Schneider Electric Recognized as the

2021

Company of the Year
Global Safety
Instrumented Systems Industry
Excellence in Best Practices

FROST & SULLIVAN

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. Schneider Electric excels in many of the criteria in the safety instrumented systems space.

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

Schneider Electric: Provider of Safety Instrumented Systems Technology

For almost four decades, Schneider Electric, headquartered in Rueil-Malmaison, France, has been at the forefront of providing cutting-edge safety instrumented systems (SIS) solutions for complex industrial safety and critical controls applications. By leveraging highly innovative SIS technology and with hands-on experience, the company outpaces its competitors and maintains an outstanding position among its clients in the SIS industry.

Notwithstanding harsh competition and a challenging economy, Schneider Electric advances its SIS technology, improving its position in the market and bringing its high-performance solutions to customers. In less than four decades, Schneider Electric has expanded its SIS customer base to 850 companies across 8,000 industrial sites in 80 countries. In December 2020, Schneider Electric invested $40 million to modernize its facilities and bring new product lines across the United States. Specifically, such a step enabled Schneider Electric to ensure new software and facility upgrades while strengthening its workforce by introducing new digital training and "up-skilling" opportunities.[1]

Schneider Electric also broadens its strategic cooperation with companies across different segments, including robotics (e.g., Staubil), energy (e.g., InnoEnergy, Alderon), and cybersecurity (e.g., Nozomi Networks). For example, in 2019, Schneider Electric partnered with Transpara, an American developer of real-time monitoring, visualization, and alerting software, to enable customers in operationally intensive

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[1] https://www.controlglobal.com/industrynews/2020/schneider-invests-40m-in-u-s-manufacturing/

industries like refining, energy, and mining to understand better and control their equipment critical assets.

Frost & Sullivan recognizes that Schneider Electric meets customers' needs and exceeds their expectations as clients value the top-performance and business impact of its SIS solutions:

Helping Companies with Effective Safety Instrumented Systems Solutions

Today, there is a growing number of threats to the safety and stability of industrial assets across different industrial applications. As a result, companies require adequate and reliable safety tools to enhance the efficiency of critical infrastructure and deliver superior protection for people, profits, and production during the entire life of industrial assets.

Schneider Electric is at the forefront of providing a suite of SIS hardware controllers and software applications that help clients achieve higher safety, efficiency, and cost-efficiency, unmatched by the competition. The company's Tricon CX product is its latest Triconex SIS controller solution and offers several competitive advantages, including:

Flexibility: The Tricon CX solution has a simple mechanical design enabling users to quickly and easily install and utilize it. In an industry where users place a premium on process uptime, users can replace modules online without disturbing the input/output modules or wiring. In turn, it is possible to have panel mounting of chassis without the need for swing frames. Additionally, clients have front access to Tricon CX without the need for rear access to any of the Tricon CX modules, connectors, or racks. Also, the solution's integrated 24 volt direct current power management and fusing ease power distribution and require less engineering, testing, and wiring.

As a result, such a practical and straightforward construction of the Tricon CX solution enables users to achieve lower costs while ensuring maximum flexibility and risk mitigation across high-hazard industries, which require safe and continuous operations.

Connectivity: Tricon CX solution supports high-performance input/output (I/O) bus, enabling effective end-to-end performance from input to controller and output. Moreover, each Tricon CX processor set can integrate up to 15 Tricon CX I/O chassis and 90 CX I/O modules, with the possibility of connecting up to 254 Tricon CX systems together. At the same time, Tricon CX can simultaneously support I/O buses in both serial and Ethernet protocols, providing a balance between cost efficiency and high performance thus enabling users to choose the media type ideally suited to their application or environmental requirements.

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Versatility: Clients can utilize Tricon CX solutions across many safety applications like boiler protection, turbine protection, emergency shutdown, fire and gas detection, burner management, turbomachinery control

and protection, and many others. At the same time, thanks to flexible system architecture, users require less design effort and training costs. Also, Tricon CX enables users to minimize cable and installation costs and lower overall capital expenditure.

Management: Clients can manage all programming and diagnostics, and sequence event data from one central location irrespective of the location or distribution of Tricon CX systems, enabling users to achieve higher efficiency and overall view of their safety systems. In this regard, users can acquire automatic status and health data on each module via the Diagnostic Expert software suite.

Performance: Clients also have access to the EcoStruxure Triconex suite of software applications, which is approved by the Technischer Überwachungsverein (Technical Inspection Association TÜV), enabling users to use them with the full awareness that they have been properly tested and certified for use in safety applications. Simultaneously, the intuitiveness and user-friendly design of these applications enables users to manage their safety functions with minimal training requirements.

Frost & Sullivan believes that the company's unmatched Tricon CX solution provides the efficiency and reliability required to meet and exceed the needs for industrial asset safety. With its high security, flexibility, and customization, Schneider Electric will continue their recent trend of growing their share of this vibrant and challenging market.

Helping Operators to Manage High-risk Conditions Effectively

Widely recognized for their safety controllers such as Tricon CX, Schneider Electric also offers software solutions that enable clients to ensure higher safety and reliability unmatched by the competition such as EcoStruxure™ Triconex™ Safety View and Triconex Safety Validator. Specifically, these two applications provide the following competitive advantages and benefits:

Performance: Safety View is the world's first software solution for effective bypass and alarm management which is TÜV-certified for usage across versatile safety applications. It is an effective online tool that enables users to reach full situational awareness of critical conditions across their assets. Specifically, it allows plant operators, shift supervisors, and maintenance engineers to detect any changes in critical processes or conditions requiring immediate attention. Safety View's functionality provides versatile contextual data to facilitate quick decision support and handling of operational risks, enabling users to replace expensive outdated hard-wired alarm panels and bypass-switch arrangements.

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Clear Visibility: Safety View operates independently from the automation system, enabling users to have clear visibility of priority alarms. At the same time, users can assign a sound and color to each alarm window while also receiving a detailed description, providing users with an understanding of the alarm to make well-informed decisions. In this regard, Safety View allows users to display up to five process variables per alarm. Furthermore, alarms are re-activated on shift handover, informing oncoming operators precisely what they need to monitor and manage so that critical alarms don't go unnoticed.

High Versatility and Efficiency: Safety Validator enables users to minimize costs and save time by lowering the effort required to validate Triconex application logic and document results. Specifically, this software solution helps users automatically verify the application functionality of the Triconex solution and automatically record the data. What makes this solution stand out is that it does not require any specialist programming, enabling users to configure Safety Validator swiftly for their specific test requirements, operating 50% faster than traditional manual testing.

At the same time, Safety Validator enables operators to deploy it across various applications such as fire and gas, boiler protection, and pipeline protection. Thus, users across power generation, chemicals, and energy industries can increase test efficiency while also saving substantial time and money.

Providing Diverse Customer Support

At the heart of Schneider Electric's success story is its determination to meet and exceed diverse customer needs. The company has at its disposal a global team of safety and critical control experts and engineering specialists aiding clients throughout the entire lifecycle of its SIS solutions. The team provides both on-site and off-site support to SIS clients, supporting them to utilize and customize SIS solutions seamlessly to comply with their specific requirements. Schneider Electric also offers different resources, e.g., informational data and workshops on SIS solutions, allowing clients to utilize SIS solutions at their industrial facilities more effectively.

Best Practice Example Confirms High-performance and Ultimate Reliability

Frost & Sullivan research analysts applaud Schneider Electric for the high-quality performance and efficiency of its SIS solutions as demonstrated by the following use case:[2]

Schneider Electric aided a global energy provider's US-based petroleum refinery that had a very limited shutdown period of five days. The client could not physically do the testing in the shutdown window time that was available. Hence, they looked for a different way to use software tools and applications to achieve speedy automated testing at their refinery. Schneider's Triconex Safety Validator enabled them to reduce test hours by 85%. Another benefit the client experienced was introducing feedstock back into their process four days earlier.

By utilizing Schneider's Triconex Safety Validator, the client that normally produces 330,000 barrels a day at refinery, could reduce operational downtime, allowing it to realize 1.2 million extra barrels of production revenue.

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[2] https://www.se.com/ww/en/download/document/998-20276313_GMA-US/

Conclusion

Today, there is a growing number of threats to the safety and stability of industrial assets across different segments of the economy. As a result, many companies require effective and reliable safety tools to enhance the efficiency and safety of critical infrastructure and deliver superior protection for people, profits, and production during the entire life of industrial assets.

An increasing number of companies across different industries look for tools to boost the safety and reliability of their critical assets. Schneider Electric leads the way by providing industry-leading safety instrumented systems to various companies globally, enabling quick and effective testing with efficiency and reliability unmatched by competitors. The company offers a suite of SIS solutions that combines supreme efficiency, security, and cost-savings.

With its unrivaled expertise and experience, innovation-driven solutions, and customer-centric approach, Schneider Electric earns Frost & Sullivan's 2021 Global Company of the Year Award in the safety instrumented systems market.

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

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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 on-going 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 six 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)**