

C0. Introduction

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C0.1

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**(C0.1) Give a general description and introduction to your organization.**

NOS, SPGS, S.A. (“NOS”, “NOS Group” or “company”) is a publicly listed company, headquartered in Portugal, created in 2014 after the merger of two of the biggest communications companies in the country - ZON and Optimus.

Our business portfolio includes two segments: i) Telecommunications where we provide fixed and mobile voice and Internet access, cable and satellite television, management of Data Centres and IT consulting services (96% of consolidated sales FY2020); and ii) Media & Entertainment where we provide cinema exhibition and distribution, video production and sale, production of channels and advertising for Pay TV (4% of consolidated sales FY2020).

NOS operates in Portugal, being a market leader in the segments where it is present: by 2020 year-end we had 5 million mobile customers, 1.8 million fixed voice customers, 1.7 million Pay TV customers, 1.5 million broadband internet customers and had sold 3.8 million cinema tickets in our 219 theatres. Our telecommunications network passes 4.8 million homes and our 4G network covers 99% of the Portuguese territory.

In 2020, consolidated revenues amounted to 1368 million EUR, we recorded an EBITDA of 603 million EUR and ended the year with a total of 1899 employees and a market capitalization of 1472million EUR on Euronext Lisbon.

C0.2

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**(C0.2) State the start and end date of the year for which you are reporting data.**

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Reporting year	January 1 2020	December 31 2020	No	<Not Applicable>

C0.3

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**(C0.3) Select the countries/areas for which you will be supplying data.**

Portugal

C0.4

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**(C0.4) Select the currency used for all financial information disclosed throughout your response.**

EUR

C0.5

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**(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.**

Financial control

C1. Governance

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C1.1

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**(C1.1) Is there board-level oversight of climate-related issues within your organization?**

Yes

C1.1a

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**(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.**

Position of individual(s)	Please explain
Chief Financial Officer (CFO)	The Executive Committee – comprised of Board Directors upon which the day-to-day management of the company has been delegated - is responsible for approving the company's Corporate Sustainability Strategy, including related targets, action plans and budgets. The CFO is the Executive Committee member with specific responsibilities to oversee and coordinate all issues related to corporate responsibility. He is in charge of submitting relevant proposals to the Executive Committee for approval and of overseeing the implementation of the Committee's decisions in this domain. Climate change is one of the top priorities of NOS Corporate Sustainability Strategy and a special focus of attention of the Executive Committee. In 2020, we strengthened the importance of climate goals in our business strategy. The medium-term targets defined in 2019 for energy efficiency, renewable energy and carbon emissions were formally integrated into NOS Next Generation, the company's 2021-2025 strategic vision. A new target was also added: to market products and services that reduce our customers' emissions in an amount higher than the emissions from our own operation, by 2025. The targets were developed under the CFO's supervision and approved by the Executive Committee and the Board upon CFO's proposal.

**C1.1b**

**(C1.1b) Provide further details on the board's oversight of climate-related issues.**

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Scope of board-level oversight	Please explain
Scheduled – some meetings	<ul style="list-style-type: none"> <li>Reviewing and guiding strategy</li> <li>Reviewing and guiding major plans of action</li> <li>Reviewing and guiding risk management policies</li> <li>Reviewing and guiding annual budgets</li> <li>Reviewing and guiding business plans</li> <li>Setting performance objectives</li> <li>Monitoring implementation and performance of objectives</li> <li>Monitoring and overseeing progress against goals and targets for addressing climate-related issues</li> </ul>	<Not Applicable>	Climate-related themes are scheduled for Executive Committee meetings upon proposal by the CFO. Examples of climate-related issues on the agenda include: investments in energy efficiency, with a particular focus on main telecommunications network sites and Data Centres; options for sourcing renewable electricity; changes to the company Business Continuity Plan to ensure increased resilience of critical sites to extreme weather events and forest fires; development of new low carbon P&S portfolio; or progress against corporate energy and emission targets. The CFO is briefed on climate-related issues by the Head of the Investor Relations and Sustainability Department (CSO), which is the corporate-level department responsible for managing and coordinating the implementation of NOS climate strategy, company-wide. Information on the implementation of specific action plans, risk management policies or budgets in different areas of the company (e.g. product development or technical infrastructure operation and supervision) is reported by the respective Heads of business to the Executive Committee member in charge of the area. Examples of business decisions by the Executive Committee in 2020 include the approval of a new climate target related to the enabling effect of telecommunications activities (to market products and services that reduce NOS customers' emissions in an amount higher than the emissions from our own operation, by 2025). This new target was formally integrated - together with our existing medium-term targets for energy efficiency, renewable energy and carbon emissions - into NOS Next Generation, the company's 2021-2025 strategic vision, approved in 2020. Integration of climate-related targets into the company's business goals means the former are monitored regularly by the Executive Committee, alongside other strategic objectives of the company.

**C1.2**

**(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.**

Name of the position(s) and/or committee(s)	Reporting line	Responsibility	Coverage of responsibility	Frequency of reporting to the board on climate-related issues
Chief Sustainability Officer (CSO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Quarterly

**C1.2a**

**(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).**

The CSO is the Head of the Investor Relations and Sustainability Department and reports directly to the CFO.

The Investor Relations and Sustainability Department is the corporate-level structure responsible for managing and coordinating the implementation of NOS climate strategy, company-wide. Its responsibilities include: defining corporate targets and commitments to be proposed for Executive Committee approval (e.g. commitment to market products and services that reduce NOS customers' emissions in an amount higher than the emissions from our own operation, by 2025 - approved in 2020); monitoring and reporting to the CFO on progress against commitments (e.g. quarterly updated of company-wide information on energy consumption and associated emissions); preparing the company non-financial statements, including climate-related information, that are part of the company's Annual Management Report & Accounts; monitoring national and international climate-related trends and best practice relevant to the telecommunications sector.

The CSO reports regularly to the CFO on the implementation of the company's climate strategy and related issues. The position of the CSO-led department in the company's structure ensures the connection between the strategy and commitment setting responsibilities of the Executive Committee and the implementation responsibilities of the operational structures of the different business areas.

### C1.3

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**(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?**

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	Financial incentives associated with climate-related KPIs are factored into our performance evaluation model for employees with responsibilities for climate-related decision-making or action implementation, across different functional groups.

### C1.3a

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**(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).**

Entitled to incentive	Type of incentive	Activity incentivized	Comment
Chief Procurement Officer (CPO)	Monetary reward	Environmental criteria included in purchases	Under NOS performance evaluation model, all employees have their variable remuneration linked to the achievement of both company objectives (strategic corporate goals defined by the Executive Committee, equal for all employees) and individual objectives (specific for each position and responsibilities). Our targets for energy efficiency, renewable electricity consumption and emissions reduction are integrated into one of the company's current strategic goals and are thus indirectly reflected into the above-mentioned company objectives. The weight of the company objectives in the calculation of each employee global achievement is dependent upon the functional group, being higher for positions with a higher degree of influence in decision-making. The corporate director responsible for sourcing (CPO) also has individual objectives linked to KPIs related to progress towards the inclusion of environmental criteria in purchases (e.g. sourcing of certified renewable electricity).
Chief Sustainability Officer (CSO)	Monetary reward	Emissions reduction target Efficiency target Environmental criteria included in purchases Company performance against a climate-related sustainability index	Under NOS performance evaluation model, all employees have their variable remuneration linked to the achievement of both company objectives (strategic corporate goals defined by the Executive Committee, equal for all employees) and individual objectives (specific for each position and responsibilities). Our targets for energy efficiency, renewable electricity consumption and emissions reduction are integrated into one of the company's current strategic goals and are thus indirectly reflected into the above-mentioned company objectives. The weight of the company objectives in the calculation of each employee global achievement is dependent upon the functional group, being higher for positions with a higher degree of influence in decision-making. The corporate director responsible for sustainability (CSO) also has individual objectives linked to KPIs related to the progress towards the company's energy and emissions goals (e.g. coordinating, monitoring and reporting to the CFO on the implementation of each energy and emissions target), as well as to the company performance in climate-related sustainability indexes (e.g. CDP Climate).
Environment/Sustainability manager	Monetary reward	Emissions reduction target Efficiency target Environmental criteria included in purchases Company performance against a climate-related sustainability index	Under NOS performance evaluation model, all employees have their variable remuneration linked to the achievement of both company objectives (strategic corporate goals defined by the Executive Committee, equal for all employees) and individual objectives (specific for each position and responsibilities). Our targets for energy efficiency, renewable electricity consumption and emissions reduction are integrated into one of the company's current strategic goals and are thus reflected into the above-mentioned company objectives. The weight of the company objectives in the calculation of each employee global achievement is dependent upon the functional group, being higher for positions with a higher degree of influence in decision-making. The manager responsible for company-wide sustainability coordination also has individual objectives linked to KPIs related to progress towards the company's energy and emissions goals (e.g. energy and emissions monitoring and reporting, preparation of renewable electricity sourcing procedures, expansion of scope 3 emissions accounting), as well as to the company performance in climate-related sustainability indexes (e.g. CDP Climate).
Energy manager	Monetary reward	Efficiency project Efficiency target	Under NOS performance evaluation model, all employees have their variable remuneration linked to the achievement of both company objectives (strategic corporate goals defined by the Executive Committee, equal for all employees) and individual objectives (specific for each position and responsibilities). Our targets for energy efficiency, renewable electricity consumption and emissions reduction are integrated into one of the company's current strategic goals and are thus reflected into the above-mentioned company objectives. The weight of the company objectives in the calculation of each employee global achievement is dependent upon the functional group, being higher for positions with a higher degree of influence in decision-making. The company managers responsible for business unit energy management also have individual objectives linked to KPIs related to the implementation of energy efficiency projects in their respective business areas (e.g. reduction in global energy consumption per service output).
Facilities manager	Monetary reward	Energy reduction project Energy reduction target Efficiency project Efficiency target	Under NOS performance evaluation model, all employees have their variable remuneration linked to the achievement of both company objectives (strategic corporate goals defined by the Executive Committee, equal for all employees) and individual objectives (specific for each position and responsibilities). Our targets for energy efficiency, renewable electricity consumption and emissions reduction are integrated into one of the company's current strategic goals and are thus reflected into the above-mentioned company objectives. The weight of the company objectives in the calculation of each employee global achievement is dependent upon the functional group, being higher for positions with a higher degree of influence in decision-making. Facility managers – in particular those responsible for premises with high electricity consumption - also have individual objectives linked to KPIs related to the implementation of specific energy efficiency projects and the achievement of pre-defined energy reduction targets at facility level (e.g. reduction in PUE – Power Usage Effectiveness index in Data Centres and main network sites).

**C2. Risks and opportunities**

**C2.1**

**(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?**

Yes

**C2.1a**

**(C2.1a) How does your organization define short-, medium- and long-term time horizons?**

	From (years)	To (years)	Comment
Short-term	0	1	Time horizon for company budget cycles and associated action and resources plans. We use this time frame to assess climate-related risks and opportunities that can materialize in the near term, e.g. changes to existing regulation or acute physical climate risks that are already materializing in the geography where we operate (currently only Portugal), such as increased frequency and severity of forest fires.
Medium-term	1	5	Time horizon for company strategic cycles and associated strategic corporate-wide goals. We use this time frame to assess climate-related risks and opportunities that can materialize in the medium term, e.g. emerging regulation or shifts in client preferences towards products and services that reduce emissions.
Long-term	5		Time horizon for company thinking or planning exercise beyond the next strategic cycle. This is an open-end interval. We use this time frame to assess climate-related risks and opportunities that can materialize in the long term and impact long-lived technical assets, e.g. chronical physical climate risks that might materialize in the long term in the geography where we operate (currently only Portugal), such as the progressive increase in mean Summer temperatures.

## C2.1b

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### **(C2.1b) How does your organization define substantive financial or strategic impact on your business?**

We assess each risk based on three pre-defined criteria for probability (timing of occurrence, detection ability and vulnerability level) and impact (financial impact, impact on reputation and scope of impact). Each criterion is assessed using a uniform scale of 0 to 10, with the probability and impact levels being determined by a combination of the three criteria. We assign quantitative thresholds to the financial impact criteria only: any impact over 250 thousand € (in either turnover, costs or revenues) is considered relevant (between 1000 and 2000 thousand € financial impact is classified as high; between 2000 and 5000 thousand € as very high; and above 5000 thousand € as catastrophic). As a risk with a relatively small potential financial impact can have a much higher impact on other dimensions we have identified risks that can have a substantive impact on our business even if their potential financial impact is below the 250 thousand € threshold (e.g. collapse of a network infrastructure with damage to physical integrity of a third party may be fully covered by insurance and thus have a limited financial impact. However, impact on reputation would qualify as very high, thus making risk very relevant).

The inherent risk level is the combination of the values obtained for probability and impact. All risks with an inherent risk value above the level of risk acceptance (as a default set to  $\geq 25$ ), are subject to special mitigation initiatives or actions. Nevertheless, NOS manages all risks identified within its risk assessment process, investing risk drivers and implementing adequate mitigation measures in line with its Internal Control Manual.

## C2.2

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## (C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

### Value chain stage(s) covered

Direct operations  
Upstream  
Downstream

### Risk management process

Integrated into multi-disciplinary company-wide risk management process

### Frequency of assessment

More than once a year

### Time horizon(s) covered

Short-term  
Medium-term  
Long-term

### Description of process

Our approach to Enterprise Risk Management (ERM), is to incorporate risk management into the company's strategic planning activities. NOS Risk Management Policy establishes the applicable methodologies and identifies responsibilities in all stages of the risk management process. It takes into account international reference standards (e.g. ERM - Integrated Framework, issued by the Committee of Sponsoring Organisations of the Treadway Commission), applicable legal and regulatory requirements, and sector specific frameworks such as COBIT (Control Objectives for Information and related Technology). NOS classifies and groups risk types using a Business Risk Model. The model incorporates a risk dictionary with a detailed description of each type of risk and its classification into the BRM (risk taxonomy), in order to support the identification of potential causes (risk drivers). Climate-related transition and physical risks are included in NOS Business Risk Model: the latest revision of our BRM saw the creation of a specific climate change risk, under the Operational risk category, with the description of the associated risk driver explicitly acknowledging the mitigation (reduction of own operations and value chain GHG emissions) and adaptation dimensions (resilience of our telecommunications infrastructure to acute and chronic physical impacts of climate change). Climate-related issues are also recognized in risk drivers in the Business Environment risk category (legal risks) and in the Security and Continuity subcategory (physical risks). Climate-related opportunities are also closely linked to risk types included in the model, namely market opportunities that might arise from the company's response to risk types identified in the Business Environment risk category under the Market for Products and Services risk subcategory. Periodic risk assessments involve different areas of the company and review and prioritize key corporate risks, including climate-related risks. Assessments are conducted, as a rule, on a yearly basis, but subject to more frequent updates whenever significant context changes take place which often is the case in the Telecommunications sector, thus making the frequency of risk assessment more often than once a year. The assessment uses three pre-defined criteria for both probability and impact, with a uniform assessment scale attached to each of them. Assessment is carried out by Business Unit Directors and/or area focal points. From the range of risks assessed, those that are given an inherent risk value above the risk acceptance level (as a default equal or above 25) are subject to appropriate response processes, initiatives and/or actions. These actions must be integrated into the annual Action and Resources Plans, prepared by each business areas, in line with the company's Strategic Business Plan, and approved by the Executive Committee. Examples include specific measure to mitigate wildfire risk for network infrastructures located in area classified as high fire risk by the Portuguese Forestry and Nature Conservancy Institute. Case study for climate-related physical risks: NOS Business Continuity Management (BCM) programme supports our response to emergency situations, including those caused by extreme weather events (e.g. floods and very strong winds) and also by direct consequences of such extreme events (e.g. forest fires caused by more intense and longer heat waves). In 2018 – in the aftermath of the devastating forest fires that hit Mainland Portugal in 2017, killing more than 100 people and seriously affecting our telecommunications infrastructure – we decided to strengthen our processes for the identification, assessment and mitigation of this particular risk type. The first step was to conduct a risk assessment that ranked all our technical sites according to fire risk. For those classified as "high risk" we implemented site-specific maintenance plans, with additional clearing of vegetation in the surrounding areas, clearing of the undergrowth and cutting of trees, whenever necessary. We also identified the most critical sites for service continuity and started rolling out alternative radio relay solutions and leasing satellite redundancy capacity, which is now also part of our business continuity response to other emergency situations. Satellite capacity was used successfully in August that same year, in the great Monchique fire in Southern Portugal, and has since been extend to the autonomous regions of Azores and Madeira islands. Later, in 2020, we undertook an assessment of various resilience scenarios to ensure that in the event of failure, disruption or external event (including wildfire), the network, platform or system has the ability to continue to provide services with the desired levels of availability and quality. These procedures are now integrated into our Business Continuity Management (BCM) programme and have increased the climate-resilience of our technical network. Case study for climate transition opportunities: The market potential associated with the carbon reduction enabling effect of information and communication technologies is huge. Projections for the IoT (Internet of Things - connected devices such as smart meters or car tracker solutions) market alone point to a 3 to 4-fold growth in the next 5 years, with a global market worth over 1100 trillion USD in 2025 (GMSA, 2020; Cisco, 2020; Absolute Reports, 2020). This is especially relevant for the B2B business segment, where clients are increasing looking for solutions to reduce their own energy and carbon footprint. To tap into the market potential in this client segment we conduct targeted research of market trends and develop specific solutions, namely IoT projects, in close cooperation with clients, that later became commercial portfolio solutions. One example was the development, in 2020, of NOS Consumption Monitoring and Control, a technological solution that, through sensors, monitors in real time the consumption of water, electricity, gas, and compressed air in industrial facilities. This allows for the timely identification of deviations from optimal consumption and for rapid corrective measures that can deliver up to 30% in savings. The solution also detects changes in the performance of industrial equipment, identifying preventive maintenance needs and thus avoiding downtime. By the end of the year, this solution was implemented in four large industrial clients, in different industries.

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## C2.2a

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**(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?**

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Although NOS is not directly covered by current legislation limiting carbon emissions (e.g. EU ETS - Emissions Trading Scheme), our operational costs are impacted by climate-related regulation that influence energy prices (e.g. direct influence of the Portuguese Carbon Tax on the price of diesel and gasoline consumed in our fleet). Current climate-related regulation is therefore a relevant risk for our business and is always included in our risk assessment. Climate-related regulation is classified in our Business Risk Model in the Business Environment risk category, under the Laws and Regulations subcategory. It is subject to periodic review under our Enterprise Risk Model process. An example of a current regulation risk is the increase in company fleet fuel costs, driven by an increase in the value of the Portuguese Carbon Tax applicable to road diesel and gasoline. In 2020, NOS spent 1.3M€ in own fleet fuel costs.
Emerging regulation	Relevant, always included	Emerging climate-related regulation (e.g. regulatory package that will implement the new European Union commitments, approved in 2020, to reduce GHG emissions by 55% in 2030 and to become climate neutral by 2050) is a relevant risk type for NOS given its impact on energy prices, in particular electricity. NOS spends more than 23 million €/year in energy costs (2020 data), almost 95% of which in electricity, mainly used in its technical infrastructure (telecommunications network and Data Centres). Emerging climate-related regulation that could impact these costs is therefore a relevant risk for our business and always included in our risk assessment. Climate-related regulation is classified in our Business Risk Model in the Business Environment risk category, under the Laws and Regulations subcategory. It is subject to periodic review under our Enterprise Risk Model process. An example of an emerging regulation risk is the increase in our electricity costs that might be brought upon by higher electricity prices. Electricity prices are forecast to rise due to the impact on the power sector of the regulatory package that will support the delivery of the new European Union GHG emission targets for 2030 (-55% from 1990 level), which was approved in 2020. This regulatory package will include a review of the EU ETS that is forecast to significantly increase the price of CO2 allowances and that electricity generators will have to transfer to electricity prices.
Technology	Relevant, always included	Rapid technological change (e.g. refurbishing of mobile telecommunications networks to support the rollout of 5G technology) is a key characteristic of the Telecommunications sector. Technological upgrades are crucial to maintaining company competitiveness and efficiency. Technological changes are therefore a relevant risk for our business and are always included in our risk assessment. Technology change is classified under our Business Risk Model in the Business Environment risk category, under the Sector and Market for P&S subcategory, and subject to periodic review under our Enterprise Risk Model process. Failure to keep up or even anticipate technology trends would undermine our capacity to implement adequate energy efficiency measures in our operation (e.g. by not selecting IT and backup equipment with the highest energy efficiency performance or by not exploring new tools such as intelligent network energy management) and to develop low carbon products and services that answer new customer demand (e.g. IoT and cloud solutions). In 2020, NOS revenues from low carbon P&S amounted to 86 million €.
Legal	Not relevant, included	Climate-related legal risks, including the risk of litigation, are not relevant to our activity, given that NOS is not directly covered by current climate regulations, namely legislation limiting carbon emissions. Nevertheless, they are included in our risk assessment. Such risks are classified under our Business Risk Model in the Business Environment risk category, under the Laws and Regulations subcategory, and subject to periodic review under our Enterprise Risk Model process. An example of such risk is the emergence of climate-litigation (e.g. civil society groups, individuals and NGOs filing court cases against companies for failing to reduce GHG emissions).
Market	Relevant, always included	Telecommunications is a highly dynamic and competitive market that calls for the continuous monitor of customer preferences and/or needs. Demand for ICT (Information and Communications Technology) solutions that reduce the client's energy consumption and carbon emissions is currently a fundamental trend, especially in the business client segment. Failure to respond to this trend can expose the company to client loss and reduced revenues. Change in market trends and patterns brought upon by climate-related issues is therefore a relevant risk for our business and always include in our risk assessment. Climate-related market risk is addressed by our Business Risk Model under the Business Environment risk category (Market for Products and Services risk subcategory) and the Operational risk category (P&S Development and Client Satisfaction risks subcategories). It is subject to periodic review under our Enterprise Risk Model process. In assessing this risk type, we have, for example, identified a clear market opportunity for the reinforcement of our low carbon P&S portfolio; it now includes Communications and Collaboration, Cloud and Data Centre, IoT (Internet of Things), and Analytics solutions that avoid traveling, improve energy and water management or provide energy efficient cloud IT infrastructure that reduce client emissions.
Reputation	Relevant, always included	Climate change is currently a high-profile theme in the government, finance and societal agenda. Negative public perceptions on our positioning and performance on climate change (e.g. poor energy and emissions reduction targets, inexistence of a portfolio of low carbon P&S) can have a negative impact on the company's reputation, exposing us to market loss, reduced investor interest or deterioration of brand value. Climate-related reputational issues are therefore a relevant risk for our business and are always included in our risk assessment. Climate-related reputational risk is classified in our Business Risk Model in the Business Strategy risk category, under the Reputational risk subcategory. It is subject to periodic review under our Enterprise Risk Model process. The company is exposed to a climate-related reputational risk, for example, if it fails to properly answer the growing investor and financial analyst requests of information on the company's climate strategy, targets and performance. More than 70% of our free-float capital is currently held by institutional investors, 35% of which that integrate Environmental, Social and Governance considerations into their investment decisions.
Acute physical	Relevant, always included	Increased frequency and intensity of extreme weather events (e.g. storms and floods), as well its consequences (e.g. increased risk of wildfires caused by extended heat waves) is one of the most relevant climate-related risk faced by NOS, given the potential to damage our telecommunications network infrastructure, disrupt service provision and induce high rebuilding and repair capital costs. Acute physical impacts of climate change are therefore a relevant risk for our business and are always included in our risk assessment. Climate-related acute physical risks are classified in our Business Risk Model in the Operational risk category, under the Safety and Continuity subcategory. These are subject to periodic review under our Enterprise Risk Model process. An example of such risk is the potential damage to our telecommunications network infrastructure from increasingly likely and severe wildfires in Portugal, one the most exposed countries to such risk in Europe.
Chronic physical	Relevant, always included	Long-term changes in climate patterns, namely changes in mean temperatures, can increase the risks associated with the operating conditions of our telecommunications and IT equipment and raise energy costs as a result of increased cooling needs. Chronic physical impacts of climate change are therefore a relevant risk for our business and are always included in our risk assessment. Climate-related chronic physical risks are classified in our Business Risk Model in the Operational risk category, under the Technical and Operational Resources subcategory. These are subject to periodic review under our Enterprise Risk Model process. An example of such risk is increase in energy costs and possible equipment failure from the impact on equipment's cooling needs of rising mean temperatures in the Southern Europe. Cooling technologies account for c. 30% of our network electricity consumption.

**C2.3**

**(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?**

Yes

**C2.3a**

**(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.**

**Identifier**

Risk 1

**Where in the value chain does the risk driver occur?**

Direct operations

**Risk type & Primary climate-related risk driver**

Emerging regulation	Carbon pricing mechanisms
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**Primary potential financial impact**

Increased indirect (operating) costs

**Climate risk type mapped to traditional financial services industry risk classification**

<Not Applicable>

**Company-specific description**

New regulations increasing or extending the reach of carbon prices can have both a direct and an indirect impact on NOS energy costs. NOS spends around 23 million

€/year in energy to power its operations in Portugal: 95% of this cost is electricity, mostly used in our technical infrastructure (3 600 mobile sites, 70 000 fixed sites, 200 main technical sites and 4 large Data Centres). The remaining 5% are fuel costs, mostly road diesel and gasoline used in our own fleet (1030 passenger and light duty cars). In 2020, the European Union approved new climate targets: to reduce GHG emissions by 55% in 2030 from 1990 levels, and to become climate neutral by 2050. Implementation of the new targets will be supported by a regulatory package, due to be approved in 2021, which will include a revision of the European Union Emissions Trading Scheme (EU-ETS). This will increase CO2 allowance scarcity and thus drive CO2 prices up. Increase in EU-ETS carbon prices will translate directly into the consumer price of fossil fuels that are subject to carbon taxes (linked to CO2 allowance prices), and indirectly into end-users' electricity prices (as the power sector is included in the EU-ETS and will pass on its production costs to clients). NOS operates in Portugal and could thus be impacted by this forecasted rise in EU-ETS CO2 prices: i) direct impact - increase in fleet fuel costs (fossil fuels are subject to the Portuguese Carbon Tax, linked to the price of CO2 in EU-ETS in the previous year) ; ii) indirect impact – increase in company electricity costs (electricity prices in Portugal will reflect the increase in CO2 prices, as the power sector is subject to EU-ETS). In the last 18 months, CO2 prices in EU-ETS more than doubled (from 25€/t CO2 in December 2019 to 51€/t CO2 in June 2021). Recent forecasts by market analysts (ICIS, Energy Aspects, Bloomberg NEF and Refinitiv, 2021) point to prices in the range of 56-89 €/t CO2 by 2030. Analysis by the European Commission (Impact Assessment of EU 2050 Vision, November 2018) projected a 5% increase in average electricity prices for final users due to the impact of new EU climate regulations, namely changes to EU-ETS. A carbon price of 73€/tCO2 (mid point of analyst forecasts) and a 5% increase in electricity price (European Commission forecast) in 2030 would increase NOS energy costs (fuel costs plus electricity costs) by around 5% from current values. This would add around 1 million €/year to our operating costs.

**Time horizon**

Medium-term

**Likelihood**

More likely than not

**Magnitude of impact**

Medium

**Are you able to provide a potential financial impact figure?**

Yes, an estimated range

**Potential financial impact figure (currency)**

<Not Applicable>

**Potential financial impact figure – minimum (currency)**

1000000

**Potential financial impact figure – maximum (currency)**

1500000

**Explanation of financial impact figure**

In 2020, NOS spent 23 million € on energy (95% on electricity; 5% on fuels, mainly diesel and gasoline for own fleet). NOS fuel costs are subject to the Portuguese Carbon Tax, whose value is linked to the price of CO2 in EU-ETS. An increase from 24€/tCO2 (allowance price factored into de tax value for 2020) to 73€/tCO2 (mid point of analyst forecasts up to 2030) would, applying the tax calculation formula, translate into an additional fuel cost of 122€/1000 L. This would add 140 thousand €/year to NOS fuel costs, assuming fuel consumption and all other price components remain constant. A 5% increase in electricity prices (European Commission forecast for increase in average electricity prices, driven by changes to climate regulation, up to 2030), would add around 1.1 million €/year to NOS electricity costs (current electricity costs being 22.5 million €), assuming consumption remains at present levels. Total increase in energy costs would therefore amount to 1.2 million €/year. We present a range of +/- 20% from the estimated figure, to account for uncertainty around the exact timing and impact of the emerging regulations on fuel and electricity prices. Values are expressed as additional annual operating costs (€/year).

**Cost of response to risk**

82000

**Description of response and explanation of cost calculation**

NOS has in place an extensive programme for improving the energy efficiency of its operations, thus limiting electricity consumption. This reduces exposure to the risk by reducing the magnitude of the potential financial impact of rising electricity prices on our operating costs. Energy efficiency measures are implemented, on an on-going basis, across all our operations: telecommunications network infrastructures (base stations, MSCs, Head Ends), Data Centres, and backoffice buildings (offices and stores). In 2020, the programme delivered 0.9 GWh in energy savings (98000 €) and avoided the emission of 177 tCO2e. Case study: Provision of Data Centre services is a rapidly expanding area, with increasing importance both to our revenues and to our electricity costs. Dedicated Data Centres currently account for almost 20% of our technical infrastructure electricity consumption and are therefore a priority of our energy efficiency plan. In 2018, we opened a new Data Centre (Imopólis II) in which we adopted state-of-the art energy efficiency measures. Technical corridors were fitted with curtain systems that contain cold, thus reducing cooling needs, and variable speed motors and LED lighting were installed. The implementation of these measures in the design and construction phase gave the new site an efficiency level 15% above those of existing similar installations. The new Data Centre also allows for the discontinuing of legacy equipment in other, less efficient, sites and a more extensive implementation of server consolidation and virtualization solutions, which continue to further reduce our energy consumption. Cost of response corresponds to total investment in energy efficiency measures in 2020, as reported in question C4.3a (82 thousand €).

**Comment**

All financial values are best currently available estimates.

**Identifier**

Risk 2

**Where in the value chain does the risk driver occur?**

Direct operations

**Risk type & Primary climate-related risk driver**

Acute physical	Increased severity and frequency of extreme weather events such as cyclones and floods
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**Primary potential financial impact**

Increased capital expenditures

**Climate risk type mapped to traditional financial services industry risk classification**

<Not Applicable>

**Company-specific description**

Climate model projections by the European Environmental Agency (2017) and the EC Joint Research Center (2020) point to an increased risk of flash floods and extremely strong winds in most parts of Europe. Projected changes are particularly severe for Southern Europe, including a 25% increase in heavy rain and a 17% increase in wind extremes by the end of the century. NOS operates an extensive telecommunications network throughout Portugal (3600 mobile telecommunication sites, over 70 thousand

fixed telecommunication sites, 2.2 million km of fibre network) and is thus exposed to this risk. Increased frequency and severity of floods and extreme winds events in southern Europe increases the exposure of these assets to physical damage, causing reduction or even disruption in service provision. This would impact both our capital costs (increased costs from infrastructure repair and replacement) and our revenues (lost revenues from reduction in service provision). A proxy for the potential impact of such risk in our operation is hurricane Leslie, which hit mainland Portugal in October 2018, causing damage to around 4% of our mobile and 2% of fixed networks assets and affecting service delivery to over 100 thousand clients.

**Time horizon**

Long-term

**Likelihood**

About as likely as not

**Magnitude of impact**

Low

**Are you able to provide a potential financial impact figure?**

Yes, an estimated range

**Potential financial impact figure (currency)**

<Not Applicable>

**Potential financial impact figure – minimum (currency)**

25000

**Potential financial impact figure – maximum (currency)**

35000

**Explanation of financial impact figure**

Figures are based on capital costs incurred by NOS with the damage repair in our mobile and fixed network in Portugal, in the aftermath of hurricane Leslie (2018). This event is considered an adequate proxy for the impact of this risk type. Values refer to total repair costs directly supported by NOS as a consequence of the mentioned event (hurricane Leslie, 2018). Total financial impact is likely to be higher as part of the repair costs are assumed by maintenance business partners under the terms of the respective contracts. We present a range of +/- 20% from the 2018 repair cost figure, to account for uncertainty around the exact extent of damage under similar extreme weather events. Values are expressed as additional capital costs incurred in a single year.

**Cost of response to risk**

477000

**Description of response and explanation of cost calculation**

NOS Business Continuity Management (BCM) programme supports our response to emergency situations, including those caused by extreme weather events. In recent years, a special focus has been put on specific measures targeted at increasing the resilience of critical network sites to extreme events such as floods and hurricanes (e.g. permanent monitoring of the Portuguese Meteorological Office alerts; contingency plans that allow automatic switching of transmission links to alternative configurations). Our BCM procedures reduce the risk of service disruption in the event of extreme weather events, thus reducing exposure to the risk by reducing the magnitude of the potential financial impact of infrastructure reparation on our capital costs as well as the potential financial impact of reduced revenues from service disruption. Case Study - In October 2018, hurricane Leslie hit mainland Portugal, causing damage to around 4% of our mobile and 2% of fixed networks assets, and affecting service delivery to over 100 thousand of our clients. With climate scenarios forecasting increase severity and frequency of such events in Southern Europe, the need for increased climate resilience of telecommunications network was made even more clear. In 2019 and 2020 we implemented additional measure to further ensure service continuity under extreme weather events. These included the adoption of alternative radio relay solutions to protect the most vulnerable communications, the strengthening of battery systems of critical stations to respond to power supply failure and leased capacity in the satellite segment and a set of satellite transmission kits that allows for a faster restoration of communications in affected areas. Cost of response corresponds to the annual cost (477 thousand € in 2020) of maintaining the measures implemented to increase network resilience to this type of event (support service and spectrum frequency cost for alternative relay solutions and redundancies; maintenance of additional energy backup systems). It does not factor the initial investment cost of such measures.

**Comment**

All financial values are best currently available estimates.

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**Identifier**

Risk 3

**Where in the value chain does the risk driver occur?**

Direct operations

**Risk type & Primary climate-related risk driver**

Acute physical	Increased likelihood and severity of wildfires
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**Primary potential financial impact**

Increased capital expenditures

**Climate risk type mapped to traditional financial services industry risk classification**

<Not Applicable>

**Company-specific description**

Projections for the Mediterranean region, including Portugal, by the European Environmental Agency (2017) and the EC Joint Research Center (2018) show that climate change will reduce forest biomass fuel moisture levels, increasing the weather-driven danger of forest fires. Fire danger intensity and number of days with high-fire potential amplify with the projected level of warming, which is particularly high for this region (40% increase in weather-driven fire danger by the end of the century). NOS operates an extensive telecommunications network throughout Portugal (3600 mobile telecommunications sites, over 70 thousand fixed telecommunications sites, 2.2 million km of fibre network) and is thus exposed to this risk. Increase in frequency and severity of wildfires increases the exposure of these assets to physical damage, causing reduction or even disruption in service provision. This would impact our capital costs (increased costs from infrastructure repair and replacement) and our revenues (reduced revenues from reduced service delivery capacity). Portugal is one of the most exposed countries to this particular climate change impact in Europe, with effects already being felt: in 2017, devastating forest fires burned over 500 thousand hectares of forest area, destroyed houses and killed more than 100 people. The extensive damage caused to our telecommunication infrastructure by this event (around 4% of our mobile and 1% of fixed networks assets were affected and over 100 thousand clients experienced service delivery problems) is used as proxy for the potential impact of this risk in our operation.

**Time horizon**

Short-term

**Likelihood**

Likely

**Magnitude of impact**

Low

**Are you able to provide a potential financial impact figure?**

Yes, an estimated range

**Potential financial impact figure (currency)**

&lt;Not Applicable&gt;

**Potential financial impact figure – minimum (currency)**

150000

**Potential financial impact figure – maximum (currency)**

250000

**Explanation of financial impact figure**

Figures are based on capital costs incurred by NOS with the damage repair in our mobile and fixed network in Portugal, in the aftermath of the forest fires that hit the country in 2017. This event is considered an adequate proxy for the impact of this risk type. Values refer to total repair costs directly supported by NOS as a consequence of the mentioned event (forest fires in Portugal, 2017). Total financial impact is likely to be higher as part of the repair costs are assumed by maintenance business partners under the terms of the respective contracts. We present a range of +/- 20% from the 2017 repair cost figure, to account for uncertainty around the exact extent of damage under similar events. Values are expressed as additional capital costs incurred in a single year.

**Cost of response to risk**

517000

**Description of response and explanation of cost calculation**

Resilience to forest fires is a key point in NOS Business Continuity Management (BCM) programme, as we operate an extensive telecommunications network spread throughout the Portuguese territory and Portugal is one of the most exposed countries in Europe to this particular climate change impact, with effects already being felt. Integration, into our BCM processes of specific measures to prevent or reduce service disruption in the event of wildfires, reduces our exposure to the risk by reducing the magnitude of the potential financial impact of infrastructure repair on our capital costs as well as the potential financial impact of reduced revenues from service disruption. Case study: In 2017, devastating forest fires burned over 500 thousand hectares of forest area in Mainland Portugal, destroyed houses and killed more than 100 people. Our telecommunications infrastructure was also effected, with damage to around 4% of our mobile and 1% of fixed networks assets and over 100 thousand clients experiencing service delivery problems. This tragic event further demonstrated the crucial need to maintain communications capacity in emergency situations. In 2018, we began implementing a comprehensive set of new measures to increase the resilience of our network. We started by identifying all fire high-risk sites and implementing site-specific maintenance plans for those, with additional cleaning of vegetation in the surrounding areas, clearing of the undergrowth and cutting of trees, whenever necessary. We also started rolling out alternative radio relay solutions and leasing satellite redundancy capacity, which is now also part of our business continuity response to other emergency situations. Satellite capacity was used successfully in August that same year, in the great Monchique fire in Southern Portugal, and has since been extend to the autonomous regions of Azores and Madeira islands. Cost of response corresponds to the annual cost (517 thousand € in 2020) of maintaining the measures implemented to increase network resilience to this type of event (support service and spectrum frequency cost for alternative relay solutions and redundancies; maintenance of additional energy backup systems; vegetation control). It does not factor the initial investment cost of such measures.

**Comment**

All financial values are best currently available estimates.

**Identifier**

Risk 4

**Where in the value chain does the risk driver occur?**

Direct operations

**Risk type & Primary climate-related risk driver**

Chronic physical	Rising mean temperatures
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**Primary potential financial impact**

Increased indirect (operating) costs

**Climate risk type mapped to traditional financial services industry risk classification**

&lt;Not Applicable&gt;

**Company-specific description**

The European Environmental Agency (2017) projects a significant average warming of about 1.5 °C in winter and about 2 °C in summer in the Mediterranean region, including Portugal, for the 2021–2050 period, compared with 1961–1990. More frequent temperature extremes and heat waves are projected. The Portuguese Meteorological Office has recently announced that the two warmest months of May recorded in the country for last 89 years occurred in 2011 and 2020. NOS operates an extensive technical infrastructure located throughout Portugal (almost 75 thousand mobile and fixed telecommunications sites, 200 main technical sites and 4 Data Centres) that consumes around 140 GWh of electricity/year and entails c. 20 million €/year in operating costs. Around 30% of this energy is used for cooling telecommunications and IT equipment. The 2°C increase in ambient temperature for Iberia would increase the cooling needs of our critical network and IT equipment in Portugal, leading to changes in HVAC systems functioning patterns and increasing our energy consumption and associated operating costs. It could also cause equipment failure, undermining our service delivery capacity and reducing revenues. We estimated that for every 1°C increase in ambient temperature in the Summer, our telecom and IT equipment cooling energy needs also increase by 1%. The forecasted 2°C increase in temperature in Portugal would thus increase our energy consumption by 0.8 GWh/year, with additional operational costs of 70 to 100 thousand €/year.

**Time horizon**

Long-term

**Likelihood**

More likely than not

**Magnitude of impact**

Low

**Are you able to provide a potential financial impact figure?**

Yes, an estimated range

**Potential financial impact figure (currency)**

<Not Applicable>

**Potential financial impact figure – minimum (currency)**

70000

**Potential financial impact figure – maximum (currency)**

100000

**Explanation of financial impact figure**

Estimated increase in electricity costs is based on the current electricity consumption of NOS technical infrastructure, located in Portugal, (c. 140 GWh/year) and on the following assumptions: i) average 30% from AVAC systems in total consumption; ii) 1% increase in energy consumption of AVAC systems per each 1°C increase in room temperature; iii) projected 2°C increase in average Summer temperatures in the Iberian Peninsula (EEA projections, 2017) This would mean an increase in electricity consumption of around 830 MWh/year, that would translate into an additional cost of 83 thousand €/year, assuming current electricity price (0.1€/kWh for medium voltage) and consumption level remain constant. We present a range of +/- 20% from the estimated figure, to account for uncertainty around electricity prices and consumption levels. Values are expressed as additional annual operating costs (€/year).

**Cost of response to risk**

30000

**Description of response and explanation of cost calculation**

Specific measures targeted at energy efficiency and reduction of energy needs of HAVAC systems supporting our technical infrastructure equipment are an important part of NOS on-going energy efficiency programme. The sustained rationalization of energy consumption in cooling systems reduces exposure to the risk by reducing the magnitude of the potential financial impact of rising equipment cooling needs on our operating costs. Case study: NOS operates an extensive technical infrastructure located throughout Portugal (almost 75 thousand mobile and fixed telecommunications sites, 200 main technical sites and 4 Data Centres) that consumes around 140 GWh of electricity/year and entails c. 20 million €/year in operating costs. Around 30% of this energy is used for cooling telecommunications and IT equipment. The increasingly severe climate scenarios for the Iberian Peninsula point to a 2°C increase in average Summer temperatures, which would increase our energy consumption by 0.8 GWh/year, with additional operational costs of 70 to 100 thousand €/year. To minimize this potential impact, in 2016 we started to rollout the implementation of free cooling solutions in some of our most important technical sites. The system uses the outside air to cool equipment, reducing the use of HVAC units. It is currently implemented in over 30 Mid and Main network sites and Data Centres. Total investment between 2016 and 2020 was around 120 thousand € and generated 415 MWh/year in electricity savings. Cost of response corresponds to annual cost of investment (30 thousand € in 2020) in implemented measures (improvements in cooling systems, including installation of freecooling solutions).

**Comment**

All financial values are best currently available estimates.

**C2.4****(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?**

Yes

**C2.4a****(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.****Identifier**

Opp1

**Where in the value chain does the opportunity occur?**

Direct operations

**Opportunity type**

Resource efficiency

**Primary climate-related opportunity driver**

Use of more efficient production and distribution processes

**Primary potential financial impact**

Reduced indirect (operating) costs

**Company-specific description**

NOS uses around 160 GWh of electricity per year (2020 data), almost 90% of which is consumed in our technical infrastructure (mobile and fixed telecommunications network and Data Centres). With the expansion of our operational activity and the rapid growth in data traffic (+400% from 2015 to 2020), which induces greater consumption in the supporting equipment, absolute energy consumption is also rising (+8% from 2015 to 2020). In 2020, our total energy costs amounted to 23 million € and represented around 2% of our total operating costs. Rising absolute electricity consumption and pressure on electricity prices from evolving climate change regulation (e.g. new European Union climate targets approved in 2020 and the ensuing revision of the associated climate and energy regulatory package) strengthens the business case for the implementation of energy management programmes. This creates an opportunity for increasing the energy efficiency of our operation and reducing operating costs.

**Time horizon**

Short-term

**Likelihood**

More likely than not

**Magnitude of impact**

Medium-low

**Are you able to provide a potential financial impact figure?**

Yes, an estimated range

**Potential financial impact figure (currency)**

<Not Applicable>

**Potential financial impact figure – minimum (currency)**

80000

**Potential financial impact figure – maximum (currency)**

115000

**Explanation of financial impact figure**

Estimated reduction in electricity costs is based on the total reduction in electricity consumption delivered by the energy efficiency measures implemented by NOS in 2020 (0.9 GWh in energy savings). This will translate into a 97 thousand €/year in electricity cost savings, assuming that current electricity prices (average 0.11 €/kWh across our operations) and investment in efficiency measures remain constant. We present a range of +/- 20% from the estimated figure, to account for uncertainty around electricity prices and consumption levels. Values are expressed as annual savings in operating costs (€/year).

**Cost to realize opportunity**

82000

**Strategy to realize opportunity and explanation of cost calculation**

NOS is actively managing the energy resources efficiency opportunity through its on-going energy efficiency programme that limits electricity consumption and delivers cost savings. Energy efficiency measures are implemented across all our operations: telecommunications network infrastructures (base stations, MSCs, Head Ends), Data Centres, and backoffice buildings (offices and stores). In 2020, the programme delivered 0.9 GWh in energy savings (98000 €) and avoided the emission of 177 tCO<sub>2</sub>e. Case study: Mobile data traffic is growing at a faster pace than total telecommunications data traffic. In NOS network, mobile data had a 6-fold increase between 2015 and 2020 vs a 4-fold increase in our total data traffic, in the same period. This brings about particular challenges both in terms of network capacity and of associated energy consumption, as more traffic increases the energy needs of network equipment. To address these challenges, between 2017 and 2019 we undertook the complete modernization of our mobile access network across the Portuguese territory. The project involved the migration of 2G, 3G and 4G technologies to single equipment, the strengthening of the network capacity and the installation of more efficient equipment. It generated energy savings of around 25%, for the same traffic capacity, which limited the growth in absolute consumption, despite the installation of more equipment and increased use. We also tested several functionalities of intelligent network management, which optimize the operation in periods of reduced traffic, with results that point to savings between 1.5 and 2.5%, and which will now be activated across the entire mobile network. Cost of response corresponds to total investment in energy efficiency measures in 2020, as reported in question C4.3a (82 thousand €).

**Comment**

All financial values are best currently available estimates.

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**Identifier**

Opp2

**Where in the value chain does the opportunity occur?**

Downstream

**Opportunity type**

Products and services

**Primary climate-related opportunity driver**

Development and/or expansion of low emission goods and services

**Primary potential financial impact**

Increased revenues resulting from increased demand for products and services

**Company-specific description**

With a 1:10 ratio between the carbon emissions it induces and the emissions avoided with the adoption of the products and services it offers (GeSI, 2015), the Information and communications technology (ICT) sector is a fundamental enabler of the low carbon transition. Use of smart ICT solutions across the economy (namely in manufacturing, agriculture, buildings, mobility and logistics) could reduce about 20% of global emissions in 2030 (GeSI, 2015). The market potential associated with the carbon reduction enabling effect of ICT P&S is huge. Projections for the IoT (Internet of Things - connected devices such as smart meters or car tracker solutions) market alone point to a 3 to 4-fold growth in the next 5 years, with a global market worth over 1100 trillion USD in 2025 (GMSA, 2020; Cisco, 2020; Absolute Reports, 2020) Increased interest in carbon reduction solutions – especially in the corporate client segment – creates an opportunity to strengthen our low carbon P&S portfolio and to tap this new market potential thus increasing our revenues. We are exploring this opportunity by growing our portfolio of low carbon solutions (e.g. smart electricity and gas metering systems; additional cloud storage solutions provided by our Imopolis Data Centre; NOS Follow Pro fleet optimization tool). In 2020, we reviewed our revenue projections for this portfolio up to 2030.

**Time horizon**

Medium-term

**Likelihood**

Likely

**Magnitude of impact**

High

**Are you able to provide a potential financial impact figure?**

Yes, an estimated range

**Potential financial impact figure (currency)**

<Not Applicable>

**Potential financial impact figure – minimum (currency)**

80000000

**Potential financial impact figure – maximum (currency)**

120000000

**Explanation of financial impact figure**

Estimated increase in revenues is based on the projected revenues from our expanding low carbon Products & Services portfolio, up to 2025. The portfolio comprises our telecommunications and IT solutions that deliver client emissions reductions and includes: Communications & Collaboration; Cloud and Data Centre services; IoT (Internet of Things); and Analytics. Estimated figure corresponds to the aggregated revenue projection of these four P&S categories (aprox. 100 million €). We present a range of +/- 20% from the estimated figure, to account for uncertainty around market conditions. Values are expressed as additional annual revenues (€/year).

**Cost to realize opportunity**

0

### Strategy to realize opportunity and explanation of cost calculation

In 2020, NOS Executive Committee approved a new climate target related to the enabling effect of telecommunications activities: to market products and services that reduce NOS customers' emissions in an amount higher than the emissions from our own operation, by 2025. This new target was formally integrated - together with our targets for energy efficiency, renewable energy and carbon emissions - into NOS Next Generation, the company's 2021-2025 strategic vision, approved in 2020. The recognition of the market potential of low carbon products and services (P&S), and its full integration into the company's business strategy, means we are actively managing this climate-related opportunity. Our expanding low carbon P&S portfolio now includes Communications and Collaboration, Cloud and Data Centre, IoT (Internet of Things), and Analytics solutions that avoid traveling, improve energy and water management across economic sectors or provide digital and energy efficient cloud IT infrastructure, all of which induce significant carbon emissions reductions. These P&S for the business client segment represented around 6% of our revenues in the telecommunications business segment. Case study: Clients, in particular in the business segment (large companies and small and medium-sized enterprises) are increasingly looking for solutions that improve their environmental performance, in particular in what relates to energy, carbon emissions and water. Machine-to-machine connectivity solutions enables this performance improvement so we identified industrial optimization of operations (e.g. energy efficiency and control of cooling systems) as one of the priorities for the development of our IoT offer. In 2020, we developed NOS Consumption Monitoring and Control, a technological solution that, through sensors, monitors in real time the consumption of water, electricity, gas, and compressed air in industrial facilities. This allows for the timely identification of deviations from optimal consumption and for rapid corrective measures that can deliver up to 30% in savings. The solution also detects changes in the performance of industrial equipment, identifying preventive maintenance needs and thus avoiding downtime. By the end of the year, this solution was implemented in four large industrial clients, in different industries. Cost of response is considered immaterial as the development of low carbon P&S is already embedded in our product development costs.

### Comment

All financial values are best currently available estimates.

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### Identifier

Opp3

### Where in the value chain does the opportunity occur?

Downstream

### Opportunity type

Products and services

### Primary climate-related opportunity driver

Shift in consumer preferences

### Primary potential financial impact

Other, please specify (Increased reputation and brand value)

### Company-specific description

Climate change is currently a high-profile theme in the government and societal agenda. At the same time, investor pressure for improved climate disclosure and performance of public traded companies is increasing. Our recent market research (NOS targeted survey on environmental awareness, conducted in 2020 amongst Portuguese telecom customers in the business to consumer segment) showed that customers value corporate commitment to environmental protection – with climate change considered the most outstanding environmental issue. However, they do not differentiate the environmental performance of telecom operators present in the national market. This creates a differentiation opportunity for NOS. Climate performance is also increasing important for investors. More than 70% of our free-float capital is held by institutional investors, of which 35% integrate Environmental, Social and Governance considerations into their investment strategies. We have thus identified an opportunity to reinforce goodwill and brand value, to increase access to capital markets, and to grow market share, by demonstrating climate leadership. We are actively managing this opportunity by integrating quantified and time-bound climate targets into our business strategy (e.g. to reduce the carbon footprint of own operation by 75% in 2030, from 2015 levels; to market products and services that reduce our customers' emissions in an amount higher than the emissions from our own operation, by 2025). Increase in the financial value of NOS brand due to recognition of the company's climate commitment, is used as a proxy for the potential financial impact of this opportunity.

### Time horizon

Medium-term

### Likelihood

About as likely as not

### Magnitude of impact

Low

### Are you able to provide a potential financial impact figure?

Yes, an estimated range

### Potential financial impact figure (currency)

<Not Applicable>

### Potential financial impact figure – minimum (currency)

200000

### Potential financial impact figure – maximum (currency)

250000

### Explanation of financial impact figure

Figures are based on the estimated increase in the financial value of NOS brand due to the reputational benefits of the public recognition of the company's climate commitments. This is used as a proxy for the potential financial impact of the opportunity. NOS brand is currently valued at 480 million € (2021 update calculation according to ISO 10668). Environmental stewardship (part of the reputational dimension of the brand value) weights c. 0.5% in the total value calculation. We assumed a 10% increase in the environmental score of the brand value to be achieved from NOS being recognized as a climate leader in the Portuguese telecommunications sector. This would translate into an increase of c. 200 thousand € in the total value of NOS brand. We present a range of +/- 10% from the calculated figure to account for uncertainty around the exact extent of climate leadership impact on the company's reputation. Values are expressed as additional value of an intangible asset.

### Cost to realize opportunity

0

### Strategy to realize opportunity and explanation of cost calculation

NOS is actively managing the opportunity to increase reputation and brand value by demonstrating climate leadership. Climate targets are included in our business strategy (NOS Next Generation 2021-2025), alongside other business goals, and we have committed to adopt an emissions reduction Scientific Base Target approved by SBTi. We are also increasing the disclosure of climate-related and other sustainability information, by integrating non-financial statements in our mainstream report, and by actively engaging with investors and financial analysts on such topics. Case study: More than 70% of our free-float capital is held by institutional investors, of which 35% integrate Environmental, Social and Governance (ESG) considerations into their investment strategies. NOS is also evaluated by a growing number of ESG analysts. In 2020, the company decided to further strengthen the integration of ESG issues, amongst which climate change ranks high, into its strategic planning. The Executive Committee

approved NOS Next Generation, the company's 2021-2025 strategic vision and, for the first time, ESG themes were included from scratch in the strategy design and were part of the preparatory discussions between the different areas of the company (e.g. Strategic Planning, Investor Relations and Sustainability, Operations and Supervision and Financial). Four quantified and time-bound climate targets were integrated into the approved strategy: i) reduce energy consumption per data traffic by 75% by 2025 and 85% by 2030, compared to 2015; ii) use 65% of renewable electricity by 2025 and 80% by 2030; iii) reduce the carbon footprint of own operation (scope 1 and 2 emissions) by 50% by 2025 and 75% by 2030, compared to 2015; iv) market products and services that reduce customers' emissions in an amount higher than the emissions from our own operation, by 2025. Integration of climate-related targets into the company's business goals means they are monitored regularly by the Executive Committee, alongside other strategic objectives. This sends a clear message to our stakeholders that climate change is a strategic issue for NOS. Recognition of this corporate commitment increases reputation and strengthens NOS brands, contributing to increase brand value. There is no relevant additional cost of response as the cost of associated actions (mainly human resource costs) are already integrated into the budget of the Corporate Investor Relations and Sustainability department.

**Comment**

All financial values are best currently available estimates.

**C3. Business Strategy**

**C3.1**

**(C3.1) Have climate-related risks and opportunities influenced your organization's strategy and/or financial planning?**

Yes

**C3.1b**

**(C3.1b) Does your organization intend to publish a low-carbon transition plan in the next two years?**

	Intention to publish a low-carbon transition plan	Intention to include the transition plan as a scheduled resolution item at Annual General Meetings (AGMs)	Comment
Row 1	Yes, in the next two years	No, we do not intend to include it as a scheduled AGM resolution item	In 2020, NOS formally integrated climate-related issues (including four quantified and timebound business targets) into the company's 2021-2025 business strategy (NOS Next Generation). Climate targets are now monitored regularly by the Executive Committee, alongside other strategic objectives of the company. We have also committed to fully implement the Recommendations of the Task Force on Climate-related Financial Disclosures in our Annual Management Report & Accounts. This will entail an assessment of our business strategy against a range of climate-scenarios, and the integration of our climate commitments and action plans into an articulated low-carbon transition plan. Results will be included in the report. NOS Annual Management Report & Accounts is a scheduled item of NOS AGM meetings, and its approval is put to vote by the shareholders, so we currently do not plan to present our low-carbon transition plan as a separate AGM resolution item.

**C3.2**

**(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?**

No, but we anticipate using qualitative and/or quantitative analysis in the next two years

**C3.2b**

**(C3.2b) Why does your organization not use climate-related scenario analysis to inform its strategy?**

NOS is not yet using climate-related scenario planning because it will do so within the process, already approved by the management, of fully implementing the Recommendations of the Task Force on Climate-related Financial Disclosures in our Annual Management Report & Accounts. We plan to do this in our annual report for FY2022.

We will use climate-scenarios to further detail our existing assessment of climate-related risks and opportunities. For transition risks, we plan to use the International Energy Agency (IEA) scenarios, including the Sustainable Development Scenario (SDS) and the recent Net Zero by 2050 scenario. For physical risks, we plan to use IPCC scenarios, namely RCP 8.5 and RCP 2.6. We will also resort to scenarios and decarbonisation pathways developed specifically for the Information and Communications Sector, in particular to those developed by the UN International Telecommunication Union (ITU) in its Recommendation ITU-T L.1470 - GHG emissions trajectories for the ICT sector compatible with the UNFCCC Paris Agreement<sup>1</sup> and aligned to the IPCC Special Report on 1.5°C.

We are already using 1.5°C decarbonisation trajectories in the designing of our Science Based Target. The target is being developed under the Guidance for ICT Companies Setting Science Based Targets, published in 2020 by ITU, the Global Sustainability Initiative for ICT (GeSI), the association of worldwide mobile operators (GSMA) and the Science Based Targets Initiative (SBTi). We plan to have our target formally approved by SBTi by the end of 2021.

**C3.3**

**(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.**

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	The enabling effect of ICT technologies (1:10 ratio between its own carbon emissions, and the emissions avoided with the adoption of its products and services) means there is a growing marketing opportunity for low carbon Products & Services. NOS is actively pursuing this climate-related opportunity by expanding its low carbon P&S portfolio. It currently includes Communications and Collaboration, Cloud and Data Centre, IoT (Internet of Things), and Analytics and represents 6% of our revenues in the telecommunications business segment. In 2020, NOS Executive Committee approved a new climate target: to market products and services that reduce NOS customers' emissions in an amount higher than the emissions from our own operation, by 2025. This new target was formally integrated into NOS Next Generation, the company's 2021-2025 strategic vision. Time horizon for climate-related risks and opportunities influence on our products and services strategy is therefore 5 years (2020-2025). Case study: Projections for the IoT market alone point to a 3 to 4-fold growth in sales the next 5 years, with a global market worth over 1100 trillion USD in 2025 (GMSA, 2020; Cisco, 2020; Absolute Reports, 2020). In order to tap into this market potential, in 2020 we put a special focus on the development of machine-to-machine connectivity solutions. Amongst them, we identified industrial optimization of operations (e.g. energy efficiency and control of cooling systems) as one of the priorities for the development of our IoT offer. During the year, we developed NOS Consumption Monitoring and Control, a technological solution that, through sensors, monitors in real time the consumption of water, electricity, gas, and compressed air in industrial facilities. This allows for the timely identification of deviations from optimal consumption and for rapid corrective measures that can deliver up to 30% in savings. The solution also detects changes in the performance of industrial equipment, identifying preventive maintenance needs and thus avoiding downtime. By the end of the year, this solution was implemented in four large industrial clients, in different industries.
Supply chain and/or value chain	Yes	Over 95% of our value chain end-to-end GHG emissions are indirect emissions that occur either in the generation of the electricity we purchase (scope 2 emissions) or upstream/downstream from our own operations (scope 3 emissions). Integration of climate-related issues in our supply chain, namely in our procurement practices is, therefore, key to achieving our climate mitigation targets. In 2020, NOS Executive Committee formally integrated our renewable electricity target into into NOS Next Generation, the company's 2021-2025 strategic vision. Our target is to achieve 80% of electricity consumption from renewable sources by 2030, with an interim target of 65% by 2025 (from 2015 baseline). Time horizon for climate-related risks and opportunities influence on our supply chain strategy is therefore 10 years (2020-2030). Case Study: Purchased electricity accounts for around 90% of total energy consumption in our own operations and for almost 80% of our combined scope 1 and 2 emissions. In order to achieve the 75% reduction target in scope 1 and 2 emissions by 2030, we need to drastically reduce the carbon content of the electricity we purchase. Sourcing renewable energy is the solution and we made a public commitment to achieve 80% renewable electricity consumption by 2030. In 2019, we began to actively explore different options to implement our commitment, including long-term electricity purchase bilateral agreements, ensuring the use of reliable energy attribute certificates and contracts. In early 2021, NOS signed a long-term Power Purchasing Agreement (PPA) for investment in a new wind farm which will supply our operations with over 62GWh renewable electricity per year.
Investment in R&D	No	Although several investments that are part of our climate strategy have a strong focus on innovation (e.g. new IoT or Analytics solutions that reduce third party emissions; new energy efficient cooling solutions for Data Centres), our global R&D investment budget is not directly influenced by the need to address climate-related risks or opportunities.
Operations	Yes	Our technical telecommunications infrastructure - network and Data Centres - is responsible for 80% of NOS total energy consumption. The weight of infrastructure in our energy consumption has been increasing steadily, in line with the continuous expansion of our operational activity and the rapid growth of data traffic, which induces greater energy consumption in telecommunications equipment. In 2020, NOS Executive Committee formally integrated our energy efficiency target into into NOS Next Generation, the company's 2021-2025 strategic vision. Our target is to achieve an 85% reduction in in energy consumption per data traffic unit by 2030, with an interim target of 75% by 2025 (from 2015 baseline). Time horizon for climate-related risks and opportunities influence on our operational strategy is therefore 10 years (2020-2030). Case study: NOS mobile data traffic had a 6-fold increase between 2015 and 2020. This brings about particular challenges both in terms of network capacity and of associated energy consumption, as more traffic increases the energy needs of network equipment. To address these challenges, between 2017 and 2019 we undertook the complete modernization of our mobile access network across the Portuguese territory. The project involved the migration of 2G, 3G and 4G technologies to single equipment, the strengthening of the network capacity and the installation of more efficient equipment. It generated energy savings of around 25%, for the same traffic capacity, which limited the growth in absolute consumption, despite the installation of more equipment and increased use. The reinforced network capacity was also crucial in delivering high service levels in the face of the significant demand increase brought about by the Covid-19 pandemic in 2020 and 2021.

**C3.4**

**(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.**

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Indirect costs Capital expenditures	Revenues - Increase in demand for ICT products and services that reduce user emissions is expected to occur in the next 5 to 10 years, generating increased revenues from our low carbon portfolio. Indirect costs - Rise in electricity prices driven by changes in European climate and energy policies is expected to impact our indirect costs in the next 3-5 years. Capital expenditures - We will continue to invest in energy efficiency projects that deliver significant energy and emissions savings and attractive payback periods. Planning horizon is aligned with our business plan timeframe (5 years). Case study for capital expenditures: NOS operates an extensive technical infrastructure located throughout Portugal that consumes around 140 GWh of electricity/year entailing c. 20 million €/year in operating costs. Around 30% of this energy is used for cooling telecommunications and IT equipment. To reduce cooling electricity costs, in 2016 we started to rollout an investment plan for the implementation of free cooling solutions in some of our most important technical sites. The system uses the outside air to cool equipment, reducing the use of HVAC units. It is currently implemented in over 30 Mid and Main network sites and Data Centres. Total investment between 2016 and 2020 was around 120 thousand € and generated 415 MWh/year in electricity savings.

**C3.4a**

**(C3.4a) Provide any additional information on how climate-related risks and opportunities have influenced your strategy and financial planning (optional).**

No further relevant information.

**C4. Targets and performance**

**C4.1**

**(C4.1) Did you have an emissions target that was active in the reporting year?**

Absolute target

## C4.1a

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### (C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

**Target reference number**

Abs 1

**Year target was set**

2019

**Target coverage**

Company-wide

**Scope(s) (or Scope 3 category)**

Scope 1+2 (market-based)

**Base year**

2015

**Covered emissions in base year (metric tons CO2e)**

66837

**Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)**

100

**Target year**

2030

**Targeted reduction from base year (%)**

75

**Covered emissions in target year (metric tons CO2e) [auto-calculated]**

16709.25

**Covered emissions in reporting year (metric tons CO2e)**

35789

**% of target achieved [auto-calculated]**

61.9377490511742

**Target status in reporting year**

Underway

**Is this a science-based target?**

Yes, we consider this a science-based target, but it has not been approved by the Science-Based Targets initiative

**Target ambition**

1.5°C aligned

**Please explain (including target coverage)**

This is NOS's first corporate GHG emissions reduction target. It was set in 2019 and, in 2020, it was formally included in the company's 2021-2025 business strategy (NOS Next Generation). Together with three other climate-related targets (for energy efficiency, renewable energy consumption and P&S that avoid client's emissions), it materializes our climate ambition and commitment. Integration of the target into the company's business goals means it is monitored regularly by the Executive Committee, alongside other strategic objectives of the company. The target covers 100% of company-wide scope 1 and 2 combined emissions, including all operations within the boundary of our GHG inventory (financial control approach). 2015 was chosen as base year because it is the first year for which we have a complete, robust and third-party verified emissions inventory. Target year is 2030 (75% reduction) but we also set the intermediate goal of achieving a 50% reduction by 2025. In 2019, we signed up to the Business Ambition for 1.5°C initiative of the United Nations. We tested our target against the Science Based Target Initiative criteria using the SBTi ICT Sector Guidance, which used 1.5°C trajectories, and are committed to formally adopting a Science Based Target by the end of 2021.

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## C4.2

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### (C4.2) Did you have any other climate-related targets that were active in the reporting year?

Target(s) to increase low-carbon energy consumption or production

Other climate-related target(s)

## C4.2a

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**(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.**

**Target reference number**

Low 1

**Year target was set**

2019

**Target coverage**

Company-wide

**Target type: absolute or intensity**

Absolute

**Target type: energy carrier**

Electricity

**Target type: activity**

Consumption

**Target type: energy source**

Renewable energy source(s) only

**Metric (target numerator if reporting an intensity target)**

Percentage

**Target denominator (intensity targets only)**

<Not Applicable>

**Base year**

2015

**Figure or percentage in base year**

0.01

**Target year**

2030

**Figure or percentage in target year**

80

**Figure or percentage in reporting year**

0.03

**% of target achieved [auto-calculated]**

0.0250031253906738

**Target status in reporting year**

Underway

**Is this target part of an emissions target?**

This is our renewable electricity consumption target. Although it is an independent target, it will be crucial for the achievement of our 75% scope 1 and 2 emissions reduction goal by 2030, given that emissions from purchased electricity represent 85% to 90% of our combined scope 1 and 2 emissions.

**Is this target part of an overarching initiative?**

No, it's not part of an overarching initiative

**Please explain (including target coverage)**

This is our target for the procurement of certified renewable electricity. It was set in 2019, and, in 2020, it was formally included in the company's 2021-2025 business strategy (NOS Next Generation). Integration of the target into the company's business goals means it is monitored regularly by the Executive Committee, alongside other strategic objectives of the company. Target covers 100% of our company-wide electricity consumption, including all operations within the boundary of our GHG inventory (financial control approach). Target year is 2030 (80% renewable electricity in total electricity consumption) but we also set the intermediate goal of achieving 65% of renewable electricity consumption by 2025. We current consume only very small quantities of self-generated renewable energy from solar PV and wind pilot-projects installed in our access network. We are actively exploring different options to implement our commitment, including long-term bilateral agreements, ensuring the use of reliable energy attribute certificates and contracts. In early 2021, NOS signed a long-term Power Purchasing Agreement (PPA) for investment in a new wind farm which will supply our operations with over 62GWh renewable electricity per year.

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**C4.2b**

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**(C4.2b) Provide details of any other climate-related targets, including methane reduction targets.**

**Target reference number**

Oth 1

**Year target was set**

2019

**Target coverage**

Company-wide

**Target type: absolute or intensity**

Intensity

**Target type: category & Metric (target numerator if reporting an intensity target)**

Energy consumption or efficiency	GJ
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**Target denominator (intensity targets only)**

Other, please specify (Terabyte of data traffic (TB))

**Base year**

2015

**Figure or percentage in base year**

0.81

**Target year**

2030

**Figure or percentage in target year**

0.12

**Figure or percentage in reporting year**

0.16

**% of target achieved [auto-calculated]**

94.2028985507246

**Target status in reporting year**

Underway

**Is this target part of an emissions target?**

This is our energy efficiency target. Although it is an independent target, it will play an important role in the achievement of our 75% scope 1 and 2 emissions reduction goal by 2030, given that energy-related emissions account for over 95% of our combined scope 1 and 2 emissions. Increasing the efficiency with which we consume energy will enable us deliver more and better products and services to the market while limiting our use of resources and carbon emissions.

**Is this target part of an overarching initiative?**

No, it's not part of an overarching initiative

**Please explain (including target coverage)**

This is our target for global energy efficiency. It was set in 2019, and, in 2020, it was formally included in the company's 2021-2025 business strategy (NOS Next Generation). Integration of the target into the company's business goals means it is monitored regularly by the Executive Committee, alongside other strategic objectives of the company. Target covers 100% of our company-wide energy consumption including all operations within the boundary of our GHG inventory (financial control approach). Target metric is the ratio between our total energy consumption (fossil fuels, electricity and thermal energy, expressed in GJ) and data traffic in our telecommunications network, expressed in Terabyte (TB). It accounts for mobile and fixed data traffic, including non-linear TV (streaming) and excluding linear TV (broadcast). 2015 was chosen as base year because it is the first year for which we have a complete and third-party verified energy consumption data. Target year is 2030 (85% reduction in GJ/TB ratio)) but we also set the intermediate goal of achieving a 75% reduction by 2025. Our strategy to achieve the target is based in the significant increase in the energy efficiency of our network and support facilities and reconfiguration of our passenger vehicle fleet.

**C4.3**

**(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.**

Yes

**C4.3a**

**(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.**

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	0	0
To be implemented*	7	479
Implementation commenced*	6	209
Implemented*	6	177
Not to be implemented	0	0

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

**Initiative category & Initiative type**

Energy efficiency in buildings	Heating, Ventilation and Air Conditioning (HVAC)
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**Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)**

170

**Scope(s)**

Scope 2 (market-based)

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

87000

**Investment required (unit currency – as specified in C0.4)**

40000

**Payback period**

<1 year

**Estimated lifetime of the initiative**

11-15 years

**Comment**

Implementation of free cooling in mobile telecommunication sites - use of outside air to cool down equipment, reducing the use of HVAC units –, adoption of cold containment solutions in main sites and Data Centers, equipment modernization in backoffice buildings and optimized operation of HVAC systems. Estimated energy savings of 860 MWh/year.

**Initiative category & Initiative type**

Energy efficiency in buildings	Lighting
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**Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)**

2

**Scope(s)**

Scope 2 (market-based)

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

7000

**Investment required (unit currency – as specified in C0.4)**

12000

**Payback period**

1-3 years

**Estimated lifetime of the initiative**

6-10 years

**Comment**

Installation of LED lighting in backoffice buildings and own stores. Estimated energy savings of 11 MWh/year.

**Initiative category & Initiative type**

Energy efficiency in production processes	Machine/equipment replacement
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**Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)**

5

**Scope(s)**

Scope 2 (market-based)

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

4000

**Investment required (unit currency – as specified in C0.4)**

30000

**Payback period**

4-10 years

**Estimated lifetime of the initiative**

6-10 years

**Comment**

Installation of more energy efficient energy backup systems in mobile telecommunications sites. Estimated energy savings of 22 MWh/year.

## C4.3c

**(C4.3c) What methods do you use to drive investment in emissions reduction activities?**

Method	Comment
Dedicated budget for energy efficiency	Energy efficiency budget is allocated to the measures showing the best financial cost-benefit analysis. Additional selection criteria include the contribution of the investment to the improvement of the company's environmental performance (including contribution to the achievement of its emissions reduction target).

## C4.5

**(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?**

Yes

## C4.5a

**(C4.5a) Provide details of your products and/or services that you classify as low-carbon products or that enable a third party to avoid GHG emissions.****Level of aggregation**

Group of products

**Description of product/Group of products**

Communications and Collaboration. Broadband connection services, digital collaboration products, video, audio and web-conference solutions that enhance productivity and enable remote work, reducing travel needs and associated carbon emissions. Examples include: NOS Unified Communications, NOS VCaaS and ACaaS (video and audio conference as a service) and Contact Center aaService.

**Are these low-carbon product(s) or do they enable avoided emissions?**

Avoided emissions

**Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions**

Evaluating the carbon-reducing impacts of ICT

**% revenue from low carbon product(s) in the reporting year**

5.4

**% of total portfolio value**

&lt;Not Applicable&gt;

**Asset classes/ product types**

&lt;Not Applicable&gt;

**Comment**

% of revenues corresponds to the share of sales from this group of products (B2B business segment only) in our Telco business segment consolidated revenues FY2020.

**Level of aggregation**

Group of products

**Description of product/Group of products**

Cloud and Data Centre. Housing, storage, Infrastructure as a Service, virtual machines and cloud applications provided by our Data Centres, that reduce overall emissions through the use of a dedicated and highly energy efficient infrastructure (IT equipment and backup systems). Examples include: NOS IaaS, NOS Cloud Backup and Storage, MS Office 365, and Virtual Desktop

**Are these low-carbon product(s) or do they enable avoided emissions?**

Avoided emissions

**Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions**

Evaluating the carbon-reducing impacts of ICT

**% revenue from low carbon product(s) in the reporting year**

0.8

**% of total portfolio value**

&lt;Not Applicable&gt;

**Asset classes/ product types**

&lt;Not Applicable&gt;

**Comment**

% of revenues corresponds to the share of sales from this group of products (B2B business segment only) in our Telco business segment consolidated revenues FY2020.

**Level of aggregation**

Group of products

**Description of product/Group of products**

IoT (Internet of Things). Remote monitoring and device control solutions, that reduce emissions by reducing energy and water consumption (early detection of malfunctioning, optimized equipment operation, better car route planning) and avoiding unnecessary travel for in loco interventions. Examples include: Smart water/electricity/gas meters, Intelligent irrigation systems, Bike tracking solution, NOS Follow Pro.

**Are these low-carbon product(s) or do they enable avoided emissions?**

Avoided emissions

**Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions**

Evaluating the carbon-reducing impacts of ICT

**% revenue from low carbon product(s) in the reporting year**

0.2

**% of total portfolio value**

<Not Applicable>

**Asset classes/ product types**

<Not Applicable>

**Comment**

% of revenues corresponds to the share of sales from this group of products (B2B business segment only) in our Telco business segment consolidated revenues FY2020.

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**Level of aggregation**

Group of products

**Description of product/Group of products**

Analytics. Big data analysis solutions (e.g. analysis of movement patterns) that inform better decisions and resource planning, reducing overall emissions and improving local environmental conditions. Examples include: Analysis of city mobility patterns to support public transportation route optimization.

**Are these low-carbon product(s) or do they enable avoided emissions?**

Avoided emissions

**Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions**

Evaluating the carbon-reducing impacts of ICT

**% revenue from low carbon product(s) in the reporting year**

0.1

**% of total portfolio value**

<Not Applicable>

**Asset classes/ product types**

<Not Applicable>

**Comment**

% of revenues corresponds to the share of sales from this group of products (B2B business segment only) in our Telco business segment consolidated revenues FY2020.

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**C5. Emissions methodology**

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**C5.1**

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**(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).**

**Scope 1**

**Base year start**

January 1 2015

**Base year end**

December 31 2015

**Base year emissions (metric tons CO2e)**

4902

**Comment**

2015 is the year of NOS's first audited GHG emissions complete inventory. It is also the base year for our current emissions reduction target.

**Scope 2 (location-based)**

**Base year start**

January 1 2015

**Base year end**

December 31 2015

**Base year emissions (metric tons CO2e)**

40252

**Comment**

2015 is the year of NOS's first audited GHG emissions complete inventory. It is also the base year for our current emissions reduction target.

**Scope 2 (market-based)**

**Base year start**

January 1 2015

**Base year end**

December 31 2015

**Base year emissions (metric tons CO2e)**

61935

**Comment**

2015 is the year of NOS's first audited GHG emissions complete inventory. It is also the base year for our current emissions reduction target. We use scope 2 market-based figures to report our combined scope 1 and 2 GHG emissions, to define our emissions reduction target and to monitor our carbon performance, including progress against the reduction target.

**C5.2**

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**(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.**

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

The Greenhouse Gas Protocol: Scope 2 Guidance

**C6. Emissions data**

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**C6.1**

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**(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?**

**Reporting year**

**Gross global Scope 1 emissions (metric tons CO2e)**

3441

**Start date**

<Not Applicable>

**End date**

<Not Applicable>

**Comment**

Scope 1 includes emissions from mobile combustion (company fleet - light passenger and duty vehicles), stationary combustion (natural gas-powered boiler in our headquarters and emergency generators) and refrigeration fluorinated gas leakage (mostly from HAVAC equipment and fire extinguishers used in our backoffice buildings, telecommunications network, Data Centres and cinema theatres).

**C6.2**

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**(C6.2) Describe your organization's approach to reporting Scope 2 emissions.**

**Row 1**

**Scope 2, location-based**

We are reporting a Scope 2, location-based figure

**Scope 2, market-based**

We are reporting a Scope 2, market-based figure

**Comment**

In scope 2 we account for emissions from purchased electricity and thermal energy (heating and cooling consumed in two of our backoffice buildings). Electricity emissions: for location-based figures, we use national grid electricity emission factors for Portugal, published yearly by the European Environment Agency (EEA); for market-based figures, we use our electricity supplier specific yearly emission factor. Heating and cooling emissions: for both market-based and location-based figures, we use emission factors representative of one of our thermal energy suppliers. We chose this method as there are no readily available location-based emission factors for heating/cooling in Portugal, and because the generation technology (natural gas-fired co-generation) used to supply thermal energy to the two building is the same, although the supplier is different. Thermal energy represents, in average, only 2% of our scope 2 emissions. We use scope 2 market-based figures to report our combined scope 1 and 2 GHG emissions, to define our emissions reduction target and to monitor our carbon performance, including progress against the reduction target.

**C6.3**

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**(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?**

**Reporting year**

**Scope 2, location-based**

50032

**Scope 2, market-based (if applicable)**

32348

**Start date**

<Not Applicable>

**End date**

<Not Applicable>

**Comment**

Scope 2 includes emissions from purchased electricity (consumed in our backoffice buildings, telecommunications network, Data Centres, own retail stores and cinema theatres) and purchased thermal energy - heating and cooling (consumed in two of our backoffice buildings and in cinema theatres).

**C6.4**

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**(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?**

Yes

**C6.4a**

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**(C6.4a) Provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure.**

**Source**

Emissions from the activity of NOS Group in the Portuguese Autonomous Regions of Azores and Madeira

**Relevance of Scope 1 emissions from this source**

Emissions are not relevant

**Relevance of location-based Scope 2 emissions from this source**

Emissions are not relevant

**Relevance of market-based Scope 2 emissions from this source (if applicable)**

Emissions are not relevant

**Explain why this source is excluded**

In addition to Mainland Portugal, NOS also provides telecommunications services in the insular Portuguese Autonomous Regions of Azores (through NOS Açores Comunicações, S.A.) and Madeira (through NOS Madeira Comunicações, S.A.). NOS SPGS, S.A. holds 84% and 78% stake, respectively, in these companies which are, therefore, within the organizational boundary of our GHG inventory, as defined by the adopted financial control approach. The scale of NOS's operational activity in Azores and Madeira is much smaller than in Mainland Portugal: together, these two markets represented, in 2020, 3.9% of the company's consolidated revenues and 3.6% of its customers in the telecommunications business segment. Emissions (mainly scope 2 emissions associated with electricity consumption in the telecommunications network) are estimated to account for less than 1% of total combined scope 1 and 2 emissions of NOS Group. They are, therefore, considered not relevant. Given the small scale of operations and the limited availability of company staff in these geographies, collection of robust activity data for GHG emissions accounting has not been defined as a priority.

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**C6.5**

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## (C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

### Purchased goods and services

#### Evaluation status

Relevant, not yet calculated

#### Metric tonnes CO<sub>2</sub>e

<Not Applicable>

#### Emissions calculation methodology

<Not Applicable>

#### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

#### Please explain

In 2018, we conducted a materiality assessment of our scope 3 emissions and defined a roadmap for its complete accounting. Based on the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard methodology, we identified the emission categories most relevant to our activity, using criteria such as the estimated size, ability to influence reduction, risk exposure and sector practices. We concluded that emissions associated with the production of the goods and services we acquire, including capital goods (telecommunications network equipment, client equipment such as mobile phones and TV set-top boxes and interconnection services provided by other operators) are one of the most relevant scope 3 sources. Together with category category 11 (use of sold products), this is estimated to represent 80-90% of our total scope 3 emissions. We have now defined the accounting methodology for this emissions category and plan to include it in our 2021 scope 3 inventory. Emissions will be accounted together for capital and non-capital goods (categories 1 and 2), as we are not able to fully separate the two categories.

### Capital goods

#### Evaluation status

Not relevant, explanation provided

#### Metric tonnes CO<sub>2</sub>e

<Not Applicable>

#### Emissions calculation methodology

<Not Applicable>

#### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

#### Please explain

In 2018, we conducted a materiality assessment of our scope 3 emissions and defined a roadmap for its complete accounting. Based on the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard methodology, we identified the emission categories most relevant to our activity, using criteria such as the estimated size, ability to influence reduction, risk exposure and sector practices. Emissions for this category will be included in our 2021 scope 3 inventory, being accounted for together with emissions from purchased goods and services (category 1), as we are not able to fully separate the two categories. Category 2 emissions are not, therefore, considered relevant per se.

### Fuel-and-energy-related activities (not included in Scope 1 or 2)

#### Evaluation status

Relevant, calculated

#### Metric tonnes CO<sub>2</sub>e

11293

#### Emissions calculation methodology

We follow the GHG Protocol Value Chain (Scope 3) Standard. For activity data we use the same energy consumption data used for scope 1 accounting (diesel, gasoline, natural gas and electricity consumption), complemented with reference data for electricity grid losses in Portugal, published by the Portuguese Energy General Directorate. For emission factors we use UK DEFRA's well-to-tank emission factors. For GWP we use IPCC Fourth Assessment Report values, to ensure convergence with the latest edition of the Portuguese National GHG Emissions Report.

#### Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

#### Please explain

In this category we account for emissions from the extraction and processing of fossil fuels consumed in our fleet and buildings, for upstream emissions from the generation of purchased electricity and for emissions from transport and distribution losses of consumed electricity.

### Upstream transportation and distribution

#### Evaluation status

Not relevant, calculated

#### Metric tonnes CO<sub>2</sub>e

269

#### Emissions calculation methodology

We follow the GHG Protocol Value Chain (Scope 3) Standard. For activity data we use company information on transported quantities (weight) and distances travelled, and supplier information on the type of delivery vehicle used. For emission factors we use UK DEFRA's emission factors applicable to each type of delivery vehicle used by our services providers. For GWP we use IPCC Fourth Assessment Report values, to ensure convergence with the latest edition of the Portuguese National GHG Emissions Report.

#### Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

#### Please explain

This category includes emissions from the transportation, paid for by NOS, of telecom equipment from our logistic centre to our store network for sale (own or franchised stores) or directly to B2B and B2C clients. It also includes indirect emissions from electricity consumption in our subcontracted logistics center. We have included this emissions category in our scope 3 inventory starting in 2020.

## Waste generated in operations

### Evaluation status

Not relevant, calculated

### Metric tonnes CO<sub>2</sub>e

105

### Emissions calculation methodology

We follow the GHG Protocol Value Chain (Scope 3) Standard. For activity data we use the amount of unsorted waste generated in our facilities, as monitored through the legally required waste transportation forms. We use emission factors derived from the Portuguese National GHG Inventory for the Waste Sector (landfilling). For GWP we use IPCC Fourth Assessment Report values, to ensure convergence with the latest edition of the Portuguese National GHG Emissions Report.

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

### Please explain

In this category we account for emissions from the disposal of waste generated in own operations. 95% of total generated waste is forwarded to multimaterial recycling or energy recovery. These emissions are excluded from this category as, according to the Portuguese National GHG Inventory methodology, they should be allocated to the recycling and electricity generation sectors. We therefore only account for the emissions of the 5% of waste that goes to landfill.

## Business travel

### Evaluation status

Not relevant, calculated

### Metric tonnes CO<sub>2</sub>e

148

### Emissions calculation methodology

We follow the GHG Protocol Value Chain (Scope 3) Standard. For activity data we use company records of air and train employee travel, which include distance travelled for each trip. For the use of taxi we use financial records and convert expenses to distance travelled using a representative €/km ratio. We use emission factors derived from the Portuguese National GHG Inventory for road transportation, Portuguese Rail data for train travel and DEFRA emission factors for air travel. We include Radiative Forcing Index (RFI) in air travel emission factors. For GWP we use IPCC Fourth Assessment Report values, to ensure convergence with the latest edition of the Portuguese National GHG Emissions Report.

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

### Please explain

In this category we account for emissions from employee business travel by airplane, train and taxi.

## Employee commuting

### Evaluation status

Not relevant, calculated

### Metric tonnes CO<sub>2</sub>e

429

### Emissions calculation methodology

We follow the GHG Protocol Value Chain (Scope 3) Standard. For activity data we use information on work-home transportation modes and distances travelled gathered through an employee survey conducted every two to three years. We use emission factors derived from the Portuguese National GHG Inventory for each transportation mode. For GWP we use IPCC Fourth Assessment Report values, to ensure convergence with the latest edition of the Portuguese National GHG Emissions Report.

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

### Please explain

In this category we account for emissions from employee home-work-home travel.

## Upstream leased assets

### Evaluation status

Relevant, calculated

### Metric tonnes CO<sub>2</sub>e

2245

### Emissions calculation methodology

We follow the GHG Protocol Value Chain (Scope 3) Standard. For activity data we estimate electricity consumption based on the number of equipments installed in third party sites and the average consumption for similar equipments in NOS network. We use the electricity location-based emission factors for Portugal published by the International Energy Agency, as we do not have information on the other operator electricity supplier. For GWP we use IPCC Fourth Assessment Report values, to ensure convergence with the latest edition of the Portuguese National GHG Emissions Report.

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

50

### Please explain

In this category we account for emissions from energy consumption in NOS telecommunication equipment installed on shared network sites owned by other operators.

## Downstream transportation and distribution

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Please explain

Under this category we would account for emissions from the transportation, paid for by third parties (store operators other than our franchisees), of telecom equipment, from our logistic centre to retail stores. Based on information published by sector companies and on our own hot spot analysis, emissions in this category are not relevant, as the involved transportation volumes are not significant, nor are distances travelled. Therefore, we currently do not plan to include this emission category in our scope 3 inventory.

## Processing of sold products

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Please explain

Our products and services do not entail processing prior to use by the end client. Therefore, this emissions category does not apply to our activity.

## Use of sold products

### Evaluation status

Relevant, not yet calculated

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Please explain

In 2018, we conducted a materiality assessment of our scope 3 emissions and defined a roadmap for its complete accounting. Based on the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard methodology, we identified the emission categories most relevant to our activity, using criteria such as the estimated size, ability to influence reduction, risk exposure and sector practices. We concluded that emissions associated with the use of the telecommunications services we provide (energy consumption in mobile terminals, fixed telephones, TV set-top boxes, routers or modems) are one of the most relevant scope 3 sources. Together with category 1 (purchased goods and services), this is estimated to represent 80-90% of total scope 3 emissions. We have now defined the accounting methodology for this emissions category and plan to include it in our 2021 scope 3 inventory.

## End of life treatment of sold products

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Please explain

This category includes emissions from the end-of-life treatment of client equipment transportation and respective packaging. We have implemented a recovery operation that ensures that more than 70% of the equipment used by fixed service customers is collected, technically evaluated and, whenever possible, refurbished for re-use. For the remaining customer equipment, especially mobile terminals, we partnered with specialized waste management entities and finance the operation of a collection and recycling system for all the equipment placed in the market. The same happens with all equipment packaging. Given the high recovery rates, we do not estimate emissions associated with equipment and packaging disposal to be relevant. Nevertheless, we have now defined a methodology for accounting of this emission category and plan to include it in our 2021 scope 3 inventory.

## Downstream leased assets

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Please explain

We do not lease company assets, namely property, to third parties. Additional energy consumption in our own network sites shared with other telecom operators is accounted for as own electricity consumption under scope 2. Therefore, this emissions category does not apply to our activity.

## Franchises

### Evaluation status

Not relevant, calculated

### Metric tonnes CO2e

274

### Emissions calculation methodology

We follow the GHG Protocol Value Chain (Scope 3) Standard. For activity data we use the total area of the franchised retail network and a specific kWh/m2 ratio derived from our own store network data and validated against primary data obtained from franchisees. We use the electricity location-based emission factors for Portugal published by the International Energy Agency, as we do not have information on the franchisee electricity supplier. For GWP we use IPCC Fourth Assessment Report values, to ensure convergence with the latest edition of the Portuguese National GHG Emissions Report.

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

50

### Please explain

In this category we account for emissions from energy consumption in NOS store network operated by third parties, under a franchising regime.

## Investments

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Please explain

We hold non-controlling stakes in three other companies in the Media & Entertainment business segment. Operational activity of these companies is mostly limited to backoffice activities in administrative buildings and associated emissions are estimated to be immaterial. Therefore, we currently do not plan to include this emission category in our scope 3 inventory.

## Other (upstream)

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Please explain

There are no other scope 3 upstream emissions in our value chain.

## Other (downstream)

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Please explain

There are no other scope 3 downstream emissions in our value chain.

## C6.7

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### (C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?

No

## C6.10

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### (C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

#### Intensity figure

0.000026

#### Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

35789

#### Metric denominator

unit total revenue

#### Metric denominator: Unit total

1368000000

#### Scope 2 figure used

Market-based

#### % change from previous year

21

#### Direction of change

Decreased

#### Reason for change

In 2020, there was a 14% reduction in our consolidated sales, largely due to the impact of Covid-19 pandemic, especially in our Media & Entertainment business segment. Our gross combined scope 1 and 2 emissions decreased by 32%, as a result of the energy efficiency measures implemented throughout the year, as reported in C4.3a. The most relevant set of measures consisted of free cooling in mobile telecommunication sites - use of outside air to cool down equipment, reducing the use of HVAC units -, cold containment solutions in main sites and Data Centres, equipment modernization in backoffice buildings and optimized operation of HVAC systems. Together, the energy efficiency measures implemented throughout 2020, delivered 0.9 GWh/year in electricity savings and 177t CO2e/year in emissions savings. Reduction in gross scope 1 and 2 emissions was also driven by the reduction in the carbon content of purchased electricity, as we account for scope 2 emissions using the market-based method. Reduction in gross scope 1+ scope 2 emissions, combined with sales decrease, resulted in an overall 21% decrease in our emissions per revenue metric.

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#### Intensity figure

0.009

#### Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

35789

#### Metric denominator

Other, please specify (Terabyte of data traffic (TB))

#### Metric denominator: Unit total

3890327

#### Scope 2 figure used

Market-based

#### % change from previous year

59

#### Direction of change

Decreased

#### Reason for change

In 2020, data traffic in our telecommunications network grew at an even higher rate than in recent years (+67% from 2019). This was particularly visible on our fixed network, as a result of changes in internet and TV streaming consumption patterns, due to restrictions on mobility in force for most of the year. Despite strong growth on service delivery, our gross combined scope 1 and 2 emissions decreased by 32%, as a result of the energy efficiency measures implemented throughout the year, as reported in C4.3a. The energy consumption ratio per unit of traffic decreased by 44% from 2019 level, strengthening the consistent improvement in energy efficiency in recent years. The most relevant set of measures consisted of free cooling in mobile telecommunication sites - use of outside air to cool down equipment, reducing the use of HVAC units -, cold containment solutions in main sites and Data Centres, equipment modernization in backoffice buildings and optimized operation of HVAC systems. Together, the energy efficiency measures implemented throughout 2020, delivered 0.9 GWh/year in electricity savings and 177t CO2e/year in emissions savings. Reduction in gross scope 1 and 2 emissions was also driven by the reduction in the carbon content of purchased electricity, as we account for scope 2 emissions using the market-based method. The technical infrastructure (network and Data Centres) represents around 80% of our total energy consumption and is responsible for over 70% of our scope 1 and 2 carbon footprint. Growth in data traffic induces greater energy consumption in the equipment that supports it. Our energy efficiency plan has been key in limiting the increase in network energy consumption and associated emissions: our energy consumption by data traffic indicator, decreased by 80% between 2015 and 2020, anticipating our energy efficiency goal for 2025 (-75%) and setting the company's performance in line with its 85% reduction target for 2030. Reduction in gross scope 1+ scope 2 emissions, combined with data traffic growth, resulted in an overall 59% decrease in our emissions per data traffic metric.

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## C7. Emissions breakdowns

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C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?

Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	2991	IPCC Fourth Assessment Report (AR4 - 100 year) We use IPCC's Fourth Assessment Report to align with the GWP values used by the Portuguese Environment Agency in preparing the National Inventory Report.
HFCs	450	IPCC Fourth Assessment Report (AR4 - 100 year) We use IPCC's Fourth Assessment Report to align with the GWP values used by the Portuguese Environment Agency in preparing the National Inventory Report.

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/region.

Country/Region	Scope 1 emissions (metric tons CO2e)
Portugal	3441

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By business division

By activity

C7.3a

(C7.3a) Break down your total gross global Scope 1 emissions by business division.

Business division	Scope 1 emissions (metric ton CO2e)
Telecommunications	3254
Media & Entertainment	187

C7.3c

(C7.3c) Break down your total gross global Scope 1 emissions by business activity.

Activity	Scope 1 emissions (metric tons CO2e)
Mobile fuel consumption (company fleet)	2909
Stationary fuel consumption (fuel consumption in company buildings)	82
F-gases leaks (refrigerant gases in cooling and fire extinguishing equipment)	450

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/region.

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted for in Scope 2 market-based approach (MWh)
Portugal	50032	32348	162273	0

## C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

By business division

By activity

## C7.6a

(C7.6a) Break down your total gross global Scope 2 emissions by business division.

Business division	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Telecommunications	46623	30052
Media & Entertainment	3409	2296

## C7.6c

(C7.6c) Break down your total gross global Scope 2 emissions by business activity.

Activity	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Purchased electricity consumption	49355	31671
Purchased thermal energy consumption	678	678

## C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Decreased

## C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	0	No change	0	No change in our combined scope 1 and 2 emissions from change in renewable energy consumption in 2020. We currently generate only small amounts of renewable energy for self-consumption (59 MWh in 2020), with immaterial year to year variations, and do not source specific low or zero carbon energy products, namely electricity, from our energy suppliers. We are exploring different options for sourcing renewable electricity in the near future, in order to implement our renewable electricity target: to ensure 80% renewable electricity in total electricity consumption by 2030. In early 2021, NOS signed a long-term Power Purchasing Agreement (PPA) for investment in a new wind farm which will supply our operations with over 62GWh renewable electricity per year.
Other emissions reduction activities	177	Decreased	0.3	In 2020, we continued to roll out our energy efficiency plan. We invested in HAVAC and lighting systems in our backoffice buildings and store network and implemented several measures in our telecommunications infrastructure (innovative cooling technologies, improved HAVAC operation and new energy efficient backup systems). Together, these initiatives delivered 0.9 GWh/year in electricity savings and an estimated 0.3% reduction in our combined scope 1 and 2 emissions compared to 2019. % of emissions reduction induced by the initiatives was not as significant as in previous years due to the postponement, due to the Covid-19 pandemic, of several measures planned for 2020 that had to be rescheduled for 2021 and 2022. Emissions reduction from energy efficiency initiatives: 177 tCO2e Combined scope 1 and 2 emissions 2019: 52996 tCO2e % change = $(177/52996) \times 100 = 0.3\%$
Divestment	0	No change	0	In 2020, there were no divestments with an impact in our combined scope 1 and 2 emissions.
Acquisitions	0	No change	0	In 2020, there were no acquisitions with an impact in our combined scope 1 and 2 emissions.
Mergers	0	No change	0	In 2020, there were no mergers with an impact in our combined scope 1 and 2 emissions.
Change in output	7656	Decreased	14.4	In 2020, our consolidated sales decreased by 14%, mainly due to the effect of the Covid-19 pandemic. This induced a lower scope 1 and 2 emissions level, despite significant increase in data traffic in our networks, the effect of which was counter-balanced by the increasingly high energy efficiency of our technical infrastructure. Emissions decrease from sales decrease: 7656 tCO2e Combined scope 1 and 2 emissions 2019: 52996 tCO2e % change = $(7656/52996) \times 100 = 14.4\%$
Change in methodology	12249	Decreased	23.1	We use market-based figures to report combined scope 1 and 2 emissions and to monitor our carbon performance. In 2020, the supplier specific electricity emission factor was 28% below that of 2019, due to an increased share of renewable sources in the supplier generation mix. This resulted in lower total emissions associated with our purchased electricity consumption in 2020, leading to an estimated 23.1% reduction in combined scope 1 and 2 emissions, compared to 2019. Emissions reduction from reduction in supplier electricity emission factor: 12249 tCO2e Combined scope 1 and 2 emissions 2019: 52996 tCO2e % change = $(12249/52996) \times 100 = 23.1\%$
Change in boundary	0	No change	0	In 2020, there was no change in our GHG inventory boundary with an impact in our combined scope 1 and 2 emissions.
Change in physical operating conditions	0	No change	0	In 2020, there were no changes in physical operating conditions with an impact in our combined scope 1 and 2 emissions.
Unidentified	0	No change	0	In 2020, there were no unidentified reasons for change with an impact in our combined scope 1 and 2 emissions.
Other	0	No change	0	In 2020, there were no other reasons for change with an impact in our combined scope 1 and 2 emissions.

## C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Market-based

## C8. Energy

### C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 0% but less than or equal to 5%

### C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	Yes
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	Yes
Generation of electricity, heat, steam, or cooling	Yes

### C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	0	11713	11713
Consumption of purchased or acquired electricity	<Not Applicable>	0	159209	159209
Consumption of purchased or acquired heat	<Not Applicable>	0	879	879
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	0	2126	2126
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	59	<Not Applicable>	59
Total energy consumption	<Not Applicable>	59	173927	173986

### C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	No
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

### C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

**Fuels (excluding feedstocks)**

Diesel

**Heating value**

LHV (lower heating value)

**Total fuel MWh consumed by the organization**

11184

**MWh fuel consumed for self-generation of electricity**

<Not Applicable>

**MWh fuel consumed for self-generation of heat**

<Not Applicable>

**MWh fuel consumed for self-generation of steam**

<Not Applicable>

**MWh fuel consumed for self-generation of cooling**

<Not Applicable>

**MWh fuel consumed for self-cogeneration or self-trigeneration**

<Not Applicable>

**Emission factor**

71.14

**Unit**

kg CO2e per GJ

**Emissions factor source**

Portuguese Environmental Agency, 2020. National GHG Inventory Report.

**Comment**

We use diesel for mobile combustion in our passenger car fleet and for stationary combustion in emergency generators in our backoffice buildings and technical sites. Emission factor is a weighted average (GJ/GJ) of the emission factors for the two sources, as used by the Portuguese Environmental Agency to report national emission to the United Nations Framework Convention on Climate Change (NIR – National Inventory Report). Diesel used for mobile combustion accounts for over 95% of our total diesel use. We collect diesel activity data in volume units (litres) and convert it to energy units using density and Lower Heating Value for this fuel from the Portuguese NIR.

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**Fuels (excluding feedstocks)**

Motor Gasoline

**Heating value**

LHV (lower heating value)

**Total fuel MWh consumed by the organization**

339

**MWh fuel consumed for self-generation of electricity**

<Not Applicable>

**MWh fuel consumed for self-generation of heat**

<Not Applicable>

**MWh fuel consumed for self-generation of steam**

<Not Applicable>

**MWh fuel consumed for self-generation of cooling**

<Not Applicable>

**MWh fuel consumed for self-cogeneration or self-trigeneration**

<Not Applicable>

**Emission factor**

72.19

**Unit**

kg CO2e per GJ

**Emissions factor source**

Portuguese Environmental Agency, 2020. National GHG Inventory Report.

**Comment**

We use gasoline for mobile combustion in our passenger car fleet. We collect gasoline activity data in volume units (litres) and convert it to energy units using density and Lower Heating Value for this fuel from the Portuguese NIR.

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**Fuels (excluding feedstocks)**

Natural Gas

**Heating value**

LHV (lower heating value)

**Total fuel MWh consumed by the organization**

190

**MWh fuel consumed for self-generation of electricity**

<Not Applicable>

**MWh fuel consumed for self-generation of heat**

<Not Applicable>

**MWh fuel consumed for self-generation of steam**

<Not Applicable>

**MWh fuel consumed for self-generation of cooling**

<Not Applicable>

**MWh fuel consumed for self-cogeneration or self-trigeneration**

<Not Applicable>

**Emission factor**

56.72

**Unit**

kg CO2e per GJ

**Emissions factor source**

Portuguese Environmental Agency, 2020. National GHG Inventory Report.

**Comment**

We use natural gas to produce heat in one of our backoffice buildings. We collect natural gas activity data in volume units (m3) and convert it to energy units using Lower Heating Value for this fuel from the Portuguese NIR.

**C8.2d**

**(C8.2d) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.**

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	26	26	26	26
Heat	33	33	33	33
Steam	0	0	0	0
Cooling	0	0	0	0

**C8.2e**

**(C8.2e) Provide details on the electricity, heat, steam, and/or cooling amounts that were accounted for at a zero emission factor in the market-based Scope 2 figure reported in C6.3.**

**Sourcing method**

None (no purchases of low-carbon electricity, heat, steam or cooling)

**Low-carbon technology type**

<Not Applicable>

**Country/area of consumption of low-carbon electricity, heat, steam or cooling**

<Not Applicable>

**MWh consumed accounted for at a zero emission factor**

<Not Applicable>

**Comment**

We currently do not source specific low or zero carbon energy products, namely electricity, from our energy suppliers. We use supplier specific emission factors to account for purchased electricity, heating and cooling under the market-based method. We generate very small amounts of renewable energy for self-consumption: electricity from wind and solar photovoltaic micro-generation pilot projects installed in our telecommunications network sites (26 MWh in 2020); and thermal energy from solar panels providing hot water for the HAVAC system in our headquarters (33 MWh in 2020). Together, this renewable energy production accounted for 0.03% of our total energy consumption in 2020. We have set a strategic business target to ensure 80% renewable electricity in total electricity consumption by 2030, with an interim goal of 65% by 2025. We are actively exploring different options to implement our commitment, including long-term bilateral agreements, ensuring the use of reliable energy attribute certificates and contracts. In early 2021, NOS signed a long-term Power Purchasing Agreement (PPA) for investment in a new wind farm which will supply our operations with over 62GWh renewable electricity per year.

**C9. Additional metrics****C9.1**

**(C9.1) Provide any additional climate-related metrics relevant to your business.**

**Description**

Energy usage

**Metric value**

0.16

**Metric numerator**

Total energy consumption (GJ)

**Metric denominator (intensity metric only)**

Data traffic (TB)

**% change from previous year**

44

**Direction of change**

Decreased

**Please explain**

This is the metric used to monitor progress against our target for global energy efficiency. It is the ratio between our total energy consumption (fossil fuels, electricity and thermal energy, expressed in GJ) and data traffic in our telecommunications network, expressed in Terabyte (TB) - mobile and fixed data traffic, including non-linear TV (streaming) and excluding linear TV (broadcast). We committed to an 85% reduction in this ratio by 2030, from a 2015 baseline. Our strategy to achieve the target is based in the significant increase in the energy efficiency of our network and support facilities, and reconfiguration of our passenger vehicle fleet. In 2020, we had already achieved an 80% reduction in the efficiency ratio. During the year, data traffic in our telecommunications network grew at an even higher rate (+67% from 2019). This was particularly visible on our fixed network, as a result of changes in internet and TV streaming consumption patterns, due to restrictions on mobility in force for most of the year. The energy consumption ratio per unit of traffic decreased by 44% from 2019 level, strengthening the consistent improvement in energy efficiency in recent years.

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**Description**

Waste

**Metric value**

90

**Metric numerator**

Own waste recovery rate (%)

**Metric denominator (intensity metric only)**

Not applicable (absolute metric).

**% change from previous year**

5

**Direction of change**

Decreased

**Please explain**

This is the most relevant metric used to monitor our performance regarding the management of waste generated in our own operations. End-of-life electrical and electronic equipment and associated packaging, as well as batteries, are the main waste of NOS 'own operation. We implemented selective collection systems that guarantee the forwarding to material recycling or energy recovery of more than 90% of the total waste we produce. In 2020, Covid-19 restrictions forced adjustments to our operation that resulted in an overall reduction of 27% in the amount of waste produced, in particular waste streams that are sent to recycling (e.g. paper and cardboard; telecom equipment and batteries). Other waste streams, including unsorted waste, saw a smaller reduction which caused a slight decrease in the overall recovery rate.

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**Description**

Other, please specify (Client equipment)

**Metric value**

84

**Metric numerator**

Collected fixed telecom client equipment (%)

**Metric denominator (intensity metric only)**

Not applicable (absolute metric).

**% change from previous year**

1

**Direction of change**

Increased

**Please explain**

This metric is used to monitor the performance of our client equipment circularity project. We implemented a reversed logistics process that ensures the equipment used by fixed service customers (TV boxes, routers and hubs) is collected, technically evaluated and, whenever possible, refurbished and reused. In 2020, 84% of this equipment was collected and more than 50% was put back into the market, thus avoiding additional consumption of raw materials and energy.

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**C10. Verification**

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**C10.1**

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

### C10.1a

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(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

C10\_EY\_NOS\_GHGVerificationDeclaration2020.pdf

NOS\_AnnualReport2020\_EN.pdf

**Page/ section reference**

EY NOS GHG Verification Declaration 2020: p.1-3; NOS Consolidated Management Report & Accounts 2020: p.146 (Carbon Footprint - Emission figures 2020).

**Relevant standard**

ISAE3000

**Proportion of reported emissions verified (%)**

100

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### C10.1b

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**(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.**

**Scope 2 approach**

Scope 2 location-based

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

C10\_EY\_NOS\_GHGVerificationDeclaration2020.pdf

NOS\_AnnualReport2020\_EN.pdf

**Page/ section reference**

EY NOS GHG Verification Declaration 2020: p.1-3; NOS Consolidated Management Report & Accounts 2020: p.146 (Carbon Footprint - Emission figures 2020).

**Relevant standard**

ISAE3000

**Proportion of reported emissions verified (%)**

100

---

**Scope 2 approach**

Scope 2 market-based

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

C10\_EY\_NOS\_GHGVerificationDeclaration2020.pdf

NOS\_AnnualReport2020\_EN.pdf

**Page/ section reference**

EY NOS GHG Verification Declaration 2020: p.1-3; NOS Consolidated Management Report & Accounts 2020: p.146 (Carbon Footprint - Emission figures 2020).

**Relevant standard**

ISAE3000

**Proportion of reported emissions verified (%)**

100

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**C10.1c**

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**(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.**

**Scope 3 category**

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

C10\_EY\_NOS\_GHGVerificationDeclaration2020.pdf

NOS\_AnnualReport2020\_EN.pdf

**Page/section reference**

EY NOS GHG Verification Declaration 2020: p.1-3; NOS Consolidated Management Report & Accounts 2020: p.146 (Carbon Footprint - Emission figures 2020).

**Relevant standard**

ISAE3000

**Proportion of reported emissions verified (%)**

100

---

**Scope 3 category**

Scope 3: Upstream transportation and distribution

**Verification or assurance cycle in place**

Annual process

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**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

C10\_EY\_NOS\_GHGVerificationDeclaration2020.pdf  
NOS\_AnnualReport2020\_EN.pdf

**Page/section reference**

EY NOS GHG Verification Declaration 2020: p.1-3; NOS Consolidated Management Report & Accounts 2020: p.146 (Carbon Footprint - Emission figures 2020).

**Relevant standard**

ISAE3000

**Proportion of reported emissions verified (%)**

100

---

**Scope 3 category**

Scope 3: Waste generated in operations

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

C10\_EY\_NOS\_GHGVerificationDeclaration2020.pdf  
NOS\_AnnualReport2020\_EN.pdf

**Page/section reference**

EY NOS GHG Verification Declaration 2020: p.1-3; NOS Consolidated Management Report & Accounts 2020: p.146 (Carbon Footprint - Emission figures 2020).

**Relevant standard**

ISAE3000

**Proportion of reported emissions verified (%)**

100

---

**Scope 3 category**

Scope 3: Business travel

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

C10\_EY\_NOS\_GHGVerificationDeclaration2020.pdf  
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**Page/section reference**

EY NOS GHG Verification Declaration 2020: p.1-3; NOS Consolidated Management Report & Accounts 2020: p.146 (Carbon Footprint - Emission figures 2020).

**Relevant standard**

ISAE3000

**Proportion of reported emissions verified (%)**

100

---

**Scope 3 category**

Scope 3: Employee commuting

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

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**Page/section reference**

EY NOS GHG Verification Declaration 2020: p.1-3; NOS Consolidated Management Report & Accounts 2020: p.146 (Carbon Footprint - Emission figures 2020).

**Relevant standard**

ISAE3000

**Proportion of reported emissions verified (%)**

100

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**Scope 3 category**

Scope 3: Upstream leased assets

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

C10\_EY\_NOS\_GHGVerificationDeclaration2020.pdf

NOS\_AnnualReport2020\_EN.pdf

**Page/section reference**

EY NOS GHG Verification Declaration 2020: p.1-3; NOS Consolidated Management Report & Accounts 2020: p.146 (Carbon Footprint - Emission figures 2020).

**Relevant standard**

ISAE3000

**Proportion of reported emissions verified (%)**

100

---

**Scope 3 category**

Scope 3: Franchises

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

C10\_EY\_NOS\_GHGVerificationDeclaration2020.pdf

NOS\_AnnualReport2020\_EN.pdf

**Page/section reference**

EY NOS GHG Verification Declaration 2020: p.1-3; NOS Consolidated Management Report & Accounts 2020: p.146 (Carbon Footprint - Emission figures 2020).

**Relevant standard**

ISAE3000

**Proportion of reported emissions verified (%)**

100

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C10.2

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**(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?**

Yes

C10.2a

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**(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?**

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C4. Targets and performance	Emissions reduction activities	ISAE 3000. Limited assurance.	Data was verified within the third-party verification process of non-financial information included in our 2020 Consolidated Management Report & Accounts (p.177 Independent Limited Assurance Report). Corporate-wide, annual verification. Questions: C4.3b (emissions reduction initiatives in reporting year).
C6. Emissions data	Year on year change in emissions (Scope 1)	ISAE 3000. Limited assurance.	Data was verified within the third-party verification process of non-financial information included in our 2020 Consolidated Management Report & Accounts (p.177 Independent Limited Assurance Report). Corporate-wide, annual verification. Questions: C6.1 (scope 1 emissions).
C6. Emissions data	Year on year change in emissions (Scope 2)	ISAE 3000. Limited assurance.	Data was verified within the third-party verification process of non-financial information included in our 2020 Consolidated Management Report & Accounts (p.177 Independent Limited Assurance Report). Corporate-wide, annual verification. Questions: C6.3 (scope 2 emissions).
C6. Emissions data	Year on year change in emissions (Scope 1 and 2)	ISAE 3000. Limited assurance.	Data was verified within the third-party verification process of non-financial information included in our 2020 Consolidated Management Report & Accounts (p.177 Independent Limited Assurance Report). Corporate-wide, annual verification. Questions: C4.3b (emissions reduction initiatives in reporting year).
C6. Emissions data	Year on year change in emissions (Scope 3)	ISAE 3000. Limited assurance.	Data was verified within the third-party verification process of non-financial information included in our 2020 Consolidated Management Report & Accounts (p.177 Independent Limited Assurance Report). Corporate-wide, annual verification. Questions: C6.10 (emissions intensities).
C6. Emissions data	Year on year emissions intensity figure	ISAE 3000. Limited assurance.	Data was verified within the third-party verification process of non-financial information included in our 2020 Consolidated Management Report & Accounts (p.177 Independent Limited Assurance Report). Corporate-wide, annual verification. Questions: C6.5 (scope 3 emissions).
C7. Emissions breakdown	Year on year change in emissions (Scope 1 and 2)	ISAE 3000. Limited assurance.	Data was verified within the third-party verification process of non-financial information included in our 2020 Consolidated Management Report & Accounts (p.177 Independent Limited Assurance Report). Corporate-wide, annual verification. Questions: C7.9 (change in scope 1 and 2).
C7. Emissions breakdown	Other, please specify (Emissions (Scope 1 and 2) breakdown by activity)	ISAE 3000. Limited assurance.	Data was verified within the third-party verification process of non-financial information included in our 2020 Consolidated Management Report & Accounts (p.177 Independent Limited Assurance Report). Corporate-wide, annual verification. Questions: C7.3c (scope 1 emissions breakdown by activity); C7.6c (scope 2 emissions breakdown by activity).
C8. Energy	Energy consumption	ISAE 3000. Limited assurance.	Data was verified within the third-party verification process of non-financial information included in our 2020 Consolidated Management Report & Accounts (p.177 Independent Limited Assurance Report). Corporate-wide, annual verification. Questions: C8.2a (total energy consumption, broken down by energy type).
C9. Additional metrics	Other, please specify (Energy intensity)	ISAE 3000. Limited assurance.	Data was verified within the third-party verification process of non-financial information included in our 2020 Consolidated Management Report & Accounts (p.177 Independent Limited Assurance Report). Corporate-wide, annual verification. Questions: C9.1 (additional metrics).
C9. Additional metrics	Other, please specify (Own waste recovery rate)	ISAE 3000. Limited assurance.	Data was verified within the third-party verification process of non-financial information included in our 2020 Consolidated Management Report & Accounts (p.177 Independent Limited Assurance Report). Corporate-wide, annual verification. Questions: C9.1 (additional metrics).
C9. Additional metrics	Other, please specify (Client equipment collection rate)	ISAE 3000. Limited assurance.	Data was verified within the third-party verification process of non-financial information included in our 2020 Consolidated Management Report & Accounts (p.177 Independent Limited Assurance Report). Corporate-wide, annual verification. Questions: C9.1 (additional metrics).

**C11. Carbon pricing**

**C11.1**

**(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?**

Yes

**C11.1a**

**(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.**

Portugal carbon tax

**C11.1c**

**(C11.1c) Complete the following table for each of the tax systems you are regulated by.**

**Portugal carbon tax**

**Period start date**

January 1 2020

**Period end date**

December 31 2020

**% of total Scope 1 emissions covered by tax**

87

**Total cost of tax paid**

68615

**Comment**

Tax applies to diesel and gasoline consumed in our company fleet, to diesel used in emergency generators, and to natural gas consumed to generate heat in our headquarters. Fuel consumption in company fleet accounts for 97% of total cost of tax paid. In 2020, the tax covered 87% of our total scope 1 emissions, corresponding to emissions associated with mobile and stationary fuel combustion. The remaining scope 1 emissions are HFCs from leakage of refrigerant gases used in cooling and fire extinguishing equipment. The value of tax is defined on a yearly basis by the Portuguese Government and is indexed to the average price of CO2 emission allowances in the EU-ETS in the previous year.

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**C11.1d**

**(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?**

Fuel-related emissions covered by the carbon tax applicable to our operations (Portugal Carbon Tax) represented 87% of our scope 1 and 9% of our combined scope 1 and 2 emissions (market-based method) in 2020. Carbon tax paid in 2020 accounted for only 5% of our fuel costs and 0.3% of our total energy costs, in the same year. 97% of the tax amount paid was associated with fuel consumption in company fleet.

Although the current value of the tax is not financially material, there is a risk that this situation might change in the future, given that the tax is indexed to the price of CO2 emission allowances in the EU-ETS, and that forecasts point to a sustained increase in such prices over the next decade, as a consequence of changes to EU Climate and Energy legislation. Our strategy not only for complying with the tax, but also for limiting the impact of its increase on our operating costs is to progressively reduce our dependency on fossil fuels, in particular in our own fleet, as road diesel and gasoline account for over 95% of our carbo tax payment.

Case study: Road diesel and gasoline consumed in our passenger and light duty company fleet (1.15 million liters in 2020) account for over 95% of our total payments of Portugal Carbon Tax (97% in 2020). In order to mitigate fuel cost, which are under increasing pressure from carbon pricing mechanisms such as the Portuguese carbon tax, and, specially, to contribute to our emissions reduction target (-75% in combined scope 1 and 2 GHG in 2030, from 2015 levels), we have developed a fleet electrification plan. By 2020 year end, our fleet included 1050 vehicles, 93% of which were still with Internal Combustion Engine (ICE). Our electrification plan foresees that % of CIE vehicles will go down to 60% by 2023 and that the fleet will be fully electrified by 2025. This will eliminate almost completely the direct impact of the Portuguese Carbon Tax on our operating costs.

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**C11.2**

**(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?**

No

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**C11.3**

**(C11.3) Does your organization use an internal price on carbon?**

No, but we anticipate doing so in the next two years

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**C12. Engagement**

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**C12.1**

**(C12.1) Do you engage with your value chain on climate-related issues?**

Yes, our suppliers

Yes, other partners in the value chain

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**C12.1a**

**(C12.1a) Provide details of your climate-related supplier engagement strategy.**

**Type of engagement**

Compliance & onboarding

**Details of engagement**

Included climate change in supplier selection / management mechanism  
Code of conduct featuring climate change KPIs

**% of suppliers by number**

100

**% total procurement spend (direct and indirect)**

100

**% of supplier-related Scope 3 emissions as reported in C6.5**

65

**Rationale for the coverage of your engagement**

NOS Sustainability Requirements for Suppliers and Partners ("Requirements") are an integral part of all our request for proposals and supplier contractual documents. The Requirements identify Energy and Emissions as one of the relevant topics for supplier compliance. In addition to encouraging suppliers to monitor energy and emissions and to improve performance, the Requirements bound the supplier to cooperate with NOS in establishing and fulfilling energy and emissions targets that might be defined by the company. The Requirements are the object of a specific clause in the General Conditions for the Supply of Goods and Services to the NOS Group, to which all suppliers must abide. This applies to all our sourcing procedures, may they be centralized by our Purchasing Department or conducted directly by other company structures, namely for the sourcing of specific IT equipment. Coverage of engagement is therefore 100%, both by supplier number and procurement spend. Coverage by % of supplier-related scope 3 emissions is an estimate, as we do not yet quantify all relevant scope 3 emissions, namely emissions related to purchased goods and services (category 1). Estimate is based on the average weight of category 1 in total scope 3 emissions of telecom companies (65%). These are the scope 3 categories directly related to the carbon intensity of purchases and are thus used as a proxy.

**Impact of engagement, including measures of success**

Direct measurement of the engagement success is the % of procurement spend where NOS Sustainability Requirements for Suppliers and Partners are applied. This currently stands at 100%, as the Requirements are included as a clause in the General Conditions for the Supply of Goods and Services to the NOS Group, applicable to 100% of purchases. We also monitor positive outcomes of the Energy and Emissions criteria of the Requirements, as well as of the inclusion of energy efficiency criteria in the technical specification of network equipment, through our global energy efficiency ratio. Between 2015 and 2020, the energy intensity ratio (GJ/TB) decreased by 80%, driven mostly by the increasing energy efficiency of IT equipment. In addition to specific technical conditions for energy efficiency, the supply of telecommunications network equipment also includes, when applicable, GHG-related criteria. A recent example is the acquisition of a chiller for our new Data Centre (Imópolis II), where the request for proposals explicitly the use of a refrigerant gas with a Global Warming Potential below 1.

**Comment**

NOS specific technical contract conditions for the supply of telecommunications network equipment always include energy efficiency requirements and, when applicable, GHG-related criteria.

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**C12.1d**

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**(C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.**

We engage on climate-related issues with our franchisees. In addition to our 60 own stores (as of 31.12.2020), NOS retail network includes 100 stores managed by business partners, in a franchising regime.

Case study: NOS has published a complete scope 1 and 2 GHG inventory since 2015. Under scope 3, however, only a few emissions categories (business travel and waste management) were accounted for. Given the relevance of value chain emissions in the telecommunications sector, in 2018 we conducted a materiality assessment of our scope 3 emissions and defined a roadmap for its complete accounting. One of the scope 3 emissions prioritized was category 14, associated with the indirect emissions from the electricity consumed in the c. 100 stores in NOS retail network that are managed by business partners under franchising agreements. Given that we do not have operational control over these stores, we needed to engage with our franchisees to collect information on the stores electricity consumption. The calculation methodology involved direct engagement with franchisees for the collection of electricity consumption data (primary data) and information on store configuration, in order to obtain a representative value for the electricity to store area ratio (kWh/m<sup>2</sup>). For future annual updates of our GHG inventory, we will apply this ratio to the total franchised retail network area and will also review the consumption ratio on a regular basis.

Additional information: our retail management department also provides direct support to franchisees on the installation of energy efficient store equipment, in particular lighting systems. Starting in 2016, NOS rolled out a store revamp program that includes the replacement of all lighting equipment for LED technology, with 30% savings in store electricity consumption.

**C12.3**

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**(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?**

Direct engagement with policy makers  
Trade associations

**C12.3a**

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**(C12.3a) On what issues have you been engaging directly with policy makers?**

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Adaptation or resilience	Support	We engage with the Portuguese National Communications Authority (ANACOM) on several climate change adaptation-related themes. NOS was a member of the sectoral Working Group on Communications of the 2020 Portuguese National Climate Change Adaptation Strategy, coordinated by ANACOM. We were also actively involved in the special Working Group on Forest Fires, brought together by ANACOM following the devastating forest fires of that occurred in Portugal in 2017.	Within our participation in the 2020 National Climate Change Adaptation Strategy, we help define a roadmap for improving the Portuguese telecommunications and postal services resilience to both acute and chronic climate-related physical risks. The special working group on forest fires – in which we participated alongside other telecom operators – identified a set of 27 protection and resilience measures and associated procedures to be adopted by operators of electronic communications infrastructure in Portugal.

**C12.3b**

**(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?**

Yes

**C12.3c**

**(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.**

**Trade association**

Portuguese Association for the Development of Communications (APDC)

**Is your position on climate change consistent with theirs?**

Consistent

**Please explain the trade association's position**

APDC supports the transition to a low carbon economy and actively advocates the role of Information and Communication Technologies in such process. Recently, APDC joined BCSD - the Portuguese delegation of the World Business Council for Sustainable Development – in creating the national manifesto "Economic Recovery - A New Paradigm for Sustainable Development". NOS is also one of the founding members of the movement.

**How have you influenced, or are you attempting to influence their position?**

NOS is a member of APDC Board and actively participates in the association's activities. We support APDC's position in what regards the need to transition to a low carbon economy and the fundamental enabler role of the telecommunications sector.

**C12.3f**

**(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?**

Ensuring consistency in climate-policy engagement across the company is facilitated by the fact that we currently operate in only one geography (Portugal) and that the business segment where climate-related risks and opportunities are most relevant within our operations (Telecommunications) is also our core business, accounting for 96% of consolidated revenues in 2020.

Our corporate governance model further ensures coordination and consistency of the company's positions and policy engagement activities with our strategy and public commitments on climate change: maximum responsibility for the Corporate Sustainability Strategy and associated commitments – including the integration of our emissions reduction, renewable energy, energy efficiency and low P&S 2030 targets – lies with the Executive Committee. The CFO is the Board member with direct responsibility for all sustainability-related issues, with climate strategy playing a key role. The Corporate Investor Relations and Sustainability Department, delegated by the Executive Committee, is in charge of coordinating the implementation of the strategy, and the respective management. The position of the Corporate Investor Relations and Sustainability department within the company structure (a top level department, whose Head reports directly to the CFO) ensures consistency in climate-policy engagement across the company.

**C12.4**

**(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).**

**Publication**

In mainstream reports

**Status**

Complete

**Attach the document**

NOS\_AnnualReport2020\_EN.pdf

**Page/Section reference**

NOS Consolidated Management Report & Accounts 2020 – Non-Financial Statements, Chapter 2 – Our approach to sustainability (p. 93-95) and Chapter 6 – Environment, section Energy and Climate (p. 144-147)

**Content elements**

Governance

Strategy

Emissions figures

Emission targets

Other metrics

Other, please specify (Development of low carbon solutions)

**Comment**

Climate change-related information is one of the highlights of the non-financial information integrated in our annual mainstream company report. This information is subject to independent third-party verification.

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## C15. Signoff

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### C-FI

**(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.**

No further information or comments.

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### C15.1

**(C15.1) Provide details for the person that has signed off (approved) your CDP climate change response.**

	Job title	Corresponding job category
Row 1	Chief Financial Officer	Chief Financial Officer (CFO)

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## Submit your response

**In which language are you submitting your response?**

English

**Please confirm how your response should be handled by CDP**

	I am submitting to	Public or Non-Public Submission
I am submitting my response	Investors	Public

**Please confirm below**

I have read and accept the applicable Terms