Second-Party Opinion
Telefónica SDG Framework

Evaluation Summary

Sustainalytics is of the opinion that the Telefónica SDG Framework is credible and impactful, and aligns with the four core components of the Green Bond Principles 2018, Social Bond Principles 2018 and Sustainability Bond Guidelines 2018. This assessment is based on the following:

**USE OF PROCEEDS** The eligible categories for the use of proceeds – (i) Energy Efficiency of Telefónica’s Network Infrastructure, (ii) Renewable Energy, (iii) Energy Efficiency: Digital Solutions for the Environment, (iv) Digital Inclusion, Access for all through an Affordable Infrastructure, and (v) Employment Generation and Economic Growth – are aligned with those recognized by the Green Bond Principles, Social Bond Principles and Sustainability Bond Guidelines. Sustainalytics views that the ‘Eligible Projects’ will support carbon abatement for Telefónica’s own operations and for its customers through the provision of smart solutions that help save energy. Furthermore, Sustainalytics believes that ‘Eligible Projects’ will support socioeconomic development through digital inclusion and SME financing.

**PROJECT EVALUATION / SELECTION** Telefónica’s project evaluation and selection is governed by a dedicated SDG bond committee / working group. The committee has cross-departmental senior management representatives from the Finance Department, Sustainability Department, Control Department and other technical areas. This process is in line with market practices.

**MANAGEMENT OF PROCEEDS** Proceeds from the green and social bonds will be earmarked and monitored internally through an SDG Register. Pending full allocation, Telefónica will invest the unallocated proceeds according to its normal liquidity policy. This is in line with market practices.

**REPORTING** Telefónica intends to provide allocation and impact reporting annually on the company’s website. The (i) allocation report will comprise data on the eligible projects financed through the bonds, including the amounts allocated, the bond proceeds allocated per eligible category and the remaining balance of unallocated proceeds. With regards to the (ii) impact report, Telefónica will disclose a comprehensive list of relevant KPIs for each use of proceeds category. Sustainalytics views the scope and granularity of Telefónica’s reporting to be aligned with market practices.

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**Evaluation date**
27 November 2018

**Issuer Location**
Madrid, Spain

**Report Sections**

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Introduction

Telefónica is a telecommunication and digital services company which offers connectivity, digital services and technological solutions, operating in Spain, the United Kingdom, Germany and Latin America. Telefónica has developed the Telefónica SDG Framework (the “Framework”) under which it is considering to issue multiple green, social and sustainability bonds and use the proceeds to finance and refinance, in whole or in part, existing and future projects that promote energy efficiency and the reduction of GHG emissions within its own operations and those of its clients and/or deliver positive social outcomes. The Framework defines eligibility criteria in the following areas:

1. Energy Efficiency of Telefónica Network Infrastructure
2. Renewable Energy
4. Digital Inclusion, Access for all through an Affordable Infrastructure
5. Employment Generation and Economic Growth

Telefónica engaged Sustainalytics to review the Telefónica SDG Framework and provide a second-party opinion on the alignment of the SDG framework with the Green Bond Principles 2018 (the “GBP”), Social Bond Principles 2018 (“SBP”), and Sustainability Bond Guidelines 2018 (“SBG”), as administered by the International Capital Market Association (the “ICMA”), and the Framework’s environmental and social credentials. This Framework has been published in a separate document.

As part of this engagement, Sustainalytics held conversations with various members of Telefónica’s management team to understand the sustainability impact of their business processes and planned use of proceeds, as well as management of proceeds and reporting aspects of Telefónica’s green and social bonds to be issued under the SDG framework. Sustainalytics also reviewed relevant public documents and non-public information.

This document contains Sustainalytics’ opinion of the Telefónica SDG Framework and should be read in conjunction with that Framework.

Sustainalytics’ Opinion

Section 1: Sustainalytics’ Opinion on the Telefónica SDG Framework

Sustainalytics is of the opinion that the Telefónica SDG Framework is credible, impactful and aligns with the four core components of the Green Bond Principles, Social Bond Principles and Sustainability Bond Guidelines. Sustainalytics highlights the following elements of Telefónica’s Framework:

- Use of Proceeds
  - All five use of proceeds categories align with those recognized as impactful by the Green Bond Principles 2018, the Social Bond Principles 2018 and the Sustainability Bond Guidelines 2018.
  - The project category 'Energy efficiency: Digital Solutions for the Environment' includes financing of Internet of Things (IoT) technologies, Big Data and Artificial Intelligence (AI), which are expected to support energy efficiency innovations in a range of industrial and societal applications. Telefónica confirmed that bond proceeds for this category will be used for innovation investments into smart metering, smart lighting, smart traffic, smart parking and other aspects of smart cities, along with supportive technologies for smart agriculture and smart logistics, for example.
  - However, Sustainalytics recognizes that IoT, Big Data and AI technologies carry the following limitations in terms of applicability and scope of the impact:
    i. The technologies have a broad impact and can drive energy efficiency gains in a variety of industries. This does not exclude the possibility of application in fossil fuel-based industries. Sustainalytics understands that the issuer cannot control the use and application of the IoT enabling technologies once sold. This is a limitation of the use of proceeds. However, Sustainalytics notes that the Telefónica SDG Framework explicitly excludes technologies developed specifically for use in the fossil fuels industry and infrastructure.
    ii. The expansion of IoT networks and increasing data flows resulting from IoT solutions may result in additional overall energy demands on telecommunications networks. Telefónica’s own ratio of operational GHG emissions vs. customer GHG emissions avoided as a result of applying IoT technology was at least 1:0.69 in 2017. Telefónica confirmed to Sustainalytics that only five potential services that result in emissions savings were studied as part of the assessment. Furthermore, studies have indicated that the ratio of network carbon emissions to emissions abatement from mobile technologies is currently estimated at 1:5 in Europe and the USA. Based on these studies there is evidence that telecommunications technologies are already resulting in net energy savings. Given these studies, Sustainalytics considers Telefónica’s investments in IoT infrastructure and solutions to be an important element towards reaching carbon neutrality and, ultimately, net savings. Sustainalytics recommends that Telefónica track the impact of these technologies in order to ensure an accurate ratio of operational GHG emissions vs. customer GHG emissions avoided as a result of applying IoT technology.
    iii. Possible increases in energy demand on the network resulting from the deployment of IoT solutions highlights the relevance of the investments in renewable energy and network energy efficiency to decarbonize and reduce energy use of networks that Telefónica is simultaneously pursuing. Sustainalytics highlights that Telefónica’s bond allocations to these activities may also provide a catch-up effect supporting the company in improving its net carbon footprint across operations and the application of IoT technologies.
  - The Framework defines target populations for the social use of proceeds categories, as recommended by the Social Bond Principles. Telefónica sets a widely applicable architecture for digital inclusion in Latin America, with a target population covering (i) unconnected communities (no digital service in place) and (ii) underserved communities (areas where 2G

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EDGE or 3G service is available, but with less than 1.5Mbps per user on average). Telefonica confirmed to Sustainalytics that its definition of underserved communities are often dispersed populations at least 10 km away from the nearest municipality or communities with populations of less than 300 people. Telefonica’s definition of underserved communities is often, but not always, communities of less than 3,000 inhabitants and/or at least 10 km from the nearest municipal center. Sustainalytics believes that expanding access to telecommunications technology for unconnected or underserved populations facilitates digital inclusion and socioeconomic empowerment through more reliable and higher quality broadband services that facilitate access to information, tools, services and opportunities to engage in the digital economy (see Section 3: Impact of Use of Proceeds).

- Telefonica will use proceeds to invest in SMEs directly and through contributions to Wayra, Telefonica’s startup accelerator. Sustainalytics recognizes the importance of SMEs to supporting economic development and employment generation. Sustainalytics considers Telefonica’s definition of SMEs as companies with less than 250 employees and a turnover equal to or less than EUR 50 million, which is aligned with EU recommendation 2003/361, as a strength. Telefonica’s investments are targeted at SMEs focused on digital innovation. Sustainalytics notes that Telefonica works directly with a number of these SMEs, as they develop products and services that support the company’s commercial strategy. However, this is not a requirement for SME financing activities, and a large majority of companies receiving support from Telefonica are not working with the company. Telefonica confirmed that it will allocate a segment of the social bond proceeds to OPEX (operational expenditures) specific to Wayra’s activities (support services for SMEs, mentoring activities etc.). Given the nature of Wayra, Sustainalytics believes that OPEX’ allocations are necessary for Telefonica’s SME support. Sustainalytics recommends that Telefonica ensures that the OPEX is tracked on a project-by-project basis and that OPEX is project specific, rather than general expenditures for Wayra.

- Project Selection Process
  - In line with market practice, Telefonica has established a dedicated SDG Bond committee/working group in order to oversee the project evaluation and selection process. The committee is composed out of senior management representatives from the Finance Department, Sustainability Department, Control Department and other technical areas. The committee will also review and select projects based on the eligibility criteria outlined in the Telefonica Framework. This process is aligned with market practices.

- Management of Proceeds
  - Telefonica plans to establish an SDG Bond Register in order to manage green, social and sustainability bonds. Bond proceeds will be deposited in general funding accounts and earmarked for allocation using the SDG Register, which will be reviewed annually. Sustainalytics views this approach as aligned with market practices.

- Reporting
  - Telefonica plans to publish an annual allocation and impact report until the proceeds have been completely allocated. The (i) allocation report will include eligible projects financed and their allocated amounts, bond proceeds allocated per eligibility category and the balance of unallocated proceeds. In addition, Telefonica commits to provide an extensive list of impact indicators itemized for each use of proceeds category. The (ii) impact report will include the following green reporting metrics: estimated GHG emissions reduced, energy consumption per data traffic, expected energy saved, renewable MWh generated or purchased, the percentage of electricity consumed from renewable sources, service-related KPIs and qualitative reporting on innovation. Impact reporting for social projects categories include the percentage of population connected as a result of Telefonica’s network, percentage of the population with access to fibre, the number of people with access in regions defined as “at risk of exclusion”, qualitative reporting of SME development as a result of access to fibre, number of SMEs supported or funded, the number of employees of SMEs supported or funded and the number of jobs generated. Sustainalytics views the scope and granularity of Telefonica’s reporting to be in line with current market practices.

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5 Telefonica’s confirmed to Sustainalytics that its definition of underserved communities are often dispersed populations at least 10 km away from the nearest municipality or communities with populations of less than 300 people.

Alignment with Green Bond Principles, Social Bond Principles and Sustainability Bond Guidelines

Sustainalytics has determined that the Telefónica SDG Framework aligns to the four core components of the Green Bond Principles, Social Bond Principles and Sustainability Bond Guidelines. For detailed information please refer to Appendix 1: Sustainability Bond/ Sustainability Bond Programme External Review Form.

Section 2: Sustainability Strategy and Performance of the Issuer

Sustainability is embedded in Telefónica’s business strategy, it is managed by relevant corporate governance structures and is quantified through performance indicators. Telefónica manages sustainability through a dedicated Responsible Business Office comprised of the heads of several departments, including Compliance, Human Resources, and Corporate Ethics and Sustainability.7

Within its Responsible Business Plan,8 Telefónica commits to sustainable productivity and growth, while integrating sustainability principles into its innovation activities. Telefónica commits to expand and transform its networks with an aim to making them more energy efficient, through transitioning its legacy networks from copper to optic fibre and implementing free cooling systems, for example. To implement its Responsible Business Plan, the company outlined multiple sustainability goals. Underlining its commitment to sustainability, these sustainability targets include (i) reducing GHG emissions by 30% in absolute terms by 2020, and by 50% by 2030 against a 2015 baseline, (ii) obtaining 50% of electricity from renewable sources by 2020 and 100% by 2030, (iii) extending the digitization of waste management to 6 more countries, (iv) increasing the amount of emissions avoided through EcoSmart services, (v) reducing energy consumption by 50% per unit of traffic by 2020 against a 2015 baseline, and (vi) increasing the emissions avoided by its services so that Telefónica’s net CO2 emissions are neutral.9 Thus far, the company estimates that its services have resulted in emissions savings outside of Telefónica of 939ktCO2, equivalent to 69% of its own carbon footprint.10 Specific examples of how Telefónica services have promoted resource efficiency include a 15% fuel consumption reduction through fleet management services provided by Telefónica’s IoT and Big Data services to customers, 20% water consumption reduction in agriculture with Smart Agro, 23.6% energy use reduction through energy efficiency service and LUCA Energy, and 30% less energy consumed by street lighting through Smart Lighting.11

In addition, the company reduced its own operational carbon emissions by 28% and increased energy efficiency by 52% in 2017, compared to 2015. Telefónica’s commitment to operating in an environmentally-friendly manner is further reinforced by its membership in the RE100 initiative, certifying its GHG emissions targets through the Science Based Targets Initiative (SBTi), and receiving for the third consecutive year the highest CDP Climate Change classification.12

Given Telefónica’s (i) sustainability strategy and targets, (ii) its corporate governance structures overseeing the integration of sustainability considerations, as well as Telefónica’s (iii) sustainability progress reporting, Sustainalytics considers that Telefónica is well positioned to issue green, social and sustainability bonds and that its bonds will support the advancement of Telefónica’s sustainability strategy.

Well positioned to address common environmental and social risks associated with the projects

While Sustainalytics recognizes that the proceeds from Telefónica’s SDG Framework will be directed towards eligible projects that are recognized by market norms (GBP, GLP and SBP) to have positive impact, Sustainalytics is aware that such projects entail potential environmental and social risks. These risks include: human rights challenges in the supply chain for raw materials critical to the telecommunications industry.
health and safety risks associated with the construction of infrastructure to promote energy efficiency, biodiversity and community relations risks associated with the construction of new assets, and exposure to data privacy, security and censorship risks. Moreover, social projects bear the risk of increasing inequality if not targeted at an appropriate population. To manage these risks Telefónica is taking the following steps:

- Telefónica has adopted a supply chain due diligence framework in order to mitigate risks associated with the sourcing of conflict minerals and the metals utilized for manufacturing telecommunication electronic equipment.\(^\text{13}\) While the company does not have direct business relationships with smelters or refiners, it works towards including its sustainability criteria in its value chain.\(^\text{14}\) The framework includes the establishment of an internal conflict mineral management system, a risk identification and assessment process in the supply chain, a strategy to respond to identified risks during the assessments, third-party audits of supply chain due diligence at identified points in the supply chain and reporting on supply chain due diligence.\(^\text{15}\) In 2017, 83% of Telefónica’s suppliers had a policy on conflict minerals. Moreover, Telefónica has engaged in various initiatives regarding the responsible sourcing of minerals, such as Electronic Industry Citizen Coalition (EICC), Global e-Sustainability Initiative (GeSI) Extractives Working Group, and OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict Affected and High-Risk Areas.\(^\text{16}\) The company has a separate due diligence framework that seeks to address slavery and human trafficking risks in its supply chain, which is outlined in its Modern Slavery Statement.\(^\text{17}\) Sustainalytics considers the due diligence framework to be credible and robust to manage risks related to conflict minerals in Telefónica’s supply chain.

- Out of the company’s total operations, 85% incorporate a health and safety management system, which has been certified in 50% of the countries where it operates. Furthermore, 70% of all company providers report on health and safety indicators.\(^\text{18}\) Suppliers need to conduct their business activities in line with ethical standards similar to Telefónica, including health and safety as outlined in the company’s minimum Responsible Business Standards,\(^\text{19}\) indicating that the company expects adequate health and safety standards for its own operations and within its supply chain.

- Telefónica’s environmental management systems have all achieved ISO 14001, which represents best practice for mitigating the environmental impact of operations.\(^\text{20}\)

- Telefónica has adopted several policies that regulate data privacy, protection and censorship. The company discloses commitments to customer privacy,\(^\text{21}\) respecting digital rights of children,\(^\text{22}\) and freedom of expression.\(^\text{23}\) In 2013, Telefónica signed the Telecommunications Industry Dialogue Group for the Freedom of Expression and Privacy,\(^\text{24}\) which outlines a common approach to protecting individual rights to privacy and freedom of expression. Moreover, in 2017, Telefónica became a member of the Global Network Initiative, which promotes the same goal.\(^\text{25}\) The company also requires minimum privacy criteria for its providers, included in its Global Supply Chain Security Regulations, and carries out specific projects to ensure that data privacy provisions are met and best practices in data protection are identified annually.\(^\text{26}\) Furthermore, in November 2018 Telefónica announced its Artificial Intelligence (AI) Principles, which outlines its commitments for developing AI in a responsible manner. Privacy and security by design

\(^{13}\) Telefónica Corporate Website; https://www.telefonica.com/en/web/responsible-business/our-commitments/supply-chain/minerals/regulations

\(^{14}\) Telefónica Sustainability in the supply chain; https://www.telefonica.com/documents/1258915/1261723/Minerales_en.pdf/66972d60-530d-e1a8-1628-25e1f92512f7

\(^{15}\) Telefónica Sustainability in the supply chain; https://www.telefonica.com/documents/1258915/1261723/Minerales_en.pdf/66972d60-530d-e1a8-1628-25e1f92512f7

\(^{16}\) Telefónica Corporate Website; https://www.telefonica.com/en/web/responsible-business/our-commitments/supply-chain/minerals/regulations

\(^{17}\) Telefónica UK Modern Slavery Statement; https://www.o2.co.uk/sites/default/files/2017-06/02-Modern-Slavery-Statement.pdf


Section 3: Impact of Use of Proceeds

All five use of proceeds categories are recognized as impactful by the Green Bond Principles, Social Bond Principles and Sustainability Bond Guidelines. Sustainalytics has focused on four below where the impact is specifically relevant.

Importance of energy and resource efficiency worldwide

According to the International Energy Association (IEA), in 2017 world electricity demand rose by 3.1% while innovations in energy efficiency slowed down significantly.27 According to the IEA Bridge Scenario, increasing energy efficiency, for industry, buildings and transport, is a critical action to reduce GHG emissions, with a potential contribution of approximately 48% of global emissions reductions by 2030.28 Information and Communications Technologies (ICTs) are already having a sizeable positive impact, with annual carbon abatement from ICTs estimated at 180 million tonnes of CO₂ in the United States and Europe.29 Furthermore, the Global e-Sustainability Initiative (GeSI) estimates that ICTs can drive an additional 20% reduction in global carbon emissions by 2030, equivalent to maintaining 2015 levels.30

Telefónica’s Internet of Things (IoT), Big Data or Artificial Intelligence (AI) have a wide range of applications that have the potential to save energy through the distribution of electricity and optimization of energy use in cities, industries, buildings, and vehicles, amongst others, ultimately leading to a reduction in carbon emissions.31 Additionally, Telefónica’s IoT, Big Data and AI also have important applications for driving resource efficiencies not directly related to energy or carbon mitigation. These broader applications include Hydro Smart (for water) and Smart Agro (for agriculture).32 Therefore, Sustainalytics considers Telefónica’s projects in energy and resource efficiency to have the potential to contribute to energy and GHG emission reduction.

Moreover, Telefónica pursues energy efficiency within its mobile/fixed networks through network infrastructure innovations, improved hardware and energy saving software which can contribute to foster energy efficiency in the countries where the upgrades are taking place. For example, 10% energy savings in air conditioning were achieved through Telefónica’s SUSI Platform in over 150 buildings from Brazil, Colombia and Chile.33 SUSI is Telefónica’s digital platform for automated building management, integrating a range of functions for enhancing efficiencies related to maintenance, energy and CAPEX & OPEX. Regarding network transformation, Telefónica communicated to Sustainalytics that the switch from copper to fiber optic wiring can save between seven and 20 times the amount of energy used. This process has been underway since 2008, and between 2016 and 2018 an additional 5 million homes have been connected to fibre optic cable in Spain alone. Fiber optic cable also produces other benefits in terms of bandwidth, having a superior capacity to section of cable ratio and being less prone to breakdowns. The network transformation in Spain has also resulted in the ability to decommission over 190 technical buildings between 2014 and 2018 and facilitated the recovery of copper and other network elements.

Sustainalytics is of the opinion that the increase in energy and resource efficiency in Telefónica’s own operations as well as its customers’ can contribute to reduce GHG emissions and resource use at its own operations and through customers around the world.

Importance of internet and mobile connectivity for long-term socio-economic development

Studies have analysed the relation between internet connectivity and economic development, highlighting that internet connectivity is important for economic growth, especially for innovation and entrepreneurship. GeSI (Global e-Sustainability Initiative) has indicated that digital access and mobile penetration can contribute to more than 65% of UN SDGs. According to GeSI, digital access is most strongly correlated with positive impact related to health, growth and innovation. In this regard, e-health solutions have been identified as being a critical benefit of connectivity that helps to make progress towards achieving the SDGs, including remote diagnostics, health data storage and personalized medicine, for example. These benefits are even more impactful for isolated communities typically lacking direct access to medical services. Improved digital and mobile access is also positively impacts digital fluency rates, enabling improvement in digital skills and female empowerment. Moreover, complementary studies have indicated that digital fluency positively impacts gender equality in the workplace. In this context, Telefónica’s definition of an underserved community as having either 2G EDGE or 3G and less than 1.5Mbps per user on average is notable, as 4G and 5G technologies are important pre-requisites that facilitate quick and reliable access to the next generation of digital services, particularly in the area of e-health and education amongst others. Additionally, digital services may provide the support for the transformation of administrative systems and bring institutional change through the deployment of e-platforms for accountable and transparent administrative decision-making processes. In this sense, OECD studies indicated that digital transformation of both the (i) administrative services and (ii) direct personal services enable improved administrative governance, openness and social engagement through data sharing, data crowd-sourcing and analytics.

Given this context, Sustainalytics considers that Telefónica’s projects of providing connectivity infrastructure and related innovations in areas with risk of digital exclusion in Latin America to be impactful, contributing not only towards the digital integration of marginal communities, but also enabling a range of socioeconomic benefits.

Socioeconomic advancement and employment generation through the financing of ICT focused SMEs

SMEs represent a significant socio-economic component in most developing countries, contributing up to 60% of total employment and up to 40% of national income (GDP), in these economies. In the EU 85% of net employment creation is attributable to SMEs. Telefónica intends to use part of the bond proceeds to finance its start-up hub accelerator Wayra, which has already supported the development of more than 100 SMEs globally, in Spain, the United Kingdom, Germany and Latin America. The International Telecommunication Union (ITU) indicated that tech SMEs within the ICT manufacturing industries, the ICT trade industries or the ICT services industries are a primary source of net job creation. While some critics have raised concerns on technology replacing jobs, the ITU study highlights that the ratio of job creation by tech SMEs compared to the job losses they may create through digital disruption is positive. Furthermore, the report indicates that due to the relative ease of scaling digital technologies, ICT focused SMEs can grow rapidly, and overcome key

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36 Information retrieved from GeSi’s Digital Access Index available at: http://www.digitalaccessindex-sdg.gesi.org/
37 Information retrieved from GeSi’s Digital Access Index available at: http://www.digitalaccessindex-sdg.gesi.org/
38 Information retrieved from GeSi’s Digital Access Index available at: http://www.digitalaccessindex-sdg.gesi.org/
42 Demystifying small and medium enterprises’ (SMEs) performance in emerging and developing economies; https://www.sciencedirect.com/science/article/pii/S2214845018300280
43 A review of Micro, Small and Medium Enterprises in the ICT Sector from the International Telecommunication Union available at: https://www.itu.int/dms_pub/itu-s/oth/06/36/S06360000013301PDFE.pdf
44 A review of Micro, Small and Medium Enterprises in the ICT Sector from the International Telecommunication Union available at: https://www.itu.int/dms_pub/itu-s/oth/06/36/S06360000013301PDFE.pdf
The study covered Brazil, Spain, New Zealand, Hungary, Portugal, Luxembourg, Netherlands, Austria, Italy, France, Belgium, Canada, Sweden, Great Britain, Norway, USA, Japan and Finland.
hurdles of non-ICT based start-ups.\textsuperscript{45} While many tech-start-ups will ultimately fail, the ITU report also highlights data from the US indicating that job creation from successful small technology firms outweighs job losses from early-stage company failures.\textsuperscript{46} Given this context, Sustainalytics favourably views Telefónica’s plans to invest in ICT-focused SMEs, as start-ups will support and promote entrepreneurship and generate employment opportunities in Telefónica’s European and Latin America markets.

**Alignment with/contribution to SDGs**

The Sustainable Development Goals (SDGs) were set in September 2015 and form an agenda for achieving sustainable development by the year 2030. This sustainability framework advances the following SDG goals and targets:

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<th>Use of Proceeds Category</th>
<th>SDG</th>
<th>SDG target</th>
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<tr>
<td>Energy Efficiency of Telefónica Network Infrastructure</td>
<td>7. Affordable and Clean Energy</td>
<td>7.3 By 2030, double the global rate of improvement in energy efficiency</td>
</tr>
<tr>
<td></td>
<td>9. Industry, Innovation and Infrastructure</td>
<td>9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities</td>
</tr>
<tr>
<td>Renewable Energy</td>
<td>7. Affordable and Clean Energy</td>
<td>7.2 By 2030, increase substantially the share of renewable energy in the global energy mix</td>
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<tr>
<td>Energy Efficiency: Digital Solutions for the Environment</td>
<td>6. Clean Water and Sanitation</td>
<td>6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity</td>
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<tr>
<td></td>
<td>7. Affordable and Clean Energy</td>
<td>7.3 By 2030, double the global rate of improvement in energy efficiency</td>
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<td></td>
<td>8. Decent Work and Economic Growth</td>
<td>8.4 Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead</td>
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<td></td>
<td>11. Sustainable Cities and Communities</td>
<td>11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management</td>
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<td></td>
<td>13. Climate Action</td>
<td>13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries</td>
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</table>

\textsuperscript{45} A review of Micro, Small and Medium Enterprises in the ICT Sector from the International Telecommunication Union available at: https://www.itu.int/dms_pub/itu-s/oth/06/36/S06360000013301PDF.cpdf

\textsuperscript{46} A review of Micro, Small and Medium Enterprises in the ICT Sector from the International Telecommunication Union available at: https://www.itu.int/dms_pub/itu-s/oth/06/36/S06360000013301PDF.cpdf
**Digital Inclusions, Access for all through Affordable Infrastructure**

<table>
<thead>
<tr>
<th>9. Industry, Innovation and Infrastructure</th>
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<tr>
<td>9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all</td>
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<tr>
<td>9.0 Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020</td>
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<th>Employment Generation and Economic Growth</th>
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<tr>
<td>8. Decent work and economic growth</td>
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<tr>
<td>8.6 By 2020, substantially reduce the proportion of youth not in employment, education or training</td>
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</table>

### Conclusion


Sustainalytics believes that financing activities to promote energy efficiency within Telefónica’s own operations and at clients through its digital solutions for the environment offerings will help to reduce GHG emissions and promote resource efficiency in the countries were those activities are taking place. An emphasis on transitioning towards an increasingly large proportion of renewable energy use will also lower the company’s carbon emissions and support renewable energy projects. Furthermore, Sustainalytics notes that financing to promote social inclusion and SME development can contribute to socioeconomic development, employment and economic growth.

Sustainalytics is confident that Telefónica is well placed to issue green and social bonds, and that the Telefónica SDG Framework is robust and transparent and in alignment with the four core components of the ICMA’s Green Bond Principles 2018, Social Bond Principles 2018 and Sustainability Bond Guidelines 2018.
Appendix 1: Sustainability Bond / Sustainability Bond Programme  
- External Review Form

Section 1. Basic Information

<table>
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<th>Issuer name:</th>
<th>Telefónica</th>
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<tr>
<td><strong>Sustainability Bond ISIN or Issuer Sustainability Bond Framework Name, if applicable:</strong></td>
<td>Telefónica SDG Framework</td>
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<td>Review provider’s name:</td>
<td>Sustainalytics</td>
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<td>Completion date of this form:</td>
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<tr>
<td>Publication date of review publication:</td>
<td>[where appropriate, specify if it is an update and add reference to earlier relevant review]</td>
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Section 2. Review overview

**SCOPE OF REVIEW**

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

The review assessed the following elements and confirmed their alignment with the GBPs and SBPs:

- ☒ Use of Proceeds
- ☐ Process for Project Evaluation and Selection
- ☒ Management of Proceeds
- ☒ Reporting

**ROLE(S) OF REVIEW PROVIDER**

- ☒ Consultancy (incl. 2nd opinion)
- ☐ Certification
- ☐ Verification
- ☐ Rating
- ☐ Other (*please specify*):

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

**EXECUTIVE SUMMARY OF REVIEW and/or LINK TO FULL REVIEW (if applicable)**
Section 3. Detailed review

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

1. USE OF PROCEEDS

Overall comment on section *(if applicable)*:

- All five use of proceeds categories align with those recognized as impactful by the Green Bond Principles 2018, the Social Bond Principles 2018 and the Sustainability Bond Guidelines 2018.

- The project category ‘Energy efficiency: Digital Solutions for the Environment’ includes financing of Internet of Things (IoT) technologies, Big Data and Artificial Intelligence (AI), which are expected to support energy efficiency innovations in a range of industrial and societal applications. Telefónica confirmed that bond proceeds for this category will be used for innovation investments into smart metering, smart lighting, smart traffic, smart parking and other aspects of smart cities, along with supportive technologies for smart agriculture and smart logistics, for example.

- However, Sustainalytics recognizes that IoT, Big Data and AI technologies carry the following limitations in terms of applicability and scope of the impact:

  i. The technologies have a broad impact and can drive energy efficiency gains in a variety of industries. This does not exclude the possibility of application in fossil fuel-based industries. Sustainalytics understands that the issuer cannot control the use and application of the IoT enabling technologies once sold. This is a limitation of the use of proceeds. However, Sustainalytics notes that the Telefónica SDG Framework explicitly excludes technologies developed specifically for use in the fossil fuels industry and infrastructure.

  ii. The expansion of IoT networks and increasing data flows resulting from IoT solutions may result in additional overall energy demands on telecommunications networks. Telefónica’s own ratio of operational GHG emissions vs. customer GHG emissions avoided as a result of applying IoT technology was at least 1:0.69 in 2017. Telefónica confirmed to Sustainalytics that only five potential services that result in emissions savings were studied as part of the assessment. Furthermore, studies have indicated that the ratio of network carbon emissions to emissions abatement from mobile technologies is currently estimated at 1:5 in Europe and the USA. Based on these studies there is evidence that telecommunications technologies are already resulting in net energy savings. Given these studies, Sustainalytics considers Telefónica’s investments in IoT infrastructure and solutions to be an important element towards reaching carbon neutrality and, ultimately, net savings. Sustainalytics recommends that Telefonica track the impact of these technologies in order to ensure an accurate ratio of operational GHG emissions vs. customer GHG emissions avoided as a result of applying IoT technology.
Possible increases in energy demand on the network resulting from the deployment of IoT solutions highlights the relevance of the investments in renewable energy and network energy efficiency to decarbonize and reduce energy use of networks that Telefónica is simultaneously pursuing. Sustainalytics highlights that Telefónica’s bond allocations to these activities may also provide a catch-up effect supporting the company in improving its net carbon footprint across operations and the application of IoT technologies.

- The Framework defines target populations for the social use of proceeds categories, as recommended by the Social Bond Principles. Telefónica sets a widely applicable architecture for digital inclusion in Latin America, with a target population covering (i) unconnected communities (no digital service in place) and (ii) underserved communities (areas where 2G EDGE or 3G service is available, but with less than 1.5Mbps per user on average). Telefónica confirmed to Sustainalytics that census data, internal data and 3rd party data facilitates the identification of these communities, along with satellite imagery, and that the communities are often, but not always, communities of less than 3,000 inhabitants and/or at least 10 km from the nearest municipal center. Sustainalytics believes that expanding access to telecommunications technology for unconnected or underserved populations facilitates digital inclusion and socioeconomic empowerment through more reliable and higher quality broadband services that facilitate access to information, tools, services and opportunities to engage in the digital economy (see Section 3: Impact of Use of Proceeds).

- Telefónica will use proceeds to invest in SMEs directly and through contributions to Wayra, Telefónica’s startup accelerator. Sustainalytics recognizes the importance of SMEs to supporting economic development and employment generation. Sustainalytics considers Telefónica’s definition of SMEs as companies with less than 250 employees and a turnover equal to or less than EUR 50 million, which is aligned with EU recommendation 2003/361, as a strength. Telefónica’s investments are targeted at SMEs focused on digital innovation. Sustainalytics notes that Telefónica works directly with a number of these SMEs, as they develop products and services that support the company’s commercial strategy. However, this is not a requirement for SME financing activities, and a large majority of companies receiving support from Telefónica are not working with the company. Telefónica confirmed that it will allocate a segment of the social bond proceeds to OPEX (operational expenditures) specific to Wayra’s activities (support services for SMEs, mentoring activities etc.). Given the nature of Wayra, Sustainalytics believes that OPEX’ allocations are necessary for Telefónica’s SME support. Sustainalytics recommends that Telefónica ensures that the OPEX is tracked on a project-by-project basis and that OPEX is project specific, rather than general expenditures for Wayra.

Use of proceeds categories as per GBP:

- Renewable energy
- Energy efficiency
- Environmentally sustainable management of living natural resources and land use
- Terrestrial and aquatic biodiversity conservation
- Clean transportation
2. PROCESS FOR PROJECT EVALUATION AND SELECTION

In line with market practice, Telefónica has established a dedicated SDG Bond committee/working group in order to oversee the project evaluation and selection process. The committee is composed out of senior management representatives from the Finance Department, Sustainability Department, Control Department and other technical areas. The committee will also review and select projects based on the eligibility criteria outlined in the Telefónica Framework. This process is aligned with market practices.

**Evaluation and selection**

| ☒ Credentials on the issuer’s social and green objectives | ☒ Defined and transparent criteria for projects eligible for Sustainability Bond proceeds |
| Documented process to determine that projects fit within defined categories | Documented process to identify and manage potential ESG risks associated with the project |
3. MANAGEMENT OF PROCEEDS

Overall comment on section (if applicable):

Telefónica plans to establish an SDG Bond Register in order to manage green, social and sustainability bonds. Bond proceeds will be deposited in general funding accounts and earmarked for allocation using the SDG Register, which will be reviewed annually. Sustainalytics views this approach as aligned with market practices.

Tracking of proceeds:

☒ Sustainability Bond proceeds segregated or tracked by the issuer in an appropriate manner
☒ Disclosure of intended types of temporary investment instruments for unallocated proceeds
☐ Other (please specify):

Additional disclosure:

☒ Allocations to both existing and future investments
☐ Allocations to future investments only
☐ Allocation to individual disbursements
☒ Allocation to a portfolio of disbursements
☐ Disclosure of portfolio balance of unallocated proceeds
☐ Other (please specify):

4. REPORTING

Overall comment on section (if applicable):

Telefónica plans to publish an annual allocation and impact report until the proceeds have been completely allocated. The (i) allocation report will include eligible projects financed and their allocated amounts, bond proceeds allocated per eligibility category and the balance of unallocated proceeds. In addition, Telefónica commits to provide an extensive list of impact indicators itemized for each use of proceeds category. The (ii)
impact report will include the following green reporting metrics: estimated GHG emissions reduced, energy consumption per data traffic, expected energy saved, renewable MWh generated or purchased, the percentage of electricity consumed from renewable sources, service-related KPIs and qualitative reporting on innovation. Impact reporting for social projects categories include the percentage of population connected as a result of Telefónica’s network, percentage of the population with access to fibre, the number of people with access in regions defined as “at risk of exclusion”, qualitative reporting of SME development as a result of access to fibre, number of SMEs supported or funded, the number of employees of SMEs supported or funded and the number of jobs generated. Sustainalytics views the scope and granularity of Telefónica’s reporting to be in line with current market practices.

**Use of proceeds reporting:**

- [ ] Project-by-project
- [ ] Linkage to individual bond(s)
- [x] On a project portfolio basis
- [ ] Other *(please specify):*

**Information reported:**

- [x] Allocated amounts
- [ ] Sustainability Bond financed share of total investment
- [ ] Other *(please specify):*

**Frequency:**

- [x] Annual
- [ ] Semi-annual
- [ ] Other *(please specify):*

**Impact reporting:**

- [ ] Project-by-project
- [x] On a project portfolio basis
- [ ] Linkage to individual bond(s)
- [ ] Other *(please specify):*

**Frequency:**

- [x] Annual
- [ ] Semi-annual
- [ ] Other *(please specify):*

**Information reported (expected or ex-post):**

- [x] GHG Emissions / Savings
- [x] Energy Savings
- [ ] Decrease in water use
- [ ] Number of beneficiaries
- [ ] Target populations
- [ ] Other ESG indicators *(please specify):*

- [ ] Energy consumption per data traffic, renewable MWh
generated or purchased, the percentage of electricity consumed from renewable sources, service-related KPIs and qualitative reporting on innovation, the percentage of population connected as a result of Telefónica’s network, percentage of the population with access to fibre, the number of people with access in regions defined as “at risk of exclusion”, qualitative reporting of SME development as a result of access to fibre, number of SMEs supported or funded, the number of employees of SMEs supported or funded and the number of jobs generated.

Means of Disclosure

☐ Information published in financial report
☒ Information published in ad hoc documents
☐ Reporting reviewed (if yes, please specify which parts of the reporting are subject to external review):

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

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

https://www.telefonica.com/en/home

SPECIFY OTHER EXTERNAL REVIEWS AVAILABLE, IF APPROPRIATE

Type(s) of Review provided:

☐ Consultancy (incl. 2nd opinion) ☐ Certification
☐ Verification / Audit ☐ Rating
☐ Other (please specify):

Review provider(s): Date of publication:
ABOUT ROLE(S) OF REVIEW PROVIDERS AS DEFINED BY THE GBP AND THE SBP

i. Consultant Review: An issuer can seek advice from consultants and/or institutions with recognized expertise in environmental and social sustainability or other aspects of the issuance of a Sustainability Bond, such as the establishment/review of an issuer’s Sustainability Bond framework. “Second Party Opinions” may fall into this category.

ii. Verification: An issuer can have its Sustainability Bond, associated Sustainability Bond framework, or underlying assets independently verified by qualified parties, such as auditors. In contrast to certification, verification may focus on alignment with internal standards or claims made by the issuer. Evaluation of the environmentally and socially sustainable features of underlying assets may be termed verification and may reference external criteria.

iii. Certification: An issuer can have its Sustainability Bond or associated Sustainability Bond framework or Use of Proceeds certified against an external green and social assessment standard. An assessment standard defines criteria, and alignment with such criteria is tested by qualified third parties / certifiers.

iv. Rating: An issuer can have its Sustainability Bond or associated Sustainability Bond framework rated by qualified third parties, such as specialised research providers or rating agencies. Sustainability Bond ratings are separate from an issuer’s ESG rating as they typically apply to individual securities or Sustainability Bond frameworks / programmes.
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For more information, visit www.sustainalytics.com

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