

# SEGMENT SALES KIT

# NOKIA Portfolio

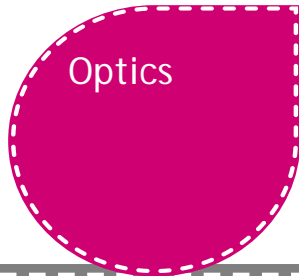
## IP/MPLS LAN/WAN

the best IP network solution to handle all your critical applications



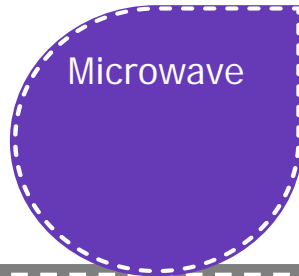
## Optics WDM / OTN

Scalable & dynamic optical transport for mobile, video and cloud-based services



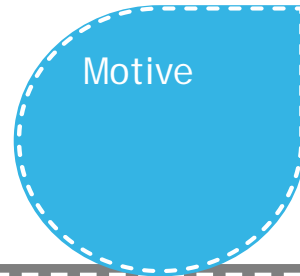
## Microwave

Proven IP microwave solutions for transport over the air



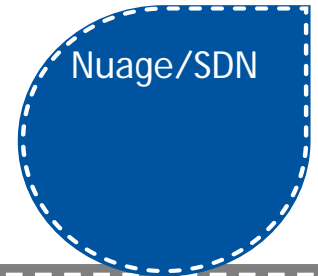
## Customer experience

Motive innovative solution for customer experience, M2M and network analytics



## Nuage/SDN

connect your datacenters, manage your hybrid cloud, add branch to enterprise cloud



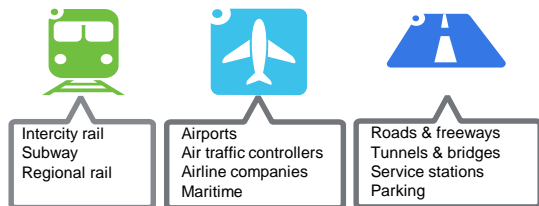
SERVICE-AWARE UNIFIED MANAGEMENT

# TRANSPORT



## THE BEST IP SOLUTION FOR A SMOOTH MIGRATION TO AN ULTRA-HIGH-PERFORMANCE COMMUNICATION NETWORK TO HANDLE ALL YOUR CRITICAL APPLICATIONS

### SEGMENTS



### CONTEXT

The transport industry has traditionally deployed dedicated communication networks for each service. Most of these critical networks are now aging and unable to absorb the growing traffic demands of more advanced, bandwidth-hungry services. By upgrading to a unified ultra-broadband IP network to support all of their services, your customers will cut their operating costs and enjoy much more flexibility to add new applications, securely and with improved performance.


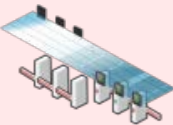




### WHY WORK WITH NOKIA

- Nokia has more than 30 years' experience, and supplies more than 100 customers in the transport sector. (#1 in optical transport; #2 in IP/MPLS edge routing)
- To reduce cost of ownership, we offer a single IP/MPLS network for all your critical and non-critical services.
- Savings of 20 to 50% on operating costs by using our unified IP/Fiber-optic/RF/Wireless management platform.
- No need to redevelop your existing business applications, as our IP/MPLS solution provides a smooth migration path to the future without increased network costs, with continued support for existing infrastructure through the most complete range of industrial-strength IP/MPLS routers on the market. (7750 SAR: over 300,000 sales in 2014, 7705 HC: world's smallest industrial-strength router...)
- Our multi-tenant IP network solutions offer the potential for reselling network capacity or deploying a wide range of IP services on any network topology.

### HOW TO GAIN CUSTOMER ENGAGEMENT

- Are you faced with obsolescent devices in your communication networks?
- Do you have a digital transformation project?
- Is your current communication network capable of handling the digital services demanded by users (video, data, location, on-board high-speed Internet...)?
- Would you like to monetize your investment by reselling high-speed Internet access along railways as well as in your rail stations, airports, ports, tunnels, subways...)?

### SOLUTIONS AND OPPORTUNITIES

AVIATION, ROADS, HARBORS, RAIL, URBAN TRANSPORT	OPPORTUNITIES	NOKIA SOLUTIONS
   	<ul style="list-style-type: none"> <li>• Mission-critical communication networks, SCADA renewal</li> <li>• Data center consolidation</li> <li>• Network virtualization</li> <li>• Radio coverage, PMR migration, private/public Wi-Fi</li> <li>• Machine-to-machine, Internet of things</li> </ul>	<ul style="list-style-type: none"> <li>• IP/MPLS LAN/WAN (7750 SR, 7705 SAR, 7210 SAS)</li> <li>• O&amp;M 5620 Service Aware Manager</li> <li>• Microwave IP 9500 MPR</li> <li>• Hardened and certified products (EN 50121, 50155, IEC 61850...)</li> <li>• WDM &amp; ROADM optical transport 1830 PSS</li> <li>• DWDM fiber-optic data center</li> <li>• L1 encryption of optical signal</li> <li>• Nuage SDN dynamic cloud management</li> <li>• LTE, small cells (metro/enterprise), WiFi, WiFi Gateway</li> <li>• Motive M2M, Big Network Analytics</li> </ul>
	<ul style="list-style-type: none"> <li>• Security solutions (networks and traffic)</li> </ul>	<ul style="list-style-type: none"> <li>• Motive Security Guardian: real-time analysis of cyber-attacks over millions of transactions.</li> </ul>
	<ul style="list-style-type: none"> <li>• Big Data intelligence</li> </ul>	<ul style="list-style-type: none"> <li>• Motive Big Network Analytics</li> </ul>

### SUCCESS STORY TRAFIKVERKET – IP WHOLESALÉ project

#### •Issues

- Consolidate IT, telecoms and signaling networks in a modern communication network.
- Objective to resell unused network capacity to operators, private companies and manufacturers in Sweden along transport lines.

#### •Solution

- Create a secure, unified IP/MPLS network carrying all services including voice, video and data, with reselling of wholesale IP services (premium VPN solutions, level 2 or level 2 using Ethernet as LAN/WAN access).



# ENERGY - UTILITIES



## NOKIA OFFERS THE BEST WAY OF UPGRADING TO A MODERN COMMUNICATION NETWORK TO IMPROVE BUSINESS PROCESSES FOR PRODUCTION AND DISTRIBUTION

### SEGMENTS



### CONTEXT

Customers whose business is distributing energy or water face numerous challenges such as cost inflation caused by supporting aging networks, security threats and regulation.

In the oil & gas or power utility segment, this will involve integrating millions of smart meters, new energy sources, and access to hundreds of thousands of substations. For the water sector, water wastage in the network will have to be detected. On oil and gas platforms, ultra-broadband Internet and video surveillance will need to be provided.

Customers need to be constantly innovating. To get the most out of these initiatives, existing network need to be upgraded to a modern, high-availability, low-latency network for critical applications.

### WHY WORK WITH NOKIA

- Reduced network integration costs, because our products and platforms are used by more than 200 energy customers around the world, minimizing the need for certification and interoperability tests.
- To reduce cost of ownership, we offer a single IP/MPLS network for all your critical and non-critical services.
- Savings of 20 to 50% on operating costs by using our unified IP/Fiber-optic/RF/Wireless management platform.
- No need to redevelop your existing business applications, as our IP/MPLS solution provides a smooth migration path to the future without increased network costs, with continued support for existing infrastructure through the most complete range of industrial-strength IP/MPLS routers on the market. (7750 SAR: over 300,000 sales in 2014, 7705 HC: world's smallest industrial-strength router...)
- Motive's M2M solution is an open, standardized platform which supports most M2M protocols on the market, enabling M2M objects with limited resources to connect to the Internet. This solution is deployed and being used for remote real-time management of millions of terminals and M2M connections all across the.

### HOW TO GAIN CUSTOMER ENGAGEMENT

- Are you faced with obsolescent devices in your communication networks?
- What is your plan for deploying smart networks?
- What are you doing to improve your ability to locate and resolve problems on your energy network, predict faults, or respond to an unscheduled service interruption?
- Is your network capable of integrating new applications (such as video, Internet of things...) in your digital transformation plan?
- What can you do to reduce the risk of a major security breach with the arrival of M2M?
- What is the impact on your network of the proliferation of injection points for renewable energy production?

### SOLUTIONS AND OPPORTUNITIES

GENERATION, TRANSPORT/ DISTRIBUTION, SMART GRID, OIL & GAS, WATER

OPPORTUNITIES

NOKIA SOLUTIONS

- Mission-critical communication networks, SCADA renewal, teleprotection, automation of distribution, automation of substations, PMR migration...
- Data center consolidation
- Network virtualization
- Machine-to-machine, Internet of things
- Security Solutions (networks and traffic)
- Big Data intelligence
- Smart meters
- IP/MPLS LAN/WAN (7750 SR, 7705 SAR, 7210 SAS)
- O&M 5620 Service Aware Manager
- Microwave IP 9500 MPR
- Hardened and certified products (EN 50121, 50155, IEC 61850...)
- WDM & ROADM optical transport 1830 PSS
- FAN: GPON fiber access(7360 ISAM / 7368 ONT...)
- LTE, small cells (metro/enterprise), WiFi
- DWDM fiber-optic data center interconnection
- L1 encryption of optical signal
- Dynamic cloud management: Nuage SDN
- Motive M2M
- Motive Security Guardian: real-time analysis and response to cyber-attacks over millions of transactions.
- Motive Big Network Analytics
- Motive MDM

### SUCCESS STORY RTE – INUIT project

•Issues: Obsolescence of ATM network, increased number of CCTV cameras, increase in high definition surveillance cameras.

#### •BENEFITS

- Unified multiservice network for telecoms and IT providing secure, logical differentiation of data for separate VPNs.
- Unified end-to-end network operation (WDM/IP).
- Secure, redundant architecture.



# GOVERNMENT



## MEETING THE DIGITAL ASPIRATIONS OF GOVERNMENT BODIES, PUBLIC SERVICES AND CITIZENS WITH A COMPLIANT, RELIABLE INFRASTRUCTURE PROVIDING TRANSPARENCY OF PROCESS, OPERATIONAL SECURITY, AND ABLE TO ATTRACT FUNDING

### SEGMENTS



### CONTEXT

#### Digital plan

Requirement for full national ultra-broadband coverage to ensure competitiveness, enabling broad social and economic advantages by facilitating communication, education, healthcare, business and the dissemination of knowledge. Requirement to retain public data in local data centers while still sharing data openly. (open data)

#### Public safety

Requirement for secure, highly-available networks for critical communications between all regional bodies and emergency services.

#### Defense

As the armed forces' missions continue to broaden: armed conflict, humanitarian assistance, hostage rescue, civil protection, disasters, communication networks provide real-time information (voice, data, video) and facilitate greater preparedness, monitoring, risk management and other critical tasks which the armed forces must perform for the safety and security of society.

#### Smart city

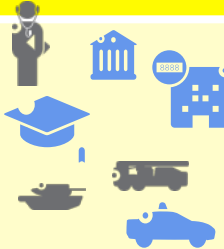
Using digital as a strategic means to share the city's resources, improve productivity, and optimize citizens' quality of life.

### WHY WORK WITH NOKIA

- Nokia has an in-depth understanding of the public sector's communication needs, and provides end-to-end network solutions for critical services to 100 customers.
- Our experience covers the world's biggest government, defense and public safety networks.
- Our Public Affairs department has considerable influence in the area of taking public services digital and ultra-broadband networks with regulatory authorities, standardization bodies, competitiveness clusters...
- Leader in France in ultra-broadband access technologies (fiber, copper, 4G) with the only available ANSI-certified fiber-optic solution on the market.
- Nokia supports you in your open data strategy by consolidating and securing data centers and activating a public services marketplace in the cloud.
- Nokia offers Software Defined Network technology to provide cloud services in a more dynamic manner thanks to a programmable, automated network environment. (>15 SDN contracts)
- Motive's M2M solution is an open, standardized platform which supports most M2M protocols on the market, and is ideal for digitizing the millions of objects and street furniture of the Smart City.

### SOLUTIONS AND OPPORTUNITIES

#### SMART CITY, EMERGENCY SERVICES, ADMINISTRATION, RESEARCH & EDUCATION, DEFENSE & SECURITY



#### OPPORTUNITIES

- Mission-critical communication networks
- Secure fiber/copper access infrastructure
- Radio coverage, PMR/Tetra migration
- Fiber-optic Metro connectivity
- Data center consolidation
- Network virtualization
- Machine-to-machine, Internet of things, Smart city
- Security solutions (networks and traffic)
- Continuity of service for DCs (Active resilience/disaster recovery)
- Open data, Big data

#### NOKIA SOLUTIONS

- IP/MPLS LAN/WAN (7750 SR, 7705 SAR, 7210 SAS)
- O&M 5620 Service Aware Manager
- Microwave IP 9500 MPR
- DSL, PON, FTTx access (7360 ISAM / 7368 ONT...)
- LTE, small cells (metro/enterprise), WiFi
- WDM & ROADM optical transport 1830 PSS
- DWDM fiber-optic DC interconnection
- L1 encryption of optical signal
- Nuage SDN dynamic cloud management
- Motive M2M, MDM
- Motive Security Guardian: Real-time protection for millions of transactions.
- 1830 PSS + HP 3PAR RemoteCopy
- Motive Big Network Analytics

### HOW TO GAIN CUSTOMER ENGAGEMENT

- Is your current communication network capable of handling digital services?
- Do you have a single system for operating your critical applications?
- Would you like to migrate your aging radio technologies to mobile broadband technology?
- How do you ensure protection of your services?
- Would you like to retain your data regionally while administering the data at the national level?
- Do you want to set up a marketplace for your service users to securely access virtual services?
- Would you like to resell your spare IP VPN capacity to local authorities or commercial users?



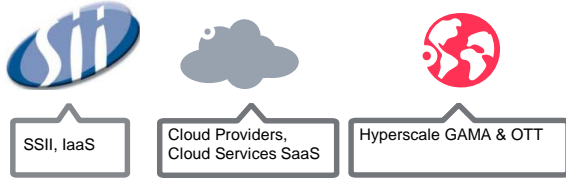
FOR MORE INFORMATION: <http://www2.Nokia.com/government/>

# CLOUD AND INTERNET INDUSTRIES



## DEPLOYING AN FLEXIBLE, AUTOMATED, PROGRAMMABLE PLATFORM TO OFFER UNLIMITED RESOURCES FOR TODAY'S DIGITAL WORLD: CLOUD, SOCIAL NETWORKS, BIG DATA, E- SERVICES

### SEGMENTS



### CONTEXT

These companies are 100% digital. Their assets are computing power and storage of data from varied sources. These IT players require a powerful, simple, flexible and self-adapting communication network that can distribute, store and secure information in data centers and transport it speedily. Thanks to "Big Data", they can monetize their data by aggregating them into business indicators while ensuring their confidentiality, security and governance.

### WHY WORK WITH NOKIA

- Experience: Number 1 in fiber-optic data center interconnection in Europe, leader in SDN among the biggest cloud players in France (for example OVH, Numergy...), Nokia is a predominant and dynamic player for transformation in the cloud industry.
- Virtualization: Alcatel Lucent provides complete, integrated solutions to web companies, based on operator-class equipment to meet the needs of network virtualization.
- Security: Recognized optical encryption for secure, low-latency inter-DC traffic.
- TCO savings: With its Nuage VSP solution, Nokia offers Software Defined Network technology as an overlay, a software layer above your customers' existing cloud architecture, to offer cloud services in a more dynamic manner thanks to an automated, programmable network environment. (>15 SDN contracts, >65 NFV projects)
- Agnostic: No replacement of infrastructure, Nuage interfaces with all cloud orchestrators on the market: VMware, Openstack, Cloudstack, Cloudband, Docker...
- Simplicity: The Nuage man-machine interface is recognized as the best on the market for simplifying the configuration and management of Cloud resources.
- Speed: Nokia accelerates the time to deploy new services by 10x.

### HOW TO GAIN CUSTOMER ENGAGEMENT

- Do you have a network services virtualization project?
- How long does it take to provision a new service? Do you find constraints in your network for this type of operation?
- Would you like to unify the administration of your network and your cloud with its existing VMware environment, OpenStack and other orchestrators?
- Do you find yourself facing security problems (cyber attacks, data protection...)?

### SOLUTIONS AND OPPORTUNITIES

SSIS , IAAS, CLOUD PROVIDERS, OTTS, HYPERSCALE, SAAS	OPPORTUNITIES	NOKIA SOLUTIONS
	<ul style="list-style-type: none"> <li>• Consolidation, automation and virtualization of data centers</li> <li>• Network virtualization</li> <li>• Setting up private or hybrid clouds</li> <li>• IP/MPLS LAN/WAN routing &amp; switching</li> </ul>	<ul style="list-style-type: none"> <li>• DWDM fiber-optic DC interconnection</li> <li>• L1 encryption of optical signal</li> <li>• WDM &amp; ROADM optical transport 1830 PSS</li> <li>• Dynamic cloud management: Nuage SDN</li> <li>• Cloudband</li> <li>• IP/MPLS LAN/WAN (7750 SR, 7705 SAR, 7210 SAS)</li> <li>• O&amp;M 5620 Service Aware Manager</li> </ul>
	<ul style="list-style-type: none"> <li>• Security solutions (networks and traffic)</li> <li>• Continuity of service for data centers (Active resilience/disaster recovery)</li> </ul>	<ul style="list-style-type: none"> <li>• Motive Security Guardian: Real-time management of cyber-attacks over millions of transactions.</li> <li>• HP 3PAR RemoteCopy for distances &lt;130km and Nokia 1830 PSS.</li> </ul>
	<ul style="list-style-type: none"> <li>• Big Data intelligence</li> <li>• Advanced enterprise communications</li> </ul>	<ul style="list-style-type: none"> <li>• Motive Big Network Analytics</li> <li>• Hosted enterprise services provided by an IMS core: unified communications, IP Centrex, PBX hosting, WebRTC</li> </ul>

### SUCCESS STORY SDN projects

"Nuage Networks' SDN technology enables us to offer our cloud services in a more dynamic manner, by enabling our customers to reduce time to market thanks to a programmable, automated network environment," comments Octave Klaba, CEO and founder of OVH.

"In a public or private cloud, flexibility and automation are key. SDN and Nuage Networks provide us with that, with the additional benefit of compatibility with Openstack open-source software, which is the forge that we used to manage our platform," says Erik Beauvalot, COO of Numergy

# BANKING AND INSURANCE

THE BANKING AND INSURANCE INDUSTRY IS GOING DIGITAL. BEYOND CONNECTIVITY, NOKIA PROVIDES A HIGH-PERFORMANCE, SCALABLE NETWORK USING NEW TECHNOLOGIES AS THE DRIVER TO GENERATE NEW SERVICES AND GET THE MOST OUT OF YOUR DATA NETWORK.



## SEGMENTS



## CONTEXT

To cope with the constant increase in financial flows and the proliferation of sales channels for financial services, to turn new technologies to advantage and deploy new tools (applications, multimedia...) at a controlled cost (whether nationally or internationally), banks and insurers need to increase their network bandwidth. They want a scalable, simple secure solution that enables them to pool their various applications and share them across sites. In addition to office applications, they would like to move critical services to the enterprise cloud (private or hybrid) and simplify the IT in branches and brokers' offices.

## WHY WORK WITH NOKIA

- **Datacenter:** Number 1 for fiber -optic data center interconnection in Europe, Nokia has experience with tens of banks and insurers in consolidating, automating and virtualizing data networks.
- **Big data:** We offer a superior IP/MPLS LAN/WAN infrastructure for secure real -time processing of your big data.
- **Virtualization:** Alcatel Lucent provides complete, integrated solutions to banks and insurers, based on operator-class equipment to meet the needs of network virtualization.
- **TCO savings:** With its Nuage VSP solution, Nokia offers Software Defined Network technology as an overlay, a software layer above your customers' existing cloud architecture, to offer cloud services in a more dynamic manner thanks to an automated, programmable network environment. (>15 SDN contracts, >65 NFV projects)
- **Agnostic:** No replacement of infrastructure, Nuage interfaces with all cloud orchestrators on the market: VMware, Openstack, Cloudstack, Cloudband, Docker...
- **Security:** Recognized optical encryption for secure, low -latency inter-DC traffic.
- **Crisis management:** active data center resilience provided by an HP (or EMC) + Nokia solution that offers complete protection of the data network.
- **Customer experience:** Motive recognized as innovation of the year for enterprise customer satisfaction and retention with a range of solutions around the customer experience. References e.g. Vodafone, AT&T, Orange, KPN, TWC....

## SOLUTIONS AND OPPORTUNITIES

FINANCE AND INSURANCE INDUSTRIES	OPPORTUNITIES	NOKIA SOLUTIONS
	<ul style="list-style-type: none"> <li>• Consolidation, automation and virtualization of data centers</li> <li>• Network virtualization</li> </ul>	<ul style="list-style-type: none"> <li>• DWDM fiber-optic DC interconnection</li> <li>• L1 encryption of optical signal</li> <li>• WDM &amp; ROADM optical transport 1830 PSS</li> <li>• Dynamic cloud management: Nuage SDN</li> <li>• SD-VPN: Nuage VNS to connect branches to WAN/Cloud services.</li> <li>• Cloudband</li> <li>• IP/MPLS LAN/WAN (7950 XRS, 7750 SR, 7705 SAR, 7210 SAS)</li> <li>• O&amp;M 5620 Service Aware Manager</li> </ul>
	<ul style="list-style-type: none"> <li>• Security solutions (networks and traffic)</li> <li>• Continuity of service for data centers (Active resilience/disaster recovery)</li> </ul>	<ul style="list-style-type: none"> <li>• Motive Security Guardian: Real-time management of cyber-attacks over millions of transactions.</li> <li>• HP 3PAR RemoteCopy for distances &lt;130km and Nokia 1830 PSS.</li> </ul>
	<ul style="list-style-type: none"> <li>• Big Data intelligence</li> <li>• Advanced enterprise communications</li> </ul>	<ul style="list-style-type: none"> <li>• Motive Big Network Analytics</li> <li>• Hosted enterprise services provided by a compact IMS: unified communications, IP Centrex, PBX hosting, WebRTC, Vital Suite</li> </ul>

## HOW TO GAIN CUSTOMER ENGAGEMENT

- What is the impact of network quality on the performance of your financial transactions?
- Are you interested in network virtualization to control your IT costs?
- Do you find yourself facing security problems (cyber attacks, data protection...)?

2014 BROADBAND INFOVISION AWARDS  
Best Fixed Broadband Access Innovation and Best Customer Experience Innovation



# COMMERCE AND DISTRIBUTION



**CUSTOMER CONSUMPTION BEHAVIORS IN COMMERCE AND DISTRIBUTION ARE CHANGING RAPIDLY. NOKIA SUPPLIES THE INTELLIGENT SOLUTIONS NEEDED TO SIMPLIFY AND SECURE THE PURCHASING EXPERIENCE WHETHER IN-STORE OR DIGITAL. SOLUTIONS AND OPPORTUNITIES**

## SEGMENTS



## CONTEXT

The commerce and distribution value chain is vast, with numerous players. IT/telecoms requirements are different for different customer types. Head office requirements are close to those of major enterprises to want a high-performance intra-site communication network, secure data centers and big data intelligence, virtualization of services into the cloud, and effective monitoring of customer satisfaction. Regional centers and commercial sites open to the public require IP/cloud connectivity and also enhanced services made up of augmented reality, connected objects and location services. On-line commerce continues to grow in scale and requires flexible IT capacity for more intelligent trading.

## WHY WORK WITH NOKIA

- **Datacenter:** Number 1 for fiber-optic data center interconnection in Europe, Nokia has experience with tens of large enterprises in consolidating, automating and virtualizing data networks.
- **Big data:** We offer a superior IP/MPLS LAN/WAN infrastructure for secure real-time processing of your big data.
- **Virtualization:** Alcatel Lucent provides complete, integrated solutions, based on operator-class equipment to meet the needs of network virtualization.
- **TCD savings:** With its Nuage VSP solution, Nokia offers Software Defined Network technology as an overlay, a software layer above your customers' existing cloud architecture, to offer cloud services in a more dynamic manner thanks to an automated, programmable network environment. (>15 SDN contracts, >65 NFV projects)
- **Simplicity:** Nuage's man-machine interface is recognized as the best on the market, and for its openness.
- **Being close to your customer:** Cellular/Wi-Fi coverage solutions based on small cells can unify the customer experience online and at point-of-sale with location and identification of the customer's preferences.
- **Internet of things:** Motive's M2M solution is an open, standardized platform which supports most M2M protocols on the market, enabling M2M objects with limited resources to connect to the Internet. This solution is deployed and being used for remote real-time management of millions of terminals and M2M connections all across the world in various industry segments.

COMMERCE AND DISTRIBUTION	OPPORTUNITIES	NOKIA SOLUTIONS
	<ul style="list-style-type: none"> <li>• Consolidation, automation and virtualization of data centers</li> <li>• Network virtualization</li> </ul>	<ul style="list-style-type: none"> <li>• DWDM fiber-optic DC interconnection</li> <li>• L1 encryption of optical signal</li> <li>• Nuage SDN dynamic cloud management</li> <li>• SD-VPN: Nuage VNS to connect branches to WAN/Cloud services.</li> <li>• IP/MPLS LAN/WAN (7750 SR, 7705 SAR, 7210 SAS)</li> <li>• O&amp;M 5620 Service Aware Manager</li> <li>• Motive Big Network Analytics</li> </ul>
	<ul style="list-style-type: none"> <li>• Taking control of WAN management (WAN insourcing)</li> <li>• Big Data intelligence</li> </ul>	
	<ul style="list-style-type: none"> <li>• Radio coverage, Wi-Fi hotspots</li> <li>• Machine-to-machine, Internet of things</li> <li>• Big Data intelligence</li> <li>• Advanced communications for customers and staff</li> </ul>	<ul style="list-style-type: none"> <li>• Small cells (metro/enterprise), 3G/4G/WiFi</li> <li>• Motive M2M, MDM</li> <li>• Motive Big Network Analytics</li> <li>• Hosted enterprise services provided by a compact IMS core: unified communications, IP Centrex, PBX hosting, WebRTC, Vital Suite</li> </ul>

## HOW TO GAIN CUSTOMER ENGAGEMENT

- Is your current communication network capable of handling e-commerce services?
- How do you manage your data between head office and network sales points?
- Would you like to introduce digital services for the customer experience in store, hotel...?

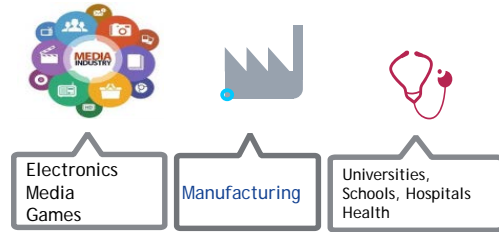


# EXTRA LARGE ENTREPRISES

**NOKIA ENABLES YOU TO UPGRADE TO A SAFE SIMPLE AND FLEXIBLE NETWORK OF DATA CENTERS THAT RESPONDS PROFITABLY TO THE BUSINESS REQUIREMENTS AND OPERATIONAL PERFORMANCE OF MAJOR ENTERPRISES.**



## SEGMENTS






## CONTEXT

Major enterprises' IT are becoming more complex and more virtualized, making operations more difficult to control and less flexible to respond rapidly to the need for changes in processes. Major enterprises want to upgrade to a high-performance inter-site communication network, secure and flexible data centers, analytic intelligence, virtualization of services into the cloud (office and business applications), and resources for measuring customer satisfaction. Simple LAN/WAN solutions are required for connecting corporate branches, and industrial sites are going digital, requiring IP/wireless connectivity and also enhanced services made up of augmented reality, connected objects and location services.

## WHY WORK WITH NOKIA

- Datacenter: Number 1 for fiber-optic data center interconnection in Europe, Nokia has experience with tens of major enterprises in consolidating, automating and virtualizing data networks.
- Big data: We offer a superior IP/MPLS LAN/WAN infrastructure for secure real-time processing of your big data.
- Virtualization: Alcatel Lucent provides complete, integrated solutions, based on operator-class equipment to meet the needs of network virtualization.
- TCO savings: No replacement of infrastructure, Nuage's VSP solution (using Software Defined Network technology) is a software layer applied above your customers' existing cloud to offer services in a dynamic manner thanks to an automated, programmable environment. (>15 SDN contracts)
- Agnostic: Nuage interfaces with all cloud orchestrators on the market: VMware, Openstack, Cloudstack, Cloudband, Docker...
- Security: Recognized optical encryption for secure, low-latency inter-DC traffic.
- Crisis management: active data center resilience provided by an HP (or EMC) + Nokia solution that offers complete protection of the data network.
- Customer experience: Motive recognized as innovation of the year for enterprise customer satisfaction and retention with a range of solutions around the customer experience. References e.g. Vodafone, AT&T, Orange, KPN, TWC....

## SOLUTIONS AND OPPORTUNITIES

XLES	OPPORTUNITIES	NOKIA SOLUTIONS
	<ul style="list-style-type: none"> <li>• Consolidation, automation and virtualization of data centers</li> <li>• Network virtualization</li> <li>• Cloud/WAN connectivity for branches</li> <li>• IP/MPLS LAN/WAN modernization</li> </ul>	<ul style="list-style-type: none"> <li>• DWDM fiber-optic DC interconnection L1 encryption of optical signal</li> <li>• Dynamic cloud management: Nuage SDN</li> <li>• Nuage VNS SDVPN</li> <li>• IP/MPLS LAN/WAN (7750 SR, 7705 SAR, 7210 SAS)</li> <li>• O&amp;M 5620 Service Aware Manager</li> </ul>
	<ul style="list-style-type: none"> <li>• Security solutions (networks and traffic)</li> <li>• Continuity of service for data centers (Active resilience/disaster recovery)</li> </ul>	<ul style="list-style-type: none"> <li>• Motive Security Guardian: Real-time management of cyber-attacks over millions of transactions.</li> <li>• HP 3PAR RemoteCopy for distances &lt;130km and Nokia 1830 PSS.</li> </ul>
	<ul style="list-style-type: none"> <li>• Radio coverage, Wi-Fi hotspots</li> <li>• Machine-to-machine, Internet of things</li> <li>• Advanced enterprise communications</li> <li>• Big Data intelligence</li> </ul>	<ul style="list-style-type: none"> <li>• Small cells (metro/enterprise), 3G/4G/WiFi</li> <li>• Motive M2M, MDM</li> <li>• Hosted enterprise services provided by a compact IMS core: unified communications, IP Centrex, PBX hosting, WebRTC, Vital</li> <li>• Motive Big Network Analytics</li> </ul>

## HOW TO GAIN CUSTOMER ENGAGEMENT

- Are you satisfied with proprietary business solutions that have the sophistication of a Swiss clock but are not open or upgradable and tie you in to manufacturers at exorbitant prices?
- Wouldn't you like to transform your Information System with solutions that are proven in use with telecom operators (99.9999% availability), open and flexible to help you introduce new services rapidly and cheaply?

## SUCCESS STORY

For a major international enterprise, Nokia and its partner offered a managed transformation service to do away with redundant voice, PBX and trunk systems and replace them with an IMS solution.

**Estimated savings from this transformation project > 90 million dollars over 5 years.**

Example of a branch office using Nuage VNS: