



CyanConnode Recognized for

2021

Technology Innovation Leadership

Global

Smart Metering Industry

Excellence in Best Practices

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. CyanConnode excels in many of the criteria in the smart metering 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

Commitment to Innovation

The core of CyanConnode’s innovation excellence is characterized by its laser sharp focus on three key

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- Gautham Gnanajothi, Research Director

aspects; the first one is decarbonisation followed by improving revenue collection / billing efficiency, and finally addressing the technical limitations of electricity grids, especially those caused by rapidly evolving use cases. The company employs a standards-based, low-power, IPv6, narrowband RF mesh communication technology that is not only cost-effective but also provides near 100% coverage and has the ability to support the communication and data availability requirements of the smart grid. It seamlessly extends the simplicity of IP into the Smart Grid. The level of focus the company has on SLAs (service level agreements) is simply outstanding; it

delivers over 99.5% on the SLAs. CyanConnode is perceived as true communications specialist in the smart metering industry; it has achieved this prestigious status as a result of its meticulous R&D and innovation efforts. It not only offers top of the class narrowband RF Mesh technology, but also seamlessly incorporates cellular based technologies and furthermore, it has the ability to bubble up technologies

such as NB IoT and LoRaWAN which leverages a low power modulation technology.

One of the key aspects that make CyanConnode stand out is its ability to offer 100% communications coverage to its customers. It leaves no stone unturned to ensure there is no interruption between the two way communication flow, right from the consumer side, all the way to the head end system which gets seamlessly integrated into the meter data management system of the utilities. Its solutions offer extreme resilience with the network as it leverages a point-to-multipoint topology (as opposed to point-to-point) and is able to automatically switch routes if a particular route goes down. In essence, the company's technology and innovation excellence has a profound impact on its customers from three key perspectives – It dramatically reduces the total cost of ownership, it significantly enhances the overall quality of service and reduces the overall AT&C (Aggregate Technical & Commercial) losses.

Commitment to Creativity

CyanConnode is a true pioneer and visionary in the smart meter industry. The level of dedication and perseverance the company has displayed in executing its vision of creating industry leading narrowband radio mesh networks is phenomenal. While there are existing Narrowband RF mesh technologies that address the capacity conundrum for connected devices, these do not fully address the un-met market needs such as cost reduction, optimized Quality of Service (QoS) and so on. With a tremendous commitment towards technology and innovation, CyanConnode has developed a RF mesh network topology that is not only capable of addressing the current un-met market needs, but also the evolving future needs.

CyanConnode's creative DNA played a crucial role in combining the right technologies at the right price point to enable mass adoption. The company's diligence in analysing mega trends, studying customer requirements, evolving market needs and end user pain points is highly commendable. It was quick to identify and capitalize on the technology evolution of IPv6, 6LoWPAN and acquired Connode (software specialist) in 2016. By doing so, the company was able to enhance its offering and achieved prominence as a true end to end solution provider (hardware, software and services). The solution can be integrated to any make and type of meter and protocol and can be seamlessly integrated to any meter data management system.

Excellence in Stage Gate Efficiency

CyanConnode differentiates itself from other networks in many ways; it offers significantly higher efficiency levels, which is driven by its ability to swiftly create robust ad-hoc networks. By leveraging unique built-in diagnostics and fault reporting systems, it is able to offer uncompromised quality standards that are second to none in the industry. It has radically simplified installation where its standards-based networking stack can be deployed efficiently and recurrently with zero commissioning effort and minimal human intervention.

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The company has fostered a rich partnership culture that further complements its success in the smart metering industry. By establishing a high degree of propinquity with its partners, the company has been highly successful with its go-to-market strategies. It has developed a knack to seamlessly translate creative, ground-breaking concepts swiftly and profitably from early-stage investments to late-stage prototyping. Key partners of CyanConnode include Genus, L&T (part of Schneider Electric), EsyaSoft, JST, Forth Corporation, Intellisart and EESL Energy Solutions, Dubai.

On the other hand, the company has an intentional low bureaucracy development practice in place to ensure the organization’s operational and business case centered validations are valued and measured in all opportunities. By leveraging an iterative methodology throughout the product development process, the company is able to achieve a perfectly fluid and measured approach towards the design target. Furthermore, its ongoing gated assessment of technical success against the business case and market opportunity further elevates the value addition to the organization.

Industry Leading Commercialization Success

CyanConnode’s commercialization success emanates from its profound technology expertise and comprehensive understanding in three key fields – hardware, software and network management. The company has developed a highly innovative and futuristic smart metering solution “Omnimesh” powered by IPv6 6LoWPAN narrowband RF mesh technology and is offered as a part of its Omni IoT Platform. The launch of “Omnimesh” was a land mark achievement for the company and is a true testament to its technology and innovation excellence. The sheer value addition Omnimesh brings to the smart metering market is simply astounding. It empowers the utilities on multiple fronts to achieve aspects that were previously considered unfeasible and impractical. With this solution, utilities are now able to significantly enhance customer experience and billing; some of the key functionalities that enable this are, ability to locate and resolve outages rapidly, cutting down distribution losses, peak period real time demand management and so on. On the other hand, its unique RF mesh networks offer self-forming and self-healing capabilities. As a result, it significantly reduces deployment costs and it supports spectrum diversity and can operate in any suitable sub-GHz band including free unlicensed ISM bands. Furthermore, the Omnimesh platform is uniquely designed to support the deployment of multiple communication technologies; it is able to minimize cost and complexity by optimizing a mix of different communication technologies.

CyanConnode's revenue growth over the past two years is a perfect testament to its commercialization success; between 2019 and 2021 it registered a staggering revenue growth of 152% (2021 revenue estimates are based on existing contract wins). Based on the company's order pipeline, it is estimated that 2022 and 2023 will witness further strong growth. This includes order pipe lines in India, Thailand, UAE, Africa and Egypt. India is a key market that is driving the growth of the company; with an extremely strong foothold in the country, CyanConnode is on a trajectory to achieving phenomenal commercial success over the next few years. This will be mainly driven by India's commitment to deploy 250 million smart meters by 2022/2023 as a part of its Smart Meter National Programme.

Wide Application Diversity

The intrinsic nature of the CyanConnode's standards-based, low-power, IPv6, narrowband RF mesh technology makes it highly versatile and applicable to a wide array of end user applications. Beyond the conventional smart metering use case, the company's technology has the potential to revolutionize numerous other industry verticals and applications that leverage IoT and IIoT use cases. The company has developed cutting edge multi-application canopies (communication platforms) and is working with its partners to rapidly commercialize new application areas. These canopies not only bring immense value additions to electricity metering, gas metering, water metering markets, but also have the potential to create a step change in areas such as heating controls, distribution automation, smart lighting, EV charging and smart cities. While smart lighting and distribution automation areas are likely to offer high growth potential for CyanConnode in the short/midterm, applications such as EV charging and smart cities are expected to drive substantial new revenue streams in the long run.

The path travelled by CyanConnode is highly intriguing; it has pioneered RF mesh supporting smart metering and smart Lighting for nearly two decades and has been instrumental in creating demand in this space by demonstrating effective solutions to real world problems. It has created solutions to the power sector's aggregated technical and commercial losses problem which is valued at nearly \$42 billion. A perfect example to showcase CyanConnode's potential growth opportunity driven by application diversity is the smart cities space in India. India's PM Narendra Modi launched his ambitious "100 Smart Cities Mission" vision in 2015. This vision is underpinned by communication technologies and the key technology selected for standardization by the panel on Smart City standards is low-power, IPv6, narrowband RF mesh.

Excellent Operational Efficiency

CyanConnode places paramount importance to operational efficiency. Highly effectual operational best practice has always been an intrinsic pillar in driving the company's growth. CyanConnode continually evaluates operational efficiency from a financial stand point to maintain efficiencies and governance to agreed budgets for delivered customer projects and internal design work. It has ongoing controls as well as project accounting run by its finance team to ensure adherence to agreed budgets. The company is also ISO 9001, 27001 and 14001 accredited ensure focus on controls and procedures.

Conclusion

CyanConnode has a long standing pedigree of not just meeting customer requirements, but more importantly, exceeding customer expectations. By working in close proximity to its customers, it helps them to understand the full benefits of leveraging its technology offerings and thereby empowering them to expand their horizons to far-reaching levels. While the company's technology supports the development of new green tariffs and enables decarbonizing of the economy, it also enables rapid electrification of whole populations which drives up productivity and GDP, ultimately improving the lives of individuals. With its strong overall performance, CyanConnode earns Frost & Sullivan's 2021 Technology Innovation Leadership Award in the Global smart metering industry.

What You Need to Know about the Technology Innovation Leadership Recognition

Frost & Sullivan's Technology Innovation 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

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)**

