FROST & SULLIVAN

2024 COMPANY OF THE YEAR

IN THE GLOBAL
DIGITAL SUSTAINABILITY
IN THE ENERGY, OIL
AND GAS INDUSTRY

FROST & SULLIVAN

2024

PRACTICES



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. SAP excels in many of the criteria in the digital sustainability in energy and O&G industry.

AWARD CRITERIA	
Visionary Innovation & Performance	Customer Impact
Addressing Unmet Needs	Price/Performance Value
Visionary Scenarios Through Mega Trends	Customer Purchase Experience
Implementation of Best Practices	Customer Ownership Experience
Leadership Focus	Customer Service Experience
Financial Performance	Brand Equity

A Market Snapshot

The oil and gas (O&G) and utilities industries face significant challenges in decarbonization and transitioning towards a net-zero future. A central issue is accurately accounting for carbon emissions and

"By enabling advanced digital technologies and robust analytics, SAP accelerates the adoption of sustainable practices, positioning itself as a crucial partner in the digital transformation of the energy and O&G industries."

- Paulina Blaszczyk, Industry Analyst, Sustainability environmental impacts across operations heavily reliant on traditional fossil fuels. Companies must establish robust methods for measuring and reporting emissions against stringent targets. Furthermore, diversifying energy sources poses a critical challenge. The industry must adopt new technologies and practices to support renewable energy alternatives and develop sustainable fuels like renewable diesel, aviation biofuels, hydrogen derivatives, methanol, and ammonia. Additionally, there is a growing focus on implementing carbon capture and sequestration

technologies to mitigate emissions effectively. Addressing these challenges requires innovative solutions and industry-specific strategies to navigate the complexities of decarbonization while meeting global sustainability goals.

Growth Opportunities in the Sustainability and the Circular Economy shaped by the 6Ps

According to Frost & Sullivan, the 6Ps (policies, products, processes, people, partnerships, and platforms) are shaping the future of sustainability. Effective synergies across these core components enable continued business growth and a competitive advantage along sustainable development by delivering more with less on multiple counts of "good for people, good for planet, good for business" approach.

6P Framework for Future of the ESG, Sustainability & Circular Economy - A Pathway to Net Zero The future of sustainability will rely on delivering "more with less" and shaped by the pathway of policies through to platforms. PLATFORMS 6 Platforms for measuring, monitoring, United Nations Sustainability Development Goals reporting, verifying and trading of (SDG's), Corporate Sustainability Reporting Directive(CSRD), Green Taxonomy, Enhanced Producer sustainability in a circular economy Responsibility (EPR), Paris Climate Agreement (Net Zero Goals/Targets) as well as Regional, National and Local green policies PARTNERSHIPS 5 2 PRODUCTS Designing and developing products with Partners in structuring, implementing and achieving sustainability and circular environmental credentials (tackling economy goals in B2B partnerships FOOTPRINT and/or enhancing HANDPRINT) in Cities, Manufacturing and Industries, Agriculture PEOPLE/PERSONAS 4 3 PROCESSES Mapping of key activities and workflows of

6P Framework

Source: Frost & Sullivan

water use and waste generation

Scope 3

impacting/influencing the environment and carbon emissions - Scope 1, Scope 2 and

Market Leading Sustainability Practices

People and Personas both internal(supply side) and external(demand side) includi

customers to enhance productivity

SAP is a global technology leader that provides enterprise application software and services. The company's extensive suite of applications and solutions span areas such as supply chain management, finance, and data analytics, enabling businesses to adapt to changing market conditions. Moreover, as the push for emissions reduction spreads throughout every industry, SAP is well-positioned to guide its customers into sustainable practices.

SAP prioritizes sustainability to enhance global well-being and drive success, leading with carbon-neutral operations and empowering customers to develop smart, sustainable enterprises. Aligned with the United Nations' Sustainable Development Goals, SAP aims for net-zero emissions across its value chain by 2030 and continuously improves energy efficiency. The company is committed to eliminating electronic waste by 2030, improving waste management, reducing water consumption, and raising sustainability awareness. SAP integrates Environmental, Social, and Governance criteria into its operations for transparency and accountability, enhancing credibility and customer confidence. It offers comprehensive tools across sectors, including utilities, water and wastewater management, and O&G to accurately measure environmental impact.

Recently, SAP launched the "We Measure" program, applying financial accounting principles to emissions, such as carbon dioxide (CO2). This initiative allows organizations to measure their carbon footprint at various levels, enabling them to set and track key performance indicators (KPI) related to their CO2 impact.

Additionally, SAP supports sustainability report creation that comply with standards such as the Center

"Emphasizing the importance of harmonized data for effective sustainability reporting, SAP solutions such as the Enterprise Sustainability Hub integrate data from various sources, including SAP and non-SAP systems, to streamline the reporting process. This approach supports customers with different sustainability maturity levels, from manual spreadsheet-based processes to fully automated systems."

- Samantha Fisher, Best Practices Research Analyst for Sustainable Rural Livelihoods and the Global Reporting Initiative, automating the data gathering and reporting process for accuracy and efficiency.

SAP's solutions also focus on actions to reduce environmental impact. For example, Crescent Petroleum (Crescent), one of the first and oldest private upstream Middle O&G in the Middle East, elected SAP to support its sustainability goals. The client implemented SAP S/4HANA in eight months, committed to zero customization to realize value quickly. The integration enables seamless data framework and optimized operations through predictive analytics. This transformation allowed

Crescent to eliminate legacy applications, foster integrated operations, and enhance agility and decision-making across the business.

Emphasizing the importance of harmonized data for effective sustainability reporting, SAP solutions such as the Enterprise Sustainability Hub integrate data from various sources, including SAP and non-SAP systems, to streamline the reporting process. This approach supports customers with different sustainability maturity levels, from manual spreadsheet-based processes to fully automated systems. The company's flexible and scalable sustainability services enable organizations to define their KPIs and adapt to changing standards and reporting requirements. SAP supports organizations across various industries, such as utilities, water and wastewater, and power, in effectively managing their environmental impact and driving sustainability initiatives. By covering the entire lifecycle of environmental data management from recording and accounting to reporting and action, the company enables comprehensive oversight and actionability.

Demonstrated Leadership through Continuous Product Innovation

SAP significantly accelerates digital sustainability in the energy and O&G markets. By enabling the expansion of hydrogen fuel cell vehicle markets, the company's Cloud ERP solution supports the distribution and retailing of hydrogen, addressing retail-level availability challenges, and fostering new market creation in sustainable transportation. An example is the conversion of a California refinery into a biodiesel plant, with SAP serving as the digital backbone for operations, demonstrating its role in the shift towards renewable energy production.

In Germany, SAP supported an energy transmission company in executing a proof of concept for end-toend value chain management, including certifications and mass balancing of energy portfolios. This approach showcases the company's pivotal role in advancing system-level strategies across the energy sector. SAP's solutions enhance operational efficiency, ensure regulatory compliance, and enable innovation, helping companies capitalize on emerging opportunities in sustainable energy markets.

By enabling advanced digital technologies and robust analytics, SAP accelerates the adoption of sustainable practices, positioning itself as a crucial partner in the digital transformation of the energy and O&G industries.

Through market expansion, operational efficiency, and comprehensive value chain management, SAP delivers substantial customer value. The company's solutions facilitate new market creation, such as hydrogen fuel cell vehicles, by addressing limitations in hydrogen availability and supporting sustainable transportation growth. SAP also aids in converting traditional oil refineries to biodiesel production facilities, aligning operations with global sustainability goals, and capitalizing on renewable energy opportunities. Furthermore, its end-to-end value chain management enhances operational efficiency and regulatory compliance, empowering customers to innovate and meet sustainability targets effectively.

A Purpose-filled Mission and Vision

SAP offers a comprehensive product suite that enhances sustainability and efficiency across various industries. Cloud for Energy optimizes energy consumption and reduces costs by leveraging cloud technology for scalable and flexible energy data management. Meanwhile, Green Ledger provides CO2 impact tracking, enabling better carbon footprint management. SAP Control Tower and SAP Data Sphere facilitate real-time operational monitoring and data integration, ensuring accurate reporting and decision-making. SAP Footprint Management calculates the environmental impact on specific activities, aiding in detailed sustainability reporting. Finally, the SDX enhances data exchange between suppliers and SAP systems, promoting collaboration and accurate sustainability data.

The company's strategic partnerships further expand its capabilities. Collaborations with companies like EvoVadis, Verrity New Energy, and Exnator complement SAP's core offerings, providing comprehensive tools for sustainability and efficiency management. The company also engages in projects like Catena-X, funded by the European Commission, to address sector-specific needs. These partnerships ensure that its solutions meet diverse customer requirements and adapt to regional nuances.

Moreover, SAP's platform offers flexibility and independence, integrating seamlessly with existing systems and accommodating diverse equipment. This approach enables customers to maintain adaptability and optimize operations through advanced functionalities like predictive analytics. By combining its technology with partner expertise, the company helps organizations achieve their sustainability goals while maintaining operational and financial performance, transforming raw data into actionable insights that drive efficiency and sustainability.

A Customer-centric Approach Driving Unmatched Client Experience

SAP prioritizes the customer experience through structured engagement initiatives like the Advisory Council and specialized working groups, which bring together industry leaders to tackle challenges across functions like finance and asset management. By leveraging its Innovation Center and Cloud Consortium, the company refines solutions based on direct customer feedback and rigorous testing, ensuring products meet real-world needs effectively. Collaborative learning opportunities at annual boot camps and industry

conferences further strengthen partnerships and facilitate continuous improvement. This proactive approach enables SAP to remain responsive to evolving customer demands.

In delivering customer service experience, SAP begins by providing customers with a clear understanding of their current circumstances. This approach offers a comprehensive view of their status, which is crucial for defining realistic goals and improvement strategies. The company's technology helps clarify positions that companies may not realize, establishing a strong baseline to identify quick wins and areas needing immediate attention.

SAP's end-to-end solutions connect seamlessly with various systems using standard protocols like SIM CIM. Spanning from meter to cash, asset management, and sustainability, the company ensures comprehensive integration and operational support across sectors beyond data management and analytics. This holistic approach underscores its commitment to providing robust solutions.

After understanding the customer's current state, SAP focuses on automation to streamline processes, reduce reporting efforts, and minimize disparate solutions, enhancing efficiency. Cloud-based solutions further cut infrastructure costs, contributing to overall savings. The company's reliable reporting helps maintain strong ratings from organizations like EcoVadis, essential for investor attraction and retention. In the energy sector, SAP's solutions offer a 360-degree view, which is critical for informed decisions on contract management and investments, balancing sustainability with financial performance effectively.

"The one-partner, one-contract approach of the RISE with SAP solution helped us successfully migrate our core systems to the cloud. RISE with SAP has enabled us to quickly scale operations and increase our IT agility and flexibility while delegating infrastructure and management to SAP."

Mariaelena Perazza, Head of Enabling Services, MAIRE

"Handover optimization is a must for energy companies. Now, thanks to SAP experts and our new handover models, we are realizing significant benefits that can only increase in the future as we expand our production assets."

Cosimo Fiusco, Head of System Governance & Business Intelligence, Enel Green Power S.p.A.

"Being able to scale using best-in-class solutions and leading frameworks will help us create the type of organization we're striving for."

- A NineDot Energy Finance Executive

A Foot in the Present and an Eye on the Future

SAP observes a strong demand for sustainability solutions across various regions. There is significant interest in the United States (US), Europe, and the Asia-Pacific. Additionally, the company is engaging with customers in South America with projects focused on various sustainability initiatives underway.

The maturity of sustainability initiatives varies by region, with many starting with Scope 1 and Scope 2 emissions. However, a Scope 3 emissions focus is growing more critical for future efforts.

SAP identifies significant growth potential for its solutions across diverse global regions. In the US, growth is fueled by legislative incentives and state-level regulations driving sustainability efforts. Europe presents a robust market with stringent regulatory frameworks and initiatives supporting sustainable practices, enhancing the appeal of the company's compliance and operational efficiency solutions. Southeast Asia is emerging as a pivotal region, where discussions and initiatives around sustainability are intensifying, particularly in integrating digital capabilities into heavy industries to bolster renewable fuels and hydrogen markets. SAP's partnerships with Japanese firms highlight its strategic focus on Asia, aiming to leverage digital technologies in industrial processes to promote sustainability. These efforts underscore the company's commitment to advancing global sustainability agendas through innovative digital solutions tailored to regional market needs.

The company collaborates extensively with leading global system integrators, engaging in co-investment and co-development efforts to drive forward its growth strategies. For instance, one of its core partners plays a pivotal role in advancing predictive maintenance capabilities, crucial for maintaining highly efficient processes and preventing incidents like emission releases. Another key partnership focuses on hydrogen gas technologies, aiming to accelerate SAP's capabilities and expand its portfolio in these critical areas. Additionally, the company works closely with partners to enhance its core logistics capabilities for natural gas and hydrogen blends, ensuring robust solutions for its customers. Moreover, SAP actively supports startups through ecosystems and European Commission-funded projects like PLEXE and Smart Utility, aimed at facilitating the exchange of flexibilities across various sectors and advancing sustainable energy initiatives across Europe. These partnerships underscore its commitment to innovation and sustainability, leveraging collaborative efforts to meet diverse market demands and drive meaningful impact.

Conclusion

Despite the ongoing push toward sustainability, the oil and gas (O&G) and utilities industries face significant challenges in decarbonization, including accurately accounting for carbon emissions and environmental impacts from fossil fuel operations. Companies must adopt new technologies and diversify energy sources, such as renewable fuels and carbon capture, to meet stringent sustainability targets. Overall, SAP addresses these unmet needs with a strong leadership focus that incorporates customercentric strategies, exemplifies best practice implementation, and aligns with Frost & Sullivan's 6P framework: policies, products, processes, partnerships, and platforms. The company integrates sustainability initiatives into its operations and solutions, enhancing transparency and customer confidence. It offers tools to measure environmental impact and support sustainable growth. SAP also helps digitally transform oil refineries to biodiesel facilities and creates markets for hydrogen fuel cell vehicles, aligning with global climate change goals. The company remains a trusted partner, earning a reputation for offering the overall best in the market.

For its strong overall performance, SAP is recognized with Frost & Sullivan's 2024 Global Company of the Year Award in the digital sustainability in the energy, oil and gas industry.

What You Need to Know about the Company of the Year Recognition

Frost & Sullivan's Company of the Year Award is its top honor and recognizes the market participant that exemplifies visionary innovation, market-leading performance, and unmatched customer care.

Best Practices Award Analysis

For the Company of the Year Award, Frost & Sullivan analysts independently evaluated the criteria listed below.

Visionary Innovation & Performance

Addressing Unmet Needs: Customers' unmet or under-served needs are unearthed and addressed by a robust solution development process

Visionary Scenarios Through Mega Trends: Long-range, macro-level scenarios are incorporated into the innovation strategy through the use of Mega Trends, thereby enabling first-to-market solutions and new growth opportunities

Leadership Focus: Company focuses on building a leadership position in core markets and on creating stiff barriers to entry for new competitors

Best Practices Implementation: Best-in-class implementation is characterized by processes, tools, or activities that generate a consistent and repeatable level of success

Financial Performance: Strong overall business performance is achieved in terms of revenue, revenue growth, operating margin, and other key financial metrics

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

About Frost & Sullivan

Frost & Sullivan is the Growth Pipeline Company™. We power our clients to a future shaped by growth. Our Growth Pipeline as a Service™ provides the CEO and the CEO's growth team with a continuous and rigorous platform of growth opportunities, ensuring long-term success. To achieve positive outcomes, our team leverages over 60 years of experience, coaching organizations of all types and sizes across 6 continents with our proven best practices. To power your Growth Pipeline future, visit Frost & Sullivan at http://www.frost.com.

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 $^{\text{TM}}$.

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

OPPORTUNITY UNIVERSE Capture full range of growth opportunities and prioritize them based on key criteria OPPORTUNITY EVALUATION Adapt strategy to changing market dynamics and unearth new opportunities PLANNING & IMPLEMENTATION Execute strategic plan with milestones, targets, owners and deadlines OPPORTUNITY EVALUATION Conduct deep, 360-degree analysis opportunities opportunities FORTING Translate strategic alternatives into a cogent strategy

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)

