Sensative AB Recognized for



Technology Innovation Leadership

European Internet of Things Sensors Industry *Excellence in Best Practices*

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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. Sensative AB excels in many of the criteria in the IoT sensors market.

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

Intelligent Innovation

Sensative AB (Sensative) is a technology company that leverages the Internet of Things (IoT) sensors for cities and commercial property markets, empowering people with smart technology. According to Frost & Sullivan research, IoT, artificial intelligence, and cloud technologies continue to support smart buildings and cities. To this end, properties owners, such as cities, utilities, and real estate, must reclaim data

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- Samantha Fisher, Best Practices Research Analyst ownership to become data-driven and remain competitive in the market. Sensative develops various products geared toward providing valuable services to customers, tenants, and citizens in the digital age, such as Yggio, a future internet-ware (FIWARE)-compliant platform that transforms multiple vertical functions to a horizontal business model with Yggio-managed infrastructure and thousands of data-driven services connecting to application programming interfaces (API). Named after the large Tree of Life in Old Norse mythology, Yggdrasil, the Yggio platform is a digitalization infrastructure management system (DiMS), a term coined by Sensative. The unified platform provides a single API to the customer that connects various sensors, systems, and data sources. It also acts as an access broker for users and service providers. Yggio empowers property owners to manage their devices through its best-in-class DiMS, ultimately returning data ownership where it belongs. The company pairs its platform with a line of ultra-discreet wireless sensors for property management marketed as Strips, the sensors offer various use cases, such as temperature, humidity, and water leaks, as well as support for Z-Wave, long-range wide-area network (LoRaWAN) and soon also ZigBee.

- **Z-Wave Plus 700:** Up to 500 meters/1,500 feet range, 20 year battery life, best-in-class security (S2), SmartStart for easy installations and cross brand compatibility.
- LoRaWAN: Up to an astonishing 20 km/12.4 miles range and still 10 years battery life, 128-bit AES end-to-end encryption.
- **Strips Guard:** Magnetic sensor designed to monitor and protect windows, doors, and valuables indoors and outdoors. Z-Wave & LoRaWAN versions.
- Strips Drip: Indoor and outdoor monitoring for water leaks. Z-Wave & LoRaWAN versions.
- **Strips Comfort:** Temperature, humidity, ambient light monitoring and an on/off button to control lights or change profiles. Z-Wave & LoRaWAN versions.
- **Strips Presence:** Used for activity-based offices to monitor if desks are available. The optional slider button can be used to register when the desk is cleaned. Only LoRaWAN version.

Frost & Sullivan finds Sensative's Yggio and Strips sensors form an unbeatable IoT duo and pave the way for smart ecosystems on the macro (cities, municipalities) and micro (buildings, homes) scale, opening up further use cases and advancing digitalization. The invisible design lends to its discreet presence, while its innovative features, such as "smart-start," build on its excellence. Moreover, the significant battery life (10 to 20 years) and LoRaWAN capabilities round out the company's value proposition, delivering a reliable and optimal experience.

Use Case: Municipal-owned VA-Syd sought a digitization vendor to realize connected infrastructure benefits. As a result, the company required a horizontally-oriented architecture with various sensors and actuators to provide a unified context. To this end, VA-Syd approached Sensative regarding its Yggio Platform, which resulted in the customer ordering and deploying 65,000 water sensors in the second half of 2020. Sensative's technology optimized VA-Syd's processes in various ways, including leak detection, water loss prevention, and mapping water flow.

Standardized Excellence

Leveraging an IoT integration platform often helps enterprises solve interoperability issues; these platforms also act as connectivity sources for various devices and sensor networks. Sensative designed its Yggio platform to be an industry standard for any domain. As a result, the open platform provides horizontal integration between several sensor networks and enterprises, allowing user and service access to data from shared and private IoT devices. Many competitors, including market leaders, leverage traditional communications service provider business models that come with significant pitfalls. For example, all-in-one, single supplier strategies create complete customer dependence with no data

ownership, which results in considerable costs should the customer wish to change vendors. Yggio integrates with various computing environments and third-party service providers, including cloud, edge, hybrid, and on-premise. Sensative standardizes its platforms for all domains and customers with support for most major standards. Moreover, it offers an extensive software development kit and support for

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application and development kit and support for successfully integrated its Yggio platform in Stockholm, which defined the required technical architecture to enable cross-functional data sharing between committees and companies through IoT devices during the project Connected Stockholm Royal Seaport (Connected SRS). Sensative's modular and open framework successfully provided a shared IoT platform for converting and visualizing data while also providing simplified and seamless connectivity

for data producers and consumers. The company rounds out its value proposition with an ecosystem of third-party service providers, empowering users, such as employees, citizens, and property managers, with critical data and professional administrative and installer tools.

Exceeding Expectations

Sensative continues to witness positive market response since the commercialization of its platform and sensors. The company offers Yggio in a Platform-as-a-Service option for public, private, and on-premise, as well as licensing options. Sensative's Strips are fully available throughout Europe and North America, with steady growth in Asia, as well. The company focused almost exclusively on Sweden in 2020 to build

and strengthen its partner ecosystem in its home country, where almost all municipalities with a common smart city platform opted for Yggio above others. This ecosystem focuses mainly on system providers, helping the company acquire partners in Europe, Canada, and the United States, enabling it to move forward with pilots in these areas. Despite the COVID-19 pandemic, Sensative established its footprint globally in 2020, and in early 2021, the company commercially launched its new generation of Yggio, Yggio 3.



+Guard LoRaWAN

Image courtesy of Sensative AB

Moreover, as of August 2021, the company reports it delivered more than 150,000 Strips and licensed Yggio to more than 50 customers. It also achieved monthly recurring revenue in excess of 345,000 SEK in 2020. Sensative's horizontal interoperability delivers a competitive edge to the company that is evident in its ongoing success. Returning data ownership to the customer is a critical differentiator that well-positions the company for success. Frost & Sullivan finds Sensative offers a robust value proposition that opens up opportunities for various industries and applications.

The Yggio 3 platform simplifies digitalization, enabling customers to develop comprehensive IoT plans that leverage data collection to prioritize organizational efficiency, competence, and performance. Sensative offers more than strategy; it allows customers to choose technologies that integrate with their existing technologies, offering easy scalability and data aggregation to prepare for future, possibly larger use cases. Moreover, Yggio's open architecture means it integrates with any system, enabling customers to optimize internal processes, such as sustainability reporting, maintenance planning, and booking systems.

Broad Application Potential

Sensative's platform and sensor technology presents opportunities for various smart applications across multiple industries, including agriculture, environment, home, infrastructure, utilities, and transportation. For example, the company announced a partnership with Alliot Technologies (Alliot) in May 2020 to bring Sensative's Strips to the United Kingdom and Europe. Alliot is an IoT distributor with a strong presence in these regions, providing significant visibility to Sensative. At the end of February 2021, the company released Ratatosk, a FIWARE NGSIv2 API-compliant context broker that powers Yggio 3 horizontal IoT integration platform as open-source with a permissive Apache 2.0 license for all to use. In keeping with Norse mythology, Ratatosk is a red squirrel that runs up and down Yggdrasil, bringing information from Mimir's dwell, the source of wisdom connected through the roots, to the gods. The company translates this into modern technology as Yggio 3's context broker ferries communication between connected devices and applications while also providing the context necessary to carry out tasks. Ratatosk builds on its predecessor, the original FIWARE Orion NGSIv2 context broker written in C++; Sensative wrote its new broker in node.js, which empowers customers with flexibility, efficiency, and productivity. This new runtime environment also offers increased security through plugins that enforce access and identity management. Ratatosk connects to any standard, bringing significant value since applications written to work with Yggio 3 currently work with NGSIv2-compliant platforms and vice versa, thus avoiding lock-in effects and large software porting efforts.

Conclusion

Despite the ongoing push toward sustainability and digitization, various enterprises continue to operate with "dumb" technology. Specifically, property managers and owners stand to benefit from smart technology. Swedish technology company, Sensative AB (Sensative) delivers these benefits through an innovative combination of its Internet of Things (IoT) Yggio platform and Strips sensors portfolio. When working in tandem, Yggio and Strips enable buildings, homes, and even cities to address various issues, such as temperature monitoring, leak detection, and humidity checks. Sensative continues to gather success with its IoT solution, with positive revenue outcomes since its founding, even during the 2020 COVID-19 pandemic. The company stands apart from its competition through its technology, as it offers greater value than most competing solutions.

For its portfolio of proven results, keen technology, and strong overall performance, Sensative is recognized with Frost & Sullivan's 2021 European Technology Innovation Leadership Award for the IoT sensors market.

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

About Frost & Sullivan

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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[™]. 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 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)



