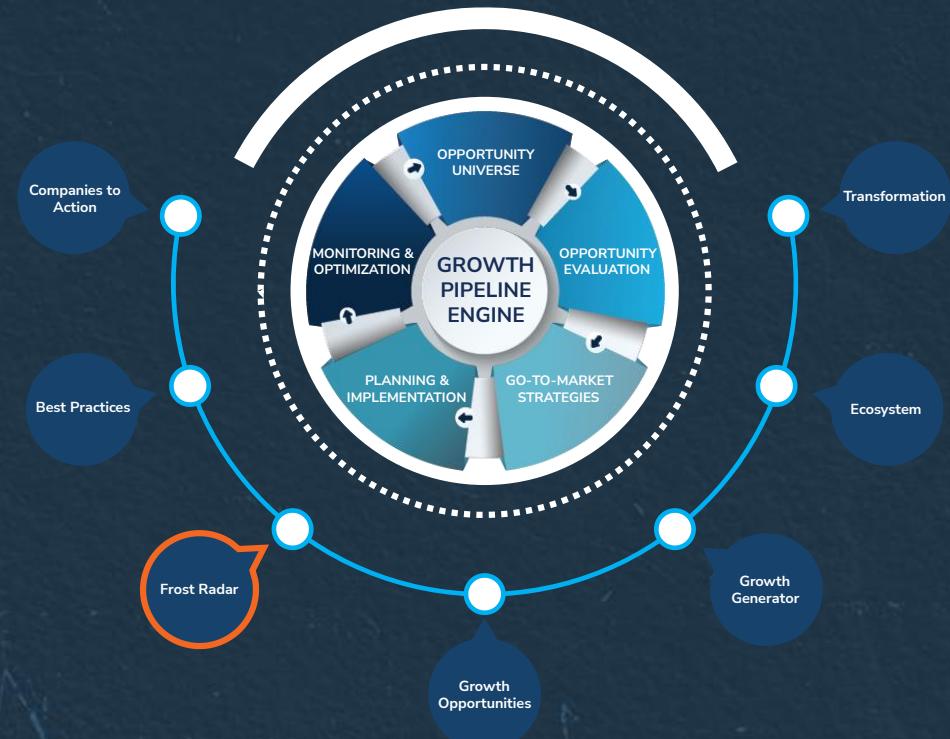


Frost Radar™: Managed SD-WAN in North America, 2025

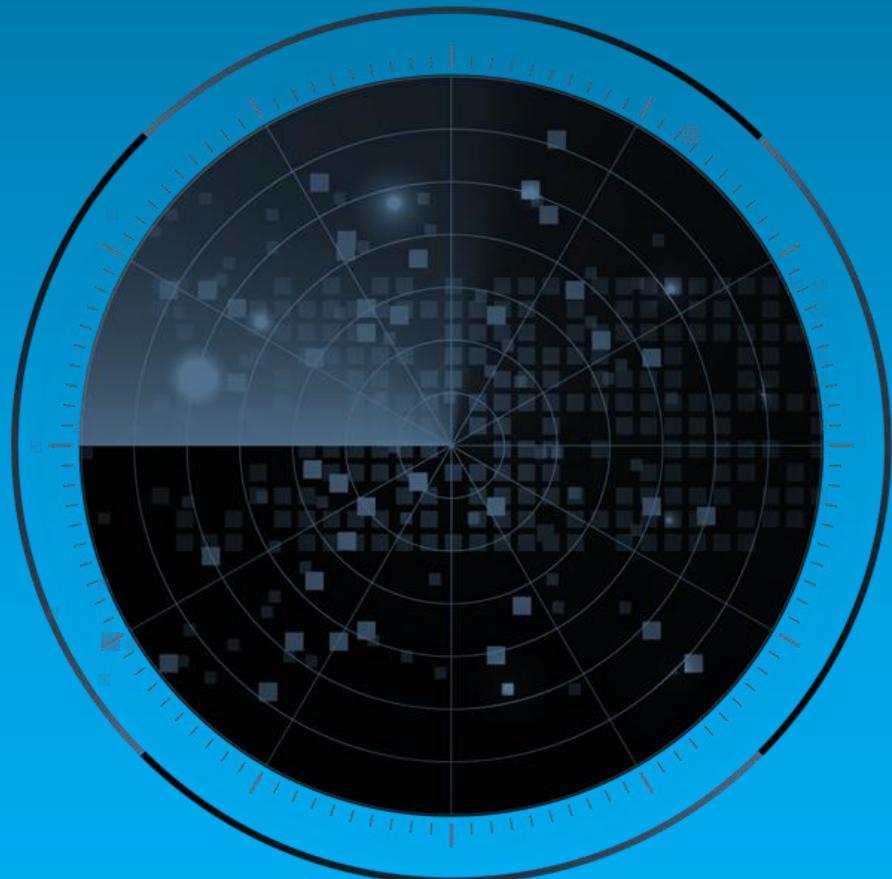
A Benchmarking System to Spark
Companies to Action - Innovation
That Fuels New Deal Flow and
Growth Pipelines



Authored by: Stephen Thomas

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Strategic Imperative and Growth Environment



Strategic Imperative

- The pace of innovation in software-defined wide area networking (SD-WAN) continues to accelerate, making it a cornerstone of digital transformation strategies. As enterprises modernize their infrastructure, SD-WAN is no longer just a networking upgrade, but a strategic enabler of secure, agile, and cloud-centric operations. Yet, as SD-WAN solutions grow more advanced, so do the challenges of deploying and managing them effectively. This complexity is fueling demand for managed SD-WAN services, which help organizations streamline implementation and maximize value.
- Frost & Sullivan's 2024 [global voice of the customer network survey](#) found that the top concern for North American enterprises is aligning network and security architectures across distributed branch sites. This concern is shaping the market, with providers integrating secure SD-WAN with security service edge (SSE) capabilities and consolidating vendor ecosystems to simplify operations. The survey also revealed that organizations are prioritizing convergence of LAN and WAN infrastructure, vendor stability with global support, and seamless cloud connectivity to platforms such as AWS, Azure, and Google Cloud.
- These preferences are directly reflected in how managed SD-WAN providers are evolving their offerings. Providers are embracing platform-centric service delivery, building unified platform approaches that integrate networking, security, observability, and lifecycle management. These platforms are designed to be role-based, API-first, and capable of orchestrating across multiple vendors.

Strategic Imperative (continued)

- Providers are embedding AI and machine learning into threat detection, network observability, and predictive maintenance, transforming portals into single-pane-of-glass experiences that offer deeper insights and faster issue resolution. This aligns with the survey's finding that in North America, 92% of organizations prefer managed or co-managed SD-WAN, citing benefits such as service-level agreements (SLAs), simplified vendor management, and faster service restoration. Service providers are adapting support models as well by providing fully managed, co-managed, and even notify-only options.
- Seamless, cloud-native and multicloud integration is now a baseline expectation, with ecosystems built to support hybrid environments and rapid provisioning. Their platforms underscore the importance of speed to service, transparent pricing, and contract agility.
- The convergence of networking and security is no longer optional, but foundational. SD-WAN is integrated with SSE frameworks, with vendors partnering with leading security providers, such as Palo Alto Networks, Zscaler, and Netskope, to deliver holistic, secure connectivity. Top providers are even embedding their own threat intelligence into the mix to make them more of a value-added service.

Growth Environment

- In a managed SD-WAN model, the service provider becomes the single point of accountability for delivering a complete solution, covering the SD-WAN appliance, software licensing, WAN connectivity, and ongoing support. This approach simplifies deployment and operations for enterprises, especially as SD-WAN architecture decouples control and management from data flows. This abstraction allows for flexible placement of controllers and management systems, whether on universal customer premises equipment (uCPE), at the providers edge, in the public cloud, or in a data center.
- Key responsibilities of managed SD-WAN providers include:
 - procuring, installing, configuring, and managing the SD-WAN edge device (physical or virtual) and associated software;
 - provisioning and managing underlay WAN links, such as direct internet access (DIA), Ethernet, broadband, or wireless—either on their own infrastructure or through telecom partners;
 - handling all moves, adds, and changes across the SD-WAN environment;
 - providing 24x7 monitoring, troubleshooting, and restoration services (day-two support);
 - delivering performance guarantees through SLAs that cover the full solution;
 - offering optional value-added services such as WAN aggregation, continuity configurations, third-party access management, enhanced security features, and WAN optimization;
 - empowering IT teams with self-service portals and APIs for granular visibility and control; and
 - billing through a subscription-based model, typically as a monthly recurring charge (MRC). Some providers bundle the edge device, bandwidth, and management into a single MRC, while others separate bandwidth charges.

Growth Environment (continued)

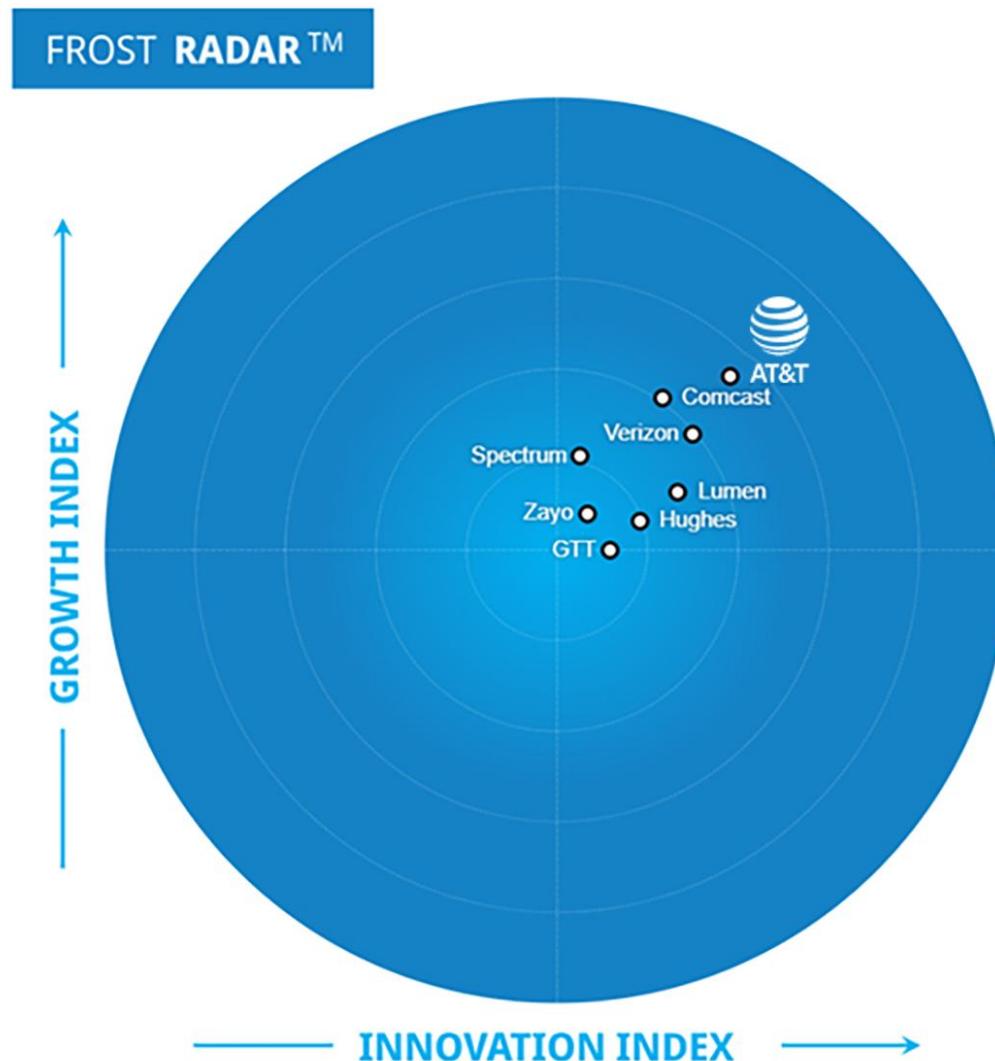
- There are three types of service providers in this space:
 - Network service providers (NSPs), such as AT&T Business, Comcast Business, Lumen, and Verizon Business, combine their own infrastructure with vendor solutions. This integration supports strong SLAs, better visibility, and positions them as digital infrastructure integrators.
 - Managed service providers (MSPs), such as TPx, Windstream, GTT, and Fusion Connect, offer managed services across network, security, unified communications, and cloud. They typically partner with vendors and source access from different tiers of carriers, providing scalable and customizable solutions.
 - Value-added resellers/technology service distributors, such as Ingram Micro, Avant, Telarus, and CDW, act as procurement channels, coordinating installation and ongoing service with NSPs or MSPs. Revenue typically flows through the primary provider.
- This Frost Radar™ focuses only on NSPs and MSPs with integrated backbone networks.
- Managed SD-WAN site growth in North America was 20.3% in 2024, signaling strong momentum in the region. This growth is underpinned by network investment trends captured in Frost & Sullivan's 2024 network survey. In North America, 69% of respondents reported increased network budgets, and of those, 88% boosted spending by 11% or more (above the global average). These figures reflect a clear commitment to modernizing network infrastructure and are encouraging for SD-WAN growth: while 50% of respondents globally are still in the learning or planning phase, the investment climate in North America provides a foundation for accelerated adoption.

F R O S T & S U L L I V A N

Frost Radar™: Managed SD-WAN in North America



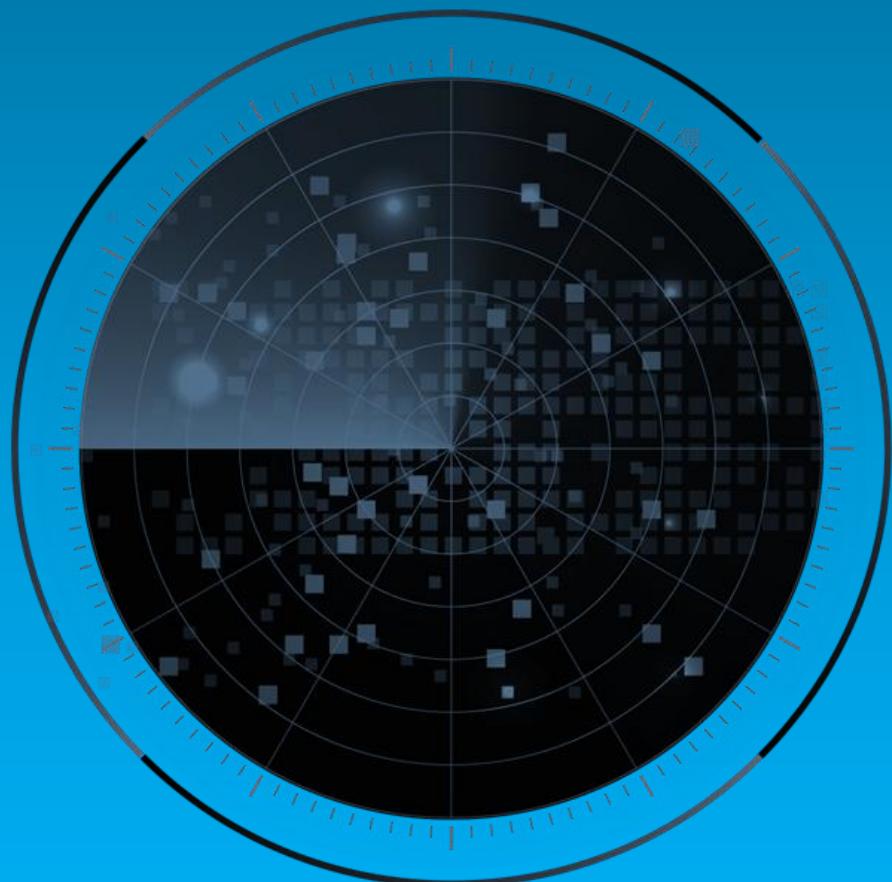
Frost Radar™: Managed SD-WAN in North America



Frost Radar™ Competitive Environment

- The managed SD-WAN market continues to evolve rapidly, driven by innovation in connectivity, cloud integration, security, and edge computing. A diverse mix of providers, ranging from telecom giants to infrastructure specialists, are shaping how enterprises deploy and manage their networks.
- Frost Radar™ leader AT&T is the largest SD-WAN provider in North America, leveraging its vast infrastructure and global reach to support complex enterprise networks. Its impact is felt through scalable hybrid connectivity and deep integration with cloud and security platforms. AT&T's strength lies in its ability to deliver agile, secure, and globally consistent services across diverse industries.

Frost Radar™: Companies to Action



AT&T Business

INNOVATION

- AT&T offers a comprehensive network services portfolio with Cisco and Palo Alto Prisma as its single-SD-WAN vendor options, which streamlines its go-to-market approach. For a modernized network portfolio, the company offers a blend of Cisco Catalyst, Edge Connect, VeloCloud, AT&T Network Functions Virtualization, and a gateway service enabling hybrid deployments, preserving MPLS at select sites while advancing others to SDN.
- AT&T had 10 SD-WAN/SSE vendor options but has since streamlined its focus to Velo by Arista, Aruba by HPE, and Cisco. This strategic shift is aimed at enhancing operational efficiency and driving innovation. AT&T continues to leverage its uCPE platform to support pre-integrated solutions and virtual network functions, while also maintaining flexibility through bring-your-own-license options.
- SD-LAN/SD-Branch offers a dual-platform flexibility with Aruba Central and Cisco Meraki, empowering agile branch transformation.
- AT&T delivers security intelligence at scale through solutions fortified by its proprietary Dynamic Defense framework. This approach leverages AT&T's extensive threat intelligence and a portfolio of over 1,000 security patents. SD-WAN offerings can be seamlessly integrated with SSE solutions from partners, such as Zscaler and Palo Alto Networks' Prisma, enabling a comprehensive and flexible security architecture.

AT&T Business (continued)

INNOVATION

- AT&T's self-service portal enables zero-touch provisioning and lifecycle management, with the ability to execute logical network changes. All are powered by a virtual AI assistant.
- For next-gen observability, AT&T utilizes a proprietary AIOps tool and plans to deliver advanced digital experience monitoring by integrating Aruba UXI, Cisco Thousand Eyes, and VeloCloud RAN.
- AT&T's "try before you buy" model, powered by proof-of-concept labs, invites customers to explore innovation hands-on before committing. This forward-thinking approach fosters experimentation, accelerates adoption, and showcases AT&T's role as a catalyst for transformation.

AT&T Business (continued)

GROWTH

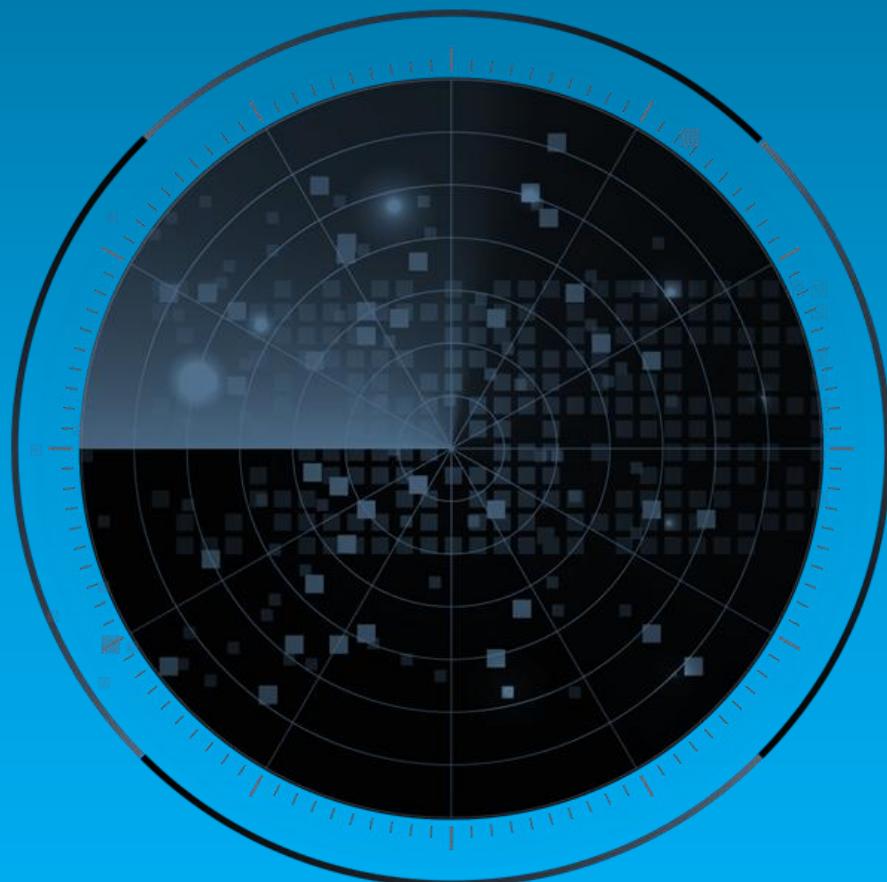
- AT&T maintains its position as the largest SD-WAN provider in North America, with a 6-digit number of sites deployed globally.
- Customers benefit from dynamic bandwidth provisioning across AT&T Switched Ethernet, internet, and MPLS, powered by SDN.
- The combination of fixed wireless access growth and SD-WAN enables rapid site turn-ups, accelerating deployment timelines. Additionally, AT&T's partnerships with Low Earth Orbit (LEO) satellite providers extend connectivity to hard-to-reach and underserved areas, ensuring broader network coverage and resilience.
- Wireless internet is available in nearly 70 markets, supporting hybrid network configurations such as DIA paired with LTE, 4G, or 5G backup. This setup enhances reliability and ensures business continuity.
- AT&T maintains a strong North American gateway footprint, including 8 private AT&T/VeloCloud core gateways, additional public partner gateways, and multi-vendor gateways owned by AT&T in 10 major cities. These gateways are supported by a unified platform that integrates virtual routers, SD-WAN, firewalls, and Session Border Controllers (SBCs), enabling scalable and secure network services.
- AT&T bespoke security services are now delivered through LevelBlue, supported by an equity partnership established in 2024.
- AT&T is well-positioned to capture the hybrid cloud market, with scalable multicloud connectivity pre-provisioned in more than 900 on-net cloud locations globally, including 600 in North America.

AT&T Business (continued)

FROST PERSPECTIVE

- AT&T has a diverse portfolio—DIA, broadband, wireless, Ethernet, MPLS, and IP VPN—combined with SD-WAN capabilities, creating strong customer retention across verticals.
- By offering both single-vendor SASE and best-of-breed options, AT&T effectively serves the full spectrum of clients—from SMBs to large enterprises.
- With ongoing asset transitions and product rationalization, AT&T maintains one of the most robust and adaptive service portfolios in the industry.
- As NaaS gains traction, AT&T's website must evolve into a true digital front door, enabling seamless access to its full range of services. This would further enhance AT&T's sales and marketing efforts by providing access to dynamic pricing and a broader range of services.

Best Practices & Growth Opportunities



Best Practices

1

Industry leaders are adopting converged, cloud-centric architectures by integrating SD-WAN with SSE and enabling seamless connectivity across hybrid and multicloud environments.

2

Industry leaders are using intelligent, unified platforms with AI-driven insights, an API-first design, and global vendor stability to enable secure and agile operations.

3

Industry leaders are leveraging AI- and ML-powered platforms to enhance visibility, detect threats, and deliver predictive insights with unified observability across their vendors and platforms.

Growth Opportunities

1

Providers must embrace a “simplicity-first” strategy to effectively capture enterprise demand, particularly among organizations grappling with multivendor sprawl and fragmented IT environments. By streamlining service delivery and reducing integration overhead, providers can position themselves as trusted partners in digital transformation, which will unlock significant growth.

2

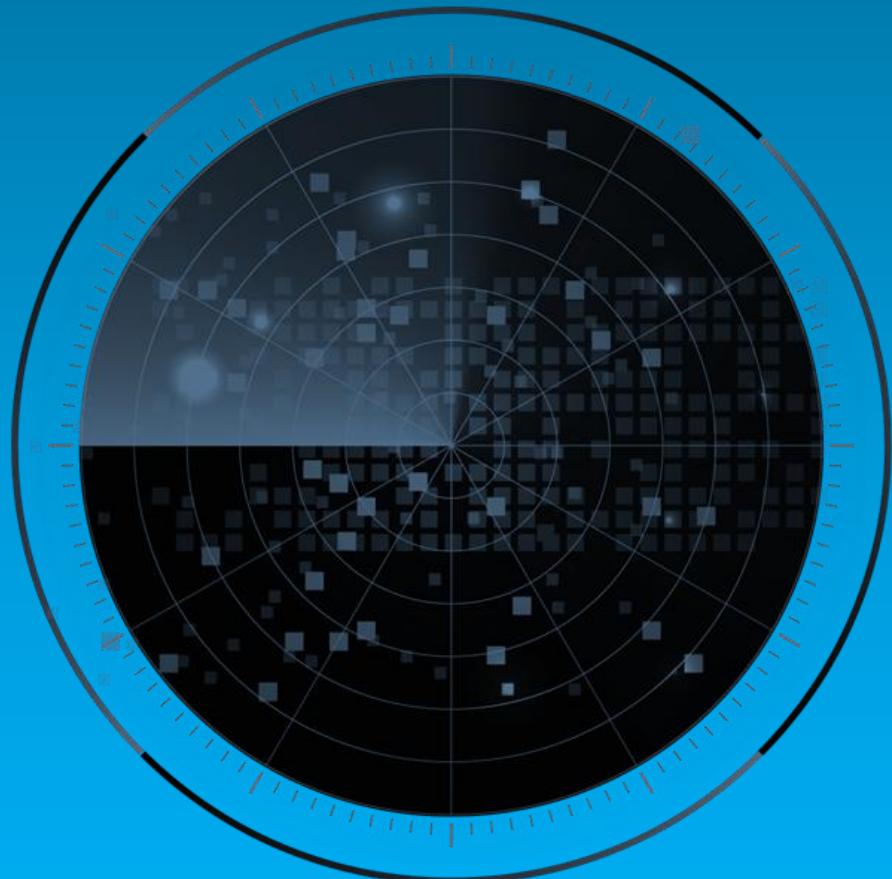
Leading providers are investing in AI-powered threat detection, zero trust architectures, and digital experience platforms. Their growth will increasingly come from offering differentiated service layers, not limited to basic connectivity but focused on intelligent, user-centric platforms that enhance visibility, control, and overall user experience.

3

As quantum computing advances, the urgency to secure data against future decryption threats is accelerating. NSPs are uniquely positioned to lead the transition to quantum-resilient infrastructure, particularly through offerings such as VPNs, SD-WANs, and secure edge services fortified with post-quantum cryptography.

F R O S T & S U L L I V A N

Frost Radar™ Analytics

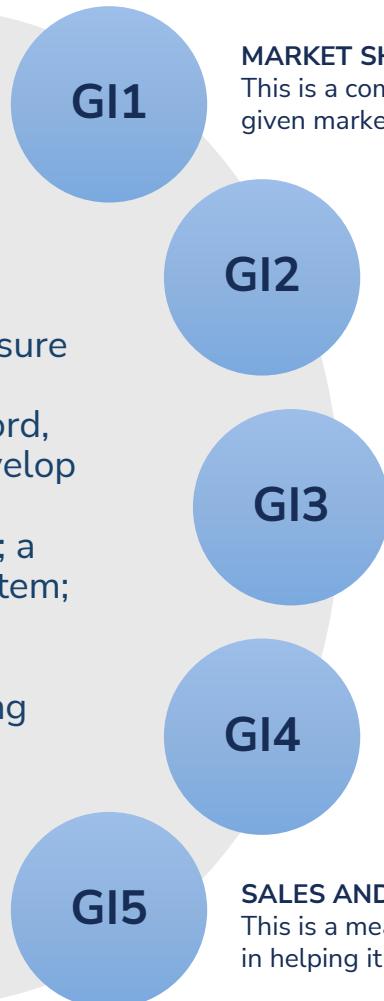


Frost Radar™: Benchmarking Future Growth Potential

2 Major Indices, 10 Analytical Ingredients, 1 Platform

Growth Index

Growth Index (GI) is a measure of a company's growth performance and track record, along with its ability to develop and execute a fully aligned growth strategy and vision; a robust growth pipeline system; and effective market, competitor, and end-user focused sales and marketing strategies.



MARKET SHARE (PREVIOUS 3 YEARS)

This is a comparison of a company's market share relative to its competitors in a given market space for the previous 3 years.

REVENUE GROWTH (PREVIOUS 3 YEARS)

This is a look at a company's revenue growth rate for the previous 3 years in the market/industry/category that forms the context for the given Frost Radar™.

GROWTH PIPELINE™

This is an evaluation of the strength and leverage of a company's growth pipeline system to continuously capture, analyze, and prioritize its universe of growth opportunities.

VISION AND STRATEGY

This is an assessment of how well a company's growth strategy is aligned with its vision. Are the investments that a company is making in new products and markets consistent with the stated vision?

SALES AND MARKETING

This is a measure of the effectiveness of a company's sales and marketing efforts in helping it drive demand and achieve its growth objectives.

Frost Radar™: Benchmarking Future Growth Potential

2 Major Indices, 10 Analytical Ingredients, 1 Platform (continued)

Innovation Index

Innovation Index (II) is a measure of a company's ability to develop products/ services/ solutions (with a clear understanding of disruptive megatrends) that are globally applicable, are able to evolve and expand to serve multiple markets and are aligned to customers' changing needs.



II1 INNOVATION SCALABILITY

This determines whether an organization's innovations are globally scalable and applicable in both developing and mature markets, and also in adjacent and non-adjacent industry verticals.

II2 RESEARCH AND DEVELOPMENT

This is a measure of the efficacy of a company's R&D strategy, as determined by the size of its R&D investment and how it feeds the innovation pipeline.

II3 PRODUCT PORTFOLIO

This is a measure of a company's product portfolio, focusing on the relative contribution of new products to its annual revenue.

II4 MEGATRENDS LEVERAGE

This is an assessment of a company's proactive leverage of evolving, long-term opportunities and new business models, as the foundation of its innovation pipeline. An explanation of megatrends can be found [here](#).

II5 CUSTOMER ALIGNMENT

This evaluates the applicability of a company's products/services/solutions to current and potential customers, as well as how its innovation strategy is influenced by evolving customer needs.

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