



## EFSI Operation Scoreboard<sup>1</sup>

<b><u>PROJECT PRESENTATION</u></b>	
<b><u>Project name</u></b>	NOKIA 5G
<b><u>Promoter or financial intermediary</u></b>	NOKIA OYJ
<b><u>Country of implementation</u></b>	France, Finland, Germany, Poland, Regional EU Countries
<b><u>Summary project description</u></b>	<p>The telecom industry is currently working on the development of the new 5G mobile communications standards and products that are not only expected to result in higher efficiency than existing mobile technologies, both in terms of spectrum use and energy consumption, but will also enable innovative digitalisation applications that are not accessible with today's technology.</p> <p>The project relates to the development of a 5G end-to-end mobile network product portfolio according to the telecom industry's global 5G standard still to be fully defined, including the complementary Internet Protocol (IP)/Optical solutions to address the transport challenges posed by the massive amount of traffic that will be generated by 5G customers. The project will include both development of hardware and software elements.</p>

<sup>1</sup> This Scoreboard of indicators reflects the information presented to the EFSI Investment Committee (IC) for its decision on the use of the EU guarantee for this operation. Therefore, the document does not take into account possible developments that could have occurred after this decision.

Parts of this document that fall under the exceptions for disclosure defined by the EIB Group Transparency Policy, notably under the articles 5.5 (protection of commercial interests) and 5.6 (protection of the Bank's internal decision-making process), have been replaced by the symbol [...].

## PROJECT PILLAR ASSESSMENT

### **Pillar 1**

Contribution to EU policy	Significant
<b>Cross-cutting objectives</b>	
Climate Action	16.90%
EIB Cohesion Priority Regions / Economic and Social Cohesion	14.50%
<b>EFSI</b>	
Contribution to EFSI	100.00%
EFSI: Research, development and innovation	96.60%
Projects that are in line with Horizon 2020	96.60%
EFSI: Development and deployment of information and communication technologies	3.40%
Digital content - cybersecurity and network protection infrastructures	3.40%

### **Pillar 2**

Quality and soundness of the project	Excellent
1. Growth	[...]
2. Promoter capabilities	[...]
3. Sustainability	[...]
4. Employment	[...]

*This pillar evaluates the quality and soundness of the operation. This pillar is composed of four indicators which include:*

- (i) "Growth" i.e. for example and where relevant the economic rate of return ('ERR'), which considers the project's socioeconomic costs and benefits, including its spillover effects;*
- (ii) "Promoter capabilities" i.e. the capacity of the promoter/intermediary to implement the project and create the expected impact at the [final] beneficiary level;*
- (iii) "Sustainability" i.e. environmental and social sustainability<sup>2</sup>;*
- (iv) "Employment" i.e. the project's direct employment effect.*

### **Pillar 3**

EIB Technical and financial contribution to the project	Moderate
1. Financial contribution	[...]
2. Financial facilitation	[...]
3. Advice	[...]

*This pillar measures the EIB's particular contribution to the project and its financing scheme in the form of financial and non-financial benefits which go beyond what commercial players would normally be able to offer. This dimension of value added is assessed through three indicators:*

- (i) "Financial Contribution" i.e. improving the counterpart's funding terms compared to market sources of finance (interest rate reduction and/or longer lending tenor),*
- (ii) "Financial Facilitation" i.e. helping to attract private financiers (for example through positive signaling effects), promoting synergies in co-financing with other public sources of funds including National Promotional Banks or EU financial instruments,*
- (iii) "Technical Contribution and Advice" i.e. providing advice with a view to optimizing the financing package (financial structuring), or technical advisory services in the form of expert input / knowledge transfer – provided in-house by the EIB or in the form of assignments to external consultants – to facilitate the preparation or implementation of a project.*

<sup>2</sup> For additional information on the EIB's assessment of the project's environmental and social aspects, please refer to the project's Environmental and Social Data Sheet (ESDS) published on the EIB website.

## **Pillar 4 – Complementary indicators**

### ***Additionality***

In line with the EFSI objective of supporting the development of research, development and innovation as well as cybersecurity and network protection, the operation will support the transition to 5G mobile technology network and thus contribute to the EU Gigabit society targets. The operation is expected to have a significant and far-reaching impact on the support of digitalisation of the European economies and promotion of the Digital Single Market by enabling the launch of new applications and usage of mobile broadband not achievable with today's technology.

The financing of this project supports research, development and innovation activities, which generate significant positive knowledge, technology and/or environmental externalities, through the creation of innovative processes, products or services and through skills development and upgrading.

The project presents high risk and is expected to be classified under the EIB Special Activities category, in particular due to the unsecured structure and long tenor[...] while operating in a highly competitive environment. The financing of RDI of a novel technology is also inherently risky. Due to the expected riskiness of the operation, the loan could not have been provided to the same extent by the EIB without EFSI support.

The EIB will be providing long term financing via an unsecured structure. The EIB lending will be seen as a quality stamp to the company and its 5G RDI initiative. As such this is expected to crowd-in private sector financing and improve the borrower's diversification of borrowing sources. EIB financing is expected to increase the commercial lenders' confidence in the company and confirm their own engagement in the financing.

## Set of indicators related to the macroeconomic environment

### Finland - Economic environment

#### Economic Performance

	FI	EU	US	FI
	2016	2016	2016	2001-2007
GDP per capita (EUR, PPP)	31,864	29,440	42,615	32,965
GDP growth (%)	1.4	1.9	1.6	3.2
Potential GDP growth (%)	0.45	1.3	2.1	3.0
Output gap (% of potential GDP)	-1.8	-0.75	-0.03	0.79
Unemployment Rate (%)	8.7	8.2	4.7	8.2
Unemployment Rate (%) - Y/Y change (% points)	-0.6	-0.8	-0.3	-0.4
Bank-interest rates to non-financial corporations (%)	1.4	1.4	1.8	3.6
Bank-interest rates to non-financial corporations (%) - Y/Y change (% points)	-0.1	-0.21	-1.4	0.05
Investment rate (GFCF as % of GDP) - Total	21.4	19.7	19.6	22.6
Investment rate (GFCF as % of GDP) - Public	3.9	2.7	3.4	3.6
Investment rate (GFCF as % of GDP) - Private	17.5	17.0	16.2	19.0

#### General Sector Indicators

	2013	2014	2015	2016	EU (latest available)
Value added in Manufacture of computer, electronic and optical products (% of total)	--	--	--	--	0.7
Employment in Manufacture of computer, electronic and optical products (% of total)	--	--	--	--	--

#### Information and communications technology

	2013	2014	2015	2016	EU (latest available)
The Digital Economy and Society Index (DESI) (composite index)	--	60.1	64.3	65.6	52.3
Fixed broadband subscriptions (lines) per 100 people	31.6	32.1	31.5	31.3	32.7
Fixed broadband Next Generation Access (NGA) coverage/availability (% of households)	72.1	0.75	0.75	--	0.71
Mobile broadband subscriptions per 100 population	122.9	137.8	143.3	147.2	83.9
Internet bandwidth (kb/s per user)	14.0	15.0	14.0	--	--

## France - Economic environment

### Economic Performance

	FR	EU	US	FR
	2018	2018	2018	2001-2007
GDP per capita (EUR, PPS)	30,910	29,440	42,615	30,572
GDP growth (%)	1.2	1.9	1.6	1.9
Potential GDP growth (%)	1.1	1.3	2.1	1.8
Output gap (% of potential GDP)	-1.3	-0.75	-0.03	1.9
Unemployment Rate (%)	10.1	8.2	4.7	8.5
Unemployment Rate (%) - Y/Y change (% points)	-0.1	-0.8	-0.3	-0.19
Bank-interest rates to non-financial corporations (%)	1.2	1.4	1.8	3.5
Bank-interest rates to non-financial corporations (%) - Y/Y change (% points)	-0.19	-0.21	-1.4	0
Investment rate (GFCF as % of GDP) - Total	21.9	19.7	19.6	21.7
Investment rate (GFCF as % of GDP) - Public	3.4	2.7	3.4	3.9
Investment rate (GFCF as % of GDP) - Private	18.4	17.0	16.2	17.8

### General Sector Indicators

	2013	2014	2016	2018	EU (latest available)
Value added in Manufacture of computer, electronic and optical products (% of total)	--	--	--	--	0.7
Employment in Manufacture of computer, electronic and optical products (% of total)	--	--	--	--	--

### Information and communications technology

	2013	2014	2016	2018	EU (latest available)
The Digital Economy and Society Index (DESI) (composite index)	--	43.5	46.2	48.5	52.3
Fixed broadband subscriptions (lines) per 100 people	38.0	39.3	40.5	41.1	32.7
Fixed broadband Next Generation Access (NGA) coverage/availability (% of households)	40.9	0.43	0.45	--	0.71
Mobile broadband subscriptions per 100 population	53.3	64.4	78.7	80.7	83.9
Internet bandwidth (kb/s per user)	25.0	17.0	12.0	--	--



## Germany - Economic environment

### Economic Performance

	DE	EU	US	DE
	2018	2018	2018	2001-2007
GDP per capita (EUR, PPP)	36,232	29,440	42,615	32,614
GDP growth (%)	1.9	1.9	1.6	1.4
Potential GDP growth (%)	1.8	1.3	2.1	1.3
Output gap (% of potential GDP)	-0.15	-0.75	-0.03	-0.27
Unemployment Rate (%)	3.9	8.2	4.7	9.4
Unemployment Rate (%) - Y/Y change (% points)	-0.5	-0.8	-0.3	0.06
Bank-interest rates to non-financial corporations (%)	1.3	1.4	1.8	4.1
Bank-interest rates to non-financial corporations (%) - Y/Y change (% points)	-0.15	-0.21	-1.4	-0.04
Investment rate (GFCF as % of GDP) - Total	20.0	19.7	19.6	19.9
Investment rate (GFCF as % of GDP) - Public	2.1	2.7	3.4	2.0
Investment rate (GFCF as % of GDP) - Private	17.9	17.0	16.2	17.9

### General Sector Indicators

	2013	2014	2015	2016	EU (latest available)
Value added in Manufacture of computer, electronic and optical products (% of total)	--	--	--	--	0.7
Employment in Manufacture of computer, electronic and optical products (% of total)	--	--	--	--	0.6

### Information and communications technology

	2013	2014	2015	2016	EU (latest available)
The Digital Economy and Society Index (DESI) (composite index)	--	47.7	50.3	53.8	52.3
Fixed broadband subscriptions (lines) per 100 people	35.5	36.4	37.4	38.2	32.7
Fixed broadband Next Generation Access (NGA) coverage/availability (% of households)	74.8	0.81	0.81	--	0.71
Mobile broadband subscriptions per 100 population	54.7	64.8	71.2	73.3	83.9
Internet bandwidth (kb/s per user)	28.0	24.0	20.0	--	--

**Poland - Economic environment**
**Economic Performance**

	PL	EU	US	PL
	2016	2016	2016	2001-2007
GDP per capita (EUR, PPS)	20,385	20,440	42,615	14,639
GDP growth (%)	2.7	1.9	1.6	4.1
Potential GDP growth (%)	2.7	1.3	2.1	3.8
Output gap (% of potential GDP)	-0.29	-0.75	-0.03	-1.9
Unemployment Rate (%)	5.5	8.2	4.7	16.4
Unemployment Rate (%) - Y/Y change (% points)	-1.4	-0.0	-0.3	-1.2
Bank-interest rates to non-financial corporations (%)	3.7	1.4	1.8	6.3
Bank-interest rates to non-financial corporations (%) - Y/Y change (% points)	-0.05	-0.21	-1.4	0.47
Investment rate (GFCF as % of GDP) - Total	18.1	19.7	19.6	19.6
Investment rate (GFCF as % of GDP) - Public	3.3	2.7	3.4	3.3
Investment rate (GFCF as % of GDP) - Private	14.7	17.0	16.2	16.3

**General Sector Indicators**

	2013	2014	2015	2016	EU (latest available)
Value added in Manufacture of computer, electronic and optical products (% of total)	--	--	--	--	0.7
Employment in Manufacture of computer, electronic and optical products (% of total)	--	--	--	--	0.6

**Information and communications technology**

	2013	2014	2015	2016	EU (latest available)
The Digital Economy and Society Index (DESI) (composite index)	--	35.5	37.2	39.5	52.3
Fixed broadband subscriptions (lines) per 100 people	16.5	18.7	18.9	18.6	32.7
Fixed broadband Next Generation Access (NGA) coverage/availability (% of households)	52.1	0.53	0.61	--	0.71
Mobile broadband subscriptions per 100 population	79.4	87.2	102.8	114.6	83.9
Internet bandwidth (kb/s per user)	30.0	37.0	33.0	--	--

**Regional - EU countries - Economic environment**
**Economic Performance**

	EU	EU	US	EU
	2016	2016	2016	2001-2007
GDP per capita (EUR, PPS)	29,440	29,440	42,615	28,710
GDP growth (%)	1.9	1.9	1.6	2.3
Potential GDP growth (%)	1.3	1.3	2.1	2.1
Output gap (% of potential GDP)	-0.75	-0.75	-0.03	1.0
Unemployment Rate (%)	8.2	8.2	4.7	8.5
Unemployment Rate (%) - Y/Y change (% points)	-0.0	-0.0	-0.3	-0.26
Bank-interest rates to non-financial corporations (%)	1.4	1.4	1.8	3.9
Bank-interest rates to non-financial corporations (%) - Y/Y change (% points)	-0.21	-0.21	-1.4	-0.02
Investment rate (GFCF as % of GDP) - Total	19.7	19.7	19.6	21.4
Investment rate (GFCF as % of GDP) - Public	2.7	2.7	3.4	3.1
Investment rate (GFCF as % of GDP) - Private	17.0	17.0	16.2	18.3

**General Sector Indicators**

	2013	2014	2015	2016	EU (latest available)
Value added in Manufacture of computer, electronic and optical products (% of total)	--	--	--	--	0.7
Employment in Manufacture of computer, electronic and optical products (% of total)	--	--	--	--	0.6

**Information and communications technology**

	2013	2014	2015	2016	EU (latest available)
The Digital Economy and Society Index (DESI) (composite index)	--	43.2	46.3	49.4	52.3
Fixed broadband subscriptions (lines) per 100 people	29.8	31.0	32.2	32.7	32.7
Fixed broadband Next Generation Access (NGA) coverage/availability (% of households)	61.0	0.68	0.71	--	0.71
Mobile broadband subscriptions per 100 population	63.7	72.0	80.7	83.9	83.9
Internet bandwidth (kb/s per user)	--	--	--	--	--

- Country average for "GDP per capita (EUR, PPS)" is calculated in real terms
- EU value for "Bank-interest rates to non-financial corporations" corresponds to Euro Area average; Country average is the simple average between 2003 and 2007
- The EU value is displayed as the value in the year that corresponds to the latest value of the indicator in a particular country



### **Other indicators<sup>3</sup>**

#### **Key project characteristics**

	<b>Expected at PCR</b>
Start of works	01.01.2018
End of works	31.12.2020
Project investment cost	1,774.70 MEUR
EIB/EFSI eligible investment mobilised	1,774.70 MEUR
External EFSI multiplier	3.55
External EIB (non-EFSI) multiplier	
Amount of private financing	1,024.70 MEUR
Quick start (% of expenditure during 2015-2018)	28.91 %
Co-financing with national promotional banks	250.00 MEUR
Co-financing with structural funds (ESIF)	0.00 MEUR
Co-financing with other EU instruments (i.e. Horizon 2020, Connecting Europe Facility, etc)	
Energy efficiencies realised	0.00 MWh/a
Climate Action indicator	16.90% Mitigation - RDI (transversal)
Employment during construction - temporary jobs	15,555 person years
Employment during operation - new permanent jobs	0 FTE

<sup>3</sup> For additional information on the EIB's assessment of the project's environmental and social aspects, please refer to the project's Environmental and Social Data Sheet (ESDS) published on the EIB website. The abbreviation PCR stands for Project Completion Report.