Environmental protection

ENVIRONMENTAL PROTECTION

Many of the Sustainable Development Goals are intuitively linked to the world of the environment, energy and environmental sustainability: this is the case, for example, of the goal to prevent and control climate change, the goals relating to terrestrial and marine life, and those relating to the design of smart cities.

The fight against climate change in particular represents a challenging and urgent goal. On 11 November 2016, Italy ratified the Paris Agreement to contain the global warming of the planet, which came into force internationally on 4 November 2016 when it exceeded the threshold of 55 countries signed up, representing 55% of greenhouse gas emissions worldwide.

In recent years evidence of the effects of global warming (desertification, flooding, hurricanes, disease, ice melting) have even convinced sceptics that the problem needs to be addressed. The Agreement commits the signatory countries to contain global warming below a 2 degree rise above pre-industrial levels. Five-year checks on the undertakings are planned, starting in 2023. The richest countries will have to help the poorer ones financially.

Italy must comply with the targets set by the EU. Action is required in three key areas:
- renewable energy and energy savings;
- non-polluting mobility;
- building modernization, to make them less energy-intensive.

There is a clear benefit to Italy in acting rapidly and with profound steps to keep global warming below 1.5° C, as in that case the reduced availability of water would be halved and the duration of exceptional droughts would be reduced by 30% (with respect to warming of 2°)[1], which tend to lead to desertification[2].

TIM's strategy promotes business in line with the aforementioned guidelines. In fact, the ICT sector plays a key role in the reduction of CO_2 and other greenhouse gas (GHG) emissions, not only because the sector itself can contain and reduce its own CO_2 emissions, but primarily because it can contribute to the reduction of emissions in other sectors thanks to the development of innovative services that promote more sustainable lifestyles (such as, for example, video conferencing, telecommuting, telemedicine and, more generally, all services that encourage the "dematerialization" of the economy). International studies[3] in fact believe that the adoption of these services could lead to a 20% reduction in global CO_2 emissions by 2030, thereby maintaining them at 2015 levels.

In this scenario, TIM signed a voluntary agreement in 2012 with the Ministry of the Environment and Protection of Land and Sea (MATTM), aimed at promoting shared projects designed to measure, contain and neutralize the impact of the telecommunications sector on the climate. To this end, the procedures for analysing the typical services of telecommunications activities were defined with the aim of providing carbon footprint indicators in agreement with the methodology described in "GHG Protocol Product Life Cycle Accounting and Reporting Standard ICT Sector Guidance – Chapter 2" for services provided by TIM throughout the entire country: fixed network (telephone calls), mobile network (text messages, transferred data, calls), transferred data (including MMS).

[1] Secondo Mauro Centritto, Direttore Ivalsa-CNR, "In Italia, gli ultimi rapporti mostrano che è a rischio desertificazione quasi il 21% del territorio nazionale, il 41% del quale nel Sud del Paese".

[2] Carl-Friedrich Schleussner et al. : Differential climate impacts for policy-relevant limits to global warming: the case of 1.5° C and 2° C – Earth Systems Dynamics 7, 2016.

[3] #SMARTer2030 – ICT Solutions for 21st Century Challenges – published in 2015 by the Global e-Sustainability Initiative.

The specific actions taken by the Group are therefore aimed at reducing its environmental impacts and offering technological solutions aimed at individuals, businesses and public administration for the creation of a more inclusive and viable digital society.

TIM is convinced it can play a key role, together and in synergy with other sectors of the economy, in facilitating the transition towards a low carbon emission economy.

The environment stakeholder consists of future generations and their right to live in a world not compromised by the negative effects of development by previous generations. The interests of this collective person are identified in the demands made by:

- national and international environmental organisations;
- national and supranational institutions;
- the community in general, particularly in the areas where TIM operates;
- industry associations and non-profit organisations dealing with issues relating to the environment. These include the following in particular: European Telecommunications Network Operators' Association (ETNO), European Telecommunications Standards Institute (ETSI), Global e-Sustainability Initiative (GeSI), CDP, International Telecommunication Union (ITU).

TIM is attentive to the needs expressed by stakeholders interested in environmental protection and with them it has developed various communication channels, including a multi-stakeholder forum organized in October 2016. This tested method of listening and involvement reinforced the understanding of the demands and priorities of stakeholders on environmental matters and gathered contributions on possible development areas.

The environmental strategy of the Group's companies is founded on the following principles:

- optimising the use of energy sources and other natural resources;
- constantly seeking to improve environmental and energy performance by reducing negative impacts and increasing positive ones;
- adopting procurement policies that take environmental issues into account;
- disseminating a culture that promotes a correct approach to environmental issues.

In order to ensure the effective and sustainable management of operational processes which have particular environmental impacts, TIM has equipped itself with an Environmental Management System (Sistema di Gestione Ambientale - SGA) which is ISO14001 certified. In some organizations, the Environmental Management system has been integrated with the Quality Management System based on the ISO 9001 standard: all of them having achieved the respective certification. Some websites[1] obtained the certification of the Energy Management Systembased on ISO 50001 standard. As for the Data Centres, the energy efficiency of Rozzano 2 was found to be the PUE (Power Usage Effectiveness) value certified in 2014 amounting to 1.66, which can be considered a good value for a data centre built between 2008 and 2010. The PUE value of the other data centres has not yet been certified.

For further details on this subject go to the telecomitalia.com website.

The definition of fixed and mobile network architectures and the technical specifications of equipment and components also adopted criteria that minimise environmental impacts (e.g. consumption, excavation, obstacles, noise, use of batteries), while considering the service requirements and costs of the various solutions. As of 2008 in particular, in performing the financial assessments of bids, the energy costs over a period of three to five years are also considered.

[1] Si tratta delle sedi aziendali di Roma Parco de' Medici, Bologna, via Stendhal, e Rozzano (MI) 1 e 2

Finally, TIM actively promotes, participates and in some cases coordinates national and international environmental projects.

To further demonstrate the commitment to contain environmental impacts, TIM invests each year in research on innovative solutions. TIM has had many patents recognized in this area.

Research activities

As regards the adoption of ICT solutions for the Internet of Things (IoT) applied to the smart city world, the following projects are mentioned in particular for their strong positive environmental impact: smart grid (application of the IoT to the management of various segments of the electricity grid), smart water (application of the IoT to water distribution networks), smart gas (gas metering applications) and smart waste (efficient management of the waste cycle).

With regard to smart grids, TIM is studying IoT solutions aimed at a better use of energy resources in terms of distributed generation and remote control. In particular, work continued on assessing the opportunity to share the telecommunication and power distribution network infrastructure, with a view to cutting costs and reducing their environmental impact.

As for smart water management techniques, the IoT solutions analysed allow research to be conducted and hidden water leaks to be identified more efficiently and at a lower cost. Water will become an increasingly valuable environmental resource and losses in the distribution network in the range of 30% will no longer be sustainable, from an environmental or economic perspective. Multi-utility smart metering solutions, which include water, gas and if necessary electricity based on widespread networks, are also being developed and tested in the field as part of research on losses and distribution cost optimization.

Finally, the application of IoT techniques will allow the development of smart waste solutions aimed at obtaining an increase in separated waste collection and a reduction in illegal dumping. In particular, for example, the filling levels of the various waste collection sites are measured in real time and waste collection vehicles are only sent when it is truly necessary, thereby minimizing the costs and times and on the other hand avoiding having full waste collection bins with the consequent overflow onto the street of waste left by citizens.

Patents for solutions with environmental relevance

Wireless top up
For some time in the international arena an efficient solution has been sought to replace conventional wired chargers with a universal wireless charger which would simultaneously charge mobile phones, mp3 players, notebooks, video cameras and anything else that has now become a part of our everyday lives, which are increasingly dynamic and nomadic. Exploiting wireless technology usually means doing without a physical connection between the charger and the device, and exploiting a wireless charger for several devices, even if they required different power voltages, such as a mobile phone and a notebook. This system allows for a more efficient management of the space, number of devices, and energy, where the energy transfer occurs in a non-radiative evanescent field with the resulting benefits in terms of the containment of interference and the biological impact in the environment surrounding the charger.

Automatic systems for managing domestic appliances
This patent relates to the sector of automatic systems for managing electrical appliances.

The system which the present invention relates to is configured to automatically manage the activation and deactivation of electrical appliances belonging to a domestic network so as to reduce electricity consumption and avoid exceeding the maximum total power threshold. In particular, the central control unit of the system updates a schedule with the activation of each electrical appliance bearing in mind energy consumption and the relative constraints.

Automatic system for managing the energy consumption of sets of electrical equipment
The patent concerns an automatic system for managing energy consumption in sets of electrical devices, such as domestic appliances. The system invented is based on the generation of a table which plans the on/off times of domestic appliances and the execution of the energy phases of the operating cycles of each domestic appliance.

Patents that reduce the electricity consumption of network

Optimization of consumption in mobile phone networks
The patent concerns the method of optimising consumption in mobile phone networks, in particular those characterised by deployment heterogeneity and, as a result, energy consumption heterogeneity in the network nodes, where relatively frequent transition states (on/off) can have negative impacts on the longevity of the network devices and the average time between breakdowns. The proposed algorithm is capable of determining, based on the maximum permitted number of state transitions for each network node as well as the current and expected loads of the network, the on/off moments of the network nodes.

CLIMATE CHANGE

[G4-DMA Economic Performance] There are many signs of climate change which we can already measure and that are summarized every 6 years by Intergovermental Panel on Climate Change (IPCC), the UN climate committee.

Today we know a great deal about the climate change issue:

- the planet is warming and will continue to warm in the decades ahead;
- human activities – in particular the combustion of coal, gas and oil – are the main cause;
- floods, droughts, heat waves, or what experts call extreme events, are intensifying in different parts of the world in an erratic manner and they are undermining the idea of the stability to which we are accustomed, resulting in destroyed communities, economic damage to people and entire production systems, as well as, unfortunately, deaths and injuries.

According to studies conducted by the IPCC[1] the planet is warming (by just under one degree as a global average) and we are heading towards an average global temperature rise which, by the end of the century, if we do not act decisively, may even be 4°- 5°C. Therefore, in addition to policies aimed at reducing greenhouse gas emissions to limit future damage, mobilisation at all levels is required, by citizens and companies, regions and national governments alike, to put in place actions to respond to the challenge of climate change.

The Group's approach to the fight against climate change is based on three synergistic levels of action:

- reducing their own direct and indirect emissions of greenhouse gases;
- limiting the emissions of other sectors and customers in general by supporting virtualisation and the provisions of services that promote new ways of working, learning, travelling and living;
- contributing to disseminating a culture based on a correct approach to environmental issues inside and outside the Company.

RISKS ASSOCIATED WITH CLIMATE CHANGE

The environmental impact of TIM in terms of CO_2 emissions is essentially determined, as shown in the following paragraphs, by direct emissions from the use of fossil fuels, indirect emissions through the procurement of electricity and other indirect emissions due for example to home-work commuting and air/train travel by staff.
For details of current activities aimed at reducing emissions see the Environmental performance/Energy and Environmental performance/Emissions sections.

RISKS ASSOCIATED WITH CLIMATE CHANGE

[G4-EC2] The risks associated with climate change for the telecommunications sector have implications of a physical, economical and regulatory nature, with major repercussions even on the image and reputation of the company. In Italy, in particular, considerable flooding has occurred in recent years, which has had a devastating impact on vast areas of land, cities and infrastructure.

[1] www.ipcc.ch

TIM's installations, network infrastructure and Data Centres are spread across the country and the Company believes that flooding is one of the most serious physical risks and the one most likely to occur. The evaluated effects consist of damage ranging from reduced use to loss of properties and, in extreme cases, total loss of the ability to provide the service to customers.
In order to prevent or limit the potential damage, TIM's new exchanges and buildings are built at a safe distance from rivers and bodies of water in general and, in order to ensure continuity of service, the network is designed considering appropriate levels of resilience and redundancy.

In Italy, the situation of the network infrastructure, particularly areas where there is a heightened hydro-geological risk, is monitored using the company's Ci.Pro. (Civil Protection) system, which uses a database of information relating to the territory and infrastructure, which is continuously updated with a view to planning the work required as quickly as possible. Lastly, the physical risks to which company assets are in any case subject, are managed by insurance cover that takes into account the value of the structure and equipment as well as any effects that these catastrophic events would cause for the service.

In Brazil, changeable weather conditions increasingly give rise to extreme meteorological conditions and TIM Brasil has developed technologies and applications for effective and continuous monitoring, particularly in areas at greatest risk The Company has also invested heavily in advanced infrastructure and technologies, not only to guarantee the continuity and quality of the service offered to customers, but also to improve efficiency and reduce the consumption associated with its operations.

At present in Brazil most electricity is generated by hydroelectric plants (64% according to data from the Balanço Energético Nacional – 2016). Long periods of drought can lead to a dramatic reduction in the availability of electricity, to an increase in its cost and to increasing recourse to fossil fuels. Lower availability of water in water basins may lead to the rationing of energy and significant fluctuations in the cost per kWh.

In Brazil, the national policy on climate change, which was defined in 2009 (law 12187) and is governed by decrees 7390/2010 and 7643/2011 supplemented by sectoral plans for mitigation and adaptation to climate change, confirms the country's alignment with international initiatives, including the agreements signed in Paris (COP21) which were also signed and ratified by Brazil, under which the "Nationally Determined Contribution"[1] amounts to a 37% reduction in emissions by 2025 compared to 2005 levels.
In the states of São Paulo and Rio de Janeiro, which are the ones where most of the country's industrial and commercial activities are concentrated, specific state laws have been introduced on climate change.

A considerable amount of TIM's emissions are associated with electricity consumption, particularly by the network infrastructure. Energy industry policies tend to lead to an increase in the cost of energy and these increases are in turn transferred to users, and therefore also to TIM, which may see an increase in the cost of the goods and services it buys from suppliers, in particular those that produce telecommunications equipment and infrastructure.

Extreme weather conditions like highly frequent high intensity storms can damage the network infrastructure, particularly transmission towers and pylons, thus increasing the cost of management and insurance against risks, reducing coverage, weakening the signal and interrupting the service. Variations in the levels of humidity and salinity in the air can reduce the service life of equipment. Furthermore, an increase in the average temperature can lead

[1] The aim is to reduce greenhouse gas emissions to the level established nationally by each signatory country to the Paris agreements and communicated to the UNFCCC, which then includes it in a special register.

to a greater consumption of electricity by air conditioning and cooling systems. Potential flooding make it difficult for staff to travel and do their work, thus reducing the efficiency of the system.

OPPORTUNITIES ASSOCIATED WITH CLIMATE CHANGE

[G4-EC2] The ICT sector is required to play an important part in the fight against climate change by promoting the replacement of physical products and traditional services with digital products and processes (also see Digitisation, connectivity and social innovation/ innovative services chapters) that can promote the virtualization of the company by reducing the need for people and goods to travel. In general:

- Audio/video conferencing services and teleworking reduce the need for people to travel.
- on line invoicing and payments, in addition to saving paper and therefore the energy required to produce and transport it, eliminate the need for transport to make payments;
- telemedicine services reduce the need for doctors to meet patients in person;
- infomobility systems, using information obtained from mobile handsets, allow the optimisation of traffic flows, reducing travel times and the emission of greenhouse gases;
- systems for the monitoring and analysis of consumption allow the optimisation of the energy efficiency of offices and dwellings.

The efficiency improvements, savings achievable in economic terms and reduced environmental impacts associated with the use of these services are an interesting business opportunity for the Company, particularly considering the sensitivity of its stakeholders and citizens in general to the need to achieve significant reductions in greenhouse gas emissions to ensure a sustainable future for the planet and society. One example is illustrated in the box and relates to the Digital Life TIM Programme.

The foregoing obviously also applies to Brazil, where the development of solutions for mitigation and adaptation to climate change also have significant weight. One example is the partnership agreement signed with the Ministry of Science, Technology and Innovation (MCTI) for the installation of platforms to collect rainfall data at Radio Base Stations situated in the proximity of areas at high risk of natural disasters.
Finally, in order to prevent situations where there is a shortage of electricity for opposite reasons, namely a lack of rainfall, TIM Brasil is promoting initiatives aimed at reducing the consumption of services and installations.

In Brazil too, climate change can affect the behaviour of investors, who increasingly tend to give priority to companies that are transparent about how they manage emissions and show that they know how to assess and anticipate potential risks and seize opportunities. As a demonstration of its commitment, in 2016 TIM Participações S.A. was included in BM&FBovespa's Corporate Sustainability Index (ISE) for the ninth year running, as indicated in the Indexes/recognitions paragraph in this report.

Moreover, TIM Brasil measures and communicates transparently since 2008; the CDP questionnaire was completed in 2007 and the company has been involved in the national EPC (Empresas pelo Clima) programme since 2010 and this could be a competitive advantage.
In 2013, for the first time the company formalised the voluntary acquisition of "Carbon Credits" to offset its direct emissions (Scope 1); in 2015 others were acquired for an overall total of 6,000 tCO_2 and generated by the REDD+ Jari-Amapá project[1] (reduction of emissions from deforestation and forest degradation) which was pursued through a partnership between the

[1] www.biofilica.com.br/web/projeto-jari.php

Jari Group and Biofilica in the Jari river valley, in the state of Amapá. The direct emissions produced in 2013 and 2014 were completely offset, while the remaining credits (amounting to 4,374 tCO_2e) were used to offset the direct emissions produced by TIM's vehicle fleet, electricity generators and refrigerating gas losses in 2015, amounting to 29% of the direct emissions (Scope 1).

TIM Digital Life Programme

The European Digital Agenda, presented by the European Commission in 2010, is an initiative specifically developed to encourage growth in the countries of the European Union in terms of infrastructural modernization, innovation and the efficiency of resources and services for both the public administration as well as citizens and businesses. All Member States have signed up to the European Digital Agenda, which aims to create smart, sustainable and inclusive growth through the extensive and broad adoption of new IT and telecommunications technologies.

On 1 March 2012, transposing what was agreed in the European sphere, Italy defined the Italian Digital Agenda and prepared its own domestic strategy, identifying the priorities and methods of intervention, as well as the actions to take and measure on the basis of specific performance indicators in line with that identified by the European Union - the DESI (Digital Economy and Society Index) - to assess the level of digitisation of the countries of the European Community.

In this context TIM launched the Digital Life Programme, a set of solutions which aim to provide new services dedicated to security, the environment and optimal energy management, providing a global response to the needs of the territory and cities and towns. The aim is to promote the "smart city" model to improve quality of life by developing innovative digital services.

The Digital Life solutions that have had positive benefits on the environment are:
NUVOLA IT URBAN SECURITY (2016 revenues of around €350.000): the cloud platform providing services to optimize penalty processes carried out by the municipal police (including positive impacts on the containment of process-related paper documentation), the integrated management of urban security, environmental monitoring and smart mobility;

NUVOLA IT YOUR WAY: the integrated solution for managing commercial vehicle fleets and planning movements as part of fleet management and infomobility (with positive impacts on atmospheric pollution);

NUVOLA IT ENERGREEN (2016 revenues of around €650,000): the system that allows companies to monitor energy consumption and its efficiency through implementation instruments with sensors placed locally within the company. The energy saved can be estimated at around 10%, if only the metering & reporting function is implemented, but it can rise to over 50% for specific energy efficiency projects.

NUVOLA IT MESSAGE CUBE: the cloud platform for providing Unified Communications and Collaboration services for companies and public administrations (with positive impacts on the containment of process-related paper documentation and containing movement between sites);

LIGHTING SUITE (2016 revenues of around €343,000): the public lighting management service, which provides energy efficiency by controlling lighting units, transforming it into an outdoor city network offering added value services in a metropolitan context (for further information see the chapter Digitisation, connectivity and social innovation). Energy saving

is estimated within a range of values between 15% (light produced by high-efficiency lamps, e.g. LEDs) and over 30% in the case of light produced by old style lamps (e.g. sodium vapour or incandescence). Added to these values is the option of varying lighting by switching on and/or reducing the intensity of individual lamp posts.
Assuming that average per capita energy consumption in Italy is 107 kWh[1] and applying a 20% reduction (the replacement of conventional lamps with high efficiency ones is in progress in many towns) a town of 100,000 inhabitants would be able to achieve a total annual saving of 2,140,000 kWh, corresponding to 827 t of CO_2 emissions avoided[2].

SMART BUILDING: ad hoc solutions for the smartmanagement and automation of buildings able to be implemented on a project basis through the components of the Lighting Suite and Nuvola IT Energreen (for details refer to the Digitisation, connectivity and social innovation solution). The energy saved can be estimated at around 10%, if only the Metering & Reporting function is implemented, but it can rise to over 50% for specific energy efficiency projects.

The revenues trend envisaged by TIM for the overall programme in the next three years is + 10% YoY.

OLIVETTI solutions

SMART CLEAN AIR: solutions to monitor air quality and reduce particulate matter and the main polluting substances in indoor and outdoor environments.

The solution, integrated into the TIM cloud, is comprised of a field device located in the territory which draws in polluted air, filters out the harmful substances and detects the measurements of a series of environmental parameters which are then sent to the central system; the device, integrated into Olivetti's IoT platform, is managed remotely through a specific Cloud application.
The device is comprised of a telemetry module that transmits the relevant data to the Cloud application, an "electronic nose" made up of sensors to detect particulate matter, heavy metals and other harmful substances, and lastly a scrubber which performs a clean-up thereby reducing the polluting substances (PM 10 ~ 99%) without using filters and without generating special waste.

Smart Clean Air requires infrequent maintenance, very limited energy consumption, and is particularly suited for industrial environments, offices or factories, as well as highly frequented outdoor areas such as railway and subway stations, shopping centres and bus stops.
The efficient reduction of polluting agents varies depending on the specific characteristics of the installation site. Measurements taken in an outdoor city environment, in highly frequented areas, show efficient reduction, that is a percentage reduction of particulate matter with respect to the initial concentration, which ranges between 19% and 100% in relation to the different sizes of the particles.

SMART AGRICULTURE: a cloud solution which enables the monitoring of environmental parameters and the implementation of actions to optimize the yield and quality of the crop.
The solution permits the monitoring of parameters through a system of probes applied to the growing medium, connected to a data acquisition and processing switchboard. A special alerting system allows users to receive early warnings via email or text message in the event of risks associated with the harvest (frost, heat waves, need for irrigation, ...).

[1] Fonte: dal blog del Commissario governativo italiano per la Spending Review

[1] Using the 2009 conversion factor for Italy calculated by the GHG Protocol, which is 0.3864 $kgCO_2/kWh$

The continuous recording of environmental data results in a series of historical records which are useful for agronomic studies and the modelling of natural phenomenon.

The solution enables a series of benefits to be obtained, such as:

- minimized use of water resources: thanks to humidity sensors distributed over the ground and knowledge of the specific crop requirements, the water cycles can be optimized based on the actual state of the ground, thereby avoiding unnecessary waste.
- reduced use of fertilizers: if the crop is watered too often, some of the fertilizer spread over the ground is drained away together with the water; automated irrigation optimizes the yield of fertilizers.
- energy savings: automation of the irrigation system reduces the water use cycles and as a result reduces the energy consumption associated with water transportation.

ENVIRONMENTAL PERFORMANCE

[G4-DMA Energy] The information regarding environmental performance is drawn from management data, some of which is estimated. The data shown below relate to energy use (heating, transport and electricity), eco-efficiency, atmospheric emissions, use of water, paper and waste production. The main indicators used to measure the Group's environmental performance in 2016 performed as follows:

Indicator	Trend
Total electricity procured and produced	Up
Total CO_2 atmospheric emissions	Up
Total water consumption	Down
Eco-efficiency	Up

ENERGY

[G4-EN3], [G4-EN6] Energy consumption by the Group is presented according to the guidelines proposed by the Global Reporting Initiative regarding direct consumption for heating, electricity generation and transport (Scope1, according to the GreenHouse Gas Protocol[1]) and indirect consumption for the purchase and use of electricity (Scope2).

Heating systems

Group breakdown by Business Unit (%) and % variation compared to the previous 2 years

		Gruppo	Domestic	Brasile
Energy generated by heating oil	MJ	65.041.599	100%	0%
Energy generated by Natural Gas	MJ	405.242.474	100%	0%
Total energy for heating	MJ	470.284.073	100%	0%
2016 v. 2015		(14)%	(14)%	%
2016 v. 2014		(34)%	(34)%	%

The data in the table shows that in 2016 a significant reduction with respect to 2015 and 2014 can mainly be attributed to the review of the methods for reporting on fuel consumption, but also the climatic conditions that occurred during the year of reference and to real estate rationalisation and energy efficiency.
In Brazil, given the particular climate conditions throughout the year, indoor heating is not

[1] The Greenhouse Gas (GHG) Protocol, developed by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD), defines the standards of reference for measuring, managing and recording greenhouse gas emissions.

used. INWIT, the company of the Group that operates in Italy in the electronic communication infrastructure sector, is much smaller than the Group and is therefore part of the Domestic BU.

Transport(*)

Group breakdown by Business Unit (%) and % variation compared to the previous 2 years

		Group	Domestic	Brazil
Energy from unleaded petrol	MJ	56.364.281	49%	51%
Energy by heating oil	MJ	606.185.541	100%	0%
Energy from LPG	MJ	3.493.183	100%	0%
Energy by natural gas	MJ	250.951	100%	0%
Total energy for transport(**)	MJ	666.293.956	95%	5%
2016 v. 2015		(6)%	(5)%	(32)%
2016 v. 2014		(5)%	(3)%	(39)%
Total number of vehicles	n.	18.585	97%	3%
2016 v. 2015		(5)%	(4)%	(34)%
2016 v. 2014		(7)%	(6)%	(35)%
Total distance travelled	km	278.114.632	97%	3%
2016 v. 2015		(10)%	(9)%	(37)%
2016 v. 2014		(8)%	(6)%	(41)%

(*) The data shown in the tables and graphs relating to transport refer to all the Group's vehicles (industrial, commercial, used by senior managers/middle managers/sales people), both owned and hired. The vehicles, consumption and mileage of vehicles owned or in use by the sales force of Tim Brasil have been included only where usage is significant and continuous.
(**) Represents conversion into MegaJoules of the consumption of unleaded petrol, diesel and LPG (expressed in litres) and methane (expressed in kg).

In general, energy consumption for transport and journeys is reduced. In Italy a project to renew the operational fleet is underway.
Consumption figures for electricity used to operate telecommunications and civil/industrial technological plants are shown below. The purchase of electricity from mixed sources increased significantly in 2016 compared to the previous two years due to the decision not to invest, in Italy, in acquiring guarantees of origin, which certify the electricity produced by renewable sources, but rather in energy efficiency measures which concerned the network infrastructure and company offices.
In recent years technological developments concerning the fixed and mobile network infrastructure and IT solutions are resulting in a significant annual increase in energy consumption. In Italy, developments in the fixed and mobile network were more than offset by the savings made possible by a series of energy efficiency measures started in previous years as well as by new measures started and completed in 2016.

Electricity procured and produced

Group breakdown by Business Unit (%) and % variation compared to the previous 2 years

		Group	Domestic	Brazil
Electricity from mixed sources	kWh	2,642,134,246	75%	25%
2016 v. 2015		263%	1,106%	17%
2016 v. 2014		337%	1,545%	37%
Electricity from renewable sources	kWh	42,143,908	100%	0%
2016 v. 2015		(98)%	(98)%	
2016 v. 2014		(98)%	(98)%	
Total electricity	kWh	2,684,278,154	75%	25%
2016 v. 2015		2%	(2)%	17%
2016 v. 2014		7%	0%	37%

The tables below specify the main areas of increased consumption and savings at TIM S.p.A..

Deployment projects in Italy

		Incrementi
Fixed network developments	GWh	110
Mobile network developments	GWh	55
Data Centres developments	GWh	20
Other increases	GWh	9
Total	GWh	194

Savings projects in Italy

		Risparmi
Savings on power supply and air conditioning infrastructure	GWh	125
Disposal of obsolete network platforms	GWh	100
Savings on offices	GWh	6
Total	GWh	231

In 2014 and 2015 TIM has already assessed solutions to provide increased energy efficiency for the GSM radio base stations installed on its network. In 2016 the activity expanded to energy efficiency solutions for 3G and 4G, for all TIM suppliers. As a whole, these solutions enable significant savings in consumption for the mobile access network without resorting to physically switching off the radio sites. These savings are in the range of 4-6 GWh/year for each 2G, 3G and 4G radio access network and overall they ensure estimated savings of around 3% of the total annual consumption of the TIM mobile network.

The self-generation of electricity, through co-generation and tri-generation systems, was essentially stable in 2016 compared to 2015. In 2016 some large plants underwent extraordinary maintenance works which slowed down their normal operation. In the next few years the plan is to take greater advantage of the potential of production from tri-generation plants in line with a goal to increase self-generation by around 20%. Cogeneration and trigeneration systems use around 30% less energy than traditional electricity generation systems, and play a by no means negligible role for TIM, particularly in industrial sites, in data processing centres (DPCs), which have notable energy requirements and high heating/cooling requirements.

The energy efficiency of TIM was also recognised through the awarding of Energy Efficiency Certificates (EEC, also known as White Certificates): at the end of 2016 the overall number of projects approved was 41, corresponding to an estimated economic value at current prices, over 5 years, of 44.5 million euros. The certificates, also known as white certificates, certify the achievement of energy savings in the final use of energy through measures to increase virtuous energy efficiency as the performance is better than the national average. In 2016, revenues from EEC sales came to around 21 million euros.
In 2016, numerous measures were implemented; the main ones are described below.

Continuity measures in the industrial sector:

- Lighting Plan relating to the fixed network exchanges: the plan to replace conventional neon light fittings in the fixed network exchanges with LED technology tubes was completed. In 2016 all 108,500 tubes envisaged were installed in addition to the 100,000 replaced in 2015. The energy savings when fully operational are expected to be around 7 GWh.
- Fixed network exchanges: the equipment compactness measures were completed. The project resulted in the virtualization and increased efficiency of the network servers. The benefits of these measures are linked to a significant reduction of energy consumption by the equipment estimated, when fully operational, to be around 2.5 GWh.
- Decommissioning initiatives for “obsolete” technological platforms continued, which mainly concerned the following projects:
  - PSTN: the Project involves the migration of traditional accesses (except for ISDN accesses) to innovative platforms (VoIP). This will result in reduced energy consumption, occupation of space and maintenance, and in general in the overcoming of the obsolescence of the traditional plants. As a result, in 2016 the plan to switch off roadside equipment that is no longer necessary (around 9,400) continued.
  - The project to shift to superSGU was completed. The initiative aimed to make the fixed network equipment more compact, concentrating the functions of some Urban Group Stages (SGUs) on a reduced number of ‘superSGU’ with direct benefits in terms of reducing energy consumption, estimated when fully operational to be around 3 GWh.
  - ATM: the Project involves optimizing data accesses with the gradual disposal of ATM devices and a shift to IP technology devices. This will result in reduced energy consumption and in general the overcoming of the obsolescence of the traditional plants.
  - Quick-Hits: the modernization plans for obsolete company systems through architecture simplification resulting in increased energy efficiency are part of this category.

- Power supply system: the plan to fully replace the largest power stations with the lowest performances has led to the installation of 235 new appliances; works to replace the rectifier modules were also completed, which affected 253 power stations; this made it possible to raise the average performance to above 90%.
- Air conditioning systems: as regards the fixed network, the plan to replace the obsolete Cooling Units (83) and Air Conditioners (215) with new, higher-performance appliances has been completed; as for the mobile network, in 2016, 120 power stations were replaced and free-cooling solutions were adopted which meant 122 air conditioning systems could be switched off.
- The set points management project was completed; this project involved the installation of a "well-being" button which allows the engineers at work to temporarily improve the room temperature for the duration of the work.

In total, in 2016, in order to modernise the technology and streamline systems serving the fixed network exchanges and Radio Base Stations of the mobile network, the following was achieved:

- 608 actions were carried out on power stations;
- 420 actions were carried out on air conditioning systems;
- 1,187 actions were carried out on batteries.

For the 2016 works on the power supply and air conditioning systems in the industrial sectors an overall reduction in consumption of around 20 GWh is estimated when fully operational; where possible, the relative Energy Efficiency Certificates (white certificates) will be requested.

Continuity measures in the office area:

- LED Lighting Project: the plan started in previous years to replace conventional neon light fittings in the main office premises with LED technology, motion sensors and intensity adjustment (dimmer switches) has been completed. In 2016 another 1,800 neon lights were replaced.
- UPS replacement project: the plan to replace UPSs with an average service life of over 10-15 years to comply with regulations, to optimize the air conditioning in offices, has been completed.

In the trials area, the development of 4 solar-cooling plants (Apulia region) with the aim of using solar energy to cover the entire thermal demand of the exchange, using lithium bromide absorbers, has been completed.

New measures in the industrial area:

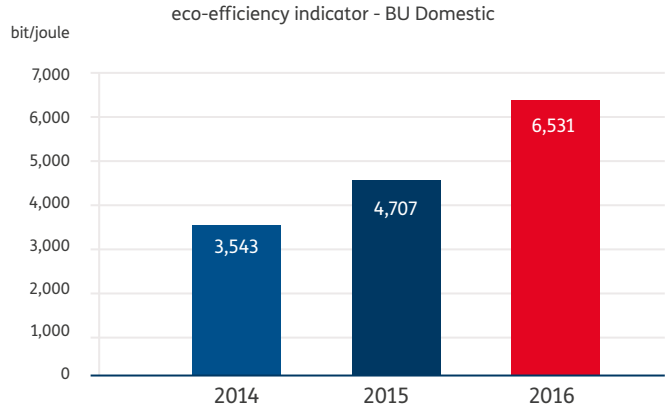
- Insulation Plants: measures to reduce energy consumption have been completed through the application of reflective films on glass, total internal darkening, the insulation of boxes, the extension of free cooling, the internal insulation of ceilings, the insulation of walls, the closure of the holes and cable ducts used for systems, the installation of hydraulic door closures and monitoring instruments.
- "Smart Building": the installation of appropriate environmental sensors on 2 TIM PoPs[1] (Padua and Mestre) was completed; the aim was to optimise consumption linked to air conditioning by creating heat maps, calculating the optimal set-point temperatures and the optimal programming of the use of different Cooling Units.

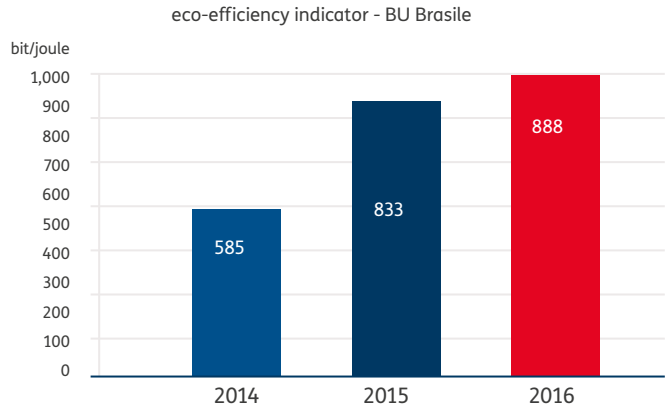
[1] PoPs, or Points of Presence, are points providing access to the network along the access network.

ECO-EFFICIENCY INDICATOR

[G4-EN5] The Group measures its own energy efficiency by using an indicator that establishes a relationship between the service offered to the customer in terms of bits transmitted and the company's impact on the environment represented by joules of energy consumed. The factors taken into consideration are the amounts of data and voice traffic of the fixed/mobile networks and energy consumption for industrial purposes (transmission and climate control in exchanges), domestic purposes (electricity for office use, air conditioning and heating in the offices) and vehicles. The diagrams show the level of the eco-efficiency indicator over the past three years for the Domestic and Brazil BU.

Eco-efficiency





In 2016 the value of the indicator calculated for the Domestic BU was 6,531 bit/joule, up by around 39% compared to 2015 and by 84% compared to 2014. The commitment continues with the establishment for 2017 of an objective of 8,500 bit/Joule, an increase of +30% on the figure for 2016 (see 2017 Objectives in the Appendix).

The eco-efficiency indicator calculated for Brazil also showed continuous improvement over time: in 2016 it grew by approximately 7% compared to 2015 and by approximately 52% compared to 2014. This was due to a notable increase in the data traffic over the last year which did not lead to a corresponding increase in the electricity consumption thanks to the efficiency of the network.

The values of the indicators calculated respectively for Italy and Brazil are not directly comparable because the two organisations are very different in operational and environmental terms: e.g. in Brazil the traffic is primarily mobile and, as previously mentioned, no heating fuels are used in view of the particular climate conditions.

ATMOSPHERIC EMISSIONS

[G4-EN15], [G4-EN16], [G4-EN19] Greenhouse gas emissions by the Group consist almost exclusively of carbon dioxide and are due to the use of fossil fuels for heating, transport, electricity generation, purchase of electricity produced by third parties and staff travel (for business trips and commuting between home and work). In addition to these, dispersals of hydrochlorofluorocarbons and hydrofluorocarbons (HCFC and HFC) from air conditioning plants are also considered and converted into kg of CO_2 equivalent.
For atmospheric emissions as well, use is made of the Global Reporting Initiative - GRI Version 4 - guidelines, which refer to the definitions of the GHG Protocol, distinguishing between direct emissions (Scope1: use of fossil fuels for transport, heating, power generation), indirect emissions (Scope2: purchase of electricity for industrial and civil use) and other indirect emissions (Scope3). Unless otherwise stated, the atmospheric emission figures given in this Report have been calculated based on the updated coefficients made available by the GHG Protocol .

The following table shows the total CO_2 emissions of the Group.

Atmospheric emissions

Group breakdown by Business Unit (%) and % variation compared to the previous 2 years

		Group	Domestic	Brazil
CO_2 emissions from transport	kg	49,673,594	96%	4%
CO_2 emissions from heating	kg	26,862,102	100%	0%
Emissions of CO_2 equivalents for HCFC/ HFC(*) dispersals	kg	6,112,260	100%	0%
CO_2 emissions from electricity generation by cogeneration	kg	59,332,797	100%	0%
CO_2 emissions from electricity generation using diesel	kg	3,170,846	73%	27%
Total direct emissions of CO_2 - under Scope1 GRI	kg	145,151,599	98%	2%
2016 v. 2015		(6)%	(6)%	(19)%
2016 v. 2014		3%	4%	(23)%
CO_2 emissions from purchases of electricity generated by mixed sources	kg	770,216,498	93%	7%
Total indirect emissions of CO_2 - under Scope2 GRI	kg	770,216,498	93%	7%
2016 v. 2015		826%	5688%	(23)%
2016 v. 2014		865%	5169%	(18)%
CO_2 emissions from work-home commuting**	kg	64,755,152	92%	8%
CO_2 emissions from air travel***	kg	4,999,265	56%	44%
CO_2 emissions from train travel***	kg	618,298	100%	0%
Total other indirect emissions of CO_2 - under Scope3 GRI	kg	70,372,715	90%	10%
2016 v. 2015		(10)%	(8)%	(28)%
2016 v. 2014		(10)%	(9)%	(21)%
Total CO_2 emissions	kg	985,823,334	93%	7%
2016 v. 2015		210%	295%	(23)%
2016 v. 2014		229%	317%	(18)%

(*) The equivalent CO_2 emissions of the hydrochlorofluorocarbons (HCFC) and hydrofluorocarbons (HFC) are determined by reference to specific Global Warming Potential (GWP) parameters for the two gases: the index is based on a relative scale that compares the gas considered with an equal mass of carbon dioxide with a GWP of 1. The GWP of HCFC used was 1,780 and that of HFC was 1,300.

(**) In determining the impact of home-work commuting, reference is made to statistical data produced on the company's personnel.

(***)Emissions due to air travel were calculated by the study and research centre of American Express (the Travel Agency used by TIM) supported by DEFRA (Department of Environment, Food and Rural Affairs of the United Kingdom) based on the number of journeys actually made, subdivided by the duration of each individual journey (short, medium or long).

(****) The calculation of the emissions for train journeys relates to Italy, and for SpA only, and was taken from reports by LifeGate (used solely to determine Rail CO_2). The emission factors refer to means of transport designed to transport passengers and derive from two main sources: 1. Yearly Report on environmental emissions associated with transport calculated annually by the National Institute for Environmental Protection and Research (Istituto Superiore per la Protezione e la Ricerca Ambientale - ISPRA); 2. Ecoinvent Database version 2.2; the emission factors were calculated using the characterization factors issued by the International Panel of Climate Change (IPCC) in 2007.

The emissions produced by purchasing electricity from mixed sources (Scope 2) increased significantly in 2016 compared to the two previous years. As already mentioned, this is a result of the decision not to invest in Italy, in acquiring guarantees of origin, which certify the electricity produced by renewable sources, unlike in the previous two years, but rather in energy efficiency measures which concerned the network infrastructure and company offices.

WATER

[G4-EN8]

Water consumption

Group breakdown by Business Unit (%) and % variation compared to the previous 2 years

		Group	Domestic	Brazil
Consumption of water drawn from artesian wells	m^3	25,000	100%	0%
Consumption of water provided by water supply companies	m^3	3,875,353	96%	4%
Consumption of water drawn from other sources	m^3	36,823	0%	100%
Total water consumption	m^3	3,937,176	95%	5%
2016 v. 2015		(31)%	(32)%	(2)%
2016 v. 2014		(18)%	(17)%	(24)%

In general water consumption tends to reduce thanks to targeted management and awareness-raising actions.

PAPER

Paper for office and commercial use

Group breakdown by Business Unit (%) and % variation compared to the previous 2 years

		Group	Domestic	Brazil
Non-recycled and non-certified paper purchased for office use	kg	10,700	100%	0%
Recycled paper purchased for office use	kg	2,017	40%	60%
FSC certified paper purchase for office use	kg	167,033	87%	13%
Total paper purchased for office use	kg	179,750	87%	13%
2016 v. 2015		(37)%	(37)%	(40)%
2016 v. 2014		(49)%	(49)%	(48)%
Total paper purchased for commercial use	kg	2,844,702	72%	28%
2016 v. 2015		(30)%	23%	(67)%
2016 v. 2014		(26)%	56%	(68)%

Purchases of paper for office and commercial use (telephone bills) continue to be directed at product types that meet the highest environmental standards based on the responsible management of forests according to the Forest Stewardship Council (FSC, see fsc.org) requirements.

The reduction in paper consumption for office use shown in the following table is in line with a historical trend resulting from work done to raise awareness about the responsible use of paper in the workplace and rationalisation of energy use through the "printing on demand" project, which provides for the use of shared high performance printers and printing methods that save energy and consumables. Moreover, towards the end of 2015, TIM was involved in Olivetti's Cloud Printing project to deal with the need for the technological renewal of printing equipment, with the aim of optimizing printing processes and as a result reducing the costs. The new printing equipment has high energy efficiency and reduced environmental impact. Activities continued with the aim of achieving overall reductions in the use of paper for business purposes, including the promotion among customers of electronic invoices and statements.

WASTE

[G4-EN23] The data shown in the table refer to the quantity of waste consigned[1] and recorded by law[2]

Waste consigned

Group breakdown by Business Unit (%) and % variation compared to the previous 2 years

		Group	Domestic	Brazil
Hazardous waste	kg	3,576,468	98%	2%
Non-hazardous waste	kg	9,142,157	95%	5%
Total waste consigned(*)	kg	12,718,625	96%	4%
2016 v. 2015		(26)%	(25)%	(31)%
2016 v. 2014		(3)%	(4)%	30%
Waste sent for recycling or recovery	kg	12,235,314	99%	1%
% Waste sent for recycling or recovery		96%	99%	27%

(*) The data does not include the Domestic BU telephone poles because these are not disposed of as ordinary waste but under the framework agreement signed in 2003 with the Ministry of the Environment, the Ministry of Production Activities and the production and recovery companies, subject to the favourable opinion of the conference of State-Regions-Autonomous Provinces. In 2016, TIM decommissioned 130,258 poles weighing a total of 10,420,640 kg.

[1] By "waste consigned" is meant waste delivered to carriers for recycling or reclamation or disposal.

[2] Slight variations compared to the situation on December 31 may occur until the following March 30, because the source of the data is the records of waste loaded and unloaded, which are consolidated once the actual weight at destination has been verified. The information is supplied to the producer of the waste within 3 months of consignment, which is the reason for the potential variations in the data.

Waste data varies over time according to the quantities and types delivered to the companies contracted to treat it. The most important item of data for TIM's purposes is the ratio between waste produced and consigned for recycling/recovery, which reached a significant level.
Ministerial Decree No. 65 of March 8, 2010 (published in the Gazzetta Ufficiale on May 10, 2010) implemented the collection of Waste Electrical and Electronic Equipment (WEEE) by all TIM sales channels as of June 18, 2010, resulting in the company's registration as a "distributor" in the national Register of environmental managers.

TIM has entered into contracts with companies specialised in handling used, faulty and end-of-life products, with the aim of reclaiming components and raw materials and at the same time obtaining tangible economic benefits deriving from their recovery.
In 2016 the various management activities allowed logistics and network products (58,386 items) and commercial logistics products (119,367 items) to be regenerated, components and raw materials (458,185 items, almost exclusively of fixed telephony) to be sent for recovery and used products (67.786 items, almost exclusively of mobile telephony) to be resold.

In Brazil TIM collects and manages mobile terminals, batteries and accessories at its shops through the Recarregue o Planeta (Recharge the Planet) programme. In 2016, a total of 961 kg was collected and sent for recovery/recycling or disposed of in compliance with current legislation.

This activity has a dual purpose: contributing to a reduction in WEEE produced while at the same time generating a financial benefit resulting from the difference between the cost that would be incurred for the purchase of new equipment and the cost of regeneration.

ELECTROMAGNETIC EMISSIONS

The actions of the TIM Group on the subject of electromagnetic emissions are essentially:
- careful management of its equipment during its entire life cycle and in compliance with current regulations and internal standards of efficiency and safety;
- deployment of, and constant research into, the latest technological instruments for checks and controls.

Systematic monitoring of the levels of electromagnetic emissions in installations aims to ensure that legal limits are respected and high safety standards are maintained for workers and the general population. According to the checks carried out in Italy, the electromagnetic emissions generated are well within legal limits.
As part of the certification of mobile phones sold on the market under the TIM brand, TILab performs tests on all technologically innovative products to check the SAR (Specific Absorption Rate) declared by suppliers. This parameter estimates the quantity of electromagnetic energy per unit of body mass absorbed by the human body in the event of exposure to the electromagnetic field generated by telephones and other mobile devices. TIM certifies and sells through its sales network only mobile devices with a SAR value lower than the limit set by European legislation. In determining this conformity TIM complies with the instructions given in the ICNIRP (International Commission on Non-Ionizing Radiation Protection) guidelines and subsequent declarations of conformity[1]. This qualification, which is carried out during the pre-marketing stage, when TIM does not often have the SAR value declared by the supplier, makes the test more valuable than a simple quality control check.
As part of the SAR evaluations, tests on mobile devices placed near to the human body were

[1] Guidelines for Limiting Exposure to Time-Varying Electric, Magnetic, and Electromagnetic Fields (up to 300 GHz). Health Physics 74 (4): 494-522; 1998; Statement on the "Guidelines for limiting exposure to time-varying electric, magnetic and electromagnetic fields (up to 300 GHz)". Health Physics 97(3):257-259; 2009.

also carried out in 2016. SAR measurements were taken for seventeen new "smartphone" models using 2G-3G technology and five new technologically innovative 3G/WiFi/LTE tablet models.

The results confirmed compliance with the limit set in the European Regulations for all devices subject to testing. Joint activities are also taking place with a number of ARPAs (regional environmental protection agencies) to assess the electromagnetic fields generated by RBSs, considering the actual power transmitted based on traffic and power control mechanisms, in accordance with changes to the Prime Ministerial Decree of 8/7/2003 contained in the Decree Law on Growth 179/2012. Similar attention is paid to the emissions from mobile devices using the frequency bands operated by TIM.

In Brazil the non-ionising radiation emitted by the radio base stations of TIM Brasil are fully within the parameters dictated by the World Health Organization and adopted by ANATEL. All the radio base stations of TIM Brasil have a license to operate issued by ANATEL.

COMPLIANCE WITH EXISTING ENVIRONMENTAL LEGISLATION

As active and responsible members of the community, the Group's companies are committed to observing and ensuring the observance of the laws in force in the countries in which they operate and adopt the organisational tools needed to prevent the violation of legal provisions[1]. During 2016, no significant financial penalties[2] were imposed on the Group's companies in Italy for violations of environmental legislation in the areas in which they perform their activities. This consideration is also valid for the previous two years.
In Brazil, 341 significant penalties were inflicted on TIM in 2016, all for having put radio base stations into operation without waiting for environmental authorization from the relevant body; TIM submitted an appeal and is waiting for the judgement from the relevant authority. In 2015 one was inflicted for the same reason, which was resolved, while none were received in previous years.
Seven non-financial administrative sanctions were reported for 2016; no penalty of this type was recorded in the previous two years, while no environmental dispute resolutions via conciliation mechanisms were reported. In Brazil, there is no arrangement for environmental disputes to be resolved by conciliation.

ICT can influence the price, efficiency and relative convenience of products and services, eventually affecting the demand for services and increasing the overall demand for energy. It can also accelerate the obsolescence of products and require the resulting technological waste to be managed. It is the responsibility of the ICT sector, and therefore also of TIM, to consider these effects, focusing on research and development to create products with a low environmental impact throughout their entire life cycle (see Digitisation).
In 2016, the Group centrally handled 90,177 audio conferences (-5% compared to 2015) and 45,223 video conferences (+2% compared to 2015). In addition to these is the use of "Free Access" audio conference services assigned to authorised employees/working groups, but the actual use is not assessed at present[3]. The use of these communication systems is estimated to have allowed a significant amount of carbon dioxide (and other pollutants) associated with the use of means of transport () to be avoided.

[1] Principles stated in the Group's Code of Ethics and Conduct and in the Human Rights Policy

[2] Significant financial penalties for the Group in Italy are considered to be those that exceed 500,000 euros; for its own accounts, Brazil applies an amount of 100,000 reais.

[3] Free Access is always active, and the number of times a single code is used is not counted but only the state of the ports active at the same time is monitored to control the total state of occupation of the platform).

ECO-FRIENDLY TIM

At the end of the 1990s, TIM launched a series of internal research and development activities to build terminals with a reduced environmental impact. In order to improve the environmental efficiency of products offered to private and business customers alike, attention has to be paid to their energy aspects, optimising consumption while meeting the needs of the services delivered and applying "Design For Environment" rules that reduce their environmental impact, particularly during the production phase and the end-of-life management of equipment.

Pursuing and expanding this logic, the TIM Green logo has been created, renamed TIM eco-friendly in 2015, to identify both TIM's environmental protection initiatives and projects and eco-friendly products.

For products and initiatives that bear this logo, information is provided about the features and specific solutions adopted, as a result of which their eco-friendliness and/or environmental benefit can be demonstrated. In the case of products, this information appears in the environmental statement drawn up in accordance with the UNI EN ISO 14021 standard, as well as in the sustainability section of the telecomitalia.com website, where information can also be found about the "eco-friendly" features of initiatives and projects.

The Green range includes a number of products developed with the assistance of suppliers and dedicated to business and consumer customers alike.

The most recent environmental declarations issued relate to 6 new products launched in 2016, i.e.:

- the Smart Modem for broadband services produced by Technicolor, which when actively working enables electricity savings of 8% higher than the values set in the European Code of Conduct regarding the energy consumption of Broadband Equipment;
- the Smart Modem for Broadband services produced by Sercomm, which in one year of operation enables electricity savings of around 19% with respect to the challenging targets set in the European Code of Conduct regarding the energy consumption of Broadband Equipment;
- the "Sirio Classico" telephone, produced by Bertana, which is offered to TIM customers for the landline service, the annual average use of which enables electricity savings of over 90% compared to a model with similar features powered from the mains;
- The new TIMvision decoder with Android TV™, the annual average use of which enables electricity savings of over 64% compared to the previous generation decoder and it is equipped with a high energy efficiency power supply, over 84%;
- The FACILE DESIGN cordless telephone produced by Motorola which, by activating the "ECO" and "ECO Plus" mode, reduces electricity consumption by 99% compared to previous generation products;
- the FIBRA modem for ultrabroadband services produced by ADB, which when fully operational enables electricity savings of around 23% with respect to the already challenging target values set by the European Code of Conduct regarding the energy consumption of Broadband Equipment.

Il risparmio di energia elettrica si traduce anche in una equivalente riduzione delle emissioni di gas a effetto serra. Va anche sottolineato che tutti i prodotti della linea TIM eco-friendly sono progettati applicando criteri di eco-progettazione e sia la scocca che l'imballo sono realizzati con materiali omogenei, riciclati e/o riciclabili.