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Nokia's Enterprising Security Strategy

HardenStance attended Nokia's Global Analyst Forum held at Nokia Bell Labs HQ in New Jersey, earlier this month. Here are the key take-aways relating to the security space:

- Nokia sees no reason why its new enterprise business shouldn't account for 25% of total revenues in the future.
- Nokia is already reaching into enterprise networks to connect applications reliably and securely to the cloud with SD-WAN, private 4G and enterprise routing solutions.
- Next, Nokia should seek to lead in tightly coupling security features with its end-to-end solutions for private 5G networks and 5G network slices. It should grow security headcount and favour partnering leading security vendors and start-ups over M&A.

In technology, getting your head around what something is not is often key to understanding what it actually is. Credit then to Bhaskar Gorti, President of Nokia's software group, for telling the company's recent Global Analyst Forum in New Jersey that "Nokia doesn't want to be a generic IT security player".

Much of what's emerging in Nokia's security strategy centres on the enterprise market, including the new "Future X for Industries" strategy focused on the Industrial Internet of Things (IIOT). Nokia is intent on exploiting the disruptive technology trends of digital transformation and 5G to make an unprecedented push into enterprise networking.

Nokia doesn't want to be a generic IT security player.

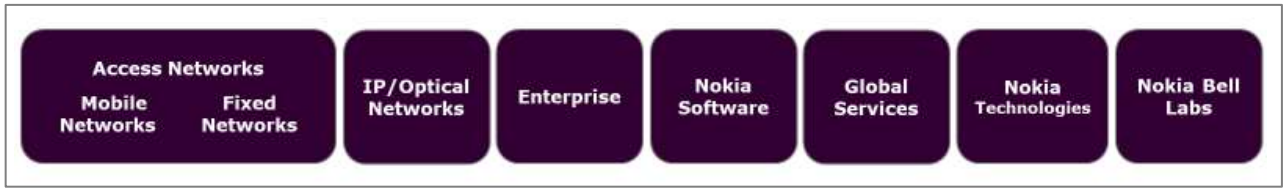
A new Enterprise Business Group comes into effect on January 1st, led by current Chief Strategy Officer, Kathrin Buvac. Nokia thinks in terms of an addressable enterprise networking market growing at a CAGR of 8% over the next five years, reaching $22 billion by 2023. From just 5% today, the company sees no reason why enterprise revenues shouldn't grow to 25% of its total business, maybe even higher. The strategy is to target the enterprise directly as well as in partnership with telco partners. A global sales force of six hundred people is dedicated to the cause.

Reach into enterprise infrastructure and connect securely to the cloud

Consistent with this, CEO, Rajeev Suri told assembled analysts that enterprise customers want a networking partner "that can reach deep into their infrastructure and reliably and securely connect their applications to the cloud."

Thanks to the Nuage Networks business unit, Nokia's SDN solution, Nokia is already doing this with one of the leading SD-WAN solutions on the market. Marcus Weldon, CTO and President of Nokia Bell Labs, referred to it as "our trojan horse into the branch router". Nokia now has fifty telco partners selling its SD-WAN product line.

Figure 1: Nokia's new Business Groups, effective January 1 2019



Source: HardenStance

The SD-WAN 2.0 release, launched in September, boasts unified security – micro-segmentation as well as real-time threat detection and response - across branch and regional sites, private data centres, SaaS providers and public clouds. Nokia also wields the highly competitive router portfolio that came with acquiring Alcatel-Lucent. This generated sales of €5.7 billion in 2017.

The company also has its own NetGuard security portfolio, spanning the Security Management Centre – Nokia's Security Operations, Analytics and Response (SOAR) platform – as well as network security, End Point and IoT security solutions. In-line filtering built into Nokia's FP4 routing silicon combined with the cloud analytics acquired with Deepfield enables scalable DDoS protection solutions. Telcos deploying these capabilities can also serve as channels to the enterprise market.

The lower latency of 5G will be critical for some industrial automation use cases.

Nokia wants to push on from these core security building blocks to grow enterprise share by exploiting its strengths in mobile networks, including in 5G. Elsewhere in the competitive landscape, and despite twenty years of trying, Cisco, the 800 pound gorilla in enterprise networking, has singularly failed to earn credibility in cellular radio.

This is going to count. Many large enterprises undergoing digital transformation will certainly continue with large scale deployments of Wi-Fi for Industrial IoT and other use cases. Here Cisco can continue to leverage its leadership and scale in Wi-Fi to great effect. But for a lot of enterprise use cases, the lower-latency of 5G is a critical – non-negotiable – requirement. For some use cases, Wi-Fi just won't cut it.

Nokia will be able to differentiate with end-to-end 5G solutions

It's not just Nokia's mobile radios themselves that will count. The tying back of those radios into Nokia's end-to-end network solution will also be key – whether it's a private 4G or 5G network deployed by the enterprise itself or one or more 5G network slices served up by a Nokia-supplied telco. Yes, Cisco can partner other 5G radio vendors to assemble an end-to-end solution of sorts with its own 5G core. But by virtue of having one hundred per cent control over its own end-to-end solution, Nokia has an opportunity to differentiate in 5G networking and supporting security features for enterprises.

Some of the enterprise use cases that Nokia is targeting were demonstrated and presented in New Jersey. They are shown in **Figure 2**. Marcus Weldon pitched Nokia's

Figure 2: Enterprise digital transformation use cases Nokia is targeting

Example	Digital Transformation Use Case
Factory automation	Analysts experienced a new Virtual Reality demo showing how "Future X" will play out when applied to full 5G-driven automation of everything in Nokia's factory in Oulu. The demo featured a human-free factory floor, with people only intervening in some tasks via remote controlled drones and a subset of robots.
AT&T IoT	Nokia announced AT&T as a major Worldwide IoT Network Grid (WING) customer in June. AT&T's SVP of IoT Solutions, Chris Penrose, stressed the benefits of rolling out its IoT services for multiple verticals across the global network of networks that Nokia has built out with WING. He stated that AT&T is "hyper-focused on IoT security." He showed how the security services it builds out relies on layers of foundational security provided by the WING platform together with additional security services layered on by AT&T.
Logistics automation	Nokia is working with a world leading logistics company to deliver a private 4G network to automate the loading and unloading of goods at its airport hubs and ground transport facilities world-wide. Nokia cited productivity gains for the company of up to 45%.

Source: HardenStance

underlying infrastructure solutions as the network equivalent of the iPhone - ready to support as much application innovation as enterprise verticals can throw at it.

In enterprise security, there's no doubt that Cisco has outspent everyone on acquisitions in recent years. $2.35 billion for Duo Security is only the latest in a long line of costly acquisitions. Nokia's 2016 outlay on Nakina Systems – the source of the company's SOAR solution – was tiny by comparison.

Nokia should generally avoid M&A in security except to buy talent that can fill skills gaps in key areas.

Hence security is inevitably a trump card for Cisco in enterprise accounts? Not necessarily. As documented in the HardenStance Network Security Sales Index (NSSI) despite the billions spent on security acquisitions, growth in Cisco's security sales has been strikingly poor compared with leading security vendors. Cisco's mastery of networking M&A and portfolio integration is legendary, but it doesn't seem to have been quite as effective for security; not yet, anyway.

So, what are the next steps in terms of Nokia "reaching deep" into enterprise infrastructure and "reliably and securely connecting applications to the cloud"? As the new enterprise business unit prepares to go live on January 1st, here's how HardenStance thinks Nokia should look to differentiate further in enterprise security:

- **Lead with a rich menu of easy-to-use 5G security services that is tightly coupled with its end-to-end private network and network slicing solutions**. Engage with enterprise Chief Information Security officers (CISOs) early in the 5G sales cycle. Prioritize 5G security features that many enterprise customers will need above 'bright, shiny" networking features that a big enterprise or carrier customer says they want but may never need.
- **Focus on partnering innovative cyber security vendors and start-ups.** Nokia should generally avoid M&A in security except for the purpose of buying talent that can fill skill gaps in key areas. With Marcus Weldon coining the term "IOCT" - the convergence of ICT and Operations Technology (OT) – during his talk, OT is one obvious area. Niche verticals like Industrial Control Systems (ICS) is another.
- **Grow cyber security headcount** to help the many enterprises and telco partners that don't have the expertise to navigate the security challenges of digital transformation by themselves.
- **Go to market with telco partners that have a long-term commitment to enterprise security and invest in the security solutions those operators need.** Nokia should combine its security portfolio with the best third-party security solutions and bring them to enterprises via the telco channel as well as directly. ■

More Information

- HardenStance is participating with Nokia in a December 6th Infosec webinar on Malware: What Telecom Operators Can See and What They Can Do About It"
- HardenStance White Paper: "5G Security to Drive Enterprise Investment"
- HardenStance White Paper: "New Managed Security Opportunities for Telcos"

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