Strategy and operating model update

16 December 2020
Disclaimer

It should be noted that Nokia and its business are exposed to various risks and uncertainties and certain statements herein that are not historical facts are forward-looking statements. These forward-looking statements reflect Nokia’s current expectations and views of future developments and include the statements in the Outlook section and statements preceded by “believe”, “expect”, “expectations”, “commit”, “anticipate”, “foresee”, “see”, “target”, “estimate”, “designed”, “aim”, “plan”, “intend”, “influence”, “assumption”, “focus”, “continue”, “project”, “should”, “is to”, “will” or similar expressions. These statements are based on management’s best assumptions and beliefs in light of the information currently available to it.

Because they involve risks and uncertainties, actual results may differ materially from the results that we currently expect. Factors, including risks and uncertainties that could cause such differences can be both external, such as general, economic and industry conditions, as well as internal operating factors. We have identified these in more detail in our annual report on Form 20-F for the year ended December 31, 2019 under “Operating and Financial Review and Prospects—Risk Factors”, our financial report for Q1/2020 published on 30 April 2020 on From 6-K, and in our other filings or documents furnished with the U.S. Securities and Exchange Commission, including Nokia’s financial results reports. 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. We do 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.

Nokia presents financial information on reported, non-IFRS and constant currency basis. Non-IFRS measures presented in this document exclude costs related to the acquisition of Alcatel-Lucent and related integration, goodwill impairment charges, intangible asset amortization and other purchase price fair value adjustments, restructuring and associated charges and certain other items that may not be indicative of Nokia’s underlying business performance. In order to allow full visibility on determining non-IFRS results, information on non-IFRS exclusions is presented separately for each of the components of profit or loss.

Constant currency reporting provides additional information on change in financial measures on a constant currency basis in order to better reflect the underlying business performance.

Therefore, change in financial measures at constant currency excludes the impact of changes in exchange rates in comparison to euro, our reporting currency. Non-IFRS or constant currency financial measures should not be considered in isolation from, or as a substitute for, financial information presented in compliance with IFRS, and either of these financial measures as used by Nokia may not be comparable to similarly titled measures used by other companies or persons. Please see our complete financial report for more information on our results and financial performance for the indicated periods as well as our operating and reporting structure.

Proposed organizational changes referenced in this release may be subject to consultation with employee representatives in certain jurisdictions and are not considered final until such processes are completed.

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Welcome

Pekka Lundmark
President and CEO

4. Strategic analysis

10. Business group update, including market dynamics, our competitive positions, strategic imperatives and financial expectations

Marco Wirén
CFO

25. Strong capital structure and prudent financing strategy

27. Prioritizing capital towards areas where we can achieve leadership

28. Driving a lean corporate structure

29. Clear and transparent reporting and communication
Strategic analysis
Technology is vital in solving the world’s challenges

Pressure on the planet is increasing
Reducing carbon emissions and optimizing our use of scarce resources

Productivity is stalling
Bringing digitalization to the physical industries it has not yet reached

Access to opportunity remains stubbornly unequal
Providing more inclusive access to work, healthcare and education
A summary of our six strategic beliefs

1. Networks play an increasingly important role in society. This allows us to extend our focus to serving Critical Networks beyond CSPs.
Critical Networks

Networks are playing an increasingly important role in society. This is allowing us to extend our focus to serving Critical Networks beyond CSPs.
A summary of our six strategic beliefs

1. Networks play an increasingly important role in society. This allows us to extend our focus to serving Critical Networks beyond CSPs.

2. Critical Networks are built based on a best-of-breed approach with network elements selected on a best performance per TCO basis.

3. Technology leadership underpins momentum and financial returns in Critical Networks.

4. Re-establishing technology leadership in some segments requires us to anticipate, shape and invest in the next technology window – where there is no path, we will reassess segment participation.

5. Over the longer term, value in Critical Networks is migrating away from monolithic systems towards silicon, software and service and will be captured through different business models.

6. Sustained investment in long-term innovation provides us with a platform to take the long view.
Our focus areas

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<th>For customers</th>
<th>A trusted partner for Critical Networks</th>
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<td>For shareholders</td>
<td>Drive long-term value growth</td>
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<td>What</td>
<td>Secure technology leadership</td>
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<td>Build our cloud software and network services future</td>
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<td>Strengthen our long-term research and patent portfolio</td>
</tr>
<tr>
<td>How</td>
<td>Invest in a best-of-breed portfolio</td>
</tr>
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<td></td>
<td>Renew our operating model, capabilities and culture</td>
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About our business
Mobile Networks
Net sales of approximately €10bn*

Tommi Uitto
President, Mobile Networks

Portfolio

- Radio Access Network (RAN) and Microwave Radio Link products, and related network management solutions
- Network planning, deployment, optimization and technical support services

Objective

Create value by regaining industry leadership in wireless mobility networks and associated services

* Indicative only, in the last four quarters
Mobile Networks

Market

Slight overall market growth with significant growth in enterprise:

• 5G is driving customer demand
• Growth in ORAN and vRAN – we are investing to improve our technology leadership
• Trust and security are increasing in importance

Competitive position:

• #2 in 4G and 5G, excluding China
• #2 in rollout services, globally

Source for estimates: Dell’Oro rolling four quarters for competitive position
External analysts and Nokia analysis for market, excluding China
Mobile Networks
Focus areas and expectations

Strategic imperatives

• 2021: Execute ongoing turnaround and drive competitiveness in 5G and services digitalization
• Leadership in 5G and ORAN/vRAN and maintaining scale with CSPs
• Grow enterprise-dedicated Private Wireless Networks business
• High performance and learning culture and lean operating model
• Accelerate cost reduction across products, services and power consumption

Comparable* operating margin %

2021: around zero

Longer term: significant improvement

*Comparable results exclude amortization of acquired intangibles, restructuring and other items affecting comparability. The information provided reflects Nokia’s new operating model, effective January 1, 2021.
Network Infrastructure
Net sales of approximately € 7bn*  

Federico Guillén  
President, Network Infrastructure

Portfolio
- IP Networks  
- Optical Networks
- Fixed Networks
- Alcatel Submarine Networks

Objective
Create value by being the world’s most trusted partner, with best-of-breed solutions for the world’s most Critical Networks

* Indicative only, in the last four quarters.
Network Infrastructure
Market

Overall growth driven by enterprise and webscale; CSP market flattish:

• Market factors, including the 5G cycle, drive customer demand
• Trust and security are increasing in importance

Competitive position:

• #3 in CSP IP routing (edge and core) – #2 excluding China
• #4 in optical networking (WDM) – #3 excluding China
• #2 in fixed access networks (ONT, OLT, DSL) – #1 excluding China
• Leader in submarine networks

Source for estimates: Dell’Oro and Omdia rolling four quarters for competitive positions
External analysts and Nokia analysis for global market

<table>
<thead>
<tr>
<th>Market share</th>
<th>CSP IP routing</th>
<th>Optical networking</th>
<th>Fixed access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global</td>
<td>18%</td>
<td>11%</td>
<td>19%</td>
</tr>
<tr>
<td>Excluding China</td>
<td>25%</td>
<td>17%</td>
<td>32%</td>
</tr>
</tbody>
</table>

~3% CAGR

in EUR billion, excluding the submarine cable market

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Network Infrastructure
Focus areas and expectations

Strategic imperatives

• Expand leadership in IP routing for CSPs, establish data center switching/routing business and grow in enterprise/webscale switching and routing

• Grow optical sales into CSPs, webscale and enterprise while driving cost savings through targeted vertical integration

• Maintain leadership in fiber access and in 5G fixed wireless access

• Expand leadership position in submarine networks while scaling up our capacity

Comparable* operating margin %

2021: high single digit

Longer term: gradual improvement

*Comparable results exclude amortization of acquired intangibles, restructuring and other items affecting comparability. The information provided reflects Nokia’s new operating model, effective January 1, 2021.
Cloud and Network Services
Net sales of approximately € 3bn*

Raghav Sahgal
President, Cloud and Network Services

Portfolio
- Communications software
- Mobile and converged core solutions
- Enterprise solutions
- Cognitive services
- Managed services

Objective
Create value by leading the industry transition to cloud-native software and as-a-service delivery models, as demand for Critical Networks accelerates

* Indicative only, in the last four quarters.
Cloud and Network Services

Market

Significant value shift towards critical networks with growth in:

- Cloud-native, open architecture software
- Advanced, cognitive services
- As-a-service delivery models
- Industry 4.0 solutions, driven by 5G

Competitive position:

- #1 in telecommunications software and software services
- Leader in cognitive automation
- #1 in industrial private wireless*

Source for estimates: Analysys Mason and GlobalData for competitive positioning
External analysts and Nokia analysis for market

* Customer wins

<table>
<thead>
<tr>
<th>Year</th>
<th>Market share</th>
<th>CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>Legacy 15</td>
<td>-9%</td>
</tr>
<tr>
<td>2023</td>
<td>Future 10</td>
<td>+14%</td>
</tr>
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<td></td>
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<tr>
<td></td>
<td></td>
<td>~2%</td>
</tr>
</tbody>
</table>

Market share
Telecommunications software and software services

7%
Cloud and Network Services  
Focus areas and expectations  

Strategic imperatives  
• Fully transition to cloud-native portfolio  
• Expand cognitive service capability  
• Boost leadership in private wireless  
• Build network-enhanced industrial automation  
• Transition to as-a-service delivery models  
• Strengthen and scale partner ecosystem  

Comparable* operating margin %  

2021: mid single digit  

Longer term: significant improvement  

*Comparable results exclude amortization of acquired intangibles, restructuring and other items affecting comparability. The information provided reflects Nokia’s new operating model, effective January 1, 2021.
Nokia Technologies
Net sales of approximately €1.4bn* 

Jenni Lukander
President, Nokia Technologies

Portfolio
- Patent licensing
- Technology licensing
- Brand licensing

Objective
Create value by maintaining our industry-leading patent portfolio and growing Nokia’s intellectual property licensing

* Indicative only, in the last four quarters.
Nokia Technologies

- Industry-leading patent portfolio; circa 20,000 patent families, including 3,500+ 5G standard essential patent families
- An independent report concluded that Nokia is #1 for ownership of granted patents found essential to the 5G Standard*
- Strong licensing track record across the segments we focus on
- 200+ licensees across all programs

* Source: PA Consulting
The list of licensees is not all inclusive, it is for illustration purposes only and may include past and/or current licensees and does not imply future license renewals

<table>
<thead>
<tr>
<th>Agreement reached</th>
<th>Company</th>
<th>Achieved objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>Huawei</td>
<td>✓</td>
</tr>
<tr>
<td>2011</td>
<td>Apple</td>
<td>✓</td>
</tr>
<tr>
<td>2012</td>
<td>Blackberry</td>
<td>✓</td>
</tr>
<tr>
<td>2014</td>
<td>HTC</td>
<td>✓</td>
</tr>
<tr>
<td>2015</td>
<td>LG</td>
<td>✓</td>
</tr>
<tr>
<td>2016</td>
<td>Samsung</td>
<td>✓</td>
</tr>
<tr>
<td>2017</td>
<td>Apple</td>
<td>✓</td>
</tr>
<tr>
<td>2017</td>
<td>Xiaomi</td>
<td>✓</td>
</tr>
<tr>
<td>2017</td>
<td>Huawei</td>
<td>✓</td>
</tr>
<tr>
<td>2018</td>
<td>OPPO</td>
<td>✓</td>
</tr>
<tr>
<td>2018</td>
<td>Vivo</td>
<td>✓</td>
</tr>
<tr>
<td>2019</td>
<td>Samsung</td>
<td>✓</td>
</tr>
</tbody>
</table>

Competitive position, based on 2019 licensing revenue

#2
Nokia Technologies
Focus areas and expectations

Strategic imperatives

• Drive innovation by investing in 5G and multimedia R&D and standardization and continuing to renew our industry-leading patent portfolio for the long term

• Continue successful smartphone licensing by securing renewals for the major mobile device deals at favorable rates and licensing remaining uncontracted vendors

• Continue to diversify and grow in new segments, including Automotive, Consumer Electronics and IoT, and further leverage broad technology assets

• Build brand partnerships and grow brand value by developing new brand licensing opportunities, including in smart home and other connected devices

*Comparable results exclude amortization of acquired intangibles, restructuring and other items affecting comparability. The information provided reflects Nokia’s new operating model, effective January 1, 2021.
Our refreshed operating model

Lean corporate center enabling fully accountable business groups
CFO remarks

Marco Wirén
CFO

25. Strong capital structure and prudent financing strategy
27. Prioritizing capital towards areas where we can achieve leadership
28. Driving a lean corporate structure
29. Clear and transparent reporting and communication
Strong capital structure and prudent financing strategy
The foundation for our long-term stability and liquidity, as well as our ability to invest in R&D to ensure technology leadership

| We target an investment grade credit rating. | We intend to maintain a level of total cash and other liquid assets at 30% or more of annual net sales. | We are driving value creation through improved focus on capital allocation, both at the Nokia Group level, as well as at the business group level. | We will continuously review our competitive positions and address our portfolio accordingly. This could mean divestments and/or bolt-on acquisitions. |
Clear capital allocation priorities

Our primary focus is to deploy our capital towards organic or inorganic investments to ensure technology leadership in areas where we have a clear path towards creating shareholder value, while maintaining a strong capital structure and prudent financing strategy.

Our next priority is to provide shareholders with capital returns. Naturally, in connection with the work on the strategic and financial targets, we will assess also the dividend policy.
Prioritizing capital towards areas where we can achieve leadership

- We have four focused business groups with full operative P&L and operating cash flow ownership and accountability.
- Each business group is focused on creating shareholder value by prioritizing capital towards attractive areas – typically the industry leaders create more value.
- Each business must earn more than its cost of capital. At a minimum, there must be a credible path to value creation.
- In addition, we see opportunities for each business group to streamline and optimize its cost base and working capital, over time.
We are driving a lean corporate structure

Empowering business groups with full accountability

- Moving forward, as much as possible, costs and headcount will be directly embedded in the business groups and the business groups will be able to control these costs
  - No allocations
  - ~14,000 people will be moved from corporate to business groups
- In addition, we have further potential to optimize our centralized corporate activities, over time
We are committed to clear and transparent reporting and communication

Our focus
• Open and transparent communications

Our goal
• To make it easier to assess and value each of our four business groups

Our commitments, beginning 2021
• Our external reporting will mirror our internal reporting
• We will provide P&L transparency to each of our four business groups
• We will host CMDs with a regular cadence
Improving reporting – an example

Beginning 2021, we intend to supplement our reported IFRS results by also reporting “Comparable operating profit,” which excludes items affecting comparability.

Furthermore, we will disclose the excluded items up front in our interim reports.

<table>
<thead>
<tr>
<th>Q1-Q3’20 example</th>
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<tbody>
<tr>
<td>EUR million</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Reported operating profit</th>
<th>444</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amortization of acquired intangible assets</td>
<td>-308</td>
</tr>
<tr>
<td>Restructuring and associated charges</td>
<td>-337</td>
</tr>
<tr>
<td>Gain on defined benefit plan amendment</td>
<td>90</td>
</tr>
<tr>
<td>Impairment of assets, net of impairment reversals</td>
<td>-25</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
</tr>
<tr>
<td>Comparable operating profit</td>
<td>1 025</td>
</tr>
</tbody>
</table>
Q&A