



Managing ESG for Private Equities and Their Portfolio Companies



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Global Business Alert

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Introduction

Almost half of private equity (PE) firms are addressing climate change through their environmental, social, and governance (ESG) policies. With **70% of private equity's \$6.3 trillion assets** under management in funds with ESG policies, PE firms should be able to lead large-scale decarbonization through their active investment approach in over **40,000 companies.** The reality is somewhat different, however. While many general partnerships (GPs) have committed to integrating ESG factors into the investment lifecycle, obtaining the right data in a consistent manner remains a significant hurdle. Few companies have managed to capture and analyze the necessary data to effect change and report on it consistently. In this GBV, we'll show how **Gardenia Technologies'** carbon accounting solution on Amazon Web Services (AWS) helps private equity groups achieve their sustainability goals. Gardenia is an AWS Partner and AWS Marketplace Seller that provides an enterprise ESG solution to capture, analyze, and report ESG data at scale.

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Reporting Gaps in Private Equity

Investors are taking ESG risks seriously and requesting data to inform capital allocation. In a recent report, 93% of investors stated they would **walk away from a deal** if there were an ESG concern. In parallel, regulators are introducing new requirements for general partnerships to disclose sustainability-related risks and opportunities to investors. As a basis for sustainability disclosures, GPs need to create an inventory of their greenhouse gas (GHG) emissions, covering Scopes 1, 2, and 3 as shown in Figure 1.

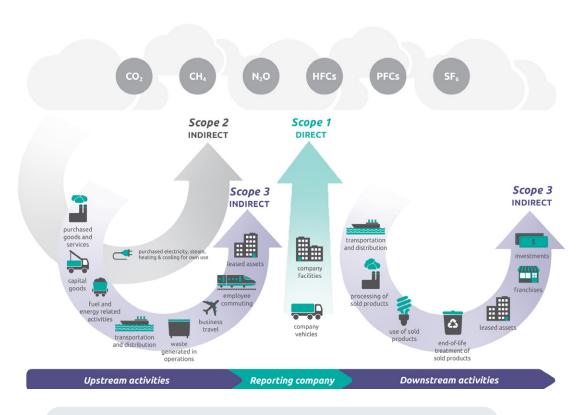


Figure 1 – Complete GHG inventory is made up of Scopes 1, 2, and 3.

Scope 3 Category 15 and its Challenges

Reporting on Scope 3, **Category 15 (Investments)** is a significant data challenge for general partnerships. For a full GHG inventory, GPs must measure and aggregate the Scope 1, 2, and 3 emissions of each of its portfolio companies, as well as its own. Getting a full Scope 1, 2, and 3 inventory is already a challenge on the portfolio company level. In a recent TCFD survey, 83% reported difficulties accessing Scope 3 data. This requires gathering data on a wide range of events along the value chain, from supplier activities to customers. This challenge is compounded when completing inventory for a portfolio of companies due to data scale. When doing portfolio assessments, over 85% of TCFD respondents report problems with data availability, quality, and lack of standardizations. At both the company and fund levels, GPs encounter challenges in obtaining consistent and reliable data, which hinders investors and companies from developing cohesive ESG strategies.

Implications of ESG Data Gaps

Data quality discrepancies present significant obstacles to successful ESG initiatives, resulting in:



- Difficulty preparing comprehensive and accurate GHG inventories; keeping data up-to-date and aligned over time is a challenge.
- Incomplete GHG inventory limits an organization's ability to implement accredited targets, such as science-based targets (SBTi).
- Challenges in setting and tracking key performance indicators (KPIs) over time due to a lack of granular, real-time data.
- Sustainability management becoming a resource burden due to lengthy reporting processes.

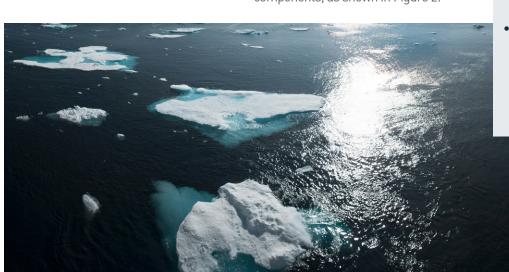
Key Features of the Gardenia Carbon Accounting Platform

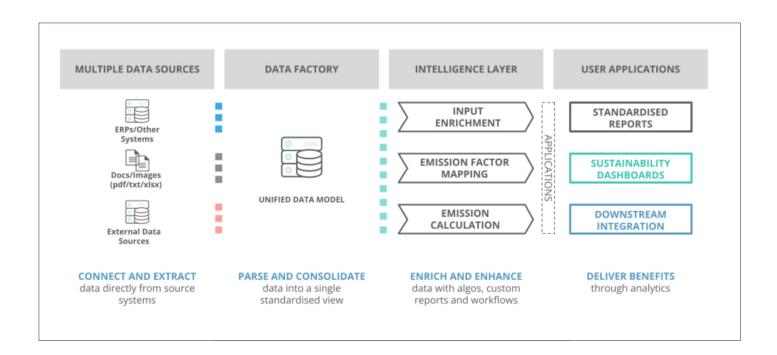
The Gardenia Carbon Accounting (GCA) platform is designed to address data gaps in the corporate and PE sectors, providing an end-toend solution for capturing, analyzing, and reporting ESG data.

The platform has built-in data transformation and enrichment pipelines to automate data processing—from collection and enrichment to reporting and tracking. Artificial intelligence (AI)-driven automation is leveraged to streamline delivery of ESG data and insights in real-time, at the right resolution. Key stakeholders can access data through a set of intuitive dashboards, reducing manual efforts and facilitating data-driven decision-making.

The GCA platform comprises three core components, as shown in Figure 2:

- Data factory: This component serves as the backbone and enables efficient data collection from various sources. Robust architecture enhances data accuracy and integrity throughout the process.
- Intelligence layer: At the heart of the GCA platform is the Intelligence layer which employs machine learning (ML) workflows to analyze collected ESG data. The Intelligence layer provides insights for GPs to make informed ESG decisions.
- Web app: Enables key stakeholders to navigate and explore the ESG data through interactive dashboards and reports.





Exploring the AWS-Hosted Architecture

Gardenia's AWS-hosted architecture replaces typical manual ESG reporting processes with an automated approach by connecting directly to company data sources. This allows the platform to deliver highquality data while minimizing efforts on the client's side. This process is split into three stages; the first two enable GCA to build a systemsagnostic carbon accounting calculation pipelines that are updated in real-time.

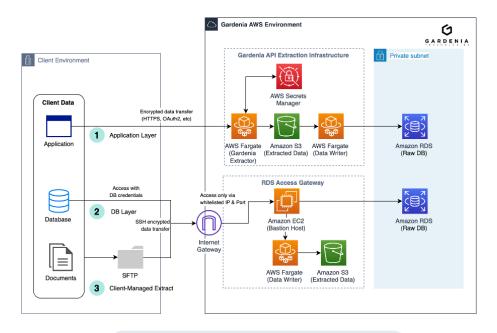


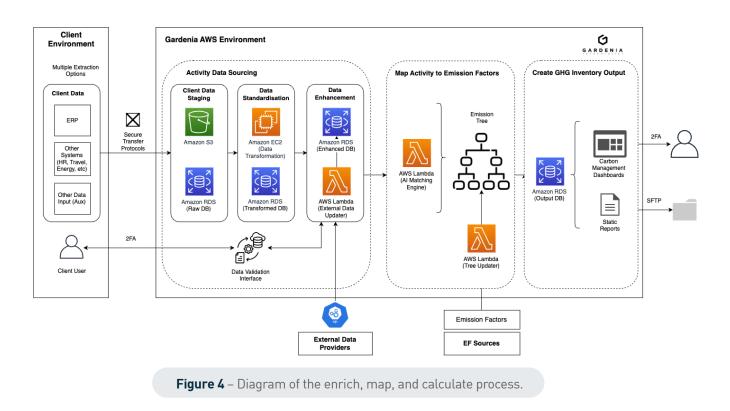
Figure 3 – Diagram of the extraction process.

Extract and Standardize

Connectors integrate directly to "systems of record" (such as enterprise resource planning, or ERP) using native methods (APIs, database replication) to extract data straight from the source in an auditable way, without manual work from the client. Gardenia's transformation engine translates data from any supported systems into a single unified format.

Enrich, Map, and Calculate

Al-driven classification and enhancement workflows identify relevant emission factors and automatically calculate emissions. This process is validated by a "human in the loop" to fine-tune Al inferences. The calculation engine resolves complex mappings to provide users aggregated, easy-to-check outputs, thus reducing the effort required for clients to adapt calculation workflows in accordance with company-specific requirements.



Visualize and Recommend

Comprehensive ESG data is presented in web app dashboards which provide an interactive tool to showcase the reporting requirements and ability to interrogate results, drill down into emission sources, and gain insights into how to improve processes.

E 🖸 GARDENIA		Carbon	Accounting		0 <u>+</u>
Overview Scope	1 and 2 Scope 3	- Supply Chain Sci	ope 3 - Others		
Emissions	Emissions By Scope	Revenue		Emissions Intensity	Offsetting Cost
Total Emissions (tCO2e) 91.8K Vol' Change 45.9%		96 Yor c Sok 100k	tal Sales (E) 5.52M hange 127.6%	Intensity (kgCO2e/E) 0,95 YeY Change -38.9%	Equivalent Offsetting Cost (E)
Emissions along Value Chain (tCO2e) Subsco		Subscopes		Emissions over Tir	Emissions Value Sales (E)
The second secon		Upstream transportation	Purchased goods and services	15M 10M 5M	2.5 Concerning and a set of a

Figure 5 – Overview of Gardenia Carbon Accounting platform.

Use Cases

The Gardenia Carbon Accounting platform provides clients resources to achieve their ESG goals by providing the following foundational elements:



Efficient data collection:

Clients can replace intensive manual reporting processes with automated pipelines to improve the quality and efficiency of ESG reporting in real-time. This allows individual companies and GPs to confidently analyze and benchmark their investments efficiently.

Rapid emissions calculations:

Clients can receive full Scope 1, 2, and 3 inventories and Scope 3, Category 15 measurements on average 6x faster using GCA. The inventories adhere to the GHG Protocol Corporate Standard and ISO 14064-1:2018 Standard.

Automated reporting and auditing:

Automated data collection and governance workflows provide clients access to accurate, consistent, and auditable data. Auto-populated ESG reports can be downloaded to transform the reporting process into an assessment rather than a data challenge. An audit trail can be accessed to trace the data aggregation and transformation steps.

Data-driven ESG strategies:

Gardenia dashboards surface key insights allowing clients to slice the data by company, subsidiary, currency, products, or other relevant views. This enables a clear view of emissions impact along the value chain to identify carbon hotspots and implement effective reduction strategies.

Track and forecast decarbonization initiatives:

Based on these assessments, targets can be set at the company and portfolio levels. Performancetracking tools enable teams to implement targets more effectively. Real-time data enables teams to adjust actions quickly to refine strategies as needed.

Security and scalability:

By building on AWS, Gardenia's platform benefits from industry-leading security, scalability, and performance capabilities. Managed AWS services like Amazon Relational Database Service (Amazon RDS) are leveraged to scale resources in accordance to demand without interruption.



Conclusion

With the growing demands of environmental, social, and governance (ESG) reporting, private equity firms are facing challenges in gathering, standardizing, and analyzing vast amounts of data.

New tools are needed to bridge the reporting gap, and Gardenia Technologies' end-to-end ESG data management tool aims to remove the complexity in access to consistent, high-quality data and enable private equities to make progress on ESG initiatives.





Contact:

Contact Gardenia to learn more, and explore its ESG accounting and management tool on AWS Marketplace. For further information on this topic or anything relating to the AGN International association of accounting and advisory firms, or to become an AGN member, please email your closest AGN Regional Director (see below) or go direct to www.aqn.org.

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