

Second-Party Opinion

Nokia Sustainable Finance Framework

Second-Party Opinion

Reviewed by:

MORNINGSTAR

SUSTAINALYTICS



Evaluation Summary

Sustainalytics is of the opinion that the Nokia Sustainable Finance Framework aligns with the Sustainability-Linked Bond Principles (SLBP) 2020 and the Sustainability-Linked Loan Principles (SLLP) 2022. This assessment is based on the following:

- Selection of Key Performance Indicator (KPI)** The Nokia Sustainable Finance Framework includes one KPI: Absolute scope 1, 2 and 3 GHG emissions (see Table 1). Sustainalytics considers the KPI to be very strong based on its materiality and relevance, scope of applicability, clear and consistent methodology, which is externally defined, and ability to be externally benchmarked.
- Calibration of Sustainability Performance Target (SPT)** Sustainalytics considers the SPT to be aligned with Nokia's sustainability strategy. Sustainalytics considers the SPT to be highly ambitious based on a comparison with past performance, peer performance and alignment with science-based trajectories.
- Bond and Loan Characteristics** Nokia will link the financial characteristics of the sustainability-linked bonds and loans issued under the Framework to the achievement or non-achievement of the SPT. For sustainability-linked bonds and loans issued or obtained, a coupon rate step-up, a redemption premium payment or a margin adjustment will be triggered in the case: i) the SPT has not been achieved by its observation date; or ii) the verification of the SPT has not been provided and made public in a timely manner as set out in the legal documentation of the relevant financing.
- Reporting** Nokia commits to report on its KPI progress in its annual People and Planet report. Nokia commits to disclosing relevant information enabling investors to monitor progress towards the SPT. The reporting commitments are aligned with the SLBP and SLLP.
- Verification** Nokia commits to have external limited assurance carried out on its KPI and SPT progress annually. In the case of periods that are relevant for assessing the KPI against the SPT leading to a potential financial adjustment, said assurance will be carried out before publication of the report related to the target observation date. The verification commitments are aligned with the SLBP and SLLP.

Evaluation Date	February 3, 2023
Issuer Location	Espoo, Finland

The SPTs contribute to the following SDGs:



Overview of KPI and SPT

KPI	Baseline	Strength of KPI	SPT	Ambitiousness of SPT
Absolute scope 1, 2 and 3 GHG emissions (in tCO ₂ e)	2019	Very Strong	Reduce absolute scope 1, 2 and 3 GHG emissions (in tCO ₂ e) by 50% between 2019 and 2030	Highly Ambitious

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Scope of Work and Limitations

Nokia has engaged Sustainalytics to review the Nokia Sustainable Finance Framework dated February 2023 (the “Framework”) and provide an opinion on its alignment with the Sustainability-Linked Bond Principles 2020 (SLBP)¹ and Sustainability-Linked Loan Principles 2022 (SLLP).²

Sustainalytics’ Second-Party Opinion reflects Sustainalytics’ independent³ opinion on the alignment of the Framework with the Sustainability-Linked Bond Principles 2020, as administered by ICMA, and the Sustainability-Linked Loan Principles 2022, as administered by APLMA, LMA and LSTA.

As part of this engagement, Sustainalytics exchanged information with various members of Nokia’s management team to understand the sustainability impact of their business processes and SPTs, as well as the reporting and verification processes of aspects of the Framework. Nokia’s representatives have confirmed that:

- (1) They understand it is the sole responsibility of issuer to ensure that the information provided is complete, accurate or up to date;
- (2) They have provided Sustainalytics with all relevant information; and
- (3) Any provided material information has been duly disclosed in a timely manner.

Sustainalytics also reviewed relevant public documents and non-public information. This document contains Sustainalytics’ opinion of the Framework and should be read in conjunction with the Framework. Any update of the present Second-Party Opinion will be conducted according to the agreed engagement conditions between Sustainalytics and Nokia. Sustainalytics’ Second-Party Opinion, while reflecting on the alignment of the Framework with market standards, is no guarantee of alignment nor warrants any alignment with future versions of relevant market standards. Furthermore, Sustainalytics’ Second-Party Opinion addresses the anticipated SPTs of KPIs but does not measure KPI performance.⁴ The measurement and reporting of the KPIs is the responsibility of the issuer. No information provided by Sustainalytics under the present Second-Party Opinion shall be considered as being a statement, representation, warrant or argument either in favour or against, the truthfulness, reliability or completeness of any facts or statements and related surrounding circumstances that Nokia has made available to Sustainalytics for the purpose of this Second-Party Opinion.

The Second-Party Opinion is valid for issuances aligned with the respective Framework for which the Second-Party Opinion was written and aligned with the methodology to calculate the KPI performance outlined in the Second-Party Opinion up to 24 months or until one of the following occurs:

- (1) A material change to the external benchmarks⁵ against which targets were set;
- (2) A material corporate action (such as a material M&A or change in business activity) which has a bearing on the achievement of the SPT or the materiality of the KPI.

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¹ The Sustainability-Linked Bond Principles (SLBP) were launched by ICMA in June 2020. They are administered by ICMA and are available at: <https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/June-2020/Sustainability-Linked-Bond-Principles-June-2020-100620.pdf>

² The Sustainability-Linked Loan Principles (SLLP) were launched by LSTA in March 2022. They are administered by the LSTA and are available at: <https://www.lsta.org/content/sustainability-linked-loan-principles-sllp/#>

³ When operating multiple lines of business that serve a variety of client types, objective research is a cornerstone of Sustainalytics and ensuring analyst independence is paramount to producing objective, actionable research. Sustainalytics has therefore put in place a robust conflict management framework that specifically addresses the need for analyst independence, consistency of process, structural separation of commercial and research (and engagement) teams, data protection and systems separation. Last but not the least, analyst compensation is not directly tied to specific commercial outcomes. One of Sustainalytics’ hallmarks is integrity, another is transparency.

⁴ Sustainalytics has provided an opinion based on the understanding that the financial characteristics of instruments issued under this Framework will be tied to the achievement of SPTs corresponding to each of the KPIs included in the Framework.

⁵ Benchmarks refers to science-based benchmarks

Introduction

Nokia Corporation (“Nokia” or the “Company”) is a Finnish communications and information technology company with operations in 130 countries. Headquartered in Espoo, Finland, Nokia provides telecom equipment and services in four business groups: i) mobile networks, ii) network infrastructure consisting of IP networks, optical networks, fixed networks and submarine networks divisions, iii) cloud and network services, and iv) Nokia Technologies focused on technology and patent licensing. The Company had an annual revenue of EUR 24.9 billion in 2022 and employed approximately 87,900 people as of year-end 2021.⁶

Nokia intends to issue sustainability-linked bonds (SLBs) or obtain sustainability-linked loans (SLLs) which will have a coupon rate step-up, redemption premium payment or margin adjustment tied to the achievement of the SPT for the selected KPI. The selected KPI refers to absolute scope 1, scope 2 and scope 3 GHG emissions.

Nokia has engaged Sustainalytics to review the Framework and provide an opinion on the alignment of the Framework with the SLBP and SLLP. The Framework will be published in a separate document.⁷

The KPI and SPT used by Nokia are defined in Table 1 and 2 below.

Table 1: KPI Definition

KPI	Definition
Absolute scope 1, 2 and 3 GHG emissions (in tCO ₂ e)	<p>The KPI is defined as the absolute amount of scope 1, 2 and 3 GHG emissions across the Company's global value chain,⁸ measured in tonnes of CO₂ equivalent (tCO₂e) and calculated in line with the GHG Protocol Corporate Accounting and Reporting Standard.⁹</p> <p>Scope 1 emissions are direct emissions from sources owned or controlled by the Company. Scope 2 emissions are indirect emissions stemming from the consumption of purchased electricity, heat and steam. Scope 3 emissions are indirect emissions caused by the Company's activities from sources not owned or controlled by the Company.</p>

Table 2: SPT and Past Performance

KPI	2019 (baseline)	2020	2021	SPT 2030
KPI 1: Absolute scope 1, 2 and 3 GHG emissions (in tCO ₂ e)	34,961,000	32,620,000	37,598,000	SPT: Reduce absolute scope 1, 2 and 3 GHG emissions (in tCO ₂ e) by 50% between 2019 and 2030.

Sustainalytics' Opinion

Section 1: Sustainalytics' Opinion on the Alignment of the Nokia Sustainable Finance Framework with the Sustainability-Linked Bond Principles and Sustainability-Linked Loan Principles.

Sustainalytics is of the opinion that the Nokia Sustainable Finance Framework aligns with the five core components of the Sustainability-Linked Bond Principles 2020 and the Sustainability-Linked Loan Principles 2022.

⁶ Nokia, “Nokia in 2021 – Annual Report”, (2022), at: <https://www.nokia.com/system/files/2022-03/nokia-ar21-en.pdf>

⁷ The Nokia Sustainable Finance Framework will be made available at: <https://www.nokia.com/about-us/investors/debt-information/>

⁸ In 2021, scope 1, 2 and 3 emissions represented 92% of Nokia's total emissions, including emissions from logistics and assembly factories within the Company's supply chain, as well as Nokia's own operations.

⁹ The Greenhouse Gas Protocol, “A Corporate Accounting and Reporting Standard”, at: <https://ghgprotocol.org/sites/default/files/standards/ghg-protocol-revised.pdf>



Selection of Key Performance Indicators

Relevance and Materiality of KPI

In its assessment of materiality and relevance, Sustainalytics considers: i) whether an indicator speaks to a material impact of the issuer's business on environmental or social issues; and ii) to what extent the KPI is applicable.

Sustainalytics considers the KPI, absolute scope 1, 2 and 3 GHG emissions (in tCO₂e), to be material and relevant given the following:

- Sustainalytics' ESG Risk Rating of Nokia identifies Carbon – Own Operations as a Material ESG Issue (MEI).¹⁰ Sustainalytics' Industry Report on Technology Hardware outlines that some firms are building data centre infrastructure for their own use and offering cloud solutions to customers as part of the ongoing shift to software-focused offerings. This increases their exposure to the Carbon – Own Operations MEI due to higher operational costs, with an elevated compliance burden in jurisdictions with stringent GHG emissions regulations.¹¹
- The Sustainability Accounting Standards Board (SASB) identifies energy management as a relevant issue for the telecommunication services industry.¹² The SASB standard for telecommunication services highlights that telecommunication services companies' management of energy efficiency, as well as their reliance on different energy types and ability to access alternative energy sources, will become increasingly material as the global regulatory focus on climate change expands.¹³
- As part of its materiality analysis conducted in 2021, Nokia identified climate as a key material topic.¹⁴ Further, the KPI's underlying GHG emissions reduction target to achieve net zero by 2050 presents Nokia's overarching climate target, tackling the Company's total carbon footprint, including scope 1, 2 and 3 emissions.

In terms of applicability, the KPI covered 92% of Nokia's global scope 1, 2 and 3 GHG emissions in 2021. Emissions within the scope of the KPI accounted for a total 37,598,000 tCO₂e in 2021. The underlying majority of applicable GHG emissions relates to scope 3 GHG emissions, accounting for a total 37,249,600 tCO₂e in 2021. The KPI includes emissions from logistics and assembly factories within the Company's supply chain, as well as final assembly suppliers. Although the KPI excludes GHG emissions from other suppliers, Sustainalytics considers the KPI to have a high scope of applicability and views Nokia's efforts to influence emissions and environmental performance beyond its direct control positively.

KPI Characteristics

In its assessment of the KPI's characteristics, Sustainalytics considers: i) whether it uses a clear and consistent methodology, ii) whether it follows an externally recognized definition, iii) whether the KPI is a direct measure of the issuer or borrower's performance on the material environmental or social issue, and iv) if applicable, whether the methodology can be benchmarked against an external contextual benchmark.¹⁵

Sustainalytics considers Nokia's definition and methodology to calculate the KPI performance to be clear and consistent based on its ease of calculation using tCO₂e as an absolute emissions metric, as well as the Company's consistent reporting on the KPI since 2019. In addition, Nokia follows the GHG Protocol's Corporate Accounting and Reporting Standard for measuring and reporting its scope 1, 2 and 3 GHG emissions.¹⁶ This approach is considered an industry standard and supports the benchmarking against science-based global decarbonization pathways.

¹⁰ The Sustainalytics' Carbon – Own Operations MEI refers to a company's management of risks related to its own operational energy use and GHG emissions (scope 1 and 2). It also includes parts of scope 3 GHG emissions.

¹¹ Sustainalytics' Industry Report on Technology Hardware (2022).

¹² SASB, "Materiality Finder - Telecommunication Services", at: [https://www.sasb.org/standards/materiality-finder/find/?industry\[\]=TC-TL](https://www.sasb.org/standards/materiality-finder/find/?industry[]=TC-TL)

¹³ Ibid.

¹⁴ Nokia, "Annual Report 2021", at: <https://www.nokia.com/system/files/2022-03/nokia-ar21-en.pdf>

¹⁵ External contextual benchmarks provide guidance on alignment with ecological system boundaries. This criterion is not applied to social KPIs or impact areas for which such contextual benchmarks are not available.

¹⁶ The Greenhouse Gas Protocol, "A Corporate Accounting and Reporting Standard revised edition", at: <https://ghgprotocol.org/sites/default/files/standards/ghg-protocol-revised.pdf>

Sustainalytics considers the KPI to be directly linked to the Company's environmental performance, given its material environmental impact, as it measures scope 1, 2 and 3 emissions in absolute terms.

Overall Assessment

Sustainalytics considers the KPI, absolute scope 1, 2 and 3 GHG emissions (in tCO₂e), to be very strong given that: i) it is a direct measure of the Group's environmental performance, covering emissions resulting from Nokia's direct operational performance (scope 1 and 2) and the emissions resulting from its indirect business activities (scope 3), plus it refers to a material ESG issue; ii) it has a high scope of applicability; iii) it follows a clear and consistent methodology aligned with the GHG Protocol Corporate Standard that is externally verifiable; and iv) it lends itself to be externally benchmarked against science-based trajectories.

KPI	Strength of KPI			
KPI 1: Absolute scope 1, 2 and 3 GHG emissions (in tCO ₂ e)	Not Aligned	Adequate	Strong	Very strong



Calibration of Sustainability Performance Targets

Alignment with Nokia's Sustainability Strategy

Nokia has set the following SPT for its KPI:

- Reduce absolute scope 1, 2 and 3 GHG emissions (in tCO₂e) by 50% between 2019 and 2030

Sustainalytics considers the SPT to be aligned with Nokia's sustainability strategy. Please refer to Section 2 for an analysis of the credibility of Nokia's sustainability strategy. As part of its sustainability strategy, Nokia highlights Environment (climate and circularity) as one of five focus areas for the future. The SPT is aligned with Nokia's decarbonization target to achieve net zero for its scope 1, 2 and 3 GHG emissions across its value chain by 2050, in line with the Science Based Targets initiative (SBTi)'s 1.5°C scenario.¹⁷ Nokia has set the following interim targets for 2025 and 2030, to enable its pathway towards net zero: i) use 100% renewable electricity in its facilities by 2025; ii) reduce 65% of scope 1 and 2 GHG emissions by 2025, compared to 2019 levels; iii) final assembly suppliers to reach net zero emissions by 2030; iv) all suppliers to reduce GHG emissions by 50% by 2030, compared to 2019 levels.¹⁸

Strategy to Achieve the SPT

Nokia intends to achieve the SPT through the following strategies:

- Nokia's product portfolio: Reduce power consumption across Nokia's product portfolio and advance its products and features towards increased energy efficiency. For example, this includes the target to achieve a 50% reduction in average power consumption of its 5G massive MIMO¹⁹ base station by 2023, compared to 2019 levels.
- Nokia's product portfolio: Follow a sustainable product design approach across its product portfolio, to address material and energy efficiency. This includes considering life cycle as a key component, as well as providing an environmental product declaration to customers for most of its products, covering environmental data for the relevant product, including carbon footprint, power consumption and recycling instructions, amongst other content.
- Nokia's own operations: Increase the use of renewable energy to power offices, labs and other facilities, using 100% of renewable electricity by 2025. This also includes the goal to generate green electricity on-site and purchase renewable energy certificates.

¹⁷ Nokia, "People and planet report 2021", at: <https://www.nokia.com/sites/default/files/2022-03/nokia-people-and-planet-2021-sustainability-report.pdf>

¹⁸ Ibid.

¹⁹ Massive MIMO is a technology that deploys multiple antennas to increase data rates and capacity within a 5G network.

- Nokia's own operations: Electrify the Company's car fleet and offer mobility services where feasible. Nokia has informed Sustainalytics that mobility services include car sharing, the provision of bicycles and the support for using public transportation.
- Engaging with Nokia's suppliers on climate targets: Collaborate with final assembly suppliers to develop 2030 factory level roadmaps, in order for them to achieve net zero by 2030.

Ambitiousness, Baseline and Benchmarks

To determine ambitiousness of the SPT, Sustainalytics considers: i) whether the SPT goes beyond a business-as-usual trajectory; ii) how the SPT compares to targets set by peers; and iii) how the SPT compares with science.²⁰

Nokia has selected 2019 as the baseline year for the SPT, which has been approved by the SBTi. Sustainalytics recognizes that the market favours setting a more recent baseline, however, notes Nokia's intention to ensure consistency with its company-wide sustainability strategy and with the SBTi-validated targets.

SPT: Sustainalytics used the following benchmarks to assess ambitiousness: past performance, peer performance and alignment with science.

In 2021, Nokia's scope 3 GHG emissions represented 99% of the Company's total GHG emissions. Nokia's absolute scope 1, 2 and 3 GHG emissions increased by an average annual rate of 3.7% between 2019 and 2021, mainly related to increased scope 3 emissions from: i) customer use of sold products linked to increased demand for fibre connection for home office use and larger shipments of single RAN²¹ high-capacity products including 5G; ii) upstream transportation and distribution of its products; and iii) capital goods. To achieve the SPT, Nokia must reduce its scope 1, 2 and 3 GHG emissions by 50% by 2030, compared to the 2019 baseline, implying an average annual reduction of approximately 4.55%. Based on the above, Sustainalytics considers the targeted performance required to achieve the SPT to be above past performance.

In addition, based on a comparative assessment against seven peer companies in the technology hardware industry and the telecommunication services industry, there is only one peer with a more ambitious target, while Nokia remains above the other six peers' targets. Therefore, Sustainalytics considers the SPT to be above peer performance.

For the comparison with recognized science-based decarbonization trajectories, Sustainalytics notes that the SPT is aligned with the SBTi's 1.5°C scenario, using an absolute contraction approach.²² This model requires a minimum GHG emissions reduction rate of 4.2% annually in absolute terms.²³ Nokia's SPT is aligned with this minimum reduction rate and has been validated by the SBTi.

Further, Sustainalytics notes that Nokia has developed a recalculation policy for a potential recalculation of the KPI, SPT or baseline in case of material changes in the calculation methodology, regulatory changes or others.

Overall Assessment

Sustainalytics considers the SPT to align with Nokia's sustainability strategy and considers it to be highly ambitious, given that it: i) presents a material improvement compared to past performance; ii) is above the targets of industry peers; and iii) is aligned with the SBTi's thresholds for carbon emissions consistent with a 1.5°C scenario.

SPT(s)	Ambitiousness of SPT(s)			
SP1: Reduce absolute scope 1, 2 and 3 GHG emissions (in tCO₂e) by 50% between 2019 and 2030.	Not Aligned	Moderately Ambitious	Ambitious	Highly Ambitious

²⁰ We refer here to contextual benchmarks that indicate the alignment of targets with ecosystem boundaries.

²¹ Single RAN consists of multipurpose hardware and common software for 2G, 3G, 4G and 5G non-standalone and standalone architecture technologies.

²² The absolute contraction approach is a method for companies to set emissions reduction targets that are aligned with the global, annual emissions reduction rate that is required to meet the 1.5°C or well-below 2°C targets.

²³ SBTi, "SBTi Corporate Manual, Version 2.0" (2021), at: <https://sciencebasedtargets.org/resources/files/SBTi-Corporate-Manual.pdf>



Bond Characteristics

Nokia intends to issue sustainability-linked bonds and obtain sustainability-linked loans under the Framework. The financial characteristics of the sustainability-linked bonds and loans issued or obtained under the Framework will be linked to the KPI and its SPT, as defined in the Framework. Sustainalytics notes that the financial characteristic adjustments may include a coupon rate step-up, a redemption premium payment or a margin adjustment in the case that: i) the SPT has not been achieved by its observation date; or ii) the verification of the SPT has not been provided and made public in a timely manner as set out in the legal documentation of the relevant financing. Sustainalytics recognizes that if the KPI cannot be calculated, observed or reported as per the definition in the instrument's legal documentation, the financing characteristic adjustments will be triggered as if the target was not met.

Sustainalytics notes that Nokia will notify its investors of the achievement or non-achievement of the SPT within 180 days after the end of the relevant financial year. Further, Nokia intends to specify the relevant KPI, SPT, coupon rate, margin or premium payment, as applicable, in the documentation of the relevant financing instrument.

Sustainalytics recognizes that the relevant financial characteristics of the sustainability-linked bonds and loans are aligned with the SLBP and the SLLP.



Reporting

Nokia commits to report on an annual basis on its progress on the KPI and SPT, which will be made available in its People and Planet annual report. Furthermore, the Company commits to disclosing relevant information enabling investors to monitor the progress of the KPI towards the SPT. Information may also include: i) a qualitative or quantitative explanation of the contribution of the main factors influencing the KPI progress; ii) the positive impacts of the KPI and SPT progress; iii) potential reassessments of the KPI and SPT due to changes to the calculation methodology or significant changes in data; iv) adjustments to the baseline or KPI scope; and v) regulatory changes relevant to the KPI and SPT. The reporting commitments are aligned with the SLBP and SLLP.



Verification

Nokia commits to have an independent external verifier provide a limited assurance statement on the KPI and SPT progress annually. In case of periods that are relevant for assessing the KPI against the SPT leading to a potential financial adjustment, said assurance will take place before the report related to the target observation date has been published. The verification commitments are aligned with the SLBP and SLLP.

Section 2: Assessment of Nokia's Sustainability Strategy

Credibility of Nokia Sustainability Strategy

Nokia launched its renewed ESG strategy in October 2022, focusing on five points: (i) environment (climate and circularity); (ii) industrial digitization; (iii) security and privacy; (iv) bridging the digital divide; and (v) responsible business.^{24,25}

As part of the environment focus area of its ESG strategy, Nokia aims to improve energy efficiency in silicon, software and systems, optimizing its networks' energy use and greening its operations. Nokia integrates circularity in its operations by using recycled material in its products and through refurbishment and recycling of products when removed from its customers networks. In 2020, Nokia set a target to divert 70% of its facility waste from landfill and reported to have achieved 80% diversion

²⁴ Nokia, "Our ESG Strategy", at: <https://www.nokia.com/about-us/sustainability/esg-strategy/>

²⁵ Nokia, "Nokia takes ESG strategy to next level of impact", (2022), at: <https://www.nokia.com/about-us/news/releases/2022/10/31/nokia-takes-esg-strategy-to-next-level-of-impact/#:~:text=The%20ESG%20strategy%20builds%20on,Digital%20Divide%3B%20and%20Responsible%20Business>

in 2021.²⁶ To help meet its environmental ambitions, Nokia signed the European Green Digital Coalition in 2021, committing to support the EU's green and digital transformation and to maximize the sustainability benefits of digitization.²⁷ Nokia joined the World Economic Forum's First Movers Coalition as a founding member in 2021 with the aim to accelerate the market for zero-emissions goods and services. In 2022, Nokia joined the RE100 initiative with the target to achieve 100% purchased electricity from renewable sources by 2025 across its offices, research and development labs, and factories.²⁸

Nokia has been reporting on its environmental and sustainability issues since 1994 and has been a member of the United Nations' Global Compact (UNGC) since 2001.^{29,30} In addition, the Company complies with international sustainability frameworks such as SASB, GRI and TCFD.³¹ In 2022, Nokia achieved a CDP score of A- (leadership band) in its activity group, demonstrating its environmental stewardship.³²

Sustainalytics considers Nokia's sustainability strategy to be strong and expects the instruments issued under the Framework to further support Nokia's sustainability strategy.

Nokia's Environmental and Social Risk Management

Sustainalytics' ESG Risk Rating for Nokia indicates strong management of material ESG issues.³³ Sustainalytics also recognizes that Nokia's defined targets are impactful, but acknowledges that achieving the SPTs bears environmental and social risks related to: (i) data privacy and security;³⁴ (ii) human capital;³⁵ and (iii) carbon-own operations.³⁶ Sustainalytics comments below on Nokia's ability to mitigate such potential risks.

- **Data Privacy and Security:** To address risks pertaining to data privacy and security, Nokia has implemented a company-wide Information Security Framework.³⁷ The Company's security control and processes follow the ISO/IEC 27001 standard and the NIST Cybersecurity Framework to ensure identification and detection of security threats and risks to its systems.^{38,39} Nokia's Cyber Defense Center monitors the execution of access management, antimalware operations, certificate management, log provisioning, network security services, server provisioning, software whitelisting and vulnerability remediation by detecting anomalies and remediating security incidents.⁴⁰ Nokia's information protection programme protects Nokia's and its customers' information and enforces proper handling, storage, transmission and destruction of sensitive or confidential information. The Company's security awareness programme enables e-training for all its employees on security best practices and targeted awareness campaigns. Nokia's security management process Design for Security and product security requirements meet industry standards such as the 3GPP Security Assurance Methodology and the GSMA Network Equipment Security Assurance Scheme.^{41,42,43} The Company complies with the EU's General Data Protection Regulation and the legal and regulatory requirements for the telecommunications

²⁶ Ibid

²⁷ Nokia, "People and Planet", (2021) at: <https://www.nokia.com/sites/default/files/2022-03/nokia-people-and-planet-2021-sustainability-report.pdf>

²⁸ Ibid

²⁹ Nokia, "Environmental Policy", (2016), at: <https://www.nokia.com/sites/default/files/2019-02/Nokia%20Environmental%20Policy%20%281%29.pdf>

³⁰ UN Global Compact, "Nokia Corporation", at: <https://www.unglobalcompact.org/what-is-gc/participants/6967-Nokia-Corporation>

³¹ Nokia, "People and Planet", (2021) at: <https://www.nokia.com/sites/default/files/2022-03/nokia-people-and-planet-2021-sustainability-report.pdf>

³² Nokia, "CDP Score Report- Climate Change 2022", at: <https://www.nokia.com/sites/default/files/2023-01/2022-cdp-score-report.pdf>

³³ This assessment has been derived from Sustainalytics' ESG Risk Rating of Nokia on November 4, 2022

³⁴ Sustainalytics' material ESG issue 'Data Privacy and Security' focuses on Data Privacy and Security focuses on data governance practices, including how companies collect, use, manage and protect data.

³⁵ Sustainalytics' material ESG issue 'Human Capital' focuses on the management of risks related to scarcity of skilled labour as well as labour relations, such as non-discrimination, working hours and minimum wages.

³⁶ Sustainalytics' material ESG issue 'Carbon - Own Operations' refers to a company's management of risks related to its own operational energy use and GHG emissions (scope 1 and 2). It also includes parts of Scope 3 emissions.

³⁷ Nokia, "People and Planet", (2021) at: <https://www.nokia.com/sites/default/files/2022-03/nokia-people-and-planet-2021-sustainability-report.pdf>

³⁸ ISO, "ISO/IEC 27001 Information Security Management", at: <https://www.iso.org/isoiec-27001-information-security.html>

³⁹ NIST Cybersecurity Framework is a set of guidelines for mitigating organizational cybersecurity risks, published by the US National Institute of Standards and Technology based on existing standards, guidelines, and practices. Further information available at: <https://www.nist.gov/cyberframework>

⁴⁰ Nokia, "People and Planet", (2021) at: <https://www.nokia.com/sites/default/files/2022-03/nokia-people-and-planet-2021-sustainability-report.pdf>

⁴¹ Nokia, "Design for Security (DFSEC)", (2021), at: <https://www.nokia.com/sites/default/files/2021-10/DFSEC-introduction-Customer-document.pdf>

⁴² 3GPP, "Security Assurance Methodology (SECAM) for 3GPP Nodes", (2013), at: <https://www.3gpp.org/news-events/3gpp-news/secam-for-3gpp-nodes>

⁴³ GSMA, "GSMA Network Equipment Security Assurance Scheme (NESAS)", at: <https://www.gsma.com/security/network-equipment-security-assurance-scheme/>

sector in the countries it operates. Nokia's Third-Party Security Risk Management process for its suppliers ensures supply chain security and compliance with applicable laws and regulations.⁴⁴

- **Human Capital:** To address risks pertaining to human capital, Nokia has developed its Code of Conduct for its employees and suppliers, which is complemented by its Human Rights Policy and sets out guidelines to ensure responsible and ethical conduct within the Company.⁴⁵ Nokia's Human Rights Policy is committed to the principles of The Universal Declaration of Human Rights and the UNGC, the International Labor Organization's Declaration on Fundamental Principles and Rights at Work, Organisation for the Economic Co-operation and Development, and adheres to the guidelines for Multinational Enterprises and the United Nations Guiding Principles on Business and Human Rights.^{46,47} Nokia Modern Slavery statement prohibits the use of servitude, child labour, forced labour, human trafficking or slavery in its operations, or in any part of its global supply chain.⁴⁸ The Company's policies and standard operating procedures also address child labour, forced labour, freedom of association and collective bargaining, non-discrimination, humane treatment, working time, disciplinary practices, compensation and occupational health and safety.⁴⁹ Nokia adheres to all applicable laws and regulations of the geographical locations in which it operates, and complies with the social accountability standard SA8000.⁵⁰
- **Carbon – Own Operations:** To address risks pertaining to Carbon - Own Operations, Nokia aims to reduce 50% of its emissions by 2030 and achieve net zero emissions by 2050 along its value chain. The Company's near-term target has been validated by the SBTi to be aligned with its 1.5°C decarbonization pathway.⁵¹ Nokia implemented an Environmental Policy in 2016 to improve the environmental performance of its business by minimizing the negative environmental impact of its products and services throughout their life cycle.⁵² Nokia assesses the carbon footprint of its products with its Life Cycle Assessment procedure, which follows the ITU-T L.1410 standard based on the ISO 14040 standard and is aligned with the Greenhouse Gas Protocol ICT Sector Guidance.^{53,54} The Company complies with ISO 14001:2015 to manage its environmental systems and requires its suppliers to have an environmental management system in place.^{55,56}

In addition to the above, Sustainalytics notes that it has found no evidence of any major environmental or social controversies related to Nokia. However, Nokia, through its associated companies or subsidiaries, operates in countries that Sustainalytics has identified as high-risk in relation to: (i) human and labour rights; (ii) corruption; and (iii) sourcing from mining operations. Sustainalytics notes that operations in high-risk countries should be accompanied by thorough risk management procedures to ensure that any adverse effects are sufficiently identified and addressed. Nokia has undertaken the following measures to mitigate risks in high-risk countries:

- To assess and mitigate potential human and labour right risks, Nokia implements a Code of Conduct which is binding on all employees and business partners including those of Nokia's affiliates and subsidiaries.⁵⁷ In addition, Nokia has its own Code of Ethics and Third-Party Code of Conduct to reinforce ethical behaviour and promote high standards of business conduct.^{58,59} The Company supports and expects its suppliers to comply with the principles of the United Nations Global Compact, UN Universal Declaration of Human Rights and the national laws and regulations in the countries it operates in. Further, Nokia conducts risk assessments in high-risk countries, trains employees to raise awareness on

⁴⁴ Nokia, "People and Planet", (2021) at: <https://www.nokia.com/sites/default/files/2022-03/nokia-people-and-planet-2021-sustainability-report.pdf>

⁴⁵ Nokia, "Code of Conduct", (2021), at: <https://www.nokia.com/sites/default/files/2020-01/Code%20of%20conduct-ENG-FINAL.pdf>

⁴⁶ Nokia, "People and Planet", (2021) at: <https://www.nokia.com/sites/default/files/2022-03/nokia-people-and-planet-2021-sustainability-report.pdf>

⁴⁷ Nokia, "Human Rights Policy", (2022), at: <https://www.nokia.com/sites/default/files/2022-02/NokiaHumanRightsPolicy.pdf>

⁴⁸ Nokia, "Modern Slavery statement", (2021), at: https://www.nokia.com/sites/default/files/2022-06/nokia_modern_slavery_statement_for_year_2021.pdf

⁴⁹ Nokia, "People and Planet", (2021) at: <https://www.nokia.com/sites/default/files/2022-03/nokia-people-and-planet-2021-sustainability-report.pdf>

⁵⁰ Social Accountability International, "SA8000:2014 Standard", at: <https://sa-intl.org/resources/sa8000-standard/>

⁵¹ SBTi, "Companies taking Action", accessed (19.01.23) at: <https://sciencebasedtargets.org/companies-taking-action>

⁵² Nokia, "Environmental Policy", (2016), at: <https://www.nokia.com/sites/default/files/2019-02/Nokia%20Environmental%20Policy%20%281%29.pdf>

⁵³ ITU, "Methodology for environmental life cycle assessments of information and communication technology goods, networks and services- Recommendation ITU-T L.1410", (2014), at: https://www.itu.int/rec/dologin_pub.asp?lang=e&id=T-REC-L.1410-201412-1!!PDF-E&type=items

⁵⁴ ISO, "ISO 14040:2006– Environment Management- Life Cycle Assessment-Principles and Framework", at: <https://www.iso.org/standard/37456.html>

⁵⁵ ISO, "ISO 14001– Environment Management Systems", at: <https://www.iso.org/iso-14001-environmental-management.html>

⁵⁶ Nokia, "People and Planet", (2021) at: <https://www.nokia.com/sites/default/files/2022-03/nokia-people-and-planet-2021-sustainability-report.pdf>

⁵⁷ Nokia, "Code of Conduct", (2021), at: <https://www.nokia.com/sites/default/files/2020-01/Code%20of%20conduct-ENG-FINAL.pdf>

⁵⁸ Nokia, "Code of Ethics", (2018), at: https://www.nokia.com/sites/default/files/2019-02/Code%20of%20Ethics%202019_0.pdf

⁵⁹ Nokia, "Third Party Code of Conduct", (2022), at: <https://www.nokia.com/sites/default/files/2022-12/nok2292-code-of-conduct-3rd-party-2022-eng.pdf>

human rights and performs internal audits to review human rights issues. In 2021, Nokia conducted 21 supplier training workshops on diversity and inclusion, modern slavery, responsible minerals sourcing and climate change, and health and safety.⁶⁰ Nokia also collaborates with Verisk Maplecroft, an independent global risk intelligence provider, to identify relevant human rights issues and effectively manage such risks.⁶¹

- Nokia addresses risks pertaining to corruption through its zero-tolerance policy on corruption, which is detailed in its Code of Conduct and Third-Party Code of Conduct and is embedded in its compliance programme. The Company's Anti-Corruption Center of Excellence monitors and manages high-risk third parties, including the screening of customers and suppliers. Additionally, Nokia provides targeted anti-corruption training for employees in sales, procurement, marketing and other relevant functions and complies with all applicable legal regulations.⁶²
- To address risks pertaining to sourcing from mining operations, Nokia conforms to the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas and has a Responsible Minerals Policy in place for socially and environmentally responsible sourcing of materials.⁶³ The policy requires that suppliers commit to sourcing materials from responsible and free-of-conflict sources and report on their due diligence processes.

Sustainalytics considers Nokia to have strong management programmes and policies in place to mitigate the environmental and social risks that could arise from its operations in high-risk countries.

Section 3: Impact of the SPTs

The information and communications technology (ICT) industry contributes 2%-3% of total global GHG emissions, with data centres and data transmission networks responsible for nearly 1% of energy-related GHG emissions.^{64,65} Between 2010 and 2022, global internet traffic grew 20-fold while the number of internet users more than doubled, leading to increased energy consumption by the ICT industry.^{66,67} Consistent with this growth, the number of unique mobile subscribers reached 5.3 billion in 2021 and is projected to reach 5.7 billion by 2025,⁶⁸ with the COVID-19 pandemic and technological advances further increasing data usage and electricity demand.⁶⁹ In this sense, the IEA expects 5G's share of mobile data traffic to rise from 10% in 2021 to 60% in 2027.⁷⁰

According to the International Telecommunication Union (ITU), the ICT industry needs to reduce GHG emissions by 45% between 2020 and 2030 to meet the targets of the Paris Agreement.⁷¹ The GSM Association, which represents mobile operators, and the SBTi state that in order to align with the 1.5°C trajectory between 2020 and 2030, the ICT sector needs to focus on: (i) continued implementation of energy efficiency plans; (ii) a shift to renewable or low-carbon electricity supply; and (iii) encouragement of carbon consciousness among end users.⁷² As of 2022, operators covering 44% of global mobile connections have committed to science-based targets and those covering 29% of those connections have committed to net zero targets by 2050 or earlier.⁷³

⁶⁰ Nokia, "People and Planet", (2021) at: <https://www.nokia.com/sites/default/files/2022-03/nokia-people-and-planet-2021-sustainability-report.pdf>

⁶¹ Nokia, "Modern Slavery statement", (2021), at: https://www.nokia.com/sites/default/files/2022-06/nokia_modern_slavery_statement_for_year_2021.pdf

⁶² Nokia, "Code of Conduct", at: <https://www.nokia.com/about-us/company/leadership-and-governance/code-of-conduct/#:~:text=Anti%2Dcorruption,important%20role%20in%20fighting%20corruption>.

⁶³ Nokia, "Responsible Minerals Policy", (2019), at: https://www.nokia.com/sites/default/files/2019-09/Responsible%20minerals%20policy_ext.pdf

⁶⁴ IEA, "Data Centers and Networks", (2022), at: <https://www.iea.org/fuels-and-technologies/data-centres-networks>

⁶⁵ Global Data, "Scope 3 Greenhouse Gas (GHG) Emissions of Major Technology Companies in 2021", (2021), at: <https://www.globaldata.com/data-insights/technology-media-and-telecom/scope-3-greenhouse-gas-ghg-emissions-2089128/>

⁶⁶ IEA, 2022, "Data centers and data transmission networks, at: <https://www.iea.org/reports/data-centres-and-data-transmission-networks>

⁶⁷ S&P Global, "ESG Industry Report Card: Telecoms", (2020) at: <https://www.maalot.co.il/Publications/GRB20200824143602.pdf>

⁶⁸ GSM Association, "The Mobile Economy", (2022), at: <https://www.gsma.com/mobileeconomy/wp-content/uploads/2022/02/280222-The-Mobile-Economy-2022.pdf>

⁶⁹ The World Bank, "How COVID-19 increased data consumption and highlighted the digital divide", at: <https://wdr2021.worldbank.org/spotlights/how-covid-19-increased-data-consumption-and-highlighted-the-digital-divide/>

⁷⁰ IEA, 2022, "Data centers and data transmission networks, at: <https://www.iea.org/reports/data-centres-and-data-transmission-networks>

⁷¹ ITU, "ICT industry to reduce greenhouse gas emissions by 45 per cent by 2030", (2020) at: <https://www.itu.int/en/mediacentre/Pages/PR04-2020-ICT-industry-to-reduce-greenhouse-gas-emissions-by-45-percent-by-2030.aspx>

⁷² Science Based Targets initiative, "Guidance for ICT companies setting science-based target", at: https://sciencebasedtargets.org/resources/legacy/2020/04/GSMA_IP_SBT-report_WEB-SINGLE.pdf

⁷³ GSM Association, "Mobile Net Zero", (2022) at: [Moble-Net-Zero-State-of-the-Industry-on-Climate-Action-2022.pdf](https://www.gsma.com/mobileeconomy/wp-content/uploads/2022/02/280222-The-Mobile-Economy-2022.pdf)

Most ICT companies have significant scope 3 emissions⁷⁴ primarily driven by two factors: (i) the upstream delivery of capital goods and services; and (ii) the downstream use of telecom services, which consists of electricity consumption to operate telecom equipment.⁷⁵ To achieve net zero emissions in the ICT industry by 2050, the GSM Association calls for operators and suppliers to align their operations with the recommendations of the TCFD, set science-based targets, improve energy efficiency and increase the use of renewable energy, carbon offsetting and circularity across the sector.^{76,77}

Sustainalytics is of the opinion that Nokia's focus and efforts in reducing scope 1, 2 and 3 GHG emissions are expected to positively contribute to reducing its environmental footprint and support the ambitions of the Paris Agreement, including by stimulating suppliers to commit to science-based targets.

Alignment with/contribution to SDGs

The Sustainable Development Goals were adopted by the United Nations General Assembly in September 2015 and form part of an agenda for achieving sustainable development by the year 2030. The sustainability-linked financing instruments issued under the Framework are expected to help advance the following SDG goals and targets:

KPI	SDG	SDG Target
Absolute scope 1, 2 and 3 GHG emissions (tCO ₂ e)	7. Affordable and clean energy	7.2 By 2030, increase substantially the share of renewable energy in the global energy mix 7.3 By 2030, double the global rate of improvement in energy efficiency
	9. Industry, Innovation and Infrastructure	9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities

Conclusion

Nokia intends to issue sustainability-linked bonds and obtain sustainability-linked loans, which will have a coupon rate step-up, a redemption premium payment or a margin adjustment tied to the achievement or non-achievement of the following SPT:

- Reduce absolute scope 1, 2 and 3 GHG emissions (in tCO₂e) by 50% between 2019 and 2030

Sustainalytics considers the KPI, absolute scope 1, 2 and 3 GHG emissions (in tCO₂e), to be very strong based on its materiality and relevance to Nokia's business, its high scope of applicability, the use of a clear and consistent methodology that is externally defined and its suitability to be benchmarked against external decarbonization trajectories. Sustainalytics considers the SPT, reduce absolute scope 1, 2 and 3 GHG emissions (in tCO₂e) by 50% between 2019 and 2030, to be aligned with Nokia's sustainability strategy and to be highly ambitious given that it is above historical performance, aligned with peer performance and aligned with SBTi's 1.5°C scenario.

Sustainalytics also considers the reporting and verification commitments to be aligned with market expectations.

Based on the above, Sustainalytics considers the Nokia Sustainable Finance Framework to be aligned with the five core components of the Sustainability-Linked Bond Principles 2020 and Sustainability-Linked Loan Principles 2022, and the prospective achievement of the SPT to be impactful.

⁷⁴ Science Based Targets initiative, "Guidance for ICT companies setting science-based target", at: https://sciencebasedtargets.org/resources/legacy/2020/04/GSMA_IP_SBT-report_WEB-SINGLE.pdf

⁷⁵ BCG, "Putting Sustainability at the top of Telco Agenda", (2021), at: <https://www.bcg.com/publications/2021/building-sustainable-telecommunications-companies>

⁷⁶ GSM Association, "Mobile Net Zero", (2022) at: [Moble-Net-Zero-State-of-the-Industry-on-Climate-Action-2022.pdf](https://www.gsma.com/betterfuture/emissions-mitigation)

⁷⁷ GSM Association, "Mobile creating a #BetterFuture Reducing Energy Emissions", at: <https://www.gsma.com/betterfuture/emissions-mitigation>

Appendix 1: Sustainability-Linked Bonds - External Review Form

Section 1. Basic Information

Issuer name: Nokia

Sustainability-Linked Bond ISIN:

Independent External Review provider's name for second party opinion pre-issuance (sections 2 & 3): Sustainalytics

Completion date of second party opinion pre-issuance: February 3, 2023

Independent External Review provider's name for post-issuance verification (section 4):

Completion date of post issuance verification:

Original completion date of post issuance verification [please fill this out for updates]:

At the launch of the bond, the structure is:



a step-up structure



a variable redemption structure

Section 2. Pre-Issuance Review

2-1 SCOPE OF REVIEW

The following may be used or adapted, where appropriate, to summarise the scope of the review.

The review:

- | | |
|--|--|
| <input checked="" type="checkbox"/> assessed all the following elements (complete review) | <input type="checkbox"/> only some of them (partial review): |
| <input checked="" type="checkbox"/> Selection of Key Performance Indicators (KPIs) | <input checked="" type="checkbox"/> Bond characteristics (acknowledgment of) |
| <input checked="" type="checkbox"/> Calibration of Sustainability Performance Targets (SPTs) | <input checked="" type="checkbox"/> Reporting |
| <input checked="" type="checkbox"/> Verification | |
| <input checked="" type="checkbox"/> and confirmed their alignment with the SLBP. | |

2-2 ROLE(S) OF INDEPENDENT EXTERNAL REVIEW PROVIDER

- | | |
|--|---|
| <input checked="" type="checkbox"/> Second Party Opinion | <input type="checkbox"/> Certification |
| <input type="checkbox"/> Verification | <input type="checkbox"/> Scoring/Rating |

Note: In case of multiple reviews / different providers, please provide separate forms for each review.

2-3 EXECUTIVE SUMMARY OF REVIEW and/or LINK TO FULL REVIEW (if applicable)

Nokia intends to issue sustainability-linked bonds and obtain sustainability-linked loans, which will have a coupon rate step-up, a redemption premium payment or a margin adjustment tied to the achievement or non-achievement of the following SPT:

- Reduce absolute scope 1, 2 and 3 GHG emissions (in tCO₂e) by 50% between 2019 and 2030

Sustainalytics considers the KPI, absolute scope 1, 2 and 3 GHG emissions (in tCO₂e), to be very strong based on its materiality and relevance to Nokia's business, its high scope of applicability, the use of a clear and consistent methodology that is externally defined and its suitability to be benchmarked against external decarbonization trajectories. Sustainalytics considers the SPT, reduce absolute scope 1, 2 and 3 GHG emissions (in tCO₂e) by 50% between 2019 and 2030, to be aligned with Nokia's sustainability strategy and to be highly ambitious given that it is above historical performance, aligned with peer performance and aligned with SBTi's 1.5°C scenario.

Sustainalytics also considers the reporting and verification commitments to be aligned with market expectations.

Based on the above, Sustainalytics considers the Nokia Sustainable Finance Framework to be aligned with the five core components of the Sustainability-Linked Bond Principles 2020 and Sustainability-Linked Loan Principles 2022, and the prospective achievement of the SPT to be impactful.

Section 3. Detailed pre-issuance review

Reviewers are encouraged to provide the information below to the extent possible and use the comment section to explain the scope of their review.

3-1 SELECTION OF KEY PERFORMANCE INDICATORS (KPIs)

Overall comment on the section (if applicable): Sustainalytics considers the KPI, absolute scope 1, 2 and 3 GHG emissions (in tCO₂e), to be very strong given that: i) it is a direct measure of the Group's environmental performance and speaks to a material ESG issue; ii) it has a high scope of applicability; iii) it follows a clear and consistent methodology that is externally defined; and iv) it lends itself to be externally benchmarked.

List of selected KPIs:

- Absolute scope 1, 2 and 3 GHG emissions (tCO₂e)

Definition, Scope, and parameters

- | | |
|--|---|
| <input checked="" type="checkbox"/> Clear definition of each selected KPIs | <input checked="" type="checkbox"/> Clear calculation methodology |
| <input type="checkbox"/> Other (please specify): | |

Relevance, robustness, and reliability of the selected KPIs

- | | |
|--|---|
| <input checked="" type="checkbox"/> Credentials that the selected KPIs are relevant, core and material to the issuer's sustainability and business strategy. | <input type="checkbox"/> Evidence that the KPIs are externally verifiable |
| <input checked="" type="checkbox"/> Credentials that the KPIs are measurable or quantifiable on a consistent methodological basis | <input checked="" type="checkbox"/> Evidence that the KPIs can be benchmarked |
| | <input type="checkbox"/> Other (please specify): |

3-2 CALIBRATION OF SUSTAINABILITY PERFORMANCE TARGETS (SPTs)

Overall comment on the section (if applicable): Sustainalytics considers the SPT to align with Nokia's sustainability strategy and considers it to be highly ambitious, given that it: i) presents a material improvement compared to past performance; ii) is above the targets of industry peers; and iii) is aligned with the SBTi's thresholds for carbon emissions consistent with a 1.5°C scenario.

Rationale and level of ambition

- | | |
|--|---|
| <input checked="" type="checkbox"/> Evidence that the SPTs represent a material improvement | <input checked="" type="checkbox"/> Credentials on the relevance and reliability of selected benchmarks and baselines |
| <input checked="" type="checkbox"/> Evidence that SPTs are consistent with the issuer's sustainability and business strategy | <input checked="" type="checkbox"/> Credentials that the SPTs are determined on a predefined timeline |
| | <input type="checkbox"/> Other (please specify): |

Benchmarking approach

- | | |
|--|--|
| <input checked="" type="checkbox"/> Issuer own performance | <input checked="" type="checkbox"/> Issuer's peers |
| <input checked="" type="checkbox"/> reference to the science | <input type="checkbox"/> Other (please specify): |

Additional disclosure

- | | |
|---|--|
| <input checked="" type="checkbox"/> potential recalculations or adjustments description | <input checked="" type="checkbox"/> issuer's strategy to achieve description |
| <input checked="" type="checkbox"/> identification of key factors that may affect the achievement of the SPTs | <input type="checkbox"/> Other (please specify): |

3-3 BOND CHARACTERISTICS

Overall comment on the section (if applicable): Nokia will link the financial characteristics of the sustainability-linked bonds and loans issued under the Framework to the achievement or non-achievement of the SPT. For sustainability-linked bonds and loans issued or obtained, a coupon rate step-up, a redemption premium payment or a margin adjustment will be triggered in the case that: i) the SPT has not been achieved by its observation date; or ii) the verification of the SPT has not been provided and made public in a timely manner as set out in the legal documentation of the relevant financing.

Financial impact:

- | |
|---|
| <input checked="" type="checkbox"/> variation of the coupon |
| <input checked="" type="checkbox"/> Other (please specify): redemption premium payment or a margin adjustment |

Structural characteristic:

- | |
|--|
| <input type="checkbox"/> ... |
| <input type="checkbox"/> ... |
| <input type="checkbox"/> Other (please specify): |

3-4 REPORTING

Overall comment on the section (if applicable): Nokia commits to reporting on an annual basis on its KPI performance made publicly available in its People and Planet annual report. Nokia commits to disclosing relevant information enabling investors to monitor the progress towards the SPT. The reporting commitments are aligned with the SLBP and SLLP.

Information reported:

- | | |
|--|---|
| <input checked="" type="checkbox"/> performance of the selected KPIs | <input checked="" type="checkbox"/> verification assurance report |
| <input checked="" type="checkbox"/> level of ambition of the SPTs | <input type="checkbox"/> Other (please specify): |

i) a qualitative or quantitative explanation of the contribution of the main factors influencing the KPI performance; ii) the positive impacts of the KPI and SPT performance; iii) potential reassessments of the KPI and SPT due to changes to the calculation methodology or significant changes in data; iv) adjustments to the baseline or KPI scope; and/or v) regulatory changes relevant to the KPI and SPT.

Frequency:

- ☒ Annual ☐ Semi-annual
☐ Other (please specify):

Means of Disclosure

- ☐ Information published in financial report ☐ Information published in sustainability report
☐ Information published in ad hoc documents ☒ Other (please specify): Company's website
☐ Reporting reviewed (*if yes, please specify which parts of the reporting are subject to external review*):

Where appropriate, please specify name and date of publication in the "useful links" section.

Level of Assurance on Reporting

- ☒ limited assurance ☐ reasonable assurance
☐ Other (*please specify*):

USEFUL LINKS (e.g. to review provider methodology or credentials, to issuer's documentation, etc.)

Section 4. Post-issuance verification

Overall comment on the section (*if applicable*):

Information reported:

- ☐ limited assurance ☐ reasonable assurance
☐ Other (please specify):

Frequency:

- | | |
|--|--------------------------------------|
| <input type="checkbox"/> Annual | <input type="checkbox"/> Semi-annual |
| <input type="checkbox"/> Other (please specify): | |

Material change:

- | | |
|---|--|
| <input type="checkbox"/> Perimeter | <input type="checkbox"/> KPI methodology |
| <input type="checkbox"/> SPTs calibration | |

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The issuer is fully responsible for certifying and ensuring the compliance with its commitments, for their implementation and monitoring.

In case of discrepancies between the English language and translated versions, the English language version shall prevail.

About Sustainalytics, a Morningstar Company

Sustainalytics, a Morningstar Company, is a leading ESG research, ratings and data firm that supports investors around the world with the development and implementation of responsible investment strategies. For more than 30 years, the firm has been at the forefront of developing high-quality, innovative solutions to meet the evolving needs of global investors. Today, Sustainalytics works with hundreds of the world's leading asset managers and pension funds who incorporate ESG and corporate governance information and assessments into their investment processes. Sustainalytics also works with hundreds of companies and their financial intermediaries to help them consider sustainability in policies, practices and capital projects. With 17 offices globally, Sustainalytics has more than 1500 staff members, including more than 500 analysts with varied multidisciplinary expertise across more than 40 industry groups.

For more information, visit www.sustainalytics.com

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