FROST & SULLIVAN
BEST PRACTICES

2026

SINGAPORE QUANTUM -SAFE NETWORKS SERVICE PROVIDER

COMPANY OF THE YEAR

sptel

Reliability with an Edge

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Best Practices Criteria for World-Class Performance

Frost & Sullivan applies a rigorous analytical process to evaluate multiple nominees for each recognition category before determining the final recognition recipient. The process involves a detailed evaluation of best practices criteria across two dimensions for each nominated company. SPTel excels in many of the criteria in the quantum-safe networks service provider space.

RECOGNITION CRITERIA

Visionary Innovation & Performance	*Customer Impact*
Addressing Unmet Needs	Price/Performance Value
Visionary Scenarios Through Megatrends	Customer Purchase Experience
Leadership Focus	Customer Ownership Experience
Best Practices Implementation	Customer Service Experience
Financial Performance	Brand Equity

Singapore's Quantum-Safe Networks Service Market

The Singapore quantum-safe networks (QSN) service market is an emerging segment driven by the increasing risk that quantum computing poses to traditional cryptographic methods. As a highly digitalized economy and global financial and data hub, Singapore places strong emphasis on securing communications for government agencies, critical national infrastructure, and regulated industries such as finance, energy, healthcare, and telecommunications.

The market is shaped by proactive national initiatives that promote early adoption of quantum-resilient technologies, including quantum key distribution (QKD) and post-quantum cryptography (PQC). QSN services in Singapore extend beyond experimental research, focusing on commercial-grade, deployable solutions that integrate secure connectivity, encryption, key management, and continuous monitoring.

Demand is primarily driven by organizations with long data confidentiality lifecycles, stringent regulatory obligations, and high availability requirements. As a result, service models emphasize managed offerings, end-to-end security, and integration across both IT and operational technology (OT) environments. The Singapore QSN market is expected to expand steadily as quantum-safe requirements become embedded into national digital infrastructure strategies, cross-border data exchange frameworks, and long-term cybersecurity planning, positioning Singapore as a regional leader in quantum-secure communications.

Operationalized Quantum Security for Regulated Real-World Environments

SPTel, a Singapore based business focused telecommunications and digital services provider established in 2018 and headquartered in Singapore, is a 100% owned portfolio company of Seraya Partners addresses critical unmet needs created by the growing quantum threat, particularly for government agencies and regulated industries operating mission critical information technology (IT) and operational technology (OT) environments. While many organizations struggle to translate quantum security concepts into deployable solutions, SPTel delivers commercial grade QSN designed for real operational use.

A key strength lies in SPTel's ability to support OT-grade quantum-safe connectivity, enabling protection for energy systems and other critical national infrastructure. A project with an organisation in the energy and utilities industry exemplifies how SPTel meets industry-specific security requirements through a long-term, production-level deployment. Similarly, participation in the Monetary Authority of Singapore (MAS) Quantum Sandbox, involving four banks, validates the relevance of quantum-key-distribution-as-a-**s**ervice (QKDaaS) for financial institutions preparing for post-quantum risks.

By integrating managed connectivity, QKD, post-quantum cryptography (PQC), and IT/OT encryption into a single service framework, SPTel effectively bridges the gap between quantum security theory and enterprise-ready implementation, aligning closely with immediate customer needs.

National-Scale Resilience Architecture for the Post-Quantum Era

SPTel demonstrates a clear visionary approach by aligning its business strategy with the megatrend of post-quantum cybersecurity and national digital resilience. Recognizing the long-term impact of quantum computing on encryption standards, the company proactively positioned QSN as a foundational capability for Singapore's future digital infrastructure.

> *"This leadership is further reinforced by SPTel's consistent success in securing deployments across regulated and mission-critical environments, underscoring its position as a market leader in commercial quantum-safe service adoption within Singapore in 2025."*
>
> ***- Kenny Yeo***
> ***Director, ICT***

As an Infocomm Media Development Authority (IMDA)-appointed operator of the National Quantum-Safe Network Plus (NQSN+), SPTel contributes to the development of a nationwide quantum-secure communications backbone. Its adoption of a hybrid QKD and PQC architecture reflects forward-looking planning, enabling organizations to prepare for future threats while maintaining near-term operational continuity.

Through sustained investment, ecosystem partnerships, and use-case-driven development, SPTel translates an emerging global technology shift into practical, scalable services, ensuring long-term relevance across government, finance, energy, and other regulated sectors.

Market-Shaping Leadership in Commercial Quantum-Safe Services

SPTel has demonstrated strong leadership by proactively shaping the quantum-safe communications landscape rather than responding reactively to market demand. Early strategic investments in QSNs, OT encryption, and resilient national infrastructure reflect a commitment to long-term national and enterprise security objectives.

The company has played a central role in convening regulators, enterprises, and technology partners to develop operational use cases under initiatives such as NQSN+, an energy and utilities industry deployment and the MAS sandbox program. This leadership is further reinforced by SPTel's consistent success in securing deployments across regulated and mission critical environments, underscoring its position as a market leader in commercial quantum safe service adoption within Singapore in 2025. These outcomes reflect strong institutional confidence in SPTel's technical maturity, delivery capability, and long-term operational reliability.

> *"SPTel follows a structured service lifecycle encompassing design, deployment, testing, continuous monitoring, and managed operations. This disciplined approach enables scalable, repeatable success across complex quantum-secure deployments, demonstrating strong operational maturity."*
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> ***- Kenny Yeo***
> ***Director, ICT***

By prioritizing capability building, ecosystem collaboration, and operational readiness, SPTel moves beyond experimentation to enable repeatable, scalable implementation of quantum-secure communications. This combination of strategic foresight and proven market traction establishes itself as a trusted leader guiding organizations through the transition to quantum-secure communications.

Shift from Cryptographic Theory to Carrier-Grade Execution

SPTel excels in execution by delivering fully managed, commercial-grade QSN supported by robust best-practice implementation processes. Its solutions are built on self-operated nationwide fiber infrastructure, designed to support high resilience and consistent performance for mission-critical applications.

Key implementation strengths include software-defined networking (SDN), ultra-low latency routing, true physical path diversity, and multi-layer encryption incorporating QKD, Advanced Encryption Standard (AES)-256, Media Access Control Security (MACsec), Internet Protocol Security (IPsec), and Optical Transport Network (OTN) encryption. These capabilities ensure end-to-end protection across both IT and OT environments.

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Delivery of Quantum Resilience with Predictable Economics

SPTel delivers strong price-to-performance value by providing managed quantum-safe connectivity, minimizing complexity and reducing upfront investment for customers. Flexible deployment models, including shared and dedicated QKDaaS with or without bandwidth, allow organizations to align security investments with operational and risk requirements.

By leveraging its existing nationwide fiber, and edge infrastructure, SPTel achieves high levels of performance, resilience, and security efficiency. The integration of connectivity, encryption, key management, and monitoring into a single service offering reduces the total cost of ownership and accelerates time to deployment.

This balanced approach ensures customers receive enterprise-grade quantum-safe capabilities with predictable commercial outcomes.

Trusted Lifecycle Partnership for Mission-Critical Security

SPTel provides a differentiated customer service experience through end-to-end managed quantum-safe services, supported by strong local engineering expertise and continuous operational oversight. Customers benefit from a single point of accountability covering consultation, solution architecture, deployment, and ongoing service management.

Proactive network and security monitoring, rapid response processes, and continuous service improvement are integral to SPTel's operating model. Feedback from regulated-industry deployments is systematically used to refine service delivery and enhance customer satisfaction.

By combining advanced quantum-safe technologies with responsive, locally delivered support, SPTel establishes long-term trust and positions itself as a strategic partner in customers' quantum-security journeys.

Conclusion

SPTel distinguishes itself in the Singapore QSN service market by systematically addressing the growing gap between emerging quantum security risks and the operational realities of government agencies and regulated industries. Through its QSN, QKDaaS, and end-to-end managed PQC ready offerings, SPTel delivers commercial-grade solutions that integrate secure connectivity, encryption, key management, and monitoring across both IT and OT environments. As organizations increasingly demand deployable, regulation-ready quantum-safe communications, SPTel provides a cohesive service framework that translates advanced cryptography into real-world operational confidence.

Guided by a clear visionary outlook, SPTel pioneers a national-scale, service-led approach to quantum-safe communications aligned with major megatrends such as post-quantum cybersecurity, critical infrastructure protection, and long-term digital resilience. This vision is reinforced by execution excellence, demonstrated through multi-year commercial deployments, nationwide infrastructure readiness, and the seamless convergence of QKD, PQC, and carrier-grade network technologies.

Supported by strong institutional trust and deep local expertise, SPTel further strengthens customer confidence by delivering superior ownership and service experience that reduces complexity and ensures long-term security assurance. Through decisive leadership in quantum-safe service innovation and ecosystem development, SPTel has set a new benchmark for quantum-secure communications in Singapore. With its outstanding overall performance, SPTel earns Frost & Sullivan's 2026 Singapore Company of the Year Recognition in the QSN service provider industry.

What You Need to Know about the Company of the Year Recognition

Frost & Sullivan's Company of the Year Recognition is its top honor and recognizes the market participant that exemplifies visionary innovation, market-leading performance, and unmatched customer care.

Best Practices Recognition Analysis

For the Company of the Year Recognition, Frost & Sullivan analysts independently evaluated the criteria listed below.

Visionary Innovation & Performance

Addressing Unmet Needs: Customers' unmet or underserved needs are unearthed and addressed to create growth opportunities across the entire value chain

Visionary Scenarios Through Megatrends: Long-range scenarios are incorporated into the innovation strategy by leveraging megatrends and cutting-edge technologies, thereby accelerating the transformational growth journey

Leadership Focus: The company focuses on building a leadership position in core markets to create stiff barriers to entry for new competitors and enhance its future growth potential

Best Practices Implementation: Best-in-class implementation is characterized by processes, tools, or activities that generate consistent, repeatable, and scalable success

Financial Performance: Strong overall business performance is achieved by striking the optimal balance between investing in revenue growth and maximizing operating margin

Customer Impact

Price/Performance Value: Products or services offer the best ROI and superior value compared to similar market offerings

Customer Purchase Experience: Purchase experience with minimal friction and high transparency assures customers that they are buying the optimal solution to address both their needs and constraints

Customer Ownership Excellence: Products and solutions evolve continuously in sync with the customers' own growth journeys, engendering pride of ownership and enhanced customer experience

Customer Service Experience: Customer service is readily accessible and stress-free, and delivered with high quality, high availability, and fast response time

Brand Equity: Customers perceive the brand positively and exhibit high brand loyalty, which is regularly measured and confirmed through a high Net Promoter Score®

Best Practices Recognition Analytics Methodology

Inspire the World to Support True Leaders

This long-term process spans 12 months, beginning with the prioritization of the sector. It involves a rigorous approach that includes comprehensive scanning and analytics to identify key best practice trends. A dedicated team of analysts, advisors, coaches, and experts collaborates closely, ensuring thorough review and input. The goal is to maximize the company's long-term value by leveraging unique perspectives to support each Best Practice Recognition and identify meaningful transformation and impact.

STEP		VALUE IMPACT: WHAT	VALUE IMPACT: WHY
1	**Opportunity Universe**	Identify Sectors with the Greatest Impact on the Global Economy	Value to Economic Development
2	**Transformational Model**	Analyze Strategic Imperatives That Drive Transformation	Understand and Create a Winning Strategy
3	**Ecosystem**	Map Critical Value Chains	Comprehensive Community that Shapes the Sector
4	**Growth Generator**	Data Foundation That Provides Decision Support System	Spark Opportunities and Accelerate Decision-making
5	**Growth Opportunities**	Identify Opportunities Generated by Companies	Drive the Transformation of the Industry
6	**Frost Radar**	Benchmark Companies on Future Growth Potential	Identify Most Powerful Companies to Action
7	**Best Practices**	Identify Companies Achieving Best Practices in All Critical Perspectives	Inspire the World
8	**Companies to Action**	Tell Your Story to the World (BICEP*)	Ecosystem Community Supporting Future Success

*Board of Directors, Investors, Customers, Employees, Partners

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.

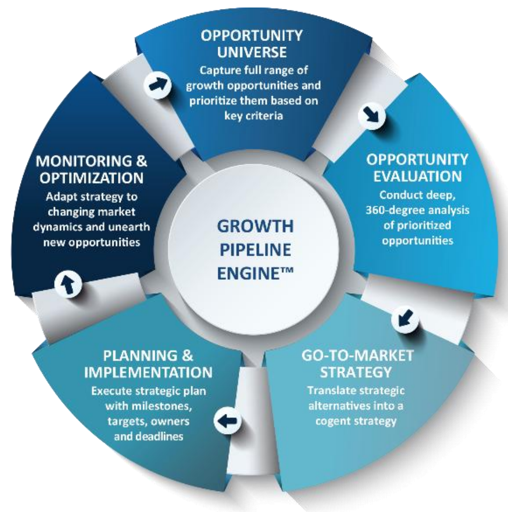
The Growth Pipeline Generator™

Frost & Sullivan's proprietary model to systematically create ongoing growth opportunities and strategies for our clients is fueled 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:

- Megatrend (MT)
- Business Model (BM)
- Technology (TE)
- Industries (IN)
- Customer (CU)
- Geographies (GE)