

KNX **RECEIVES THE 2023** TECHNOLOGY INNOVATION LEADERSHIP AWARD

*Identified as best in class in the European smart home
and buildings communication protocol industry*



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. KNX excels in many of the criteria in the smart home and buildings communication protocol space.

AWARD CRITERIA	
<i>Technology Leverage</i>	<i>Business Impact</i>
Commitment to Innovation	Financial Performance
Commitment to Creativity	Customer Acquisition
Stage Gate Efficiency	Operational Efficiency
Commercialization Success	Growth Potential
Application Diversity	Human Capital

Market Overview

The European smart home and building automation systems (BAS) market is witnessing significant growth and evolution. BAS is crucial in enhancing energy efficiency, reducing operational costs, and improving occupant comfort in commercial, residential, and industrial buildings. Several factors are driving the increasing adoption of BAS in Europe. For example, the rising awareness of environmental sustainability and the need to comply with stringent energy efficiency regulations are compelling building owners and operations to invest in BAS solutions. The desire to create smart, connected, and advanced buildings also increases market expansion. The growing trend towards smart cities and integrating Internet of Things (IoT) devices further propels the demand for BAS. These systems allow consistent communication and coordination between various building subsystems, such as heating, ventilation, air conditioning (HVAC), lighting, security, and access control, resulting in optimal building operations and resource management.

Moreover, ongoing digitalization and the emergence of cloud-based solutions are providing new opportunities for BAS vendors to offer innovative and scalable solutions to customers. Integrating artificial intelligence and data analytics capabilities into BAS transforms building management, enables predictive maintenance, and improves overall system efficiency. However, the European BAS comes with challenges, including the initial high implementation costs and the complexity of retrofitting existing buildings with advanced technology. Additionally, the lack of standardized protocols for communication and interoperability between different BAS components can hinder seamless integrations and limit the scalability of solutions. However, the market outlook for BAS in Europe remains positive. The European

BAS market is poised to grow at a moderate compound annual growth rate of 2.6% from 2018 to 2025.¹ European businesses and building owners recognize the long-term benefits of BAS in terms of energy savings, operational efficiency, and occupant experiences, making building automation a key focus in the region.

KNX: An Industry Leader

Founded in 1999 and headquartered in Brussels, Belgium, KNX provides smart homes and building solutions. KNX is an open and globally recognized standard, ensuring interoperability and compatibility between different manufacturers' products. This standardization fosters a wide range of choices for customers and simplifies the integration and expansion of systems in various building types and applications. With over 30 years of experience, KNX has built a vast ecosystem of certified products and trained professionals, providing customers with confidence in the system's performance and support.

KNX addresses the lack of standardized protocols, aiding seamless integrations and boosting scalability for BAS solutions. The company adopts a robust, universal open standard, facilitating excellent communication between diverse building automation devices from different manufacturers. This

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***- Viswesh Vancheeshwar
Industry Principal***

approach ensures that KNX-compliant products can effortlessly interact with each other, allowing for easy integration and interoperability. Thus, building owners and operators can mix and match products from various vendors without compatibility concerns, reducing implementation complexities and costs.

KNX's commitment to continuous improvement and updates ensures that its protocols stay current with emerging technologies, enabling future-proof solutions that can adapt to evolving demands of the building automation industry. The collaborative efforts of KNX with industry leaders and partners also contribute to the growth of a diverse ecosystem of certified products,

enhancing the array of choices available to customers and ultimately fostering a more scalable and efficient building automation environment.

At the core of KNX's portfolio is its open and interoperable platform, which allows simple integration with various building systems, including lighting, HVAC, security, and access control. This flexibility empowers clients to create fully customized and future-proof solutions that optimize building performance, enhance energy efficiency, and elevate occupant experiences. The company's portfolio encompasses a variety of smart devices, sensors, controllers, and software applications, providing clients with an array of tools to design, implement, and manage sophisticated building automation systems. Whether automating lighting schedules, regulating temperature settings, or monitoring energy consumption, KNX equips users with the tools they need to transform buildings into intelligent and sustainable environments. By embracing

¹ *European Building Automation Systems (BAS) Market, Forecast to 2025* (Frost & Sullivan October 2019)

emerging technologies, such as IoT and artificial intelligence, the company empowers clients to embrace the latest advancements.

KNX's dedication to open standards and interoperability sets it apart from proprietary systems, fostering a strong community of developers and manufacturers and contributing to its growth and adaptability. The platform's focus on international standardization enables it to maintain a global presence, catering to diverse markets such as architecture, construction, offices, e-commerce, and manufacturing. Furthermore, the company invests in extensive training and certification programs for professionals, ensuring a skilled workforce that can effectively design, install, and maintain KNX-based systems. This emphasis on education and expertise enhances customer satisfaction and KNX's reputation as a reliable and trusted solutions provider in the BAS industry.

“From commercial buildings, educational institutions, and healthcare facilities to residential spaces, KNX’s technology showcases its ability to optimize energy usage, enhance occupant comfort, and promote sustainability. Whether implementing smart lighting, HVAC controls, security systems, or intelligent energy management, the KNX standard meets the diverse needs of different building types and sizes.”

**- Mia Martinez-Palacios
Best Practices Research Analyst**

KNX commits to creativity by constantly exploring new ways to enhance the functionality and versatility of its building automation solutions. The platform encourages developers, engineers, and partners to innovate and create novel applications that push the boundaries of smart building technology. Plus, the company fosters a culture of collaboration and knowledge-sharing within its community, inspiring members to exchange ideas when navigating the community tab on the KNX website. Furthermore, KNX's research and development team advances building automation technology to create cutting-edge solutions. By embracing creativity and staying at the forefront of innovation, the company positions

itself as a leading force in the ever-evolving field of smart and sustainable buildings.

Strategic Excellence

Since its launch, KNX has grown to 500 manufacturers, 116,689 partners, and 45 national groups in many countries that promote the company in different regional markets. Leveraging its commercial success, the company reinvests in research and development initiatives, further enhancing its building automation technology and expanding its product offerings. KNX's financial stability and market leadership enable it to attract industry leaders and forge strategic partnerships, driving the global modernization and adoption of KNX solutions. Moreover, the company consistently strengthens its brand presence and engages in marketing and educational campaigns that promote the benefits of its open and interoperable platform, fostering a loyal customer base. KNX also invests in customer support and training programs, ensuring users receive the highest service and expertise and reinforcing its position as a reliable and customer-centric provider in the building automation industry.

KNX's use cases are prime examples of the platform's versatility and effectiveness in real-world applications, showcasing how its automation solutions integrate with different building systems to optimize energy usage, enhance occupant comfort, and promote sustainability. One example is the Martinhal Residences, a luxury apartment development and hotel located in Parque das Nações, Lisbon,

which sought a cutting-edge system that easily integrates with diverse communication protocols prevalent in modern buildings.² The client's objective was to achieve scalability and efficiency by incorporating IoT technology into the Martinhal Residences. After careful consideration, KNX emerged as the primary choice for its unparalleled versatility, compatibility, and various media options. Moreover, KNX's diverse selection of user-visible equipment designs perfectly complemented the project's vision, providing residents and guests with an unparalleled experience in comfort and convenience. By embracing KNX, Martinhal Residences has harnessed the power of smart technology and set a new standard in modern living, where intelligent solutions and luxurious living harmoniously converge. This case demonstrates how the company's open and interoperable technology integrates with different building systems, enabling efficient control and management.

The Medieval Castle at Sea in Soynio, Greece, serves as another example where the client aims to implement a smooth automation system, overcoming the challenge of the castle's classic structure.³ The client integrated KNX's technology to achieve a smart building without compromising the castle's architecture. The castle's operations were modernized, with control functions embedded into buttons that resemble the shape and color of stones that add to the castle's timeless visuals. Visitors can leverage the power of smartphones and tablets as the control functions are user-friendly, ensuring that modern convenience meets ancient grandeur. Green energy practices have been fervently adopted as a testament to sustainability and environmental consciousness, further exemplifying the castle's commitment to a future where efficiency and historical aesthetic are in perfect harmony.

From commercial buildings, educational institutions, and healthcare facilities to residential spaces, KNX's technology showcases its ability to optimize energy usage, enhance occupant comfort, and promote sustainability. Whether implementing smart lighting, HVAC controls, security systems, or intelligent energy management, the KNX standard meets the diverse needs of different building types and sizes. These cases demonstrate KNX's commitment to delivering innovative, user-friendly solutions that create future-ready environments. Frost & Sullivan anticipates rapid, widespread technology adoption. The company's first-mover status strengthens its position on emerging opportunities.

The Heart of KNX: Its People

KNX's human capital is behind the company's success and industry leadership. Comprised of highly skilled and dedicated professionals, KNX's team brings diverse expertise in various fields, including engineering, technology, design, and customer service. The company strongly emphasizes investing in human capital through continuous training, professional development, and knowledge-sharing initiatives. This commitment to nurturing talent ensures that KNX's workforce remains current with industry trends and technological advancements. The company's collaborative and innovative work culture fosters creativity. It encourages employees to think outside the box, leading to the development of cutting-edge solutions that address the ever-evolving needs of the building automation market. With this passionate and talented team driving its operations, KNX is well-equipped to provide exceptional products, services, and support to its global customer base.

² <https://projects.knx.org/en/detail/PRJ002802>

³ <https://projects.knx.org/en/detail/PRJ002828>

Innovative Technology Provides Sustainable Leadership

With its customer-led strategy, KNX consistently brings to market best-in-class technology with a portfolio of more than 400 products. The company capitalizes on its well-established brand, reputation, and industry recognition by leveraging its market leadership, innovative solutions, and extensive ecosystems to attract potential customers. As a global standard for building automation, KNX's strong presence in the market instills confidence in businesses and organizations seeking reliable and future-proof solutions. In addition, its successful implementations and track record of delivering high-quality products and services make it a preferred choice for customers looking to enhance their buildings' efficacy and functionality, such as the KNX IoTech.

KNX IoTech is an innovative smart home automation system that offers complete control over lighting, heating, and security from a single platform, providing convenience and ease of use to users. Its open standard foundation allows seamless integration with other devices and systems, making it highly flexible and scalable to cater to user needs. With KNX IoTech, homeowners can enjoy comfort, convenience, and security, all customizable from anywhere in the world, while benefiting from environmentally friendly technology that reduces energy consumption and carbon emissions. It is well positioned to take advantage of the increasing demand for smart home automation systems, offering promising growth opportunities in the market. KNX IoTech's continuous development and expanding features promise to revolutionize home living and lead the way toward a more connected and intelligent future.

KNX engages in targeted market and outreach initiatives to expand its customer base. The company employs a multi-channel marketing strategy, leveraging digital platforms, industry events, trade shows, and seminars to showcase the benefits and capabilities of its platform. These efforts help increase brand visibility, generate leads, and attract potential consumers. Finally, KNX collaborates with industry partners, system integrators, and distributors to penetrate new markets and offer custom solutions catering to specific customer needs. By cultivating strategic partnerships, the company creates a robust network of stakeholders that promotes its offerings and emerging industries.

Conclusion

KNX is an exceptional and revolutionary technology that has redefined the concept of home and building automation. Its standardized communication protocols, flexibility, and seamless interoperability makes it a preferred choice for professionals and homeowners. Over the years, KNX successfully transformed ordinary spaces into smart, energy-efficient, and interconnected environments, enhancing comfort and convenience while reducing energy consumption. Its commitment to open standards and continuous development has kept it at the forefront of the industry, adapting to evolving technologies and expanding its compatibility with a wide range of devices. As we look to the future, the legacy of KNX will continue to shape the world of smart technology, leading customers toward a more sustainable, intelligent, and interconnected world.

With its strong overall performance, KNX earns Frost & Sullivan's 2023 Europe Technology Innovation Leadership Award in the smart home and buildings communication protocol industry.

What You Need to Know about the Technology Innovation Leadership Recognition

Frost & Sullivan's Technology Innovation Leadership Award recognizes the company that has introduced the best underlying technology for achieving remarkable product and customer success while driving future business value.

Best Practices Award Analysis

For the Technology Innovation Leadership Award, Frost & Sullivan analysts independently evaluated the criteria listed below.

Technology Leverage

Commitment to Innovation: Continuous emerging technology adoption and creation enables new product development and enhances product performance

Commitment to Creativity: Company leverages technology advancements to push the limits of form and function in the pursuit of white space innovation

Stage Gate Efficiency: Technology adoption enhances the stage gate process for launching new products and solutions

Commercialization Success: Company displays a proven track record of taking new technologies to market with a high success rate

Application Diversity: Company develops and/or integrates technology that serves multiple applications and multiple environments

Business Impact

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

Customer Acquisition: Customer-facing processes support efficient and consistent new customer acquisition while enhancing customer retention

Operational Efficiency: Company staff performs assigned tasks productively, quickly, and to a high-quality standard

Growth Potential: Growth is fostered by a strong customer focus that strengthens the brand and reinforces customer loyalty

Human Capital: Commitment to quality and to customers characterize the company culture, which in turn enhances employee morale and retention

