



IMEX greenhouse gas emissions measurement methodology

Working at the heart of the global meetings and events industry is a collaborative, innovative and passionate team. We bring the global meetings and events community together to power profitable connections, foster innovation, spark inspiration, and propel purposeful progress at two world-leading trade shows, IMEX Frankfurt and IMEX America.

We are committed to reducing the carbon emissions and waste associated with our organization. This document is part of a suite that lays out our intentions, approach and progress towards decarbonization.

We use our influence to unite, advance and promote a thriving global industry focused on positive change. We are IMEX.



1.0 Introduction

1.1 About this document

This document outlines IMEX's approach to measuring, managing, and improving the quality of carbon emissions data associated with its events. It sets out the data collection processes, estimation principles, and data quality assessment framework used to support robust and transparent GHG reporting.

The methodology is designed to ensure consistency, comparability, and continuous improvement across events and over time. It also provides guidance for engaging with IMEX's supply chain, clarifying expectations, and embedding data quality considerations into ongoing collaboration and feedback processes.

This document supports informed decision-making and accountability by clearly defining how data is collected, assessed, and used to track progress toward IMEX's sustainability goals.

2.0 Data Gathering & Footprinting


2.1 Supplier Engagement

Collaboration with our supply chain partners is central to the success of our carbon measurement approach. Engagement is built around two core pillars: clear expectation-setting and an ongoing feedback loop that supports alignment and continuous improvement.

For key suppliers, such as venue and logistics partners, including Messe Frankfurt (incl. Accente and Fairconstruction), Mandalay Bay and GES, engagement follows a structured process:

- **8 weeks prior to the event:** A measurement kick-off meeting is held to review key successes and challenges from the previous year. This session is used to address any miscommunications and identify opportunities to improve data availability and granularity.
- **6 weeks prior to the event:** A TRACE onboarding session is conducted to ensure supplier teams are equipped to provide data in the required format and within defined measurement boundaries.
- **4 weeks prior to the event:** Clear expectations across all relevant data categories are documented for supplier.

For smaller supply chain partners, data collection focuses on providing clear expectations with sufficient advance notice. A guidance email is issued **4 weeks before the event**, outlining the required data, submission format, and any additional guidance needed to support accurate reporting.



All suppliers are followed up as required for up to two months' post-event to obtain outstanding data. Where data remains unavailable after this period, appropriate proxy data will be applied to enable timely and complete emissions reporting.

Such proxy data will be derived from prior-year submissions, relevant industry benchmarks, or reasonable estimates, as appropriate.

2.2 Use of TRACE

TRACE is a carbon measurement platform developed specifically for the events industry. Using this platform ensures that measurement results are consistent and comparable across the sector, enabling meaningful contributions to industry-wide sustainability insights. It also allows IMEX to benchmark performance over time, and use the data as an indicator of progress toward its sustainability goals.

This comparability is enabled through the use of industry-standard carbon emission factors, ensuring datasets are aligned and robust.

Further details on the methodology used to calculate the event's carbon footprint, including the carbon factors used, are available in the [TRACE methodology documentation](#).


3.0 Boundary Setting

3.1 What do we measure?

IMEX measurement boundaries are clearly defined within the [GHG accounting methodology documentation](#). To ensure these requirements are met, boundaries are applied at an individual supplier level. Clear guidance at the event measurement level specifies both *what* should be measured and the level of detail required for each inclusion.

Key boundary clarifications include:

- **Energy use:** Energy consumption is measured only for spaces hired by IMEX. This excludes energy use within supplier-owned or operated facilities.
- **Waste:** Where waste is included within the GHG accounting or reporting boundary, it should be reported as a total weight, broken down by waste stream and, where possible, further separated by source (e.g. exhibitor, IMEX-owned, catering, and show floor).
- **IMEX staff business travel:** Business travel for IMEX staff is measured on a door-to-door basis, including transfers to and from airports as well as flights. In addition, all event-related transport undertaken by IMEX staff, such as taxi journeys between hotels and the venue, is included within the measurement boundary.
- **Other staff travel:** Travel is included for staff members for whom the event venue is not their usual place of work. Door-to-door journeys are expected.

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- **Participant travel to IMEX:** This includes participants' primary mode of travel to the event, based on responses collected during the registration process. Door-to-door travel is not included.
 - **Participant ground transportation:** This includes all ground transportation organized by IMEX, such as onsite shuttle services. It excludes travel to and from hotels that is arranged independently by participants.
 - **Freight and transport:** Transport emissions are included where deliveries are directly related to IMEX activities.
 - **Business Operations:** Inclusive of office energy, waste, catering as well as staff commuting and business travel (excluding staff business travel for IMEX Frankfurt and IMEX America which will be reported under event emissions).

4.0 Data Quality & Review

Understanding data quality is essential to assess the effectiveness of our measurement strategy and ensuring confidence in actions informed by carbon data. Higher data quality increases confidence in the conclusions drawn, strengthens our decarbonization trajectory, and helps ensure that our actions are prioritized effectively.

4.1 Assessing data quality

Data quality is assessed through a qualitative review of data provided by our supply chain. This assessment is currently undertaken by the IMEX team post-event; however, going forward, data quality evaluation will be embedded within ongoing supply chain engagement, including regular conversations and feedback mechanisms.

Data quality is assessed against three key dimensions: **accuracy**, **reliability**, and **completeness**.

4.1.1 Data Completeness

Data completeness assesses the extent to which data is missing if no appropriate estimate has been applied. This includes reviewing instances where suppliers have not provided the requested data and the degree to which extrapolation has been required.

The scale of any data gaps is assessed based on the materiality of the expected data. Completeness is then evaluated against the key measurement categories within TRACE, generating a percentage data coverage score for each TRACE category and an overall weighted average data coverage score, weighted according to emission significance.

4.1.2 Data Accuracy

Data accuracy assesses whether the data provided is specific to the event and meets the defined measurement requirements. This focuses primarily on the data collection

methodology, including whether data has been estimated and, if so, how those estimates have been derived.

Data accuracy is rated on a scale of one to five, where five represents highly accurate, event-specific data, and one represents low-accuracy data. Generally, high accuracy reflects IMEX-specific collected data, whereas low accuracy uses industry-wide collected benchmark data. Examples of methodologies corresponding to each end of the scale are provided below.

TRACE Category	Low Accuracy Examples (1)	High Accuracy Examples (5)
Energy	Energy estimate based on venue type (industry-level data)	Sub-meter readings specific to IMEX
Waste	Waste estimate based on venue type (industry-level data)	Entered as weights specific to IMEX
Production/Graphic materials	Estimated based on similar events	Itemized actual material weights
Transport	Estimated based on supplier locations and assumed transport type	Entered using travel reports or usage data
Catering	Estimate based on industry/population dietary preferences	Reports from catering based on real consumption, including all necessary data points
Travel	Estimate based on a small sample or broad assumptions	Start and end destinations (or mileage) and transport type (<i>including engine type for ground travel, flight class for air travel</i>) provided for each journey
Accommodation	Estimate based on event length, unknown tariff	Data on the number of rooms, nights and energy tariff

4.1.3 Data Reliability

Data reliability assesses the repeatability and consistency of the information provided. For example, it considers whether the data would be materially the same if provided by another member of the supplier’s team and whether the information is internally consistent.

Reliability is assessed on a scale of 1 to 5, where 5 represents highly reliable, event-specific data and 1 represents low-reliability data. Lower scores are assigned where there are unanswered questions or a lack of clarity regarding the data provided. For example, material weights submitted with vague descriptions would score low, whereas detailed contextual information for each data point would increase reliability by clearly defining what has been included.

Reliability is also assessed through supply chain feedback conversations, where data is tested through clarifying questions. For example, asking which staff were included in reported travel data or what estimation methodology was used. Clear, confident responses indicate higher reliability, while vague or non-specific responses suggest lower reliability.



This assessment is currently based largely on the professional judgement of IMEX team members informed by established supplier relationships. Going forward, this approach will be further standardized to improve consistency across assessments.

4.1.4 The difference between accuracy and reliability

Accurate but not reliable	You have staff travel data, but it's the wrong number of journeys
Reliable but not accurate	You have meter readings for the venue, but need to estimate based on the space hired
Both reliable and accurate	Sub-meter readings for the space and time hired.

4.1.5 Data quality calculations

All three dimensions of data quality, **accuracy**, **reliability**, and **completeness**, are assessed at the individual data-point level. Scores are then averaged for each TRACE measurement category and extrapolated to produce an annual data quality score for each IMEX event.

4.2 Continuous improvements

The data quality score is used to provide insight into where improvements are needed in our understanding of emissions data and to inform prioritization across supplier engagement activities.

Specific implications of low scores include:

- **Low completeness scores:** Indicate a need to strengthen engagement across the supply chain, including measures such as incentivizing data provision and formalizing reporting requirements within supplier contracts.
- **Low accuracy scores:** Indicate a need to support suppliers in providing higher-quality, event-specific data. This may include working with suppliers to implement improved data collection systems or, where appropriate, assuming additional administrative responsibilities within the IMEX team to facilitate data submission.
- **Low reliability scores:** Indicate a need to improve onboarding and training processes, such as providing clearer guidance on data boundaries and expectations, as well as enhanced support for using the TRACE platform.



5.0 Estimates and Extrapolations

5.1 Approach to data gaps

We recognize that setting ambitious measurement targets may result in data gaps, particularly where data collection relies on a broad and diverse supply chain. These gaps represent opportunities to strengthen our approach through improved engagement, education, and collaboration with our suppliers.

Where data gaps exist, we will be transparent about their anticipated scale, and report them with the same level of prominence as areas where data coverage is complete. Conclusions will be appropriately caveated where limited visibility exists.

To enable progress tracking and informed decision-making, we will also apply reasonable assumptions to address data gaps where necessary. These may include estimates based on qualitative information, industry averages, or extrapolation from representative sample datasets.

5.2 Extrapolations

Extrapolation is applied where collected data is considered sufficiently representative of the overall population. For populations exceeding 5,000 individuals, extrapolation may be undertaken once a minimum data completeness threshold of 27% has been achieved. For smaller populations, or where greater variability is anticipated, a higher threshold of 50% completeness is required to support robust extrapolation.

Applying this approach, it is considered methodologically acceptable to extrapolate attendee travel emissions (13,335 attendees in 2025) once 27% completeness has been achieved. For exhibitors (2,900 companies in 2025), a higher completeness threshold of 50% will be targeted to ensure reasonable confidence in extrapolated results.

- **Exhibitors:** Therefore, given the current feasibility constraints in achieving this level of completeness for exhibitors, we remain reliant on sampling methodologies until sufficient, representative data coverage is secured (see section 5.4).
- **Participant travel:** Data collection is split into 8 data sets, hosted buyer air travel (offset), hosted buyer air travel (not offset), hosted buyer ground travel (offset), hosted buyer ground travel (not offset), participant air travel (offset), participant air travel (not offset), participant ground travel (offset), participant ground travel (not offset). Each of these datasets will be extrapolated separately, according to the percentage of data collected.

Note: High data completeness does not automatically equate to high data quality. Data that meets extrapolation thresholds may still score lower on other quality dimensions, including reliability and accuracy. Completeness is therefore assessed alongside these additional metrics before conclusions are drawn, or decisions are made.

5.3 Estimates

Where adequate data is not available for extrapolation, and emissions fall within our measurement boundaries and are considered material, we will apply estimates to understand the scale of our impact.

Principles for estimates: Where estimates are required, they will be based on reasonable and justifiable assumptions and disclosed alongside emissions reporting to ensure full transparency. Estimates will be reviewed annually through ongoing engagement with suppliers, with the aim of improving accuracy over time and replacing estimates with primary data where possible. This information should then be included in the supplier measurement packs.

Key estimates:

- **Staff travel:** Where precise location data is unavailable, a staff member's home city may be used as a proxy. If this is not possible, the location of the relevant office will be used as the journey origin. Where neither is available, reasonable assumptions may be applied based on the event location, *for example, assuming 5 km of metro travel per live event day in locations with strong public transport connectivity, or equivalent taxi travel in locations where public transport is limited.*
- **Energy use:** In venues where sub-metering is not available and energy data specific to IMEX cannot be isolated, we will use the venue's meter readings for the relevant time period and apportion consumption based on the proportion of total venue space hired by IMEX.

5.4 Surveying and Sampling

Similar to extrapolation, this approach is appropriate in two scenarios: 1, where there is little anticipated change in behaviors over time and additional measurement would not provide meaningful new insight; or 2, where it is not feasible to collect a complete dataset initially and the data is expected to be too variable to support reasonable estimation via secondary data sources.

Scenario 1 - Surveying

- **Commuting (Business operations):** A yearly survey will be conducted that collects data on staff members standard commuting distance and method of travel.

A survey-based approach is applied to commuting emissions on the basis that travel patterns are expected to be relatively stable over the reporting period. Given this anticipated consistency, collecting journey-level data for each trip, per day, per employee would not materially improve accuracy.

The use of periodic survey data is therefore considered a proportionate and methodologically appropriate approach, balancing data precision with practicality and resource efficiency.



Scenario 2 - Sampling

- **Exhibitors:** Exhibitor emissions are currently estimated using a 2023 sample of 17 booths that provided data covering staff travel, logistics, material use, and catering. This dataset was used to derive per-square-meter (m²) emissions factors for both space-only and shell-scheme booths. This methodology will be retained as the basis of calculation.

A sampling approach is applied due to the volume and complexity of exhibitor data, including reliance on extended supply chains and voluntary disclosure as well as the perceived value of primary IMEX exhibitor specific data collection. The per-m² emissions factors therefore act as an intensity-based proxy to estimate total exhibitor impact.

To improve robustness over time, we will develop a more recent and comprehensive sample dataset, prioritizing engagement with exhibitors most willing and able to participate. Initial data collection will focus on the activities with the greatest emissions significance and influence.

Accuracy and representativeness will be progressively strengthened through expansion of sample size, broader data coverage, and increased data quality expectations.

6.0 Glossary

For definitions of technical terminology or clarification of IMEX-specific terms used throughout this methodology, please refer to our [Glossary document](#).²