FROST & SULLIVAN

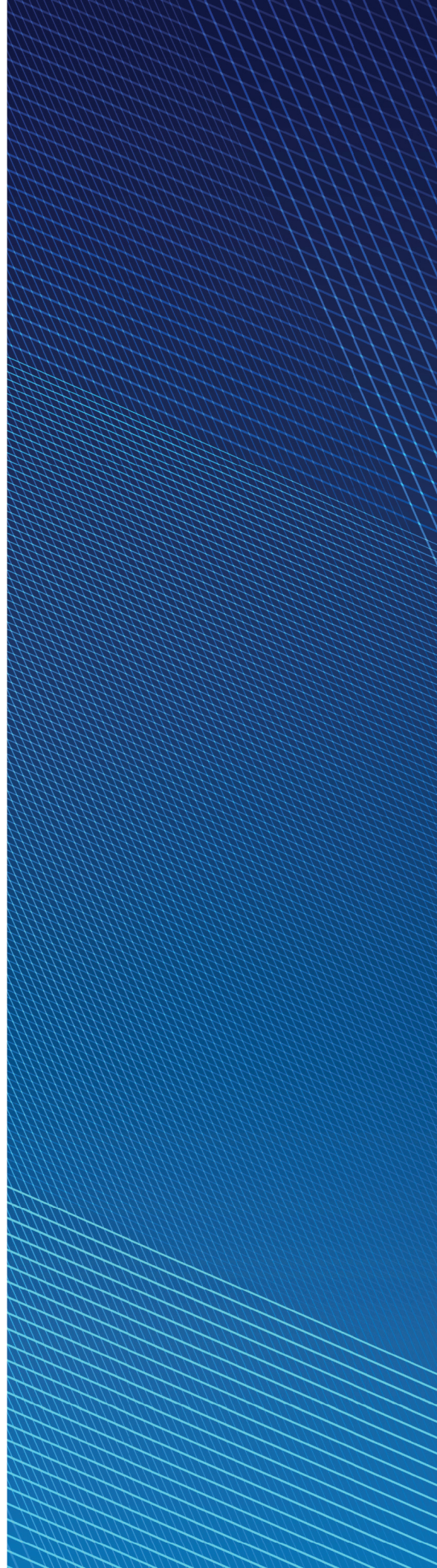# LUMEN RECEIVES THE 2023 ENABLING PLATFORM LEADERSHIP AWARD

Identified as best in class in the United States NG9-1-1 industry

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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. Lumen excels in many of the criteria in the NG9-1-1 space.

AWARD CRITERIA

Technology Leverage	Customer Impact
Commitment to Innovation	Price/Performance Value
Commitment to Creativity	Customer Purchase Experience
Stage Gate Efficiency	Customer Ownership Experience
Commercialization Success	Customer Service Experience
Application Diversity	Brand Equity

Criterion 1: Commitment to Innovation and Creativity

The National Emergency Number Association (NENA) indicates that approximately 240 million calls are made to 9-1-1 each year. While the average number of 9-1-1 incidents per year has stayed relatively stable in recent years, the volume of data that call takers must handle per incident has increased substantially due to supplemental data sources now available. Frost & Sullivan anticipates a surge in IoT-initiated 9-1-1 data coming from smart cities, connected security systems, wearables, vehicles, homes, buildings, telematics, and other connected assets. Thus, the next generation of public safety will require a new architecture to accommodate data-intensive applications, high performance connectivity, distributed computing, embedded security, and multi-cloud orchestration.

> *"The next generation of public safety will require a transformative architecture to accommodate data-intensive applications, high performance connectivity, distributed computing, embedded security, and multi-cloud orchestration."*
>
> *- Brent Iadarola*
> *Vice President, Frost & Sullivan*

In contrast to the legacy voice-centric enhanced 911 (E911) network, NG911 supports a more diverse set of Internet protocol (IP)-based communications that will enhance the speed, accuracy, and preparation of first responders. More specifically, NG911 introduces an architecture that enables first responders to leverage real-time location, text, data, video, and other IP-based connected assets during emergency events to enhance situational awareness and incident intelligence.

While the entry of large integrators has accelerated progress and reduced the complexity of NG911, Frost & Sullivan believes

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a platform-centric, managed services approach is the optimal architecture to support NG911 deployments. The burden of recurring hardware and security upgrades is consistently cited as a key reason NG911 administrators prefer a managed service provider versus owning and/or managing equipment themselves. Moreover, cybersecurity threats have emerged as a critical concern among NG911 administrators. In fact, raised security standards, with higher-level cybersecurity requirements, have materialized in many recent NG911 RFPs.

In this environment, Lumen offers a public safety grade NG911 platform that addresses key customer requirements and transforms the way public safety answering points (PSAPs) and first responders can monitor, manage, react, and respond to emergency events. More specifically, the Lumen Platform provides:

- an end-to end managed services model;
- public safety grade redundancy and embedded security;
- end-to-end systems monitoring and management;
- a flexible/adaptable, 'future-proof' framework that allows customer to customize solutions based on their specific requirements; and
- the ability to integrate of new data sources and innovative applications leveraging public and/or private cloud platforms.

In contrast to competitors that offer 'siloed', 'built-when-sold' solutions, Lumen provides an integrated platform which not only supports existing applications, but also provides a framework to enable emerging technologies that are expected to embrace the power of 5G networks, cloud computing, data analytics, machine learning (ML), and artificial intelligence (AI) to revolutionize future emergency response operations.

Criterion 2: Stage Date Efficiency

As networks and technologies advance, the ability to provide a platform that enhances the stage gate process for launching and integrating new applications and solutions is critical to the next generation of public safety. While stand-alone innovative apps and compelling use cases often generate the most powerful marketing 'buzz', it is ultimately the underlying platform that creates an environment to enable, support, control, and enhance high performance apps. The Lumen Platform provides a framework to seamlessly support and/or integrate future technology advancements, while the cloud architecture enables customers to rapidly deploy new apps leveraging these technologies.

Frost & Sullivan believes the following critical enabling technologies should be inherently, embedded capabilities in an optimal 'next generation' NG911 platform:

- Connected Security
- Cloud /Edge Computing
- Adaptive Connectivity/Networking
- Collaboration/Big Data & Analytics
- Artificial Intelligence (AI)/Machine Learning (ML)

The Lumen Platform addresses these key requirements providing embedded security, cloud/edge computing, adaptive networking, analytics and collaboration capabilities. Importantly, the platform provides the flexibility to customize distinct technology and functionality requirements, allowing public safety customers to assemble solutions that best meet their unique needs.

Criterion 3: Customer Ownership/Service Experience

There has been significant momentum in the number of state-wide awards over the last 24 months. The NG911 land grab is closing rapidly as approximately 76.3% of the population is now covered by contracts. While competition remains fierce for the few remaining states/regions of the country not currently under contract, contesting incumbents for contract renewals will be the next key battleground to increase market share.

As the public safety sector evolves to be a more data-intensive environment and applications become more sophisticated, Frost & Sullivan believes a platform-centric approach will emerge as the preferred architecture to support NG911 systems. While most competitors must independently purchase connectivity and bundle it into their NG911 offerings, Lumen owns network assets and can offer customers managed connectivity, multi-cloud diversity, embedded security, and collaboration tools in one comprehensive platform. By partnering with a vendor such as Lumen, which manages the platform as well as the underlying adaptive network, customers are uniquely equipped to enable critical services required *today*, while retaining the flexibility to support emerging applications and innovative uses cases that will inevitably emerge *tomorrow* as technologies advance.

While Lumen provides a platform-centric architecture with core embedded capabilities that can be customized based on specific client needs, the vast majority of the competition offers 'built when sold', systems integration approach that leases infrastructure. Lumen's unique approach, coupled with a managed as-a-service business model, has resonated with customers and proven to reduce the complexity of deployments. Successful deployments, coupled with momentum in capturing new awards, is a testament to Lumen's customer ownership experience. In April 2022, New Jersey awarded Lumen a 7-year NG911 contract with two 1-year optional renewals. The contract supports New Jersey's transition to NG911, establishing a statewide ESInet that will serve the state's 248 PSAPs across 21 counties and cover approximately 8.9 million residents. Lumen also has existing primary statewide contracts in Nebraska, North Dakota, South Dakota, and Colorado; along with direct contracts in various counties in Florida.

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Moreover, Lumen is the regional provider for Southern CA (89 PSAPs), covering a population of approximately 11.5 million.

Criterion 4: Brand Equity in Public Safety

Lumen has unique organizational knowledge and accumulated experience in the public safety sector. NG911 administrators are generally not risk takers and will inevitably gravitate towards vendors that have an established operational presence in the public safety sector and can showcase proven

deployments. Frost & Sullivan believes vendors that have recognized brand equity in the public safety sector, offer end-to-end managed services, adhere to i3 industry standards, and communicate a vision beyond simply voice will be best positioned to win NG911 awards. Lumen has demonstrated a commitment to NENA i3 standards, provides a flexible/collaborative design approach (recognizing that one size does not fit all), and has unique embedded public safety grade security capabilities.

Conclusion

New technologies have fundamentally changed the way we live, communicate, and interact, ushering in an array of new requirements and opportunities for public safety entities. In this environment, Lumen has developed a visionary platform designed for the next generation of public safety. Frost & Sullivan believes Lumen's platform-centric, 'as-a-service' approach to NG911 provides a robust framework to support innovative applications and compelling future use cases. For the third consecutive year, Frost & Sullivan acknowledges Lumen's forward-thinking mindset in public safety, and recognizes Lumen with the 2023 Enabling Platform Leadership Award in the U.S. NG911 Market.

What You Need to Know about the Enabling Platform Leadership Recognition

Frost & Sullivan's Enabling Platform Leadership Award recognizes the company that applies its platform in new ways to improve existing products and services and elevate the customer experience.

Best Practices Award Analysis

For the Enabling Platform 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

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

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- **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)**