FROST & SULLIVAN

Customer Value Leadership Award

niagara⁴

Smart Building Integration
NORTH AMERICA

Contents

Letter of Congratulations

I am proud to present Tridium's Niagara 4 team with this year's Award for Customer Value Leadership in the smart building integration industry.

Frost & Sullivan's global teams of analysts and consultants research a wide range of markets across multiple industries and regions, and identify companies that consistently deepen customer relationships by offering superior products and services that deliver a clear, demonstrable return on investment. Against the backdrop of extensive primary and secondary research across the entire value chain, Frost & Sullivan is pleased to recognize Tridium as the Customer Value Leader in the smart building integration industry.

Achieving leadership in customer value is never an easy task, and it is made even more difficult considering today's competitive intensity, customer volatility, and economic uncertainty—not to mention the difficulty of innovating in an environment of escalating challenges to intellectual property. In this context, your receipt of this award signifies an even greater accomplishment.

Frost & Sullivan recognizes that this accomplishment is the result of many employees, customers, and investors making daily choices to support your organization and contribute in a meaningful way to its future.

I enthusiastically acknowledge and celebrate these achievements, and wish you great success in the future. Frost & Sullivan is here to support you on any future.

Sincerely yours,

David Frigstad
Chairman
Frost & Sullivan

Background and Company Performance

Industry Challenges

Today, there is a strategic move from traditional building automation systems (BAS) to smart automation systems that incorporate seamless integration of various building controls and media on a single platform. This approach optimizes the use of multiple functions as and when required at a given time frame.[1] Factors contributing to the growth of this trend include Internet of Things (IoT) transformation, the rising adoption of building automation technology, developments in communication technologies, massive growth in building automation centric wireless protocols, and a market increase of emerging countries that are developing infrastructure technologies.

An intelligent building transcends system and sub-system integration to achieve interaction, in which, the previously independent systems work collectively to optimize the building's performance and constantly create an environment that is most conducive to the occupants' goals. Additionally, fully interoperable systems in intelligent buildings tend to perform better, cost less to maintain, and leave a smaller environmental footprint than individual utilities and communication systems. The end goal for any smart building is to conform to a fully dynamic environment that responds to occupants' changing needs and lifestyles. As technology advances and as information and communication expectations become more sophisticated, networking solutions, both converge and automate the technologies to improve responsiveness, efficiency, and performance. To achieve this efficiency, an intelligent building combines data, voice, and video with security, heating, ventilation, air conditioning, and refrigeration, lighting, building controls, and other electronic controls on a single Internet protocol (IP) network platform that facilitates user management, space utilization, energy conservation, comfort, and systems improvement.[2]

A vast majority of buildings still lack in fully integrated and interoperable systems. There is a growing demand for bringing disparate systems together, making integration possible, and helping deliver a seamlessly integrated experience. To achieve this, companies need to update the systems and business models with necessary changes to have more flexible and dynamic system offerings with innovative open-source platforms that can allow a variety of different applications to run on them.

Frost & Sullivan finds the BAS market growth is significantly driven by the quantifiable energy efficiency realized from proper system integration with interoperability that ensures better visibility into systems' performance to help preemptively optimize the building's functioning.

Despite favorable technological advances propelling building technology industry growth, there remain key challenges to overcome, such as connecting conventional facilities and legacy systems with open systems to transform into intelligent buildings—enabling higher efficiencies, lower costs, and greater returns on investment.

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[1] *European Building Automation Systems (BAS) Market, Forecast to 2025,* (Frost & Sullivan, October 2019)
[2] *The Best Practices Technology Showcase for Intelligent Buildings,* (Frost & Sullivan, November 2013)

Customer Impact and Business Impact of Tridium

Leading the Way in Business Application Frameworks: Connecting Minds and Machines

Headquartered in Richmond, Virginia, Tridium, Inc. (Tridium) leverages over two decades of experience to be a leading company in business application frameworks. An independent business entity of Honeywell International, Inc., Tridium provides pioneering software, the Niagara Framework® (Niagara), which acts as the basis for connecting devices and enables IoT growth.

Tridium's Niagara is a complete management and control solution, dedicated to connecting buildings and enterprises. Niagara facilitates better energy management, enhances security and operational excellence, lowers costs, and enables end-to-end efficiency across various industries and applications such as BAS, data centers, industrial, smart cities, and governments. Niagara is manufacturer-agnostic and communication-protocol agnostic, integrating diverse systems and devices into a unified platform.

Niagara supports building owners and facility management, as it preserves existing investments and integrates them with new technologies while enabling access and control of all diverse systems through any standard Web browser. As a result, conventional facilities transform into intelligent buildings, enabling higher efficiencies, lower costs, and greater returns on investment. Furthermore, Niagara combines information from different systems to optimize facility management, while specifying interoperable systems and applications from multiple vendors; thus, eliminating vendor lock.[3]

With its industry-leading performance, Tridium fulfils a unique niche in the smart buildings market by helping customers experience a connected and autonomous environment seamlessly, navigating legacy and open systems harmoniously and cost-effectively. Tridium's Niagara revolutionizes how building automation is achieved without a significant cost burden to the building owner. At the heart of its success lies a solid initiative to bring a highly fragmented value chain of system integrators and installers to work in a cohesive and complementary manner to deliver a strong value proposition to the customer. Tridium's success stems from striking the right balance to allow reseller partners and systems integrators to deliver on their core competencies, while offering a truly innovative integration software platform that makes that delivery process highly successful for them and their clients.

Bringing Exceptional Value to Customers

Tridium's market and technology leadership is the result of aligning its powerful capabilities and resources to optimize a building owner's asset performance. Tridium leverages a solid reseller partner community to deliver its value proposition to its customer base. Tridium's achievements in delivering the ultimate smart building experience via seamless interoperability and integration in an IoT-enabled smart buildings environment is in part due to its strategic approach to engage this reseller partner community that helps deliver

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[3]*A global Leader in Building Automation,* https://www.tridium.com/en/products-services/building-automation, accessed November 2019

this experience to the building owners and operators.The company actively pursues its organic growth while continuously developing market expertise, specifically, through efficient partnerships; by collaborating with others, the company discovers new ways to improve its competence. Notably, Tridium launched a new industrial IoT (IIoT) solution developed in partnership with Dell and Intel Corporation. The IIoT solution is built on the Niagara Framework®, and combines software and consulting services to support customers in their digital transformation journey while bringing improved operational efficiency and product quality.[4]

The company understands that open protocols enable faster processes. Therefore, Tridium leverages open protocol standards to optimize building operations without requiring advanced expertise in all areas. Niagara helps facility managers and building owners understand the building's maintenance costs: it provides end-to-end facility visibility—connecting all systems into one framework. Also, Tridium's Niagara solves the challenge of enormous data streams, as it connects and controls nearly any device while converting and visualizing various data from the connected systems. The framework is a truly open platform that helps optimize performance of any connected system.

Niagara connects the enterprise to provide better energy management, enhanced security, operational excellence, lower costs, and end-to-end efficiency across multiple industries. As a result, Niagara creates a massive community of machines, people, and companies with thousands of applications and analytical possibilities.

Tridium nurtures close relationships with partners and customers to understand their critical needs and how they shift. The Niagara Community acts as a robust knowledge base and an effective tool for communication with customers, which allows them to share thoughts or feedback on feature enhancements and proposals for further product development. As a result, customized solutions enable smarter and more efficient operations for various applications.

Furthermore, an important part of Tridium's strategy is to educate its reseller partners. Specifically, through Tridium University, the company educates the Niagara Community with leading instructors and certified training reseller partners. The training courses in various locations worldwide are complemented by e-learning courses to offer convenience and value. Tridium focuses on a mutually beneficial relationship with customers and partners to ensure best-in-solutions delivery.

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[4] *Tridium announces technology collaboration with Dell and Intel to provide IIoT software solution, consulting support for manufacturers,* https://www.tridium.com/en/resources/press, accessed November 2019

Conclusion

Today, there is a growing challenge of creating seamless integration in smart buildings, since properly integrating systems and processes in smart buildings deliver long-term savings. Responding to these growing demands, Tridium introduced Niagara, a complete management and control platform, dedicated to connecting the buildings and enterprises, combined with the advantages that the Internet of Things enablement can deliver. The company has built a solid partner approach in delivering a complete smart building experience. Tridium continues to enhance customer experience while seamlessly integrating the legacy and open systems, most harmoniously and cost-effectively. Niagara connects the enterprise to provide better energy management, enhanced security, operational excellence, lower costs, end-to-end efficiency, and greater returns on investment across multiple industries.

With its commitment to continuous innovation and customer-centric approach, coupled with its strong overall performance, Tridium earns Frost & Sullivan's 2020 North America Customer Value Leadership Award in the smart buildings integration market.

Significance of Customer Value Leadership

Ultimately, growth in any organization depends upon customers purchasing from a company and then making the decision to return time and again. Delighting customers is, therefore, the cornerstone of any successful growth strategy. To achieve these dual goals (growth and customer delight), an organization must be best-in-class in three key areas: understanding demand, nurturing the brand, and differentiating from the competition.

- Shift competitors' customers
- Increase renewal
- Increase upsell
- Customer value
- Increase market penetration

- Increase equity
- Improve recognition/recall
- Inspire customers
- Value leadership
- Clarify value proposition

DEMAND

BRAND

Customer Value Leadership

COMPETITIVE POSITIONING

- Clarify superior positioning
- Superior value to customers
- Competitors fall behind
- Best implementation
- Value mapping

Understanding Customer Value Leadership

Customer Value Leadership is defined and measured by two macro-level categories: Customer Impact and Business Impact. These two sides work together to make customers feel valued and confident in their products' quality and long shelf life. This dual satisfaction translates into repeat purchases and a high lifetime of customer value.

Key Benchmarking Criteria

For the Customer Value Leadership Award, Frost & Sullivan analysts independently evaluated two key factors—Customer Impact and Business Impact—according to the criteria identified below.

Customer Impact

Criterion 1: Price/Performance Value
Criterion 2: Customer Purchase Experience
Criterion 3: Customer Ownership Experience
Criterion 4: Customer Service Experience
Criterion 5: Brand Equity

Business Impact

Criterion 1: Financial Performance
Criterion 2: Customer Acquisition
Criterion 3: Operational Efficiency
Criterion 4: Growth Potential
Criterion 5: Human Capital

About Frost & Sullivan

Frost & Sullivan, the Growth Partnership Company, enables clients to accelerate growth and achieve best-in-class positions in growth, innovation and leadership. The company's Growth Partnership Service provides the CEO and the CEO's Growth Team with disciplined research and best practice models to drive the generation, evaluation and implementation of powerful growth strategies. Frost & Sullivan leverages more than 50 years of experience in partnering with Global 1000 companies, emerging businesses, and the investment community from 45 offices on six continents. To join our Growth Partnership, please visit http://www.frost.com.

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