FROST & SULLIVAN

2024

COMPANY OF THE YEAR

IN THE GLOBAL MOBILE IOT PLATFORMS INDUSTRY

CISCO ™

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2024 BEST PRACTICES AWARD

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. Cisco excels in many of the criteria in the mobile IoT platforms 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

"The Cisco IoT Control Center demonstrates Cisco's commitment to addressing unmet needs in the dynamic domain of IoT and wireless connectivity."

- Renato Pasquini, Research Vice President

Addressing Unmet Needs with Cisco's IoT Control Center and Mobility Services Platform

In the rapidly evolving Internet of Things (IoT) landscape, Cisco Systems Inc, a leader in networking and telecommunications hardware, software, and technology services, acknowledges enterprises' imperative need to simplify the implementation, integration, and operation of IoT networks, devices, and applications while guaranteeing security and data protection.

Cisco has created a globally available platform that has a high degree of automation, with thousands of automation rules to enable different IoT use cases to scale. The platform allows enterprises to connect, provision, and manage devices easily at any given volume.

Frost & Sullivan projects that the number of active IoT devices will grow from approximately 41.70 billion in 2023 to more than 73.00 billion globally by 2027. From these, the number of cellular IoT connections is expected to grow from 2.88 billion in 2023 to 5.60 billion in 2028. These connections are the focus of Cisco's IoT Control Center platform. Frost & Sullivan points out that attempting to service billions of connected devices demands innovative solutions in deploying, connecting, and managing these devices at an unprecedented scale.

To meet these challenges, Cisco has developed an innovative strategy focused on a cloud platform approach. This strategy aims to simplify the complexity inherent in IoT and wireless technologies. The core of Cisco's approach lies in cloud-driven automation, network and security insights, and the publication of application programming interfaces (APIs). These elements enable customers and partners to obtain additional value and facilitate a seamless transition to cloud operations platforms.

An integral component of Cisco's IoT business strategy is the Cisco IoT Control Center, a leading connectivity management platform (CMP). Tailored for communication service providers (CSPs), this platform enables them to grow rapidly, streamline operations, and deliver superior business outcomes to their enterprise and business customers. Frost & Sullivan firmly believes that the Cisco IoT Control Center truly demonstrates Cisco's commitment to addressing unmet needs in the dynamic domain of IoT and wireless connectivity.

Furthermore, the company's Mobility Services platform emerges as a cornerstone of Cisco´s strategy; it simplifies how CSPs construct, manage, and deliver global mobile services at scale. Built with industry-leading technologies in 5G, edge, and cloud, the Mobility Services platform accelerates go to market for new services while mitigating risks and costs. The Mobility Services Platform includes the IoT Control Center, and Private and Public 5G offers to address various enterprise needs with ability to add more offer capabilities based on market needs. In addition, the platform caters to diverse industries - from automotive and utilities to logistics, manufacturing, mining, and healthcare.

Offering simplified solutions-as-a-service, Cisco, with its Mobility Services platform, addresses the expanding demand for secure, high-bandwidth, and low-latency services. By eliminating complexity, cost, and time barriers, Cisco delivers the visibility and control that enterprises require.

Anticipating the Future by Leveraging Megatrends

> *"Frost & Sullivan's projections highlight the immense potential of the IoT connectivity management platform market, with market revenue anticipated to rise from $13.09 billion in 2022 to $20.67 billion in 2025, at a CAGR of 16.5%"*
>
> *- Renato Pasquini, Research Vice President*

Frost & Sullivan expects a ten-fold increase in data traffic, over 5 billion mobile internet users (1.2 billion with 5G technology), and an average of 7 connected devices per person worldwide by 2025. Cisco successfully leverages the megatrends of the Cognitive Era and Connectivity and Convergence across its businesses. In this regard, Cisco's Private 5G offer on the Mobility Services Platform manages and secures IoT devices within mobile private networks and prioritizes simplicity, flexibility, and efficiency by being delivered as a service. Cisco's Private 5G, in collaboration with service providers and partners, reduces the risks associated with deploying private networks for enterprises. Cisco's Private 5G also allows devices to transition between private and public networks, without disruption, while providing network and device visibility for enhanced operation and security.

In addition, the introduction of a Mass IoT solution and the incorporation of artificial intelligence/machine learning (AI/ML)-based cost optimization and anomaly detection capabilities exemplify Cisco's commitment in anticipating future needs and delivering maximum value through its IoT Control Center platform. Cisco's IoT Control Center processes more than 500 Terabytes of data per day and Cisco is investing heavily in Gen AI capabilities aimed at enabling easy and intuitive ways for operational and business users to run sophisticated and dynamic data queries, run analytics to uncover specific insights and ultimately take operational actions guided by human supervision. Also, Cisco's simplified and secure connectivity offering within the enhanced IoT Control Center caters to the massive deployment of low-cost, stationary devices, such as utility meters, medical devices, and agricultural sensors, addressing the growing need for the Mass IoT management for various industries in the evolving digital landscape.

Moreover, autonomous driving services are expected to account for 65% of the overall autonomous market in 2030. In this regard, and with the anticipated evolution of transportation, Cisco strategically aligns with the Frost & Sullivan-identified megatrend of Future of Mobility. The company recognizes that the transformation of connectivity, particularly with 5G, is intrinsically tied to the automotive industry. In this regard, in February 2024, Cisco announced that it and TELUS will jointly launch new 5G capabilities in North America, with a specific emphasis on IoT use cases for connected cars. The capabilities include dynamic policy, charging and quota management outcomes to launch new subscription services on demand. The collaboration also introduces on demand network slice creation, full-stack observability with service assurance and life cycle management capabilities in a lab environment, aimed at supporting advanced, mission-critical use cases in the future. TELUS expects to onboard over 1.5 million 5G standalone cars onto the Cisco IoT Control Center in the coming years, starting in 2024.

In addition, collaborating closely with Global CSPs, Cisco actively engages with global automobile manufacturers, such as General Motors (GM), addressing their progressively complex requirement for mission-critical connectivity. For instance, by deploying Cisco's Ultra-Reliable Wireless Backhaul for vehicle-to-trackside connectivity, GM engineers can now capture data from vehicle sensors during performance testing in real time, reducing testing time and accelerating the time to market for commercially ready vehicles.

In addition, to enable businesses looking to quickly extend connectivity across diverse campus and branch office environments, Cisco is now enabling cloud-managed eSIM technology powered by Cisco IoT Control Center which will enable Cisco Meraki devices to be deployed quickly into the enterprise facilities with zero touch deployment option.

Delivered in partnership with AT&T, this zero-touch experience enables customers to simply power on the device and provision AT&T's 5G connectivity through the Cisco Meraki dashboard. This will unlock many benefits including faster time to value, operational efficiency and a frictionless experience.

Cisco IoT Control Center: Automated Connectivity Management

Source: Cisco Live Presentation

Best Practices Driving Cisco's Leadership in IoT

With its financial performance in the IoT sector, Cisco demonstrates the success of its collaborative approach with key industry participants. The Control Center platform is used by 60+ telecommunications operators worldwide, including AT&T, Telstra, Telkom, Tele2, Three Group, and British Telecom. Managed IoT devices grew from 222 million in 2022 to 256 million in 2023.

Cisco's platform has a special strength in the automotive vertical, with 103 million connected cars in 2023 from brands such as GM, Nissan, Ford Motor Company, Volkswagen, and Tesla Motors. The number of connected cars managed by Cisco's platform grew 18% year over year (YoY). Moreover, Cisco was the first platform provider to enable connected cars using 5G standalone technology, which is expected to be the standard for the industry in the coming years, as it enables the end-to-end management of IoT applications with superior quality and ultra-low latency.

In addition to connected cars, Cisco has a strong presence in other applications as well, such as smart meters, fleet management telematics, security and automation, and retail point-of-sale (PoS), all of which help the company achieve sustained growth and a strong leadership position.

In total, Cisco successfully serves more than 32,000 enterprises with its IoT platform. In 2022, Cisco's IoT business revenue increased to over $1 billion, with a robust double-digit YoY growth.

Cisco remains actively engaged with CSP partners, promoting continuous collaboration to identify crucial innovations and drive strategic investments in the IoT Control Center platform and business. The company demonstrates the implementation of best practices by continually investing in the platform, such as with the introduction of its Private 5G service and with recent acquisition of Working Group Two, additional enhancements to the Mobility Services Platform with new offer capabilities can be expected.

Frost & Sullivan's projections highlight the immense potential of the IoT connectivity management platform market, with market revenue anticipated to rise from $13.09 billion in 2022 to $20.67 billion in 2025, at a compound annual growth rate (CAGR) of 16.5%.

Moreover, by recognizing the importance of seamless integration across multiple platforms in different verticals, Cisco is actively investing in the development of robust software infrastructure and APIs. The company had, on average, 131 million API calls per day in 2023.

Cisco´s Industry-leading IoT Portfolio
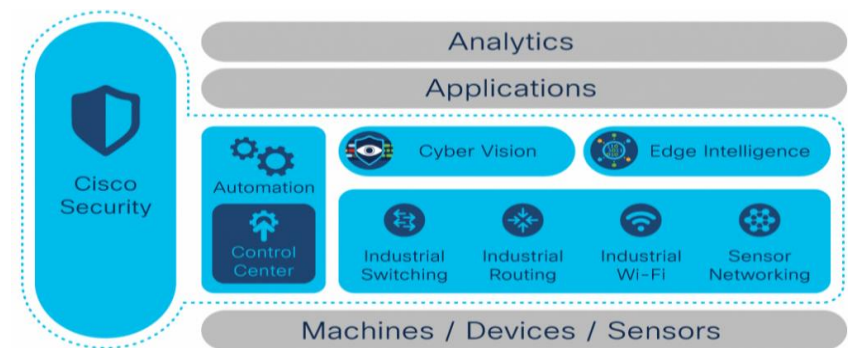
Source: Cisco

Seamless Customer Experience in IoT through Robust Brand Equity

With over 17 years of industry leadership in IoT, Cisco has garnered robust brand equity. With expertise and strategic partnerships established across various industries, the company delivers positive and seamless customer experiences throughout the lifecycle of its products and services.

In this regard, ABB Robotics relies on the Cisco IoT Control Center to ensure the uninterrupted operation of its robots on its factory floors worldwide. By proactively monitoring robot connectivity, ABB can minimize downtime and thus maintain the smooth operation of its production lines and customer satisfaction. Moreover, Trackunit can improve asset management by utilizing the Cisco IoT Control Center and KPN IoT connectivity. Through automated provisioning and connectivity, Trackunit simplifies internal and customer operations, connecting over 1 million machines globally and achieving a nearly 100% increase in revenue in 2022.

Furthermore, in partnership with Tele2, Cisco, with its IoT Control Center, facilitates an energy savings-as-a-service model for Enjay. The successful partnership results in a 90% recovery of waste heat, thus enabling early problem detection and proactive maintenance and simplifying remote connectivity for heat exchangers worldwide.

Customers that have experienced positive outcomes with Cisco's IoT solutions in manufacturing include Audi, Nissan Motor Company, Yamazaki Mazak Corporation, and Velta Technology.

Conclusion

With its operational and financial performance in the IoT sector, Cisco effortlessly meets the needs of enterprises through software development, collaboration with CSPs, strategic investments, and commitment to continual innovation. By simplifying complex technologies, enabling thousands of automation features through cloud platforms, and launching as-a-service offerings, Cisco helps organizations in diverse industries seamlessly integrate and manage a rapidly growing number of connected devices.

With its leadership focus nicely demonstrated through the success of its IoT Control Center, overall IoT portfolio, and focus on megatrends, Frost & Sullivan analysts conclude that Cisco is positioned as a key participant in shaping the future of IoT mobile connectivity.

With its strong overall performance, Cisco earns the 2024 Frost & Sullivan Global Company of the Year Award in the Mobile IoT Platforms industry.

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

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™.

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)