SORACOM

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TECHNOLOGY INNOVATION LEADER

Enhancing Customer Impact Through Powerful Technology Integration

RECOGNIZED FOR BEST PRACTICES IN THE GLOBAL GENERATIVE ARTIFICIAL INTELLIGENCE OF THINGS INDUSTRY

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. Soracom excels in many of the criteria in the generative artificial intelligence of things (GenAIoT) space.

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

Cloud-native Platform-as-a-service (PaaS) Disrupts Internet of Things (IoT) Connectivity Offerings

The IoT platform market is highly fragmented, with over 700 companies touting to be IoT platforms. Some focus on managing specific IoT applications, while others manage a range of devices in several vertical markets. Choosing the right platform for an enterprise is essential not only for the initial deployment requirements but also for the capabilities and flexibility to support future needs. Most IoT platform providers only manage connectivity and devices, and few facilitate technology managers' decision-making with a robust data visualization tool, automation in incident response, and assurance of endpoint and network security amid growing cybersecurity incidents.

Founded in 2015 by cloud and telecom veterans from AWS, Ericsson, and NTT Docomo, Soracom is disrupting traditional IoT connectivity offerings with its cloud-native PaaS model that connects devices to the cloud without sending traffic over the public Internet. Soracom, headquartered in Japan with offices in Seattle and London, is positioned as a technology partner with full mobile virtual network operator (MVNO) capabilities, cutting-edge cloud integrations, and open application programming interfaces (APIs). To handle the expansion of edge computing and network integration complexity, Soracom lets customers connect flexibly to their cloud of choice, the Internet, and/or the private backend systems, enabling a global connection with a local breakout.

New IoT Connectivity Platform Services with Deeply Embedded GenAI Capabilities to Build Low-code IoT Applications

Generative AI (GenAI) and large language models (LLMs) enable advanced data analysis and more accurate predictions. Consequently, Big Data has the potential to draw new IoT connections and achieve better efficiency in different verticals. That is why, in 2023, Soracom established an IoT x GenAI Lab in partnership with the Matsuo Institute of the University of Tokyo to conduct AI research and development (R&D) projects, develop new products, and provide GenAI and IoT professional services.

In 2023, Soracom's initial R&D investment resulted in three services with GenAI capability. Soracom Relay enables customers to use any compatible camera with real-time streaming protocol (RTSP)/real-time transport protocol (RTP) to securely transmit audio and video data to Soracom's Harvest Files for computer vision and video analytics. Soracom Query enables customers to use structured query language (SQL) from business intelligence tools or command-line interface (CLI) to mine data from IoT devices without having to set up servers or storage, resulting in a managed data warehouse. Soracom Harvest Data Intelligence enables customers to analyze time series data and identify trends, patterns, outliers, and abnormalities.

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>
> *– Carina Gonçalves*
> *Industry Principal*

Continuing its efforts in 2024 to connect AI, input/output devices, and diverse data sources with low code, the company launched two new services. Soracom Flux enables customers to build advanced IoT applications by defining data flows among AI, devices, and cloud using Microsoft Azure AI, OpenAI, Google Gemini, and Amazon Bedrock. The Soracom Flux app consists of three components: event sources (devices, IoT SIM, timers, Harvest Files, and APIs), channels, and actions. Use cases range from manufacturing, construction, healthcare, energy, and retail to security.

Taking customers' feedback, Soracom Query   evolved to enable customers to query their IoT network data in natural language and receive immediate analytics in the form of descriptive text and data visualizations including device connection session history, data usage, and billing information. It allows Soracom Flux to provide historical data as context with AI to make even smarter decisions. Both services accelerate IoT projects with GenAI application integration and natural-language network analysis. With the GenAI capabilities it has added to its connectivity platform, Soracom leverages technology advancements to push the limits of function in the pursuit of white space innovation, which no competitor has been able to reach based on the real experiences of its thousands of customers worldwide.

Technical Innovations Based on Virtualized/Cloud-native Cellular Core

While some companies believe on-premises computing and storage will remain vital, many are rapidly adopting the cloud. Enterprises may use the cloud for the next IoT applications or parallel storage options if some data needs to remain on-premises, so other data or metadata can be stored on the cloud to expose it to analytics platforms. A trend for the next few years is an integrated approach, where IoT data and

functions seamlessly operate across hybrid multi-cloud models, on-premises facilities, and co-location services so that data already stored in those facilities does not have to be moved.

Soracom is among the first in the industry to address this trend through its fully virtualized/cloud-native cellular core, which lets customers connect devices to their preferred public cloud (e.g., AWS, Microsoft, and Google) or private backend without passing traffic over the Internet. Customers can securely and smoothly collect data to their cloud backend to use AI and Big Data analytics tools available in the cloud.

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Soracom has reinvented cloud-native cellular core architecture for connected devices in the cloud era. It consists of standard telecom interfaces implemented using a distributed implementation of the cellular core interfaces and a set of microservices that enable both the cellular core and the external facing API. This holistic architecture is carefully designed to have no single point of failure and to be horizontally scalable and resilient by applying all the best practices in the cloud. It also improves flexibility, customer experience, and scalability because each system layer can be independently updated and scaled. Therefore, compared to competitors, Soracom's key technical differentiators are network management capability, hyperscaler platform integration, and secure network architecture.

Connectivity for Different Mobile and Fixed Networks Enables Global Coverage

Connectivity services are a crucial IoT component when assets are dispersed across a wide geographical area, enabling access to reliable connections to fixed and mobile networks. Soracom offers services in 180 countries over 360 different MNO networks. Soracom's platform is fully virtualized and agnostic to cloud, hardware, and bearer options in the market, allowing the company to scale globally.

For North America, Europe, and some countries in Asia-Pacific (APAC), the company offers services directly. Premium regional distributors serve Australia, New Zealand, Singapore, Taiwan, Hong Kong and Macau. Middle East, Africa, and South America are under exploration. While KDDI retains a major stake in Soracom, Sony, Hitachi, Secom, and Suzuki have made new capital investments to support its global expansions and collaborations. In March 2024, Soracom was listed on the Tokyo Stock Exchange (TSE: 147A).

In addition to global coverage, Soracom offers an industry-leading suite of features. Benefits for Soracom's customers include 24/7 uptime, one point of accountability, dynamic selection of best options, ease of managing operations, and ability to control costs. Soracom has a modular IoT connectivity stack, which includes an interface, applications, networking, and devices. Soracom has two products in the connectivity module: Soracom Air and Soracom Arc.

Soracom Air is an IoT connectivity service for cellular machine-to-machine (M2M) devices, including 3G, long-term evolution (LTE), 5G, LTE for machines (LTE-M), and low-power wide area network (LPWAN), such as low-range wide area networking (LoRaWAN), and Sigfox. Soracom Arc enables a secure link over

any Internet connection, such as Wi-Fi, Ethernet, and satellite, that allows the company to support blended IoT networks.

The company also offers native management for SatIoT connections, allowing users of supported SatIoT providers to directly manage satellite-based connections, billing, and advanced platform capabilities through the Soracom console and API. In 2024, Soracom expanded Skylo integration with third-generation partnership project (3GPP) non-terrestrial networks (NTN) connectivity in the Soracom platform.

Double-digit Growth Delivering New Innovative Technologies to Different Types of Customers

As of July 2024, Soracom reported 7 million IoT connections globally, with a double-digit growth rate year-over-year and a proven record of taking new technologies to market with a high success rate. North America and Europe represent approximately 50% of Soracom´s cellular connections. Implementing more than 366 additional features since its first product release, the company has gained over 20,000 customers, including SHARP, Panasonic, Mitsubishi Heavy Industries, Withings Health Solutions, Sollatek, and Cassia Networks.

Currently, the Soracom platform offers more than 20 separate services. With clients of different sizes, from startups and small and medium-sized enterprises (SMEs) to large enterprises, Soracom has deployments in virtually every major vertical because of its solution's low entry cost and easy testing and iteration for early-stage projects. Utilities/energy, point-of-sales (POS)/retail, consumer electronics, and healthcare primarily drive large-scale deployments.

Soracom´s PaaS Offering is Cost Competitive and Accelerates Time to Market with Self-service Capabilities

Typically, IoT connectivity service providers are large telcos or IoT MVNOs and generally have regional coverage or standardized offerings, unlike Soracom, which differs in value and capacity. The company's PaaS offering is cost-competitive because customers only commit financially to what they use. Recognizing the hardware cost as a barrier to IoT adoption, the company offers value-added services on top of connectivity that reduce communications overhead and workload required on devices such as authentication and encryption. It also features cost-effective products such as the Onyx LTE-M dongle and S+ edge camera.

Furthermore, with the PaaS model, customers gain accelerated time to market because of self-service with secure remote access and packet capture, protocol conversion of cloud integrations and external endpoints, private network to customers' IoT backend, and data storage and visualization. Soracom offers four pricing plans to suit customers' diverse use cases and data patterns. Pay-as-you-go plans include low volume, fixed usage for developers, and bundled options.

Soracom's network management console and API come at no additional cost, offering broad coverage and predictable pricing. Soracom's value proposition is difficult to replicate in the market because competitors have trouble offering such a high level of self-service and cloud integrations. The PaaS business model, speed-to-market, and pre- and post-sales support are the main differentiators of Soracom's customer experience compared to other competitors.

Soracom GenAIOT Capabilities Power Real-World Customer Cases Today

GenAI capabilities hold tremendous promise for IoT, but as of today most use cases remain speculative and few providers have actually brought functional tools to market. Soracom's GenAI offering is notable in that it is currently available to customers and already powering real-world use cases.

Otsuka Warehouse, based in Osaka, Japan, provides storage, transportation, and logistics services covering pharmaceuticals, chemicals, foods, and beverages. Soracom recently announced that Otsuka Warehouse has adopted the SORACOM IoT platform to jointly develop a warehouse intrusion detection system that utilizes cameras and generative AI. In the joint development, they used SORACOM Flux, a service that allows low-code development of IoT applications, to rapidly improve the intrusion detection system using generative AI.

Otsuka Warehouse handles the logistics of the Otsuka Group's pharmaceuticals, food, beverages, daily necessities, etc. The company aims to realize "connected logistics" by using the power of digital technology to realize highly efficient warehouse and transportation operations that do not rely on traditional "experience and intuition."

Starting this spring, Otsuka Warehouse has begun creating a system to visualize and centrally manage logistics sites nationwide in real time from its Tokyo headquarters. As an example of visualization, the company is co-developing a new "intrusion detection system using cameras and generative AI" with Soracom. The new intrusion detection system periodically captures still images from cameras installed in multiple locations within the warehouse, and when the generative AI detects a situation that corresponds to an intruder, it notifies the warehouse manager.

Previously, recordings were checked on an as-needed basis. Receiving timely notifications both improves warehouse safety and security and enhances overall quality of work. In addition, SORACOM Flux's low-code development function makes it possible to define new detection conditions in natural language and easily tune generative AI models, making it possible to adjust detection accuracy and change definitions by location.

Otsuka Warehouse plans to conduct research and development to use camera images and generative AI to analyze shipping operations to identify and prevent shipping errors.

Conclusion

Deploying, managing, and scaling complex IoT systems is resource and cost-intensive; therefore, despite understanding the benefits, companies may defer their decisions. Network availability is vital in IoT projects, and companies must maintain reliable mobile or fixed connectivity.

Soracom leads the way in technology innovations through its PaaS-based IoT connectivity offering that accelerates time to market, with built-in cloud integrations and self-service for customers to connect, secure, and control their own IoT networks, devices, and data. In addition to being an MVNO with unlimited capacity, the company is a technology partner that was among the first in the industry to build a fully virtualized, distributed cellular core architecture for the cloud and AI integrations.

For its strong overall performance, Soracom is recognized with Frost & Sullivan's 2025 Global Technology Innovation Leadership Award in the generative artificial intelligence of things 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

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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)