Quantum Automation Recognized for

2021

Competitive Strategy Leadership

Southeast Asia Building Automation Industry Excellence in Best 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. Quantum Automation excels in many of the criteria in the building automation space.

AWARD CRITERIA	
Strategy Innovation	Customer Impact
Strategy Effectiveness	Price/Performance Value
Strategy Execution	Customer Purchase Experience
Competitive Differentiation	Customer Ownership Experience
Executive Team Alignment	Customer Service Experience
Stakeholder Integration	Brand Equity

Energy-efficiency Drives Growth Opportunities in the Market

Frost & Sullivan's independent research exhibits that the building automation system (BAS) market in Southeast Asia (SEA) continually develops with an assorted bag of opportunities. There is a high degree of regional variance related to market growth and, therefore, demand. This diversity entails tailored solutions based on the requirements of both the region and end user. The escalated urbanization in SEA enables the development of various industries, such as transportation, housing, and infrastructure. These industries offer opportunities for innovative and technological expansion. The BAS industry has advanced along these lines to surpass the conventional "heating, ventilation, air condition segment to cover lighting, fire safety, and security," combined with the most recent addition, energy management.

There are considerable expansion opportunities for BAS providers. Activities, such as constructing premium residential and commercial buildings in SEA's Tier 2 and 3 cities, require BAS technology. The BAS providers address this rise in automation demand by implementing a service-oriented model instead of a product-driven method. Energy savings are a significant growth factor in this market as increasing energy costs and improved comfort level requirements in buildings facilitate unswerving growth prospects for BAS companies. Competitive differentiation has become significant with the overall market development in SEA, and value-added services (e.g., training and free maintenance) introduce competitive benefits.

¹ Building Automation System Market in Southeast Asia, Forecast to 2023 (Global Energy & Environment Research Team at Frost & Sullivan, May 2019)

Sustained Customer Relations and Customized Solutions Augment Retention and Loyalty

"The company's excellence in customer satisfaction reflects through its customers' esteemed recommendation letters, emphasizing QA's solutions and services' high standards."

-Iqra Azam, Best Practices Research Analyst

Quantum Automation (QA), a leading Singapore-based System Integrator company, offers various solutions and systems, such as Integrated Building Management System (IBMS) and Integrated Security Management System (ISMS), Building Automation Systems (BAS), Security Management Systems, Facilities Management System, Smart Home Automation System and Fire Safety System. It aims to facilitate the best technological solutions in the engineering design process, system deployment, project commissioning,

and maintenance facilities for various market segments such as Mixed development buildings, Government institutions, Educational campus, Hospitality, Data centers, Health & Science & etc. It also offers solutions for sustainable green buildings with their systems widely deployed in many Green certified (Platinum Green Mark & L.E.E.D. platinum) buildings. QA's advanced and unique system solutions address different customers' requirements by integrating various systems through its expertise in hardware engineering, adaptability in software programming, and driver designs in turnkey projects. The company's excellence in customer satisfaction reflects through its customers' esteemed recommendation letters, emphasizing QA's solutions and services' high standards.

QA improves cost competitiveness while adhering to customers' design requirements and expectations. It has a customer satisfaction matrix (CSM) monitored by the key management team. To deliver a seamless experience, its account managers conduct routine follow-ups (physical and virtual) with customers in Singapore and other countries. QA leverages all feedback and suggestions to boost its existing projects' progress, addressing ever-evolving requirements and sustaining relationships. Customers also experience a strong sense of ownership as the company respects their individual opinions and facilitates unique customer journeys. After listening attentively to customers' creative ideas, QA applies its technical knowledge and expertise to develop/deliver customized products. Moreover, all feedback goes to CSM for detailed reviews. The account managers address any negative responses and rapidly perform the restorative measures, sustaining a high customer retention rate. QA emphasizes its motto, "Never say no," to reinforce loyal and reliable customer relations. The company also leverages its existing customers' positive and constructive feedbacks to acquire new customers. Frost & Sullivan acknowledges the company's commitment to a customer-centric business model, encouraging new ideas and executing them purposefully.

To sustain its strong market position, QA focuses on open and cutting edge future-proof systems. This approach allows the company to plan its designs and upgrades ahead of time, preparing for potential future issues. It also enables QA to embrace & integrate new technologies as market trends shift. Additionally, the company's research and development (R&D) capabilities implement a three-dimensional access control user interface (UI); a facial recognition system, Bluetooth technology and a quick response QR code technology to drive emerging growth opportunities during the midst of global Covid pandemic. This three-dimensional user interface (UI) integrates with the customers' visitor management, building security systems and Lift systems. It verifies every tenant's and visitor's identity,

helps customers reduce queues at the registration counters, and authenticate visitors & tenants access to their destination floor via contactless experience. This UI leverage on the access control highest encryption and security standards and their customers actively endorse and recommend it.

In addition to R&D, QA capitalizes on regional expansion in Indonesia, Malaysia, Thailand and Vietnam to solidify its footprint, expanding its distinguished and diverse customer base (Mixed development buildings, Government institutions, Educational campus, Hospitality, Data centers, Health & Science, etc. Frost & Sullivan recognizes the company for leveraging its future-proofed capabilities and R&D expertise to establish a prominent regional presence.

"Most of our systems are bespoke to meet different customer requirements, which demand having our strong domain knowledge and own R&D, the key to our success. Our agility in satisfying evolving customer needs allows us to compete with multinational companies – and win. Where there's a niche, we'll build the products."

- Ng Cheng Leng, Managing Director, Quantum Automation²

Integrated Technology and New Ventures Build a Solid Brand Image

"Frost & Sullivan applauds QA for introducing technology-integrated solutions and services that address the market's constantly changing needs, establishing customer and brand loyalty."

- Iqra Azam, Best Practices Research Analyst QA boosts its brand image by employing smart building developments and machine learning tools that analyze building systems and equipment performance. By acquiring many smart building projects in SEA, the company ameliorates its brand equity in the entire region. For instance in one of their recent prominent Smart building projects, QA analyzed and studied its customer requirements through elaborate verbal discussions and designed a tailored platform that fixed the integrations puzzles to different third-party

systems, actively monitors any critical system's errors, and facilitates real-time incident management workflows. The company maintains excellence in operations by emphasizing in-house and overseas training for its employees. These training sessions help the staff understand QA's policies and update them on new developments to ensure efficient customer service. Moreover, the company also provides training for its customers at different levels, allowing them to leverage the full advantage of QA's solutions and services.

The company persistently upgrades and expands its solutions and services to keep up with market developments. It has introduced a stringent quality assurance process that entails different tests, such as climatic chamber test (temperature and humidity), input/output accuracy, and functional and network stability and reliability.

² http://www.qa.com.sg/quantum-automations-intelligent-systems-help-companies-boost-operational-performance/

QA develops and manufactures their Direct Digital Controllers (DDC), incorporating comprehensive smart control algorithms to optimise HVAC & Electrical equipment energy efficiency, enabling their clients to manage their building energy performance more effectively.

Their DDCs have the flexibility to customize programming modules to suit technological advancement demands such as enhancing the building's sustainability goals. One such module is their data analytic module which using machine learning to monitor the interfaced equipment performance through abnormalities & fault detection and anticipating equipment failure, notifying building operator before issue arises and minimizing impacts and downtime to the building's operation.

Additionally, QA provides the technology of Access Control System, QA-iAC Series controller, an efficient and exclusive two or four-door access control solution with a built-in capacity of 20,000/30,000 cardholders and 200,000 events³. It is easy to install, operate, and monitor. Its built-in communication interface is highly dynamic as it complements any combination of proximity, biometric, and smartcard readers technologies.

Frost & Sullivan applauds QA for introducing technology-integrated solutions and services that address the market's constantly changing needs, establishing customer and brand loyalty.

Conclusion

Quantum Automation (QA) is a promising provider of unique building automation solutions and services in Southeast Asia. The company solidifies its market position with its reliable, technology-integrated, and customizable capabilities. The company has set itself apart in rolling out new advance technologies, maintaining a continuous focus on customer experience, ensuring regular engagement and all-inclusive training sessions. QA's versatile solutions and services portfolio allows individual designs for every customer. The company's dynamic customer base is a testament to the excellence and quality of its services. QA also emphasizes green buildings projects, promoting environmental sustainability. It leverages the existent customers' recommendations to acquire new customers, sustaining a high retention rate. With its particular focus on employee training, QA ensures a seamless customer experience.

With its customer-centric commitment, cutting-edge solutions, and excellence in implementation, Quantum Automation earns Frost & Sullivan's 2021 Southeast Asia Competitive Strategy Leadership Award in the building automation industry.

³ http://www.qa.com.sg/qa-card-access-controller/

What You Need to Know about the Competitive Strategy Leadership Recognition

Frost & Sullivan's Competitive Strategy Leadership Award recognizes the company with a stand-out approach to achieving top-line growth and a superior customer experience.

Best Practices Award Analysis

For the Competitive Strategy Leadership Award, Frost & Sullivan analysts independently evaluated the criteria listed below.

Strategy Innovation

Strategy Effectiveness: Effective strategy balances short-term performance needs with long-term aspirations and overall company vision

Strategy Execution: Company strategy utilizes Best Practices to support consistent and efficient processes

Competitive Differentiation: Solutions or products articulate and display unique competitive advantages

Executive Team Alignment: Executive team focuses on staying ahead of key competitors via a unified execution of its organization's mission, vision, and strategy

Stakeholder Integration: Company strategy reflects the needs or circumstances of all industry stakeholders, including competitors, customers, investors, and employees

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 $^{\text{\tiny TM}}$.

Key Impacts:

Learn more.

- 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)



