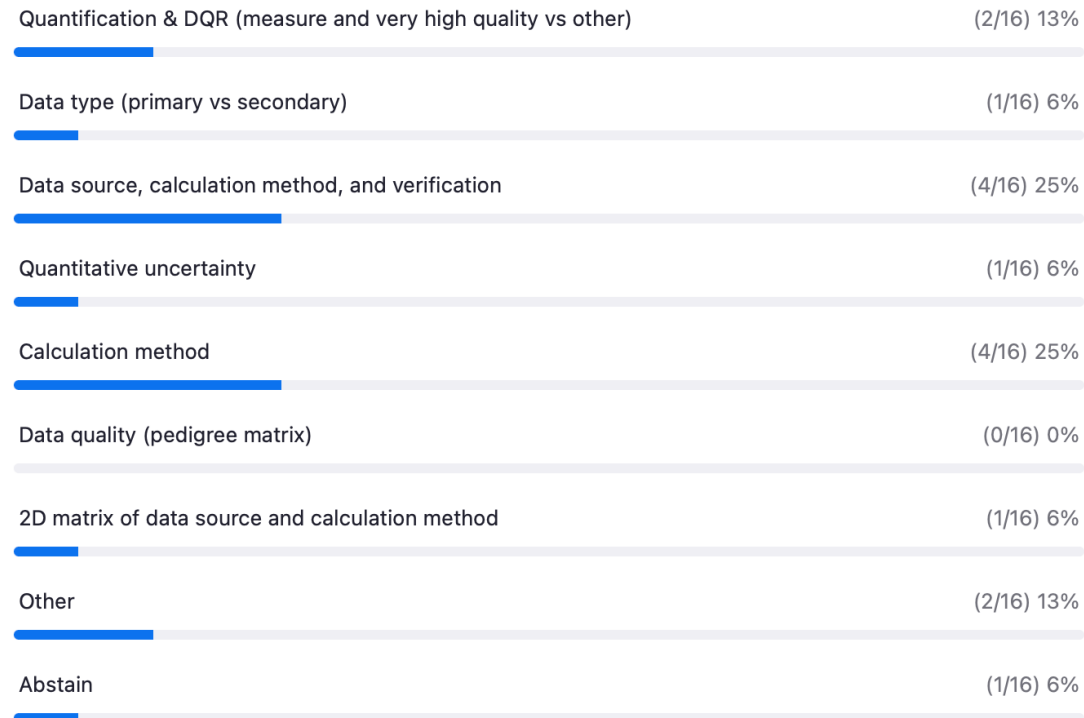
# Indicative polling in meeting#4

## A#4: Preferred option - Main room

Poll ended | 1 question | 16 of 20 (80%) participated

1. Based on the discussion, what is your preferred option to become the base of the tier differentiation? Keep in mind, that this is not intended to become the final recommendation, but the base of our future conversation on further configuration. (Single choice) \*

16/16 (100%) answered

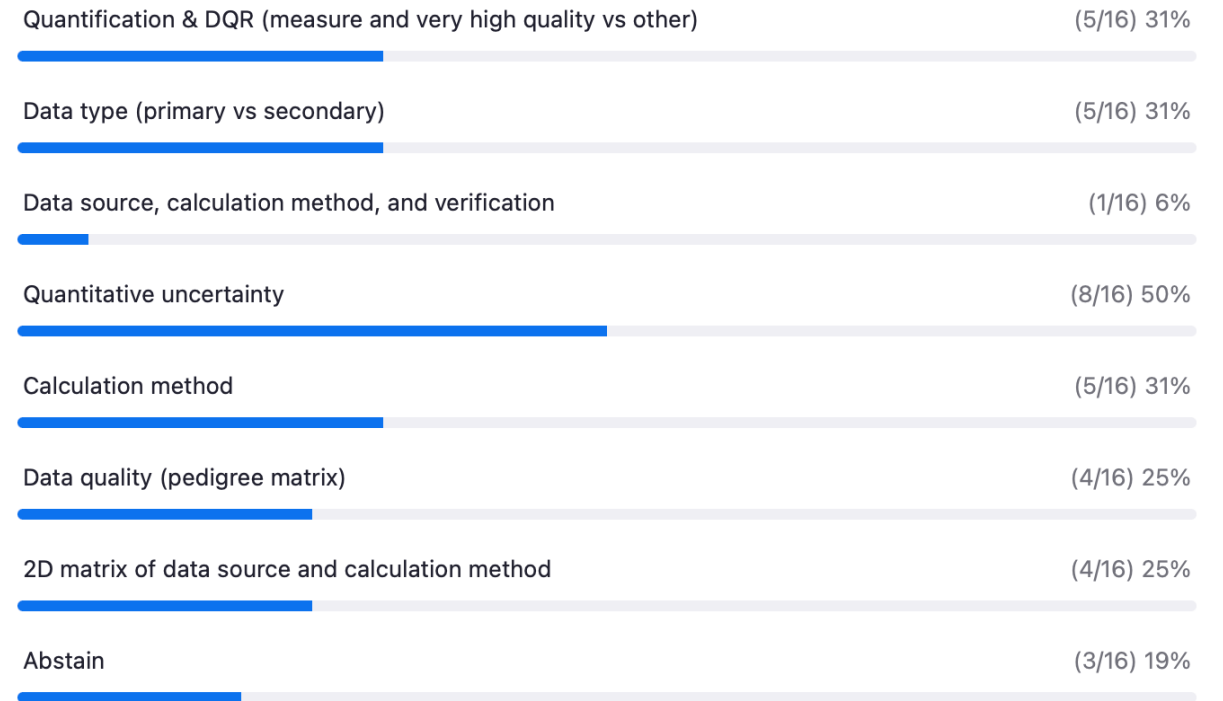


## A#4: Opposition - Main room

Poll ended | 1 question | 16 of 20 (80%) participated

1. Based on the discussion, which of the options you oppose the implementation of? (even modified) (Multiple choice) \*

16/16 (100%) answered



# Approach

## Round 1. Proposals review in breakouts (previous meeting)

- Breakout reviews the proposals one-by-one
- Identify pros and cons using the decision-making criteria

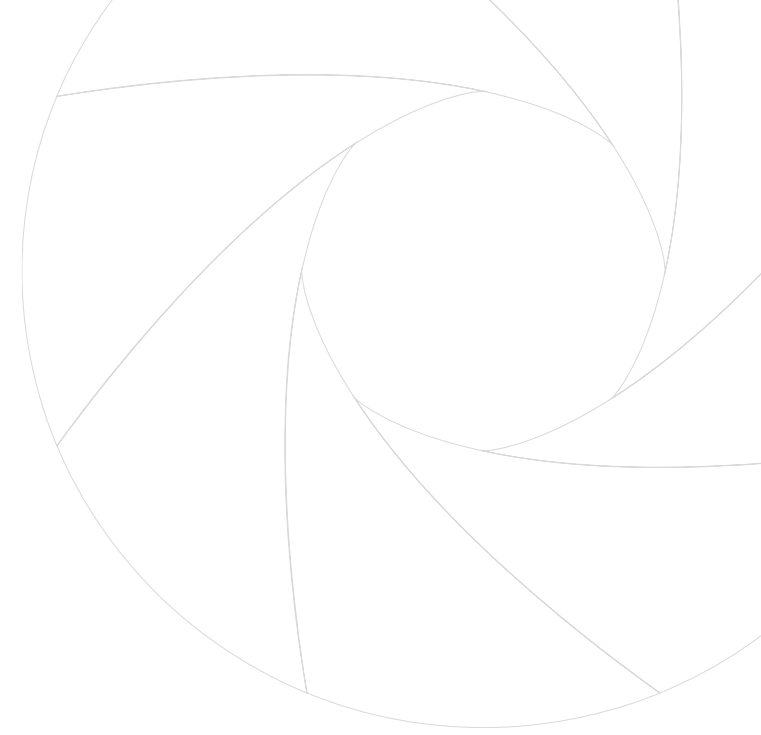
## Round 2: Full group discussion (previous meeting)

- Share findings from the breakout proposals review with the full group
- Perform indicative polling (in favor / oppose / abstain)

## Round 3. Co-create

- Refine the solutions selected in the previous meeting, and potentially integrate further elements
- How can we maximize pros and minimize cons?
- Develop a final proposal based on the decision-making criteria

# Setting up the discussion



## Purposes of the tiers

Main purpose of the tiers is to facilitate communication

Decision-making criteria	Purpose
1A. Scientific integrity	N/A
1B. GHG accounting and reporting principles	<ul style="list-style-type: none"> <li>• Encourage use of more accurate data over time, by giving an incentive for companies to move from lower tiers to higher tiers</li> <li>• Providing transparency distinguishing more accurate vs less accurate data</li> </ul>
2A. Support decision making that drives ambitious global climate action	<ul style="list-style-type: none"> <li>• Distinguish actionable vs. non-actionable data</li> </ul>
2B. Support programs based on GHG Protocol and uses of GHG data	<ul style="list-style-type: none"> <li>• Support regulatory programs</li> <li>• Make scope 3 data more useful and actionable</li> </ul>
3. Feasibility to implement	<ul style="list-style-type: none"> <li>• Supporting clarity and efficiency in implementing the current scope 3 reporting requirements</li> </ul>

## Building on calculation methods



Strengths

- Familiarity
- Simplicity
- Potential to reflect supplier engagement



Weaknesses

- Confusing names
- Does not necessarily reflect data quality

### Ideas:

- Aligning the calculation methods into more homogenous tiers
- Stipulate requirements for the calculation methods (limitations?)
- Potentially add the dimension of verification
- Potentially add the dimension of uncertainty



## Calculation methods: Appendix D

Multiple calculation methods and formulas are itemized in the *Technical Guidance for Calculating Scope 3 Emissions*, for each scope 3 category, ranked in order of specificity. It includes guidance for emission factor selection. Appendix D (p. 162-182) of the *Technical Guidance* aggregates the formulae possible/listed for use by category.

Category	Calculation methods			
	Method 1	Method 2	Method 3	Method 4
Category 1	Supplier-specific	Hybrid	Average-data	Spend-based
Category 2	Supplier-specific	Hybrid	Average-data	Spend-based
Category 3	Supplier-specific	Average-data		
Category 4: transport	Fuel-based	Distance-based	Spend-based	
Category 4: distribution	Site-specific	Average-data		
Category 5	Supplier-specific	Waste-type-specific	Average-data	
Category 6	Fuel-based	Distance-based		
Category 7	Fuel-based	Distance-based	Average-data	
Category 8	Asset-specific	Lessor-specific	Average-data	
Category 9: transport	Fuel-based	Distance-based	Spend-based	
Category 9: distribution	Site-specific	Average-data		
Category 10	Site-specific	Average-data		
Category 11: Direct use-phase emissions	Fuel-/electricity-based	Fuels/Feed-stocks	Contained/forming	
Category 11: Indirect use-phase emissions	Fuel-/electricity-based			
Category 12	Waste-type-specific			
Category 13	Asset-specific	Lessee-specific	Average-data	
Category 14	Franchise-specific	Average-data		
Category 15	Investment-specific	Project-specific	Average-data	

## Split into tiers

Category	Calculation methods			
	Tier 1	Tier 2	Tier 3	Tier 4
Category 1	Supplier-specific	Hybrid	Average-data	Spend-based
Category 2	Supplier-specific	Hybrid	Average-data	Spend-based
Category 3	Supplier-specific	Average-data		
Category 4: transport	Fuel-based	Distance-based	Spend-based	
Category 4: distribution	Site-specific	Average-data		
Category 5	Supplier-specific	Waste-type-specific	Average-data	
Category 6	Fuel-based	Distance-based		
Category 7	Fuel-based	Distance-based	Average-data	
Category 8	Asset-specific	Lessor-specific	Average-data	
Category 9: transport	Fuel-based	Distance-based	Spend-based	
Category 9: distribution	Site-specific	Average-data		
Category 10	Site-specific	Average-data		
Category 11: Direct use-phase emissions	Fuel-/electricity-based	Fuels/Feed-stocks	Contained/forming	
Category 11: Indirect use-phase emissions	Fuel-/electricity-based			
Category 12	Waste-type-specific			
Category 13	Asset-specific	Lessee-specific	Average-data	
Category 14	Franchise-specific	Average-data		
Category 15	Investment-specific	Project-specific	Average-data	

# Arrange into three tiers hierarchically

Doesn't make sense to separate it, if data is disaggregated

Category	Calculation methods				
	Tier 1: Specific		Tier 2: Average		Tier 3: Spend-based
Category 1	Supplier-specific		Hybrid	Average-data	Spend-based
Category 2	Supplier-specific		Hybrid	Average-data	Spend-based
Category 3	Supplier-specific		Average-data	Average-data	
Category 4: transport	Fuel-based		Distance-based		Spend-based
Category 4: distribution	Site-specific		Average-data		
Category 5	Supplier-specific		Waste-type-specific	Average-data	
Category 6	Fuel-based		Distance-based		
Category 7	Fuel-based		Distance-based	Average-data	
Category 8	Asset-specific	Lessor-specific		Average-data	
Category 9: transport	Fuel-based		Distance-based		Spend-based
Category 9: distribution	Site-specific		Average-data		
Category 10	Site-specific		Average-data		
Category 11: Direct use-phase emissions	Fuel-electricity-based	Fuels/Feed-stocks	Contained/forming		
Category 11: Indirect use-phase emissions	Fuel-/electricity-based				
Category 12			Waste-type-specific		
Category 13	Asset-specific		Lessee-specific	Average-data	
Category 14	Franchise-specific		Average-data		
Category 15	Investment-specific		Project-specific	Average-data	

Potentially missing spend- and revenue-based methods used in practice

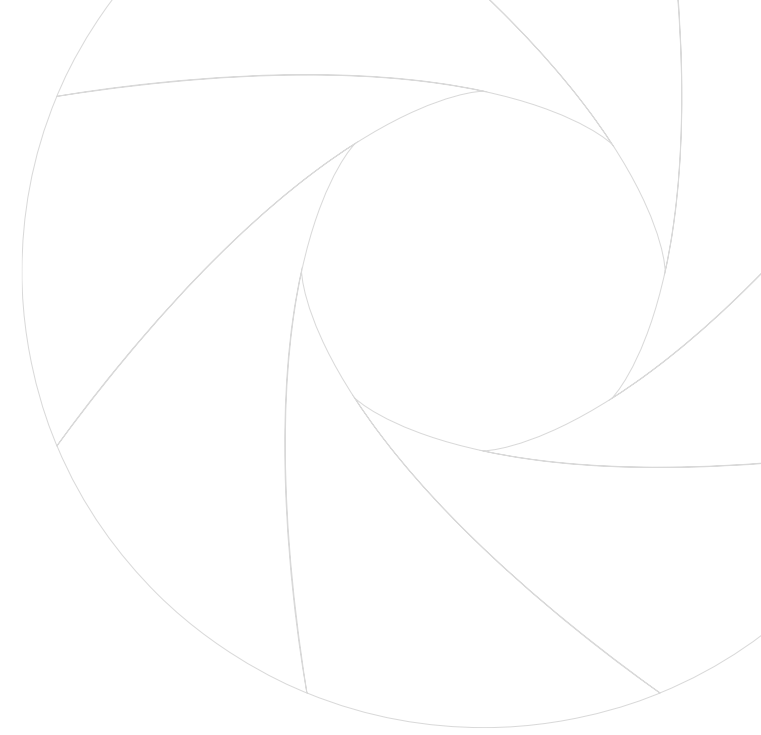
1. Arrangement is tentative: for discussion is if any of the methods need to be put into other tiers
2. More refinement is needed in definitions when it comes to "fringe" cases (e.g. spend-based assessment of activity data and use of specific EF; assumptions and scenario based assessments, etc.)

Calculation methods split is not reflective of hierarchy

## Plan for the meeting

- Discuss data specificity
- Discuss calculation methods for category 11
- Discuss mapping the calculation methods to tiers that differentiate data quality
  - Consider adding more than three tiers (beyond specific, average, spend-based)
  - Consider re-mapping calculation method vs tiers
  - Consider adding calculation methods per category
- Next meeting: Address potential adjustments to improve indication of data quality

# Data specificity



# Cradle-to-gate specific data

## Category 1 and Category 2:

**Supplier-specific method** – collects product-level cradle-to-gate GHG inventory data from goods or services suppliers. (Technical guidance, p. 21).

Requires:

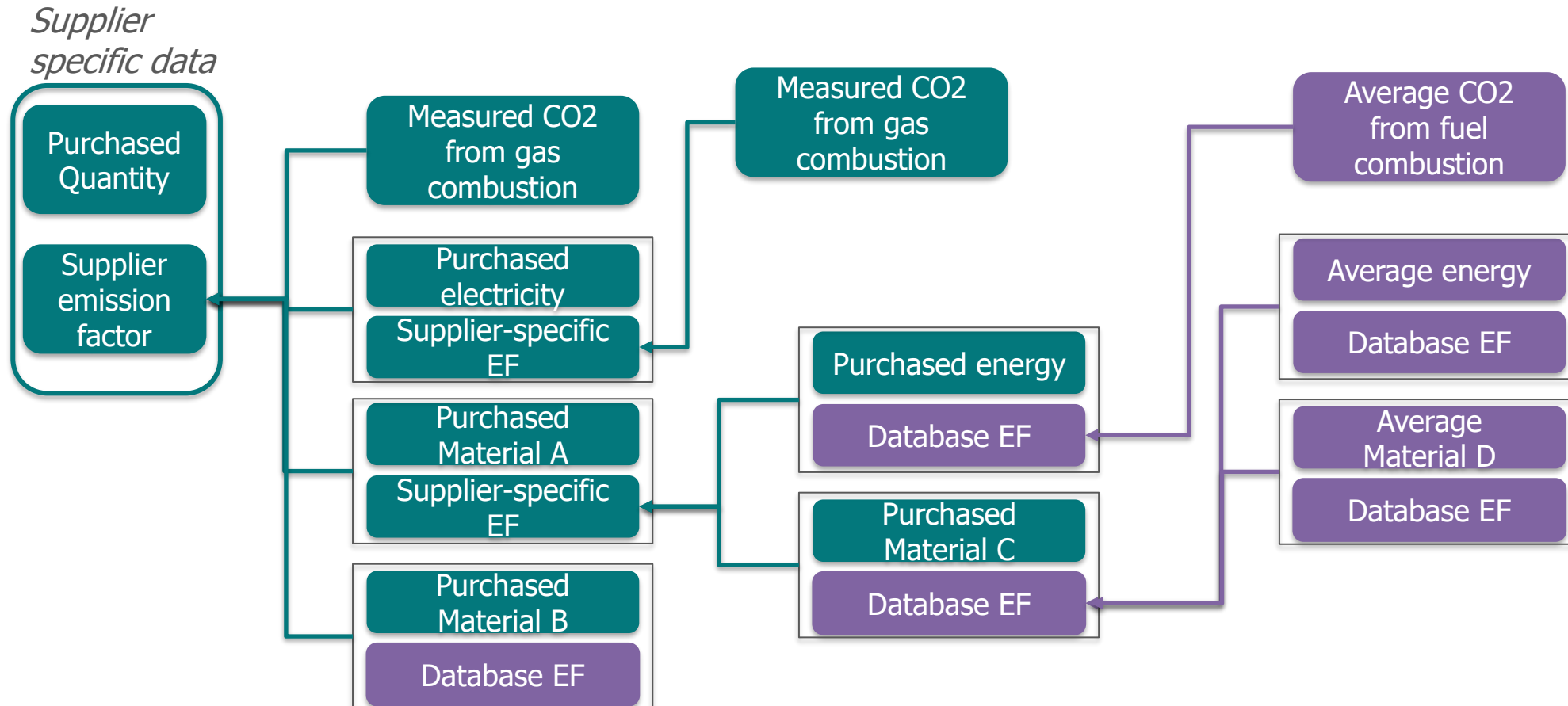
Activity data: quantities or units of goods or services purchased

Emission factor: supplier-specific emission factors (reliable cradle-to-gate inventory or LCA)

<i>Method</i>	<i>Calculation Formula</i>	<i>Activity Data Needed</i>	<i>Emission Factor Needed</i>
<b>Supplier-specific method</b>	<p><b>sum across purchased goods and services:</b>  <math>\sum</math> (quantities of good purchased (e.g., kg)            × supplier-specific product emission factor of purchased good or service            (e.g., kg CO<sub>2</sub>e/kg))</p>	<ul style="list-style-type: none"> <li>Quantities or units of goods or services purchased</li> </ul>	<ul style="list-style-type: none"> <li>Supplier-specific emission factors for the purchased goods or services (e.g., if the supplier has conducted a reliable cradle-to-gate GHG inventory, product footprint or internal LCA report)</li> </ul>

# Supplier-specific emission factor

In practice, a supplier-specific emission factor (nearly) always relies on some secondary data



# Hybrid method

## Hybrid method as described in Appendix D:

<p><b>Hybrid method (where supplier-specific activity data is available for all activities associated with producing the purchased goods)</b></p>	<p><b>sum across purchased goods and services:</b>  <math>\Sigma</math> scope 1 and 2 emissions of tier 1 supplier relating to purchased good or service (kg CO<sub>2</sub>e)          +  <b>sum across material inputs of the purchased goods and services:</b>  <math>\Sigma</math> (mass or quantity of material inputs used by tier 1 supplier relating to purchased good or service (kg or unit)          × cradle-to-gate emission factor for the material (kg CO<sub>2</sub>e/kg or kg CO<sub>2</sub>e/unit))          +  <b>sum across transport of material inputs to tier 1 supplier:</b>  <math>\Sigma</math> (distance of transport of material inputs to tier 1 supplier (km)          × mass or volume of material input (tonnes or TEUs)          × cradle-to-gate emission factor for the vehicle type (kg CO<sub>2</sub>e/tonne or TEU/km))          +  <b>sum across waste outputs by tier 1 supplier relating to purchased goods and services:</b>  <math>\Sigma</math> (mass of waste from tier 1 supplier relating to the purchased good or service (kg)          × emission factor for waste activity (kg CO<sub>2</sub>e/kg))          +          other emissions emitted in provision of the good or service as applicable</p>	<p><b>Hybrid method (where only allocated scope 1 and 2 emissions and waste data are available from supplier)</b></p>	<p><b>sum across purchased goods and services:</b>  <math>\Sigma</math> scope 1 and scope 2 emissions of tier 1 supplier relating to purchased good or service (kg CO<sub>2</sub>e)          +  <math>\Sigma</math> (mass of waste from tier 1 supplier relating to the purchased good (kg)          × emission factor for waste activity (kg CO<sub>2</sub>e/kg))          +  <math>\Sigma</math> (mass or quantity of units of purchased good or service (kg)          × emission factor of purchased good excluding scope 1, scope 2, and emissions from waste generated by producer (kg CO<sub>2</sub>e/kg or unit or \$))</p>
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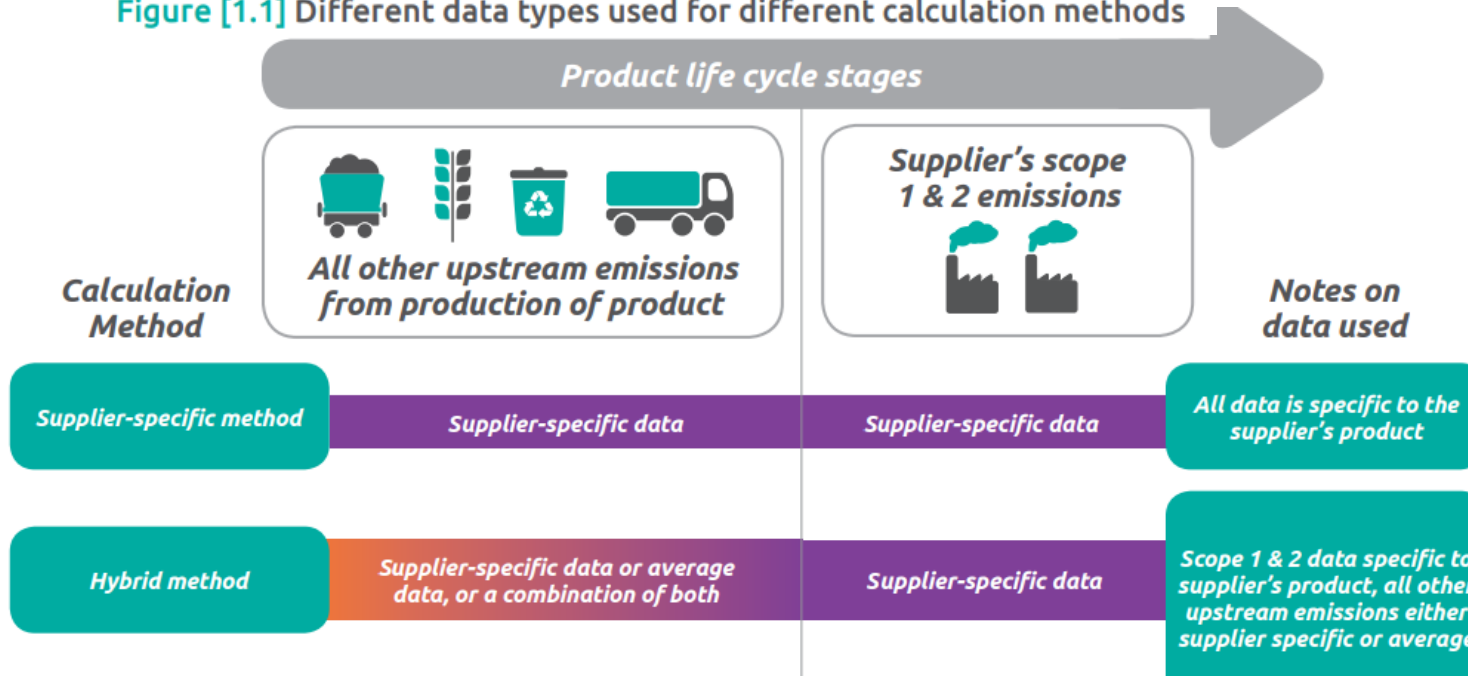
Appendix D provides guidance on emission factors: Cradle-to-gate emission factors for materials used by tier 1 supplier to produce purchased goods (Note: these emission factors can either be supplier-specific emission factors provided by the supplier, or industry average emission factors sourced from a secondary database. In general, preference should be given to more specific and verified emission factors)

In that context, hybrid and supplier specific method are very similar methodologically, and likely differ only in who calculated it



# Specific vs Hybrid methods

Figure [1.1] Different data types used for different calculation methods



Separation of supplier-specific and hybrid methods make sense only if supplier specific method assumes ALL data to be specific to the product. If so, then:

- Purely supplier-specific method is likely unachievable
- What is currently named in practice to be supplier-specific is actually hybrid method
- **As a minimum: remove hybrid method as a separate method**

## Additional possibility: build on disaggregated reporting

- Building on disaggregating reporting has a potential to highlight the line between specific and average data, if data transfer from one value chain partner to another can potentially be done in the format similar to the reporting format:

Tier	Value
Specific	
Average	
Spend	

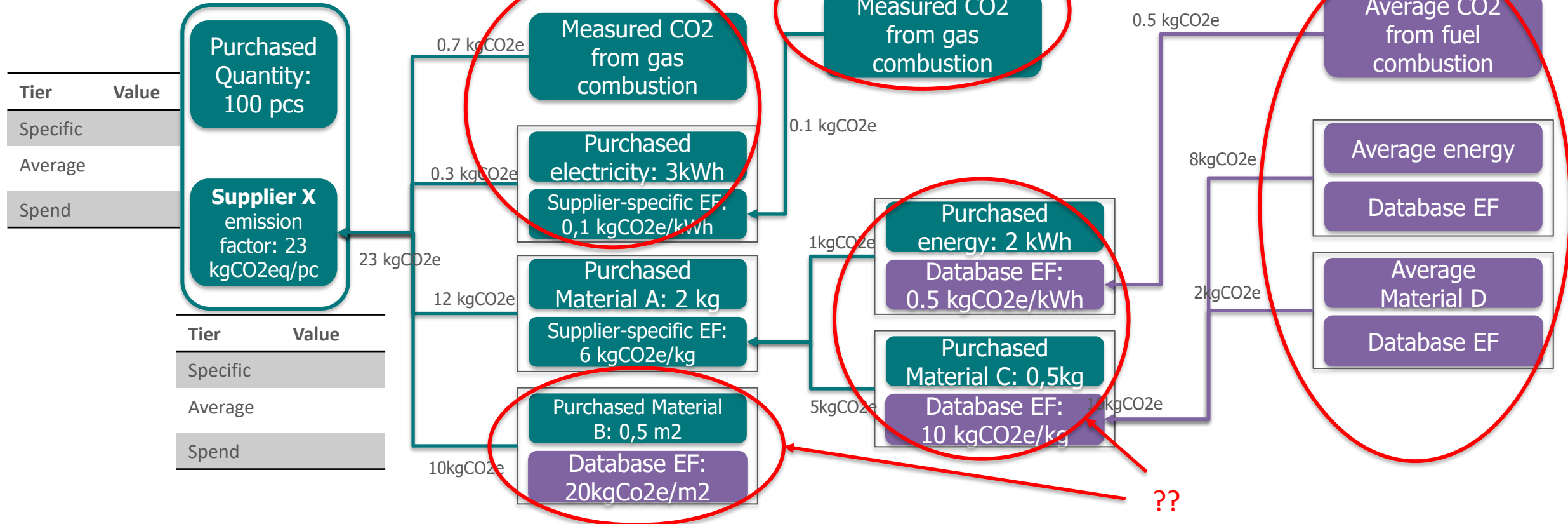
- In that case, **definition of specificity** may require refinement to adequately reflect what would go into which line:
  - In a combination of types of data for activity data and emission factor
  - For a “cradle-to-gate” emission factor.

# Example

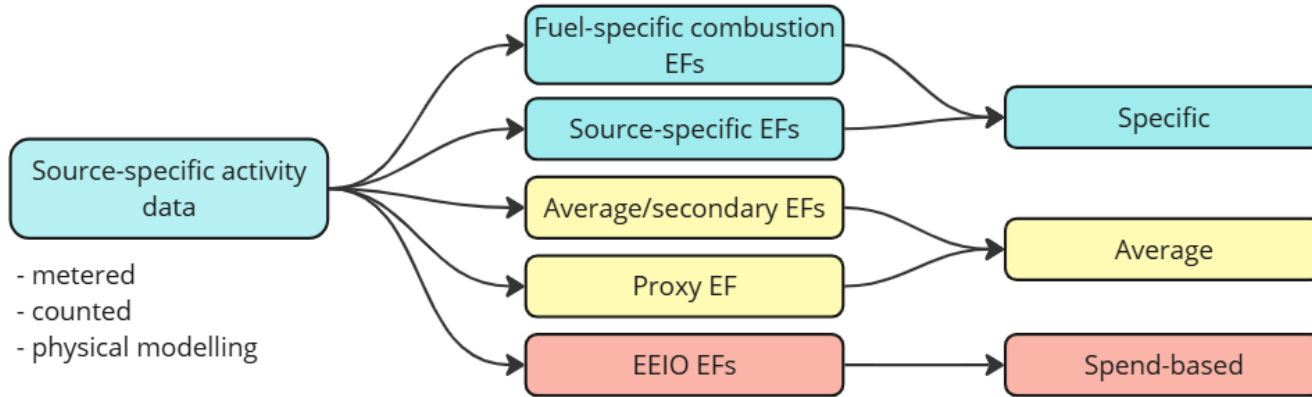
Company Z purchases 100 pcs of products from their supplier, company X. Company X provides them with an emission factor. In order to report by tiers, company Z requires company X to provide the emission factor in the breakdown by tiers of specificity as well.

Specific

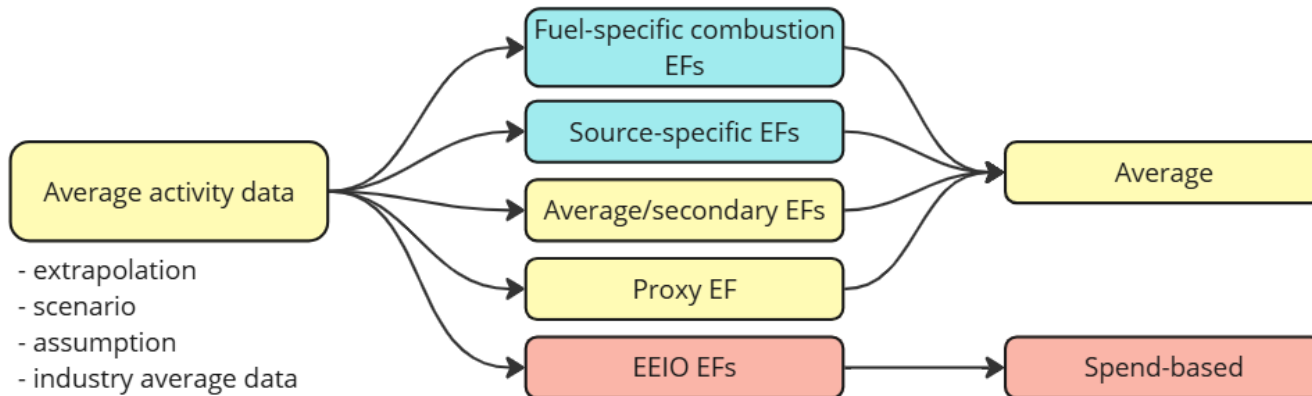
Average



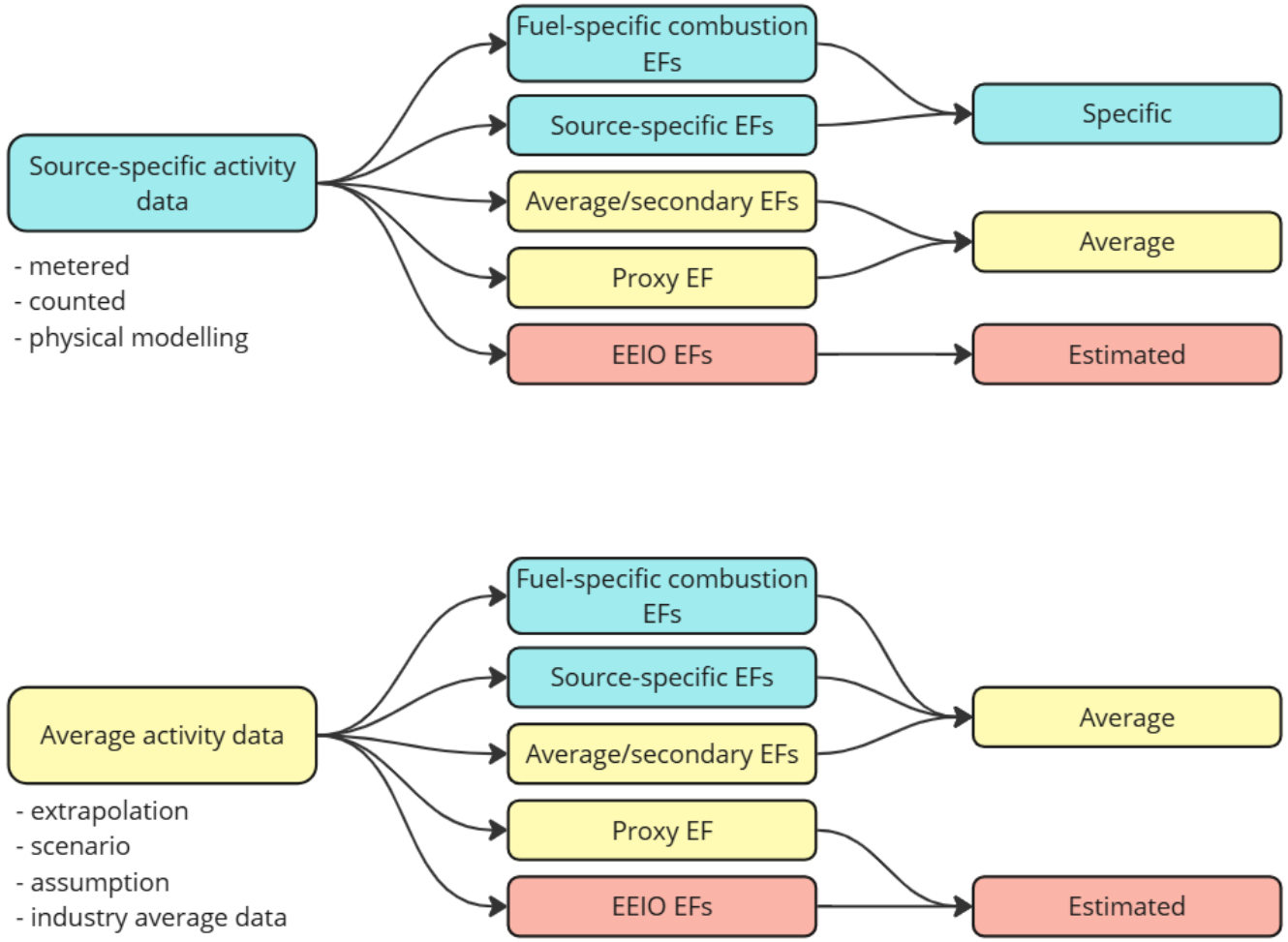
# Option 1



*Option corresponds to the tiers of calculation methods*



# Option 2



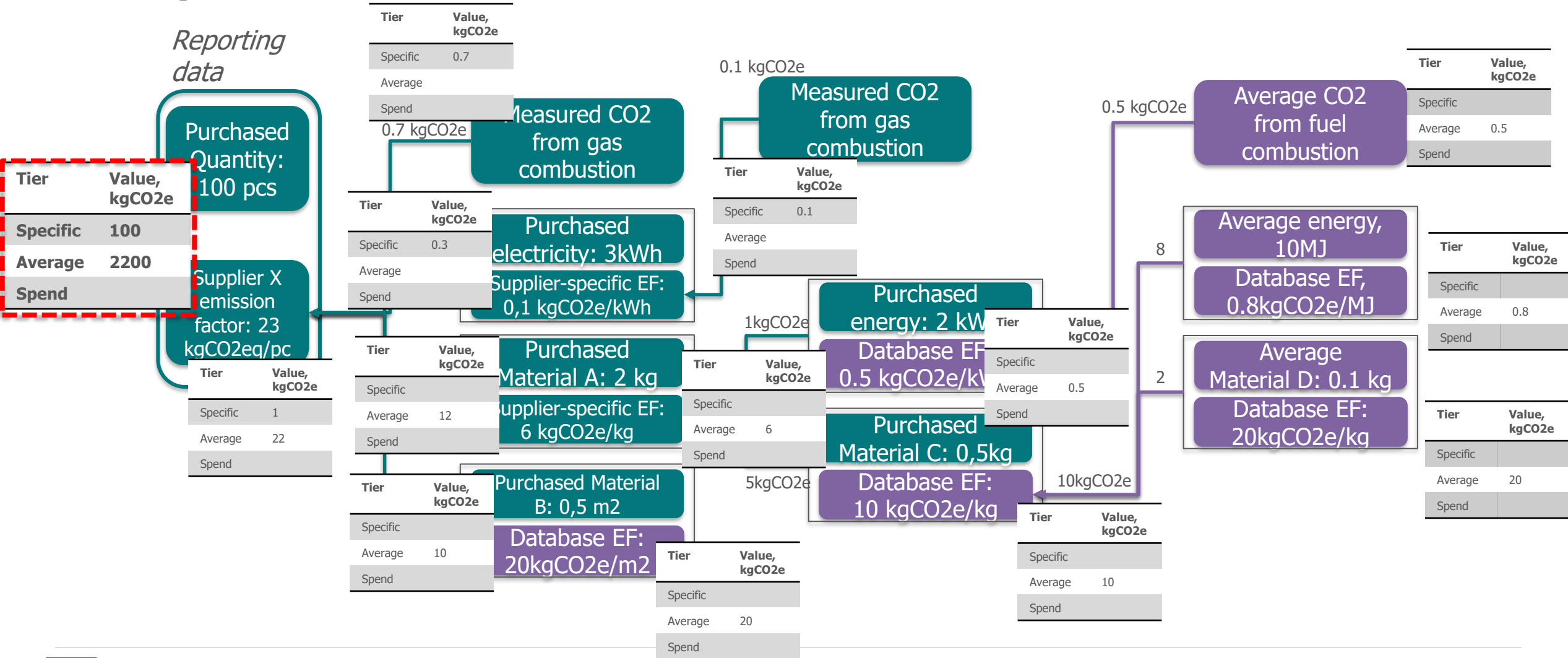
*Option does not correspond to the currently set tiers of calculation methods, but may be more balanced*

## Definitions

Activity data	
Source-specific activity data	Metered, counted, received in physical modeling
Average activity data	Involves extrapolation, assumption, scenario, industry average data, statistics
Emission factors	
Fuel-specific combustion EF	Combustion emission factors specific to the fuel used
Source-specific EF	Emission factors for process and fugitive emissions, specific to the substance
Average/secondary EF	Secondary emission factors, excluding fuel-specific combustion factors
Proxy EF	Emission factors approximating the required factor in technology, geography, time
EEIO EF	Environmentally extended input-output emission factors

# Example

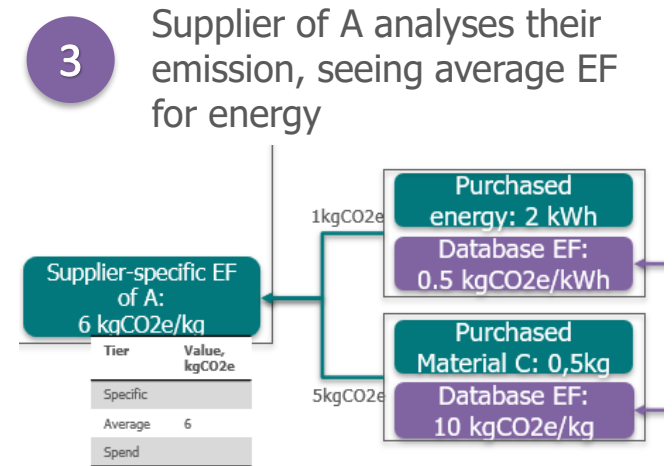
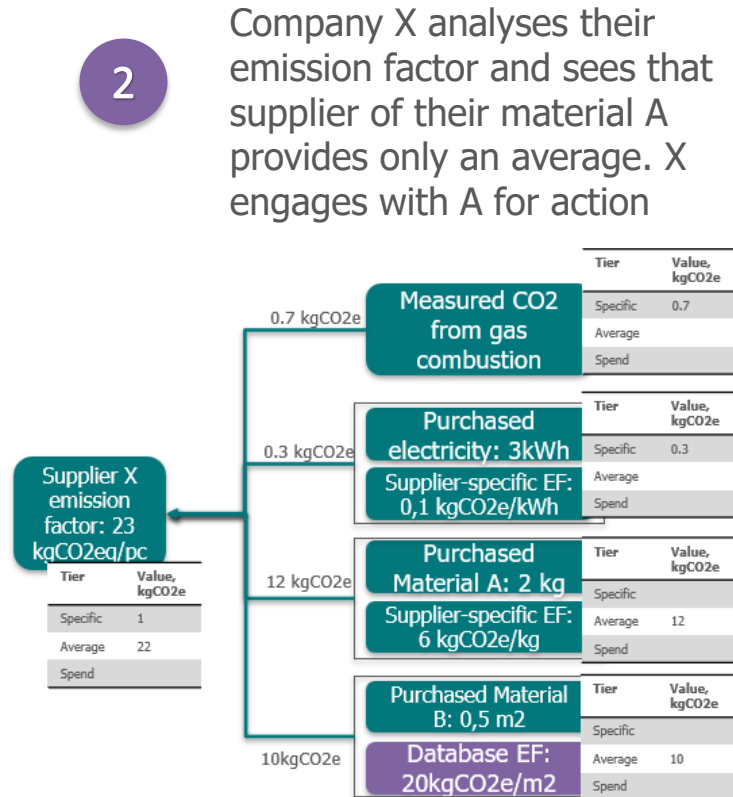
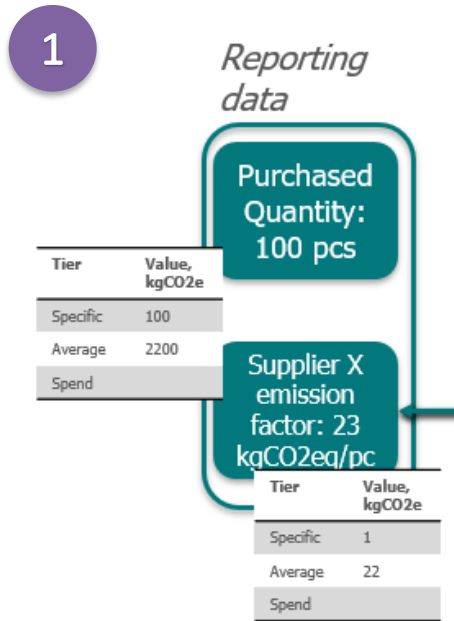
Reporting data



■ Specific data  
■ Average data

# Engaging suppliers along the value chain (1)

Company Z purchases 100 pcs of products from their supplier, company X. Company X provides them with an emission factor. In order to report by tiers, company Z requires company X to provide the emission factor in the breakdown by tiers of specificity as well

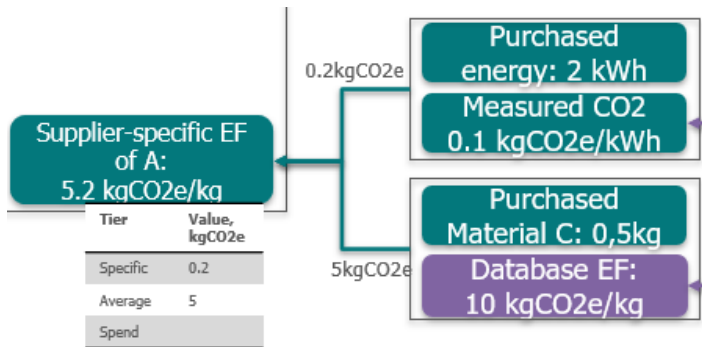




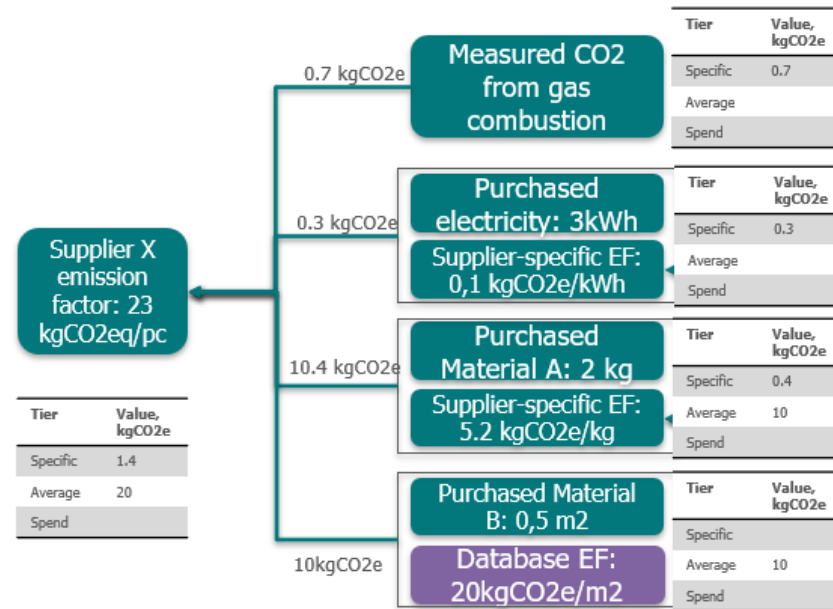
# Engaging suppliers along the value chain (2)

Company Z purchases 100 pcs of products from their supplier, company X. Company X provides them with an emission factor. In order to report by tiers, company Z requires company X to provide the emission factor in the breakdown by tiers of specificity as well

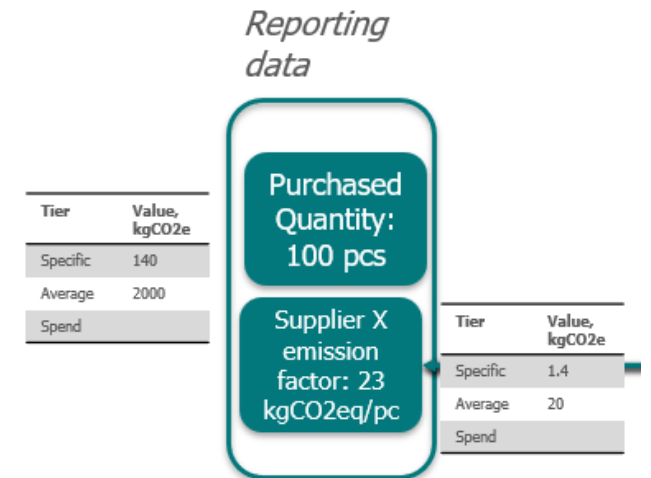
**4** Supplier of A requests and receives specific emissions from their energy provider



**5** Company X incorporates the new measure into their EF, and passes it to the company Z



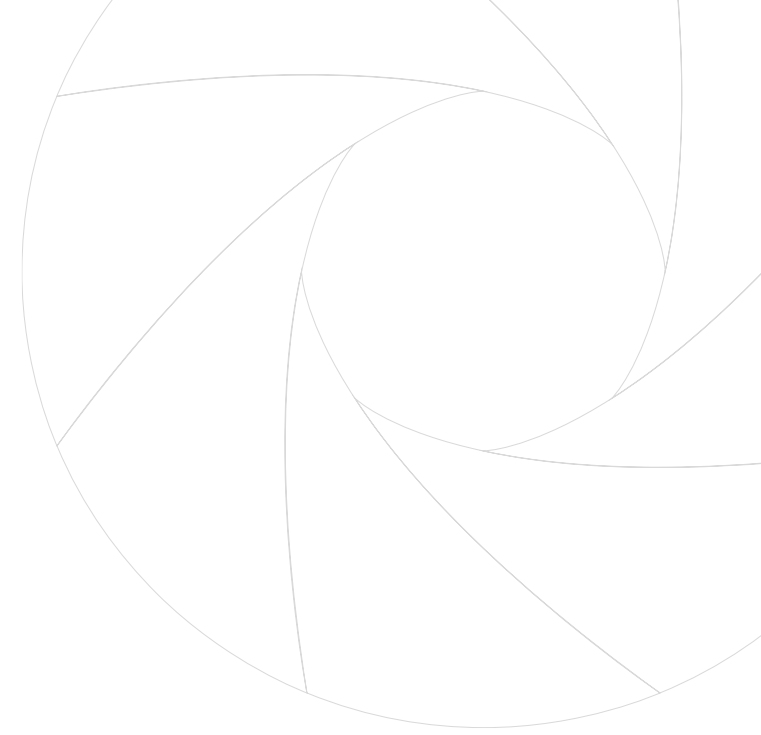
**6** Company Z incorporates the new measure into their reporting



## Questions

- Should there be more tiers?
- Which specificity terms missing for activity data and emission factors
- Which definitions need adjustment
- Are any calculation methods/options not accounted for?

# Category 11 calculation methods



# Current guidance: direct use-phase emissions

## Summary of Calculation Methods for Category 11 (Use of sold products)

Method	Calculation Formula	Activity Data Needed	Emission Factor Needed
<b>Direct Use-Phase Emissions</b>			
<b>Products that directly consume energy (fuels or electricity) during use</b>	<p><b>sum across fuels consumed from use of products:</b>  <math>\sum (\text{total lifetime expected uses of product} \times \text{number sold in reporting period} \times \text{fuel consumed per use (kWh)} \times \text{emission factor for fuel (kg CO}_2\text{e/kWh)})</math>                      +  <b>sum across electricity consumed from use of products:</b>  <math>\sum (\text{total lifetime expected uses of product} \times \text{number sold in reporting period} \times \text{electricity consumed per use (kWh)} \times \text{emission factor for electricity (kg CO}_2\text{e/kWh)})</math>                      +  <b>sum across refrigerant leakage from use of products:</b>  <math>\sum (\text{total lifetime expected uses of product} \times \text{number sold in reporting period} \times \text{refrigerant leakage per use (kg)} \times \text{global warming potential (kg CO}_2\text{e/kg)})</math></p>	<ul style="list-style-type: none"> <li>Total lifetime expected uses of product(s); and</li> <li>Quantities of products sold</li> <li>Fuel used per use of product</li> <li>Electricity consumption per use of product</li> <li>Refrigerant leakage per use of product</li> </ul>	<ul style="list-style-type: none"> <li>Emission factors for fuels</li> <li>Emission factors for electricity</li> <li>Emission factors for refrigerants</li> </ul>
<b>Fuels and Feed-stocks</b>	<p><b>sum across fuels/feedstocks:</b>  <math>\sum (\text{total quantity of fuel/feedstock sold (e.g., kWh)} \times \text{combustion emission factor for fuel/feedstock (e.g., kg CO}_2\text{e/kWh)})</math></p>	<ul style="list-style-type: none"> <li>Total quantities of fuels/feedstocks sold</li> </ul>	<ul style="list-style-type: none"> <li>Combustion emission factors of fuel/feedstock</li> </ul>
<b>Greenhouse gases and products that contain or form greenhouse gases that are emitted during use</b>	<p><b>sum across GHGs released in a product or product group:</b>  <math>\sum (\text{GHG contained per product} \times \text{Total Number of products sold} \times \text{\% of GHG released during lifetime use of product} \times \text{GWP of the GHG})</math></p> <p><b>then:</b>  <b>sum across products or product groups:</b>  <math>\sum (\text{use phase emissions from product or product group 1,2,3...})</math></p> <p>Note: if the % released is unknown 100% should be assumed.</p>	<ul style="list-style-type: none"> <li>Total quantities of products sold</li> <li>Quantities of GHGs contained per product</li> <li>% of GHGs released throughout the lifetime of the product</li> </ul>	<ul style="list-style-type: none"> <li>GWP of the GHGs contained in the product, expressed in units of carbon dioxide per unit kilogram of the GHG (e.g., 25 kg CO<sub>2</sub>/kg)</li> </ul>

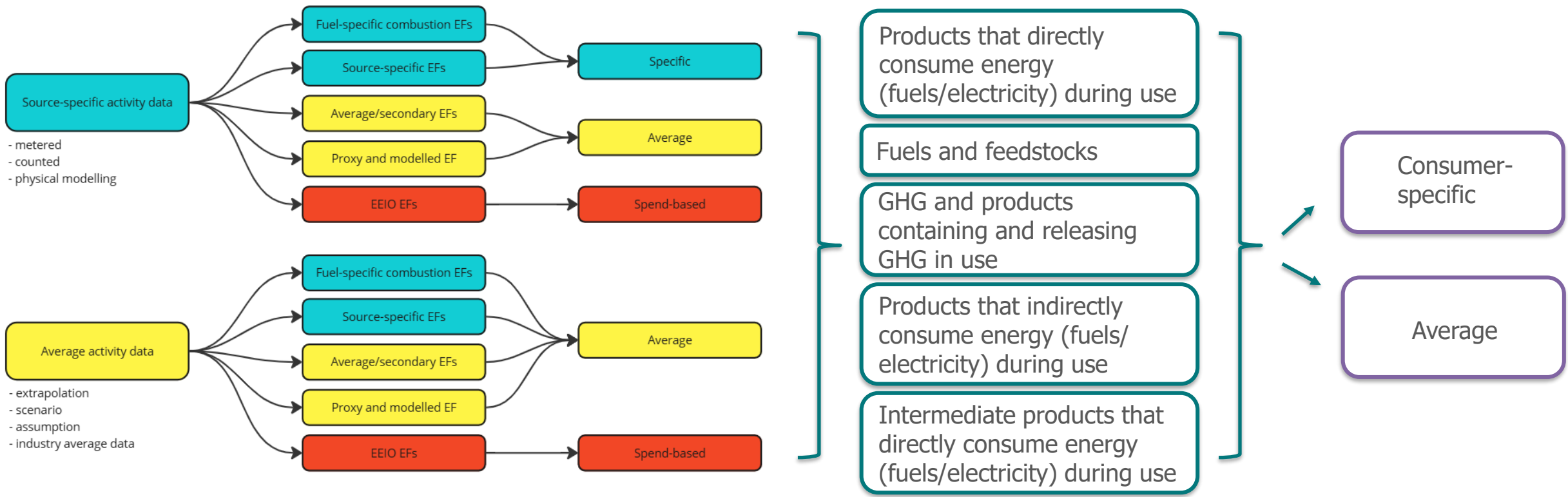
# Current guidance: indirect use-phase emissions

## Summary of Calculation Methods for Category 11 (Use of sold products) (continued)

Method	Calculation Formula	Activity Data Needed	Emission Factor Needed
<b>Indirect Use-Phase Emissions</b>			
<b>Products that indirectly consume energy (fuels or electricity) during use</b>	<p>The generation of a typical use phase may be difficult as the same product may consume more or less energy dependent on the conditions in which it is used. For example, a potato may be roasted, boiled and microwaved, each using different amount of energy and hence different emissions. Companies may choose to identify several different use-phase scenarios for a product and create a weighted average based upon actual activity.</p> <p><b>sum across fuels consumed from use scenarios:</b>  <math>\Sigma</math> (total lifetime expected uses of product <math>\times</math> % of total lifetime uses using this scenario <math>\times</math> number sold in reporting period <math>\times</math> fuel consumed per use in this scenario (e.g., kWh) <math>\times</math> emission factor for fuel (e.g., kg CO<sub>2</sub>e/kWh))            +  <b>sum across electricity consumed from use scenarios:</b>  <math>\Sigma</math> (total lifetime expected uses of product <math>\times</math> % of total lifetime uses using this scenario <math>\times</math> number sold in reporting period <math>\times</math> electricity consumed per use in this scenario (kWh) <math>\times</math> emission factor for electricity (kg CO<sub>2</sub>e/kWh))            +  <b>sum across refrigerant leakage from use scenarios:</b>  <math>\Sigma</math> (total lifetime expected uses of product <math>\times</math> % of total lifetime uses using this scenario <math>\times</math> number sold in reporting period <math>\times</math> refrigerant leakage per use in this scenario (kg) <math>\times</math> emission factor for refrigerant (kg CO<sub>2</sub>e/kg))            +  <b>sum across GHG emitted indirectly from use scenarios:</b>  <math>\Sigma</math> (total lifetime expected uses of product <math>\times</math> % of total lifetime uses using this scenario <math>\times</math> number sold in reporting period <math>\times</math> GHG emitted indirectly (kg) <math>\times</math> GWP of the GHG)</p>	<ul style="list-style-type: none"> <li>• Average number of uses over lifetime of product</li> <li>• Average use scenarios (e.g., weighted average of scenarios)</li> <li>• Fuel consumed in use scenarios</li> <li>• Electricity consumed in use scenarios</li> <li>• Refrigerant leakage in use scenarios</li> <li>• GHGs emitted indirectly in use scenarios</li> </ul>	<ul style="list-style-type: none"> <li>• Combustion emission factors of fuels and electricity</li> <li>• GWP of GHGs</li> </ul>
<b>Intermediate products that directly consume energy (fuels or electricity) during use</b>	<p><b>sum across sold intermediate products total use phase emissions:</b>  <math>\Sigma</math> (total intermediate products sold <math>\times</math> total lifetime uses of final sold product <math>\times</math> emissions per use of sold intermediate product (kg CO<sub>2</sub>e/use))</p>	<ul style="list-style-type: none"> <li>• Type(s) of final product(s) produced from reporting company's intermediate product(s)</li> <li>• Percentage of reporting company's intermediate product sales going to each type of final product</li> <li>• Activity data required to calculate the use-phase emission of the final product will be the same as described previously in this chapter.</li> </ul>	<ul style="list-style-type: none"> <li>• Depending on the type of final product, emission factors required will be the same as described earlier in this chapter.</li> </ul>

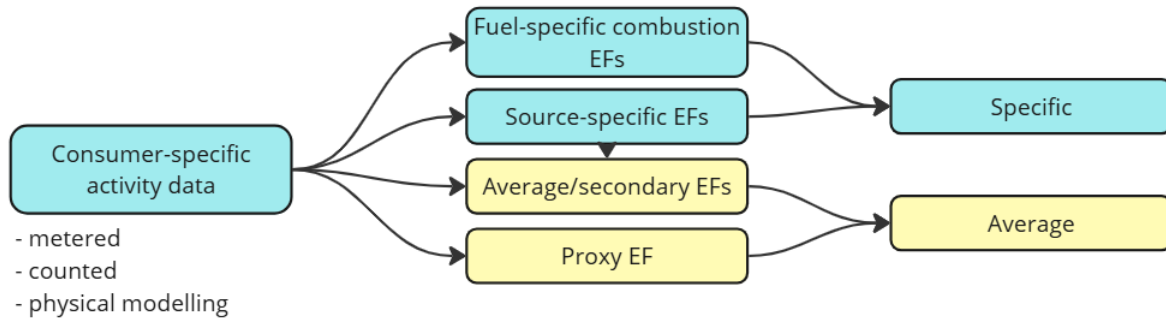
# Calculation methods

- The hierarchy of tiers (specific / average / spend-based) is to reflect data specificity
- Category 11 methods separation does not reflect data specificity but instead provides different methods for different types of activities
- Learning on correspondence of input data types and calculations methods, analogy can be drawn:

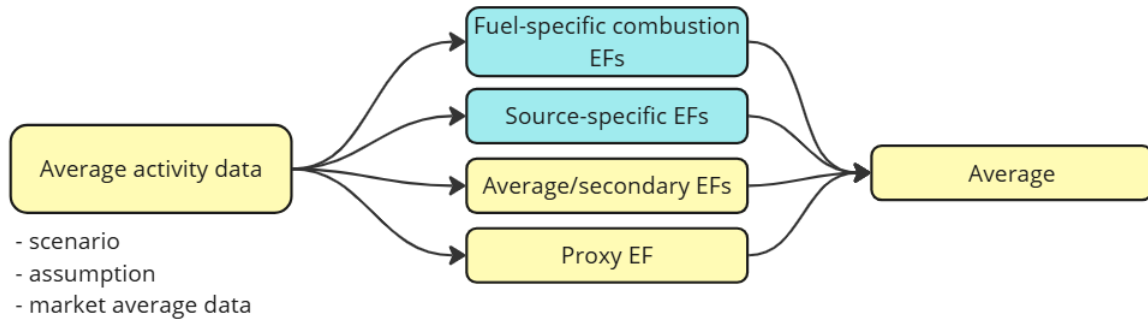
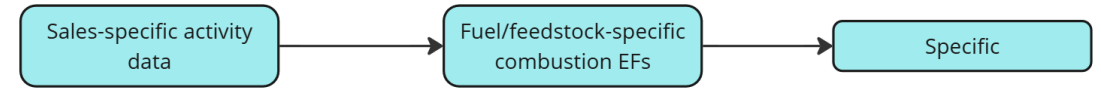


# Category 11 calculation methods

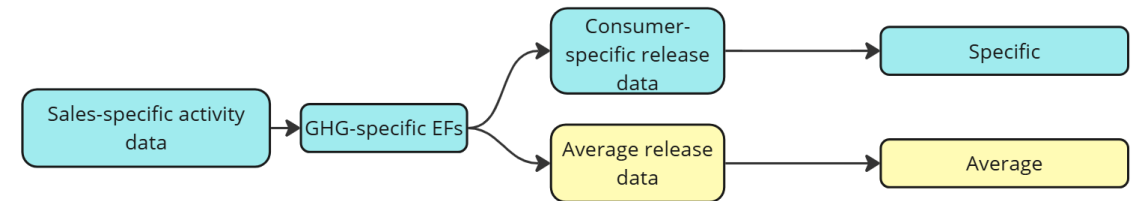
## Products that consume energy



## Fuels and feedstocks



## GHG and products containing GHG emitted in use

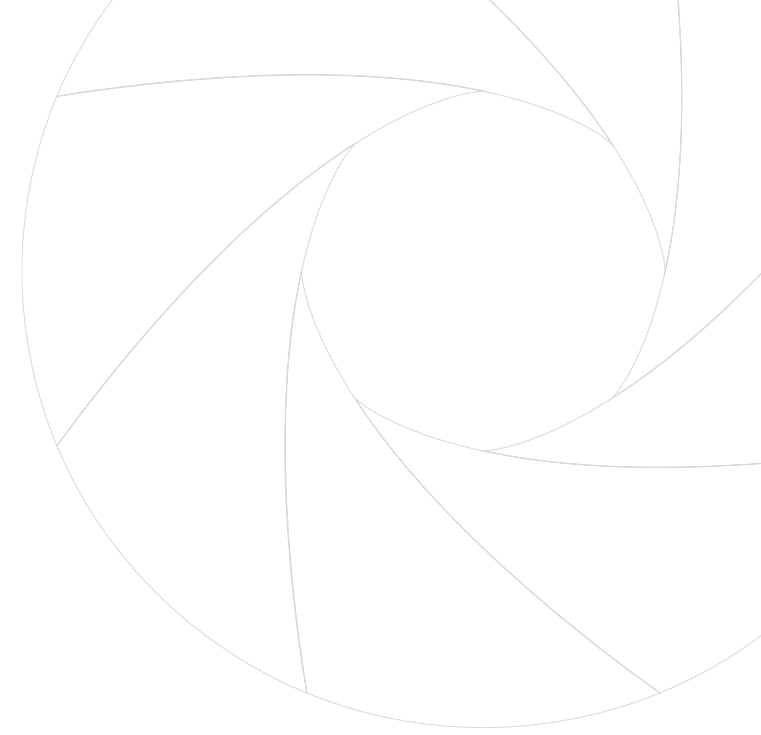


## Discussion

- Are two tiers enough?
- If average were split further, would this facilitate improved understanding of the actionability of the data?
- Should the same adjustment be applied to any other categories (e.g. 4 & 9)?



# Mapping the methods



## Arranging methods into three tiers

Category	Calculation methods				
	Tier 1: Specific		Tier 2: Average		Tier 3: Spend-based
Category 1	Supplier-specific		Hybrid	Average-data	Spend-based
Category 2	Supplier-specific		Hybrid	Average-data	Spend-based
Category 3	Supplier-specific		Average-data		
Category 4: transport	Fuel-based		Distance-based		Spend-based
Category 4: distribution	Site-specific		Average-data		
Category 5	Supplier-specific		Waste-type- specific	Average-data	
Category 6	Fuel-based		Distance-based		
Category 7	Fuel-based		Distance-based	Average-data	
Category 8	Asset-specific	Lessor-specific		Average-data	
Category 9: transport	Fuel-based		Distance-based		Spend-based
Category 9: distribution	Site-specific		Average-data		
Category 10	Site-specific		Average-data		
Category 11: Direct use-phase emissions	Consumer-specific	Fuels/Feedstocks specific	GHG-specific	Average-data	
Category 11: Indirect use-phase emissions	Fuel-/electricity-based				
Category 12			Waste-type-specific		
Category 13	Asset-specific	Lessee-specific		Average-data	
Category 14	Franchise-specific		Average-data		
Category 15	Investment-specific	Project-specific		Average-data	

1. Arrangement is tentative: for discussion is if any of the methods need to be put into other tiers
2. More refinement is needed in definitions when it comes to “fringe” cases (e.g. spend-based assessment of activity data and use of specific EF; assumptions and scenario-based assessments, etc.

# Miro-board exercise

- Should the tiers be split into more?
- Should any calculation methods be moved?
- Should any calculation methods be added?

Category	Tiers		
	Tier 1: Specific	Tier 2: Average	Tier 3: Spend
Category 1	source-specific	average      hybrid?	spend-based
Category 2	source-specific	average      hybrid?	spend-based
Category 3	source-specific	average	

## Poll

Does the new proposal in the discussed configuration satisfy the decision-making-criteria?

- Yes
- Some of them
- No
- Abstain

Are we moving the right direction?

- Yes
- No
- Abstain

**Next steps**



## Next steps

- GHG Protocol Secretariat:
  - Distribute the recording and feedback form (by Jan 31)
  - Prepare and distribute minutes of the meeting (by Feb 6)

**Next meeting on February 20<sup>th</sup> 2PM PT / 5PM ET / 11PM CET / 6AM CHN(+1) / 9AM AEDT(+1)**  
***Continue development of the proposal. Discussion on potential adjustments to improve indication of data quality***

- GHG Protocol Secretariat:
  - Distribute materials (by Feb 13)

**Thank you!**

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**Back-up**





# Current reporting requirements

## 1. Required information

- a. A list of scope 3 categories and activities included in the inventory
- b. A list of scope 3 categories or activities excluded from the inventory with justification(s) for their exclusion
- c. For each scope 3 category, a description of the types and sources of data, including activity data, emission factors and GWP values, used to calculate emissions, and a description of the data quality of reported emissions data
- d. For each scope 3 category, a description of the methodologies, allocation methods, and assumptions used to calculate scope 3 emissions
- e. For each scope 3 category, the percentage of emissions calculated using data obtained from suppliers or other value chain partners

## 2. Optional information

- a. Relevant disaggregation of the emissions data
- b. Emissions from scope 3 activities not included in the list of scope 3 categories, reported separately
- c. Qualitative information about emission sources not quantified
- d. Quantitative assessments of data quality
- e. Information on inventory uncertainty (e.g., information on the causes and magnitude of uncertainties in emission estimates) and an outline of policies in place to improve inventory quality

## Terminology

Terms “primary” and “secondary” data seem to have diverse definition in various sources.

### ***Scope 3 Standard, p. 140:***

**Primary data:** data from specific activities within a company’s value chain.

**Secondary data:** Data that is not from specific activities within a company’s value chain

Table [7.4] provides examples of primary and secondary data.

Supplier-specific data is said to be an example of primary data (Table 7.5)

### ***ISO 14064-1: 2018, 3.2.2. and ISO 14083***

**Primary data:** quantified value of a process or an activity obtained from a direct measurement or a calculation based on direct measurements.

**Secondary data:** data obtained from sources other than primary data

**Site-specific data:** primary data obtained within the organizational boundary

## Proposal 1: Tiers based on quantification and DQR

Tier name / label	Technical specification (what differentiate data of this tier from others?)
<b>Tier 1</b> High quality data	<p><b>DIRECT MEASUREMENT</b> - GHG emissions that are measured using direct monitoring (e.g. through meters or physical sensors), mass balance or stoichiometry.</p> <p><b>CALCULATION</b> - GHG emissions that are calculated using both:</p> <ul style="list-style-type: none"> <li>i) very good quality activity data (all activity data are complete, specific and reliable, and are obtained from measurements and meter readings; no assumptions or estimates are made), <b>and</b></li> <li>ii) very good quality emission factors (all emission factors are the most representative in terms of technology, time, geography, and most complete, and most reliable i.e. taken from widely used databases).</li> </ul>
<b>Tier 2</b> Other data and estimations	<p><b>CALCULATION</b> - GHG emissions calculated using good/fair/poor quality activity data or emission factors.</p> <p><b>SPEND BASED METHODS</b> - All GHG emissions calculated using spend-based methodology</p>

## Proposal 2: Tiers based on data type

	Tier name / label	Technical specification (what differentiate data of this tier from others?)
<b>Tier 1</b>	Primary data	Primary data as aligned with the ISO definitions
<b>Tier 2</b>	Secondary data: Modelled data Secondary data: Default values	

***ISO 14064-1: 2018, 3.2.2.*** and ***ISO 14083***

**Primary data:** quantified value of a process or an activity obtained from a direct measurement or a calculation based on direct measurements.

## Proposal 3: Tiers based on data source, calculation method, and verification

Tier name / label	Technical specification (what differentiate data of this tier from others?)
<b>Tier 1</b>	Value chain partner data with certification Allocated data came from value chain partner based on a certified document such as an ISO-conformant LCA, verified EPD, or a third-party verification statement
<b>Tier 2</b>	Value chain-specific data or Industry-specific average data or extrapolation of verified data or value chain partner data without certification Data came from value chain partners based other sources like CDP supply chain that has been allocated to the reporting organization, but hasn't been third party verified in any way OR; The data came from an industry-specific average data source like a life cycle inventory database or publication OR; An extrapolation of an ISO-conformant LCA to a related system that's similar to the actual OR; Data provided by a value chain partner from a high-level LCA or other assessment without external verification reporting organization's goods, services or systems OR; A calculation based on mid-tier proxy, such as distance traveled (for logistics and business travel)
<b>Tier 3</b>	Spend-based data or calculation based on high level estimates Data from spend-based calculations (e.g., EEIO) OR; High level estimate based on average data (e.g., heuristic such as 3 tCO <sub>2</sub> e / employee * year for commuting)

## Proposal 4: Tiers based on quantitative uncertainty

Tier name / label		Technical specification (what differentiate data of this tier from others?)
<b>Tier 1</b>	Low parametric uncertainty	$\leq \pm XX\%$ standard error (or it could be in confidence interval or geometric standard deviation)
<b>Tier 2</b>	Medium parametric uncertainty	$> \pm XX\% \ \& \ \leq \pm YY\%$ standard error (or CI or GSD)
<b>Tier 3</b>	High parametric uncertainty	$> \pm YY\% \ \& \ \leq \pm ZZ\%$ standard error (or CI or GSD)

## Proposal 5 & 6: Tiers based on calculation methods (specific to each category)

This proposal relies on the calculation methods itemized for each category in the GHG Protocol *Technical Guidance* (Appendix D, p. 162-182). Within a category, each method would be classified into a tier (leading, respectively, to diverse names). For example:

Category 1:

	Tier name / label	Technical specification (what differentiate data of this tier from others?)
<b>Tier 1</b>	Supplier specific	Received from suppliers and specific to purchased product
<b>Tier 2</b>	Hybrid method	Leveraging suppliers' data but not specific to purchased product
<b>Tier 3</b>	Industry average	Using physical activity data and datasets providing EFs based on physical characteristics
<b>Tier 4</b>	Spend-based	EEIO method

Category 5\*:

	Tier name / label	Technical specification (what differentiate data of this tier from others?)
<b>Tier 1</b>	Supplier specific	Allocated scope 1 and 2 received from the waste treatment company
<b>Tier 2</b>	Waste-type-specific	Calculated based on generated waste type and specified waste treatments
<b>Tier 3</b>	Average data	Average waste treatment emissions for total generated waste

Category 4 (transportation)\*

	Tier name / label	Technical specification (what differentiate data of this tier from others?)
<b>Tier 1</b>	Fuel-based	Quantities of consumed fuel and fuel-specific factors
<b>Tier 2</b>	Distance-based method	Quantifying transportation services (e.g. tkm) and using transport-specific factors
<b>Tier 3</b>	Spend-based method	EEIO method

## Proposal 7: Tiers based on data quality (pedigree matrix)

	Tier name / label	Technical specification (what differentiate data of this tier from others?)
<b>Tier 1(+)</b>	Good (“Very” could be added, if needed for different application or business goals)	High degree of representativeness (geography, time period/validity, technology), completeness (of data sources/sampling), and reliability (giving weight both to verified/verifiable measured data, accuracy, and methodological consistency and transparency of calculated primary/secondary data). Criteria for this rating TBD.  This level should be required for external purposes (at least based on some materiality criteria, and perhaps after an initial ‘grace’ period) and as such mandated by GHG programs building on the GHG Scope 3 standard.
<b>Tier 2</b>	Fair	Moderate degree of representativeness, completeness, and reliability. Mainly intended as the acceptable level for non-material aspects or during initial/transition period. Also suitable for internal purposes to monitor and manage emissions.
<b>Tier 3</b>	Poor	Low degree of representativeness, completeness, and reliability. Only to be considered as a proxy (gap-filler) during initial exploration, materiality, screening, and hot-spot analysis.



## Proposal 8: 2D tiers based on data source and calculation methods

Tier name / label		Technical specification (what differentiate data of this tier from others?)
<b>Tier 1</b>	Supplier provided EF (Emissions calculated using EF company has received directly from a supplier)	1A. Total emissions in category from suppliers using supplier-specific calculation methods or emissions factors Uncertainty level: _____ 1B. Total emissions in category from suppliers using average data methods Uncertainty level: _____ 1C. Total emissions in category from suppliers using spend-based calculation methods Uncertainty level: _____
<b>Tier 2</b>	Regional or domestic database sourced EF (Emissions calculated using EF company has taken from a regional/ domestic database that matches the geography where its primary business operates)	2A. Total emissions in category calculated using average data methods Uncertainty level: _____ 2B. Total emissions in category calculated using spend-based methods Uncertainty level: _____
<b>Tier 3</b>	Global or non-geography specific EF (Emissions calculated using EF company has taken from a global database or from a database distinct from the geography of its business activities)	3A. Total emissions in category calculated using average data methods Uncertainty level: _____ 3B. Total emissions in category calculated using spend based-methods Uncertainty level: _____

The proposal includes additional metrics for reporting (percentage reported per tier and per tier 1a), as well as next steps