CITIGROUP INC Form 424B2 April 18, 2019

The information in this preliminary pricing supplement is not complete and may be changed. A registration statement relating to these securities has been filed with the Securities and Exchange Commission. This preliminary pricing supplement and the accompanying product supplement, underlying supplement, prospectus supplement and prospectus are not an offer to sell these securities, nor are they soliciting an offer to buy these securities, in any state where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED APRIL 18, 2019

May ---, 2019

Medium-Term Senior Notes, Series N

Citigroup Global Markets Holdings Inc. Pricing Supplement No. 2019-USNCH2280

Filed Pursuant to Rule 424(b)(2)

Registration Statement Nos. 333-224495 and 333-224495-03

Enhanced Barrier Digital Plus Securities Linked to the EURO STOXX 50[®] Index Due May 29, 2024

The securities offered by this pricing supplement are unsecured debt securities issued by Citigroup Global Markets Holdings Inc. and guaranteed by Citigroup Inc. Unlike conventional debt securities, the securities do not pay interest and do not repay a fixed amount of principal at maturity. Instead, the securities offer a payment at maturity that may be greater than or less than the stated principal amount, depending on the performance of the underlying specified below from the initial underlying value to the final underlying value.

The securities offer modified exposure to the performance of the underlying, with (i) a digital (fixed) return at maturity so long as the final underlying value is greater than or equal to the final barrier value specified below and (ii) 1-to-1 participation in any appreciation of the underlying in excess of the digital return. In exchange for these features, investors in the securities must be willing to forgo any dividends with respect to the underlying. In addition, investors in the securities must be willing to accept full downside exposure to the depreciation of the underlying if the final underlying value is less than the final barrier value. If the final underlying value is less than the final barrier value, you will lose 1% of the stated principal amount of your securities for every 1% by which the final underlying value is less than the initial underlying value. You may lose your entire investment in the securities.

In order to obtain the modified exposure to the underlying that the securities provide, investors must be willing to accept (i) an investment that may have limited or no liquidity and (ii) the risk of not receiving any amount due under the securities if we and Citigroup Inc. default on our obligations. All payments on the securities are subject to the credit risk of Citigroup Global Markets Holdings Inc. and Citigroup Inc.

KEY TERMS

Issuer: Citigroup Global Markets Holdings Inc., a wholly owned subsidiary of Citigroup Inc.

Guarantee: All payments due on the securities are fully and unconditionally guaranteed by Citigroup Inc.

Underlying: EURO STOXX 50[®] Index

Stated principal

amount: \$1,000 per security

Pricing date: May 23, 2019 **Issue date:** May 29, 2019

Valuation date: May 23, 2024, subject to postponement if such date is not a scheduled trading day or certain

market disruption events occur

Maturity date: May 29, 2024

You will receive at maturity for each security you then hold:

If the final underlying value is **greater than or equal to** the final barrier value:

\$1,000 + the greater of (i) the digital return amount and (ii) $\$1,000 \times \text{the underlying return}$

Payment at maturity:

If the final underlying value is **less than** the final barrier value:

 $1,000 + (1,000 \times \text{the underlying return})$

If the final underlying value is less than the final barrier value, you will receive significantly less than the stated principal amount of your securities, and possibly nothing, at maturity.

Initial underlying

value:

, the closing value of the underlying on the pricing date

Final underlying

value:

Digital return

The closing value of the underlying on the valuation date

\$380 to \$400 per security (representing a digital return equal to 38% to 40% of the stated principal amount) (to be determined on the pricing date). You may receive the digital return amount only if the final underlying value is greater than or equal to the final barrier value.

Underlying return:

amount:

(i) The final underlying value minus the initial underlying value, divided by (ii) the initial

underlying value

Final barrier

value:

, 80% of the initial underlying value

Listing: The securities will not be listed on any securities exchange

CUSIP / ISIN: 17326YH25 / US17326YH252

Underwriter: Citigroup Global Markets Inc. ("CGMI"), an affiliate of the issuer, acting as principal

Underwriting fee and issue price: Issue price⁽¹⁾⁽²⁾ Underwriting fee⁽³⁾ Proceeds to issuer

Per security: \$1,000 \$30 \$970 **Total:** \$ \$

- (1) Citigroup Global Markets Holdings Inc. currently expects that the estimated value of the securities on the pricing date will be at least \$883 per security, which will be less than the issue price. The estimated value of the securities is based on CGMI's proprietary pricing models and our internal funding rate. It is not an indication of actual profit to CGMI or other of our affiliates, nor is it an indication of the price, if any, at which CGMI or any other person may be willing to buy the securities from you at any time after issuance. See "Valuation of the Securities" in this pricing supplement.
- (2) The issue price for investors purchasing the securities in fee-based advisory accounts will be \$970 per security, assuming no custodial fee is charged by a selected dealer, and up to \$975 per security, assuming the maximum

custodial fee is charged by a selected dealer. See "Supplemental Plan of Distribution" in this pricing supplement.

(3) CGMI will receive an underwriting fee of \$30 for each security sold in this offering. From this underwriting fee, CGMI will pay selected dealers a fixed selling concession of \$30 for each security they sell. In addition, CGMI will pay selected dealers not affiliated with CGMI a structuring fee of up to \$7.50 for each security they sell. We may also engage other firms to provide marketing or promotional services in connection with the distribution of the securities. CGMI will pay these service providers a fee of up to \$5 per security in consideration for providing marketing, education, structuring or referral services with respect to financial advisors or selected dealers. For more information on the distribution of the securities, see "Supplemental Plan of Distribution" in this pricing supplement. In addition to the underwriting fee, CGMI and its affiliates may profit from expected hedging activity related to this offering, even if the value of the securities declines. See "Use of Proceeds and Hedging" in the accompanying prospectus.

Investing in the securities involves risks not associated with an investment in conventional debt securities. See "Summary Risk Factors" beginning on page PS-5.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of the securities or determined that this pricing supplement and the accompanying product supplement, underlying supplement, prospectus supplement and prospectus are truthful or complete. Any representation to the contrary is a criminal offense.

You should read this pricing supplement together with the accompanying product supplement, underlying supplement, prospectus supplement and prospectus, which can be accessed via the hyperlinks below:

Product Supplement No. EA-02-08 dated February 15, 2019 Underlying Supplement No. 8 dated February 21, 2019

Prospectus Supplement and Prospectus each dated May 14, 2018

The securities are not bank deposits and are not insured or guaranteed by the Federal Deposit Insurance Corporation or any other governmental agency, nor are they obligations of, or guaranteed by, a bank.

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Additional Information

The terms of the securities are set forth in the accompanying product supplement, prospectus supplement and prospectus, as supplemented by this pricing supplement. The accompanying product supplement, prospectus supplement and prospectus contain important disclosures that are not repeated in this pricing supplement. For example, the accompanying product supplement contains important information about how the closing value of the underlying will be determined and about adjustments that may be made to the terms of the securities upon the occurrence of market disruption events and other specified events with respect to the underlying. The accompanying underlying supplement contains information about the underlying that is not repeated in this pricing supplement. It is important that you read the accompanying product supplement, underlying supplement, prospectus supplement and prospectus together with this pricing supplement in deciding whether to invest in the securities. Certain terms used but not defined in this pricing supplement are defined in the accompanying product supplement.

Payout Diagram

The diagram below illustrates your payment at maturity for a range of hypothetical underlying returns. The diagram assumes that the digital return amount will be set at the lowest value indicated on the cover page of this pricing supplement. The actual digital return amount will be determined on the pricing date.

Investors in the securities will not receive any dividends with respect to the underlying. The diagram and examples below do not show any effect of lost dividend yield over the term of the securities. See "Summary Risk Factors—You will not receive dividends or have any other rights with respect to the underlying" below.

Payout Diagram

n The Securities n The Underlying

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Hypothetical Examples

The table below indicates what your payment at maturity and total return on the securities would be for various hypothetical underlying returns. Your actual payment at maturity and total return on the securities will depend on the actual final underlying value. The table assumes that the digital return amount will be set at the lowest value indicated on the cover page of this pricing supplement. The actual digital return amount will be determined on the pricing date.

Hypothetical Underlying Return	Hypothetical Payment at Maturity per Security Hypothetical Total Ro Securities at Maturity	
100.00%	\$2,000.00	100.00%
75.00%	\$1,750.00	75.00%
50.00%	\$1,500.00	50.00%
38.01%	\$1,380.10	38.01%
38.00%	\$1,380.00	38.00%
20.00%	\$1,380.00	38.00%
10.00%	\$1,380.00	38.00%
5.00%	\$1,380.00	38.00%
0.00%	\$1,380.00	38.00%
-5.00%	\$1,380.00	38.00%
-10.00%	\$1,380.00	38.00%
-20.00%	\$1,380.00	38.00%
-20.01%	\$799.90	-20.01%
-30.00%	\$700.00	-30.00%
-40.00%	\$600.00	-40.00%
-50.00%	\$500.00	-50.00%
-75.00%	\$250.00	-75.00%
-100.00%	\$0.00	-100.00%

⁽¹⁾ Hypothetical total return on securities at maturity = (i) hypothetical payment at maturity per security *minus* \$1,000 stated principal amount per security, *divided by* (ii) \$1,000 stated principal amount per security

The examples below illustrate how to determine the payment at maturity on the securities, assuming the various hypothetical final underlying values indicated below. The examples are solely for illustrative purposes, do not show all possible outcomes and are not a prediction of what the actual payment at maturity on the securities will be. The

actual payment at maturity will depend on the actual final underlying value.

The examples below are based on the following hypothetical values and do not reflect the actual initial underlying value or final barrier value. For the actual initial underlying value and final barrier value, see the cover page of this pricing supplement. We have used these hypothetical values, rather than the actual values, to simplify the calculations and aid understanding of how the securities work. However, you should understand that the actual payment at maturity on the securities will be calculated based on the actual initial underlying value and final barrier value, and not the hypothetical values indicated below. The examples below assume that the digital return amount will be set at the lowest value indicated on the cover page of this pricing supplement. The actual digital return amount will be determined on the pricing date.

Hypothetical initial underlying value: 100

Hypothetical final buffer value: 80 (80% of the hypothetical initial underlying value)

Example 1—Upside Scenario A. The final underlying value is 95, resulting in a -5% underlying return. In this example, the final underlying value is **greater than** the final barrier value.

Payment at maturity per security = \$1,000 + the greater of (i) the digital return amount and (ii) $\$1,000 \times \text{the underlying return}$

= \$1,000 + the greater of (i) \$380 and (ii) \$1,000 × -5%

= \$1,000 + \$380

= \$1,380

In this scenario, the final underlying value is greater than the final barrier value, and because the digital return is greater than the underlying return, your total return at maturity would equal the digital return.

Example 2—Upside Scenario B. The final underlying value is 140, resulting in a 40% underlying return. In this example, the final underlying value is **greater than** the final barrier value.

Payment at maturity per security = \$1,000 + the greater of (i) the digital return amount and (ii) $\$1,000 \times$ the underlying return

= \$1,000 + the greater of (i) \$380 and (ii) $\$1,000 \times 40\%$

=\$1,000 + \$400

= \$1,400

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In this scenario, the final underlying value is greater than the initial underlying value, and because the underlying return is greater than the digital return, your total return at maturity would equal the underlying return.

Example 3—Downside Scenario. The final underlying value is 30, resulting in a -70% underlying return. In this example, the final underlying value is **less than** the final barrier value.

Payment at maturity per security = $\$1,000 + (\$1,000 \times \text{the underlying return})$

$$= \$1,000 + (\$1,000 \times -70\%)$$

$$= $1,000 + -$700$$

= \$300

In this scenario, the final underlying value is less than the final barrier value. As a result, your total return at maturity in this scenario would be negative and would reflect 1-to-1 exposure to the negative performance of the underlying.

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Summary Risk Factors

An investment in the securities is significantly riskier than an investment in conventional debt securities. The securities are subject to all of the risks associated with an investment in our conventional debt securities (guaranteed by Citigroup Inc.), including the risk that we and Citigroup Inc. may default on our obligations under the securities, and are also subject to risks associated with the underlying. Accordingly, the securities are suitable only for investors who are capable of understanding the complexities and risks of the securities. You should consult your own financial, tax and legal advisors as to the risks of an investment in the securities and the suitability of the securities in light of your particular circumstances.

The following is a summary of certain key risk factors for investors in the securities. You should read this summary together with the more detailed description of risks relating to an investment in the securities contained in the section "Risk Factors Relating to the Securities" beginning on page EA-7 in the accompanying product supplement. You should also carefully read the risk factors included in the accompanying prospectus supplement and in the documents incorporated by reference in the accompanying prospectus, including Citigroup Inc.'s most recent Annual Report on Form 10-K and any subsequent Quarterly Reports on Form 10-Q, which describe risks relating to the business of Citigroup Inc. more generally.

You may lose a significant portion or all of your investment. Unlike conventional debt securities, the securities do not repay a fixed amount of principal at maturity. Instead, your payment at maturity will depend on the performance of the underlying. If the final underlying value is less than the final barrier value, you will lose 1% of the stated principal amount of your securities for every 1% by which the underlying has depreciated from the initial underlying value to the final underlying value. There is no minimum payment at maturity on the securities, and you may lose up to all of your investment.

The securities do not pay interest. Unlike conventional debt securities, the securities do not pay interest or any other amounts prior to maturity. You should not invest in the securities if you seek current income during the term of the securities.

You will not receive dividends or have any other rights with respect to the underlying. You will not receive any dividends with respect to the underlying. This lost dividend yield may be significant over the term of the securities. The payment scenarios described in this pricing supplement do not show any effect of lost dividend yield over the term of the securities. In addition, you will not have voting rights or any other rights with respect to the underlying or the stocks included in the underlying.

Your payment at maturity depends on the closing value of the underlying on a single day. Because your payment at maturity depends on the closing value of the underlying solely on the valuation date, you are subject to the risk that the closing value of the underlying on that day may be lower, and possibly significantly lower, than on one or more

other dates during the term of the securities. If you had invested directly in the underlying or in another instrument linked to the underlying that you could sell for full value at a time selected by you, or if the payment at maturity were based on an average of closing values of the underlying, you might have achieved better returns.

The securities are subject to the credit risk of Citigroup Global Markets Holdings Inc. and Citigroup Inc. If we default on our obligations under the securities and Citigroup Inc. defaults on its guarantee obligations, you may not receive anything owed to you under the securities.

The securities will not be listed on any securities exchange and you may not be able to sell them prior to maturity. The securities will not be listed on any securities exchange. Therefore, there may be little or no secondary market for the securities. CGMI currently intends to make a secondary market in relation to the securities and to provide an indicative bid price for the securities on a daily basis. Any indicative bid price for the securities provided by CGMI will be determined in CGMI's sole discretion, taking into account prevailing market conditions and other relevant factors, and will not be a representation by CGMI that the securities can be sold at that price, or at all. CGMI may suspend or terminate making a market and providing indicative bid prices without notice, at any time and for any reason. If CGMI suspends or terminates making a market, there may be no secondary market at all for the securities because it is likely that CGMI will be the only broker-dealer that is willing to buy your securities prior to maturity. Accordingly, an investor must be prepared to hold the securities until maturity.

The estimated value of the securities on the pricing date, based on CGMI's proprietary pricing models and our internal funding rate, is less than the issue price. The difference is attributable to certain costs associated with selling, structuring and hedging the securities that are included in the issue price. These costs include (i) any selling concessions or other fees paid in connection with the offering of the securities, (ii) hedging and other costs incurred by us and our affiliates in connection with the offering of the securities and (iii) the expected profit (which may be more or less than actual profit) to CGMI or other of our affiliates in connection with hedging our obligations under the securities. These costs adversely affect the economic terms of the securities because, if they were lower, the economic terms of the securities would be more favorable to you. The economic terms of the securities are also likely to be adversely affected by the use of our internal funding rate, rather than our secondary market rate, to price the securities. See "The estimated value of the securities would be lower if it were calculated based on our secondary market rate" below.

The estimated value of the securities was determined for us by our affiliate using proprietary pricing models. CGMI derived the estimated value disclosed on the cover page of this pricing supplement from its proprietary pricing

models. In doing so, it may have made discretionary judgments about the inputs to its models, such as the volatility of the closing value of the underlying, the dividend yield on the underlying and interest rates. CGMI's views on these inputs may differ from your or others'

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views, and as an underwriter in this offering, CGMI's interests may conflict with yours. Both the models and the inputs to the models may prove to be wrong and therefore not an accurate reflection of the value of the securities. Moreover, the estimated value of the securities set forth on the cover page of this pricing supplement may differ from the value that we or our affiliates may determine for the securities for other purposes, including for accounting purposes. You should not invest in the securities because of the estimated value of the securities. Instead, you should be willing to hold the securities to maturity irrespective of the initial estimated value.

The estimated value of the securities would be lower if it were calculated based on our secondary market rate.

The estimated value of the securities included in this pricing supplement is calculated based on our internal funding rate, which is the rate at which we are willing to borrow funds through the issuance of the securities. Our internal funding rate is generally lower than our secondary market rate, which is the rate that CGMI will use in determining the value of the securities for purposes of any purchases of the securities from you in the secondary market. If the estimated value included in this pricing supplement were based on our secondary market rate, rather than our internal funding rate, it would likely be lower. We determine our internal funding rate based on factors such as the costs associated with the securities, which are generally higher than the costs associated with conventional debt securities, and our liquidity needs and preferences. Our internal funding rate is not an interest rate that is payable on the securities.

Because there is not an active market for traded instruments referencing our outstanding debt obligations, CGMI determines our secondary market rate based on the market price of traded instruments referencing the debt obligations of Citigroup Inc., our parent company and the guarantor of all payments due on the securities, but subject to adjustments that CGMI makes in its sole discretion. As a result, our secondary market rate is not a market-determined measure of our creditworthiness, but rather reflects the market's perception of our parent company's creditworthiness as adjusted for discretionary factors such as CGMI's preferences with respect to purchasing the securities prior to maturity.

The estimated value of the securities is not an indication of the price, if any, at which CGMI or any other person may be willing to buy the securities from you in the secondary market. Any such secondary market price will fluctuate over the term of the securities based on the market and other factors described in the next risk factor. Moreover, unlike the estimated value included in this pricing supplement, any value of the securities determined for purposes of a secondary market transaction will be based on our secondary market rate, which will likely result in a lower value for the securities than if our internal funding rate were used. In addition, any secondary market price for the securities will be reduced by a bid-ask spread, which may vary depending on the aggregate stated principal amount of the securities to be purchased in the secondary market transaction, and the expected cost of unwinding related hedging transactions. As a result, it is likely that any secondary market price for the securities will be less than the issue price.

The value of the securities prior to maturity will fluctuate based on many unpredictable factors. The value of your securities prior to maturity will fluctuate based on the closing value of the underlying, the volatility of the closing value of the underlying, the dividend yield on the underlying, interest rates generally, the time remaining to maturity and our and Citigroup Inc.'s creditworthiness, as reflected in our secondary market rate, among other factors described under "Risk Factors Relating to the Securities—Risk Factors Relating to All Securities—The value of your securities prior to maturity will fluctuate based on many unpredictable factors" in the accompanying product

supplement. Changes in the closing value of the underlying may not result in a comparable change in the value of your securities. You should understand that the value of your securities at any time prior to maturity may be significantly less than the issue price.

Immediately following issuance, any secondary market bid price provided by CGMI, and the value that will be indicated on any brokerage account statements prepared by CGMI or its affiliates, will reflect a temporary upward adjustment. The amount of this temporary upward adjustment will steadily decline to zero over the temporary adjustment period. See "Valuation of the Securities" in this pricing supplement.

The underlying is subject to risks associated with non-U.S. markets. Foreign equity securities involve risks associated with the securities markets in foreign countries, including risks of volatility in those markets, governmental intervention in those markets and cross-shareholdings in companies in certain countries. There is also generally less publicly available information about foreign companies than about U.S. companies that are subject to the reporting requirements of the Securities and Exchange Commission, and foreign companies are subject to accounting, auditing and financial reporting standards and requirements different from those applicable to U.S. reporting companies. The prices of securities in foreign markets may be affected by political, economic, financial and social factors in those countries, or global regions, including changes in government, economic and fiscal policies and currency exchange laws. Moreover, the economies in such countries may differ unfavorably from the economy in the United States in such respects as growth of gross national product, rate of inflation, capital reinvestment, resources and self-sufficiency.

The performance of the underlying will not be adjusted for changes in the exchange rate between the euro and the U.S. dollar. The underlying is composed of stocks traded in euro, the value of which may be subject to a high degree of fluctuation relative to the U.S. dollar. However, the performance of the underlying and the value of your securities will not be adjusted for exchange rate fluctuations. If the euro appreciates relative to the U.S. dollar over the term of the securities, the performance of the underlying as measured for purposes of the securities will be less than it would have been if it offered exposure to that appreciation in addition to the change in the prices of the stocks included in the underlying.

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Our offering of the securities is not a recommendation of the underlying. The fact that we are offering the securities does not mean that we believe that investing in an instrument linked to the underlying is likely to achieve favorable returns. In fact, as we are part of a global financial institution, our affiliates may have positions (including short positions) in the underlying or in instruments related to the underlying, and may publish research or express opinions, that in each case are inconsistent with an investment linked to the underlying. These and other activities of our affiliates may affect the closing value of the underlying in a way that negatively affects the value of and your return on the securities.

The closing value of the underlying may be adversely affected by our or our affiliates' hedging and other trading activities. We expect to hedge our obligations under the securities through CGMI or other of our affiliates, who may take positions in the underlying or in financial instruments related to the underlying and may adjust such positions during the term of the securities. Our affiliates also take positions in the underlying or in financial instruments related to the underlying on a regular basis (taking long or short positions or both), for their accounts, for other accounts under their management or to facilitate transactions on behalf of customers. These activities could affect the closing value of the underlying in a way that negatively affects the value of and your return on the securities. They could also result in substantial returns for us or our affiliates while the value of the securities declines.

We and our affiliates may have economic interests that are adverse to yours as a result of our affiliates' business activities. Our affiliates engage in business activities with a wide range of companies. These activities include extending loans, making and facilitating investments, underwriting securities offerings and providing advisory services. These activities could involve or affect the underlying in a way that negatively affects the value of and your return on the securities. They could also result in substantial returns for us or our affiliates while the value of the securities declines. In addition, in the course of this business, we or our affiliates may acquire non-public information, which will not be disclosed to you.

The calculation agent, which is an affiliate of ours, will make important determinations with respect to the securities. If certain events occur during the term of the securities, such as market disruption events and other events with respect to the underlying, CGMI, as calculation agent, will be required to make discretionary judgments that could significantly affect your return on the securities. In making these judgments, the calculation agent's interests as an affiliate of ours could be adverse to your interests as a holder of the securities. See "Risk Factors Relating to the Securities—Risk Factors Relating to All Securities—The calculation agent, which is an affiliate of ours, will make important determinations with respect to the securities" in the accompanying product supplement.

Changes that affect the underlying may affect the value of your securities. The sponsor of the underlying may at any time make methodological changes or other changes in the manner in which it operates that could affect the value of the underlying. We are not affiliated with the underlying sponsor and, accordingly, we have no control over any changes such sponsor may make. Such changes could adversely affect the performance of the underlying and the value of and your return on the securities.

The U.S. federal tax consequences of an investment in the securities are unclear. There is no direct legal authority regarding the proper U.S. federal tax treatment of the securities, and we do not plan to request a ruling from the Internal Revenue Service (the "IRS"). Consequently, significant aspects of the tax

treatment of the securities are uncertain, and the IRS or a court might not agree with the treatment of the securities as prepaid forward contracts. If the IRS were successful in asserting an alternative treatment of the securities, the tax consequences of the ownership and disposition of the securities might be materially and adversely affected. Moreover, future legislation, Treasury regulations or IRS guidance could adversely affect the U.S. federal tax treatment of the securities, possibly retroactively.

If you are a non-U.S. investor, you should review the discussion of withholding tax issues in "United States Federal Tax Considerations—Non-U.S. Holders" below.

You should read carefully the discussion under "United States Federal Tax Considerations" and "Risk Factors Relating to the Securities" in the accompanying product supplement and "United States Federal Tax Considerations" in this pricing supplement. You should also consult your tax adviser regarding the U.S. federal tax consequences of an investment in the securities, as well as tax consequences arising under the laws of any state, local or non-U.S. taxing jurisdiction.

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Information About the EURO STOXX 50® Index

The EURO STOXX 50® Index is composed of 50 component stocks of market sector leaders from within the 19 EURO STOXX Supersector indices, which represent the Eurozone portion of the STOXX Europe 600® Supersector indices. The STOXX Europe 600® Supersector indices contain the 600 largest stocks traded on the major exchanges of 18 European countries. The EURO STOXX 50® Index is calculated and maintained by STOXX Limited.

Please refer to the section "Equity Index Descriptions—The EURO STOXX®510ndex" in the accompanying underlying supplement for additional information.

We have derived all information regarding the EURO STOXX 50° Index from publicly available information and have not independently verified any information regarding the EURO STOXX 50° Index. This pricing supplement relates only to the securities and not to the EURO STOXX 50° Index. We make no representation as to the performance of the EURO STOXX 50° Index over the term of the securities.

The securities represent obligations of Citigroup Global Markets Holdings Inc. (guaranteed by Citigroup Inc.) only. The sponsor of the EURO STOXX 50[®] Index is not involved in any way in this offering and has no obligation relating to the securities or to holders of the securities.

Historical Information

The closing value of the EURO STOXX 50[®] Index on April 16, 2019 was 3,463.36.

The graph below shows the closing value of the EURO STOXX 50[®] Index for each day such value was available from January 2, 2014 to April 16, 2019. We obtained the closing values from Bloomberg L.P., without independent verification. You should not take the historical closing values as an indication of future performance.

EURO STOXX 50[®] Index – Historical Closing Values January 2, 2014 to April 16, 2019

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United States Federal Tax Considerations

You should read carefully the discussion under "United States Federal Tax Considerations" and "Risk Factors Relating to the Securities" in the accompanying product supplement and "Summary Risk Factors" in this pricing supplement.

In the opinion of our counsel, Davis Polk & Wardwell LLP, a security should be treated as a prepaid forward contract for U.S. federal income tax purposes. By purchasing a security, you agree (in the absence of an administrative determination or judicial ruling to the contrary) to this treatment. There is uncertainty regarding this treatment, and the IRS or a court might not agree with it. Moreover, our counsel's opinion is based on market conditions as of the date of this preliminary pricing supplement and is subject to confirmation on the pricing date.

Assuming this treatment of the securities is respected and subject to the discussion in "United States Federal Tax Considerations" in the accompanying product supplement, the following U.S. federal income tax consequences should result under current law:

You should not recognize taxable income over the term of the securities prior to maturity, other than pursuant to a sale or exchange.

Upon a sale or exchange of a security (including retirement at maturity), you should recognize capital gain or loss equal to the difference between the amount realized and your tax basis in the security. Such gain or loss should be long-term capital gain or loss if you held the security for more than one year.

We do not plan to request a ruling from the IRS regarding the treatment of the securities. An alternative characterization of the securities could materially and adversely affect the tax consequences of ownership and disposition of the securities, including the timing and character of income recognized. In addition, the U.S. Treasury Department and the IRS have requested comments on various issues regarding the U.S. federal income tax treatment of "prepaid forward contracts" and similar financial instruments and have indicated that such transactions may be the subject of future regulations or other guidance. Furthermore, members of Congress have proposed legislative changes to the tax treatment of derivative contracts. Any legislation, Treasury regulations or other guidance promulgated after consideration of these issues could materially and adversely affect the tax consequences of an investment in the securities, possibly with retroactive effect. You should consult your tax adviser regarding possible alternative tax treatments of the securities and potential changes in applicable law.

Non-U.S. Holders. Subject to the discussions below and in "United States Federal Tax Considerations" in the accompanying product supplement, if you are a Non-U.S. Holder (as defined in the accompanying product

supplement) of the securities, you generally should not be subject to U.S. federal withholding or income tax in respect of any amount paid to you with respect to the securities, provided that (i) income in respect of the securities is not effectively connected with your conduct of a trade or business in the United States, and (ii) you comply with the applicable certification requirements.

As discussed under "United States Federal Tax Considerations—Tax Consequences to Non-U.S. Holders" in the accompanying product supplement, Section 871(m) of the Code and Treasury regulations promulgated thereunder ("Section 871(m)") generally impose a 30% withholding tax on dividend equivalents paid or deemed paid to Non-U.S. Holders with respect to certain financial instruments linked to U.S. equities ("U.S. Underlying Equities") or indices that include U.S. Underlying Equities. Section 871(m) generally applies to instruments that substantially replicate the economic performance of one or more U.S. Underlying Equities, as determined based on tests set forth in the applicable Treasury regulations. However, the regulations, as modified by an IRS notice, exempt financial instruments issued prior to January 1, 2021 that do not have a "delta" of one. Based on the terms of the securities and representations provided by us as of the date of this preliminary pricing supplement, our counsel is of the opinion that the securities should not be treated as transactions that have a "delta" of one within the meaning of the regulations with respect to any U.S. Underlying Equity and, therefore, should not be subject to withholding tax under Section 871(m). However, the final determination regarding the treatment of the securities under Section 871(m) will be made as of the pricing date for the securities, and it is possible that the securities will be subject to withholding tax under Section 871(m) based on the circumstances as of that date.

A determination that the securities are not subject to Section 871(m) is not binding on the IRS, and the IRS may disagree with this treatment. Moreover, Section 871(m) is complex and its application may depend on your particular circumstances, including your other transactions. You should consult your tax adviser regarding the potential application of Section 871(m) to the securities.

If withholding tax applies to the securities, we will not be required to pay any additional amounts with respect to amounts withheld.

You should read the section entitled "United States Federal Tax Considerations" in the accompanying product supplement. The preceding discussion, when read in combination with that section, constitutes the full opinion of Davis Polk & Wardwell LLP regarding the material U.S. federal tax consequences of owning and disposing of the securities.

You should also consult your tax adviser regarding all aspects of the U.S. federal income and estate tax consequences of an investment in the securities and any tax consequences arising under the laws of any state, local or non-U.S. taxing jurisdiction.

Citigroup Global Markets Holdings Inc.

Supplemental Plan of Distribution

CGMI, an affiliate of Citigroup Global Markets Holdings Inc. and the underwriter of the sale of the securities, is acting as principal and will receive an underwriting fee of \$30 for each security sold in this offering (or up to \$5 for each security in the case of sales to fee-based advisory accounts). From this underwriting fee, CGMI will pay selected dealers not affiliated with CGMI a fixed selling concession of \$30 for each security they sell to accounts other than fee-based advisory accounts. CGMI will pay selected dealers not affiliated with CGMI, which may include dealers acting as custodians, a variable selling concession of up to \$5 for each security they sell to fee-based advisory accounts. In addition, CGMI will pay selected dealers not affiliated with CGMI a structuring fee of up to \$7.50 for each security they sell. We may also engage other firms to provide marketing or promotional services in connection with the distribution of the securities. CGMI will pay these service providers a fee of up to \$5 per security in consideration for providing marketing, education, structuring or referral services with respect to financial advisors or selected dealers. Broker-dealers affiliated with CGMI, including Citi International Financial Services, Citigroup Global Markets Singapore Pte. Ltd. and Citigroup Global Markets Asia Limited, and financial advisors employed by such affiliated broker-dealers will collectively receive a fixed selling concession of \$30 for each security they sell.

See "Plan of Distribution; Conflicts of Interest" in the accompanying product supplement and "Plan of Distribution" in each of the accompanying prospectus supplement and prospectus for additional information.

Valuation of the Securities

CGMI calculated the estimated value of the securities set forth on the cover page of this pricing supplement based on proprietary pricing models. CGMI's proprietary pricing models generated an estimated value for the securities by estimating the value of a hypothetical package of financial instruments that would replicate the payout on the securities, which consists of a fixed-income bond (the "bond component") and one or more derivative instruments underlying the economic terms of the securities (the "derivative component"). CGMI calculated the estimated value of the bond component using a discount rate based on our internal funding rate. CGMI calculated the estimated value of the derivative component based on a proprietary derivative-pricing model, which generated a theoretical price for the instruments that constitute the derivative component based on various inputs, including the factors described under "Summary Risk Factors—The value of the securities prior to maturity will fluctuate based on many unpredictable factors" in this pricing supplement, but not including our or Citigroup Inc.'s creditworthiness. These inputs may be market-observable or may be based on assumptions made by CGMI in its discretionary judgment.

The estimated value of the securities is a function of the terms of the securities and the inputs to CGMI's proprietary pricing models. As of the date of this preliminary pricing supplement, it is uncertain what the estimated value of the securities will be on the pricing date because certain terms of the securities have not yet been fixed and because it is uncertain what the values of the inputs to CGMI's proprietary pricing models will be on the pricing date.

For a period of approximately four months following issuance of the securities, the price, if any, at which CGMI would be willing to buy the securities from investors, and the value that will be indicated for the securities on any brokerage account statements prepared by CGMI or its affiliates (which value CGMI may also publish through one or more financial information vendors), will reflect a temporary upward adjustment from the price or value that would otherwise be determined. This temporary upward adjustment represents a portion of the hedging profit expected to be realized by CGMI or its affiliates over the term of the securities. The amount of this temporary upward adjustment will decline to zero on a straight-line basis over the four-month temporary adjustment period. However, CGMI is not sted

obligated to buy the securities from investors at any time. See "Summary Risk Factors—The securities will not be listed on any securities exchange and you may not be able to sell them prior to maturity."
Certain Selling Restrictions
Hong Kong Special Administrative Region
The contents of this pricing supplement and the accompanying product supplement, underlying supplement, prospectus supplement and prospectus have not been reviewed by any regulatory authority in the Hong Kong Special Administrative Region of the People's Republic of China ("Hong Kong"). Investors are advised to exercise caution in relation to the offer. If investors are in any doubt about any of the contents of this pricing supplement and the accompanying product supplement, underlying supplement, prospectus supplement and prospectus, they should obtain independent professional advice.
The securities have not been offered or sold and will not be offered or sold in Hong Kong by means of any document, other than

- (i) to persons whose ordinary business is to buy or sell shares or debentures (whether as principal or agent); or
- to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong (the (ii) "Securities and Futures Ordinance") and any rules made under that Ordinance; or

in other circumstances which do not result in the document being a "prospectus" as defined in the Companies (iii) Ordinance (Cap. 32) of Hong Kong or which do not constitute an offer to the public within the meaning of that Ordinance: and

There is no advertisement, invitation or document relating to the securities which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to securities which are or are intended to be disposed of only to persons

outside Hong Kong or only to "professional investors" as defined in the Securities and Futures Ordinance and any rules made under that Ordinance.

Citigroup Global Markets Holdings Inc.

Non-insured Product: These securities are not insured by any governmental agency. These securities are not bank deposits and are not covered by the Hong Kong Deposit Protection Scheme.

Singapore

This pricing supplement and the accompanying product supplement, underlying supplement, prospectus supplement and prospectus have not been registered as a prospectus with the Monetary Authority of Singapore, and the securities will be offered pursuant to exemptions under the Securities and Futures Act, Chapter 289 of Singapore (the "Securities and Futures Act"). Accordingly, the securities may not be offered or sold or made the subject of an invitation for subscription or purchase nor may this pricing supplement or any other document or material in connection with the offer or sale or invitation for subscription or purchase of any securities be circulated or distributed, whether directly or indirectly, to any person in Singapore other than (a) to an institutional investor pursuant to Section 274 of the Securities and Futures Act, (b) to a relevant person under Section 275(1) of the Securities and Futures Act or to any person pursuant to Section 275(1A) of the Securities and Futures Act and in accordance with the conditions of, any other applicable provision of the Securities and Futures Act. Where the securities are subscribed or purchased under Section 275 of the Securities and Futures Act by a relevant person which is:

a corporation (which is not an accredited investor (as defined in Section 4A of the Securities and Futures Act)) the (a) sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or

a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary is an individual who is an accredited investor, securities (as defined in Section 239(1) of the Securities (b) and Futures Act) of that corporation or the beneficiaries' rights and interests (howsoever described) in that trust shall not be transferable for 6 months after that corporation or that trust has acquired the relevant securities pursuant to an offer under Section 275 of the Securities and Futures Act except:

to an institutional investor or to a relevant person defined in Section 275(2) of the Securities and Futures Act or to (i) any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the Securities and Futures Act; or

- (ii) where no consideration is or will be given for the transfer; or
 - (iii) where the transfer is by operation of law; or

(iv)	pursuant to Section 276(7) of the Securities and Futures Act; or	
(v) as specified in Regulation Regulations 2005 of Sing	32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) apore.	
Any securities referred to her institution in any jurisdiction	rein may not be registered with any regulator, regulatory body or similar organization of .	or
Products and Notice on the S	Investment Products (as defined in the Notice on Recommendations on Investment cale of Investment Product issued by the Monetary Authority of Singapore on 28 July or quoted on a securities market or a futures market.	
deposits. These securities are	securities are not insured by any governmental agency. These securities are not bank a not insured products subject to the provisions of the Deposit Insurance and Policy Act 2011 of Singapore and are not eligible for deposit insurance coverage under the	
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Clients may contact their loc Investment Sales at (212) 72.	al brokerage representative. Third-party distributors may contact Citi Structured 3-7005.	
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PS-11		
="margin:0in 0in .0001pt;">	9%	
		(48
)		54

%

(122

) (275) (56)% Profit (non-IFRS) 441 171 158 % 203 117 % 644 310 108 % Profit attributable to the equity holders of the parent (non-IFRS) 449

194

%	131
	196
	129
%	646
	346
	87
%	
Non-controlling interests (non-IFRS)	
	(9
	(24
	(24
	(24
	(24 (63 6
	(24

) (95)% EPS, EUR diluted (non-IFRS) 0.08 0.03 167 % 0.03 167 % 0.11 0.06 83 % 2

Second quarter and January-June 2017 reported results. Refer to note 1, Basis of Preparation , in the Financial statement information section for further details (1)

EUR million			YoY		QoQ	Q1 -	Q1-	YoY
(except for EPS in EUR)	Q2 17	Q2 16	change	Q1 17	change	Q2 17	Q2 16	change
Net Sales - constant								
currency			0%		7%			(2)%
Net sales	5 619	5 576	1%	5 378	4%	10 996	11 088	(1)%
Nokia s Networks								
business	4 971	5 222	(5)%	4 902	1%	9 873	10 415	(5)%
Ultra Broadband								
Networks	2 165	2 356	(8)%	2 236	(3)%	4 401	4 653	(5)%
Global Services	1 448	1 444	0%	1 361	6%	2 809	2 888	(3)%
IP Networks and								
Applications	1 358	1 421	(4)%	1 304	4%	2 663	2 874	(7)%
Nokia Technologies	369	194	90%	247	49%	616	391	58%
Group Common and								
Other	307	270	14%	254	21%	562	506	11%
Non-IFRS exclusions	(11)	(93)	(88)%	(11)	0%	(21)	(197)	(89)%
Gross profit	2 236	2 031	10%	2 125	5%	4 361	3 608	21%
Gross margin %	39.8%	36.4%	340bps	39.5%	30bps	39.7%	32.5%	720bps
Operating (loss)/profit	(45)	(760)	(94)%	(127)	(65)%	(173)	(1472)	(88)%
Nokia s Networks								
business	406	313	30%	324	25%	730	650	12%
Ultra Broadband								
Networks	191	184	4%	245	(22)%	437	311	41%
Global Services	123	34	262%	55	124%	179	137	31%
IP Networks and								
Applications	91	95	(4)%	23	296%	114	202	(44)%
Nokia Technologies	230	89	158%	116	98%	346	195	77%
Group Common and								
Other	(62)	(70)		(99)		(161)	(169)	
Non-IFRS exclusions	(620)	(1 092)	(43)%	(468)	32%	$(1\ 088)$	$(2\ 149)$	(49)%
Operating margin %	(0.8)%	(13.6)%	1 280bps	(2.4)%	160bps	(1.6)%	(13.3)%	1 170bps
Financial income and								
expenses	(218)	(32)	581%	(146)	49%	(364)	(135)	170%
Taxes (2)	(172)	65		(154)	12%	(325)	166	
(Loss)/Profit (2)	(433)	(726)	(40)%	(435)	0%	(868)	(1 437)	(40)%
(Loss)/Profit								
attributable to the equity								
holders of the parent (2)	(423)	(667)	(37)%	(473)	(11)%	(896)	$(1\ 291)$	(31)%
Non-controlling								
interests (2)	(9)	(58)	(84)%	37	(124)%	28	(147)	
EPS, EUR diluted (2)	(0.07)	(0.12)	(42)%	(0.08)	(13)%	(0.16)	(0.23)	(30)%
Net cash and other								
liquid assets	3 964	7 077	(44)%	4 409	(10)%	3 964	7 077	(44)%
_			•					-

⁽¹⁾ Results are as reported unless otherwise specified. The financial information in this report is unaudited. Non-IFRS results 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. For details, please refer to the non-IFRS exclusions section included in discussions of both the quarterly and year to date performance and note 2, Non-IFRS to reported reconciliation , in the notes in the Financial statement information in this report. Change in net sales at constant currency excludes the impact of changes in exchange

rates in comparison to euro, our reporting currency. For more information on currency exposures, please refer to note 1, Basis of Preparation , in the Financial statement information section in this report.

(2) Reported Q1-Q2 16 result is not comparable to the previously published Reported Q1-Q2 16 result due to an update to the Alcatel-Lucent purchase price allocation in Q3 16 which resulted in an adjustment to the reported Q1 16 income tax benefit.

Changes in reporting structure, effective from April 1, 2017

On March 17, 2017, Nokia announced changes in its organizational structure designed to accelerate the execution of its strategy, including strengthening Nokia s ability to deliver strong financial performance, drive growth in services, meet changing customer demands in mobile networks, achieve cost savings and ongoing transformation goals, and enable strategic innovation across Nokia s Networks business. These organizational changes included the separation of Nokia s former Mobile Networks business group into two distinct organizations: one focused on products and solutions, called Mobile Networks, and the other on services, called Global Services.

As a result of these changes, Nokia has changed its financial reporting structure for its Networks business. As of the second quarter 2017, Nokia s Networks business is comprised of three reportable segments and five business groups.

- 1) Ultra Broadband Networks, comprised of the Mobile Networks and Fixed Networks business groups.
- The Mobile Networks business group is comprised of the products and solutions that resided within the previous Mobile Networks business group. As a result of the organization change, services no longer reside under Mobile Networks. The Mobile Networks business group provides radio networks, converged core networks and advanced mobile networks solutions (see note 3, Segment information, in the Financial statement information sections in this report for additional details).
- The Fixed Networks business group provides broadband access, digital home, access management solutions and Fixed Networks services (see note 3, Segment information, in the Financial statement information sections in this report for additional details).
- 2) Global Services, comprised of the Global Services business group.
- The Global Services business group is comprised of the services that resided within the previous Mobile

 Networks business group, including company-wide managed services. Global Services does not include the services
 of Fixed Networks, IP/Optical Networks and Applications & Analytics, which continue to reside within the respective
 business groups. The Global Services business group provides network planning and optimization, network
 implementation, system integration, company-wide managed services and care (see note

- 3, Segment information, in the Financial statement information sections in this report for additional details).
- 3) IP Networks and Applications, comprised of the IP/Optical Networks and Applications & Analytics business groups.
- The IP/Optical Networks business group provides IP routing, optics and IP/Optical Networks services (see note 3, Segment information, in the Financial statement information sections in this report for additional details).
- The Applications & Analytics business group provides intelligent software and services that help service providers build strong digital businesses including business support systems, operational support systems, service delivery platforms, network management, emerging businesses, as well as the software and services offerings from the Comptel acquisition (see note 3, Segment information, in the Financial statement information sections in this report for additional details).

Non-IFRS results provide meaningful supplemental information regarding underlying business performance

In addition to information on our reported IFRS results, we provide certain information on a non-IFRS, or underlying business performance, basis. We believe that our non-IFRS results provide meaningful supplemental information to both management and investors regarding Nokia s underlying business performance by excluding the below-described 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.

Non-IFRS results exclude costs related to the acquisition of Alcatel-Lucent and related integration, goodwill impairment charges, intangible asset amortization and purchase price related items, restructuring and associated charges, and certain other items that may not be indicative of Nokia s underlying business performance. The non-IFRS exclusions are not allocated to the segments, and hence they are reported only at the Nokia consolidated level.

Financial discussion

The financial discussion included in this financial report of Nokia s results comprises the results of Nokia s businesses and Nokia Technologies, as well as Group Common and Other. For more information on our reportable segments, please refer to note 3, Segment information , in the Financial statement information section in this report.

CEO STATEMENT

I am proud of the entire Nokia team for delivering strong profitability in the second quarter and group-level net sales that were close to flat year-on-year. Underpinning this result was the excellent

performance of Nokia Technologies, as well as robust gross margins and continued topline improvement in Networks. With the good work in the quarter, I remain confident that we will deliver on our full-year guidance of an operating margin of 8-10% in our Networks business.

Additionally, we made further progress in executing on the four pillars of our strategy in the second quarter. In terms of the first pillar, leading in high-performance, end-to-end networks with communication service providers, we saw year-on-year growth in orders in the first half of the year; continued to win the majority of deals we pursued; and landed more large contracts in the first half than we did during the same time period in 2016. Cross-selling also continues to generate new opportunities for us, with several important wins in the quarter, such as our contract to build three Dense Wavelength Division Multiplexing networks for M1 in Singapore.

For the second pillar, expanding sales to new vertical markets, our work is gaining further traction in terms of orders, customers and technology. We saw double-digit growth in orders in most of the verticals we are targeting, and added new customers at a significantly faster rate than one year ago. And, we launched new IP routing products that will put us in a strong competitive position with both our traditional customer base and our new target markets when the products are available at scale next year. The early response from customers to these new products has been excellent, with companies like BT Group and Xiaomi already expressing their intent to purchase.

We are starting to see the results of the extensive work we have done in the third pillar of our strategy, building a strong, stand-alone software business at scale. Q2 sales in our Applications & Analytics business group were up comfortably year-on-year and order momentum was strong.

In the fourth pillar of our strategy, creating new business and licensing opportunities in the consumer ecosystem, the licensing and business partnership agreement that we reached with Apple in the quarter was a clear highlight. You could see the benefit of that agreement in Nokia Technologies results, and we look forward to continuing to expand our overall business with Apple in the coming months. We also closed a licensing deal with Xiaomi, a milestone win with a Chinese smartphone vendor, setting the stage for us to engage further with other vendors in the country.

Finally, we expect our primary addressable market with communication service providers to be slightly more challenging in 2017 than earlier forecast. We now expect a decline in the market in the range of 3-5%, versus our earlier view of a low-single digit decline. In addition, we continue to expect our Networks sales to perform in line with the market.

Despite these headwinds, I believe Nokia s disciplined operating model puts us in a strong position to succeed in conditions of all kinds and continue to deliver solid shareholder value. In addition, we are seeing catalysts in the United States, China and Japan that point to an acceleration of 5G and the commencement of meaningful roll-outs in 2019.

In summary, a good second quarter, some challenges ahead this year, but also reasons to be optimistic about Nokia s ability to deliver.

Rajeev Suri President and CEO

NOKIA IN Q2 2017 NON-IFRS

Non-IFRS net sales and non-IFRS operating profit

Nokia non-IFRS net sales decreased 1% year-on-year and increased 4% sequentially. On a constant currency basis, Nokia non-IFRS net sales would have decreased 2% year-on-year and increased 7% sequentially.

Year-on-year changes

EUR million, non-IFRS	Net sales	% change	Gross profit	(R& D)	(SG&A)	Other income and (expenses)	Operating profit	Change in operating margin %
Networks business	(251)	(5)%	(21)	32	12	71	93	220bps
Nokia Technologies	175	90%	165	(3)	(11)	(10)	141	1 640bps
Group Common and								
Other	37	14%	2	4	10	(7)	8	570bps
Eliminations	(2)		0	0	0	0	0	
Nokia	(41)	(1)%	145	33	10	55	242	430bps

On a year-on-year basis, Nokia s non-IFRS gross profit, non-IFRS other income and expense and non-IFRS operating profit benefitted from the absence of an adverse effect related to a customer in Latin America undergoing judicial recovery in Q2 2016.

Sequential changes

EUR million, non-IFRS	Net Sales	% change	Gross profit	(R&D)	(SG&A)	Other income and (expenses)	Operating profit	Change in operating margin %
Networks business	69	1%	10	28	15	30	82	160bps
Nokia Technologies	122	49%	118	1	8	(12)	114	1 530bps
Group Common and								
Other	53	21%	27	10	3	(3)	37	1 880bps
Eliminations	(3)		0	0	0	0	0	
Nokia	241	4%	154	39	26	15	233	390bps

Non-IFRS profit attributable to the equity holders of the parent

Year-on-year changes

						Profit
						attributable to
		Financial			Non-	the equity
EUR million,	Operating	income and			controlling	holders of the
non-IFRS	profit	expenses	Taxes	Profit	interests	parent
Nokia	242	(34)	61	270	(15)	255

Nokia s regional profit mix in the second quarter 2017 resulted in an unusually low non-IFRS tax rate of 14%. The net negative fluctuation in financial income and expenses was primarily related to foreign exchange fluctuations and lower interest income.

Sequential changes

						Profit
						attributable to
		Financial			Non-	the equity
EUR million,	Operating	income and			controlling	holders of the
non-IFRS	profit	expenses	Taxes	Profit	interests	parent
Nokia	233	18	(26)	238	15	253

On a sequential basis, Nokia s regional profit mix remained similar to the first quarter 2017 and resulted in an unusually low non-IFRS tax rate of 14%. The net positive fluctuation in financial income and expenses was primarily related to gains from venture fund distributions.

NOKIA IN Q2 2017 REPORTED
FINANCIAL DISCUSSION
Net sales
Nokia net sales increased 1% year-on-year and 4% sequentially. On a constant currency basis, Nokia net sales would have been approximately flat year-on-year and would have increased 7% sequentially.
Year-on-year discussion
The year-on-year increase in net sales in the second quarter 2017 was primarily due to Nokia Technologies, lower non-IFRS exclusions related to deferred revenue and higher net sales in Group Common and Other, partially offset by Nokia s Networks business.
Sequential discussion
The sequential increase in Nokia net sales in the second quarter 2017 was primarily due to Nokia Technologies, Nokia s Networks business and Group Common and Other.
Operating profit
Year-on-year discussion
In the second quarter 2017, the decrease in operating loss was primarily due to a net positive fluctuation in other income and expenses, higher gross profit and, to a lesser extent, lower research and development (R&D) and selling, general and administrative (SG&A) expenses. On a year-on-year basis, second quarter 2017 results benefitted from the absence of an adverse effect related to a customer in Latin America undergoing judicial recovery in the second quarter 2016.
The increase in gross profit was primarily due to Nokia Technologies and lower non-IFRS exclusions related to deferred revenue. This was partially offset by lower gross profit in Nokia s Networks business.

The decrease in R&D expenses was primarily due to Nokia s Networks business, partially offset by higher non-IFRS exclusions related to intangible asset amortization and purchase price related items and product portfolio strategy costs.

The decrease in SG&A expenses was primarily due to Group Common and Other and Nokia s Networks business, partially offset by higher SG&A expenses in Nokia Technologies.

Nokia s other income and expenses was an expense of EUR 162 million in the second quarter 2017, compared to an expense of EUR 636 million in the year-ago period. The net positive fluctuation was

primarily related to lower non-IFRS exclusions attributable to lower restructuring and associated charges and, to a lesser extent, Nokia s Networks business. On a year-on-year basis, second quarter 2017 results benefitted from the absence of an adverse effect related to a customer in Latin America undergoing judicial recovery in the second quarter 2016.

Sequential discussion

In the second quarter 2017, the decrease in operating loss was primarily due to higher gross profit and lower R&D and SG&A expenses, partially offset by a net negative fluctuation in other income and expenses.

The increase in gross profit was primarily due to Nokia Technologies and, to a lesser extent, Group Common and Other and Nokia s Networks business. This was partially offset by higher non-IFRS exclusions related to product portfolio strategy costs.

The decrease in R&D expenses was primarily due to Nokia s Networks business and, to a lesser extent, lower non-IFRS exclusions related to lower product portfolio strategy costs and lower R&D expenses in Group Common and Other.

The decrease in SG&A expenses was primarily due to Nokia s Networks business and Nokia Technologies, partially offset by higher non-IFRS exclusions related to transaction and integration costs.

Nokia s other income and expenses was an expense of EUR 162 million in the second quarter 2017, compared to an expense of EUR 69 million in the first quarter 2017. The net negative fluctuation was primarily due to higher restructuring and associated charges, higher product portfolio strategy costs and Nokia Technologies. This was partially offset by Nokia s Networks business.

Profit/(Loss) attributable to the equity holders of the parent

Year-on-year discussion

In the second quarter 2017, the decrease in loss attributable to the equity holders of the parent was primarily due to lower operating loss, partially offset by higher taxes and a net negative fluctuation in financial income and expenses.

The net negative fluctuation in financial income and expenses was primarily due to non-IFRS exclusions related to Nokia s tender offer to purchase 6.50% notes due January 15, 2028, the 6.45% notes due March 15, 2029 and the 5.375% notes due May 15, 2019. The purpose of these transactions was to optimize Nokia s debt maturity profile, to lower average interest expense run rate and to eliminate subsidiary level external debt. In addition, the second quarter 2017 was negatively affected by foreign exchange fluctuations and lower interest income.

The change in taxes from a benefit in the second quarter 2016 to an expense in the second quarter 2017 was primarily due to a non-recurring change to uncertain tax positions and a non-recurring tax expense related to deferred tax valuation allowance. In the second quarter 2017, Nokia recorded a EUR 206 million tax expense related to an uncertain tax position in Germany. The matter relates to the disposal of the former Alcatel Lucent railway signaling business in 2006 to Thales (see note 12, Income Taxes of our Annual Report for 2016). Based on new facts and circumstances, management has reassessed the probability of having to pay the taxes and concluded that recognition of an uncertain tax position was warranted at the end of the second quarter 2017.

Sequential discussion

In the second quarter 2017, the decrease in loss attributable to the equity holders of the parent was primarily due to lower operating loss and a net positive fluctuation in non-controlling interests, partially offset by a net negative fluctuation in financial income and expenses and higher taxes.

The net negative fluctuation in financial income and expenses was primarily due to higher non-IFRS exclusions related to Nokia s tender offer to purchase the 6.50% notes due January 15, 2028, the 6.45% notes due March 15, 2029 and the 5.375% notes due May 15, 2019. The purpose of these transactions was to optimize Nokia s debt maturity profile, to lower average interest expense run rate and to eliminate subsidiary level external debt. This was partially offset by gains related to venture fund investments.

The higher taxes were primarily due to a non-recurring change to uncertain tax positions and a non-recurring tax expense related to deferred tax valuation allowance, partially offset by the absence of a non-recurring tax expense related to the integration of the former Alcatel-Lucent and Nokia operating models. In the second quarter 2017, Nokia recorded a EUR 206 million tax expense related to an uncertain tax position in Germany. The matter relates to the disposal of the former Alcatel Lucent railway signaling business in 2006 to Thales (see note 12, Income Taxes of our Annual Report for 2016). Based on new facts and circumstances, management has reassessed the probability of having to pay the taxes and concluded that recognition of an uncertain tax position was warranted at the end of the second quarter 2017.

The net positive fluctuation in non-controlling interests was primarily related to the absence of a non-recurring income in a partly-owned subsidiary in the first quarter 2017.

Description of non-IFRS exclusions in Q2 2017

Non-IFRS exclusions consist of costs related to the acquisition of Alcatel-Lucent and related integration, goodwill impairment charges, intangible asset amortization and purchase price related items, restructuring and associated charges, and certain other items that may not be indicative of Nokia s underlying business performance. For additional details, please refer to note 2, Non-IFRS to reported reconciliation, in the Financial statement information section in this report.

			YoY		QoQ
EUR million	Q2 17	Q2 16	change	Q1 17	change
Net sales	(11)	(93)	(88)%	(11)	0%
Gross profit	(114)	(174)	(34)%	(71)	61%
R&D	(173)	(162)	7%	(184)	(6)%
SG&A	(151)	(154)	(2)%	(138)	9%
Other income and expenses	(182)	(602)	(70)%	(74)	146%
Operating (loss)/profit	(620)	$(1\ 092)$	(43)%	(468)	32%
Financial income and expenses	(156)	(3)	5 100%	(64)	144%
Taxes	(98)	200		(106)	(8)%
(Loss)/Profit	(873)	(896)	(3)%	(638)	37%
(Loss)/Profit attributable to the					
shareholders of the parent	(873)	(862)	1%	(669)	30%
Non-controlling interests	(1)	(34)	(97)%	31	

Non-IFRS exclusions in net sales

In the second quarter 2017, non-IFRS exclusions in net sales amounted to EUR 11 million, and related to a purchase price allocation adjustment related to a reduced valuation of deferred revenue that existed on Alcatel-Lucent s balance sheet at the time of the acquisition.

Non-IFRS exclusions in operating profit

In the second quarter 2017, non-IFRS exclusions in operating profit amounted to EUR 620 million, and were primarily due to non-IFRS exclusions that negatively affected gross profit, R&D, SG&A and other income and expenses as follows:

In the second quarter 2017, non-IFRS exclusions in gross profit amounted to EUR 114 million, and were primarily due to product portfolio strategy costs related to the acquisition of Alcatel-Lucent, and the deferred revenue.

In the second quarter 2017, non-IFRS exclusions in R&D expenses amounted to EUR 173 million, and were primarily due to the amortization of intangible assets resulting from the acquisition of Alcatel-Lucent and, to a lesser extent, product portfolio strategy costs related to the acquisition of Alcatel-Lucent.

In the second quarter 2017, non-IFRS exclusions in SG&A expenses amounted to EUR 151 million, and were primarily due to the amortization of intangible assets resulting from the acquisition of Alcatel-Lucent and integration and transaction related costs.

In the second quarter 2017, non-IFRS exclusions in other income and expenses amounted to EUR 182 million, and were primarily due to restructuring and associated charges for Nokia s cost reduction and efficiency improvement initiatives and, to a lesser extent, product portfolio strategy costs.

Non-IFRS exclusions in profit/(loss) attributable to the equity holders of the parent

In the second quarter 2017, non-IFRS exclusions in profit/(loss) attributable to the equity holders of the parent amounted to EUR 873 million, and were primarily due to the non-IFRS exclusions affecting operating profit, in addition to non-IFRS exclusions that negatively affected financial income and expenses and taxes as follows:

In the second quarter 2017, non-IFRS exclusions in financial income and expenses amounted to EUR 156 million, and related to Nokia s tender offer to purchase the 6.50% notes due January 15, 2028, the 6.45% notes due March 15, 2029 and the 5.375% notes due May 15, 2019.

In the second quarter 2017, non-IFRS exclusions in taxes amounted to EUR 98 million, and were primarily due to a non-recurring change to uncertain tax positions and a non-recurring tax expense related to deferred tax valuation allowance. This was partially offset by a tax benefit of EUR 184 million related to non-IFRS exclusions in operating profit and financial income and expenses.

Cost savings program

The following table summarizes the financial information related to our cost savings program, as of the end of the second quarter 2017. Balances related to previous Nokia and Alcatel-Lucent restructuring and cost savings programs have been included as part of this overall cost savings program as of the second quarter 2016.

In EUR million, approximately	Q2 17
Opening balance of restructuring and associated liabilities	720
+ Charges in the quarter	170
- Cash outflows in the quarter	140
= Ending balance of restructuring and associated liabilities	750
of which restructuring provisions	670
of which other associated liabilities	80
Total expected restructuring and associated charges	1 700
- Cumulative recorded	1 000
= Charges remaining to be recorded	700
Total expected restructuring and associated cash outflows	2 150
- Cumulative recorded	700
= Cash outflows remaining to be recorded	1 450

The following table summarizes our full year 2016 results and future expectations related to our cost savings program and network equipment swaps.

	Expected amounts for								
In EUR million,						FY 201	9 and		
approximately		FY 2	017	FY 2	018	beyo	nd	Tot	al
rounded to the nearest	Actual	as of the	end of						
EUR 50 million	2016	Q1 17	Q2 17						
Total cost savings	550	250	250	400	400	0	0	1 200	1 200
 operating expenses 	350	100	100	350	350	0	0	800	800
- cost of sales	200	150	150	50	50	0	0	400	400
Restructuring and									
associated charges	750	750	750	200	200	0	0	1 700	1 700
Restructuring and									
associated cash outflows	400	750	750	550	550	450	450	2 150	2 150
Charges and cash outflows related to									
network equipment swaps	150	450	450	300	300	0	0	900	900

In full year 2016, the actual total cost savings benefitted from lower incentive accruals, related to the financial performance in full year 2016. Lower incentive accruals drove more than half of the higher than previously expected decrease in total costs in 2016, and this is expected to reverse in 2017, assuming full year 2017 financial performance in-line with our expectations. On a cumulative basis, Nokia continues to be on track to achieve the targeted EUR 1.2 billion of total cost savings in full year 2018.

OUTLOOK

	Metric	Guidance	Commentary
Nokia	Annual cost savings for Nokia, excluding	billion of total annual	Compared to the combined non-IFRS operating costs of Nokia and Alcatel-Lucent for full year 2015, excluding Nokia Technologies. Nokia
	Nokia	cost savings to be	expects approximately EUR 800 million of the cost savings to come from operating expenses and approximately EUR 400 million from cost of sales.

Network equipment swaps Approximately EUR swaps Approximately EU				
Non-IFRS financial income and approximately EUR 200 million in full year 2017		Technologies	· · · · · · · · · · · · · · · · · · ·	approximately EUR 1.7 billion. Restructuring and associated cash
income and expenses million in full year 2017 benefit plans, as well as the impact of foreign exchange rate fluctuations on certain balance sheet items. Non-IFRS tax rate Non-IFRS tax rate Non-IFRS tax rate Between 25% and 30% for full year 2017 Nokia expects cash outflows related to non-IFRS financial income and expenses to be approximately EUR 200 million in full year 2017. Nokia s non-IFRS tax rate in full year 2017 is expected to be influenced by factors including regional profit mix (new commentary). (This is an update to earlier guidance and commentary for non-IFRS tax rate for full year 2017 to be around the midpoint of a 30% to 35% range.) Nokia expects cash outflows related to taxes to be approximately EUR 800 million for full year 2017. Nokia expects cash outflows related to taxes to be approximately EUR 800 million for full year 2017. (This is an update to the earlier commentary for cash outflows related to taxes to be approximately EUR 800 million for full year 2017. (This is an update to the earlier commentary for cash outflows related to taxes to be approximately EUR 800 million for full year 2017. (This is an update to the earlier commentary for cash outflows related to taxes to be approximately EUR 800 million for full year 2017. (This is an update to the earlier commentary for cash outflows related to taxes to be approximately EUR 800 million for full year 2017. (This is an update to the earlier commentary for cash outflows related to taxes to be approximately EUR 800 million for full year 2017. (This is an update to the earlier commentary for cash outflows related to taxes to be approximately EUR 800 million for full year 2017. (This is an update to the earlier commentary for cash outflows related to taxes to be approximately EUR 800 million for full year 2017 are expected to be influenced by factors				non-IFRS exclusions, and therefore do not affect Nokia s non-IFRS
expenses to be approximately EUR 200 million in full year 2017. Nohia s Net sales Non-IFRS tax rate Between 25% and 30% for full year 2017 Between 25% and 30% for full year 2017 Nokia s Net sales Nokia expects cash outflows related to taxes to be approximately EUR 800 million for full year 2017. Capital expenditures		income and	approximately EUR 250	liabilities and defined benefit pension and other post-employment benefit plans, as well as the impact of foreign exchange rate fluctuations
(This is an update to the earlier commentary for cash outflows related to taxes to be approximately EUR 600 million for full year 2017. The update is due to a non-recurring tax item.(2)) Capital expenditures 500 million in full year 2017 Nokia s Net sales Decline in line with the primary addressable market in full year 2017 We currently expect market conditions for 2017 to be slightly more challenging than earlier anticipated (new commentary). Nokia s outlook for net sales and operating margin for Nokia s Network business in full year 2017 are expected to be influenced by factors		Non-IFRS tax rate	for full year 2017	expenses to be approximately EUR 200 million in full year 2017. Nokia s non-IFRS tax rate in full year 2017 is expected to be influenced by factors including regional profit mix (new commentary). (This is an update to earlier guidance and commentary for non-IFRS tax rate for
taxes to be approximately EUR 600 million for full year 2017. The update is due to a non-recurring tax item.(2)) Capital expenditures 500 million in full year 2017 Nokia s Net sales Decline in line with the Networks business Decline in line with the primary addressable market in full year 2017 Nokia s outlook for net sales and operating margin for Nokia s Network business in full year 2017 are expected to be influenced by factors				
expenditures 500 million in full year 2017 Nokia s Net sales Decline in line with the primary addressable business Metworks Metworks Decline in line with the primary addressable challenging than earlier anticipated (new commentary). Nokia s outlook for net sales and operating margin for Nokia s Network business in full year 2017 are expected to be influenced by factors				taxes to be approximately EUR 600 million for full year 2017. The
Nokia s Net sales Decline in line with the Networks primary addressable business market in full year 2017 Mokia s outlook for net sales and operating margin for Nokia s Network business in full year 2017 are expected to be influenced by factors		_	500 million in full year	Primarily attributable to Nokia s Networks business.
	Networks	Net sales	Decline in line with the primary addressable	challenging than earlier anticipated (<u>new commentary</u>). Nokia s outlook for net sales and operating margin for Nokia s Network business in full year 2017 are expected to be influenced by factors



			The level of R&D investment needed to maintain product competitiveness and accelerate 5G (new commentary); The outlook for Nokia s Networks business is provided assuming constant foreign exchange rates.
Nokia Technologies	Net sales	Not provided	Due to risks and uncertainties in determining the timing and value of significant licensing agreements, Nokia believes it is not appropriate to provide an annual outlook for full year 2017.
			For patent and brand licensing, Nokia is now disclosing net sales on a quarterly basis, rather than providing an annualized net sales run rate.
			Nokia expects total net sales from digital health and digital media to grow year-on-year in full year 2017, primarily influenced by increased consumer adoption of our digital health and digital media products.

⁽¹⁾For further details related to the cost savings and network equipment swaps guidance, please refer to the Cost savings program section above.

RISKS AND FORWARD-LOOKING STATEMENTS

It should be noted that Nokia and its businesses are exposed to various risks and uncertainties and certain statements herein that are not historical facts are forward-looking statements, including, without limitation, those regarding: A) our ability to integrate Alcatel-Lucent into our operations and achieve the targeted business plans and benefits, including targeted synergies in relation to the acquisition of Alcatel-Lucent; B) expectations, plans or benefits related to our strategies and growth management; C) expectations, plans or benefits related to future performance of our businesses; D) expectations, plans or benefits related to changes in organizational and operational structure; E) expectations regarding market developments, general economic conditions and structural changes; F) expectations and targets regarding financial performance, results, operating expenses, taxes, currency exchange rates, hedging, cost savings and competitiveness, as well as results of operations including targeted synergies and those related to market share, prices, net sales, income and margins; G) expectations, plans or benefits related to any future collaboration or to the business collaboration agreement and the patent license agreement between Nokia and Apple announced on May 23, 2017, including income to be received under any collaboration or partnership or agreement; H) timing of the deliveries of our products and services; I) expectations and targets regarding collaboration and partnering arrangements, joint ventures or the creation of joint ventures, and the related administrative, legal, regulatory and other conditions, as well as our expected customer reach; J) outcome of pending and threatened litigation, arbitration, disputes, regulatory proceedings or investigations by authorities; K) expectations regarding restructurings, investments, capital structure optimization efforts, uses of proceeds from transactions, acquisitions and divestments and

⁽²⁾ For further details related to the non-recurring tax item, please refer to the Nokia in O2 2017 Reported section above.

our ability to achieve the financial and operational targets set in connection with any such restructurings, investments, capital structure optimization efforts, divestments and acquisitions; and L) statements preceded by or including believe, expect, anticipate, project, plans, intends, focus, continue, should, will or similar expressions. These statements designed, aim, is to, 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 these differences include, but are not limited to: 1) our ability to execute our strategy, sustain or improve the operational and financial performance of our business and correctly identify and successfully pursue business opportunities or growth; 2) our ability to achieve the anticipated benefits, synergies, cost savings and efficiencies of the acquisition of Alcatel-Lucent, and our ability to implement our organizational and operational structure efficiently; 3) general economic and market conditions and other developments in the economies where we operate; 4) competition and our ability to effectively and profitably compete and invest in new competitive high-quality products, services, upgrades and technologies and bring them to market in a timely manner; 5) our dependence on the development of the industries in which we operate, including the cyclicality and variability of the information technology and telecommunications industries; 6) our global business and exposure to regulatory, political or other developments in various countries or regions, including emerging markets and the associated risks in relation to tax matters and exchange controls, among others; 7) our ability to manage and improve our financial and operating performance, cost savings, competitiveness and synergies generally or after the acquisition of Alcatel-Lucent; 8) our dependence on a limited number of customers and large multi-year agreements; 9) exchange rate fluctuations, as well as hedging activities; 10) Nokia Technologies ability to protect its IPR and to maintain and establish new sources of patent licensing income and IPR-related revenues, particularly in the smartphone market; 11) our ability to successfully realize the expectations, plans or benefits related to any future collaboration or to the business collaboration agreement and the patent license agreement between Nokia and Apple announced on May 23, 2017, including income to be received under any collaboration or partnership or agreement; 12) our dependence on IPR technologies, including those that we have developed and those that are licensed to us, and the risk of associated IPR-related legal claims, licensing costs and restrictions on use: 13) our exposure to direct and indirect regulation, including economic or trade policies, and the reliability of our governance, internal controls and compliance processes to prevent regulatory penalties in our business or in our joint ventures; 14) our ability to identify and remediate material weaknesses in our internal control over financial reporting; 15) our reliance on third-party solutions for data storage and service distribution, which expose us to risks relating to security, regulation and cybersecurity breaches; 16) inefficiencies, breaches, malfunctions or disruptions of information technology systems; 17) Nokia Technologies ability to generate net sales and profitability through

licensing of the Nokia brand, particularly in digital media and digital health, and the development and sales of products and services, as well as other business ventures which may not materialize as planned; 18) our exposure to various legislative frameworks and jurisdictions that regulate fraud and enforce economic trade sanctions and policies, and the possibility of proceedings or investigations that result in fines, penalties or sanctions; 19) adverse developments with respect to customer financing or extended payment terms we provide to customers; 20) the potential complex tax issues, tax disputes and tax obligations we may face in various jurisdictions, including the risk of obligations to pay additional taxes; 21) our actual or anticipated performance, among other factors, which could reduce our ability to utilize deferred tax assets; 22) our ability to retain, motivate, develop and recruit appropriately skilled employees; 23) disruptions to our manufacturing, service creation, delivery, logistics and supply chain processes, and the risks related to our geographically-concentrated production sites; 24) the impact of litigation, arbitration, agreement-related disputes or product liability allegations associated with our business; 25) our ability to optimize our capital structure as planned and re-establish our investment grade credit rating or otherwise improve our credit ratings; 26) our ability to achieve targeted benefits from or successfully achieve the required administrative, legal, regulatory and other conditions and implement planned transactions, as well as the liabilities related thereto; 27) our involvement in joint ventures and jointly-managed companies; 28) the carrying amount of our goodwill may not be recoverable; 29) uncertainty related to the amount of dividends and equity return we are able to distribute to shareholders for each financial period; 30) pension costs, employee fund-related costs, and healthcare costs; and 31) risks related to undersea infrastructure, as well as the risk factors specified on pages 67 to 85 of our 2016 annual report on Form 20-F under Operating and financial review and prospects-Risk factors and in our other filings with the U.S. Securities and Exchange Commission. 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.

The financial report was authorized for issue by management on July 26, 2017.

MEDIA AND INVESTOR CONTACTS:

Communications, tel. +358 10 448 4900 email: press.services@nokia.com Investor Relations, tel. +358 4080 3 4080 email: investor.relations@nokia.com

• Nokia plans to publish its third quarter 2017 results on October 26, 2017.

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Financial Report for Q2 and Half Year 2017
Strong results in Nokia Technologies and solid performance in Nokia s Networks business
Financial highlights
 Non-IFRS net sales in Q2 2017 of EUR 5.6bn (EUR 5.7bn in Q2 2016). Reported net sales in Q2 2017 of EUR 5.6bn (EUR 5.6bn in Q2 2016).
• Non-IFRS diluted EPS in Q2 2017 of EUR 0.08 (EUR 0.03 in Q2 2016). Reported diluted EPS in Q2 2017 of negative EUR 0.07 (negative EUR 0.12 in Q2 2016).
Nokia s Networks business
• 5% year-on-year net sales decrease in Q2 2017, primarily due to Ultra Broadband Networks. Within Ultra Broadband Networks, Mobile Networks declined in Q2 following a strong Q1, while Fixed Networks declined at a lower rate in Q2 compared to Q1. Within IP Networks and Applications, IP/Optical Networks declined at a lower rate in Q2 compared to Q1, and Applications & Analytics grew. Global Services net sales were approximately flat.
• Strong Q2 2017 gross margin of 39.1% and operating margin of 8.2%, with solid performance across Ultra Broadband Networks, Global Services and IP Networks and Applications.
Nokia Technologies
• 90% year-on-year net sales increase in Q2 2017, primarily due to a new license agreement in Q2 2017 and a license agreement that was expanded in Q3 2016. Approximately 40% of the EUR 175 million year-on-year increase was non-recurring in nature and related to catch-up net sales for Q1 2017.

158% year-on-year operating profit increase in Q2 2017, primarily related to higher net sales, partially offset

by increased licensing-related litigation costs and the ramp-up of our digital health business unit.

Second quarter and January-June 2017 non-IFRS results. Refer to note 1, $\,$ Basis of Preparation $\,$, in the Financial statement information section for further details (1)

	00.45	00.46	YoY	04.4	QoQ	Q1-	Q1-	YoY
EUR million (except for EPS in EUR)	Q2 17	Q2 16	change	Q1 17	change	Q2 17	Q2 16	change
Net sales constant currency			(2)(4		701			(4)64
(non-IFRS)	5 (20	5.670	(2)%	5.200	7%	11.015	11.005	(4)%
Net sales (non-IFRS)	5 629	5 670	(1)%	5 388	4%	11 017	11 285	(2)%
Nokia s Networks business	4 971	5 222	(5)%	4 902	1%	9 873	10 415	(5)%
Ultra Broadband Networks	2 165	2 356	(8)%	2 236	(3)%	4 401	4 653	(5)%
Global Services	1 448	1 444	0%	1 361	6%	2 809	2 888	(3)%
IP Networks and Applications	1 358	1 421	(4)%	1 304	4%	2 663	2 874	(7)%
Nokia Technologies	369	194	90%	247	49%	616	391	58%
Group Common and Other	307	270	14%	254	21%	562	506	11%
Gross profit (non-IFRS)	2 350	2 205	7%	2 196	7%	4 546	4 433	3%
Gross margin % (non-IFRS)	41.7%	38.9%	280bps	40.8%		41.3%	39.3%	200bps
Operating profit (non-IFRS)	574	332	73%	341	68%	915	677	35%
Nokia s Networks business	406	313	30%	324	25%	730	650	12%
Ultra Broadband Networks	191	184	4%	245	(22)%	437	311	41%
Global Services	123	34	262%	55	124%	179	137	31%
IP Networks and Applications	91	95	(4)%	23	296%	114	202	(44)%
Nokia Technologies	230	89	158%	116	98%	346	195	77%
Group Common and Other	(62)	(70)		(99)		(161)	(169)	
Operating margin % (non-IFRS)	10.2%	5.9%	430bps	6.3%	390bps	8.3%	6.0%	230bps
Financial income and expenses								
(non-IFRS)	(63)	(29)	117%	(81)	(22)%	(144)	(96)	50%
Taxes (non-IFRS)	(74)	(135)	(45)%	(48)	54%	(122)	(275)	(56)%
Profit (non-IFRS)	441	171	158%	203	117%	644	310	108%
Profit attributable to the equity								
holders of the parent (non-IFRS)	449	194	131%	196	129%	646	346	87%
Non-controlling interests								
(non-IFRS)	(9)	(24)	(63)%	6		(2)	(37)	(95)%
EPS, EUR diluted (non-IFRS)	0.08	0.03	167%	0.03	167%	0.11	0.06	83%

Second quarter and January-June 2017 reported results. Refer to note 1, Basis of Preparation , in the Financial statement information section for further details (1)

EUR million (except for EPS in EUR)	Q2 17	Q2 16	YoY change	Q1 17	QoQ	Q1- Q2 17	Q1- Q2 16	YoY
Net Sales - constant currency	Q2 17	Q2 10	0%	Q1 17	change 7%	Q2 17	Q2 10	change (2)%
Net sales	5 619	5 576	1%	5 378	4%	10 996	11 088	(1)%
Nokia s Networks business	4 971	5 222	(5)%	4 902	1%	9 873	10 415	(5)%
Ultra Broadband Networks	2 165	2 356	(8)%	2 236	(3)%	4 401	4 653	(5)%
Global Services	1 448	1 444	0%	1 361	6%	2 809	2 888	(3)%
IP Networks and Applications	1 358	1 421	(4)%	1 304	4%	2 663	2 874	(7)%
Nokia Technologies	369	194	90%	247	49%	616	391	58%
Group Common and Other	307	270	14%	254	21%	562	506	11%
Non-IFRS exclusions	(11)	(93)	(88)%	(11)	0%	(21)	(197)	(89)%
Gross profit	2 236	2 031	10%	2 125	5%	4 361	3 608	21%
Gross margin %	39.8%	36.4%	340bps	39.5%	30bps	39.7%	32.5%	720bps
Operating (loss)/profit	(45)	(760)	(94)%	(127)	(65)%	(173)	(1472)	(88)%
Nokia s Networks business	406	313	30%	324	25%	730	650	12%
Ultra Broadband Networks	191	184	4%	245	(22)%	437	311	41%
Global Services	123	34	262%	55	124%	179	137	31%
IP Networks and Applications	91	95	(4)%	23	296%	114	202	(44)%
Nokia Technologies	230	89	158%	116	98%	346	195	77%
Group Common and Other	(62)	(70)		(99)		(161)	(169)	
Non-IFRS exclusions	(620)	$(1\ 092)$	(43)%	(468)	32%	$(1\ 088)$	(2149)	(49)%
Operating margin %	(0.8)%	(13.6)%	1 280bps	(2.4)%	160bps	(1.6)%	(13.3)%	1 170bps
Financial income and expenses	(218)	(32)	581%	(146)	49%	(364)	(135)	170%
Taxes (2)	(172)	65		(154)	12%	(325)	166	
(Loss)/Profit (2)	(433)	(726)	(40)%	(435)	0%	(868)	(1437)	(40)%
(Loss)/Profit attributable to the								
equity holders of the parent (2)	(423)	(667)	(37)%	(473)	(11)%	(896)	(1 291)	(31)%
Non-controlling interests (2)	(9)	(58)	(84)%	37	(124)%	28	(147)	
EPS, EUR diluted (2)	(0.07)	(0.12)	(42)%	(0.08)	(13)%	(0.16)	(0.23)	(30)%
Net cash and other liquid assets	3 964	7 077	(44)%	4 409	(10)%	3 964	7 077	(44)%

⁽¹⁾ Results are as reported unless otherwise specified. The financial information in this report is unaudited. Non-IFRS results 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. For details, please refer to the non-IFRS exclusions section included in discussions of both the quarterly and year to date performance and note 2, Non-IFRS to reported reconciliation , in the notes in the Financial statement information in this report. Change in net sales at constant currency excludes the impact of changes in exchange rates in comparison to euro, our reporting currency. For more information on currency exposures, please refer to note 1, Basis of Preparation , in the Financial statement information section in this report.

⁽²⁾ Reported Q1-Q2 16 result is not comparable to the previously published Reported Q1-Q2 16 result due to an update to the Alcatel-Lucent purchase price allocation in Q3 16 which resulted in an adjustment to the reported Q1 16 income tax benefit.

Changes in reporting structure, effective from April 1, 2017

On March 17, 2017, Nokia announced changes in its organizational structure designed to accelerate the execution of its strategy, including strengthening Nokia s ability to deliver strong financial performance, drive growth in services, meet changing customer demands in mobile networks, achieve cost savings and ongoing transformation goals, and enable strategic innovation across Nokia s Networks business. These organizational changes included the separation of Nokia s former Mobile Networks business group into two distinct organizations: one focused on products and solutions, called Mobile Networks, and the other on services, called Global Services.

As a result of these changes, Nokia has changed its financial reporting structure for its Networks business. As of the second quarter 2017, Nokia s Networks business is comprised of three reportable segments and five business groups.

- 1) Ultra Broadband Networks, comprised of the Mobile Networks and Fixed Networks business groups.
- The Mobile Networks business group is comprised of the products and solutions that resided within the previous Mobile Networks business group. As a result of the organization change, services no longer reside under Mobile Networks. The Mobile Networks business group provides radio networks, converged core networks and advanced mobile networks solutions (see note 3, Segment information, in the Financial statement information sections in this report for additional details).
- The Fixed Networks business group provides broadband access, digital home, access management solutions and Fixed Networks services (see note 3, Segment information, in the Financial statement information sections in this report for additional details).
- 2) Global Services, comprised of the Global Services business group.
- The Global Services business group is comprised of the services that resided within the previous Mobile Networks business group, including company-wide managed services. Global Services does not include the services of Fixed Networks, IP/Optical Networks and Applications & Analytics, which continue to reside within the respective business groups. The Global Services business group provides network planning and optimization, network implementation, system integration, company-wide managed services and care (see note 3, Segment information, in the Financial statement information sections in this report for additional details).
- 3) IP Networks and Applications, comprised of the IP/Optical Networks and Applications & Analytics business groups.

- The IP/Optical Networks business group provides IP routing, optics and IP/Optical Networks services (see note 3, Segment information, in the Financial statement information sections in this report for additional details).
- The Applications & Analytics business group provides intelligent software and services that help service providers build strong digital businesses including business support systems, operational support systems, service delivery platforms, network management, emerging businesses, as well as the software and services offerings from the Comptel acquisition (see note 3, Segment information, in the Financial statement information sections in this report for additional details).

Non-IFRS results provide meaningful supplemental information regarding underlying business performance

In addition to information on our reported IFRS results, we provide certain information on a non-IFRS, or underlying business performance, basis. We believe that our non-IFRS results provide meaningful supplemental information to both management and investors regarding Nokia s underlying business performance by excluding the below-described 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.

Non-IFRS results exclude costs related to the acquisition of Alcatel-Lucent and related integration, goodwill impairment charges, intangible asset amortization and purchase price related items, restructuring and associated charges, and certain other items that may not be indicative of Nokia s underlying business performance. The non-IFRS exclusions are not allocated to the segments, and hence they are reported only at the Nokia consolidated level.

Financial discussion

The financial discussion included in this financial report of Nokia s results comprises the results of Nokia s businesses. Nokia s Networks business and Nokia Technologies, as well as Group Common and Other. For more information on our reportable segments, please refer to note 3, Segment information, in the Financial statement information section in this report.

CEO statement

I am proud of the entire Nokia team for delivering strong profitability in the second quarter and group-level net sales that were close to flat year-on-year. Underpinning this result was the excellent performance of Nokia Technologies, as well as robust gross margins and continued topline improvement in Networks. With the good work in the quarter, I remain confident that we will deliver on our full-year guidance of an operating margin of 8-10% in our Networks business.

Additionally, we made further progress in executing on the four pillars of our strategy in the second quarter. In terms of the first pillar, leading in high-performance, end-to-end networks with communication service providers, we saw year-on-year growth in orders in the first half of the year; continued to win the majority of deals we pursued; and landed more large contracts in the first half than we did during the same time period in 2016. Cross-selling also continues to generate new opportunities for us, with several important wins in the quarter, such as our contract to build three Dense Wavelength Division Multiplexing networks for M1 in Singapore.

For the second pillar, expanding sales to new vertical markets, our work is gaining further traction in terms of orders, customers and technology. We saw double-digit growth in orders in most of the verticals we are targeting, and added new customers at a significantly faster rate than one year ago. And, we launched new IP routing products that will put us in a strong competitive position with both our traditional customer base and our new target markets when the products are available at scale next year. The early response from customers to these new products has been excellent, with companies like BT Group and Xiaomi already expressing their intent to purchase.

We are starting to see the results of the extensive work we have done in the third pillar of our strategy, building a strong, stand-alone software business at scale. Q2 sales in our Applications & Analytics business group were up comfortably year-on-year and order momentum was strong.

In the fourth pillar of our strategy, creating new business and licensing opportunities in the consumer ecosystem, the licensing and business partnership agreement that we reached with Apple in the quarter was a clear highlight. You could see the benefit of that agreement in Nokia Technologies results, and we look forward to continuing to expand our overall business with Apple in the coming months. We also closed a licensing deal with Xiaomi, a milestone win with a Chinese smartphone vendor, setting the stage for us to engage further with other vendors in the country.

Finally, we expect our primary addressable market with communication service providers to be slightly more challenging in 2017 than earlier forecast. We now expect a decline in the market in the range of 3-5%, versus our earlier view of a low-single digit decline. In addition, we continue to expect our Networks sales to perform in line with the market.

Despite these headwinds, I believe Nokia s disciplined operating model puts us in a strong position to succeed in conditions of all kinds and continue to deliver solid shareholder value. In addition, we are seeing catalysts in the United States, China and Japan that point to an acceleration of 5G and the commencement of meaningful roll-outs in 2019.

In summary, a good second quarter, some challenges ahead this year, but also reasons to be optimistic about Nokia s ability to deliver.

Rajeev Suri President and CEO

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Nokia in Q2 2017	Non-IFRS
Non-IFRS net sale	s and non-IFRS operating profit
Nokia non-IFRS ne would have decreas	at sales decreased 1% year-on-year and increased 4% sequentially. On a constant currency basis, Nokia non-IFRS net sales are 2% year-on-year and increased 7% sequentially.

EUR million, non-IFRS	Net Sales	% change	Gross profit	(R&D)	(SG&A)	Other income and (expenses)	Operating profit	Change in operating margin %
Networks business	(251)	(5)%	(21)	32	12	71	93	220bps
Nokia Technologies	175	90%	165	(3)	(11)	(10)	141	1 640bps
Group Common and Other	37	14%	2	4	10	(7)	8	570bps
Eliminations	(2)		0	0	0	0	0	
Nokia	(41)	(1)%	145	33	10	55	242	430bps

Year-on-year changes

On a year-on-year basis, Nokia s non-IFRS gross profit, non-IFRS other income and expense and non-IFRS operating profit benefitted from the absence of an adverse effect related to a customer in Latin America undergoing judicial recovery in Q2 2016.

Sequential changes

EUR million, non-IFRS	Net Sales	% change	Gross profit	(R&D)	(SG&A)	Other income and (expenses)	Operating profit	Change in operating margin %
Networks business	69	1%	10	28	15	30	82	160bps
Nokia Technologies	122	49%	118	1	8	(12)	114	1 530bps
Group Common and								
Other	53	21%	27	10	3	(3)	37	1 880bps
Eliminations	(3)		0	0	0	0	0	•
Nokia	241	4%	154	39	26	15	233	390hns

Non-IFRS profit attributable to the equity holders of the parent

Year-on-year changes

						Profit attributable
		Financial			Non-	to the equity
	Operating	income and			controlling	holders of the
EUR million, non-IFRS	profit	expenses	Taxes	Profit	interests	parent
Nokia	242	(34)	61	270	(15)	255

Nokia s regional profit mix in the second quarter 2017 resulted in an unusually low non-IFRS tax rate of 14%. The net negative fluctuation in financial income and expenses was primarily related to foreign exchange fluctuations and lower interest income.

Sequential changes

						Profit attributable
		Financial			Non-	to the equity
	Operating	income and			controlling	holders of the
EUR million, non-IFRS	profit	expenses	Taxes	Profit	interests	parent
Nokia	233	18	(26)	238	15	253

On a sequential basis, Nokia s regional profit mix remained similar to the first quarter 2017 and resulted in an unusually low non-IFRS tax rate of 14%. The net positive fluctuation in financial income and expenses was primarily related to gains from venture fund distributions.

Nokia in Q2 2017	Reported
Financial discussion	
Net sales	
Nokia net sales increflat year-on-year and	eased 1% year-on-year and 4% sequentially. On a constant currency basis, Nokia net sales would have been approximately would have increased 7% sequentially.
Year-on-year discus	sion
	crease in net sales in the second quarter 2017 was primarily due to Nokia Technologies, lower non-IFRS exclusions related and higher net sales in Group Common and Other, partially offset by Nokia s Networks business.

Sequential discussion
The sequential increase in Nokia net sales in the second quarter 2017 was primarily due to Nokia Technologies, Nokia s Networks business and Group Common and Other.
Operating profit
Year-on-year discussion
In the second quarter 2017, the decrease in operating loss was primarily due to a net positive fluctuation in other income and expenses, higher gross profit and, to a lesser extent, lower research and development (R&D) and selling, general and administrative (SG&A) expenses. On a year-on-year basis, second quarter 2017 results benefitted from the absence of an adverse effect related to a customer in Latin America undergoing judicial recovery in the second quarter 2016.
The increase in gross profit was primarily due to Nokia Technologies and lower non-IFRS exclusions related to deferred revenue. This was partially offset by lower gross profit in Nokia s Networks business.
The decrease in R&D expenses was primarily due to Nokia s Networks business, partially offset by higher non-IFRS exclusions related to intangible asset amortization and purchase price related items and product portfolio strategy costs.
The decrease in SG&A expenses was primarily due to Group Common and Other and Nokia s Networks business, partially offset by higher SG&A expenses in Nokia Technologies.
Nokia s other income and expenses was an expense of EUR 162 million in the second quarter 2017, compared to an expense of EUR 636 million in the year-ago period. The net positive fluctuation was primarily related to lower non-IFRS exclusions attributable to lower restructuring and associated charges and, to a lesser extent, Nokia s Networks business. On a year-on-
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year basis, second quarter 2017 results benefitted from the absence of an adverse effect related to a customer in Latin America undergoing judicial recovery in the second quarter 2016.
Sequential discussion
In the second quarter 2017, the decrease in operating loss was primarily due to higher gross profit and lower R&D and SG&A expenses, partially offset by a net negative fluctuation in other income and expenses.
The increase in gross profit was primarily due to Nokia Technologies and, to a lesser extent, Group Common and Other and Nokia s Networks business. This was partially offset by higher non-IFRS exclusions related to product portfolio strategy costs.
The decrease in R&D expenses was primarily due to Nokia s Networks business and, to a lesser extent, lower non-IFRS exclusions related to lower product portfolio strategy costs and lower R&D expenses in Group Common and Other.
The decrease in SG&A expenses was primarily due to Nokia s Networks business and Nokia Technologies, partially offset by higher non-IFRS exclusions related to transaction and integration costs.
Nokia s other income and expenses was an expense of EUR 162 million in the second quarter 2017, compared to an expense of EUR 69 million in the first quarter 2017. The net negative fluctuation was primarily due to higher restructuring and associated charges, higher product portfolio strategy costs and Nokia Technologies. This was partially offset by Nokia s Networks business.
Profit/(Loss) attributable to the equity holders of the parent
Year-on-year discussion
In the second quarter 2017, the decrease in loss attributable to the equity holders of the parent was primarily due to lower operating loss, partially offset by higher taxes and a net negative fluctuation in financial income and expenses.
The net negative fluctuation in financial income and expenses was primarily due to non-IFRS exclusions related to Nokia s tender offer to purchase 6.50% notes due January 15, 2028, the 6.45% notes due March 15, 2029 and the 5.375% notes due May 15, 2019. The purpose of these transactions was to optimize Nokia s debt maturity profile, to lower average interest expense run rate and to eliminate subsidiary level external debt. In addition, the second quarter 2017 was negatively affected by foreign exchange fluctuations and lower interest income.

The change in taxes from a benefit in the second quarter 2016 to an expense in the second quarter 2017 was primarily due to a non-recurring
change to uncertain tax positions and a non-recurring tax expense related to deferred tax valuation allowance. In the second quarter 2017, Nokia
recorded a EUR 206 million tax expense related to an uncertain tax position in Germany. The matter relates to the disposal of the former Alcatel
Lucent railway signaling business in 2006 to Thales (see note 12, Income Taxes of our Annual Report for 2016). Based on new facts and
circumstances, management has reassessed the probability of having to pay the taxes and concluded that recognition of an uncertain tax position
was warranted at the end of the second quarter 2017.

Sequential discussion

In the second quarter 2017, the decrease in loss attributable to the equity holders of the parent was primarily due to lower operating loss and a net positive fluctuation in non-controlling interests, partially offset by a net negative fluctuation in financial income and expenses and higher taxes.

The net negative fluctuation in financial income and expenses was primarily due to higher non-IFRS exclusions related to Nokia s tender offer to purchase the 6.50% notes due January 15, 2028, the 6.45% notes due March 15, 2029 and the 5.375% notes due May 15, 2019. The purpose of these transactions was to optimize Nokia s debt maturity profile, to lower average interest expense run rate and to eliminate subsidiary level external debt. This was partially offset by gains related to venture fund investments.

The higher taxes were primarily due to a non-recurring change to uncertain tax positions and a non-recurring tax expense related to deferred tax valuation allowance, partially offset by the absence of a non-recurring tax expense related to the integration of the former Alcatel-Lucent and Nokia operating models. In the second quarter 2017, Nokia recorded a EUR 206 million tax expense related to an uncertain tax position in Germany. The matter relates to the disposal of the former Alcatel Lucent railway signaling business in 2006 to Thales (see note 12, Income Taxes of our Annual Report for 2016). Based on new facts and circumstances, management has reassessed the probability of having to pay the taxes and concluded that recognition of an uncertain tax position was warranted at the end of the second quarter 2017.

The net positive fluctuation in non-controlling interests was primarily related to the absence of a non-recurring income in a partly-owned subsidiary in the first quarter 2017.

Description of non-IFRS exclusions in Q2 2017

Non-IFRS exclusions consist of costs related to the acquisition of Alcatel-Lucent and related integration, goodwill impairment charges, intangible asset amortization and purchase price related items, restructuring and associated charges, and certain other items that may not be indicative of Nokia s underlying business performance. For additional details, please refer to note 2, Non-IFRS to reported reconciliation, in the Financial statement information section in this report.

			YoY		QoQ
EUR million	Q2 17	Q2 16	change	Q1 17	change
Net sales	(11)	(93)	(88)%	(11)	0%
Gross profit	(114)	(174)	(34)%	(71)	61%
R&D	(173)	(162)	7%	(184)	(6)%
SG&A	(151)	(154)	(2)%	(138)	9%
Other income and expenses	(182)	(602)	(70)%	(74)	146%
Operating (loss)/profit	(620)	$(1\ 092)$	(43)%	(468)	32%
Financial income and expenses	(156)	(3)	5 100%	(64)	144%
Taxes	(98)	200		(106)	(8)%
(Loss)/Profit	(873)	(896)	(3)%	(638)	37%
(Loss)/Profit attributable to the					
shareholders of the parent	(873)	(862)	1%	(669)	30%
Non-controlling interests	(1)	(34)	(97)%	31	
Taxes (Loss)/Profit (Loss)/Profit attributable to the shareholders of the parent	(98) (873) (873)	200 (896) (862)	(3)% 1%	(106) (638) (669)	(8)% 37%

Non-IFRS exclusions in net sales

In the second quarter 2017, non-IFRS exclusions in net sales amounted to EUR 11 million, and related to a purchase price allocation adjustment related to a reduced valuation of deferred revenue that existed on Alcatel-Lucent s balance sheet at the time of the acquisition.

Non-IFRS exclusions in operating profit

In the second quarter 2017, non-IFRS exclusions in operating profit amounted to EUR 620 million, and were primarily due to non-IFRS exclusions that negatively affected gross profit, R&D, SG&A and other income and expenses as follows:

In the second quarter 2017, non-IFRS exclusions in gross profit amounted to EUR 114 million, and were primarily due to product portfolio strategy costs related to the acquisition of Alcatel-Lucent, and the deferred revenue.

In the second quarter 2017, non-IFRS exclusions in R&D expenses amounted to EUR 173 million, and were primarily due to the amortization of intangible assets resulting from the acquisition of Alcatel-Lucent and, to a lesser extent, product portfolio strategy costs related to the acquisition of Alcatel-Lucent.

In the second quarter 2017, non-IFRS exclusions in SG&A expenses amounted to EUR 151 million, and were primarily due to the amortization of intangible assets resulting from the acquisition of Alcatel-Lucent and integration and transaction related costs.

In the second quarter 2017, non-IFRS exclusions in other income and expenses amounted to EUR 182 million, and were primarily due to restructuring and associated charges for Nokia s cost reduction and efficiency improvement initiatives and, to a lesser extent, product portfolio strategy costs.

Non-IFRS exclusions in profit/(loss) attributable to the equity holders of the parent

In the second quarter 2017, non-IFRS exclusions in profit/(loss) attributable to the equity holders of the parent amounted to EUR 873 million, and were primarily due to the non-IFRS exclusions affecting operating profit, in addition to non-IFRS exclusions that negatively affected financial income and expenses and taxes as follows:

In the second quarter 2017, non-IFRS exclusions in financial income and expenses amounted to EUR 156 million, and related to Nokia s tender offer to purchase the 6.50% notes due January 15, 2028, the 6.45% notes due March 15, 2029 and the 5.375% notes due May 15, 2019.

In the second quarter 2017, non-IFRS exclusions in taxes amounted to EUR 98 million, and were primarily due to a non-recurring change to uncertain tax positions and a non-recurring tax expense related to deferred tax valuation allowance. This was partially offset by a tax benefit of EUR 184 million related to non-IFRS exclusions in operating profit and financial income and expenses.

Cost savings program

The following table summarizes the financial information related to our cost savings program, as of the end of the second quarter 2017. Balances related to previous Nokia and Alcatel-Lucent restructuring and cost savings programs have been included as part of this overall cost savings program as of the second quarter 2016.

In EUR million, approximately	Q2 17
Opening balance of restructuring and associated liabilities	720
+ Charges in the quarter	170
- Cash outflows in the quarter	140
= Ending balance of restructuring and associated liabilities	750
of which restructuring provisions	670
of which other associated liabilities	80
Total expected restructuring and associated charges	1 700
- Cumulative recorded	1 000
= Charges remaining to be recorded	700
Total expected restructuring and associated cash outflows	2 150
- Cumulative recorded	700
= Cash outflows remaining to be recorded	1 450

The following table summarizes our full year 2016 results and future expectations related to our cost savings program and network equipment swaps.

					Expected an	nounts for			
In EUR million, approximately		FY 2	017	FY 20	018	FY 2019 an	d beyond	Tot	al
rounded to the nearest EUR 50	Actual	as of the	end of	as of the	end of	as of the	end of	as of the	end of
million	2016	Q1 17	Q2 17	Q1 17	Q2 17	Q1 17	Q2 17	Q1 17	Q2 17
Total cost savings	550	250	250	400	400	0	0	1 200	1 200
 operating expenses 	350	100	100	350	350	0	0	800	800
- cost of sales	200	150	150	50	50	0	0	400	400
Restructuring and associated									
charges	750	750	750	200	200	0	0	1 700	1 700
Restructuring and associated									
cash outflows	400	750	750	550	550	450	450	2 150	2 150
Charges and cash outflows related to network equipment									
swaps	150	450	450	300	300	0	0	900	900

In full year 2016, the actual total cost savings benefitted from lower incentive accruals, related to the financial performance in full year 2016. Lower incentive accruals drove more than half of the higher than previously expected decrease in total costs in 2016, and this is expected to reverse in 2017, assuming full year 2017 financial performance in-line with our expectations. On a cumulative basis, Nokia continues to be on track to achieve the targeted EUR 1.2 billion of total cost savings in full year 2018.

Outlook

	Metric	Guidance	Commentary
Nokia	Annual cost savings for Nokia, excluding Nokia Technologies	Approximately EUR 1.2 billion of total annual cost savings to be achieved in full year 2018(1)	Compared to the combined non-IFRS operating costs of Nokia and Alcatel-Lucent for full year 2015, excluding Nokia Technologies. Nokia expects approximately EUR 800 million of the cost savings to come from operating expenses and approximately EUR 400 million from cost of sales.
			Restructuring and associated charges are expected to total approximately EUR 1.7 billion. Restructuring and associated cash outflows are expected to total approximately EUR 2.15 billion.
	Network equipment swaps	Approximately EUR 900 million in total(1)	The charges related to network equipment swaps are being recorded as non-IFRS exclusions, and therefore do not affect Nokia s non-IFRS operating profit.
	Non-IFRS financial income and expenses	Expense of approximately EUR 250 million in full year 2017	Primarily includes net interest expenses related to interest-bearing liabilities and defined benefit pension and other post-employment benefit plans, as well as the impact of foreign exchange rate fluctuations on certain balance sheet items.
			Nokia expects cash outflows related to non-IFRS financial income and expenses to be approximately EUR 200 million in full year 2017.
	Non-IFRS tax rate	Between 25% and 30% for full year 2017 (update)	Nokia s non-IFRS tax rate in full year 2017 is expected to be influenced by factors including regional profit mix (<u>new commentary</u>).
			(<u>This is an update</u> to earlier guidance and commentary for non-IFRS tax rate for full year 2017 to be around the midpoint of a 30% to 35% range.)
			Nokia expects cash outflows related to taxes to be approximately EUR 800 million for full year 2017.
			(<u>This is an update</u> to the earlier commentary for cash outflows related to taxes to be approximately EUR 600 million for full year 2017. The update is due to a non-recurring tax item.(2))
	Capital expenditures	Approximately EUR 500 million in full year 2017	Primarily attributable to Nokia s Networks business.
	Net sales		

Nokia s Networks business	Operating margin	Decline in line with the primary addressable market in full year 2017	We currently expect market conditions for 2017 to be slightly more challenging than earlier anticipated (new commentary). Nokia s outlook for net sales and operating margin for Nokia s Networks business in full year 2017 are expected to be influenced by factors including: • A 3 to 5 percent decline in the primary
		2017	addressable market for Nokia s Networks business (This is an update to earlier commentary for a low single digit percentage decline.);
			• Uncertainty related to the timing of completions and acceptances of certain projects, particularly in the second half of 2017 (new commentary);
			• Competitive industry dynamics;
			Product and regional mix;
			• The timing of major network deployments;
			• Execution of cost savings and reinvestment plans, with operating expenses down on a year-on-year basis; and
			• The level of R&D investment needed to maintain product competitiveness and accelerate 5G (<u>new commentary</u>);
			The outlook for Nokia s Networks business is provided assuming constant foreign exchange rates.
Nokia Technologies	Net sales	Not provided	Due to risks and uncertainties in determining the timing and value of significant licensing agreements, Nokia believes it is not appropriate to provide an annual outlook for full year 2017.
			For patent and brand licensing, Nokia is now disclosing net sales on a quarterly basis, rather than providing an annualized net sales run rate.
			Nokia expects total net sales from digital health and digital media to grow year-on-year in full year 2017, primarily influenced by increased consumer adoption of our digital health and digital media products.

⁽¹⁾ For further details related to the cost savings and network equipment swaps guidance, please refer to the Cost savings program section above.

⁽²⁾ For further details related to the non-recurring tax item, please refer to the Nokia in Q2 2017 Reported section above.

Nokia s Networks business in Q2 2017
Operational highlights
Ultra Broadband Networks Mobile Networks
Nokia announced that it is to play an integral role in T-Mobile s plans to launch nationwide 5G coverage in the United States by 2020. Nokia s strategy of using multi-radio platforms and advanced antenna technologies aligns strongly with T-Mobile s announced plans to utilize all of its spectrum resources.
Nokia announced that it is to develop a 5G ecosystem with leading Japanese telecoms operator NTT DOCOMO to prepare for the upcoming introduction of the next generation wireless network. The collaboration is to commence with interoperability testing of multi-vendor technology using the 4.5GHz frequency band.
Nokia announced that it is to supply an LTE network to the Shanghai Oriental Pearl Group to transform Shanghai s fast-growing former industrial district of Hongkou through a range of new smart city and public safety application services. Nokia Shanghai Bell, Nokia s joint venture company in China, is to provide the deployment and services.
At 5G World in London, Nokia demonstrated the flexibility, upgradeability and scalability of its AirScale radio portfolio, a key component of its 5G FIRST solution, to adapt to the frequency bands that are to deliver the promise of 5G in initial applications of the technology. AirScale s performance attributes ensure that operators exiting investment in radio technology are protected while preparing them for the path to 5G.
At Mobile World Congress Shanghai, Nokia and China Mobile Communications Corp demonstrated how 5G can support telehealth and potentially transform emergency hospital patient care. The demonstration showcased slicing techniques that allow operators to serve multiple end users with a variety of services that meet different demands for latency, speed and capacity over a common 5G network infrastructure.
Nokia introduced a new Ultra Compact Network (an LTE network that can be deployed where no other connectivity exists) with new application features, including push-to-video; and launched the Integrated Operations Center, which enables critical communications agencies to transform command center operations with services that aggregate data feeds from a multitude of sources and vendors—systems in an emergency situation
The National Association of State Procurement Officials (NASPO) ValuePoint in the United States chose Nokia as a supplier of packet microwave communications technology for state and local governments. The agreement is to incorporate the use of Nokia s 9500 Microwave Packet Radio, which supports both traditional TDM services and Ethernet-based services.

Ultra Broadband Networks Fixed Networks

Frontier Communications chose Nokia s G.fast technology to deliver fiber-like speeds and avoid having to install new, in-building infrastructure. Nokia s G.fast technology, which allows Frontier to use the last few hundred meters of existing copper, is to be rolled out across the U.S. state of Connecticut.

Nokia and China Mobile started extending ultra-broadband access and intelligent home services across China. The deployment is to cover 30 million users during 2017 and enable Internet of Things communications between devices and sensors.

Nokia and nbn Australia successfully tested Nokia s universal NG-PON fiber solution, achieving aggregate broadband speeds of 102Gbps on a single fiber. The test also demonstrated the dynamic provisioning of bandwidth to support surging data demand from residential and business customers.

As the next step in our strategic and long-standing relationship, Nokia and nbn Australia signed an agreement to further advance nbn s nationwide high-speed broadband access network deployment. Nokia is to partner with nbn to supply hardware, software and services to roll out nbn s world-leading fibre-to-the-curb (FTTC) network.

Nokia Bell Labs demonstrated that it is possible for operators to re-use existing fiber-to-the-home massive-scale deployments to satisfy the strict latency and capacity needs for mobile transport in 4G and future 5G networks.

Nokia, in conjunction with Infracapital, won a contract from the Polish government to design, build, and operate advanced fiber optics networks to deliver broadband services to residences and schools mostly in central and northern Poland. The networks, based on Gigabit Passive Optical Network (GPON) technology, will deliver speeds of 100 megabits per second to more than 400,000 homes and 2,500 schools.

Nokia and Elisa of Finland successfully trialed the first 10-gigabit network in the country using Nokia s XGS-PON technology.

Estonian cable operator Starman officially launched Nokia s next generation fiber-optic 10G network. Starman is the first cable operator in Europe to offer ultra-fast Internet based on 10G EPON technology.

Nokia and technology integrator FWD-IP along with their chosen distributor Temple have deployed Nokia s first Passive Optical LAN solution in the UK at a major school campus in Cambridge. Based on optical fiber infrastructure and proven GPON technology, Passive Optical LAN provides a secure, flexible, scalable and future-proof network that allows the school to significantly improve the high-speed internet and educational services they provide students.

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Nokia expanded its end-to-end portfolio for critical communications with the launch of the Integrated Operations Center, a solution which enhances situational awareness and command center decision-making through a tailor-made approach to centralized situation management for Public Safety agencies.

Nokia won three industry awards for its professional services in the second quarter 2017: 1) a Global Telecoms Business (GTB) innovation award for voice experience optimization with Vodafone, Germany, 2) a GTB innovation award for the Gotthard tunnel project with Alp Transit, Switzerland, and 3) a Leadership in IoT award from TechXLR8 for the Nokia worldwide IoT network grid (WING).

Nokia published new studies outlining the benefits of Nokia s 5G Acceleration Services which are designed to help operators and enterprises identify how the move to 5G will enable them to deliver new services that transform the customer experience and create new revenue streams.

Nokia attended Mobile World Congress in Shanghai and presented several demos successfully, including the new Workforce of the future demo, which showcases augmented virtual reality for learning, crowdsourcing, robotics and the digital assistant MIKA in action, all powered by Nokia AVA.

Nokia was ranked by GlobalData as a leader in Services vision and strategy as well as in the network planning and optimization category in June 2017, and as a leader in managed services product offering in April 2017.

IP Networks and Applications IP/Optical Networks

Nokia announced the world s most powerful internet routing platforms to make modern telecom networks faster, safer and more adaptable. The platforms are powered by Nokia s new FP4 silicon, the world s first multi-terabit chipset that is up to six times more powerful than network processors on the market today.

Nokia said it is to upgrade Spark New Zealand s core infrastructure under a three-year agreement to prepare Spark for 5G, ultra-broadband and IoT

Nokia s cutting edge optical transport technology was chosen by Energia Communications of Japan to expand its 100 Gbps optical network on Japan s main island, Honshu. The expansion is to include Nokia s real-time optical fiber supervision, which can monitor and locate fiber breakage in the network and improve network efficiency and reliability.

Telefonica Group selected Nokia s Nuage Networks for its software-defined networking solutions to deliver automated, cloud-based end-to-end services to several thousand global enterprise customers.

Nokia and Skyguide announced the first stage of modernizing Switzerland s air traffic control system with the deployment of Nokia s Internet Protocol/Multi-Protocol Label Switching (IP/MPLS) technology, which improves the performance and reliability of mission-critical networks.

Nokia and China Unicom announced they are conducting a live trial of Nokia s Virtualized Service Router, with the aim of eventually simplifying and accelerating the delivery of residential broadband.

Nokia Bell Labs announced new innovations for the Velocix IP Video portfolio to help operators deliver a more responsive and immersive Internet TV experience at a fraction of the cost and resources. Skim storage and other innovations bring Internet TV closer to the traditional broadcast distribution experience.

IP Networks and Applications Applications & Analytics

Nokia bolstered its software offerings with the introduction of new machine-learning capabilities and expertise to help service providers strengthen digital customer care and drive new revenue streams. The new offerings include Nokia Autonomous Customer Care, Nokia Cognitive Analytics for Crowd Insight and Nokia Analytics Office Services suite.

Nokia further enhanced its go-to-market capabilities and bolstered its software portfolio with the completion of the acquisition of Comptel Corporation, adding complementary technologies which help digital service providers bring new services to market faster, master service

orchestration, capture data-in-motion and refine decision-making.

Communications service provider, Swisscom, selected Nokia Wi-Fi and other consumer broadband network issues.	s Home Analytics software to improve its ability to identify and quickly resolve
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Financial highlights

EUR million	Q2 17	Q2 16	YoY change	Q1 17	QoQ change
Net sales - constant currency			(6)%		4%
Net sales	4 971	5 222	(5)%	4 902	1%
Gross profit	1 945	1 966	(1)%	1 935	1%
Gross margin %	39.1%	37.6%	150bps	39.5%	(40)bps
R&D	(916)	(948)	(3)%	(944)	(3)%
SG&A	(652)	(664)	(2)%	(667)	(2)%
Other income and expenses	30	(41)		0	
Operating profit	406	313	30%	324	25%
Operating margin %	8.2%	6.0%	220bps	6.6%	160bps

Net sales by region

EUR million	Q2 17	Q2 16	YoY change	Q1 17	QoQ change
Asia-Pacific	1 026	974	5%	1 046	(2)%
Europe	1 091	1 206	(10)%	976	12%
Greater China	627	671	(7)%	556	13%
Latin America	298	353	(16)%	227	31%
Middle East & Africa	431	411	5%	403	7%
North America	1 498	1 606	(7)%	1 694	(12)%
Total	4 971	5 222	(5)%	4 902	1%

Net sales and operating profit

Nokia s Networks business net sales decreased 5% year-on-year and increased 1% sequentially. On a constant currency basis, Nokia s Networks business net sales would have decreased 6% year-on-year and increased 4% sequentially.

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A discussion of our results within Ultra Broadband Networks, Global Services and IP Networks and Applications is included in the sections Ultra Broadband Networks , Global Services and IP Networks and Applications below.

Year-on-year changes

EUR million	Net Sales	% change	Gross profit	(R&D)	(SG&A)	Other income and (expenses)	Operating profit	Change in operating margin %
Ultra Broadband								
Networks	(191)	(8)%	(70)	33	11	34	7	100bps
Global Services	4	0%	61	3	11	14	89	610bps
IP Networks and								
Applications	(63)	(4)%	(12)	(4)	(9)	23	(4)	0bps
Networks business	(251)	(5)%	(21)	32	12	71	93	220bps

The year-on-year net positive fluctuation in other income and expenses was primarily due to lower doubtful account allowances and a net positive fluctuation related to foreign exchange hedging. On a year-on-year basis, Nokia s Networks business gross profit, other income and expenses and operating profit benefitted from the absence of an adverse effect related to a customer in Latin America undergoing judicial recovery in Q2 2016.

Sequential changes

EUR million	Net Sales	% change	Gross profit	(R&D)	(SG&A)	Other income and (expenses)	Operating profit	Change in operating margin %
Ultra Broadband								
Networks	(71)	(3)%	(91)	2	7	28	(54)	(220)bps
Global Services	87	6%	620	2	5	1	68	450bps
IP Networks and								
Applications	54	4%	40	24	4	2	68	490bps
Networks business	69	1%	10	28	15	30	82	160bps

The sequential net positive fluctuation in other income and expenses was primarily due to a net positive fluctuation related to foreign exchange hedging.

Ultra Broadband Networks in Q2 2017

Financial highlights

EUR million	Q2 17	Q2 16	YoY change	Q1 17	QoQ change
Net sales - constant currency			(9)%		0%
Net sales	2 165	2 356	(8)%	2 236	(3)%
Mobile Networks	1 619	1 727	(6)%	1 735	(7)%
Fixed Networks	546	629	(13)%	501	9%
Gross profit	1 040	1 110	(6)%	1 131	(8)%
Gross margin %	48.0%	47.1%	90bps	50.6%	(260)bps
R&D	(581)	(614)	(5)%	(583)	0%
SG&A	(293)	(304)	(4)%	(300)	(2)%
Other income and expenses	25	(9)		(3)	
Operating profit	191	184	4%	245	(22)%
Operating margin %	8.8%	7.8%	100bps	11.0%	(220)bps

Net sales by region

EUR million	Q2 17	Q2 16	YoY change	Q1 17	QoQ change
Asia-Pacific	437	438	0%	457	(4)%
Europe	417	451	(8)%	359	16%
Greater China	275	351	(22)%	241	14%
Latin America	101	128	(21)%	64	58%
Middle East & Africa	149	125	19%	125	19%
North America	786	863	(9)%	989	(21)%
Total	2 165	2 356	(8)%	2 236	(3)%

Financial discussion

Net sales

Ultra Broadband Networks net sales decreased 8% year-on-year and 3% sequentially. On a constant currency basis, Ultra Broadband Networks net sales would have decreased 9% year-on-year and would have been approximately flat sequentially.

Year-on-year discussion

The year-on-year decrease in Ultra Broadband Networks net sales in the second quarter 2017 was due to both Mobile Networks and Fixed Networks.

The decrease in Mobile Networks net sales was primarily due to radio networks and converged core networks. Small cells continued to deliver strong growth in percentage terms. For radio networks, the decrease was primarily related to Greater China, North America and Europe, partially

offset by growth in Asia-Pacific and Middle East & Africa. For converged core networks, the decrease was primarily related to North America.

The net sales performance in Fixed Networks was in comparison to a particularly strong second quarter 2016, which was driven by high order intake in the fourth quarter 2015. The decrease in Fixed Networks net sales was primarily due to broadband access and, to a lesser extent, services and digital home. The year-on-year decrease was primarily related to one specific customer which completed a large project in Asia-Pacific in the fourth quarter 2016. For broadband access, the decrease was primarily related to Asia-Pacific and, to a lesser extent, North America, partially offset by Europe. For services, the decrease was primarily related to Europe and North America, partially offset by Greater China. For digital home, the decrease was primarily related to Latin America.

Sequential discussion

The sequential decrease in Ultra Broadband Networks net sales in the second quarter 2017 was due to Mobile Networks, partially offset by Fixed Networks.

The decrease in Mobile Networks net sales was primarily due to radio networks, converged core networks and advanced mobile networks solutions. For radio networks, the decrease was primarily related to North America and, to a lesser extent, Asia-Pacific, partially offset by growth in Europe, Latin America and Middle East & Africa. For converged core networks, the decrease was primarily related to Asia-Pacific. For advanced mobile networks solutions, the decrease was primarily due to North America, partially offset by Greater China.

The increase in Fixed Networks net sales was primarily due to broadband access, services and digital home. For broadband access, the increase was primarily related to Europe. For services, the increase was primarily related to Greater China. For digital home, the increase was across most regions.

Operating profit
Year-on-year discussion
On a year-on-year basis, in the second quarter 2017, Ultra Broadband Networks operating profit increased primarily due to lower R&D expenses, a net positive fluctuation in other income and expenses and lower SG&A expenses, partially offset by lower gross profit. On a year-on-year basis, second quarter 2017 results benefitted from the absence of an adverse effect related to a customer in Latin America undergoing judicial recovery in the second quarter 2016.
The decrease in Ultra Broadband Networks gross profit was due to both Mobile Networks and Fixed Networks. The decrease in gross profit in both Mobile Networks and Fixed Networks was primarily due to lower net sales, with gross margin remaining solid.
The decrease in Ultra Broadband Networks R&D expenses was primarily due to Mobile Networks. The decrease in Mobile Networks R&D expenses was primarily due to lower personnel expenses, reflecting progress related to Nokia s cost savings program.
The decrease in Ultra Broadband Networks SG&A expenses was primarily due to Mobile Networks. The decrease in Mobile Networks SG&A expenses was primarily due to lower personnel expenses, reflecting progress related to Nokia s cost savings program.
Ultra Broadband Networks other income and expenses was an income of EUR 25 million in the second quarter 2017, compared to an expense of EUR 9 million in the year-ago quarter. On a year-on-year basis, the change was primarily related to a net positive fluctuation related to foreign exchange hedging and lower doubtful account allowances.
Sequential discussion
On a sequential basis, in the second quarter 2017, Ultra Broadband Networks operating profit decreased primarily due to lower gross profit, partially offset by a net positive fluctuation in other income and expenses.
The decrease in Ultra Broadband Networks gross profit was primarily due to Mobile Networks, partially offset by Fixed Networks. The decrease in Mobile Networks gross profit was due to both lower net sales and a lower gross margin. The increase in Fixed Networks gross profit was primarily due to higher net sales.
Ultra Broadband Networks other income and expenses was an income of EUR 25 million in the second quarter 2017, compared to an expense of EUR 3 million in the first quarter 2017. On a sequential basis, the change was primarily related to a net positive fluctuation related to foreign

exchange hedging, partially offset by higher doubtful account allowances.

Global Services in Q2 2017

Financial highlights

EUR million	Q2 17	Q2 16	YoY change	Q1 17	QoQ change
Net sales - constant currency			0%		9%
Net sales	1 448	1 444	0%	1 361	6%
Gross profit	305	244	25%	243	26%
Gross margin %	21.1%	16.9%	420bps	17.9%	320bps
R&D	(21)	(24)	(13)%	(23)	(9)%
SG&A	(159)	(170)	(6)%	(164)	(3)%
Other income and expenses	(1)	(15)	(93)%	(2)	(50)%
Operating profit	123	34	262%	55	124%
Operating margin %	8.5%	2.4%	610bps	4.0%	450bps

Net sales by region

EUR million	Q2 17	Q2 16	YoY change	Q1 17	QoQ change
Asia-Pacific	321	307	5%	326	(2)%
Europe	301	335	(10)%	271	11%
Greater China	232	206	13%	207	12%
Latin America	110	99	11%	87	26%
Middle East & Africa	180	198	(9)%	175	3%
North America	303	299	1%	295	3%
Total	1 448	1 444	0%	1 361	6%

Financial discussion

Net sales

Global Services net sales were approximately flat year-on-year and increased 6% sequentially. On a constant currency basis, Global Services net sales would have been approximately flat year-on-year and would have increased 9% sequentially.

Year-on-year discussion

The approximately flat net sales in Global Services was primarily due to growth in network implementation, partially offset by decreases in systems integration and care. For network implementation, the increase was primarily related to North America, Greater China and Asia-Pacific, and primarily related to the timing of certain projects. This was partially offset by a decrease in Middle East & Africa. For systems integration, the decrease was primarily related to Europe, primarily attributable to the winding down of a specific set of legacy Alcatel-Lucent contracts. For care, the decrease was primarily related to Asia-Pacific.

Sequential discussion

The increase in Global Services net sales was primarily due to network implementation, network planning and optimization and managed services, partially offset by systems integration. In the second quarter 2017, both network implementation and network planning and optimization benefitted from the timing of certain projects. For network implementation, the increase was related to most regions, with particular strength in North America, Greater China and Latin America. For network planning and optimization, the increase was related to most regions. For managed services, the increase was related to growth across all regions. For systems integration, the decrease was primarily related to North America, which was negatively affected by the winding down of a specific set of legacy Alcatel-Lucent contracts.

Operating profit

Year-on-vear	disc	cussion

On a year-on-year basis, in the second quarter 2017, Global Services operating profit increased primarily due to higher gross profit, a net positive fluctuation in other income and expenses and lower SG&A expenses. On a year-on-year basis, second quarter 2017 results benefitted from the absence of an adverse effect related to a customer in Latin America undergoing judicial recovery in the second quarter 2016.

The increase in Global Services gross profit was primarily due to network implementation, which benefitted from the timing of certain projects, as well as higher gross margin across all other business units, reflecting progress related to Nokia s cost savings program.

The decrease in Global Services SG&A expenses was primarily due to lower personnel expenses, reflecting progress related to Nokia s cost savings program.

Global Services other income and expenses was an expense of EUR 1 million in the second quarter 2017, compared to an expense of EUR 15 million in the year-ago quarter. On a year-on-year basis, the change was primarily due to lower doubtful account allowances.

Sequential discussion

On a sequential basis, in the second quarter 2017, Global Services operating profit increased primarily due to higher gross profit.

The increase in Global Services gross profit was primarily due to network implementation and network planning and optimization, both of which benefitted from the timing of certain projects, as well as progress related to Nokia s cost savings program.

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IP Networks and Applications in Q2 2017

Financial highlights

EUR million	Q2 17	Q2 16	YoY change	Q1 17	QoQ change
Net sales - constant currency			(5)%		7%
Net sales	1 358	1 421	(4)%	1 304	4%
IP/Optical Networks	993	1 087	(9)%	945	5%
IP Routing	654	713	(8)%	621	5%
Optical Networks	339	375	(10)%	324	5%
Applications & Analytics	365	334	9%	359	2%
Gross profit	600	612	(2)%	560	7%
Gross margin %	44.2%	43.1%	110bps	42.9%	130bps
R&D	(314)	(310)	1%	(338)	(7)%
SG&A	(199)	(190)	5%	(203)	(2)%
Other income and expenses	6	(17)		4	50%
Operating profit	91	95	(4)%	23	296%
Operating margin %	6.7%	6.7%	0bps	1.8%	490bps

Net sales by region

EUR million	Q2 17	Q2 16	YoY change	Q1 17	QoQ change
Asia-Pacific	268	229	17%	263	2%
Europe	373	420	(11)%	346	8%
Greater China	120	115	4%	107	12%
Latin America	87	126	(31)%	76	14%
Middle East & Africa	103	88	17%	102	1%
North America	408	444	(8)%	410	0%
Total	1 358	1 421	(4)%	1 304	4%

Financial discussion

Net sales

IP Networks and Applications net sales decreased 4% year-on-year and increased 4% sequentially. On a constant currency basis, IP Networks and Applications net sales would have decreased 5% year-on-year and increased 7% sequentially.

Year-on-year discussion

The year-on-year decrease in IP Networks and Applications net sales in the second quarter 2017 was due to IP/Optical Networks, partially offset by Applications & Analytics.

The decrease in IP/Optical Networks net sales was due to both IP routing and optical networks, primarily due to weakness in the communication service provider market, as well as a product portfolio transition in IP routing. For IP routing, the decrease was primarily related to North

America and Europe. For optical networks, the decrease was primarily related to Latin America, Europe and North America, partially offset by growth in Asia-Pacific.

The increase in Applications & Analytics net sales was primarily due to growth in the services, network management, operational support systems and emerging businesses business units, the latter two of which showed particularly strong growth in percentage terms. The year-on-year performances of services and operational support systems benefitted from the acquisition of Comptel. To drive growth and higher returns, building a standalone software business at scale is a key priority for Nokia. Thus, Applications & Analytics is driving a significant transformation, enabled by investments in sales, R&D and services capabilities. As of the beginning of the second quarter 2017, the stand-alone sales force was fully operational. As a result, organic net sales performance has improved, and on a year-on-year basis, excluding the acquisition of Comptel, Applications & Analytics net sales would have increased.

Sequential discussion

The sequential increase in IP Networks and Applications net sales in the second quarter 2017 was due to both IP/Optical Networks and Applications & Analytics.

The increase in IP/Optical Networks net sales was due to both IP routing and optical networks. For IP routing, the increase was primarily related to North America and Latin America, partially offset by Asia-Pacific. For optical networks, the increase was primarily related to Asia-Pacific and Europe, partially offset by Latin America.

The slight increase in Applications & Analytics net sales was primarily due to growth in network management, operational support systems and services. This was partially offset by business support systems, following a strong first quarter 2017. The sequential performances of services, operational support systems and business support systems benefitted from the acquisition of Comptel.

Operating profit
Year-on-year discussion
On a year-on-year basis, in the second quarter 2017, IP Networks and Applications operating profit was approximately flat, primarily due to a net positive fluctuation in other income and expense, partially offset by lower gross profit. On a year-on-year basis, second quarter 2017 results benefitted from the absence of an adverse effect related to a customer in Latin America undergoing judicial recovery in the second quarter 2016.
The decrease in IP Networks and Applications gross profit was primarily due to IP/Optical Networks, partially offset by higher gross profit in Applications & Analytics. The decrease in gross profit in IP/Optical Networks was primarily due to lower net sales. The increase in gross profit in Applications & Analytics was primarily due to higher net sales.
IP Networks and Applications other income and expenses was an income of EUR 6 million in the second quarter 2017, compared to an expense of EUR 17 million in the year-ago quarter. On a year-on-year basis, the change was primarily due to lower doubtful account allowances.
Sequential discussion
On a sequential basis, in the second quarter 2017, IP Networks and Applications operating profit increased primarily due to higher gross profit and lower R&D expenses.
The increase in IP Networks and Applications gross profit was primarily due to IP/Optical Networks. The increase in gross profit in IP/Optical Networks was primarily due to higher gross margin and higher net sales.
The decrease in IP Networks and Applications R&D expenses was primarily due to IP/Optical Networks. The decrease in IP/Optical Networks was primarily due to cost controls and the timing of R&D projects.
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Nokia Technologies in Q2 2017
Operational highlights
Licensing
Nokia and Apple signed a multi-year patent license and business collaboration agreement that ended all litigation related to their intellectual property dispute. Under the collaboration agreement, Nokia will be providing certain network infrastructure products and services to Apple, and Apple will resume carrying Nokia digital health products in Apple retail and online stores. Nokia received an up-front cash payment from Apple in the second quarter 2017, with additional revenues during the term of the agreement. The value of the agreement will be reflected partially as patent licensing sales in Nokia Technologies and partially as net sales in other Nokia business groups.
Nokia and Xiaomi signed a business collaboration agreement and a multi-year patent agreement, including a cross license to each company s cellular standard essential patents. Under the business collaboration agreement, Nokia will provide network infrastructure equipment designed to deliver the high capacity, low power requirements expected by large web providers and datacenter operators. In addition, the companies have agreed to explore opportunities for further cooperation, in areas such as Internet of Things, augmented and virtual reality, and artificial intelligence. Xiaomi also acquired patent assets from Nokia as part of the transaction, which resulted in the recognition of net sales related to divested IPR in the second quarter 2017, with licensing income expected beginning in the fourth quarter 2017.
HMD Global, exclusive licensee of the Nokia brand for phones and tablets, began shipping the Nokia 3, Nokia 5 and Nokia 6 smartphones, as well as the reimagined Nokia 3310 featurephone.
Digital Media and Digital Health
Nokia announced the appointment of Gregory Lee as President of Nokia Technologies and as a member of the Nokia Group Leadership Team. Lee joined Nokia following a 13-year career at Samsung Electronics, where he most recently served as President and CEO of Samsung Electronics North America.
Nokia expanded its digital health offering with new products, including Nokia Body BMI Wi-Fi connected scale and the Nokia Health Mate app, which provides a 360-degree view of one shealth. Nokia also completed the transition of Withings digital health products to Nokia-branded products; these are now available at health.nokia.com and at various leading retailers around the world, including BestBuy and Amazon.com.
Nokia introduced its next generation of immersive technology solutions, including OZO+, a significant upgrade to Nokia s virtual reality camera, and OZO Creator, completely updated virtual reality image processing and stereoscopic software.

Nokia announced it is working with Lucasfilm to deliver an immersive behind-the-scenes experience of Star Wars: The Last Jedi using Nokia s OZO virtual reality camera and software solutions. The activation is the latest under a multi-year VR technology partnership with Walt Disney Studios.

Nokia introduced Healthier Together , a first of its kind immersive virtual reality experience for consumers to discover Nokia s portfolio of digital health products. The virtual reality campaign allows customers to interact with Nokia digital health products, and, in a first for VR, to make purchases directly.

Nokia s virtual reality OZO camera and OZO Live platform were used in the world s first mixed reality neurological surgery procedure at the Helsinki University Hospital. Providing a more immersive view of the surgery and the operating room environment, the procedure was livestreamed to around 100 neurosurgeons.

Nokia and Technicolor announced a partnership to create new and compelling virtual reality content by utilizing Nokia s OZO+ camera and OZO content creation tools.

Financial highlights

EUR million	Q2 17	Q2 16	YoY change	Q1 17	QoQ change
Net sales - constant currency			90%		50%
Net sales	369	194	90%	247	49%
Gross profit	352	187	88%	234	50%
Gross margin %	95.4%	96.4%	(100)bps	94.7%	70bps
R&D	(60)	(57)	5%	(61)	(2)%
SG&A	(50)	(39)	28%	(58)	(14)%
Other income and expenses	(12)	(2)	500%	0	
Operating profit	230	89	158%	116	98%
Operating margin %	62.3%	45.9%	1 640bps	47.0%	1 530bps

Financial discussion

During the second quarter 2017, Nokia Technologies entered into two patent licensing and business collaboration agreements, one with Apple and one with Xiaomi. The agreement with Apple resulted in the recognition of recurring and non-recurring net sales, as well as a reduction in licensing-related litigation costs and a substantial up-front cash payment. Nokia previously expected Apple-related litigation costs to reach an annualized run-rate of EUR 100 million. From the third quarter 2017 onwards Nokia expects the annualized run-rate for Apple-related litigation costs to be zero, compared to an annualized run-rate of approximately EUR 50 million in the first quarter 2017 and approximately EUR 40 million in the second quarter 2017. The agreement with Xiaomi resulted in the recognition of net sales related to divested IPR, with licensing income expected beginning in the fourth quarter 2017.

Net sales

In the second quarter 2017, Nokia Technologies net sales increased 90% year-on-year and 49% sequentially. On a constant currency basis, Nokia Technologies net sales would have increased 90% year-on-year and 50% sequentially. Of the EUR 369 million of net sales in the second quarter 2017, EUR 357 million related to patent and brand licensing and EUR 12 million related to digital health and digital media.

Year-on-year discussion

The year-on-year increase in Nokia Technologies net sales in the second quarter 2017 was primarily related to non-recurring net sales related to a new license agreement in the second quarter 2017, higher net sales related to an IPR license agreement that was expanded in the third quarter 2016, higher net sales related to a new license agreement in the second quarter 2017, our brand partnership with HMD, divested IPR and the acquisition of Withings in the second quarter 2016. This was partially offset by lower licensing income from certain existing licensees. Approximately 40% of the overall EUR 175 million year-on-year increase in Nokia Technologies net sales in the second quarter 2017 were non-recurring in nature and related to catch-up net sales for the first quarter of 2017.

Sequential discussion

The sequential increase in Nokia Technologies net sales in the second quarter 2017 was primarily related to higher net sales related to a new
license agreement in the second quarter 2017, non-recurring net sales related to a new license agreement in the second quarter 2017 and, to a
lesser extent, divested IPR. This was partially offset by the absence of non-recurring net sales primarily related to a new license agreement in the
first quarter 2017. Approximately 60% of the overall EUR 122 million sequential increase in Nokia Technologies net sales in the second quarter
2017 were non-recurring in nature and related to catch-up net sales for the first quarter of 2017.
Operating profit

Operating profit

Year-on-year discussion

The year-on-year increase in Nokia Technologies operating profit was primarily due to higher gross profit, partially offset by higher SG&A expenses.

The increase in Nokia Technologies gross profit was primarily due to higher net sales.

The increase in Nokia Technologies SG&A expenses was primarily due to increased licensing-related litigation costs and the ramp-up of our digital health business unit. The higher SG&A expenses in digital health was primarily due to the acquisition of Withings in the second quarter 2016.
Nokia Technologies other income and expenses was an expense of EUR 12 million in the second quarter 2017, compared to an expense of EUR 2 million in the year-ago quarter. The change was primarily due to a net negative fluctuation related to foreign exchange hedging in the second quarter 2017.
Sequential discussion
The sequential increase in Nokia Technologies operating profit was primarily due to higher gross profit and, to a lesser extent, lower SG&A expenses, partially offset by a net negative fluctuation in other income and expenses.
The increase in Nokia Technologies gross profit was primarily due to higher net sales.
The decrease in Nokia Technologies SG&A expenses was primarily due to lower licensing-related litigation costs and marketing expenses related to digital health.
Nokia Technologies other income and expenses was an expense of EUR 12 million in the second quarter 2017, compared to approximately zero in the first quarter 2017. The change was primarily due to a net negative fluctuation related to foreign exchange hedging in the second quarter 2017.
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Group Common and Other in Q2 2017

Financial highlights

EUR million	Q2 17	Q2 16	YoY change	Q1 17	QoQ change
Net sales - constant currency			10%		21%
Net sales	307	270	14%	254	21%
Gross profit	54	52	4%	27	100%
Gross margin %	17.6%	19.3%	(170)bps	10.6%	700bps
R&D	(66)	(70)	(6)%	(76)	(13)%
SG&A	(53)	(63)	(16)%	(56)	(5)%
Other income and expenses	3	10	(70)%	6	(50)%
Operating loss	(62)	(70)	(11)%	(99)	(37)%
Operating margin %	(20.2)%	(25.9)%	570bps	(39.0)%	1 880bps

Financial discussion
Net sales
Group Common and Other net sales increased 14% year-on-year and 21% sequentially. On a constant currency basis, Group Common and Other net sales would have increased 10% year-on-year and 21% sequentially.
Year-on-year discussion
The year-on-year increase in Group Common and Other net sales in the second quarter 2017 was primarily due to Alcatel Submarine Networks
Sequential discussion
The sequential increase in Group Common and Other net sales in the second quarter 2017 was primarily due to Alcatel Submarine Networks, partially offset by Radio Frequency Systems.
Operating profit
Year-on-year discussion
On a year-on-year basis, in the second quarter 2017, Group Common and Other operating loss decreased, primarily due to lower SG&A expenses.
The decrease in SG&A expenses was primarily due to lower personnel expenses.
Sequential discussion
On a sequential basis, in the second quarter 2017, Group Common and Other operating loss decreased primarily due to higher gross profit and lower R&D expenses.

The increase in Group Common and Other gross profit was primarily due to Alcatel Submarine Networks.
The decrease in R&D expenses was primarily due to progress related to Nokia s cost savings program.
Cash and cash flow in Q2 2017
Nokia change in net cash and other liquid assets (EUR billion)
* Cash outflows related to income taxes were approximately EUR 240 million, of which approximately EUR 110 million was non-recurring in nature and related to the integration of the former Alcatel-Lucent and Nokia operating models.

** Cash outflows related to net interest were approximately EUR 190 million, of which approximately EUR 160 million was non-recurring in nature, and related to Nokia s tender offer to purchase certain bonds.

EUR million, at end of period	Q2 17	Q2 16	YoY change	Q1 17	QoQ change
Total cash and other liquid assets(1)	7 917	10 987	(28)%	8 820	(10)%
Net cash and other liquid assets(1)	3 964	7 077	(44)%	4 409	(10)%

⁽¹⁾ Total cash and other liquid assets consist of the following line items from our consolidated statement of financial position: Cash and cash equivalents, available-for sale investments, liquid assets and investments at fair value through profit and loss, liquid assets. Net cash and other liquid assets equals total cash and other liquid assets less long-term interest-bearing liabilities and less short-term interest-bearing liabilities. For details, please refer to note 14, Notes to the consolidated statement of cash flows , in the Financial statement information section in this report.

In the second quarter 2017, Nokia s total cash and other liquid assets decreased by EUR 903 million and Nokia s net cash and other liquid assets decreased by EUR 445 million. In the second quarter Nokia issued approximately EUR 0.9 billion of new bonds, and purchased, through a tender offer, approximately EUR 1.2 billion of certain bonds.

Foreign exchange rates had an approximately EUR 40 million negative impact on net cash.

On a sequential basis, net cash and other liquid assets were affected by the following factors:

In the second quarter 2017, Nokia s net cash from operating activities was positive EUR 1 039 million:

- Nokia s adjusted net profit before changes in net working capital was EUR 459 million in the second quarter 2017.
- Total cash inflows related to working capital were approximately EUR 1.0 billion.
- Nokia had approximately EUR 140 million of restructuring and associated cash outflows in the second quarter 2017. Excluding this, net working capital generated an increase in net cash of approximately EUR 1.15 billion primarily due to an increase in short-term liabilities and a decrease in receivables, partially offset by an increase in inventories.
- The cash inflows related to the increase in short-term liabilities were approximately EUR 1.1 billion, and were primarily due to an up-front cash payment of approximately EUR 1.7 billion, part of which was recognized in the second quarter 2017 results. This was partially offset by the payment of incentives related to Nokia s business performance in 2016.
- The cash inflows related to the decrease in receivables were approximately EUR 150 million.

- The cash outflows related to the increase in inventories were approximately EUR 140 million.
- In addition, Nokia s cash outflows related to income taxes were approximately EUR 240 million, of which approximately EUR 110 million was non-recurring in nature and related to the integration of the former Alcatel-Lucent and Nokia operating models. Also, cash outflows related to net interest were approximately EUR 190 million, of which approximately EUR 160 million was non-recurring in nature, and related to Nokia s tender offer to purchase the 6.50% notes due January 15, 2028, the 6.45% notes due March 15, 2029 and the 5.375% notes due May 15, 2019. The purpose of these transactions was to optimize Nokia s debt maturity profile, to lower average interest expense run rate and to eliminate subsidiary level external debt.

In the second quarter 2017, Nokia s net cash outflows from investing activities primarily related to acquisition of businesses of approximately EUR 310 million, primarily due to the acquisition of Comptel, and capital expenditures of approximately EUR 140 million. This was partially offset by a net cash inflow of approximately EUR 50 million related to the sale of certain assets.

In the second quarter 2017, Nokia s net cash outflows from financing activities primarily related to the payment of ordinary dividend amounting to approximately EUR 840 million and, to a lesser extent, share repurchases of approximately EUR 180 million and the purchase of Comptel securities of approximately EUR 30 million.

Related to the dividend paid in the second quarter 2017, a withholding tax of approximately EUR 120 million is expected to be paid in the third quarter 2017.

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Financial highlights(1)

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EUR million (except EPS in EUR)	Q1-Q2 17	Q1-Q2 16	YoY change
Net sales - constant currency			(2)%
Net sales	10 996	11 088	(1)%
Nokia s Networks business	9 873	10 415	(5)%
Ultra Broadband Networks	4 401	4 653	(5)%
Global Services	2 809	2 888	(3)%
IP Networks and Applications	2 663	2 874	(7)%
Nokia Technologies	616	391	58%
Group Common and Other	562	506	11%
Non-IFRS exclusions	(21)	(197)	(89)%
Gross profit	4 361	3 608	21%
Gross margin %	39.7%	32.5%	720bps
Operating (loss)/profit	(173)	(1 472)	(88)%
Nokia s Networks business	730	650	12%
Ultra Broadband Networks	437	311	41%
Global Services	179	137	31%
IP Networks and Applications	114	202	(44)%

Nokia Technologies	346	195	77%
Group Common and Other	(161)	(169)	
Non-IFRS exclusions	(1 088)	(2 149)	(49)%
Operating margin %	(1.6)%	(13.3)%	1 170bps
Financial income and expenses	(364)	(135)	170%
Taxes (2)	(325)	166	
(Loss)/profit (2)	(868)	(1 437)	(40)%
(Loss)/Profit attributable to the shareholders of the parent (2)	(896)	(1 291)	(31)%
Non-controlling interests (2)	28	(147)	
EPS, EUR diluted (2)	(0.16)	(0.23)	(30)%

(1) Results are reported unless otherwise specified.
(2) Reported Q1-Q2 16 result is not comparable to the previously published Reported Q1-Q2 16 result due to an update to the Alcatel-Lucent purchase price allocation in Q3 16 which resulted in an adjustment to the reported Q1 16 income tax benefit.
Financial discussion
Net sales
In the first six months of 2017, Nokia net sales decreased 1% year-on-year. On a constant currency basis, Nokia net sales would have decreased 2% year-on-year.
The year-on-year decrease in Nokia net sales in the first six months of 2017 was primarily due to Nokia s Networks business, partially offset by Nokia Technologies, lower non-IFRS exclusions related to a reduced valuation of deferred revenue that existed on Alcatel-Lucent s balance sheet at the time of acquisition and Group Common and Other.
Operating profit
In the first six months of 2017, the decrease in operating loss was primarily due to a higher gross profit, a net positive fluctuation in other income and expenses and, to a lesser extent, lower SG&A and R&D expenses. On a year-on-year basis, second quarter 2017 results benefitted from the absence of an adverse effect related to a customer in Latin America undergoing judicial recovery in the second quarter 2016.
The increase in gross profit was primarily due to lower non-IFRS exclusions related to valuation of inventory and deferred revenue and higher gross profit in Nokia Technologies, partially offset by Nokia s Networks business.
The decrease in R&D expenses was primarily due to Nokia s Networks business, partially offset by higher non-IFRS exclusions related to product portfolio strategy costs and amortization of intangible assets.
The decrease in SG&A expenses was primarily due to lower non-IFRS exclusions related to transaction and integration related costs and, to a lesser extent, Nokia s Networks business, partially offset by Nokia Technologies.
Nokia s other income and expenses was an expense of EUR 230 million in first six months of 2017, compared to an expense of EUR 689 million in the year-ago period. The change was primarily related to lower non-IFRS exclusions attributable to lower restructuring and associated charges

and a net positive fluctuation in Nokia s Networks business primarily related to foreign exchange hedging. On a year-on-year basis, the results

for the first six months of 2017 benefitted from the absence of an adverse effect related to a customer in Latin America undergoing judicial recovery in the second quarter 2016.

(Loss)/profit attributable to the shareholders of the parent

In the first six months of 2017, the decrease in loss attributable to the shareholders of the parent was primarily due to a lower operating loss, partially offset by an income tax expense, compared to an income tax benefit in the year-ago period, a net negative fluctuation in financial income and expenses and a net negative fluctuation in non-controlling interests.

The net negative fluctuation in financial income and expenses in the first six months of 2017 was primarily due to non-IFRS exclusions related to Nokia s tender offer to purchase the 6.50% notes due January 15, 2028, the 6.45% notes due March 15, 2029, the 6.75% notes due February 4, 2019 and the 5.375% notes due May 15, 2019 and losses from foreign exchange fluctuations. This was partially offset by the absence of non-IFRS exclusions related to the early redemption of Alcatel-Lucent high yield bonds and a non-cash impairment of a financial asset, both of which negatively affected the year-ago period.

The income tax expense, compared to an income tax benefit in the year-ago period, was primarily due to a non-recurring tax expense related to the integration of the former Alcatel-Lucent and Nokia operating models, a non-recurring change to uncertain tax positions and lower non-IFRS exclusions as a result of lower non-IFRS exclusions in operating profit. This was partially offset by lower income taxes due to Nokia s regional profit mix in the first six months of 2017. In the second quarter 2017, Nokia recorded a EUR 206 million tax expense related to an uncertain tax position in Germany. The matter relates to the disposal of the former Alcatel Lucent railway signaling business in 2006 to Thales (see note 12, Income Taxes of our Annual Report for 2016). Based on new facts and circumstances, management has reassessed the probability of having to pay the taxes and concluded that recognition of an uncertain tax position was warranted at the end of the second quarter 2017.

Descriptions of non-IFRS exclusions in first half 2017

Non-IFRS exclusions consist of costs related to the Alcatel-Lucent transaction and related integration, goodwill impairment charges, intangible asset amortization and purchase price related items, restructuring and associated charges, and certain other items that may not be indicative of Nokia s underlying business performance. For additional details, please refer to note 2, Non-IFRS to reported reconciliation, Continuing Operations (unaudited), in the Financial statement information section in this financial report.

EUR million	Q1-Q2 17	Q1-Q2 16	YoY change
Net sales	(21)	(197)	(89)%
Gross profit	(185)	(825)	(78)%
R&D	(357)	(319)	12%
SG&A	(289)	(378)	(24)%
Other income and expenses	(257)	(627)	(59)%
Operating (loss)/profit	(1 088)	(2 149)	(49)%
Financial income and expenses	(220)	(39)	464%
Taxes (1)	(204)	442	(146)%
(Loss)/profit (1)	(1 512)	(1 747)	(13)%
(Loss)/profit attributable to the shareholders of the parent (1)	(1 542)	(1 637)	(6)%
Non-controlling interests (1)	30	(110)	

⁽¹⁾ Reported Q1-Q2 16 result is not comparable to the previously published Reported Q1-Q2 16 result due to an update to the Alcatel-Lucent purchase price allocation in Q3 16 which resulted in an adjustment to the reported Q1 16 income tax benefit.

Non-IFRS exclusions in net sales

In the first six months of 2017, non-IFRS exclusions in net sales amounted to EUR 21 million, and related to a purchase price allocation adjustment related to a reduced valuation of deferred revenue that existed on Alcatel-Lucent s balance sheet at the time of the acquisition.

Non-IFRS exclusions in operating profit

In the first six months of 2017, non-IFRS exclusions in operating profit amounted to EUR 1 088 million, and were attributable to non-IFRS exclusions that negatively affected gross profit, R&D, SG&A and other income and expenses as follows:

In the first six months of 2017, non-IFRS exclusions in gross profit amounted to EUR 185 million, and primarily related to the product portfolio strategy costs, non-IFRS exclusions in net sales and transaction and integration related costs.

In the first six months of 2017, non-IFRS exclusions in R&D expenses amounted to EUR 357 million, and primarily related to the amortization of intangible assets and, to a lesser extent, product portfolio strategy costs.

In the first six months of 2017, non-IFRS exclusions in SG&A expenses amounted to EUR 289 million, and primarily related to the amortization of intangible assets and transaction and integration related costs.

In the first six months of 2017, non-IFRS exclusions in other income and expenses amounted to an expense of EUR 257 million, and primarily related to EUR 240 million of restructuring and associated charges.

Non-IFRS exclusions in profit attributable to the shareholders of the parent

In the first six months of 2017, non-IFRS exclusions in profit attributable to the shareholders of the parent amounted to EUR 1 542 million, and was primarily related to the non-IFRS exclusions in operating profit. In addition, non-IFRS exclusions affected financial income and expenses and income taxes as follows:

In the first six months of 2017, non-IFRS exclusions in financial income and expenses amounted to an expense of EUR 220 million, and related to Nokia s tender offer to purchase the 6.50% notes due January 15, 2028, the 6.45% notes due March 15, 2029, the 6.75% notes due February 4, 2019 and the 5.375% notes due May 15, 2019.

In the first six months of 2017, non-IFRS exclusions in income taxes amounted to an expense of EUR 204 million, and related primarily to a non-recurring tax expense related to the integration of the former Alcatel-Lucent and Nokia operating models, a non-recurring change to uncertain tax positions and a non-recurring tax expense related to deferred tax valuation allowance, partially offset by non-IFRS exclusions in operating profit.

Nokia s Networks business

Financial highlights(1)

EUR million	Q1-Q2 17	Q1-Q2 16	YoY change
Net sales - constant currency			(7)%
Net sales	9 873	10 415	(5)%
Gross profit	3 879	3 972	(2)%
Gross margin %	39.3%	38.1%	120bps
R&D	(1 860)	(1 924)	(3)%
SG&A	(1 319)	(1 333)	(1)%
Other income and expenses	30	(64)	
Operating profit	730	650	12%
Operating margin %	7.4%	6.2%	120bps

⁽¹⁾ Results are reported unless otherwise specified.

Net sales by region

EUR million	Q1-Q2 17	Q1-Q2 16	YoY change
Asia-Pacific	2 072	2 070	0%
Europe	2 067	2 410	(14)%
Greater China	1 183	1 243	(5)%
Latin America	525	695	(24)%
Middle East & Africa	834	806	3%
North America	3 192	3 191	0%
Total	9 873	10 415	(5)%

Financial discussion

Net sales by segment

In the first six months of 2017, Nokia s Networks business net sales decreased 5% year-on-year. On a constant currency basis, Nokia s Networks business net sales would have decreased 7% year-on-year.

The year-on-year decrease in Nokia s Networks business net sales in the first six months of 2017 was primarily due to both Ultra Broadband Networks, IP Networks and Applications and, to a lesser extent, Global Services.

Operating profit

On a year-on-year basis, in the first six months of 2017, Nokia s Networks business operating profit increased primarily due to a net positive fluctuation in other income and expenses, lower R&D expenses and, to a lesser extent, lower SG&A expenses, partially offset by lower gross profit. On a year-on-year basis, the results for the first six months of 2017 benefitted from the absence of an adverse effect related to a customer in Latin America undergoing judicial recovery in the second quarter 2016.

The lower gross profit was primarily due to IP Networks and Applications, partially offset by Ultra Broadband Networks.

The lower R&D expenses were primarily due to Ultra Broadband Networks.

The lower SG&A expenses were primarily due to Global Services and Ultra Broadband Networks, partially offset by IP Networks and Applications.

Nokia s Networks business other income and expenses was an income of EUR 30 million in the first six months of 2017, compared to an expense of EUR 64 million in the first six months of 2016. On a year-on-year basis, the change was primarily due to lower doubtful account allowances and a net positive fluctuation related to foreign exchange hedging.

Ultra Broadband Networks

Financial highlights(1)

EUR million	Q1-Q2 17	Q1-Q2 16	YoY change
Net sales - constant currency			(7)%
Net sales	4 401	4 653	(5)%
Mobile Networks	3 353	3 405	(2)%
Fixed Networks	1 048	1 248	(16)%
Gross profit	2 171	2 156	1%
Gross margin %	49.3%	46.3%	300bps
R&D	(1 164)	(1 226)	(5)%
SG&A	(594)	(602)	(1)%
Other income and expenses	22	(17)	
Operating profit	437	311	41%
Operating margin %	9.9%	6.7%	320bps

⁽¹⁾ Results are reported unless otherwise specified.

Net sales by region

EUR million	Q1-Q2 17	Q1-Q2 16	YoY change
Asia-Pacific	894	963	(7)%
Europe	776	905	(14)%
Greater China	516	628	(18)%
Latin America	165	243	(32)%
Middle East & Africa	274	248	10%
North America	1 775	1 666	7%
Total	4 401	4 653	(5)%

Financial discussion

Net sales

In the first six months of 2017, Ultra Broadband Networks net sales decreased 5% year-on-year. On a constant currency basis, Ultra Broadband Networks net sales would have decreased 7% year-on-year.

The year-on-year decrease in Ultra Broadband Networks net sales in the first six months of 2017 was primarily due to Fixed Networks and, to a lesser extent, Mobile Networks.

The net sales performance in Fixed Networks was in comparison to a particularly strong first six months of 2016, which was driven by high order intake in the fourth quarter 2015. The decrease in Fixed Networks net sales was primarily due to broadband access and, to a lesser extent, services and digital home. The year-on-year decrease was primarily related to two specific customers, one which completed a large project in Asia-Pacific in the fourth quarter 2016 and another customer which reduced its level of spending in Latin America. For broadband access, the decrease was primarily related to Asia-Pacific and, to a lesser extent, North America and Latin America, partially offset by Europe. For services, the decrease was primarily related to Europe and North America, partially offset by growth in Greater China. For digital home, the decrease was primarily related to Latin America and Asia-Pacific, partially offset by growth in Greater China and North America.

The decrease in Mobile Networks net sales was primarily due to radio networks and converged core networks, partially offset by growth in advanced mobile networks solutions. From a growth perspective, small cells continued to deliver strong performance on a year-on-year basis. For radio networks, the decrease was primarily related to Greater China, Europe and, to a lesser extent, Latin America, partially offset by growth in North America, Asia-Pacific and Middle East & Africa. For converged core networks, the decrease was primarily related to North America, partially offset by growth in Asia-Pacific. For advanced mobile networks solutions, the increase was primarily related to North America, partially offset by a decrease in Middle East & Africa.

Operating profit

On a year-on-year basis, in the first six months of 2017, Ultra Broadband Networks operating profit increased, primarily due to lower R&D expenses, a net positive fluctuation in other income and expenses, higher gross profit and lower SG&A expenses. On a year-on-year basis, the results for the first six months of 2017 benefitted from the absence of an adverse effect related to a customer in Latin America undergoing judicial recovery in the second quarter 2016.

The increase in Ultra Broadband Networks gross profit was primarily due to Mobile Networks, partially offset by Fixed Networks. The higher gross profit in Mobile Networks was primarily due to higher gross margin reflecting progress related to Nokia s cost savings program, partially offset by lower net sales. The lower gross profit in Fixed Networks was primarily due to lower net sales.

The decrease in Ultra Broadband Networks R&D expenses was primarily due to Mobile Networks, partially offset by Fixed Networks. The lower R&D expenses in Mobile Networks was primarily due to lower personnel expenses, reflecting progress related to Nokia s cost savings program. The higher R&D expenses in Fixed Networks was primarily related to the higher spending related to the cable access market, including the acquisition of Gainspeed in the third quarter 2016. To drive growth and higher returns, expanding to the cable access adjacency is a key priority for Fixed Networks.

Ultra Broadband Networks other income and expenses was an income of EUR 22 million in the first six months of 2017, compared to an expense of EUR 17 million in the first six months of 2016. On a year-on-year basis, the change was primarily due to lower doubtful accounts allowances and a net positive fluctuation related to foreign exchange hedging.

Global Services

Financial highlights(1)

EUR million	Q1-Q2 17	Q1-Q2 16	YoY change
Net sales - constant currency			(4)%
Net sales	2 809	2 888	(3)%
Gross profit	548	550	0%
Gross margin %	19.5%	19.0%	50bps
R&D	(44)	(49)	(10)%
SG&A	(323)	(343)	(6)%
Other income and expenses	(3)	(22)	(86)%
Operating profit	179	137	31%
Operating margin %	6.4%	4.7%	170bps

⁽¹⁾ Results are reported unless otherwise specified.

Net sales by region

EUR million	Q1-Q2 17	Q1-Q2 16	YoY change
Asia-Pacific	647	641	1%
Europe	572	660	(13)%
Greater China	440	411	7%
Latin America	197	201	(2)%
Middle East & Africa	355	369	(4)%
North America	598	607	(1)%
Total	2 809	2 888	(3)%

Financial discussion

Net sales

In the first six months of 2017, Global Services net sales decreased 3% year-on-year. On a constant currency basis, Global Services net sales would have decreased 4% year-on-year.

The year-on-year decrease in Global Services net sales in the first six months of 2017 was primarily due to systems integration, care, network planning and optimization and managed services, partially offset by network implementation. For systems integration, the decrease was primarily related to Europe. The year-on-year decrease in systems integration was attributable to the winding down of a specific set of legacy Alcatel-Lucent contracts. For care, the decrease was primarily related to Asia-Pacific, Europe and North America, partially offset by growth in Greater China. For network planning and optimization, the decrease was primarily related to North America and Europe. For network implementation, the increase was primarily related to Asia-Pacific, North America and Greater China, partially offset by Europe.

Operating profit

On a year-on-year basis, in the first six months of 2017, Global Services operating profit increased, primarily due to lower SG&A expenses and a net positive fluctuation in other income and expenses. On a year-on-year basis, the results for the first six months of 2017 benefitted from the absence of an adverse effect related to a customer in Latin America undergoing judicial recovery in the second quarter 2016.

The decrease in Global Services SG&A expenses was primarily due to lower personnel expenses, reflecting progress related to Nokia s cost savings program.

Global Services other income and expenses was an expense of EUR 3 million in the first six months of 2017, compared to an expense of EUR 22 million in the first six months of 2016. On a year-on-year basis, the change was primarily due to lower doubtful accounts allowances.

IP Netwo	orks a	and A	ppli	cations
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Financial highlights(1)

EUR million	Q1-Q2 17	Q1-Q2 16	YoY change
Net sales - constant currency			(9)%
Net sales	2 663	2 874	(7)%
IP/Optical Networks	1 938	2 182	(11)%
IP Routing	1 275	1 430	(11)%
Optical Networks	663	752	(12)%
Applications & Analytics	724	692	5%
Gross profit	1 159	1 265	(8)%
Gross margin %	43.5%	44.0%	(50)bps
R&D	(652)	(650)	0%
SG&A	(403)	(388)	4%
Other income and expenses	10	(25)	
Operating profit	114	202	(44)%
Operating margin %	4.3%	7.0%	(270)bps

⁽¹⁾ Results are reported unless otherwise specified.

Net sales by region

EUR million	Q1-Q2 17	Q1-Q2 16	YoY change
Asia-Pacific	531	467	14%
Europe	719	846	(15)%
Greater China	227	204	11%
Latin America	163	251	(35)%
Middle East & Africa	205	189	8%
North America	818	918	(11)%
Total	2 663	2 874	(7)%

Financial discussion

Net sales

In the first six months of 2017, IP Networks and Applications net sales decreased 7% year-on-year. On a constant currency basis, IP Networks and Applications net sales would have decreased 9% year-on-year.

The year-on-year decrease in IP Networks and Applications net sales in the first six months of 2017 was primarily due to IP/Optical Networks, partially offset by Applications & Analytics.

The decrease in IP/Optical Networks net sales was due to both IP routing and optical networks, primarily due to weakness in the communication service provider market, as well as a product portfolio transition in IP routing. For IP routing, the decrease was primarily related to North America, Europe and Latin America, partially offset by growth in Greater China and Asia-Pacific. In addition, IP routing net sales were negatively affected by lower resale of third party IP routers. For optical networks, the decrease was primarily related to Europe, Latin America and North America, partially offset by Asia-Pacific.

The increase in Applications & Analytics net sales was primarily due to growth in services, network management and business support systems, partially offset by service delivery platforms. The year-on-year performances of services and business support systems benefitted from the acquisition of Comptel. To drive growth and higher returns, building a standalone software business at scale is a key priority for Nokia. Thus, Applications & Analytics is driving a significant transformation, enabled by investments in sales, R&D and services capabilities. As of the beginning of the second quarter 2017, the stand-alone sales force was fully operational. As a result, organic net sales performance has improved, and on a year-on-year basis, excluding the acquisition of Comptel, Applications & Analytics net sales would have increased.

Operating profit

On a year-on-year basis, in first six months of 2017, IP Networks and Applications operating profit decreased, primarily due to lower gross profit, higher SG&A expenses, partially offset by a net positive fluctuation in other income and expenses. On a year-on-year basis, the results for

the first six months of 2017 benefitted from the absence of an adverse effect related to a customer in Latin America undergoing judicial recovery in the second quarter 2016.

The decrease in IP Networks and Applications gross profit was primarily due to IP/Optical Networks, partially offset by Applications & Analytics. The lower gross profit in IP/Optical Networks was primarily due to lower net sales. The higher gross profit in Applications & Analytics was primarily due to higher net sales.

The increase in IP Networks and Applications SG&A expenses was due to both Applications & Analytics and IP/Optical Networks.

IP Networks and Applications other income and expenses was an income of EUR 10 million in the first six months of 2017, compared to an expense of EUR 25 million in the first six months of 2016. On a year-on-year basis, the change was primarily due to doubtful accounts allowances.

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Financial highlights(1)

EUR million	Q1-Q2 17	Q1-Q2 16	YoY change
Net sales - constant currency			57%
Net sales	616	391	58%
Gross profit	586	383	53%
Gross margin %	95.1%	98.0%	(290)bps
R&D	(121)	(114)	6%
SG&A	(108)	(71)	52%
Other income and expenses	(12)	(2)	500%
Operating profit	346	195	77%
Operating margin %	56.2%	49.9%	630bps

⁽¹⁾ Results are reported unless otherwise specified.

Financial discussion

Net sales

In the first six months of 2017, Nokia Technologies net sales increased 58% year-on-year. On a constant currency basis, Nokia Technologies net sales would have increased 57% year-on-year. Of the EUR 616 million of net sales in the first six months of 2017, EUR 588 million related to

patent and brand licensing and EUR 28 million related to digital health and digital media.

The year-on-year increase in Nokia Technologies net sales in the first six months of 2017 was primarily due to higher net sales related to an IPR license agreement that was expanded in the third quarter 2016, higher net sales related to a new license agreement in the second quarter 2017 and, to a lesser extent, our brand partnership with HMD, the acquisition of Withings in the second quarter 2016, divested IPR and non-recurring net sales related to a new license agreement in the first quarter 2017. This was partially offset by lower licensing income from certain existing licensees.

Operating profit

The year-on-year increase in Nokia Technologies operating profit for the first six months of 2017 was primarily due to higher gross profit, partially offset by higher SG&A expenses.

The higher gross profit in Nokia Technologies was primarily due to higher net sales.

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The increase in Nokia Technologies SG&A expenses was primarily due to increased licensing-related litigation costs and the ramp-up of digital health. The higher SG&A expenses in digital health was primarily due to the acquisition of Withings in the second quarter 2016.

Group	Common	and	Other
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Financial highlights(1)

EUR million	Q1-Q2 17	Q1-Q2 16	YoY change
Net sales - constant currency			6%
Net sales	562	506	11%
Gross profit	81	79	3%
Gross margin %	14.4%	15.6%	(120)bps
R&D	(142)	(143)	(1)%
SG&A	(109)	(109)	0%
Other income and expenses	9	5	80%
Operating loss	(161)	(169)	(5)%
Operating margin %	(28.6)%	(33.4)%	480bps

⁽¹⁾ Results are reported unless otherwise specified.

Financial discussion

Net sales

In the first six months of 2017, Group Common and Other net sales increased 11% year-on-year. On a constant currency basis, Group Common and Other net sales would have increased 6% year-on-year.

The year-on-year increase in Group Common and Other net sales in the first six months of 2017	was primarily due to	Radio Frequency	Systems
and Alcatel Submarine Networks.			

Operating profit

On a year-on-year basis, in the first six months of 2017, Group Common and Other operating loss decreased slightly, primarily due a slight net positive fluctuation in other income and expenses.

The approximately flat gross profit in Group Common and Other was primarily due to slightly higher gross profit in Radio Frequency Systems, partially offset by slightly lower gross profit in Alcatel Submarine Networks.

Group Common and Other other income and expenses was an income of EUR 9 million in first six months of 2017, compared to an income of EUR 5 million in the first six months of 2016. On a year-on-year basis, the change was primarily due to a gain on the sale of certain assets, partially offset by lower gains related to Nokia s venture fund investments.

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Nokia change in net cash and other liquid assets

^{**} Cash outflows related to net interest were approximately EUR 320 million, of which approximately EUR 220 million was non-recurring in nature, and related to Nokia s tender offer to purchase certain bonds.

EUR million, at end of period	Q2 17	Q4 16	YTD change
Total cash and other liquid assets(1)	7 917	9 327	(15)%
Net cash and other liquid assets(1)	3 964	5 299	(25)%

⁽¹⁾ Total cash and other liquid assets consist of the following line items from our consolidated statement of financial position: Cash and cash equivalents, available-for sale investments, liquid assets and investments at fair value through profit and loss, liquid assets. Net cash and other liquid assets equals total cash and other liquid assets less long-term interest-bearing liabilities and less short-term interest-bearing liabilities. For details, please refer to note 14, Notes to the consolidated statement of cash flows , in the Financial statement information section in this report.

^{*} Cash outflows related to income taxes were approximately EUR 330 million, of which approximately EUR 110 million was non-recurring in nature and related to the integration of the former Alcatel-Lucent and Nokia operating models.

In the first six months of 2017, Nokia s total cash and other liquid assets decreased by EUR 1 410 million and Nokia s net cash and other liquid assets decreased by EUR 1 335 million. In the first six months, Nokia issued approximately EUR 2.1 billion of new bonds, and purchased, through a tender offer, approximately EUR 1.9 billion of certain bonds.

Foreign exchange rates had an approximately EUR 10 million positive impact on net cash.
Compared to the end of 2016, net cash and other liquid assets were affected by the following factors:
In the first six months of 2017, Nokia s net cash from operating activities was positive EUR 566 million:
• Nokia s adjusted net profit before changes in net working capital was EUR 750 million in the first six months of 2017.
Total cash inflows related to working capital of approximately EUR 470 million.
• Nokia had approximately EUR 290 million of restructuring and associated cash outflows in the first six months of 2017. Excluding this, net working capital generated an increase in net cash of approximately EUR 760 million, primarily due to an increase in short-term liabilities and decrease in receivables, partially offset by an increase in inventories.
• The cash inflows related to short-term liabilities were approximately EUR 900 million, and were primarily due to an up-front cash payment of approximately EUR 1.7 billion, part of which was recognized in the second quarter 2017 results. This was partially offset by the payment of incentives related to Nokia s business performance in 2016 and a decrease in accounts payable.
• The cash inflows related to the decrease in receivables were approximately EUR 380 million.
• The cash outflows related to the increase in inventories were approximately EUR 530 million.
• In addition, Nokia s cash outflows related to income taxes were approximately EUR 330 million, of which approximately EUR 110 million was non-recurring in nature and related to the integration of the former Alcatel-Lucent and Nokia operating models. Also, cash outflows related to net interest were approximately EUR 320 million, of which

approximately EUR 220 million was non-recurring in nature, and related to Nokia s tender offer to purchase the 6.50% notes due January 15, 2028, the 6.45% notes due March 15, 2029, the 6.75% notes due February 4, 2019 and the 5.375% notes due May 15, 2019. The purpose of these transactions was to optimize Nokia s debt maturity profile, to lower average interest expense run rate and to eliminate subsidiary level external debt.
In the first six months of 2017, Nokia s net cash outflows from investing activities primarily related to acquisition of businesses of approximately EUR 400 million, primarily due to the acquisition of Comptel, and capital expenditures of approximately EUR 290 million. This was partially offset by a net cash inflow of approximately EUR 60 million related to the sale of certain assets.
In the first six months of 2017, Nokia s net cash outflows from financing activities primarily related to the payment of ordinary dividend amounting to approximately EUR 840 million and, to a lesser extent, share repurchases of approximately EUR 410 million and the purchase of Comptel securities of approximately EUR 30 million.
Related to the dividend paid in the second quarter 2017, a withholding tax of approximately EUR 120 million is expected to be paid in the third quarter 2017.
Shares
The total number of Nokia shares on June 30, 2017, equaled 5 836 268 012. On June 30, 2017, Nokia and its subsidiary companies owned 184 470 873 Nokia shares, representing approximately 3.2% of the total number of Nokia shares and voting rights.
Dividend
In the second quarter 2017, Nokia paid a dividend of approximately EUR 840 million for financial year 2016 (EUR 0.17 per share), as resolved by the shareholders at the Annual General Meeting held on May 23, 2017. Related to the dividend paid, a withholding tax of approximately EUR 120 million is expected to be paid in the third quarter 2017.
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Financial statement information

Consolidated income statement (condensed, unaudited)

TEXTS									Non-IFRS	
EUR million	Q2 17	Q2 16	Q1 17	Q1-Q2 17			Q2 16	Q1 17	Q1-Q2 17	
Net sales (notes 2, 3, 4) (1)	5 619	5 576	5 378	10 996	11 088	5 629	5 670	5 388	11 017	11 285
Cost of sales (1)	(3 383)				(7 479)					(6 852)
Gross profit (notes 2, 3) (1)	2 236	2 031	2 125	4 361	3 608	2 350	2 205	2 196	4 546	4 433
Research and development				(2.4=0)	(a. =00)	(4.044)	(4.0 - 4)	(4.000)	(0.400)	(0.400)
expenses (1)	(1 214)	(1 236)	(1 265)	(2 479)	(2 500)	(1 041)	(1 074)	(1 080)	(2 122)	(2 182)
Selling, general and administrative	(00.6)	(010)	(010)	(1.005)	(1.001)	(7.5.5)	(7.65)	(701)	(1.500)	(1.510)
expenses (1)	(906)				(1 891)				(1 536)	(1 513)
Other income and expenses (1)	(162)	(636)	(69)	(230)	(689)	21	(34)	6	26	(61)
Operating (loss)/profit (notes 2,										
3)	(45)	(760)	(127)	(173)	(1472)	574	332	341	915	677
Share of results of associated										
companies and joint ventures (note										
12)	3	2	(9)	(6)	4	3	2	(9)	(6)	4
Financial income and expenses										
(note 9)	(218)	(32)	(146)	(364)	(135)	(63)	(29)	(81)	(144)	(96)
(Loss)/Profit before tax (note 2)	(261)		(282)	(543)	(1 604)		305	251	765	585
Income tax (expense)/benefit (2)	(172)	65	(154)	(325)	166	(74)	(135)	(48)	(122)	(275)
(Loss)/Profit from continuing										
operations (note 2) (2)	(433)	(726)	(435)	(868)	(1437)	441	171	203	644	310
(Loss)/Profit attributable to equity										
holders of the parent (2)	(423)	(667)	(473)	(896)	(1 291)	449	194	196	646	346
Non-controlling interests (2)	(9)	(58)	37	28	(147)	(9)	(24)	6	(2)	(37)
(Loss)/Profit from discontinued										
operations	(14)	2	(15)	(29)	17	0	0	0	0	0
(Loss)/Profit attributable to equity										
holders of the parent	(14)	2	(15)		17	0	0	0	0	0
Non-controlling interests	0	0	0	0	0	0	0	0	0	0
(Loss)/Profit for the period (2)	(447)	(723)	(450)	(897)	(1 420)	441	170	203	644	310
(Loss)/Profit attributable to equity	(407)	(665)	(400)	(025)	(1.070)	4.40	104	106	646	246
holders of the parent (2)	(437)			(925)	(1 273)		194	196	646	346
Non-controlling interests (2)	(9)	(58)	37	28	(147)	(9)	(24)	6	(2)	(37)
Earnings per share, EUR (for										
profit/(loss) attributable to										
equity holders of the parent)										
Basic earnings per share										
Continuing operations (2)	(0.07)	(0.12)	(0.08)	(0.16)	(0.23)	0.08	0.03	0.03	0.11	0.06
Discontinued operations	0.00	0.00	0.00	(0.01)	0.00	0.00	0.00	0.00	0.00	0.00
(Loss)/profit for the period (2)	(0.08)	(0.12)	(0.09)	(0.16)	(0.22)	0.08	0.03	0.03	0.11	0.06
Diluted earnings per share										
Continuing operations (2)	(0.07)	. ,		, ,	(0.23)		0.03	0.03	0.11	0.06
Discontinued operations	0.00	0.00	0.00	(0.01)	0.00	0.00	0.00	0.00	0.00	0.00
(Loss)/profit for the period (2)	(0.08)	(0.12)	(0.09)	(0.16)	(0.22)	0.08	0.03	0.03	0.11	0.06
Average number of shares (000										
shares)	5 (50	5.716	5.700	7.600	5.607					
Basic	5 670	5 746	5 709	5 689	5 697	F (70.222	5746 107	5 700 171	5 (00 (44	E (07.075
Diluted	332 5 670	107 5 771	171 5 709	5 680	5 715	3 0/0 332	3 /46 10/	3 /09 1/1	5 689 644	3 09/ 9/3
Direct	332	511	3 709 171	5 689 644		5 687 050	5 750 476	5 707 766	5 705 415	5 726 190
From continuing operations:	332	311	1/1	044	303	2 00/ 038	J 137410	5 121 100	5 705 415	5 120 100
r rom continuing operations:	(407)	(411)	(404)	(811)	(817)	(146)	(162)	(141)	(287)	(298)
	(407)	(+11)	(404)	(011)	(01/)	(140)	(102)	(141)	(207)	(270)

Depreciation	and	amortization
(notes 2, 3)		

(1) In Q1 17, Nokia adopted a more activity-based allocation method which resulted in changes to allocation and presentation principles of certain costs. In addition, it changed the presentation of certain hedging gains and losses. Prior year comparatives have been recasted to reflect these changes. Refer to Note 1, Basis of preparation .

(2) Reported Q1-Q2 16 result is not comparable to the previously published Reported Q1-Q2 16 result due to an update to the Alcatel-Lucent purchase price allocation in Q3 16 which resulted in an adjustment to the Reported Q1 16 income tax benefit.

The notes are an integral part of these consolidated financial statements.

Consolidated statement of comprehensive income (condensed, unaudited)

EUD218	Reported	Reported O2 16	Reported	Reported	Reported
EUR million (Loss) for the period (1)	Q2 17 (447)	(723)	Q1 17 (450)	Q1-Q2 17 (897)	Q1-Q2 16 (1 420)
(Loss) for the period (1)	(447)	(723)	(430)	(897)	(1 420)
Other comprehensive income					
Items that will not be reclassified to profit or loss:					
Remeasurements on defined benefit pensions	70	92	227	297	(373)
Income tax related to items that will not be reclassified to profit or	70)2	221	271	(373)
loss	(7)	(59)	(106)	(113)	100
Items that may be reclassified subsequently to profit or loss:	(1)	(37)	(100)	(113)	100
Translation differences	(991)	313	(146)	(1 137)	(366)
Net investment hedges	260	(28)	16	276	19
Cash flow hedges	83	(39)	(10)	73	(16)
Available-for-sale investments (note 9)	(29)	(48)	6	(23)	(109)
Other increase/(decrease), net	1	(2)	5	6	(1)
Income tax related to items that may be reclassified subsequently		(-)			
to profit or loss	(65)	16	(4)	(69)	5
	()			()	
Other comprehensive (loss)/income, net of tax	(678)	245	(12)	(690)	(741)
Total comprehensive loss (1)	(1 125)	(478)	(462)	(1 587)	(2 161)
10m1 compression (2)	(1 120)	(170)	(102)	(1007)	(= 101)
Attributable to:					
Equity holders of the parent (1)	(1 073)	(445)	(494)	(1 567)	(1 955)
Non-controlling interests (1)	(52)	(33)	32	(20)	(206)
	(1 125)	(478)	(462)	(1 587)	(2 161)
	, í	, ,		, í	ĺ
Attributable to equity holders of the parent:					
Continuing operations (1)	(1 059)	(447)	(479)	(1 538)	(1 972)
Discontinued operations	(14)	2	(15)	(29)	17
•	(1 073)	(445)	(494)	(1 567)	(1 955)
	, , ,	, , ,	, , ,	, , ,	
Attributable to non-controlling interests:					
Continuing operations (1)	(52)	(33)	32	(20)	(206)
Discontinued operations	0	0	0	0	0
	(52)	(33)	32	(20)	(206)

⁽¹⁾ Reported Q1-Q2 16 result is not comparable to the previously published Reported Q1-Q2 16 result due to an update to the Alcatel-Lucent purchase price allocation in Q3 16 which resulted in an adjustment to the Reported Q1 16 income tax benefit.

The notes are an integral part of these consolidated financial statements.

Consolidated statement of financial position, reported (condensed, unaudited)

EUR million	June 30, 2017	June 30, 2016	December 31, 2016
ASSETS	2017	2010	31, 2010
Goodwill	5 554	5 383	5 724
Other intangible assets	4 647	5 453	5 236
Property, plant and equipment	1 863	1 944	1 981
Investments in associated companies and joint ventures	113	100	116
Available-for-sale investments (note 9)	949	1 055	1 040
Deferred tax assets (note 8)	5 408	5 292	5 701
Other non-current financial assets (note 9)	250	178	254
Defined benefit pension assets (note 7)	3 868	3 324	3 802
Other non-current assets	295	330	327
Non-current assets	22 948	23 060	24 182
Inventories	2 950	2 798	2 506
Accounts receivable, net of allowances for doubtful accounts (note 9)	6 401	6 626	6 972
Prepaid expenses and accrued income	1 629	1 466	1 296
Social security, VAT and other indirect taxes	913	670	560
Divestment related receivables	86	130	90
Other	630	665	645
Current income tax assets	286	296	279
Other financial assets (note 9)	409	244	296
Investments at fair value through profit and loss, liquid assets (note 9)	0	747	327
Available-for-sale investments, liquid assets (note 9)	1 270	1 791	1 502
Cash and cash equivalents (note 9)	6 647	8 449	7 497
Current assets	19 593	22 417	20 674
Assets held for sale	41	53	44
Total assets	42 581	45 530	44 901

	June 30, 2017	June 30, 2016	December 31, 2016
SHAREHOLDERS EQUITY AND LIABILITIES	2017	2010	2010
Share capital	246	246	246
Share issue premium	410	381	439
Treasury shares	(1 126)	(704)	(881)
Translation differences	(384)	(17)	483
Fair value and other reserves	709	(181)	488
Reserve for invested non-restricted equity	15 616	15 771	15 731
Retained earnings	1 682	3 373	3 588
Capital and reserves attributable to equity holders of the parent	17 154	18 868	20 094
Non-controlling interests	858	1 259	881
Total equity	18 012	20 127	20 975
Long-term interest-bearing liabilities (notes 9, 13)	3 577	3 593	3 657
Deferred tax liabilities (note 8)	392	383	403
Defined benefit pension and post-retirement liabilities (note 7)	4 743	5 368	5 000
Deferred revenue and other long-term liabilities	2 596	1 477	1 453
Advance payments and deferred revenue	2 404	1 157	1 171
Other (note 9)	192	320	282
Provisions (note 10)	730	521	808
Non-current liabilities	12 038	11 341	11 321
Short-term interest bearing liabilities (notes 9, 13)	376	317	371
Other financial liabilities (note 9)	244	296	236
Current income tax liabilities	693	466	634
Accounts payable (note 9)	3 545	3 498	3 781

Accrued expenses, deferred revenue and other liabilities	6 543	7 823	6 412
Advance payments and deferred revenue	3 309	3 228	3 178
Salaries, wages and social charges	1 260	1 364	1 576
Other	1 973	3 231	1 659
Provisions (note 10)	1 131	1 660	1 172
Current liabilities	12 532	14 061	12 605
Total shareholders equity and liabilities	42 581	45 530	44 901
Interest-bearing liabilities, EUR million	3 953	3 910	4 027
Shareholders equity per share, EUR	3.04	3.27	3.51
Number of shares (1 000 shares, excluding treasury shares)	5 651 797	5 771 570	5 720 503

June 30, 2016 consolidated statement of financial position has been adjusted to reflect the impact of significant updates to the Alcatel-Lucent purchase price allocation that were determined during 2016 but subsequent to the second quarter 2016.

The notes are an integral part of these consolidated financial statements.

Consolidated statement of cash flows, reported (condensed, unaudited)

EUR million	Q2 17	Q2 16	Q1 17	Q1-Q2 17	Q1-Q2 16
Cash flow from operating activities	Q= 17	Q_ 10	Q2 11	Q- Q	Q1 Q2 10
(Loss) for the period (1)	(447)	(723)	(450)	(897)	(1 420)
Adjustments, total (note 14) (1)	906	1 019	741	1 647	1 401
Change in net working capital (note 14)	1 013	(794)	(544)	469	(1 766)
Cash from/(used in) operations	1 472	(498)	(253)	1 219	(1 785)
Interest received	16	34	18	34	55
Interest paid	(208)	(30)	(148)	(356)	(217)
Income taxes, net paid	(241)	(122)	(90)	(331)	(252)
Net cash from/(used in) operating activities	1 039	(616)	(473)	566	(2 199)
Cash flow from investing activities					
Acquisition of businesses, net of cash acquired	(310)	(179)	(79)	(389)	5 976
Purchase of current available-for-sale investments, liquid assets	(853)	(988)	(771)	(1 624)	(1 893)
Purchase of non-current available-for-sale investments	(17)	(25)	(19)	(36)	(36)
Purchase of shares in associated companies	0	0	(10)	(10)	0
(Payment of)/proceeds from other long-term loans receivable	(2)	0	0	(2)	19
Payment of from short-term loans receivable	(1)	(32)	0	(1)	(50)
Capital expenditures	(142)	(104)	(150)	(292)	(187)
Proceeds from disposal of businesses, net of disposed cash	(1)	2	0	(1)	(22)
Proceeds from disposal of shares in associated companies	0	10	0	0	10
Proceeds from maturities and sale of current available-for-sale					
investments, liquid assets	1 064	1 627	775	1 839	2 598
Proceeds from maturities and sale of investments at fair value					
through profit and loss, liquid assets	324	0	0	324	5
Proceeds from sale of non-current available-for-sale investments	43	59	39	82	112
Proceeds from sale of property, plant and equipment and					
intangible assets	25	1	3	28	3
Net cash from/(used in) investing activities	130	371	(212)	(82)	6 535
Cash flow from financing activities					
Proceeds from stock option exercises	0	(4)	0	0	4
Purchase of treasury shares	(176)	0	(237)	(413)	0
Purchase of equity instruments of subsidiaries	(30)	(139)	0	(30)	(139)
Proceeds from long-term borrowings	883	0	1 241	2 124	0
Repayment of long-term borrowings	(1 260)	(603)	(759)	(2 019)	(2 525)
Proceeds from/(payment of) short-term borrowings	86	80	(67)	19	(153)
Dividends paid and other contributions to shareholders	(843)	0	0	(843)	0
Net cash (used in)/from financing activities	(1 340)	(666)	178	(1 162)	(2 813)
Foreign exchange adjustment	(169)	17	(3)	(172)	(69)
Net (decrease)/increase in cash and cash equivalents	(340)	(894)	(510)	(850)	1 454
Cash and cash equivalents at beginning of period	6 987	9 343	7 497	7 497	6 995
Cash and cash equivalents at end of period	6 647	8 449	6 987	6 647	8 449

⁽¹⁾ Reported Q1-Q2 16 result is not comparable to the previously published Reported Q1-Q2 16 result due to an update to the Alcatel-Lucent purchase price allocation in Q3 16 which resulted in an adjustment to the Reported Q1 16 income tax benefit.

Consolidated statement of cash flows combines cash flows from both the continuing and the discontinued operations. The figures in the consolidated statement of cash flows cannot be directly traced from the statement of financial position without additional information as a result of acquisitions and disposals of subsidiaries and net foreign exchange differences arising on consolidation.

The notes are an integral part of these consolidated financial statements.

Consolidated statement of changes in shareholders equity, reported (condensed, unaudited)

Translation

	capital	Share issue premium	shares		other reserves	Reserve for invested non-restricted equity	earnings	of the parent	interest	Total equity
January 1, 2016	246	380	(718)	292	204	3 820	6 279	10 502	21	10 523
Remeasurements on defined benefit pension plans, net										
of tax	0	0	0	0	(264)	0	0	(264)	(11)	(274)
Translation										
differences	0	0	0	(317)	0	0	0	(317)	(49)	(366)
Net investment										
hedges, net of tax	0	0	0	15	0	0	0	15	0	15
Cash flow hedges,										
net of tax	0	0	0	0	(12)	0	0	(12)	0	(12)
Available-for-sale										
investments, net of		_				_			_	
tax (note 9)	0	0	0	0	(105)	0	0	(105)	0	(105)
Other										
increase/decrease,	0	0	0	0	1	0	0	1	0	1
net	0			0	1 0	0	0 (1 273)	(1 273)		(1.420)
Loss for the period Total	U	U	U	U	U	U	(1 2/3)	(1 273)	(147)	(1 420)
comprehensive										
loss	0	0	0	(302)	(380)	0	(1 274)	(1 955)	(206)	(2 161)
Share-based	U	U	U	(302)	(300)	· ·	(1 27 1)	(1)33)	(200)	(2 101)
payment	0	41	0	0	0	0	0	41	0	41
Excess tax benefit	Ŭ		Ŭ	Ŭ	, and the second	, and the second	Ŭ		Ţ,	
on share-based										
payment	0	(2)	0	0	0	0	0	(2)	0	(2)
Settlement of										
performance and										
restricted shares	0	(8)) 14	0	0	(10)	0	(4)	0	(4)
Stock options										
exercise	0			0	0	2	0	4	0	4
Dividends	0	0	0	0	0	0	(1 501)	(1 501)	(10)	(1 511)
Acquisitions										
through business	0	0	0	0	0	11.616	0	11.616	1 775	12 201
combinations	0	0	0	0	0	11 616	0	11 616	1 775	13 391
Equity issuance costs related to										
acquisitions	0	0	0	0	0	(16)	0	(16)	0	(16)
Acquisition of	U	U	U	U	U	(10)	0	(10)	U	(10)
non-controlling										
interests	0	0	0	(7)	(5)	359	(171)	176	(321)	(144)
Vested portion of	Ü	V	· ·	(1)	(3)	337	(171)	1,0	(321)	(111)
share-based										
payment awards										
related to										
acquisitions	0	6	0	0	0	0	0	6	0	6
Convertible bond -										
equity component	0	(38)	0	0	0	0	38	0	0	0
Total of other										
equity										
movements	0	1	14	(7)	(5)	11 951	(1 633)	10 321	1 444	11 765

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June 30, 2016	246	381	(704)	(17)	(181)	15 771	3 373	18 868	1 259	20 127
January 1, 2017	246	439	(881)	483	488	15 731	3 588	20 094	881	20 975
Remeasurements			()							
on defined benefit										
pension plans, net										
of tax	0	0	0	0	181	0	0	181	0	181
Translation										
differences	0	0	0	$(1\ 088)$	0	0	0	(1 088)	(49)	(1 137)
Net investment						_			_	
hedges, net of tax	0	0	0	221	0	0	0	221	0	221
Cash flow hedges,	0	0	0	•	50	0	0	~ 0	0	5 0
net of tax	0	0	0	0	58	0	0	58	0	58
Available-for-sale										
investments, net of	0	0	0	0	(20)	0	0	(20)	0	(20)
tax (note 9) Other	0	0	0	0	(20)	0	0	(20)	0	(20)
increase/decrease, net	0	0	0	0	3	0	3	6	1	7
Loss for the period	0	0	0	0	0	0	(925)	(925)	28	(897)
Total	U	U	U	U	U	U	(923)	(923)	20	(091)
comprehensive										
loss	0	0	0	(867)	222	0	(922)	(1 567)	(20)	(1 587)
Share-based	O	U	U	(007)	222	· ·	()22)	(1 507)	(20)	(1 307)
payment	0	27	0	0	0	0	0	27	0	27
Excess tax benefit										
on share-based										
payment	0	2	0	0	0	0	0	2	0	2
Settlement of										
performance and										
restricted shares	0	(60)	153	0	0	(115)	0	(22)	0	(22)
Acquisition of										
treasury shares	0	0	(398)	0	0	0	0	(398)	0	(398)
Dividends	0	0	0	0	0	0	(963)	(963)	(3)	(966)
Acquisitions										
through business										
combinations	0	0	0	0	0	0	0	0	18	18
Acquisition of										
non-controlling										
interests	0	0	0	0	0	0	(21)	(21)	(18)	(39)
Other movements	0	1	0	0	0	0	0	1	0	1
Total of other										
equity	0	(20)	(0.45)	0	0	(11.4)	(00.4)	(1.070)	(2)	(1.07.6)
movements	0	(29)	(245)	0	0	(114)	(984)	(1 373)	(3)	(1 376)
June 30, 2017	246	410	(1 126)	(384)	709	15 616	1 682	17 154	858	18 012

The notes are an integral part of these consolidated financial statements.

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Notes	tΩ	Hina	ทดาลโ	statements
10103	w	1 111a	morai	statements

1. BASIS OF PREPARATION

This unaudited, consolidated, condensed financial statement information of Nokia has been prepared in accordance with International Accounting Standard 34 (IAS 34, Interim Financial Reporting). This condensed financial statement information should be read in conjunction with the financial statements for 2016, which have been prepared in accordance with IFRS as published by the IASB and adopted by the EU. The same accounting policies, methods of computation and applications of judgment are followed in this financial statement information as was followed in the financial statements for 2016, except as described below in relation to the revised allocation methodology and changes to presentation of certain hedging gains and losses.

This financial report was authorized for issue by management on July 26, 2017.

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. Non-IFRS financial measures should not be considered in isolation from, or as a substitute for, financial information presented in compliance with IFRS, and non-IFRS financial measures as used by Nokia may not be comparable to similarly titled amounts used by other companies or persons.

Nokia has reviewed the allocation of expenses across functions and segments, and as of the first quarter 2017, a more activity-based allocation method has been adopted which resulted in changes in presentation of certain expenses by both function and segment. In addition, related to the acquisition of Alcatel-Lucent, Nokia s foreign exchange hedging activities were reviewed in order to develop harmonized hedging practices. As of the first quarter 2017, all gains and losses from hedging operative forecasted net foreign exchange exposures are recorded in other income and expenses, regardless of whether hedge accounting is applied or not. Previously, these hedging gains and losses were recorded primarily as an adjustment to net sales if cash flow hedge accounting was applied. Impact of these adjustments are not considered to be material.

Percentages and figures presented herein may include rounding differences and therefore may not add up precisely to the totals presented and may vary from previously published financial information.
New and amended standards and interpretations adopted
On January 1, 2017, Nokia adopted amendments to IAS 7, Statement of Cash Flows and IAS 12, Income Taxes. The amendments to IAS 7 are part of the IASB s Disclosure Initiative and help users of financial statements better understand changes in an entity s debt arising from financing activities, including both changes arising from cash flows and non-cash changes. The amendments to IAS 12 relate to potential restrictions of tax laws to sources of taxable profits against which an entity may make deductions on the reversal of deductible temporary difference as well as provide additional guidance on how an entity should determine future taxable profits. The amendments did not have a material impact on Nokia s consolidated financial statements.
Standards issued but not yet effective
The following new standards issued by the IASB are expected to be relevant to Nokia s operations and financial position when adopted.
IFRS 9 Financial instruments
IFRS 9, Financial Instruments, was issued in July 2014 and it replaces IAS 39, Financial Instruments: Recognition and Measurement. IFRS 9 addresses the classification and measurement of financial assets and liabilities, introduces a new impairment model and a new hedge accounting model. Nokia will adopt the standard on the effective date of January 1, 2018. At adoption Nokia plans not to restate comparative periods, but will present the cumulative effect of adopting IFRS 9 as a transition adjustment to the opening balance of equity on January 1, 2018.
Nokia s investments in venture funds that are currently classified as non-current available-for-sale investments will be classified at fair value through profit or loss. Upon initial application the accumulated fair value adjustment, currently recorded to other comprehensive income, will be presented as an adjustment to opening balance of equity. Based on review procedures to date this is expected to be the most significant transition adjustment for Nokia as no significant impacts have been identified in the assessment of the new impairment and hedge accounting models. Nokia continues to assess all potential impacts of IFRS 9.

IFRS 15 Revenue from Contracts with Customers

IFRS 15 Revenue from Contracts with Customers, was issued in May 2014 and establishes a new five-step model that will apply to revenue arising from contracts with customers. Under IFRS 15 revenue is recognized to reflect the transfer of promised goods and services to customers for amounts that reflect the consideration to which an entity expects to be entitled in exchange for those goods and services to a customer. Nokia will adopt the standard on the effective date of January 1, 2018. The new standard replaces IAS 18, Revenue, and IAS 11, Construction contracts. Nokia plans to adopt the standard by applying the modified retrospective method with the cumulative effect of adopting IFRS 15

presented as an adjustment to the opening balance of equity on January 1, 2018.

Based on review procedures on existing contracts completed to date, Nokia has not identified a material impact, with total impact to retained earnings amounting to less than one percent. We are currently assessing certain license transfer contracts where revenue may be recorded earlier at a point in time instead of over time. Due to the complexity of some of our license subscription contracts, the actual revenue recognition treatment required under the new standard will be dependent on contract-specific terms. Also, revenue related to certain software contracts is likely to change from over time under the current standard to point in time. Nokia continues to assess all potential impacts of the new standard, including assessments for contracts entered into during the second half of the year.

Currency exposures, approximately (unaudited)

	Q2 1	7	Q2	2 16	Q1 17		
	Net sales	Total costs	Net sales	Total costs	Net sales	Total costs	
EUR	~20%	~30%	~20%	~30%	~20%	~30%	
USD	~50%	~40%	~50%	~40%	~50%	~40%	
CNY	~10%	~10%	~10%	~10%	~10%	~10%	
Other	~20%	~20%	~20%	~20%	~20%	~20%	
Total	100%	100%	100%	100%	100%	100%	

End of Q2 17 balance sheet rate 1 EUR = 1.14 USD

End of Q2 16 balance sheet rate 1 EUR = 1.11 USD

End of Q1 17 balance sheet rate 1 EUR = 1.07 USD

Exchange rates

Nokia is a company with global operations and net sales derived from various countries and invoiced in various currencies. Therefore, our business and results from operations are exposed to changes in exchange rates between the euro, our reporting currency, and other currencies, such as the US dollar and the Chinese yuan. To mitigate the impact of changes in exchange rates on our results, we hedge operative forecasted net foreign exchange exposures, typically within a 12-month horizon, and apply hedge accounting in the majority of cases.

2. NON-IFRS TO REPORTED RECONCILIATION, (unaudited)

In addition to information on our reported IFRS results, Nokia provides certain information on a non-IFRS, or underlying business performance, 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. Nokia believes that the non-IFRS results provide meaningful supplemental information to both management and investors regarding Nokia s underlying business performance by excluding the above-described items. 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.

EUR million	Non-IFRS	Non-IFRS exclusions		Non-IFRS		Reported	Non-IFRS	Non-IFRS exclusions		Non-IFRS	Non-IFRS exclusions Re
Net sales	Q2 17 5 629	Q2 17 (11)	Q2 17 5 619	Q2 16 5 670	Q2 16 (93)	Q2 16 5 576	Q1-Q2 17 11 017	(21)	Q1-Q2 17 10 996	Q1-Q2 16 11 285	Q1-Q2 16 Q1 (197)
Cost of sales	(3 279)	(103)		(3 464)	(81)		(6 471)	(164)		(6 852)	(628)
Gross profit	2 350	(103)		2 205	(174)		4 546	(185)		4 433	(825)
% of net sales	41.7%	(/	39.8%		· /	36.4%		` ′	39.7%		. ,
Research and	71.7 70		37.070	30.7 /	,	50.170	71.5 /6		37.7 70	37.3 /	
development											
expenses	(1 041)	(173)	(1 214)	(1 074)	(162)	(1 236)	(2 122)	(357)	(2 479)	(2 182)	(319)
% of net sales	18%	. ,	22%	` /	(/	22%			23%		
Selling, general											
and											
administrative											
expenses	(755)	(151)	(906)	(765)	(154)	(919)	(1 536)	(289)	(1 825)	(1 513)	(378)
% of net sales	13%	,	16%	` ′	` ,	16%	` ,	` ′	17%	. ,	
Other income and											
expenses	21	(182)	(162)	(34)	(602)	(636)	26	(257)	(230)	(61)	(627)
Operating		,	` `	Ì	· · ·	, ,		,		, ,	, ,
profit/(loss)	574	(620)	(45)	332	(1.092)	(760)	915	(1 088)	(173)	677	(2 149)
% of net sales	10.2%	1	(0.8)%	5.9%)	(13.6)%	8.3%		(1.6)%	6.0%)
Share of results of associated companies and											
joint ventures	3	0	3	2	0	2	(6)	0	(6)	4	0
Financial income											
and expenses	(63)	(156)	(218)	(29)	(3)	(32)	(144)	(220)	(364)	(96)	(39)
Profit/(loss)											
before tax	514	(775)	(261)	305	(1 096)	(791)	765	(1 308)	(543)	585	(2 188)
Income tax											
(expense)/benefit	(74)	(98)	(172)	(135)	200	65	(122)	(204)	(325)	(275)	442
Profit/(loss) from continuing operations	441	(873)	(433)	171	(896)	(726)	644	(1 512)	(868)	310	(1 747)
Equity holders of		` ′	` '		, ,	` '		, ,			
the parent	449	(873)	(423)	194	(862)	(667)	646	(1 542)	(896)	346	(1 637)
Non-controlling		, ,	`		· · ·	` '		,			, ,
interests	(9)	(1)	(9)	(24)	(34)	(58)	(2)	30	28	(37)	(110)
Depreciation and											
amortization	(146)	(260)	(407)	(162)	(249)	(411)	(287)	(524)	(811)	(298)	(519)
EBITDA	723	(359)		495	(843)		1 196	(564)		978	(1 630)
Share-based payment	12	0	12	29	0	29	33	0	33	49	0

Financial

Selling,

Q2 17 EUR million	Net sales		Research and development expenses	Selling, general and administrative expenses	Other income and expenses	Operating profit	Financial income and expenses	Income tax (expense)/ benefit	Profit/(loss) from continuing operations	Attributable to the equity holders of the parent	Attributable non-controll
Non-IFRS		(3 279)		-	-	574	(63)		_	449	
Release of		()	(= 0 ==)	(122)			(00)	()	,		
acquisition-related											
fair value											
adjustments to											
deferred revenue											
	(11)	`				(11)		3	(7)	(7)	
and inventory Amortization and	(11)	,				(11)		3	(7)	(1)	
depreciation of											
acquired intangible											
assets and											
property, plant and											
equipment		(2)	(159)	(99)	(1)	(261)		74	(187)	(186)	
Transaction and											
related costs,											
including											
integration costs		(9)		(51)		(60)		11	(48)	(48)	
Restructuring and											
associated charges				(1)	(166)	(167))	39	(128)	(128)	
Product portfolio				,		,					
strategy costs		(93)	(13)		(16)	(121))	26	(96)	(96)	
Early redemption		()	(-)		()	, ,			(-)	()	
cost of debt						0	(156)	31	(125)	(125)	
Uncertain tax						· ·	(150)	, 31	(120)	(123)	
position in											
Germany						0		(206)	(206)	(206)	
Deferred tax						U		(200)	(200)	(200)	
valuation											
allowance						0		(77	(77)	(77)	
Total non-IFRS						U		(77)	(77)	(77)	
	(1.1)	(102)	(172)	(151)	(100)	((20)	(150	(00)	(073)	(072)	
exclusions	(11)	,									
Reported	5 019	(3 383)	(1 214)	(906)	(162)	(45)	(218)	(172)	(433)	(423)	
				Selling,			Financial	_		Attributable to	
02.16		C 4 6	Research and	general and	Other	0	income	Income tax	from	the equity	Attributable
Q2 16	Not color		-	administrative			and	(expense)/	continuing	holders of the	non-controll
EUR million Non-IFRS	Net sales		expenses (1 074)	expenses (765)	expenses (34)	profit	expenses (29)	benefit	operations 171	parent 194	interests
	3 070	(3 404)	(10/4)	(703)	(34)) 334	(29)	(133)) 1/1	174	
Release of											
acquisition-related											
fair value											
adjustments to											
deferred revenue											
and inventory	(93))				(93)		32	(61)	(56)	
Amortization and											
depreciation of											
acquired intangible											
assets and											
property, plant and											
equipment		(7)	(151)	(96)		(254)		84	(170)	(160)	
Transaction and		(.)	(-2-1)	(20)		(== •)			(=. 0)	(200)	
related costs,											
including											
integration costs			(1)	(55)	(7)	(63)	1	6	(56)	(53)	
megration costs			(1)	(33)	(7,	, (63)	•	U	(30)	(33)	

Profit/(loss) Attributable to

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Restructuring and										
associated charges		(2)	(3)	(596)	(601)		60	(540)	(525)	
Product portfolio										
strategy costs	(75)	(8)			(83)		17	(66)	(66)	
Other non-IFRS										
exclusions in										
operating profit	1				1			1	1	
Early redemption										
cost of debt					0	(3)		(3)	(3)	
Total non-IFRS										
exclusions	(93) (81)	(162)	(154)	(602)	(1 092)	(3)	200	(896)	(862)	
Reported	5 576 (3 545)	(1 236)	(919)	(636)	(760)	(32)	65	(726)	(667)	

Q1-Q2 17 EUR million	Net sales		Research and development expenses	Selling, general and administrative expenses	Other income and expenses	Operating profit	Financial income and expenses	Income tax (expense)/ benefit	Profit/(loss) from continuing operations	Attributable to the equity holders of the	Attributable non-controlli interests
Non-IFRS		(6 471)	-		-	_	-		•	646	III CT CS CS
Release of acquisition-related fair value adjustments to deferred revenue											
and inventory	(21))				(21))	7	(14)	(14)	,
Amortization and depreciation of acquired intangible assets and property, plant and											
equipment Transaction and		(3)	(321)	(199)) (1)	(525))	151	(373)	(373)	
related costs, including		40		(00)		(4.04)		20	(01)	(01)	
integration costs Restructuring and		(14)		(88)		(101)		20	Ì	, ,	
associated charges Product portfolio				(2)) (240)) (242)		58	(184)	(184)	
strategy costs Early redemption		(146)	(36)		(16)	(198))	43	(155)	(186)	
cost of debt Uncertain tax						0	(220)) 44	(176)	(176)	
position in Germany						0		(206)) (206)	(206)	
Deferred tax						Ť		(200)	(200)	(200)	
valuation allowance						0		(77)	(77)	(77)	,
Operating model integration						0		(245)	(245)	(245)	,
Total non-IFRS											
exclusions Reported	(21) 10 996	(164) (6 635)									
Q1-Q2 16 EUR million	Net sales	Cost of sales	expenses	expenses	expenses	profit	Financial income and expenses	Income tax (expense)/ benefit	from continuing operations	parent	Attributable non-controlli interests
Non-IFRS Release of acquisition-related fair value adjustments to deferred revenue	11 285	(6 852)	(2 182)	(1 513)	(61)) 677	(96)) (275)	310	346	
and inventory Amortization and depreciation of acquired intangible assets and property, plant and	(197)	(509)				(706)		156	(550)		
equipment		(8)				(517)		166	(351)		
			(1)	(172)) (7)	(179)	1	21	(158)	(154)	

Transaction and related costs, including integration costs										
Restructuring and							٠.			
associated charges	(7)	(2)	(3)	(619)	(630)		64	(567)	(550)	
Product portfolio										
strategy costs	(105)	(9)	(4)	(2)	(120)		22	(98)	(94)	
Other non-IFRS										
exclusions in										
operating profit	1	3			4		(1)	3	3	
Early redemption							· ·			
cost of debt					0	(39)	14	(25)	(25)	
Total non-IFRS										
exclusions	(197) (628)	(319)	(378)	(627)	(2 149)	(39)	442	(1 747)	(1 637)	(1
Reported	11 088 (7 479)	(2 500)	(1 891)	(689)	(1 472)	(135)	166	(1 437)	(1 291)	(1

3. SEGMENT INFORMATION (unaudited)

Nokia has two businesses: Nokia s Networks business and Nokia Technologies, and four reportable segments for financial reporting purposes: (1) Ultra Broadband Networks, (2) Global Services and (3) IP Networks and Applications within Nokia s Networks business; and (4) Nokia Technologies. Segment-level information for Group Common and Other is also presented.

Nokia has aggregated Fixed Networks and Mobile Networks operating segments to one reportable segment Ultra Broadband Networks and IP/Optical Networks and Applications & Analytics operating segments to one reportable segment IP Networks and Applications. The aggregated operating segments have similar economic characteristics, such as long-term margins; have similar products, production processes, distribution methods and customers; and operate in a similar regulatory environment.

Nokia adopted its current operational and reporting structure on April 1, 2017. Previously Nokia had three reportable segments for management reporting purposes: Ultra Broadband Networks and IP/Networks and Applications within Nokia s Networks business, and Nokia Technologies. Ultra Broadband Networks was comprised of two aggregated operating segments: Mobile Networks and Fixed Networks, and IP Networks and Applications was comprised of two aggregated operating segments: IP/Optical Networks and Applications and Analytics. On March 17, 2017, Nokia announced changes in its organizational structure which included the separation of Nokia s former Mobile Networks operating segment into two distinct operating segments: one focused on products and solutions, called Mobile Networks, and the other on services, called Global Services. The Global Services operating segment is comprised of the services that resided within the previous Mobile Networks operating segment, including company-wide managed services. Global Services does not include the services of Fixed Networks, IP/Optical Networks and Applications & Analytics, which continue to reside within the respective operating segments.

The chief operating decision maker receives monthly financial information for the operating and reportable segments. Key financial performance measures of the reportable segments include primarily net sales and operating profit. The chief operating decision maker evaluates the performance of the segments and allocates resources to them based on non-IFRS operating profit.

Accounting policies of the segments are the same as those described in Note 2, Significant accounting policies of our Annual Report for 2016. Inter-segment revenues and transfers are accounted for as if the revenues were to third parties, that is, at current market prices. Non-IFRS exclusions are not allocated to the segments.

Ultra Broadband Networks

Ultra Broadband Networks comprises Mobile Networks and Fixed Networks operating segments.

The Mobile Networks operating segment offers an industry-leading portfolio of end-to-end mobile networking solutions comprising hardware and software for communication service providers, enterprises and related markets/verticals, such as public safety and Internet of Things (IoT). The Mobile Networks operating segment consists of the following business units:

- Radio Networks, which includes macro radio access network (RAN) offerings for mobile data and voice communication using existing 2G, 3G and LTE technology, as well as evolution to the future 5G standard.
- Converged Core, which is the cloud computing powerhouse for Mobile Networks. This group is responsible for a market leading portfolio in the areas of 3G Core, IP Multimedia Subsystems/Voice over LTE, Subscriber Data Management (SDM), Cloud and virtualized software / infrastructure.
- Advanced Mobile Networks Solutions, which creates end-to-end innovative solutions, and is responsible for the portfolios for IoT Connectivity, Public Sector solutions, such as public safety and Microwaves. It is also responsible for Nokia s award winning Small cells portfolio and unlicensed solutions such as Wi-Fi and MulteFire. The unit is targeting communication service providers as well as vertical businesses.

The Fixed Networks operating segment provides copper and fiber access products, solutions and services. The portfolio allows for a customized combination of technologies that brings fiber to the most economical point for the customer. The Fixed Networks operating segment consists of the following business units:

- Broadband Access, which consists of advanced copper based solutions such as very high rate digital subscriber line (VDSL2), and innovative vectoring technology to reduce cross-talk interference and improve performance. The Fixed Networks business group is also developing fiber to the home solutions, such as Gigabit Passive Optical Networks (GPON) and leading in next-generation fiber access technologies like time wavelength division multiplexing PON (TWDM-PON).
- The Digital Home unit is responsible for development of the broadband network termination equipment located at the users premises. The main focus is on devices that enable connectivity of users in fiber based network. Recently, the scope is expanding towards specialized models for businesses and enterprises, including Residential Gateway and IoT functions.
- Access Management Solutions provides features required to operate end-to-end fixed networks. The solution also includes value added applications that streamline operations and significantly reduce the operational costs.
- Fixed Networks Services, which is comprised of deployment, maintenance and professional services such as copper and fiber broadband evolution, public switched telephone network transformation, site implementation and outside plant, as well as multi-vendor maintenance.

Global Services

The Global Services operating segment helps communication service providers and vertical customers navigate through complexity and transform their business. The Global Services business group consists of the following business units:

- Network Planning and Optimization, which helps customers maximize their network performance and quality of end users experience, while also keeping capex under tight control. Analytics based services powered by Nokia AVA, the cognitive service delivery platform, is designed to satisfy the surging need for a use-case driven approach to addressing customer pain points.
- Network Implementation, which deploys, expands and modernizes mobile networks of the communication service providers, enterprise and public sector customers in growth and mature markets, thus optimizing customers total cost of ownership (both capex and opex) and deployment schedules while minimizing risks.
- Systems Integration, which offers network architecture, integration, customization, and migration services. Portfolio focuses on core & SDM, data center services, telco cloud, transformation and prime integration for communication service providers and other specific services for vertical customers.
- Care, which assures optimal network availability by providing network operation support, maintenance, orchestration and expert services. With the power of Nokia AVA and its latest analytics and automation, our offering includes proactive and predictive solutions that are fully customizable to local and customer-specific requirements.
- Managed Services, which provides tailored packages for its communication service providers, public sector, transport and utility customers to help them transform their business and excel in the fixed, mobile, applications and IP domains. The full portfolio comprises of network and service management, a build-operate-transfer model, hosting, advanced analytics, IoT, cloud and security operations.

IP Networks and Applications

IP Networks and Applications comprises IP/Optical Networks and Applications & Analytics operating segments.

The IP/Optical Networks operating segment provides the key IP routing and optical transport systems, software and services to build high capacity network infrastructure for the internet and global connectivity. The IP/Optical Networks business group consists of the following business units:

- IP Routing, which includes solutions for advanced residential, business and mobile services spanning the IP core, IP edge, Mobile Packet Core and IP/Ethernet metro and access. It also includes Nuage Networks, which makes datacenter and branch network resources as readily consumable and efficient as cloud computing and storage. It also includes Video, which leverages the latest in cloud and streaming technologies to efficiently deliver an exceptional video experience.
- Optical networks includes Wavelength Division Multiplexing and wavelength routing, allowing for high data capacity by multiplexing many wavelengths over each fiber and programmability by dynamically routing wavelengths across the network.

The Applications & Analytics operating segment provides intelligent software and services that help service providers build strong digital businesses. Applications & Analytics consists of the following business units:

- Network Management, which provides a single consolidated view of any mobile network and includes tools for troubleshooting, administration, software management and configuration management.
- Emerging Businesses, which includes cloud management and orchestration, network analytics, self-organizing networks, security software and IoT platforms.
- Business Support Systems, which offers a digital commerce software platform that supports millions of transactions daily.
- Service Delivery Platforms (SDP), which enables scalable, cloud-based session border control, diameter routing, and authentication, authorization and accounting functions to control a wide variety of agile and innovative new services. SDP also provides the cloud-based communications platforms and open application program interfaces to enable global enterprises to transform their communications infrastructure.
- Operational Support Systems (OSS), which automates traditional OSS fulfillment and assurance stacks and is able to integrate complex multivendor operations support systems. Our offerings include the device management platform and assurance software portfolio, and an Autonomous Care solution that uses machine learning and bots to prevent and manage issues without human intervention.
- Services, which is dedicated to helping customers with transformation solutions and planning, with strong experience in complex cloud implementations, advanced data science, security assessments, evolved Service Operations Centers and new IoT services.

Nokia Technologies

The Nokia Technologies operating segment has two main objectives: to drive growth and renewal in its existing patent licensing business; and to build new businesses based on breakthrough innovation in key technologies and products, in the areas of Digital Media and Digital Health. The majority of net sales and related costs and expenses attributable to licensing and patenting the separate patent portfolios of Nokia Technologies, Nokia s Networks business, and Nokia Bell Labs are recorded in Nokia Technologies. Each reportable segment continues to separately record its own research and development expenses.

Group Common and Other

Group Common and Other includes Alcatel-Lucent Submarine Networks and Radio Frequency Systems, both of which are being managed as separate entities. In addition, Group Common and Other includes Nokia Bell Labs operating expenses, as well as certain corporate-level and centrally managed operating expenses.

60

Q2 17	Ultra Broadband		IP Networks and	Nokia s Networks		Group Common		
EUR million		Global Services	* *	business Total (3)	Technologies	and Other		Non-IFRS total
Net sales	2 165	1 448	1 358	4 971	369	307	(18)	
Cost of sales	(1 125)	(1 142)	(759)	(3 026)	(17)	(253)	18	(3 279)
Gross profit	1 040	305	600	1 945	352	54	0	2 350
% of net sales	48.0%	21.1%	44.2%	39.1%	95.4%	17.6%		41.79
Research and development	(501)	(21)	(21.4)	(01.6)	((0)	(60)		(1.041)
expenses	(581)	(21)	(314)	(916)	(60)	(66)	0	. ,
% of net sales	27%	1%	23%	18%	16%	21%		189
Selling, general and administrative	(200)	4.50	400		(50)	(70)		
expenses	(293)	(159)	(199)	(652)	(50)	(53)	0	. ,
% of net sales	14%	11%	15%	13%	14%	17%		139
Other income					,	_	_	
and expenses	25	(1)	6	30	(12)	3	0	21
Operating		4.00	0.4	10.5	•••	(40)		
profit/(loss)	191	123	91	406	230	(62)	0	
% of net sales	8.8%	8.5%	6.7%	8.2%	62.3%	(20.2)%	,	10.29
Depreciation and								
amortization	(67)	(21)	(42)	(130)	(4)	(12)	0	(146)
Share of results of associated companies and								
joint ventures	3	0	0	3	0	0	0	
EBITDA	261	144	133	539	234	(50)	0	723

⁽¹⁾ Mobile Networks net sales of EUR 1 619 million, Fixed Networks net sales of EUR 546 million.

⁽²⁾ IP Routing net sales of EUR 654 million, Optical Networks net sales of EUR 339 million and Applications & Analytics net sales of EUR 365 million.

⁽³⁾ Includes Total Services net sales of EUR 2 063 million which consists of all of the services sales of Nokia s Networks business, including Global Services of EUR 1 448 million and the services of Fixed Networks, IP/Optical Networks and Applications & Analytics.

⁽⁴⁾ 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 and associated charges, and certain other items that may not be indicative of Nokia s underlying business performance.

				Nokia s				
Q2 16 EUR million	Ultra Broadband Networks (1)	Global Services	IP Networks and Applications (2)	Networks business Total (3)	Nokia Technologies	Group Common and Other	Fliminations	Non-IFRS total
Net sales	2 356	1 444	1 421	5 222	194	270	(16)	
Cost of sales	(1 246)	(1 201)	(809)	(3 256)	(7)	(218)	16	(3 464)
Gross profit	1 110	244	612	1 966	187	52	0	2 205
% of net sales	47.1%							38.99
Research and development								
expenses	(614)	(24)	(310)	(948)	(57)	(70)	0	(1 074)
% of net sales	26%	2%	22%	18%	29%	26%		199
Selling, general and administrative expenses	(304)	(170)	(190)	(664)	(39)	(63)	0	, ,
% of net sales	13%	12%	13%	13%	20%	23%		13%
Other income								
and expenses	(9)	(15)	(17)	(41)	(2)	10	0	(34)
Operating								
profit/(loss)	184	34	95	313	89	(70)	0	332
% of net sales Depreciation and	7.8%	6 2.4%	6.7%	6.0%	45.9%	(25.9)%	0	5.9%
amortization	(94)	(18)	(39)	(151)	(2)	(10)	0	(162)
Share of results of associated companies and	ı,							
joint ventures	2	0	0	2	0	0	0	2
EBITDA	279	53	134	466	91	(61)	0	495

⁽¹⁾ Mobile Networks net sales of EUR 1 727 million, Fixed Networks net sales of EUR 629 million.

⁽²⁾ IP Routing net sales of EUR 713 million, Optical Networks net sales of EUR 375 million and Applications & Analytics net sales of EUR 334 million.

⁽³⁾ Includes Total Services net sales of EUR 2 039 million which consists of all of the services sales of Nokia s Networks business, including Global Services of EUR 1 444 million and the services of Fixed Networks, IP/Optical Networks and Applications & Analytics.

⁽⁴⁾ 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 and associated charges, and certain other items that may not be indicative of Nokia s underlying business performance.

				Nokia s				
Q1 17 EUR million	Ultra Broadband Networks (1)	Global Services	IP Networks and Applications (2)	Networks business Total (3)	Nokia Technologies	Group Common and Other	Fliminations	Non-IFRS total
Net sales	2 236	1 361	1 304	4 902	247	254	(15)	
Cost of sales	(1 105)	(1 118)	(744)	(2 967)	(13)	(227)	15	(3 192)
Gross profit	1 131	243	560	1 935	234	27	0	2 196
% of net sales	50.6%	17.9%				10.6%		40.8%
Research and development								
expenses	(583)	(23)	(338)	(944)	(61)	(76)	0	(1 080)
% of net sales	26%	2%	26%	19%	25%	30%		20%
Selling, general and administrative								
expenses	(300)	(164)	(203)	(667)	(58)	(56)	0	(781)
% of net sales	13%	12%	16%	14%	23%	22%		14%
Other income								
and expenses	(3)	(2)	4	0	0	6	0	6
Operating	245	5.5	22	22.4	116	(00)	0	241
profit/(loss)	245	55	23	324	116	(99)	0	341
% of net sales	11.0%	4.0%	1.8%	6.6%	47.0%	(39.0)%	9	6.3%
Depreciation and								
amortization	(64)	(19)	(43)	(126)	(4)	(11)	0	(141)
Share of results of associated companies and								
joint ventures	1	0	0	1	(10)	0	0	(9)
EBITDA	311	75	66	451	109	(88)	0	472

⁽¹⁾ Mobile Networks net sales of EUR 1 735 million, Fixed Networks net sales of EUR 501 million.

⁽²⁾ IP Routing net sales of EUR 621 million, Optical Networks net sales of EUR 324 million and Applications & Analytics net sales of EUR 359 million.

⁽³⁾ Includes Total Services net sales of EUR 1 909 million which consists of all of the services sales of Nokia s Networks business, including Global Services of EUR 1 361 million and the services of Fixed Networks, IP/Optical Networks and Applications & Analytics.

⁽⁴⁾ 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 and associated charges, and certain other items that may not be indicative of Nokia s underlying business performance.

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				Nokia s				
Q1-Q2 17 EUR million	Ultra Broadband Networks (1)	Global Services	IP Networks and Applications (2)	Networks business Total (3)	Nokia Technologies	Group Common and Other	Eliminations	Non-IFRS total
Net sales	4 401	2 809	2 663	9 873	616	562	(33)	11 017
Cost of sales	(2 230)	(2 261)	(1 503)	(5 993)	(30)	(481)	33	(6 471)
Gross profit	2 171	548	1 159	3 879	586	81	0	4 546
% of net sales	49.3%	19.5%	43.5%	39.3%	95.1%	14.4%		41.3%
Research and development								
expenses	(1 164)	(44)	(652)	(1 860)	(121)	(142)	0	(2 122)
% of net sales	26%	2%	24%	19%	20%	25%		19%
Selling, general and administrative								
expenses	(594)	(323)	(403)	(1 319)	(108)	(109)	0	(1 536)
% of net sales	13%	11%	15%	13%	18%	19%		14%
Other income		(2)	10	20	(10)			
and expenses	22	(3)	10	30	(12)	9	0	26
Operating profit/(loss)	437	179	114	730	346	(161)	0	915
% of net sales	9.9%	6.4%	4.3%	7.4%	56.2%	(28.6)%)	8.3%
Depreciation and								
amortization	(131)	(40)	(85)	(256)	(8)	(23)	0	(287)
Share of results of associated companies and								
joint ventures	4	0	0	4	(10)	0	0	(6)
EBITDA	572	219	199	990	343	(138)	0	1 196

⁽¹⁾ Mobile Networks net sales of EUR 3 353 million, Fixed Networks net sales of EUR 1 048 million.

⁽²⁾ IP Routing net sales of EUR 1 275 million, Optical Networks net sales of EUR 663 million and Applications & Analytics net sales of EUR 724 million.

⁽³⁾ Includes Total Services net sales of EUR 3 972 million which consists of all of the services sales of Nokia s Networks business, including Global Services of EUR 2 809 million and the services of Fixed Networks, IP/Optical Networks and Applications & Analytics.

⁽⁴⁾ 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 and associated charges, and certain other items that may not be indicative of Nokia s underlying business performance.

				Nokia s				
Q1-Q2 16	Ultra Broadband		IP Networks and	Networks	Nokia	Group Common		
EUR million	Networks (1) 4 653	Global Services	Applications (2)	business Total (3)	Technologies	and Other 506		Non-IFRS total
Net sales		2 888	2 874	10 415	391		(28) 28	
Cost of sales	(2 497)	(2 338)	(1 609)	(6 444)	(9)	(427)		(6 852)
Gross profit	2 156	550	1 265	3 972	383	79	0	4 433
% of net sales	46.3%	5 19.0%	44.0%	38.1%	98.0%	15.6%		39.3%
Research and development								
expenses	(1 226)	(49)	(650)	(1 924)	(114)	(143)	0	(2 182)
% of net sales	26%	2%	23%	18%	29%	28%		19%
Selling, general and administrative								
expenses	(602)	(343)	(388)	(1 333)	(71)	(109)	0	(1 513)
% of net sales	13%	12%	14%	13%	18%	22%		13%
Other income								
and expenses	(17)	(22)	(25)	(64)	(2)	5	0	(61)
Operating								
profit/(loss)	311	137	202	650	195	(169)	0	677
% of net sales	6.7%	4.7%	7.0%	6.2%	49.9%	(33.4)%	, 0	6.0%
Depreciation and								
amortization	(165)	(31)	(78)	(274)	(3)	(20)	0	(298)
Share of results of associated companies and	ļ.							
joint ventures	4	0	0	4	0	0	0	4
EBITDA	480	168	280	928	199	(149)	0	978

⁽¹⁾ Mobile Networks net sales of EUR 3 405 million, Fixed Networks net sales of EUR 1 248 million.

⁽²⁾ IP Routing net sales of EUR 1 430 million, Optical Networks net sales of EUR 752 million and Applications & Analytics net sales of EUR 692 million.

⁽³⁾ Includes Total Services net sales of EUR 4 061 million which consists of all of the services sales of Nokia s Networks business, including Global Services of EUR 2 888 million and the services of Fixed Networks, IP/Optical Networks and Applications & Analytics.

⁽⁴⁾ 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 and associated charges, and certain other items that may not be indicative of Nokia s underlying business performance.

4. NET SALES BY GEOGRAPHIC AREA, reported (unaudited)

			YoY		QoQ			YoY
EUR million	Q2 17	Q2 16	change	Q1 17	change	Q1-Q2 17	Q1-Q2 16	change
Asia-Pacific	1 037	976	6%	1 056	(2)%	2 093	2 084	0%
Europe	1 676	1 501	12%	1 377	22%	3 053	3 016	1%
Greater China	637	688	(7)%	564	13%	1 202	1 266	(5)%
Latin America	306	355	(14)%	234	31%	540	700	(23)%
Middle East & Africa	435	402	8%	406	7%	840	792	6%
North America	1 528	1 655	(8)%	1 740	(12)%	3 268	3 230	1%
Total	5 619	5 577	1%	5 378	4%	10 996	11 087	(1)%

5. PERSONNEL BY GEOGRAPHIC AREA, (unaudited)

	June 30, 2017	June 30, 2016	YoY change	March 31, 2017	QoQ change
Asia-Pacific	22 148	21 882	1%	21 648	2%
Europe	38 914	38 556	1%	38 482	1%
Greater China	17 760	19 151	(7)%	18 619	(5)%
Latin America	3 968	3 943	1%	3 347	19%
Middle East & Africa	3 974	4 070	(2)%	3 963	0%
North America	15 185	15 790	(4)%	15 024	1%
Total	101 949	103 392	(1)%	101 083	1%

6. ACQUISITIONS, reported (unaudited)

Acquisitions completed during the first half of 2017 did not have a material impact to the consolidated statement of financial position, comprehensive income or cash flows. The provisional aggregate purchase price, aggregate net assets and aggregate goodwill amount to EUR 398 million, EUR 255 million and EUR 143 million, respectively. The purchase accounting for the acquisitions is ongoing and Nokia will conduct additional analysis that will result in adjustments in the subsequent quarters of 2017.

Deepfield Networks Inc

On January 31, 2017 Nokia acquired 100% ownership interest in Deepfield Networks Inc., a United States-based leader in real-time analytics for IP network performance management and security. The goodwill arising from the acquisition was allocated to IP/Optical Networks.

Comptel Corporation

On February 8, 2017 Nokia and Comptel Corporation (Comptel) entered into a Transaction Agreement where Nokia undertook to make a voluntary public cash tender offer to purchase all of the issued and outstanding shares and option rights in Comptel that are not owned by Comptel, or any of its subsidiaries. The tender offer expired on March 29, 2017. The preliminary results of the tender offer were announced on March 30, 2017 and the final results on April 3, 2017. As part of the tender offer, Nokia acquired approximately 88.44% of all the shares and votes in Comptel (excluding the treasury shares held by Comptel) and approximately 83.34% of all the shares and votes of Comptel on a fully diluted basis. Nokia waived the Minimum Acceptance Condition of the tender offer and consolidated Comptel as of March 30, 2017.

Including the Comptel shares acquired through market purchases, as of March 31, 2017, Nokia held approximately 90.51% of all the shares and votes in Comptel (excluding the treasury shares held by Comptel) and approximately 85.30% of all the shares and votes of Comptel on a fully diluted basis. The additional Comptel shares acquired by Nokia through market purchases were accounted as separate transactions with non-controlling interests with any gain or loss recognized within Nokia s consolidated retained earnings.

Nokia commenced a subsequent offer period on April 4, 2017. The offer period expired on April 19, 2017. Additionally, Nokia continued to acquire the remaining Comptel shares through market purchases. As Nokia s holding exceeded nine tenths (9/10) of all the shares and votes in Comptel, Nokia also entered into, in accordance to the Finnish Limited Liability Companies Act, the redemption process of the shares held by the non-controlling interest. Information regarding the redemption right was registered with the Finnish Trade Register on April 7, 2017. The Arbitral Tribunal appointed by the Redemption Committee of the Finland Chamber of Commerce confirmed on June 28, 2017 that Nokia has the right to redeem the minority shares in Comptel and that Nokia has the right to obtain title to the minority shares by lodging a security approved by the Arbitral Tribunal for the payment of the redemption price and the interest accruing thereon. Nokia reports thus a 100% ownership interest in Comptel on June 30, 2017.

The goodwill arising from the acquisition was allocated to Applications and Analytics.

7. PENSIONS AND OTHER POST-EMPLOYMENT BENEFITS, reported (unaudited)

Nokia operates a number of post-employment plans in various countries including both defined contribution and defined benefit plans. Defined benefit plans include pension plans and post-retirement welfare benefit plans, providing post-retirement healthcare benefits and life insurance coverage. Defined benefit plans expose Nokia to actuarial risks such as investment risk, interest rate risk, and life expectancy risk. The characteristics and associated risks of the defined benefit plans vary depending on legal, fiscal, and economic requirements in each country.

95% of Nokia s defined benefit obligation and 97% of plan assets fair values were remeasured as of June 30, 2017. Nokia s pension and post-retirement obligations in the United States have been remeasured by updated valuations from an external actuary and Nokia s main pension plans outside of the U.S. (in Germany, United Kingdom, Switzerland and Belgium) have been re-measured based on a sensitivity analysis. The impact of not re-measuring other pension and post-employment obligations is considered not material.

The weighted average discount rates used to measure Nokia s pension and post-retirement obligations as of June 30, 2017 have been updated and were as follows:

Discount rates

	June 30, 2017	June 30, 2016	December 31, 2016
U.S. Pension	3.4	3.0	3.7
U.S. Post-retirement healthcare and other	3.1	2.7	3.4
U.S. Post-retirement group life	3.6	3.3	3.8
Euro - Pension (1)	1.7	1.8	1.5
U.K Pension	2.6	2.8	2.7

⁽¹⁾ Includes pensions, retirement indemnities and end-of service gratuities.

Change in pension and post-retirement net asset/(liability) recognized

Net liability	EUR million
•	Net liability
recognized at	
January 1 1 284 (2 482) (1 198) (398) 0 (398) (398) 0 (398	January 1
Current service cost (88) 0 (88) (66) 0 (66) (155) 0 (155)	Current service cost
Net interest	Net interest
income/(expense) 22 (43) (21) 10 (47) (37) 27 (92) (65	income/(expense)
Curtailment (28) (1) (29) (6) 0 (6) (2) 0 (2	Curtailment
Total expense	
recognized in the	recognized in the
income statement (94) (44) (138) (62) (47) (109) (130) (92) (222)	income statement
Actuarial	
gains/(losses) for the	
period 386 (1) 385 (200) (144) (344) 679 179 858	1
Change in asset	
ceiling, excluding	
amounts included in	
net interest (expense) (88) 0 (88) (29) 0 (29) (245) 0 (245)	_
Total recognized in	_
other comprehensive	-
income 298 (1) 297 (229) (144) (373) 434 179 613	
Exchange differences (151) 192 41 (16) 39 23 7 (89) (82)	U
Contributions and	
benefits paid 137 (2) 135 80 7 87 186 10 196	*
Transfers 0 0 0 0 0 (199) 154 (45	
Acquisitions through	
business combinations 0 (12) (12) 1 370 (2 644) (1 274) 1 384 (2 644) (1 260	
Net (liability)/asset	_
recognized at the end	
of the period 1 474 (2 349) (875) 745 (2 789) (2 044) 1 284 (2 482) (1 198	<u>-</u>
of which:	
- Defined benefit pension assets 3 868 0 3 868 3 324 0 3 324 3 802 0 3 802	
	1
- Pension, retirements indemnities and	*
post-employment benefits liabilities (2 394) (2 349) (4 743) (2 579) (2 789) (5 368) (2 518) (2 482) (5 000	
UCHICITIS HAUTHURS (2 374) (2 349) (4 743) (2 379) (2 709) (2 310) (2 402) (3 000	Denemes madifices

 $^{(1) \} Includes \ pensions, \ retirement \ indemnities \ and \ end-of-service \ gratuities.$

Funded status

	June 30, 2017	• ,	December 31, 2016
Defined benefit obligation	(26 810)	(30 206)	(28 663)

of period	(875)	$(2\ 044)$	(1198)
Net liability recognized at end			
Impact of the asset ceiling	(372)	(49)	(305)
Funded status	(503)	(1 995)	(893)
Fair value of plan assets	26 307	28 211	27 770

8. DEFERRED TAXES, reported (unaudited)

At June 30, 2017, Nokia had recognized deferred tax assets of EUR 5.4 billion. The recognition of deferred tax assets is based on offsetting deferred tax liabilities, earnings history and profit projections in the relevant jurisdictions. The majority of Nokia s recognized deferred tax assets relate to unused tax losses, tax credits and deductible temporary differences in Finland (EUR 2.4 billion) and the United States (EUR 1.9 billion). Based on the recent years profitability in Finland and the United States and the latest forecasts of future financial performance, Nokia has been able to establish a pattern of sufficient tax profitability in Finland and the United States to conclude that it is probable that Nokia will be able to utilize the tax losses, tax credits and deductible temporary differences in the foreseeable future. In 2016 and 2017, Finland incurred an accounting loss due to significant integration and restructuring costs following the acquisition of Alcatel-Lucent, which may delay the utilization of the tax attributes in Finland.

At June 30, 2017, Nokia had unrecognized deferred tax assets of approximately EUR 6 billion related to unused tax losses, tax credits and deductible temporary differences. The majority of the unrecognized deferred tax assets relate to France (approximately EUR 5 billion). These deferred tax assets have not been recognized due to uncertainty regarding their utilization. A significant portion of the French unrecognized deferred tax assets are indefinite in nature and available against future French tax liabilities, subject to a limitation of 50% of annual taxable profits.

At June 30, 2017, Nokia had deferred tax liabilities of EUR 0.4 billion. The majority of the deferred tax liabilities relate to the fair value adjustments on the purchase accounting of Alcatel-Lucent acquisition.

9. FAIR VALUE OF FINANCIAL INSTRUMENTS, reported (unaudited)

Financial assets and liabilities recorded at fair value are categorized based on the amount of unobservable inputs used to measure their fair value. Three hierarchical levels are based on an increasing amount of judgment associated with the inputs used to derive fair valuation for these assets and liabilities; Level 1 being market values for exchange traded products, Level 2 being primarily based on quotes from third-party pricing services and Level 3 requiring most management judgment. For more information about the valuation methods and principles, refer to note 2, Significant accounting policies and note 24, Fair value of financial instruments, of our Annual Report for 2016.

		(Carrying amounts			
EURm	Amortized		Fair value			Fair
At June 30, 2017	cost	Level 1	Level 2	Level 3	Total	value
Non-current available-for-sale						
investments	161	35	154	599	949	949
Other non-current financial assets	146	0	104	0	250	225
Other current financial assets including						
derivatives	66	0	343	0	409	409
Accounts receivable	6 401	0	0	0	6 401	6 401
Available-for-sale investments, liquid						
assets	0	0	1 270	0	1 270	1 270
Cash and cash equivalents	6 647	0	0	0	6 647	6 647
Total financial assets	13 421	35	1 871	599	15 926	15 901
Long-term interest-bearing liabilities	3 577	0	0	0	3 577	3 757
Short-term interest bearing liabilities	376	0	0	0	376	376
Other financial liabilities including						
derivatives	166	0	244	0	410	410
Accounts payable	3 545	0	0	0	3 545	3 545
Total financial liabilities	7 664	0	244	0	7 908	8 088

		(Carrying amounts			
EURm	Amortized		Fair value			Fair
At December 31, 2016	cost	Level 1	Level 2	Level 3	Total	value
Non-current available-for-sale investments	202	0	164	674	1 040	1 040
Other non-current financial assets	144	0	111	0	255	229
Other current financial assets including						
derivatives	60	0	236	0	296	296
Accounts receivable	6 972	0	0	0	6 972	6 972
Investments at fair value through profit						
and loss, liquid assets	0	0	327	0	327	327
Available-for-sale investments, liquid						
assets	0	0	1 502	0	1 502	1 502
Cash and cash equivalents	7 497	0	0	0	7 497	7 497
Total financial assets	14 875	0	2 340	674	17 889	17 863
Long-term interest-bearing liabilities	3 657	0	0	0	3 657	3 821
Short-term interest bearing liabilities	370	0	0	0	370	370
Other financial liabilities including						
derivatives	34	0	236	14	284	284
Accounts payable	3 781	0	0	0	3 781	3 781
Total financial liabilities	7 842	0	236	14	8 092	8 256

Level 3 Financial assets include a large number of investments in unlisted equities and unlisted venture funds, including investments managed by Nokia Growth Partners specializing in growth-stage investing and by BlueRun Ventures focusing on early stage opportunities.

EURm	Level 3 Financial Assets and Liabilities
Balance at December 31, 2016	660
Net gains in income statement	49
Net losses recorded in other comprehensive income	(38)
Acquisitions through business combination	0
Purchases	28
Sales	(80)
Other movements	(20)
Balance at June 30, 2017	599

The gains and losses from venture fund and similar investments categorized in level 3 are included in other operating income and expenses in cases where the investment and disposal objectives for these investments are business driven. In other cases the gains and losses are included in financial income and expenses. A net loss of EUR 4 million (net gain of EUR 6 million in 2016) related to level 3 financial instruments held at June 30, 2017, was included in the profit and loss during 2017.

10. PROVISIONS, reported (unaudited)

	1	Divestment				Environmental	Material		
EUR million	Restructuring	related	Warranty	Project losses	Litigation	liabilities	liability	Other	Total
At January 1, 2016	194	129	94	62	69	16	29	132	725
Acquisitions through									
business combinations	291	26	135	180	100	114	31	366	1 243
Translation differences	0	3	(1)	(1)	3	(1)	(1)	(5)	(3)
Reclassification	(9)	0	3	2	9	0	1	(6)	0
Charged to income statement	613	(5)	27	(4)	26	8	35	86	786
Additional provisions	638	11	34	17	29	8	52	119	908
Changes in estimates	(25)	(16)	(7)	(21)	(3)	0	(17)	(33)	(122)
Utilized during period	(237)	(22)	(50)	(67)	(16)	(11)	(12)	(155)	(570)
At June 30, 2016	852	131	208	172	191	126	83	418	2 181
At January 1, 2017	713	110	207	131	183	134	77	425	1 980
Translation differences	(9)	(6)	(6)	(3)	(7)	(10)	(2)	(14)	(57)
Reclassification (1)	0	(6)	0	0	3	0	24	4	25
Charged to income statement	205	18	43	(3)	23	13	1	37	338
Additional provisions	225	12	58	8	25	13	27	58	425
Changes in estimates	(19)	6	(14)	(11)	(2)	0	(26)	(21)	(88)
Utilized during period (2)	(241)	(4)	(44)	(18)	(37)	(10)	(23)	(48)	(425)
At June 30, 2017	668	112	201	108	164	126	77	404	1 860

⁽¹⁾ The reclassification to material liability consists of EUR 25 million transferred from accrued expenses to better reflect the nature of this item.

As of June 30, 2017, Nokia restructuring provision amounted to EUR 668 million including personnel and other restructuring related costs, such as real estate exit costs. The provision consists of EUR 486 million global provision related to the announcement of April 6, 2016 and EUR 181 million relating to the restructuring provisions recognized due to previously announced restructuring programs. The majority of the restructuring related outflows is expected to occur over the next two years.

The divestment-related provision relates to the sale of businesses, and includes certain liabilities where Nokia is required to indemnify the buyer. Cash outflows related to the divestment-related provision are inherently uncertain. The warranty provision relates to sold products. Cash outflows related to the warranty provision are generally expected to occur within the next 18 months. The project loss provision is based on IAS 11, Construction Contracts, and relates to onerous customer contracts. Cash outflows related to the project loss provision are generally expected to occur over the next 12 months. The litigation provision includes estimated potential future settlements for litigation. Cash outflows related to the litigation provision are inherently uncertain and generally occur over several periods. The environmental provision includes estimated costs to sufficiently clean and refurbish contaminated sites, to the extent necessary, and where necessary, continuing surveillance at sites where the environmental remediation exposure is less significant. Cash outflows related to the environmental liability are inherently uncertain and generally occur over several periods. The material liability provision relates to non-cancellable purchase commitments with suppliers. Cash outflows related to the material liability provision are expected to occur over the next 12 months. Other provisions include provisions for various contractual obligations and other obligations. Cash outflows related to other provisions are generally expected to occur over the next two years.

⁽²⁾ The utilization of restructuring provision includes items transferred to accrued expenses, of which EUR 40 million remained in accrued expenses as of June 30, 2017.

11. COMMITMENTS AND CONTINGENCIES, reported (unaudited)

EUR million	June 30, 2017	June 30, 2016	December 31, 2016
Collateral for own commitments			
Assets pledged	5	7	5
Contingent liabilities on behalf of Group companies (1)			
Guarantees issued by financial institutions	1 782	1 689	1 805
Other guarantees	751	759	794
Contingent liabilities on behalf of associated companies and joint			
ventures			
Financial guarantees	0	11	11
Contingent liabilities on behalf of other companies			
Financial guarantees	0	5	0
Other guarantees	31	173	135
Leasing obligations	1 014	985	1 141
Financing commitments			
Customer finance commitments	546	153	223
Financing commitments to associated companies	18	0	0
Venture fund commitments	461	532	525

The amounts above represent the maximum principal amount of commitments and contingencies.

(1) In contingent liabilities on behalf of Group companies Nokia reports guarantees that have been given to third parties in the normal course of business. These are mainly guarantees given by financial institutions to Nokia s customers for the performance of Nokia s obligations under supply agreements, including tender bonds, performance bonds, and warranty bonds issued by financial institutions on behalf of Nokia. Additionally Nokia has issued corporate guarantees with primary obligation given directly to customers with these guarantees amounting to EUR 1 508 million (EUR 2 243 million at June 30, 2016 and EUR 1 608 million at December 31, 2016). In Other guarantees Nokia reports guarantees related to non-commercial contracts that support Nokia s business activities. As a result of internal policies and active management of outstanding guarantee exposure, Nokia has not been subject to any material guarantee claims during recent years.

12. RELATED PARTY TRANSACTIONS, reported (unaudited)

Significant related party transactions with associated companies, joint ventures and other entities where Nokia has significant influence include in the first six months of 2017 share of results of associated companies and joint ventures of EUR 6 million expense (EUR 4 million income in the first six months of 2016), sales to associated companies, joint ventures and other entities where Nokia has significant influence of EUR 15 million (EUR 7 million in the first six months of 2016) and purchases from associated companies and joint ventures of EUR 122 million (EUR 158 million in the first six months of 2016).

Transactions and balances with companies over which Nokia exercises control are eliminated on consolidation. Refer to note 2, Significant accounting policies and note 32, Principal Group companies, of our Annual Report for 2016.

Nokia has related party transactions with a pension fund, the management and the Board of Directors. There have been no significant changes to related party transactions with the pension fund.

As of June 30, 2017, the Group Leadership Team (GLT) was chaired by Nokia s President and CEO, Rajeev Suri, and comprised of 15 members: the President and CEO, eight business group leaders and six unit leaders. During the second quarter, four new members were added to the GLT while one member stepped down. There have been no changes in the compensation policy for GLT members during the quarter.

13. INTEREST-BEARING LIABILITIES, reported (unaudited)

Issuer/Borrower	Instrument	Currency	Nominal (million)	Final maturity	Carrying amount (EUR million) June 30, 2017	Carrying amount (EUR million) June 30, 2016	Carrying amount (EUR million) December 31, 2016
Alcatel-Lucent S.A.	0 % OCEANE						
	convertible Bond	EUR	0	January 2019	0	29	0
Nokia Corporation	6.75 % Senior	ELID	221	E.I. 2010	245	50.4	507
Maria di Para	Notes(1)	EUR	231	February 2019	245	534	527
Nokia Corporation	5.375 % Senior	TICE	501	3.5 0010	5.15	026	0.61
41 417 404	Notes(2)	USD	581	May 2019	517	936	961
Alcatel-Lucent S.A.	0.125 % OCEANE						
	convertible Bond	EUR	0	I 2020	0	21	0
Notrio Composition	1.00 % Senior	EUK	0	January 2020	0	21	0
Nokia Corporation	Notes(1)	EUR	500	March 2021	498	0	0
Nokia Corporation	3.375 % Senior	EUK	300	Maich 2021	490	U	U
Nokia Corporation	Notes(2)	USD	500	June 2022	431	0	0
Nokia Corporation	2.00 % Senior	CSD	300	June 2022	731	0	U
Ttokiu Corporation	Notes (1)	EUR	750	March 2024	743	0	0
Nokia Corporation	4.375 % Senior	LOR	730	March 2021	713	· ·	O .
Trokia Corporation	Notes(2)	USD	500	June 2027	428	0	0
Alcatel-Lucent USA	6.5 % Senior						
Inc.	Notes (1), (2)	USD	74	January 2028	65	272	287
Alcatel-Lucent USA	6.45 % Senior			j			
Inc.	Notes(1), (2)	USD	206	March 2029	183	1 240	1 306
Nokia Corporation	6.625 % Senior						
	Notes	USD	500	May 2039	446	473	482
Nokia Corporation	Revolving credit						
	facility	EUR	1579	June 2020	0	0	0
Nokia Corporation and	Other liabilities						
various subsidiaries	(3)				397	405	464
Total					3 953	3 910	4 027

⁽¹⁾ In March 2017 Nokia issued EUR 500 million 1.00% Senior Notes due 2021 and EUR 750 million 2.00% Senior Notes due 2024 under our 5 billion Euro Medium-Term Note Programme. The proceeds of the new notes were used to redeem (nominal amounts) EUR 269 million of the 2019 Euro Notes, USD 86 million of the 2028 USD Notes and USD 401 million of the 2029 USD Notes and for general corporate purposes.

All Nokia borrowings are senior unsecured and have no financial covenants.

⁽²⁾ In June 2017, Nokia issued USD 500 million 3.375% Senior Notes due 2022 and USD 500 million 4.375% Senior Notes due 2027 under U.S. Securities Act of 1933, as amended. The proceeds of the new notes were used to redeem (nominal amounts) USD 419 million of the 2019 USD notes, USD 140 million of the 2028 USD Notes and USD 753 million of 2029 USD Notes and for general corporate purposes.

⁽³⁾ This line includes liabilities related to French R&D tax credits (i.e. Crédits d Impôt Recherche) of EUR 62 million (EUR 132 million June 30, 2016 and EUR 132 million December 31, 2016) that have been sold to banks on a recourse basis and hence not derecognized from the consolidated statement of financial position.

14. NOTES TO THE CONSOLIDATED STATEMENT OF CASH FLOWS, reported (unaudited)

EUR million	Q2 17	Q2 16	Q1 17	Q1-Q2 17	Q1-Q2 16
Adjustments for (1)					
Depreciation and amortization	407	411	404	811	817
Share-based payment	10	25	17	27	40
Impairment charges	17	26	7	24	31
Restructuring charges	155	599	50	205	613
Profit on sale of property, plant and equipment and					
available-for-sale investments	(23)	(54)	(23)	(46)	(66)
Transfer from hedging reserve to income statement	0	(7)	0	0	5
Share of results of associated companies and joint					
ventures	(3)	(2)	9	6	(4)
Financial income and expenses	181	82	108	289	123
Income tax expense/(benefit)	171	(65)	156	327	(162)
Gain on the sale of businesses	1	(7)	(1)	0	(14)
Other income and expenses	(10)	11	14	4	18
Total	906	1 019	741	1 647	1 401
Change in net working capital					
Decrease in short-term receivables	146	222	237	383	186
(Increase)/decrease in inventories	(139)	(97)	(386)	(525)	190
Increase/(decrease) in interest-free short-term					
liabilities	1 006	(919)	(395)	611	(2 142)
Total	1 013	(794)	(544)	469	(1 766)

⁽¹⁾ Adjustments for continuing and discontinued operations.

Net cash and other liquid assets

	June 30, 2017	June 30, 2016	March 31, 2017	December 31, 2016
Investments at fair value through profit and loss,				
liquid assets	0	747	337	327
Available-for-sale investments, liquid assets	1 270	1 791	1 496	1 502
Cash and cash equivalents	6 647	8 449	6 987	7 497
Total cash and other liquid assets	7 917	10 987	8 820	9 327
Long-term interest-bearing liabilities	3 577	3 593	4 106	3 657
Short-term interest-bearing liabilities	376	318	306	371
Interest-bearing liabilities	3 953	3 910	4 412	4 027
Net cash and other liquid assets	3 964	7 077	4 409	5 299

15. SUBSEQUENT EVENTS, reported (unaudited)

Nokia Shanghai Bell

On May 18, 2017, Nokia announced the signing of definitive agreements by Nokia and the China Huaxin Post & Telecommunication Economy Development Center (China Huaxin) for the proposed integration of Alcatel-Lucent Shanghai Bell Co. Ltd. and Nokia s China business into a new joint venture branded as Nokia Shanghai Bell (NSB). On July 3, 2017, Nokia and China Huaxin announced the closing of the transaction and the official start of NSB operations. The definitive agreements provide for NSB to acquire Nokia China s business and subsidiaries in exchange for a cash payment. As the transfer of the Nokia China business represents a transaction between two Nokia Group subsidiaries, any gains or losses that arise from the transaction will be fully eliminated within Nokia s consolidated financial statements. Further, the transfer of cash from the NSB to the wholly-owned parent entity of the Nokia China business will have no impact on the cash or net cash balances in Nokia Group s consolidated financial statements.

Nokia will own 50% plus one share of NSB, with China Huaxin owning the remainder, and the new joint venture will have one board of directors and one management team. The definitive agreements also provide China Huaxin with the right to fully transfer its ownership interest in NSB to Nokia in exchange for a future cash settlement. As a result, Nokia will derecognise the non-controlling interest balance related to NSB partly offset by the recognition of a related financial liability. As of June 30, 2017, the non-controlling interest balance related to NSB amounted to EUR 768 million. Derecognition of the non-controlling interest related to NSB will be partly offset by the recognition of a related financial liability with the difference recorded within equity as a transaction with the non-controlling interest. In addition, the definitive agreements also provide Nokia with the right to buy China Huaxin s ownership interest in NSB in the future.

The financial liability will be measured based on the present value of the expected future cash settlement paid to acquire the non-controlling interest in NSB and will be adjusted to reflect changes in estimates of the future cash settlement. As such, the present value discount on the financial liability will be accreted through interest expense and changes in the estimated future cash settlement will be recorded within financial income and expense.

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RISKS AND FORWARD-LOOKING STATEMENTS

It should be noted that Nokia and its businesses are exposed to various risks and uncertainties and certain statements herein that are not historical facts are forward-looking statements, including, without limitation, those regarding: A) our ability to integrate Alcatel-Lucent into our operations and achieve the targeted business plans and benefits, including targeted synergies in relation to the acquisition of Alcatel-Lucent; B) expectations, plans or benefits related to our strategies and growth management; C) expectations, plans or benefits related to future performance of our businesses; D) expectations, plans or benefits related to changes in organizational and operational structure; E) expectations regarding market developments, general economic conditions and structural changes; F) expectations and targets regarding financial performance, results, operating expenses, taxes, currency exchange rates, hedging, cost savings and competitiveness, as well as results of operations including targeted synergies and those related to market share, prices, net sales, income and margins; G) expectations, plans or benefits related to any future collaboration or to the business collaboration agreement and the patent license agreement between Nokia and Apple announced on May 23, 2017, including income to be received under any collaboration or partnership or agreement; H) timing of the deliveries of our products and services; I) expectations and targets regarding collaboration and partnering arrangements, joint ventures or the creation of joint ventures, and the related administrative, legal, regulatory and other conditions, as well as our expected customer reach; J) outcome of pending and threatened litigation, arbitration, disputes, regulatory proceedings or investigations by authorities; K) expectations regarding restructurings, investments, capital structure optimization efforts, uses of proceeds from transactions, acquisitions and divestments and our ability to achieve the financial and operational targets set in connection with any such restructurings, investments, capital structure optimization efforts, divestments and acquisitions; and L) statements preceded by or including believe, expect, anticipate, foresee. sees. continue. project, should, is to, will or similar expressions. These statements are based on management s best assumptions and be 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 these differences include, but are not limited to: 1) our ability to execute our strategy, sustain or improve the operational and financial performance of our business and correctly identify and successfully pursue business opportunities or growth; 2) our ability to achieve the anticipated benefits, synergies, cost sayings and efficiencies of the acquisition of Alcatel-Lucent, and our ability to implement our organizational and operational structure efficiently; 3) general economic and market conditions and other developments in the economies where we operate; 4) competition and our ability to effectively and profitably compete and invest in new competitive high-quality products, services, upgrades and technologies and bring them to market in a timely manner; 5) our dependence on the development of the industries in which we operate, including the cyclicality and variability of the information technology and telecommunications industries; 6) our global business and exposure to regulatory, political or other developments in various countries or regions, including emerging markets and the associated risks in relation to tax matters and exchange controls, among others; 7) our ability to manage and improve our financial and operating performance, cost savings, competitiveness and synergies generally or after the acquisition of Alcatel-Lucent; 8) our dependence on a limited number of customers and large multi-year agreements; 9) exchange rate fluctuations, as well as hedging activities; 10) Nokia Technologies ability to protect its IPR and to maintain and establish new sources of patent licensing income and IPR-related revenues, particularly in the smartphone market; 11) our ability to successfully realize the expectations, plans or benefits related to any future collaboration or to the business collaboration agreement and the patent license agreement between Nokia and Apple announced on May 23, 2017, including income to be received under any collaboration or partnership or agreement; 12) our dependence on IPR technologies, including those that we have developed and those that are licensed to us, and the risk of associated IPR-related legal claims, licensing costs and restrictions on use; 13) our exposure to direct and indirect regulation, including economic or trade policies, and the reliability of our governance, internal controls and compliance processes to prevent regulatory penalties in our business or in our joint ventures; 14) our ability to identify and remediate material weaknesses in our internal control over financial reporting; 15) our reliance on third-party solutions for data storage and service distribution, which expose us to risks relating to security, regulation and cybersecurity breaches; 16) inefficiencies, breaches, malfunctions or disruptions of information technology systems; 17) Nokia Technologies ability to generate net sales and profitability through licensing of the Nokia brand, particularly in digital media and digital health, and the development and sales of products and services, as well as other business ventures which may not materialize as planned; 18) our exposure to various legislative frameworks and jurisdictions that regulate fraud and enforce economic trade sanctions and policies, and the possibility of proceedings or investigations that result in fines, penalties or sanctions; 19) adverse developments with respect to customer financing or extended payment terms we provide to customers; 20) the potential complex tax issues, tax disputes and tax obligations we may face in various jurisdictions, including the risk of obligations to pay additional taxes; 21) our actual or anticipated performance, among other factors, which could reduce our ability to utilize deferred tax assets;

22) our ability to retain, motivate, develop and recruit appropriately skilled employees; 23) disruptions to our manufacturing, service creation, delivery, logistics and supply chain processes, and the risks related to our geographically-concentrated production sites; 24) the impact of litigation, arbitration, agreement-related disputes or product liability allegations associated with our business; 25) our ability to optimize our capital structure as planned and re-establish our investment grade credit rating or otherwise improve our credit ratings; 26) our ability to achieve targeted benefits from or successfully achieve the required administrative, legal, regulatory and other conditions and implement planned transactions, as well as the liabilities related thereto; 27) our involvement in joint ventures and jointly-managed companies; 28) the carrying amount of our goodwill may not be recoverable; 29) uncertainty related to the amount of dividends and equity return we are able to distribute to shareholders for each financial period; 30) pension costs, employee fund-related costs, and healthcare costs; and 31) risks related to undersea infrastructure, as well as the risk factors specified on pages 67 to 85 of our 2016 annual report on Form 20-F under Operating and financial review and prospects-Risk factors and in our other filings with the U.S. Securities and Exchange Commission. 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.
This financial report was authorized for issue by management on July 26, 2017.
Media and Investor Contacts:
Communications, tel. +358 10 448 4900 email: press.services@nokia.com Investor Relations, tel. +358 4080 3 4080 email: investor.relations@nokia.com
• Nokia plans to publish its third quarter 2017 results on October 26, 2017.
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SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant, Nokia Corporation, has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: July 27, 2017 Nokia Corporation

By: /s/ Jussi Koskinen Name: Jussi Koskinen

Title: Vice President, Corporate Legal

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