

IDC MarketScape: Worldwide Carbon Accounting and Management Applications 2024 Vendor Assessment

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THIS IDC MARKETSCAPE EXCERPT FEATURES SAP

IDC MARKETSCAPE FIGURE

FIGURE 1

IDC MarketScape Worldwide Carbon Accounting and Management Applications Vendor Assessment



Source: IDC, 2024

Please see the Appendix for detailed methodology, market definition, and scoring criteria.

IN THIS EXCERPT

The content for this excerpt was taken directly from IDC MarketScape: Worldwide Carbon Accounting and Management Applications 2024 Vendor Assessment (Doc # US51572424). All or parts of the following sections are included in this excerpt: IDC Opinion, IDC MarketScape Vendor Inclusion Criteria, Essential Guidance, Vendor Summary Profile, Appendix and Learn More. Also included is Figure 1.

IDC OPINION

Carbon reporting has been much in the news over the past several years, with organizations under increasing pressure to track and disclose their carbon emissions. There are numerous stakeholders requesting emissions data from organizations, including investors, partners, clients/customers, employees, and regulators. Meeting these requests is becoming increasingly cumbersome as the volume and complexity increase, a challenge which carbon management platforms seek to alleviate through streamlining and automating these processes.

While to date carbon reporting has largely been a voluntary exercise, the regulatory landscape is undergoing significant transition. Emerging environmental, social, and governance (ESG) reporting regulations and standards – including the European Union's Corporate Sustainability Responsibility Directive (CSRD), the U.S. Securities and Exchange Commission's proposed climate-risk rules, and the California's climate laws – will change how organizations report on ESG initiatives. Regulation will not be uniform but will have varying impacts on organizations depending on region, size, and industry.

Fines and litigation create new impetus for reporting, but regulation will also add a new dimension of complexity in how companies report. Emerging regulations are very prescriptive regarding what gets reported and how, which indicates a significant change from the autonomy of voluntary reporting. While there are numerous environmental, social, and governance elements to the emerging regulation, carbon emissions reporting requirements are a key component of emerging legislation.

The scope of emissions reporting will be graduated, initially focusing on Scopes 1 and 2 (CSRD requirements for FY24), with Scope 3 reporting requirements ensuing. Carbon emissions are categorized by "Scope," which refers to the type of emission and how it is categorized. Scopes 1 and 2 refer to activities directly related to the organization, while Scope 3 refers to activities attributed to third parties (vendors, suppliers, partners, etc.). While many organizations are collecting data and reporting on Scopes 1 and 2 emissions, for most organizations, Scope 3 remains elusive, presenting a significant challenge for reliable data collection and reporting. There is also an emerging category of avoided emissions, Scope 4, which while not yet mainstream, will bring further complexity to emissions calculation.

Emerging legislation is also requiring disclosure on decarbonization initiatives, indicating a marked shift from the historical reporting requirements of voluntary disclosure. For organizations that have publicly stated emissions reductions targets, CSRD will require progress reports on goal achievement and viability of projections. This will require unique data analysis and scenario planning tools to support organizations in effective decarbonization strategy planning. Thus, given the growing import of factual, consistent, and auditable carbon emissions reporting and the impetus to not only report on but improve organizational carbon footprint, organizations are experiencing a heightened need to implement a purpose-specific carbon management solution designed to address these unique challenges.

IDC MARKETSCOPE VENDOR INCLUSION CRITERIA

The vendor inclusion list for this document includes on-premises, SaaS, and cloud-enabled ESG reporting platforms. In addition, vendors must have a commercially available ESG program management offering with associated revenue. ESG reporting software includes purpose-specific software that enables the collection of ESG data, mapping of that data to various frameworks and regulations, and producing disclosure documents of various formats. ESG reporting software digitizes and automates the ESG reporting process.

All vendors actively participated in the research, with multiple customer references being contacted and interviewed for each provider. Discussions with references included the systems utilized and their perception of the vendor and software in terms of implementation, technical support, level of value delivered versus price paid, ease of integration, user interface (UI), innovation, product road map, and perceptions of pricing model/terms. In addition, references also provided in which departments and in which manner the solution was being used in their organization as well as areas for vendor improvement.

ADVICE FOR TECHNOLOGY BUYERS

Carbon accounting and management is a nascent market with significant transition occurring in the number, type, and capability of solutions available. As the market for carbon accounting and management software solutions has emerged over the past few years, the landscape has almost exclusively been made up of start-up and niche vendors. However, today, that landscape is undergoing a tectonic shift as large independent software vendors (ISVs) and hyperscalers are entering the carbon accounting and management software space and introducing purpose-specific tools. The battleground for market share capture will likely result in rapid technology evolution and product development that will ultimately benefit the functionality and utility of these tools.

Automation-Driven Efficiency and Accuracy

A primary benefit of implementing a carbon accounting and management platform is in improving emissions tracking processes. Manual, spreadsheet-based modeling and calculations are time-consuming to maintain and error prone. Purpose-built carbon accounting tools automate many of the previously manual tasks that have a business value benefit of improved efficiencies and improved accuracy. Some tools are layering in data estimation and validation features tool that create further confidence in reported emissions.

Data-Sourced Emissions Calculation

One of the key development areas for carbon accounting solutions is in the sourcing and ingestion of data used to derive carbon emissions. There is a shift occurring from estimation-based reporting to data-driven actual usage. For carbon accounting to be useful (for internal operationalization, investor, clients, etc.), the data ingested needs to be actual, accurate, and current. Estimations should only be used where actual data is unavailable. However, to accomplish this, solutions need to have easy-to-implement integrations and connectors to various data sources including other software platforms, billing platforms, and operational technology (OT) devices.

Decarbonization Strategy Support

While much of the discussion around carbon emissions over the past several years has focused on the tracking and reporting of those emissions, conversation is beginning to expand into decarbonization strategies. Organizations should evaluate platforms in their incorporation of analytics tools that support the organization's decarbonization priorities. Decarbonization pathways are unique to industry, business, stakeholders, and organization, and it is important to align carbon management platform tools that best support the organization's specific needs.

Audit and Assurance

Validation and assurance capabilities will become increasingly important as legislation like CSRD and the SEC's climate risk disclosure proposal comes into force. When exploring ESG reporting platforms, seek solutions that provide a full audit trail from source to report (including all alterations). In addition, these platforms are increasingly using AI to drive data validation, using analytics to evaluate the completeness and accuracy of disclosed data. Purpose designed software will help support the daunting task of organizing and tracing the wealth of qualitative and quantitative data streaming from multiple enterprise systems that will be applied to ESG disclosure.

GenAI and AI Analytics Tools

AI is also an evolving area of development for carbon accounting, with significant potential for both AI and GenAI to enhance capabilities. Tools are being used to source and identify data, validate its accuracy, and leverage logarithms to calculate estimations when data is missing. There are also trends beyond reporting in the use of AI to drive analytics on carbon emissions, identifying opportunities for improved efficiencies and carbon reduction.

VENDOR SUMMARY PROFILE

This section briefly explains IDC's key observations resulting in a vendor's position in the IDC MarketScape. While every vendor is evaluated against each of the criteria outlined in the Appendix, the description here provides a summary of each vendor's strengths and challenges.

SAP

SAP is positioned in the Leaders category in this 2024 IDC MarketScape for worldwide carbon accounting and management applications.

Quick facts about SAP include:

- **Employees:** 107,600 employees
- **Globalization:** 78 country office locations, localized sales support in all regions, and 80 countries with customer deployments
- **Industry focus:** Industry agnostic
- **Customer size:** Primarily enterprise, solution design scales to different size of business
- **Delivery:** 80% agnostic public cloud, 10% private cloud, and 10% hybrid cloud
- **Pricing model:** Subscription-based model
- **Implementation and consulting partner ecosystem:** Service integrators and consulting partners include Accenture, EY, IBM, and PwC
- **Solution launch date:** December 2021

- **Certifications:** FedRAMP, SOC 2 Type 2, and ENERGY STAR Partner of the Year
- **Internal ESG management:** ESG performance is tied to KPIs, bonus payout, and executive pay. SAP has committed to the SBTi and reports to CDP.

SAP is an enterprise resource planning software vendor based in Baden-Württemberg, Germany, with a 50+ year history. SAP's software suite covers various aspects of business operations, including finance, human resources (HR), supply chain management, customer relationship management, and sustainability. While sustainability solutions exist as a product category, for SAP, sustainability underlies the entire catalogue of solutions and is foundation to the vision of enabling business agility, supply chain resilience, and sustainability outcomes.

SAP's core sustainability solution offering consists of four components: Sustainability Control Tower (SCT), SAP Sustainability Footprint Management (SFM), SAP EH&S Environment Management (EM), and Sustainability Data Exchange (SDX), with each of these components contributing to an organization's carbon management initiatives. SCT is the command center for the suite of SAP sustainability enabling solutions, built on the SAP Business Technology Platform, which enables integration and bidirectional communication with core SAP solutions. SAP's SFM is the engine that calculates corporate and product footprints across Scopes 1, 2, and 3 and provides emissions management and decarbonization decisioning support. SAP EH&S Environment Management is an emissions inventory to fulfill legal, regulatory, and voluntary requirements. The SDX enhances visibility into an organization's supply chain, providing an exchange for Product Carbon Footprints (PCF) at scale and is compliant with the WBCSD PACT specifications. SAP's green ledger initiative, launching in the second half of 2024, will be the fifth modular component, enabling carbon accounting at a transactional level and will integrate with an organization's financial accounting/reporting. The suite of solutions is designed to support organizations along the sustainability value chain of data collection, data-driven reporting, and data-supported analytics and strategy, enabling the tripartite functionality of "record, report, and act."

Strengths

- **ERP centric:** One of the principal differentiators of SAP's sustainability solution is that it is built upon an ERP foundation. This is unique from other platforms that stem from a data aggregation approach since the information sourced is already centralized in the ERP system. By pulling data direct from the SAP ERP platform, integration requirements with other platforms (which can be problematic) are reduced, and thus automation of data ingestion is enhanced.
- **Integration with SAP product portfolio:** SAP's sustainability suite leverages integrations beyond the ERP platform. For example, SFM is informed by data fed from EH&S Environment Management and SDX applications but also serves to inform procurement and supply chain applications to drive supplier decisioning. SCT and SFM also interface with SAP solutions for risk management, compliance management, and financial applications.
- **Unified corporate and product carbon footprint:** SAP's SFM is unique in supporting both the higher-level aggregate corporate carbon footprint and granular product carbon footprint. Both corporate and product footprints provide ERP data-driven calculations of full Scopes 1, 2, and 3 emissions, including the possibility to source Scopes 1 and 2 emissions from Environment Management and Scope 3 PCF data from SDX to improve accuracy of the calculation. SAP supports all four Scope 3 emissions calculations methodologies supported by the GHG Protocol and granular Scope 3 PCF analysis at the product part, assembly, or SKU levels.

- **Supply chain management through SDX:** SDX leverages the business network to facilitate large-scale Scope 3 carbon data exchange between suppliers and customers and is based on WBCSD PACT protocol to ensure consistency and standardization. By integrating with SFM and any third-party calculator, it increases the accuracy of footprint calculations with primary supplier data.
- **Unified sustainability and financial data:** The sustainability suite, with its linkages to ERP, combines business and financial data and provides customers with insights into the business and financial impact of carbon emissions and decarbonization initiatives. Such capabilities are gaining increasing importance considering emerging regulations such as the ESRS requirements. Furthermore, tax implications and carbon credit analysis are emerging as important aspects under the office of CFO.

Challenges

SAP's strengths as a carbon management vendor can also be the company's weakness. The portfolio of sustainability offerings is built on a foundation of S/4HANA ERP, limiting adoption to the universe of S/4HANA users. Furthermore, while modular in design, much of the solution's value is dependent on the adoption of multiple system elements, thus commanding a higher price point.

Consider SAP When

Consider SAP for carbon management for organizations currently or planning to use S/4HANA and are seeking a solution that will be deeply embedded in organizational processes. The portfolio is best suited for a sustainability power user seeking to leverage ERP and supplier data to calculate granular carbon footprints leveraging these metrics to inform business processes and financial reporting.

APPENDIX

Reading an IDC MarketScape Graph

For the purposes of this analysis, IDC divided potential key measures for success into two primary categories: capabilities and strategies.

Positioning on the y-axis reflects the vendor's current capabilities and menu of services and how well aligned the vendor is to customer needs. The capabilities category focuses on the capabilities of the company and product today, here and now. Under this category, IDC analysts will look at how well a vendor is building/delivering capabilities that enable it to execute its chosen strategy in the market.

Positioning on the x-axis, or strategies axis, indicates how well the vendor's future strategy aligns with what customers will require in three to five years. The strategies category focuses on high-level decisions and underlying assumptions about offerings, customer segments, and business and go-to-market plans for the next three to five years.

The size of the individual vendor markers in the IDC MarketScape represents the market share of each individual vendor within the specific market segment being assessed.

IDC MarketScape Methodology

IDC MarketScape criteria selection, weightings, and vendor scores represent well-researched IDC judgment about the market and specific vendors. IDC analysts tailor the range of standard characteristics by which vendors are measured through structured discussions, surveys, and interviews with market leaders, participants, and end users. Market weightings are based on user

interviews, buyer surveys, and the input of IDC experts in each market. IDC analysts base individual vendor scores, and ultimately vendor positions on the IDC MarketScape, on detailed surveys and interviews with the vendors, publicly available information, and end-user experiences in an effort to provide an accurate and consistent assessment of each vendor's characteristics, behavior, and capability.

Market Definition

Carbon accounting and management platforms include those solutions that generate carbon data as well as those that derive calculations based on the data generated. Data generated include both ratings or benchmarking data used to evaluate across organizations and data specific to an organization used to assess organizational performance on ESG criteria. Solutions support organizations in data collection, analytics, and reporting. Carbon management solutions also support an organization's decarbonization initiatives in identifying emission reduction opportunities, prioritizing projects and project management. Carbon management solutions may be incorporated in larger platforms or exist as unique products.

Detailed definitions of the software tools and platforms that are relevant for ESG management are available in *IDC's Worldwide Environmental, Social, and Governance Management and Reporting Tools Taxonomy, 2023* (IDC #US50060023, January 2023). Environmental, social, and governance (ESG) software is an emerging product category arising to meet enterprise demand for purpose-specific solutions that support data formation, aggregation, management, analysis, and reporting on ESG metrics. An increasing number of organizations are incorporating ESG tenets into aspects of the business, from communications to strategy and executive compensation. As messaging and performance increasingly reflects on ESG performance, it is becoming increasingly important for organizations to accurately and efficiently gather the appropriate metrics to communicate their ESG performance. Stakeholders including customers, investors, employees, and legislators are demanding increased accountability for ESG performance as well. These factors are driving the rapid introduction of ESG software solutions to the market that address various aspects of ESG metrics and performance management.

LEARN MORE

Related Research

- *Broad Demand for AI for Sustainability Applications Indicates Strong Potential for Software Vendors* (IDC #US52058824, April 2024)
- *IDC Innovators: Sustainability Management Software, 2024* (IDC #US51446924, March 2024)
- *Worldwide Environmental, Social, and Governance Applications Software Forecast, 2024-2028: A Market on the Cusp of Transformation* (IDC #US51750923, January 2024)
- *IDC MarketScape: Worldwide ESG Program Management Services 2023-2024 Vendor Assessment* (IDC #US50608423, December 2023)
- *IDC Innovators: Business Continuity Management, 2023* (IDC #US51314423, November 2023)
- *IDC FutureScape: Worldwide Sustainability/ESG 2024 Predictions* (IDC #US51294923, October 2023)
- *The CFO Perspective: Business Continuity Management Is Becoming More of a Focus for the Office of the CFO* (IDC #US50255923, May 2023)

Synopsis

The IDC study provides a comprehensive analysis of carbon management platforms, highlighting the increasing need for organizations to track, manage, and report carbon emissions amid evolving regulatory landscapes and stakeholder pressures. It evaluates vendors based on their capabilities and strategies to meet future customer needs, focusing on innovation, customer satisfaction, and the ability to support organizations in their decarbonization efforts.

"In an era of escalating environmental scrutiny, mastering carbon accounting is not just compliance, but a strategic imperative for future-proofing businesses," said Amy Cravens, research manager, ESG Reporting and Management Applications at IDC.

About IDC

International Data Corporation (IDC) is the premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications, and consumer technology markets. With more than 1,300 analysts worldwide, IDC offers global, regional, and local expertise on technology, IT benchmarking and sourcing, and industry opportunities and trends in over 110 countries. IDC's analysis and insight helps IT professionals, business executives, and the investment community to make fact-based technology decisions and to achieve their key business objectives. Founded in 1964, IDC is a wholly owned subsidiary of International Data Group (IDG, Inc.).

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