

# 2024 Frost & Sullivan Institute Enlightened Growth Leadership Best Practices Recognition



FROST & SULLIVAN  
**BEST PRACTICES**  
AWARDS

**Chart Industries**



## Congratulations!

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Frost & Sullivan Institute, in partnership with Frost & Sullivan, is proud to present Chart Industries with the Enlightened Growth Leadership Best Practices Recognition.

Frost & Sullivan's global team of growth pipeline experts continuously identifies and evaluates growth opportunities across multiple industries, technologies, and regions of the world. As the world emerges into the new norm disrupted and accelerated by the COVID-19 pandemic, it is becoming increasingly important for companies to leverage opportunities to shed old ways of thinking, build value chains that leave no stakeholders behind, and create foundations for stable growth to thrive in these new environments. We identify companies that demonstrate the commitment to embrace emerging technologies and protocols and generate opportunities for all while sustaining continued growth and highlighting best practices for sustainable development. This approach involves deep strategic deliberation around best practices and the development of core analytics across the entire value chain of specific products and services. Against the backdrop of these analytics, Frost & Sullivan Institute, in partnership with Frost & Sullivan, recognizes Chart Industries for its valuable achievement.

Frost & Sullivan strictly reserves this recognition to companies at the innovation to zero and growth forefront in their respective industries. These companies demonstrate proactivity in utilizing business practices to 'innovate to zero' and address global priorities while securing sustainable growth. These companies also uniquely leverage technology and boost their industry partner ecosystem to serve ever-evolving customer needs in a way that facilitates environmental initiatives and supports the planet's well-being. Moreover, by combining business sense with a moral imperative, these companies demonstrate aspirational ideals beyond the simple goal of generating profits.

Moreover, this recognition is the result of many individuals (employees, customers, partners, and investors), making critical decisions every single day to support the organization and meaningfully contribute to its own future in a sustainable and socially responsible way. Frost & Sullivan in partnership with Frost & Sullivan Institute enthusiastically acknowledges and celebrates their contributions.

Once again, congratulations on your accomplishments, and we wish you great success in the future.

Sincerely,

David Frigstad

Chairman, Frost & Sullivan and Executive Director, Frost & Sullivan Institute



## Best Practices Criteria for World-Class Performance

Frost & Sullivan Institute leverages Frost & Sullivan's rigorous analytical process to evaluate multiple nominees for each recognition category before determining the final recipient. The process involves a detailed evaluation of best practices criteria for each nominated company. Chart Industries excels in multiple criteria.



## Why Now?

The world is at a tipping point, with climate change, AI advancements, and geopolitical instability transforming our reality. As we face record heat, melting icebergs, and job disruption due to AI, the need for innovative solutions has never been greater. Companies must now rise to the challenge, pioneering bold and transformative solutions that not only tackle these global crises but also pave the way for a resilient and sustainable future. The Frost & Sullivan Institute's Enlightened Growth Leadership Best Practices Recognition celebrates organizations committed to tackling these pressing global challenges. By aligning their business practices with sustainable growth, companies like Chart Industries have demonstrated leadership in innovation and long-term success.

Chart Industries is a global leader in the design and manufacturing of engineered equipment for the industrial gas, energy, and life sciences markets. The company specializes in cryogenic and non-cryogenic equipment, including storage tanks, vaporizers, and heat exchangers. With a focus on innovation and sustainability, Chart Industries serves a diverse range of industries worldwide. Headquartered in Ball Ground, Georgia, the company operates globally with facilities across North America, Europe, and Asia.



## Why You?

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### *'Innovating to Zero' on Global Priorities*

Chart Industries has aligned its core business strategy with some of the world's most pressing global priorities: sustainability, energy transition, and the reduction of greenhouse gas emissions. As an industry leader in the design, manufacture, and service of equipment for the production, storage, and distribution of cryogenic gases, Chart is uniquely positioned to address the challenges of the clean energy revolution.

A central focus of Chart's innovation is on the hydrogen economy. The company has been at the forefront

*"Chart Industries is leading the way in carbon capture, utilization, and storage (CCUS) technologies. The company's advanced cryogenic systems play a crucial role in capturing carbon dioxide (CO<sub>2</sub>) emissions from industrial processes and power plants. By safely and efficiently storing CO<sub>2</sub>, Chart helps businesses meet climate goals and regulatory requirements while contributing to the global effort to mitigate climate change which is the need of the hour."*

**-Shreya Ghimire, Research Analyst, Frost & Sullivan Institute**

of developing advanced technologies for hydrogen production, storage, and distribution. In 2023, Chart Industries announced a breakthrough in hydrogen liquefaction technology, which enables the efficient, cost-effective transport of hydrogen across long distances. This innovation is crucial to accelerating the global adoption of hydrogen as a clean fuel alternative, supporting industries such as transportation, energy, and manufacturing in their transition to decarbonized operations.

In addition to its work in hydrogen, Chart has been instrumental in the growth of liquefied natural gas (LNG) infrastructure, which plays a pivotal role in global energy security and transition. By making LNG more

accessible and economically viable, Chart helps reduce reliance on coal and oil while supporting the global shift toward cleaner fuels. Through its solutions, the company has enabled LNG to become a bridge fuel that facilitates a smoother energy transition and reduces the carbon footprint of industries like transportation and power generation.

The Frost & Sullivan Institute appreciates Chart Industries for leading the way in carbon capture, utilization, and storage (CCUS) technologies. The company's advanced cryogenic systems play a crucial role in capturing carbon dioxide (CO<sub>2</sub>) emissions from industrial processes and power plants. By safely and efficiently storing CO<sub>2</sub>, Chart helps businesses meet climate goals and regulatory requirements while contributing to the global effort to mitigate climate change.

### *Growth Excellence*

Chart Industries has demonstrated exceptional growth excellence by expanding its product portfolio and investing in new markets, all while staying true to its mission of sustainability and decarbonization. In February 2024, Chart Industries reported record-breaking performance across various metrics in its fourth quarter and full year 2023 financial results. Highlights included record orders, sales, backlog, gross profit, operating income, and adjusted earnings per share. The company exceeded its year-one synergy targets



following the Howden acquisition, achieving \$529.9 million in commercial synergies and \$181.4 million in cost synergies to date.

The company's commitment to growth is evident in its continued investments in R&D and technology development. Chart has expanded its innovation efforts through strategic partnerships with other leaders in the clean energy sector, including collaborations with Air Products and Shell to advance the hydrogen economy. These partnerships are designed to develop scalable solutions for hydrogen production, storage, and distribution, accelerating the transition to a hydrogen-powered world.

Additionally, Chart's expansion into international markets has further strengthened its global presence. In Oct 2023, Chart Industries, Inc. completed the divestiture of Cofimco s.r.l. ("Cofimco") to PX3 Partners, a renowned London-based private equity firm, for around \$80 million. This signifies Chart's strategic move to streamline its portfolio and focus on its core businesses in line with its commitment to delivering clean energy and industrial solutions worldwide.

The Frost & Sullivan Institute commends Chart Industries for its impressive growth trajectory and strong financial performance. The company's focus on growth and innovation has led to significant achievements and solidified its leadership position in the industry.

### ***Integrated Coopetition - Industry Partner Ecosystem***

Chart Industries has allied with global leaders in the energy, technology, and industrial sectors to accelerate the commercialization of its solutions. These collaborations help Chart expand its reach, integrate complementary technologies, and drive forward its sustainability objectives.

In Mar 2024, Chart Industries announced a collaboration with GasLog LNG Services Ltd. to explore the development of a commercial-scale liquid hydrogen (LH2) supply chain. Leveraging GasLog's expertise in liquefied natural gas (LNG) shipping and Chart's experience in cryogenics and liquefaction solutions, the partnership aims to support the establishment of LH2 supply chains from export markets in the Middle East to European and Asian destinations. This collaboration underscores a growing industry shift towards LH2 supply chains, signaling Chart's commitment to advancing sustainable energy solutions.

Frost & Sullivan Institute commends Chart Industries on its partnerships that reflect their strategy of leveraging the strengths of complementary businesses to drive industry-wide innovation while maintaining its competitive edge in the market.

## **Conclusion**

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Chart Industries exemplifies what it means to lead in both innovation and sustainability. Through its innovative work in hydrogen, LNG, and carbon capture technologies, the company is playing a pivotal role in helping industries transition to a cleaner, more sustainable future. Chart's growth excellence, commitment to environmental stewardship, and strategic partnerships underscore its position as a global leader in the clean energy sector.



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The Frost & Sullivan Institute awards the “2024 Enlightened Growth Leadership Best Practices Recognition” to Chart Industries for its leadership in advancing the energy transition and decarbonization efforts worldwide. By consistently pushing the boundaries of innovation, expanding into new markets, and embracing integrated coopetition, Chart is not only securing its own future but also contributing to the development of a more sustainable and resilient global energy system. As Chart continues to scale its solutions and expand its global reach, it remains a key player in the transformation of the energy landscape and the creation of a sustainable world for future generations



## What You Need to Know about the Enlightened Growth Leadership Recognition

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Frost & Sullivan Institute's Enlightened Growth Leadership Best Practices Recognition identifies the company that addresses the global priorities as identified by the Institute and demonstrates sustainable growth in the industry.

### Best Practices Recognition Analysis

For the Enlightened Growth Leadership Best Practices Recognition, Frost & Sullivan analysts independently evaluated the criteria listed below.

**'Innovating to Zero' on Global Priorities:** The company demonstrates proactivity in 'Innovating to Zero' in terms of one or more of the following global priorities that form the seven pillars of the Frost & Sullivan Institute:

- i) **Environment:** Environmental initiatives can include climate change, vulnerable groups, behavioral change, international governance, waste management, or others.
- ii) **Education:** Education can encompass equal access, gender parity, EdTech, quality education, education resources, vocational training, or others.
- iii) **Infrastructure:** Infrastructure can incorporate infrastructure as a basic right, technology and infrastructure, environment and infrastructure, urban infrastructure, and financing models, among others.
- iv) **Healthcare:** Healthcare can comprise healthcare crisis, mental health, finance, healthcare systems, advanced healthcare, and technology and healthcare, among others.
- v) **Security:** Human security can refer to transnational governance, human security, food security, or others.
- vi) **Human Rights:** Human rights can involve governance, special group rights, justice, or other such elements.
- vii) **Economics:** Economics can pertain to inequality, new economic regime, FinTech, behavioral change, or others.

**Growth Excellence:** The company demonstrates healthy growth over a span of 10 years. It focuses on short-term and long-term growth strategies to maintain a superior industry position. The executive team's vision aligns with the company's growth strategy, effectively translating this vision into growth. The socially responsible organization enforces strategies to increase its share of the customer wallet, successfully differentiating itself from competitors and positively impacting its market share. It also adopts strategies to build upon achieved growth and sustain continued growth while highlighting best practices for sustainable development.

**Customer Value Chain:** The company pays heed to the planet's well-being and addresses environmental initiatives such as climate change, carbon footprint reduction and elimination, waste management, or clean energy production. Its key value proposition is refined by building on client feedback and continuously improving products and services. The organization prioritizes its customers' needs and



provides significantly greater value for the price. It offers exceptional customer value by providing the best purchase experience to customers, placing importance on providing a high degree of satisfaction amongst existing and potential clients, or ensuring the best and differentiated service experience.

**Integrated Coopetition - Industry Partner Ecosystem:** The company makes use of unique business models such as corporate partnerships and public-private collaborations to boost the industry partner ecosystem. By combining business sense with a moral imperative, the company demonstrates aspirational ideals beyond the simple goal of generating profits. The organization's efforts to cooperate with competitors reveal its cognizance of a broader vision and endeavors towards positively impacting the overall industry.

**Technology Leverage/Innovation:** The company incorporates or uniquely leverages technology, standing out among the competition. The technology addresses key future needs and applications and is disruptive to or supersedes existing technologies. The company's technology or technology leverage can be diversely applicable or has created new markets or applications where none existed before. It has introduced creative features and functionality by jumping through hoops to convert its vision into a reality. The organization has a structured process or best practices to incubate new technologies developed internally or through strategic partnerships. The company's innovations or technology incorporation has the potential to become an industry standard.





## About Frost & Sullivan Institute

Frost & Sullivan Institute (FSI) is a non-profit organization dedicated to utilizing business practices to address global priorities. The genesis of the institute goes back to our vision of either creating or becoming part of a solution that addresses threats to humanity. Frost & Sullivan Institute has identified strategic imperatives for transformation and believes that by using a Socratic approach, we can truly accelerate innovation to zero. The Institute works in collaboration with leading analyst teams, its internal research team, industry experts, and other partners. It works closely with Frost & Sullivan Inc. to leverage in-house thought leadership in order to identify opportunities for transformation that will arise from innovation, disruptive technologies, and overarching megatrends that will alter the world as we know it today. To learn more about FSI, visit <https://www.frostandullivaninstitute.org/>.

## 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™.



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***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



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

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





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