FROST & SULLIVAN

CARBMEE

2022
ENABLING TECHNOLOGY LEADER

European Carbon Management Industry

Best Practices Criteria for World-Class Performance

Frost & Sullivan applies a rigorous analytical process to evaluate multiple nominees for each award category before determining the final award recipient. The process involves a detailed evaluation of best practices criteria across two dimensions for each nominated company. carbmee excels in many of the criteria in the carbon management space.

AWARD CRITERIA

Technology Leverage	Customer Impact
Commitment to Innovation	Price/Performance Value
Commitment to Creativity	Customer Purchase Experience
Stage Gate Efficiency	Customer Ownership Experience
Commercialization Success	Customer Service Experience
Application Diversity	Brand Equity

carbmee: Leveraging Environmental Intelligence to Automate Enterprise Decarbonization

Founded in 2021 and headquartered in Berlin, Germany, carbmee is an enterprise software company offering a game-changing Environmental Intelligence System (EIS)-enabled carbon management platform. As many companies globally commit to net-zero and science-based targets, the industry's focus is gradually shifting from responsible sourcing, recycling on-site, and alternative energy solutions to tackling emission reduction across the value chain. However, reducing value chain emissions remains a challenge, especially with rigid, complex, and expansive enterprise data scattered across fragmented systems. Furthermore, the tools currently available in the market are limited to enabling the mandatory tracking of scope 1 (i.e., direct emissions from a company's facilities and vehicles) and scope 2 (i.e., indirect emissions

> *"Addressing this market gap, carbmee launched its innovative carbon management solution as the industry's first tool that holistically tracks, measures, and analyzes scope 1, 2, and 3 emissions. The company's technology supports enterprises on their journey towards net-zero by facilitating the decarbonization of their complex supply chains and procurement."*
>
> *- Mahesh Radhakrishnan,*
> *Senior Industry Analyst - Energy & Environment*

from purchased electricity, steam, heat, and cooling consumption) emissions. More importantly, these exiting solutions cannot evaluate complex scope 3 emissions (i.e., the emissions produced indirectly across the company's entire value chain) that contribute to approximately 80% of a company's total carbon footprint. Addressing this market gap, carbmee launched its innovative carbon management solution as the industry's first tool that holistically tracks, measures, and analyzes scope 1, 2, and 3

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Backed by world-class procurement, software engineering, life cycle assessment (LCA), and data science experts, carbmee developed its carbon management software to leverage environmental intelligence to simplify enterprise value-chain decarbonization. Unlike its contemporaries in the carbon management space, carbmee's EIS-enabled solution uniquely combines bottom-up and top-down approaches to address enterprises' end-to-end carbon management needs. The bottom-up approach encompasses the customers' operations, procurement, and supply chain to form the EIS solution's core competencies. Similarly, the top-down approach supports the platform's reporting capabilities to address the needs of its customers' corporate strategy, finance, and sustainability teams. This novel strategy introduces cross-functionality to carbmee's carbon management solution, enabling it to deliver purpose-specific outputs, ensuring different departments within customer companies obtain the correct data to meet their specific requirements. For instance, the platform provides LCA experts access to real-time data on an aggregated level, empowering them to monitor their value chain to a granular degree. At the same time, procurement experts receive precise automated footprint calculation data, allowing them to initiate carbon reductions across their supply chains.

carbmee's revolutionary EIS-based carbon management solution combines artificial intelligence (AI) and science-based LCA to automate carbon management for enterprises. The platform drives industrial value chain decarbonization via the following steps;

- **Enterprise resource planning (ERP) data integration:** carbmee allows customers to use application programming interfaces or directly upload their operations data into its EIS platform. The company streamlines this ERP data across multiple departments and business units to generate emissions calculations from customers' end-to-end operations. Moreover, EIS integration enables customers to centralize their disparate data into a single platform, define their emissions baseline, and scale carbon analysis.

- **Value-chain collaboration and data sharing:** The company's cloud-based platform simplifies stakeholder collaborations for seamless carbon emissions mapping and ensures uninterrupted access to captured data. To this end, carbmee's EIS solution allows enterprises to invite their suppliers, customers, and other team members to share high-quality, real-time primary data, ensuring the availability of traceable and complete emissions information. Furthermore, the company builds process models of supplier relationships to find collaborative and strategic solutions for climate reduction.

- **Translation of data into emissions:** carbmee's AI-powered platform matches accumulated ERP and primary supplier data with the Greenhouse gas Protocol-compliant carbon emissions databases to generate accurate activity-based carbon footprint calculations. The EIS solution connects with comprehensive databases containing 18,000+ datasets for activities and products across all industrial sectors.

- **Emission hotspots analysis:** The company employs automated analytics with advanced data cleansing and integration capabilities to offer thorough overviews of its customers' operations

emissions and identify hotspots with maximum potential for high return on investment. Identifying these hotspots enables customer teams to focus on carbon reduction measures rather than time-intensive assessment activities. Moreover, the platform provides emissions breakdown at the material, transport, and transaction level, going well beyond the spend analytics offered by competing solutions.

- **AI-enhanced recommendations and data-driven reduction insights:** carbmee builds on its platform's carbon transparency to empower customers with actionable insights, including data-driven recommendations for reduction opportunities, ultimately guiding impactful decision-making. This capability allows customers to start their tier-n decarbonization journeys, set standards-driven actionable targets with focus suppliers, and track ongoing carbon management progress.

With its foundational carbon management platform in place, carbmee offers a comprehensive list of unique capabilities purpose-built to bridge industry gaps. While most contemporary carbon management solutions provide generic dashboards tracking scope 1 and 2 emissions, the company's intuitive and user-friendly dashboards help customers thoroughly understand the complex emissions distribution across their entire value chains. These EIS dashboards also facilitate scenario planning and emission reduction forecasting. Moreover, the data accuracy ensured by carbmee's centralized, workflow-based platform enables fast decision-making and helps convert customers' decarbonization efforts into safe investments. To this end, the company employs a unique approach to ensuring a return on decarbonization by reducing emissions while saving offsetting costs and increasing operational efficiency. The company continues to augment its platform's capabilities based on existing market needs and evolving customer demands. For instance, in response to its customers' requirements in the logistics industry, the company has launched a reduction optimization scenario planner feature on its platform shortly. Moreover, carbmee intends to evolve its platform from a carbon management solution to a comprehensive Environmental, Social, and Governance tool by adding social and corporate governance tracking capabilities in the coming years.

Frost & Sullivan's research identifies carbmee as a leading software provider, leveraging cutting-edge methodologies to advance the carbon management market.

Roadmap to Success: Customer-centric, Continuous, Proactive

carbmee serves enterprise customers across various industry verticals, including fast-moving consumer goods, automotive, logistics, and pharmaceuticals. Within its first year of operations, the company successfully amassed a robust customer portfolio, including leading global companies such as DMG Mori, DB Schenker, Infineon, Kärcher, Infarm and KWS Seed. carbmee provides exceptional customer service through its dedicated team of client success experts that support customers with platform onboarding, operation, and interpretation. The team offers virtual workshops and support calls during the first four to six weeks to facilitate smooth and efficient onboarding. Furthermore, the company provides customers with essential resources, including blogs, newsletters, webinars, and whitepapers, enabling clients to accelerate their decarbonization journeys.

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> *Best Practices Research Analyst*

carbmee uses client feedback, combined with industry trend monitoring, to gauge market needs, guide its product roadmap, and continuously evolve its carbon management software platform to maintain its innovative edge. The company conducts regular client check-ins to ensure high customer satisfaction, as evidenced by its zero-churn rate in 2021, with 100% of initial customers committed to renewing their licenses of its software solution. Moreover, impressed by carbmee's innovative carbon management solution, several customers (especially global logistics players) have expressed interest in expanding the roll-out of its platform across their international locations.

With increasing customer awareness regarding the significance of scope 3 emissions reduction, carbmee is well-positioned for robust growth in the European carbon management market with its unique technological capabilities and customer-centric approach. The company expects to register a remarkable 120X revenue growth in 2022 with an annual recurring revenue score of 2.7. To support this growth, carbmee plans to expand its workforce from 40 employees at the end of 2021, 100 by end of 2022 and at 200 by end of 2023. Moving forward, the company will implement a structured go-to-market strategy to enter new European markets beyond Germany, Austria, and Switzerland in the fourth quarter of 2022. Similarly, the company intends to expand into the North American market in 2022.

Conclusion

Technology integration is a critical success factor for the carbon management industry. Market stakeholders need to leverage the most appropriate technology-based solutions to optimize their market impact. With its game-changing Environmental Intelligence System-enabled carbon management platform, carbmee delivers the industry's first tool that holistically tracks, measures, and analyzes scope 1, 2, and 3 emissions. The company's easy-to-use platform delivers precise data down to the materials level along with powerful collaborative features and automated recommendations to empower its customers' operational teams to take meaningful climate action. carbmee stands out from competitors based on its commitment to innovation, creativity, and ability to launch solutions with far-reaching impact and application. The company supports customers across several emissions-intensive industries on their journey towards net-zero by facilitating the decarbonization of their complex supply chains and procurement. The company pairs its technology focus with customer-centric values, thus earning a solid reputation in the carbon management market.

With its strong overall performance, carbmee earns Frost & Sullivan's 2022 European Enabling Technology Leadership Award in the carbon management industry.

What You Need to Know about the Enabling Technology Leadership Recognition

Frost & Sullivan's Enabling Technology Leadership Award recognizes the company that applies its technology in new ways to improve existing products and services and elevate the customer experience.

Best Practices Award Analysis

For the Enabling Technology Leadership Award, Frost & Sullivan analysts independently evaluated the criteria listed below.

Technology Leverage

Commitment to Innovation: Continuous emerging technology adoption and creation enables new product development and enhances product performance

Commitment to Creativity: Company leverages technology advancements to push the limits of form and function in the pursuit of white space innovation

Stage Gate Efficiency: Technology adoption enhances the stage gate process for launching new products and solutions

Commercialization Success: Company displays a proven track record of taking new technologies to market with a high success rate

Application Diversity: Company develops and/or integrates technology that serves multiple applications and multiple environments

Customer Impact

Price/Performance Value: Products or services provide the best value for the price compared to similar market offerings

Customer Purchase Experience: Quality of the purchase experience assures customers that they are buying the optimal solution for addressing their unique needs and constraints

Customer Ownership Experience: Customers proudly own the company's product or service and have a positive experience throughout the life of the product or service

Customer Service Experience: Customer service is accessible, fast, stress-free, and high quality

Brand Equity: Customers perceive the brand positively and exhibit high brand loyalty

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The Growth Pipeline Engine™

Frost & Sullivan's proprietary model to systematically create ongoing growth opportunities and strategies for our clients is fuelled by the Innovation Generator™. Learn more.

Key Impacts:

- **Growth Pipeline:** *Continuous Flow of Growth Opportunities*
- **Growth Strategies:** *Proven Best Practices*
- **Innovation Culture:** *Optimized Customer Experience*
- **ROI & Margin:** *Implementation Excellence*
- **Transformational Growth:** *Industry Leadership*

The Innovation Generator™

Our 6 analytical perspectives are crucial in capturing the broadest range of innovative growth opportunities, most of which occur at the points of these perspectives.

Analytical Perspectives:

- **Mega Trend (MT)**
- **Business Model (BM)**
- **Technology (TE)**
- **Industries (IN)**
- **Customer (CU)**
- **Geographies (GE)**