



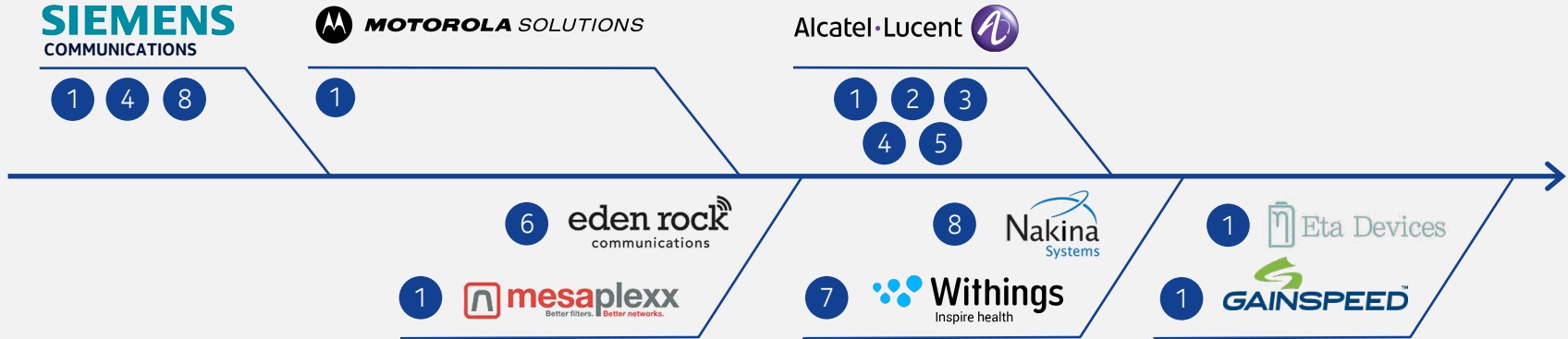
NOKIA

Higher returns through focused growth

Capital Markets Day 2016

Marc Rouanne
Chief Innovation and Operating Officer

Nokia is a benchmark in integration



1 Massive Scale Access

2 Converged Edge Cloud

3 Smart Network Fabric

4 Universal Adaptive Core

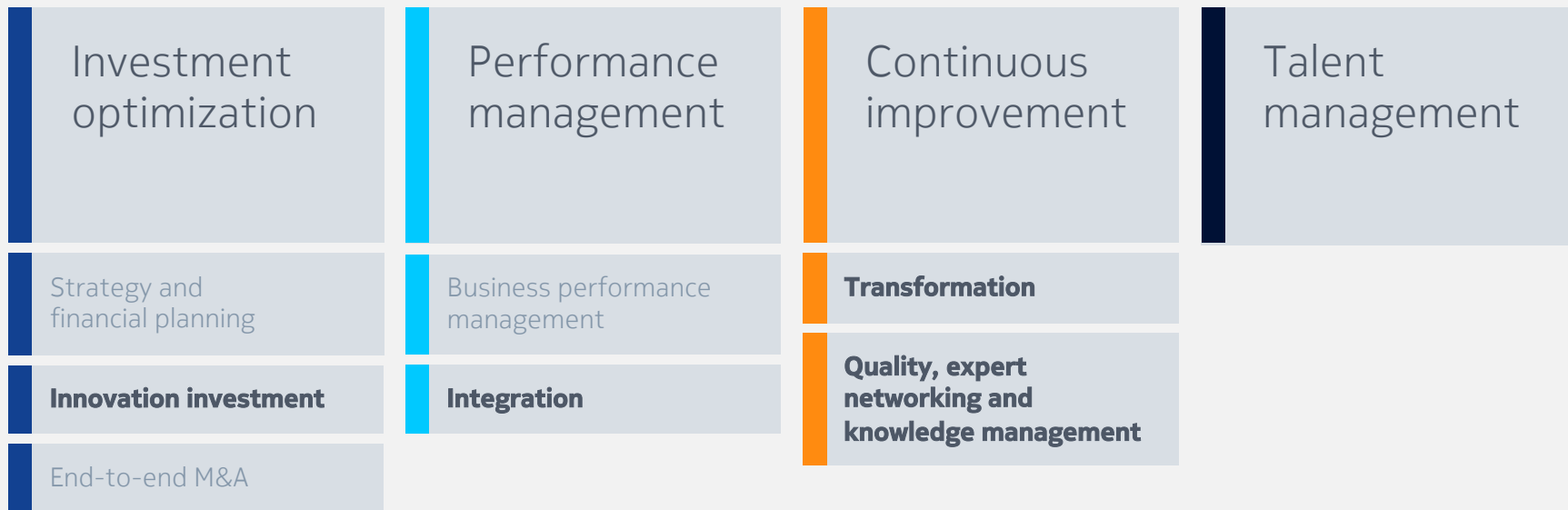
5 Programmable Network OS

6 Augmented Cognition Systems

7 Digital Value Platforms

8 Dynamic Data Security

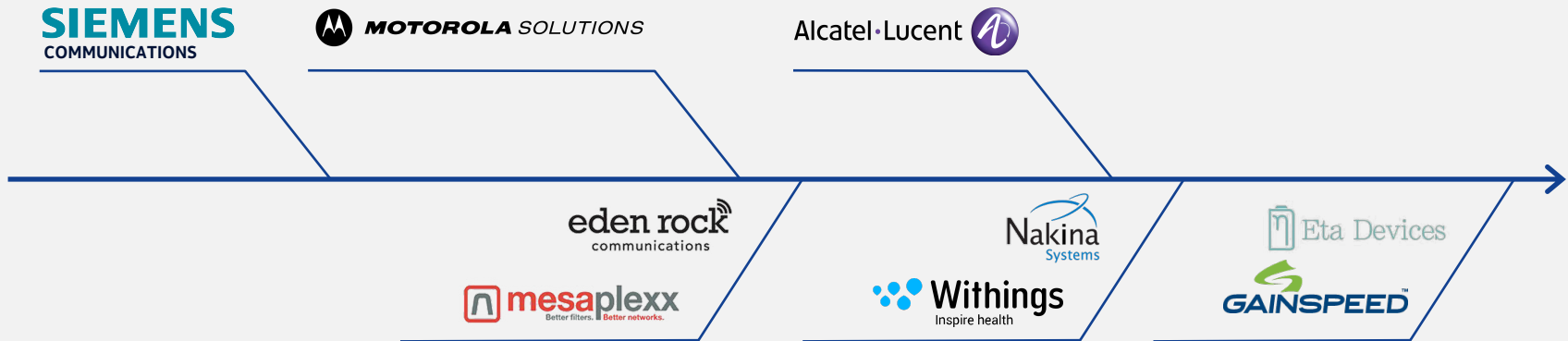
Nokia Business System: The key to strong execution



Nokia Business System: the key to integration success

Why are we successful?

- We have the right tools.
- We learn from mistakes.
- We run integration and transformation in parallel.
- We engage customers and focus on quality.
- We industrialize the best practices.
- We have executives who have done it successfully.



Nokia Business System: the key to transformation management

Transformation target cascading by

- Integration and Transformation Board
- Location Strategy Board
- Lab Council
- Quality Board



Color Books are the execution engine

We set P&L impacting targets on books and track them

Quality: consistent 20% decrease in new customer defect reports from 2012 to 2015 (YoY in Mobile Networks)

Pricing analytics and control mechanisms: substantial positive impact on Ultra Broadband Networks bottom line (year to date)

Further increasing operational efficiency

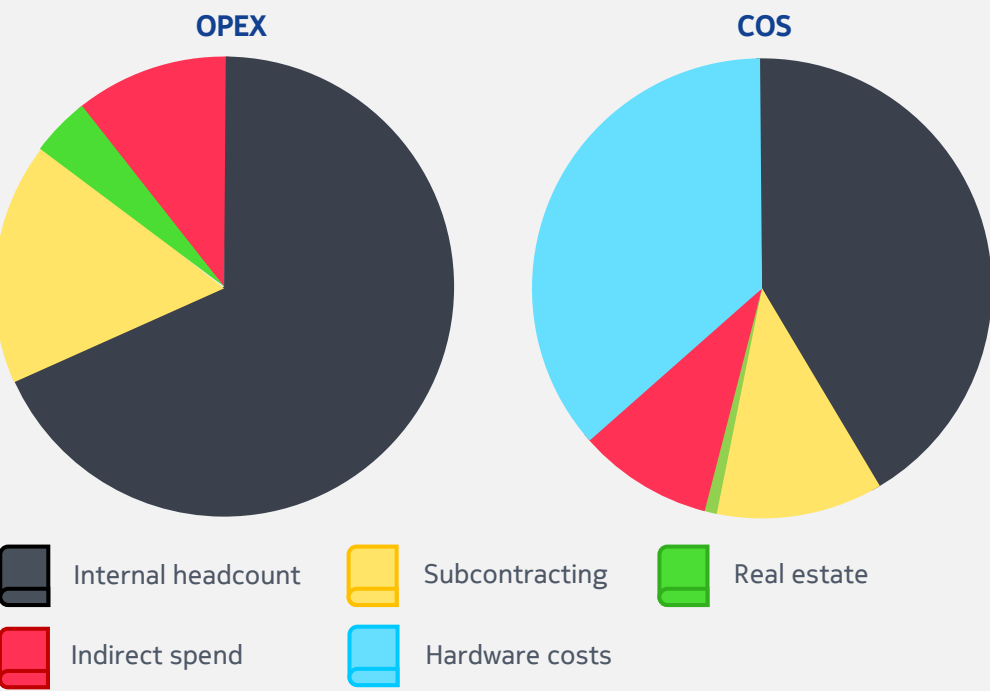
1.	Nokia digitalization	Net Sales
2.	Industrialization of best practices	Gross Margin
		OPEX
3.	Sales efficiency and enhanced capabilities	Net Sales
		Gross Margin
4.	Global operations automation	Gross Margin
5.	Global services excellence	OPEX
6.	R&D efficiency	
7.	Site strategy	OPEX
8.	Centralization and harmonization of processes and tools in corporate functions	

Expanding transformation across Nokia

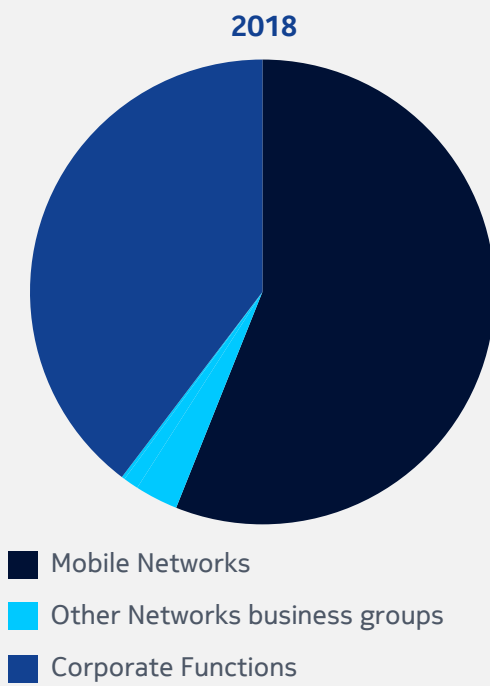
Regional and Service Profitability Improvement	Implement best practices across the business groups.	Net Sales Gross Margin OPEX
Total Cost of Ownership	Reduce the TCO in line with company's revenues.	
Supply Chain and Procurement	Improve supply chain efficiency and unify the value chain.	Gross Margin OPEX
Services	Further automation and centralization.	
Lab Virtualization	Create economies of scale and volume.	
Site Strategy	Enhanced flexibility, innovation, proximity to customers, attractiveness to talents.	OPEX

Nokia is on track to reach net savings of EUR 1.2bn by 2018

Split of gross savings 2018 by type of cost



Split of gross savings 2018 by organization



Nokia Business System: the key to people management

Workforce planning by:

- Headcount
Steering Board



Grooming
future leaders



Job
rotation



Promoting high
performance



Defragmented
teams

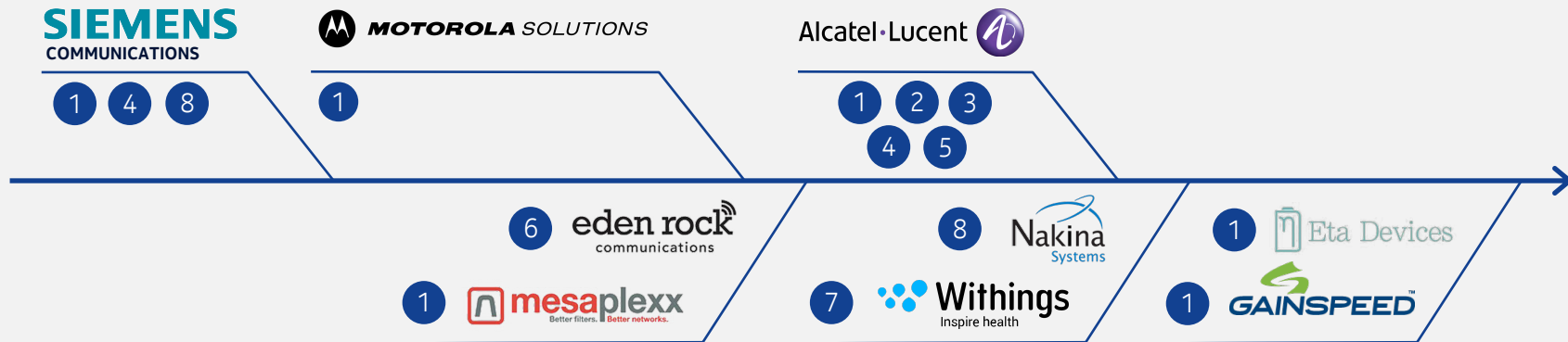


Knowledge and
competence
development



Employer
of choice

Nokia Business System: built to drive value across Nokia



1 Massive
Scale Access

2 Converged
Edge Cloud

3 Smart Network
Fabric

4 Universal
Adaptive Core

5 Programmable
Network OS

6 Augmented
Cognition Systems

7 Digital Value
Platforms

8 Dynamic
Data Security

Megatrends in the digital transformation of society and industry



Network, Compute & Storage

- Massive scale access
- Converged edge cloud
- Smart network fabric



Augmented Intelligence

- Programmable network
- Augmented cognition systems



Internet of Things

- Universal adaptive core
- Programmable network OS
- Dynamic data security



Human and Machine Interaction

- Converged edge cloud



Social & Trust Economics

- Digital value platforms
- Dynamic data security

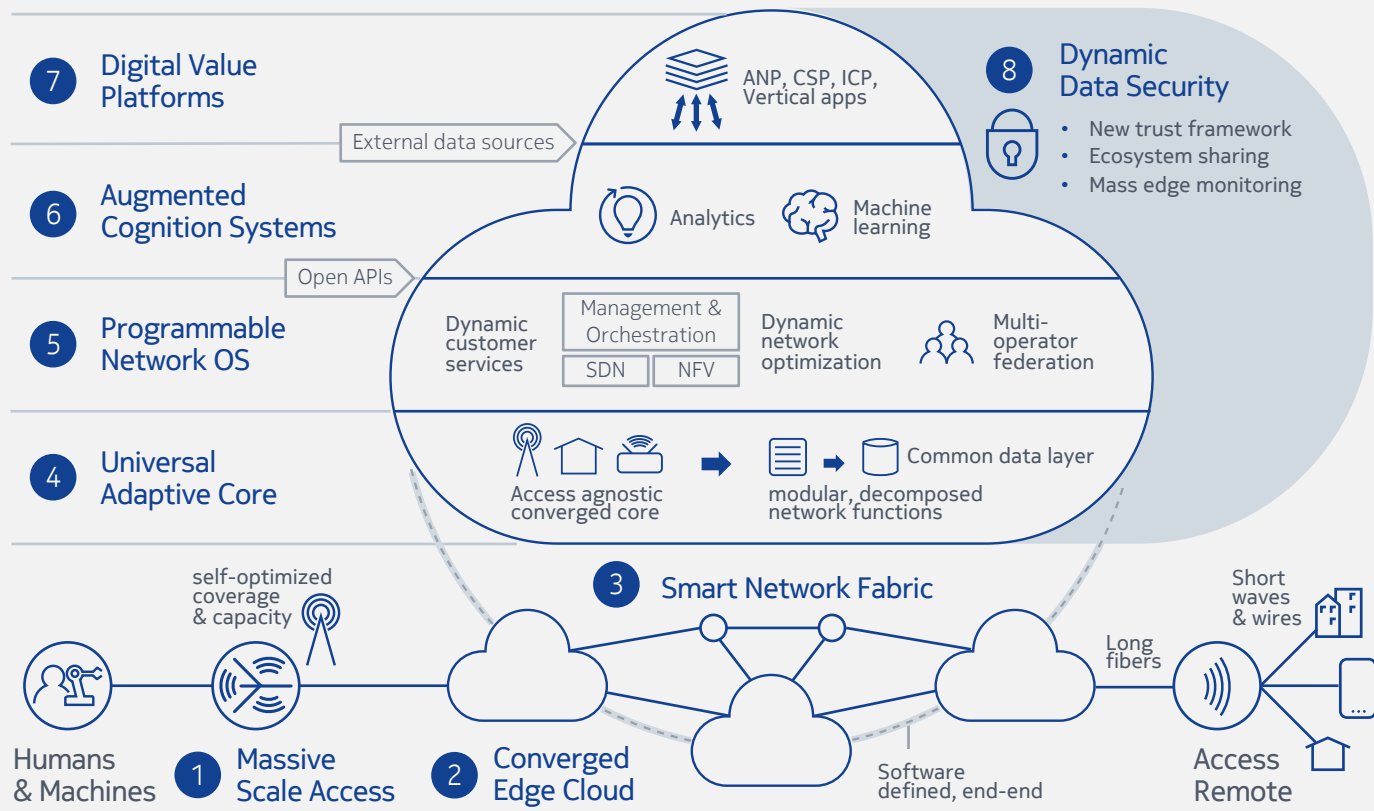


Digitalization & Ecosystems

- Digital value platforms

The Future X Network

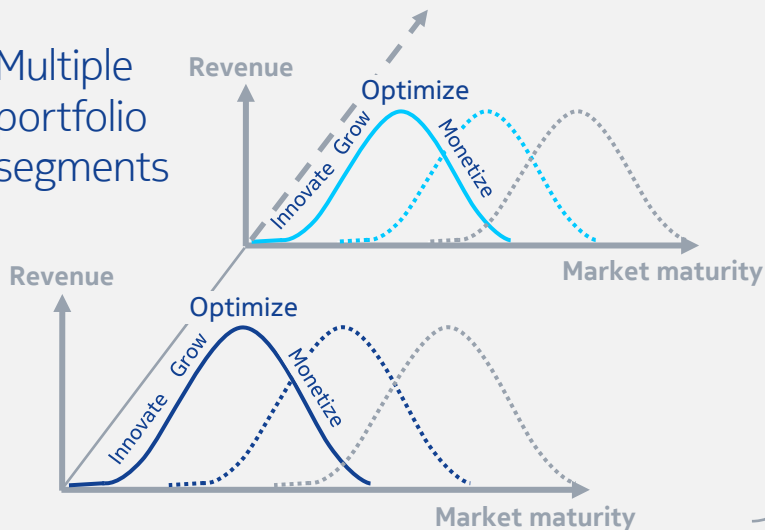
Bell Labs
Future X
architecture
outlining the
network
evolution



End to end portfolio drives capability to:

- Ride different investment waves in line with our strategy
- Capture maximum return on investment
- Invest in disruptive innovation for the future market attractiveness

Multiple portfolio segments



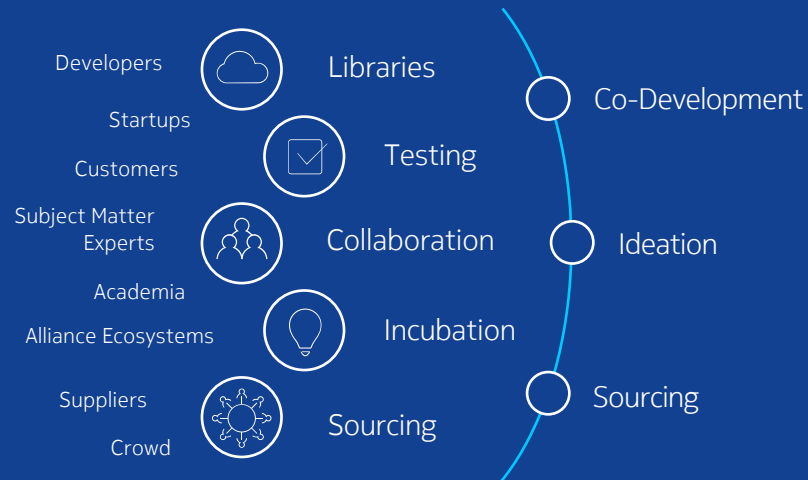
Optimized R&D Investments in 2017

- | | | |
|---|------------------------------------|--|
| 1 | Massive Scale Access | <ul style="list-style-type: none">• 4.5/4.9/5 G seamless solutions• 10G copper, cable, fiber |
| 2 | Converged Edge Cloud | <ul style="list-style-type: none">• Optimized cloud infra & services• Virtualized telco cloud solutions |
| 3 | Smart Network Fabric | <ul style="list-style-type: none">• Terabit transport• High performance virtual routing |
| 4 | Universal Adaptive Core | <ul style="list-style-type: none">• Shared data layer• Converged adaptive core |
| 5 | Programmable Network OS | <ul style="list-style-type: none">• Seamless DC & WAN SDN• Cloud/NFV orchestration & operations |
| 6 | Augmented Cognition Systems | <ul style="list-style-type: none">• Augmented network & user analytics• Self-learning & optimizing networks |
| 7 | Digital Value Platforms | <ul style="list-style-type: none">• Advanced VR & digital health technologies• Any device management |
| 8 | Dynamic Data Security | <ul style="list-style-type: none">• Advanced device & network security solutions |

Future top-line drivers

- Building a software business at scale
- Expand to secure revenue in attractive adjacencies
- Anything as a service (XaaS)
- Cross selling
- Digital business ecosystems

Digitalizing Nokia



Digital business ecosystems

Creating an accelerating effect

Future bottom line enhancers

- Digital supply and delivery chain
- Cloud-based tools throughout our operations
- IoT and robotics to our production lines
- Automation in service delivery
- Use of common software foundations
- Development for operations (DevOps)
- Automated sales

Digitalizing Nokia

Cloud based tools
for employees

Cloud and
edge cloud
for labs



Low
latency labs

Investment in
data centers and
telco cloud centers

Summary

A high-speed train, possibly a Shinkansen, is shown in motion, blurred background, with three blue text boxes overlaid. The train is white with a blue stripe. The background shows a cloudy sky and some infrastructure like a station platform and overhead wires.

Integration has been a success, and we have a deep and systematic business system to deliver our EUR 1.2bn of cost savings.

We are seeing the benefits of our portfolio scope which allows to address the megatrends, that require converged massive scale fixed and wireless or combined Optics and IP.

We use our own technology and knowledge to digitalize, and as a result, become more cost competitive and address new focused opportunities for growth.

Disclaimer

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interim report issued on May 10, 2016, our half year financial report issued on August 4, 2016, our interim report issued on October 27, 2016 and our stock exchange release covering our Capital Market Day issued on November 15, 2016. Other unknown or unpredictable factors or underlying assumptions subsequently proven to be incorrect could cause actual results to differ materially from those in the forward-looking statements. Nokia does not undertake any obligation to publicly update or revise forward-looking statements, whether as a result of new information, future events or otherwise, except to the extent legally required. In addition to information on our reported IFRS results, we provide certain information on a non-IFRS, or underlying business performance, basis. Non-IFRS results exclude costs related to the Alcatel-Lucent transaction and related integration, goodwill impairment charges, intangible asset amortization and purchase price related items, restructuring related costs, and certain other items that may not be indicative of Nokia's underlying business performance. We believe that our non-IFRS financial measures provide meaningful supplemental

information to both management and investors regarding Nokia's underlying business performance by excluding the aforementioned items that may not be indicative of Nokia's business operating results. These non-IFRS financial measures should not be viewed in isolation or as substitutes to the equivalent IFRS measure(s), but should be used in conjunction with the most directly comparable IFRS measure(s) in the reported results. A detailed explanation of the content of the non-IFRS information and a reconciliation between the non-IFRS and the reported information for historical periods can be found in Nokia's respective results reports. Please see our issued interim reports for more information on our results and financial performance for the indicated periods as well as our operating and reporting structure. Nokia is a registered trademark of Nokia Corporation. Other product and company names mentioned herein may be trademarks or trade names of their respective owners.

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