DIGITISATION, CONNECTIVITY AND SOCIAL INNOVATION

TELECOM ITALIA STRATEGIC RELEVANCE

The Company stands as a digital ecosystem "enabler", connecting companies, government bodies and local communities, so as to create positive synergies for development. The contribution the Group makes towards growth in the sectors in which it operates doesn't stop at infrastructure projects but ranges from digital solutions for government local bodies to cloud services for businesses, digital platforms for healthcare, applications for people with disabilities to technologies for reducing energy use by cities and companies. Various initiatives have been developed in this context, including the crowdfunding platform that receives requests for donations and other non-profit-making financial assistance for people intending to implement environmental protection and social projects. Furthermore, Telecom Italia is a founding member of the Italian Digital Champions association. Digital Champions are innovation ambassadors appointed by each Member State of the EU to promote the benefits of an inclusive digital society and make their citizens "digital", working with communities, businesses, Governments and academia.

In 2015, the CSV department estimated, through the application of new analysis metrics, the impact of Group activities, with a special focus on domestic activities. Details of the measurement, which came from a mapping of corporate activities, is described in the chapter and highlighted in dedicated boxes to facilitate reading.

[G4-DMA Indirect Economic Impacts], [G4-DMA Product and Service Labelling], [G4-DMA Marketing Communications], [G4-DMA Customer Privacy], [G4-DMA Compliance]

Material issues in this chapter:
- network coverage
- listening and transparency towards customers
- innovation management
- sensitive data management and protection
- child protection

Relevant company policies: Service Charter and General Subscription Conditions, Self-regulation Code for mobile services and Code of Conduct for premium services, Guidelines for responsible marketing, Telecom Italia Disclosures pursuant to article 13 of the Privacy Code, Compliance requirements for the processing of anonymised or pseudonymised data, Respect Human Rights in the Telecom Italia Group, available at telecomitalia.com.

Effectiveness and monitoring: the company uses some numerical KPIs in order to monitor the effectiveness of management processes and ensure the monitoring required by quality management systems and internal control structures. This chapter presents the ones related to the cover of the territory with broadband infrastructures, customer satisfaction, the number of conciliation requests received and resolved, the number of reports received. The KPIs regarding numerical targets are presented in an appendix to the Report. In particular, targets are listed for service activation, complaints, support and maintenance, availability and broadband network coverage.

Ultrabroadband networks: a national treasure

Telecom Italia operates the biggest fixed voice and data infrastructure, covering the whole of Italy, and provides one of the country's most extensive and advanced mobile network platforms. Therefore, in terms of size, ubiquity and infrastructural and technological assets, it is a "system company", integrated with the territory and with the social, economic and production fabric, with a pervasive role for the whole of the Country's economy and the competitiveness of its companies, the efficiency of its public administration and, more generally, the welfare of its citizens.

[G4-EC7a], [G4-EC7b], [G4-EC8a], [G4-EC8b], [G4-DMA Indirect Economic Impacts] The Group contributes to produce approximately 0.7% of the added value of the Italian GDP[1]. The Group's business generates direct work for approximately 50 thousand people in Italy; if indirect employees are considered, i.e. those operating on projects connected with the business of Telecom Italia, it is estimated that approximately 100 thousand units, corresponding to approximately 1% of employees of the entire private sector, would represent the direct and indirect work attributable to the Group in Italy.

In applying the metrics of the CSV model, the estimated value[2] generated by the Group in Italy is 8.4 billion euros, detailed as follows:

- 2.8 billion is the direct contribution to families (remuneration to employees);
- 1.4 billion is the indirect contribution to families (suppliers);
- 4.2 billion is the indirect contribution to businesses and local government offices.

[G4-EC7a] Telecom Italia is aware of this strategic role and works constantly to manage and update the infrastructure and technology it makes available to the Country: in 2015, the Company invested around 3 billion euros in innovative infrastructures in Italy; again in the three years 2016-2018, innovative investments are envisaged of approximately 7 billion euros. In 2015, the Group came in first in the European ranking of investments in Research and Development, third worldwide, in the TLC sector[3] .

The three-year business plan for 2016-2018 confirms its commitment to investing in advanced infrastructure and technologies and is focused on new generation networks in particular.

NGAN

In 2015, Telecom Italia's commitment continued even more intensely, in investments in the next generation fixed access network (NGAN). This was made possible in particular by technological innovation, which fundamentally changed the reference scenario. Solutions that bring fibre to the line splitter cabinet and then continue into the home using copper wires, known as FTTCab (Fibre to the Cabinet), are now considered to be fully-fledged next generation networks. By boosting existing network infrastructure in the final access section, FTTCab solutions reduce the investment required compared to FTTH (Fibre to the Home) solutions, because they avoid the operator having to lay fibre-optic cables all the way to the customer's home. This allows next generation access networks to be created more quickly and less expensively.

In the meantime, mobile network coverage of the whole country with the new 4G/LTE[4] standard, a significant evolution in response to the growing demand for high speed data, has almost been completed, This new mobile network technology provides greater transmission speed compared to the past and shorter response times, allowing a high degree of interactivity on the move.

Therefore, after having developed the national fixed and mobile infrastructures, the challenge faced by the Group in recent years is the development of ultrabroadband networks, an important effort involving network engineers and technicians on a daily basis.

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[1] Internal estimates.
[2] For more details, please refer to the CSV sheet on *Impact on employment*.
[3] EU Industrial R&D Investment Scoreboard. 2015 European Commission Report.
[4] Data at end 2015, more than 88% of the population; for more details see the paragraph on geographic digital inclusion.

[G4-EC8b] Moreover, Telecom Italia's commitment is also shown by its participation over the years, as the only operator, in the Eurosud public tenders organised by the Ministry of Economic Development (MISE)[1], which are essential for ensuring ultrabroadband coverage in "market failure" areas (known as "white areas", in which there is a risk of no return being made on investments) and therefore achieving the objective of 30 Mbit/s coverage of 100% of the population by 2020.

[G4-DMA Indirect Economic Impacts] The ambitious investment plan Telecom Italia is implementing coincides with a phase in which the Italian government is engaged in implementing the national strategic ultrabroadband plan, which aims to achieve the challenging objectives of the European Digital Agenda in terms of a widespread supply of infrastructure and an increase in the demand for digital services. Telecom Italia's investment plan therefore becomes an important element in the digital transformation of the society, confirming the Group's historic role as an engine for the Country's modernisation and facilitating achievement of the European Digital Agenda objectives[2].

The economic effects of broadband and ultrabroadband networks on growth and employment
[G4-DMA Indirect Economic Impacts], [G4-EC7b] The spread of broadband and ultrabroadband networks is a boost for the economic growth of Countries.

By applying the metrics of the CSV model, the contribution generated[3] in Italy by the investments made by the Group have a positive effect on both the growth of the national GDP and the occupational impact, reported as follows:
- 1.9 billion euros (0.12% of the 2014 GDP);
- the number of jobs that can be potentially activated is over 22 thousand.

As regards the specific impact of ultrabroadband networks on economies, one of the first studies on this subject is the one carried out by Analysys Mason and Tech4i2in 2013 for the European Commission[4] according to which an investment in ultrabroadband networks can generate benefits of around three times the capital invested. According to the study, investments in new generation networks also have a major impact on employment, with 20,000 jobs potentially being created for every one billion euros invested.

A similar result can also be found in the study conducted by the Boston Consulting Group (BCG) for the ETNO (European Telecommunications Network Operators' Association) in 2013[5]. BCG estimates that an investment of around 110-170 billion euros is required to achieve the infrastructure objectives of the European Digital Agenda project. BCG estimates that if the increased investments were made, GDP growth of 750 billion euros could be achieved and 5.5 million new jobs could be created, which is the equivalent of 4.4 billion euros in GDP and around 30,000 new jobs for every billion euros invested.

Both studies therefore demonstrate that ultrabroadband networks have a positive effect on economies. Better results are definitely achieved when the investment plans of private operators are accompanied by public initiatives aimed at extending coverage and therefore increasing the benefits for all citizens.

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[1] In 2015, no calls for tenders were issued. During 2014, Telecom participated in and won the two tenders for Calabria and Veneto, which joined the two tenders - relating to Lazio and Campania - that Telecom Italia won in 2013.
[2] *Telecom Italia Group* chapter contains an account of the initiatives involving national and local institutions for assessing infrastructure work requirements.
[3] For more details, please refer to the CSV sheet on the *Digitisation of the country*.
[4] Study on the socio-economic impact of bandwidth (SMART 2010/0033), Analysys Mason e Tech4i2 – March 2013. The whole study can be downloaded via this link http://ec.europa.eu/digital-agenda/en/news/study-socio-economic-impact-bandwidth-smart-20100033. A summary of the main results of the work is available on the Analysys Mason website using this link: http://www.analysysmason.com/About-Us/News/Press-releases1/broadband-benefit-for-EU-Mar2013.
[5] Reforming Europe's Telecoms Regulation to Enable the Digital Single Market, The Boston Consulting Group - 2013.

Two instruments to improve transparency in the development of network infrastructure and encourage the development of digital projects: Telecom Italia Netbook and Italia Connessa

[G4-DMA Indirect Economic Impacts] In order to make the effective development of broadband and ultrabroadband networks even more transparent, since 2012, Telecom Italia has published the Telecom Italia Netbook - telecomitalia.com/tit/it/innovazione/rete/netbook-2015, which accurately and meticulously tracks the progress achieved in the work. The Telecom Italia Netbook is a publication that shows the Country and the main stakeholders the state of the network with extreme transparency, clarity and precision, using data and maps to illustrate the size and structure of the Telecom Italia infrastructure, the evolution in terms of exchanges (which are increasingly connected by fibre-optic cables and fitted with new generation equipment for managing broadband traffic) and broadband and ultrabroadband network coverage in each individual Italian province.

Furthermore, in order the stimulate and promote a culture of innovation and speed-up digitisation processes between medium sized municipalities, 2015 saw the publication of the fourth edition of "Italia Connessa: Regional Digital Agendas", containing a digital check-up of Italian regions and connected with an initiative aimed at local governments proposing the most concrete and convincing digital development plan. Through this initiative, Telecom Italia is committed to rewarding local institutions that promote the development of digital services for citizens and businesses, creating ultrabroadband infrastructures earlier than planned.

Telecom Italia's commitment to minimising the negative impacts of creating new networks

[G4-EC7b] The creation of fixed and mobile network infrastructure can cause disruption for local communities (the work needed to lay fibre-optic cables can create noise and traffic). Telecom Italia mitigates these negative aspects by using innovative excavation and cable laying techniques, including the digging of micro-trenches instead of the normal ducts and using innovative materials. This leads to an overall reduction in the time required to carry out the work and in traffic disruption, as well as significantly reducing both the environmental impact (lower emissions and less waste for disposal) and social impact (fewer accidents at work).

Network infrastructure as an enabling platform for developing the digital economy and increasing the competitiveness of the Country

[G4-EC8a] The latest OECD Science, Technology and Industry Outlook[1] report provides a very clear summary of the aspects that determine the different levels of competitiveness of countries and outlines the "recipes" that economies should implement to overcome the crisis:

- promoting innovation, particularly by offering training systems geared above all to stimulating talent, disseminating the new skills required by production systems, extending the segment of the population susceptible to new technologies;
- increasing the productivity of labour, which explains the different rates of growth in the wealth of countries most open to new technologies and other economies;
- identifying new growth opportunities in solutions that address environmental protection, the ageing population, improving quality of life in urban areas;
- increasing the effectiveness of local and national research and development systems, connecting them to international research networks and to the main reservoirs of knowledge, increasing opportunities for interaction between research and businesses.

As General Purpose Technologies (GPTs), i.e. enabling technologies needed to activate new services and solutions and disseminate digital culture, the broadband and ultrabroadband infrastructure is one of the main drivers that will enable the developments advocated by the OECD. Since 2009, a study by Waverman[2] in fact indicated broadband as a vehicle for increasing the efficiency - and therefore the competitiveness - of an economic system by improving the productivity derived from the greater use of ICT technologies2. Naturally, the more the economic system is open to using new technologies, the wider this impact will be.

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[1] Scince, Technology and Industry Outlook, OECD.
[2] Economic Impact of Broadband: An Empirical Study, L. Waverman - 2009. Waverman estimated an increase in productivity of 0.13% each percentage poin increase in the broadband network coverage.

Digital Inclusion

[G4-EC7], [G4-EC8] In order to deal with the digital divide that has arisen in the so-called marginal areas of Italy, which would otherwise remain excluded from the mainstream plans of telecommunications operators, owing to the low profitability of investments, between 2005 and December 2015, Telecom Italia implemented a programme of extraordinary investments allowing ADSL coverage (gross coverage[1]> 70%) to be provided for approximately 7,700 municipalities in total (4,350 more municipalities than December 2005).

In December 2015, Telecom Italia activated 9,600 exchanges, including 8,200 optical fibre ones. Alongside its plan to extend coverage, Telecom Italia has launched an additional plan to expand the active network[2], where necessary, to guarantee full usability of the service by customers and the development of digital inclusion.

The following table shows the percentages of coverage as of December of the past three years.

Description	2015	2014	2013
ADLS Coverage (*)	99.10	98.75	98.40
UMTS and HSDPA coverage (**)	96.00	96.00	87.50
LTE coverage (**)	>88.00	77.00	49.00
Next Generation Plan (fixed telephony) cover (***)	>42.00	28.10	16.80

(*)   The percentage refers to fixed Telecom Italia telephone lines.
(**) The percentage refers to the residential population. Coverage values are subject to change based on ISTAT and urbanisations updates.
(***) The percentage is determined by the ratio between the number of properties connected with "cabinets" reached by access optical fibres (or which can be served directly from an exchange if within acceptable distances) and the total number of properties that have or have had active telephone lines in the past.

In order to promote digital inclusion and the consequent coverage of the remaining geographical areas of "market failure", Telecom Italia cannot avoid engaging in joint "public-private" initiatives.

Two types of action have been taken so far, both fully in line with European competition rules:
- the first is a "central" approach involving collaboration with Infratel Italia S.p.A. (Infrastrutture e Telecomunicazioni per l'Italia)[3] ,with the public entity building passive broadband (fibre optic cable), organic and integrated infrastructure throughout the country, with the aim of increasing digital inclusion in lower income areas of the Country;
- the second is a "local" approach, based on collaboration with regions that promote projects aimed at increasing the digital inclusion, e.g. through forms of financing centred on public tenders using the claw-back model, which provides for contributions to be paid to offset the lack of return on investments.

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[1] Official Telecom Italia Coverage data refers to the technical coverage of the telephone population (in terms of   64 kbit/s equivalent lines) gross of areas that cannot technically be served, due to the characteristics of the copper access network (presence of digital devices such as, for example, MPX, UCR or MD48, excessive distance from the exchange, etc.).

[2] The plan consists of actions to ensure full enjoyment of the service by customers by expanding the capacity of equipment used, in terms of both user ports and bandwidth available on the Internet. The technical term for this is desaturation of DSLAM equipment, performed either in advance or once specific broadband quality and availability thresholds are exceed.

[3] The Company was set up on the initiative of the Communication Department of the Ministry of Economic Development and Invitalia, the national inward investment and business development agency, and is the entity implementing the Broadband Programme.

Using the above forms of intervention, in some cases simultaneously, Telecom Italia has in recent years signed cooperation agreements with several local entities, (such as: Memorandum of Understanding with the region of Emilia-Romagna and Lepida[1]), , some still under development in 2015. Amongst others, we note the award of a tender in 2012 by the Marche region to complete digital inclusion (through state-of-the-art broadband services with speeds of up to 20 Mbit/s) in the region's market failure areas. The project was completed during the last quarter of 2015.

As from the second half of 2013 and through to September 2015, as part of the National Broadband Plan, the Ministry of Economic Development (MISE) issued eleven regional tenders through Infratel Italia S.p.A., identified as the implementing organisation and assignee of the funds provided.

The funds allocated for projects to extend broadband technology to digital inclusion areas amount to 353 million euros, including 225 million euros to be allocated to the "clawback" model: the contribution for each Region can correspond to a maximum of 70% of the cost of the project to widen digital inclusion. The tenders issued relate to the following twelve regions: Abruzzo, Calabria, Campania, Emilia-Romagna, Lazio, Liguria, Marche, Molise, Sicily, Tuscany, Umbria and Veneto. In 2015, no calls for tenders were issued in the last five regions: Basilicata, Lombardy, Piedmont, Apulia and Sardinia.

For the remaining three regions (Friuli Venezia-Giulia, Trentino Alto-Adige and Valle d'Aosta) no actions is planned on the part of MISE as these regions have their own independent plans.

Telecom Italia has participated in all the tenders issued to date, except for the Liguria region: it was awarded the tenders called for the regions of Calabria, Campania, Lazio, Veneto, Tuscany and Sicily (with total contributions assigned in the amount of around 63 million euros), whilst those relating to Abruzzo, Emilia-Romagna, Marche, Umbria and Liguria were awarded to NGI S.p.A..

For Molise, a first call for tenders was cancelled and a second saw no one bid.

The creation of this digital ecosystem is based on the excellence of the products and services offered to customers and on the procurement process aimed at the acquisition of products and services under the best market conditions, at the same time guaranteeing the requisites of quality, safety and social and environmental respect.

For information regarding the initiatives implemented by Telecom Italia for the social inclusion of customers with specific needs (hearing impaired, the elderly, children, etc,) see the website telecomitalia.it.

Presence of the Group in Brazil

[G4-EC7a] A focus on innovation and investments in new infrastructure and technology also characterise Telecom Italia's action in Brazil, a Country where the Group has been operating since 1997 through its subsidiary TIM Brasil and which is the Group's second biggest market. Its presence in Brazil has been increasing in recent years thanks to strategic acquisitions: the Intelig and AEM Atimus fixed network infrastructure has allowed the Group to strengthen the backbones and connecting links of the mobile network radio base stations through the use of fibre-optic cables which, in view of the development of LTE networks, are even more important and strategic.

In the past 5 years alone, Telecom Italia has invested more than 7.5 billion euros in Brazil, focusing primarily on building new generation infrastructure and actively contributing to the modernisation of the Country.

Following the acquisition in 2014 of the right to use the 700MHz bandwidth (with an expenditure of 936 million euros), in 2015 TIM Brasil continued to invest in the 3G network infrastructureand achieved leadership in 4G, in terms of both the number of cities covered (411 at the end of 2015) and coverage related to the urban population (59% at the end of 2015).

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[1] Lepida S.p.A. is the operating tool promoted by the Emilia-Romagna region for the unified and standardised planning, development and management of the telecommunication infrastructure of entities connected to the network. The company also promotes interventions in favour of digital inclusion in rural or mountain areas.

Cover of 4G sites has also increased: more specifically, the number of sites covered with LTE more than doubled in 2015, reaching a total of 7,700. The investment in infrastructure allowed the fibre optic network (both urban and long distance) to be extended to 68,000 km.

Finally, TIM Brasil concluded the sale of the third tranche of telecommunications towers to American Tower do Brasil in order to optimize the Company's financial resources and support the investment plan announced in Brazil.

In the two years 2014-2015 alone, investments in innovative infrastructures were worth more than 2 billion euros and the plan 2016-2018 envisages approximately 4 billion euros in investments, almost entirely allocated to ensuring a better 4G cover of the Country.

[G4-EC7b] In Latin America, ever since it was introduced, mobile telephony has played a key role in the process of integrating more disadvantaged people, contributing to cohesion and to involvement in social and democratic life. TIM Brasil manages over 66 million mobiles lines and has always played a major role in this context. The work already done to extend mobile network coverage to the whole Country is continuing on a number of development fronts, which include improving the quality of the network in major cities, developing Mobile BroadBand and Fiber-To-The-Site (FTTS) in some cities, pilot small-cell and Wi-Fi projects and developing the LT Amazonas Fiber transmission project in the Amazonian region.

[G4-EC8] TIM Brasil is notable for its social inclusion projects, such as the Transamazonica Digital, which takes fibre optic to certain municipalities in the State of Amazonas, Parà and Amapà. However, the availability of infrastructure is only one of the ingredients and has to go hand-in-hand with an overall digital growth of the population in a literacy development process that will increase demand and stimulate investments. Part of this process is the "National Broadband Plan" for Brazil (PNBL - Programa Nacional de Banda Larga), in which the Telecom Italia Group has been involved from the start. It is a federal programme which has led the Country towards the objective of encouraging and disseminating the use and distribution of ICT goods and services, extending network coverage to the more remote areas of the Country and making services more accessible to all segments of the population, contributing to reduce economic and social inequalities.

TIM Brasil has continued to promote commercial offers to encourage the spread of the mobile web, particularly among the poorer classes. These consist of low cost services which are particularly suited to helping to widen the socio-cultural digital inclusion (e.g. INFINITY WEB and LIBERTY WEB).

Moreover, the Data Connections project reaches all public schools located in rural areas within the area of TIM coverage (data download at 256 kbps and upload at 128 kbps). In December 2015, 75% of the project had been developed.

GROUP'S CUSTOMERS

The aim of the Group is to ensure an immediate and effective response to customer requirements, modelling their conduct on business propriety, transparency in contractual relations and undertakings, courtesy and collaboration, ensuring customer focus and in full compliance with the principles established by company procedures. Cooperation with consumer associations, which includes entering into specific agreements with them, is also highly valued.

The relevant stakeholders are:

- consumer customers, particularly customers with special needs (the disabled, the elderly, children, etc.);
- business customers and local government offices;
- consumer associations.

Quality of service and Customer Satisfaction

[G4-DMA Product and Service Labelling] The progressive global digitisation and the dissemination of social media are radically changing the way in which the consumer constructs and manages relations with the brands. Understanding and measuring customer expectations and adopting a culture of continuous optimisation are the drivers that make it possible to offer customers the best possible experience, confirming their central role, to the benefit of economic sustainability, loyalty and positive word of mouth.

In this context, Telecom Italia has developed an extensive system of listening to detect Customer Satisfaction, which is structured into "hot" and "cold" surveys. The first aim to detect quality perceived immediately after an event and/or specific contact with the company (e.g. installation of a service, purchase of a product and/or service, call to customer service, repair of a failure). These continuous or regular surveys are mainly carried out through automatic channels. "Cold" surveys carried out independently by a specific event, enable customer satisfaction to be detected in terms of competitiveness too. This scope includes the monitoring of the Customer Satisfaction Index (CSI) - which adopts international standards (ACSI, American Customer Satisfaction Index) – to detect the perception of quality on the main satisfaction indicators of the various customer segments and competitors.

Under the scope of the continuous evolution of investigations, the Group has begun experimenting with new methods of listening with a view to Customer Experience Management (CEM) in order to better understand the customer experience and obtain indications to improve processes.

The introduction of new methods has entailed a change in the questionnaires and channels used for the interviews, as well as considering new indicators. Of these, the most relevant is the Net Promoter Score (NPS) based on international standards and which is used in different industrial sectors. The NPS is based on the potential recommendation of the operator in relation to the experience accrued. On a scale of 0 to 10, "promoters" are customers expressing votes of 9 or 10 "detractors" are those providing a score of 0 to 6, whereas the rest of the customers are considered as "passive" and are not countered towards calculating the NPS. The NPS is calculated as the difference between the percentages of "promoters" and "detractors". In 2015, for example, the NPS begun to be monitored of customers talking with the telephone assistance service, with very positive results indeed (NPS more than 10).

[G4-PR5] In the same way, the monitoring of CSI has also evolved in terms of Customer Experience and has been extended to the new services (e.g. LTE and fibre). In order to reconstruct the trend of past years, records were taken in a parallel fashion to normalise the values.

Monitoring the CSI has earned certification of conformity with standard UNI 11098:2003 and has been included in the managerial (management by objectives) and collective (result premium) incentive systems.

The CSI values of Telecom Italia by segment are shown below

Customer segment			
	2015	2014	2013
Consumer	76.84	76.45	75.79
Small Enterprise	67.29	66.89	66.35
Large/Medium Enterprise + Vertical	73.22	72.01	71.67
Totals	74.29	73.66	73.15

Average satisfaction is measured on a scale of 0-100, where 0 means "not at all satisfied" and 100 means "completely satisfied".

Projects developed to improve the Customer Experience and make employees play an active part in developing innovative, effective solutions, include:

■ Customer Journey Lab: the project aims to allow colleagues/investigators to experience the service received by consumer customers first-hand by selecting, purchasing, activating and using services, so as to identify the customer's perception and the main areas requiring attention/strengths. In 2015, this method was applied to the converging (fixed/mobile - SMART offer) offers, the LTE offer and multimedia services (e.g. TIMSKY, TIMVision, TIMMusic);

■ "Chi-ama Telecom": a tool used by Telecom Italia employees to channel reports received from customers, friends or acquaintances regarding the fixed line service requirements of consumer customers, of a commercial or technical nature. The project makes employees active participants as the promoters of solutions in the management of customers;

■ The "Listening to Customer Care operators" project: launched to collect the requests and problems experienced by customers by listening to Customer Care operators, optimising the experience of those in day-to-day contact with the customers and who have in-depth knowledge of their needs and expectations, as a further contribution for the identification of opportunities to improve the customer Experience in using the Group services.

Confirming its commitment to quality of service and transparency in its relations with customers, TIM Brasil is the first Latin American company to have launched a "Portas Abertas" (open doors) website in 2013, showing the plans for expansion of the technical network. Among other things, the website offers customers the chance to:

■ interact with the company regarding the technical network coverage map for each individual street;

■ receive notifications regarding both maintenance and any failures to achieve technical network objectives;

■ provide TIM with feedback on the perceived quality of the network.

Among the actions taken in 2015, it is worth highlighting the launch of the online chat service (available on the Web and via the TIM mobile app for smart phones), the improvement in several automatic and digital portal services, the humanisation of caring on digital channels in general, the creation of an online (web chat) channel for customers with questions about Anatel (Brazilian National Telecommunications Agency).

TIM Brasil also talks to its customers via Twitter and Facebook. @ TIMBrasil" (https://twitter.com/TIMBrasil), which as of December 2015 had more than 720,000 followers, and Facebook (www.facebook.com/timbrasil) with over 1,428,000 likers. Since 2012, the company has also activated a further channel "@ TIM_AJUDA" (https://twitter.com/TIM_AJUDA), which allows it to communicate with customers via Twitter. As of December 2015, this channel has almost 246,000 followers. In the evolution of customer services, another important step consisted of the launch of the new MEU TIM application dedicated to customers needing information available at all times on their smartphones, including consumption, the last bills, the residual balance and current promotions.

TIM Brasil carries out two types of nation-wide customer satisfaction surveys by means of interviews:

■ the TIM and competitors' consumer customer survey, conducted twice a year (May and November) on a "reflective" basis, measures the customer's general perception of the Company e.g. sales structure, call centre, network coverage and quality of the network (also as regards the Internet connection), technical support, the price of services, promotions, billing;

	2015	2014	2013
Consumer Customer survey (*)	7.29	7.54	7.92
Consumer Mobile Telephony Call Centre Survey(**)	7.25	7.30	7.47
Business Mobile Telephony Call Centre Survey(***)	7.24	7.16	7.15

(*) Average index, on a scale of 0 to 10.
(**) Average mobile consumer customer satisfaction index on a Scale of 0 to 10.
(***) Average mobile business customer satisfaction index on a scale of 0 to 10.

■ the call centres survey, conducted once a month on a "reactive" basis, with the involvement of TIM customers (consumer and business) who have contacted the call centre in the previous 15 days.

Since 2012, in full compliance with privacy protection requirements, Telecom Italia has been monitoring "conversations" on the Web regarding quality in the Telecommunications sector, relating to both fixed and mobile communication and the consumer and business segments. This monitoring takes place using a tool that performs a semantic search and analysis of the subjects most frequently discussed on the Internet and analyses the "tone" (web sentiment) of conversations about Telecom Italia and its competitors. The aim is to make a prompt assessment of how customers perceive offers and services, gaining a greater insight into issues to support the business.

USE OF SOCIAL NETWORKING IN CUSTOMER CARE

In recent years, the Telecom Italia Customer Relationship Management has been increasingly focused on the monitoring of new digital contexts, identifying the future of assistance, care and loyalty of its customers in the monitoring and management of caring contacts obtained from the social networks (Twitter and Facebook).

In 2010, Telecom Italia launched the Caring on Social Media project to make the most of the opportunities provided by the new web communication channels. Amongst others, the re-engineering of Social Caring has begun, resulting in a revision of processes, the issue of procedures, the development of systems for management, the extension of monitoring times and investments in the training of social caring agents. Thanks to the constant training, the agents know the channel being used and are quick to deal with a report and understand and solve the problems described by the customer, answering with a polite, but not overly formal, tone of voice. Telecom Italia Caring on Social Media seeks to construct a new relationship with digital mobile and fixed telephony customers and strengthen their trust.

In 2015, through social caring, Telecom Italia also offered a single business vision, generating positive sentiments towards the brand and expanding upon the customer base; besides, in August it launched the integration of the Telecom and TIM Facebook pages into the single official TIM page, which boasts 2 million fans, with an extension of the times at which the social channels are manned.

Telecom Italia/TIM, which has always been committed to the development of technologies by which to improve the processes and flows of customer services, obtained recognition for this in 2015, including:

- the Italian CMMC Social CRM 2015 prize for the skilled, quick response management of particularly large volumes;
- first place in the classification of Italian telecommunications companies for the "customer service" on Facebook and ninth place worldwide amongst all brands (telecommunications and other companies in the Socially Devoted classification, prepared by the research company Socialbaker during the second quarter of 2015. Being "socially devoted" means answering the many interactions recorded on the social channels quickly, and which now represent a significant volume. More specifically, during the fourth quarter of 2015, TIM managed interactions on Facebook and Twitter with a response rate - respectively - of 87% and 71% (source: Blogmeter).

THE DIGITAL IDENTITY ON SOCIAL MEDIA

The presence of Telecom Italia/TIM on social media considers the social changes seen in the new methods of communication both between people and between people and companies. In this context, the Company systematically and continuously adopts specific communication strategies that are useful to constructing and communicating its identity on the Internet. In this respect, a digital communication model has been developed, which is inspired by the evidence revealed during the insight discovery process, at the basis of a data-driven communication plan. In this way, the most effective channels are chosen on the basis of the reference target and subject matter discussed, the most appropriate times of the day to communicate and the visual guidelines to be used. Moreover, the definition of the content to be communicated does not end with the construction of the content strategy; it is a work that is in continuous evolution, which envisages the monitoring of conversations and their measurement in real time, according to the KPI defined during the strategic phase.

The importance of a data-driven strategy is also confirmed by web monitoring activities carried out in the company. More specifically, the matters relating to telecommunications and the related conversations between users are concerned by specific analyses aimed at detecting the tone of conversations (web sentiment) and monitoring the experience of the customers with regards to the offers and services of Telecom Italia/TIM and competitors, thereby providing input and insight to the business lines.

All this has enabled the Company to consolidate its leadership in the various communities that have been created in the different social networks (facebook, twitter, google+, instagram, youtube) around the main brands: TIM, TIM Impresa Semplice, TIMvision, TIMmusic, Working Capital, Serie A TIM, Nuvola Italiana, with more than 7 million likers and followers. For information about the social networking tools available to call centre operators (TUO), see the sustainability section of the telecomitalia.com website.

Customer Satisfaction within incentives schemes

Telecom Italia's managerial incentive systems include many targets associated with customer satisfaction and experience, in keeping with the business plan for the current period. This target is measured through the Customer Satisfaction indicators monitored through periodical surveys. For 2015, the managerial incentive system envisages an objective based on the CSI structured over two separate clusters of customer segments, identified on the basis of the positioning with respect to the competitors. The purpose of this segmentation is to pursue different improvement objectives according to the segment.

Specific targets associated with quality parameters and consistent with the criteria established for corporate and segment customer satisfaction indicators have been established in the collective incentive systems for Telecom Italia staff.

Finally, specific objectives associated with customer satisfaction have been set in the collective incentive scheme - known as CANVASS - which involves some of the staff in the Customer Care and Open Access departments.

Conciliation procedures

The conciliation procedure between Telecom Italia and the Consumer Associations who signed the framework agreement for the out-of-court settlement of telephone disputes, was the first example of joint conciliation in Italy. Introduced on a trial basis in 1991 by SIP, it was implemented throughout the country in 1993 and in 1995 the European Union recognised it as a "Pilot project for consumer access to justice". The model is still used today but has been adapted over the years to fulfil new requirements, computerised and made easier to use, while maintaining the basic values that made it such an excellent tool, contributing to improving the transparency of the system, customer relations and a number of the Company's operational processes. In 2011, the joint conciliation model was brought to the attention of the European Union and, on October 25 of the same year, the European Parliament recognised the "Italian joint conciliation model as an example of best practice based on a protocol drawn up and signed by the Company and consumer protection associations, under which the Company undertakes in advance to use ADR[1] to settle any disputes that may arise in the areas covered by the protocol". Twenty Consumer Associations have signed up to the conciliation agreement to date.

In 2009, in compliance with the voluntary undertakings given and approved by the Italian Communications Authority in December 2008, Telecom Italia also started managing conciliation requests submitted by customers at the offices of Co.Re.Com.[2] and the Chambers of Commerce, thus providing a "single point of contact" and replicating the organisational model successfully applied for joint conciliations. This system allows customers who do not wish to approach a Consumer Association to use an alternative method for resolving their dispute through a streamlined and out-of-court procedure.

Than handling of conciliations takes customer requirements into account and, regardless of the selected procedure, allows their relationship with the company to be improved.

The "single point of contact" model has so far allowed the undertakings given to AGCOM to be fulfilled and the expected qualitative and numerical results to be reached. The Co.Re.Com channel is in fact becoming increasingly popular compared to other channels (recourse to Chambers of Commerce is now secondary and accounts for fewer than 5% of conciliations). The positive trend seen in the conciliation system in previous years continued in 2015, in fact:

- approximately 96% of the requests for equal conciliation discussed (9,268 out of 9,668), a percentage that is stable year on year despite the clear increase in the practices discussed and recorded in 2015 with respect to 2014 (9,668 with respect to 6,642, or +45%);
- around 83% of applications discussed by the Co.Re.Com. and Chambers of Commerce (20,294 of 24,429). This percentage has remained at excellent levels despite the fact that, again in 2015, it experienced an increase in the practices discussed with respect to 2014 (24,429 as compared with 18,540, making for +32%).

Telecom Italia supported the conciliation activity by means of:

- seminars and joint training initiatives involving dedicated personnel from Telecom Italia, AGCOM, Co.Re.Com. and Consumer Associations;
- debates, conferences, interviews and other promotional activities involving senior management in order to disseminate the correct cultural approach to the subject.

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[1] Alternative Dispute Resolution.
[2] Regional Communication Committees.

Conciliation is becoming increasingly widespread among customers, particularly in view of the:

- large number of Co.Re.Com., which are opening provincial offices in many regions to make the conciliation system more easily available to people (avoiding the costs involved in travelling to regional capitals);
- better knowledge of the procedure, which is considered to be a quick and economical way of resolving disputes;
- economic crisis, which leads people to resort to conciliation even for small amounts (e.g. potential inefficiencies involved in transferring from one operator to another).

In Brazil, TIM has close relations with the National Consumer Secretariat (SENACON) and examines claims sent by the Consumer Protection and Defence Authority (PROCON).

In 2008, TIM created the Legal BackOffice tool, which manages the whole process of handling claims from customers dissatisfied with the solutions supplied by the Company and requesting the intervention of PROCON and the judiciary. This tool shortens the response time, reduces operating costs and improves relations between TIM and the official representatives of the above Bodies; Legal BackOffice thoroughly examines preliminary claims sent by PROCONs (i.e. before they become justified complaints). The Company's legal department attends any conciliation hearings to settle justified complaints.

In 2015, TIM achieved excellent results in settling claims submitted by PROCON offices: CIPs (Preliminary Investigation Letters) 79.5%; justified complaints 74.7% (source: SENACON official report).

Certifications

For areas of the company which have a significant impact on the community, because of the products and services they offer, the Group has obtained certifications to ensure that procedures and conduct are adopted that meet the expectations of the relevant stakeholders.

The certifications achieved for the main activities are shown below:

- quality of products and services offered: UNI EN ISO 9001:2008 standard;
- environmental protection: UNI EN ISO 14001:2004 standard;
- limit greenhouse gas emissions: standard UNI EN ISO 14064-3;
- efficient energy management: standard ISO 50001: 2011;
- protection of human capital by companies and suppliers: SA 8000 standard;
- health and safety at work: BS OHSAS 18001:2007 standard;
- general requirements for the competence of testing and calibration laboratories: ISO/IEC 17025:2005 standard;
- Information Technology services: ISO/IEC 20000-1:2011 standard;
- data security: ISO 27001:2013 standard;
- software and IT solution production processes: CMMI-DEV (Capability Maturity Model Integration - Development) certifications;
- respect for principles intended to promote trust between consumers and businesses operating on the internet: WebTrust (Certification Authorities - SSL Baseline Requirements Audit Criteria);
- fulfilment of the AGID (Digital Italy Agency) requirements to perform the role of:
  - ♦ Accredited Certifier for Qualified Signatures, the National Service Charter and Timestamping;
  - ♦ Accredited Operator for Certified Email;
  - ♦ Accredited Custodian for storing electronic documents.

Detailed information about the certifications achieved by the various functions/companies of the Group can be found in the sustainability section of the telecomitalia.com website.

In Brazil, as required by ANATEL (National Telecommunications Agency), the Brazilian telecommunications authority, KPI Survey Method Quality Certificates were also achieved for the whole country regarding:

- personal mobile service (TIM Celular);
- switched fixed telephone service (TIM Celular and Intelig);
- multimedia communications services (FIBER).

Child protection

[G4-PR6] The Group companies have undertaken numerous initiatives to protect children from content that may harm their psychological and physical development (for example, content that is violent, racist, offensive to religious sentiment, etc.). Among these, precise guidelines have been adopted for classifying and checking distributed content. These cover both the content offered directly by Group Companies and content owned by third parties offering their own services on space purchased within Telecom Italia's portals. These guidelines are regularly updated in line with regulatory and technological evolution.

For this purpose, the Group, in accordance with current regulations and self-regulatory codes signed, implemented procedures to prevent children from accessing adult content on all the Group's service platforms (tablet/smart phone app, web, IPTV, TIMvision by decoder, smart TV, Xbox, WAP services).

Specifically:

- TIMvision: adult content can only be accessed using a decoder. This pay-per-view content can only be viewed after entering the parental control PIN and purchase PIN. The parental control functions are governed by legal provisions and mentioned in the statement delivered to customers after they sign up to the service;
- IPTV: access is only permitted to subscribers and the subscription can only be taken out by adults. The default setting does not allow adult content to be viewed and can only be changed after the PIN supplied to the adult subscriber has been entered;
- WAP services: content is always moderated in advance by Telecom Italia, in order to verify compliance with the classification guidelines, and delivered by a centralised platform. The PIN for accessing adult content is supplied by text message, at the customer's request, after the person to whom the number is allocated is confirmed as being an adult (including through the input of a tax code by the customer).

For services delivered by IP connection, the Total Security software is available: a complete suite of security services based on ZoneAlarm® technology that protects you when surfing the Internet from viruses, hackers and spyware that may attempt to install themselves on your computer. Furthermore, parental control ensures that children can surf the Internet safely, only on sites suited to them, with antispam to protected them unsolicited emails. Total Security includes the following services:

- antivirus and antispyware, to detect and remove viruses and spyware;
- parental control, to protect young people against unsuitable content;
- firewall for networks and programmes to block any attacks by hackers and harmful programs;
- advanced download protection to analyse downloaded files before they can infect the PC and send a report if they come from a dangerous source;
- anti-phishing and site status, in order to block unsafe websites which deceive people into revealing personal data;
- protection against unsolicited emails (SPAM), to block unsolicited emails automatically from email clients (email protocols: POP 3/IMAP incoming only, SMTP outgoing only);
- wireless PC protection to defend your PC against risks associated with connecting to unprotected networks.

The TIM-Protect solution is the exclusive TIM option for total protection against WEB threats:

- parental control: protects young people while surfing the Net, filters WEB searches, gives warnings in case of behaviour that is judged to be dangerous;
- theft protection: protects the device from loss and/or theft, ensuring remote control by sending a simple instruction (block device, find device, delete data, SIM change notification);
- protection and privacy: protects all access to e-commerce, home banking and social media websites. Ensures privacy by filtering unwanted calls and messages;
- antivirus: manages the device securely without affecting its operation, protecting it during use against viruses, malware and other threats.

The Company is particularly focussing attention on parental control, with the launch of offers dedicated to the younger generation (under 12s) with the TIM Protect service included, at no additional cost (TIM Young Junior). TIM is also implementing comarketing initiatives with certain operating partners in the "kids" segment, which is particularly sensitive to matters of child protection.

For the purpose of combating online child pornography and computer crime, from an organisational point of view and internally, Telecom Italia has identified the role of "Key contact for the Postal Police". This person manages relations, and the flow of information, with the Postal Police (CNCPO - National Centre for the Fight against Online Child Pornography, CNAIPIC – National Centre against Digital Crime for the Protection of Critical Infrastructure etc.) and the competent authorities, and has the task of coordinating, within Telecom Italia, the process of abuse management, in accordance with the relevant legislative framework. Furthermore, the Group has adopted the organisational model in accordance with Legislative Decree 231/2001, which defines the tools required to oversee and anticipate offences, particularly the dissemination of child pornography, as well as to ensure the organisational/disciplinary management of computer crimes. For this purpose, Telecom Italia has fielded resources, technologies, processes and tools to prevent and combat "abuse", meaning any activity committed in violation of the rules of conduct and legislation that governs the use of network services, digital systems or means of communication in general.

In this respect, information initiatives have been implemented, aimed at children, parents and teachers, on the risks connected with the new technologies and navigation on the Internet (chat lines, instant messaging, forums, communities etc.). Among the initiatives involving a number of important public and private stakeholders selected above all on the basis of their activities and commitment to safeguarding the rights of children (including the Postal and Communication Police, Save the Children, Adiconsum, GSMA, FOSI[1] etc.), we would mention the following:

- "abuse" topic area on the Company intranet, which informs company staff and makes them aware of the activities conducted and the tools that exist for preventing digital crimes and protecting children who use the internet services provided;
- the "Child protection" topic area on the telecomitalia.it portal, aimed at informing and making end users, and the other stakeholders, aware of the correct behaviour to adopt during navigation on the network, as well as the values and objectives that Telecom Italia pursues to combat digital abuse and protect children;
- form available on Telecom Italia's corporate and commercial portals, which can be used by Telecom Italia's end customers, or by outsider users, to report any crimes involving child pornography encountered while browsing the Internet. There is a guide to completion, and reports can also be submitted anonymously;
- management of the abuse desks: operational groups who handle abuse differentiated by type of service (consumer and business), formed in accordance with the national and community regulations on child protection, the prevention of digital criminality and the fight against sexual exploitation (child pornography). Their task is to receive alerts from external users/customers regarding alleged computer crimes or the presence of child pornography on the Group's networks, and then direct them to the relevant department, where necessary involving the relevant authorities through the key contact for the Postal Police;
- the booklet "Born with the Network," dedicated to the adult-parent public for the purposes of:
  - illustrating the fundamental rules for the safe use of the Internet;
  - alerting people to the dangers that can be hidden on the network;
  - providing the tools to convey the rules of conduct to children and guide them in the selection of content to use;
- web filtering: in accordance with the Implementing Decree of Law 38/2006 (Gentiloni Decree) which defines the technical prerequisites of filtering tools that providers of Internet network connections must use in order to prevent access to sites identified by the Postal Police through the CNCPO. Telecom Italia has also introduced a filtering system for foreign websites with child pornography content;
- drafting of "Guidelines for combating child pornography on line", which are intended to make the identification of cases of child pornography to be notified to the Postal Police as objective and uniform as possible. The aim is to minimise any potential interpretation uncertainty of the subjects concerned (chat moderators and/or community services, developers, abuse desk operators etc.) and to ensure compliance with current regulations. The guidelines are also modelled on those provided and implemented by the CNCPO and the major external organisations operating in

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[1] Family Online Safety Institute.

this field (Save The Children, Telefono Arcobaleno etc.);

■ participation in the "GSMA - Mobile Alliance against Child Sexual Abuse Content" Working Group in the context of the GSM Association, for technological, policy and communications initiatives aimed at protecting children in the mobile phone sector. Amongst other aspects, the initiative deals with awareness raising, the fight against illegal content and the classification of content, and an important part of the programme is dedicated to Safer Internet Centres, present in more than 30 different countries, to provide support and information for children, parents and teachers. The scope of the activities implemented by the Alliance includes the agreement stipulated with Child Helpline International, aimed at protecting children and safeguarding their right to be heard. Telecom Italia has subscribed to the initiative, undertaking to support child helplines on a national level;

■ participation in the European initiative ICT Coalition for Children On-line, launched in 2012. Telecom Italia is an active member and participates in the coalition's work, as it promotes safe, responsible use of the internet. Telecom Italia has subscribed to the principles adopted by the Coalition, participates in the six-monthly forums (in this context, Telecom Italia also presented the EducaTI initiative) and the meetings organised by the Coalition with the important stakeholders (e.g. NGOs) and the European Commission and European Parliament. In April 2014, the first report was published on the implementation of principles by the businesses, drawn up by an independent subject. At the same time, Telecom Italia has confirmed the implementation of the European Framework for Safer Mobile Use, stipulated in 2007. In 2015, a study was commissioned of an independent consultant, focused on the trend of the use of ICT services by children and the younger generation, the results of which were unveiled in February 2016;

■ participation in the European Commission initiatives under the scope of the Better Internet for Kids ("BIK") initiative for the definition and implementation of the principles and technologies necessary to make the internet a safe place for children (Telecom Italia took part in the "CEO Coalition" initiative organised by the European Commission, currently on stand-by). Telecom Italia also took part in the 2015 edition of the Safer Internet Forum - an international conference organised each year by the European Commission under the scope of the BIK - dedicated to "Breaking down barriers for a better internet";

■ cooperation in the context of the Italian Child Abduction Alert System (ICAAS) project, for the creation of a web portal providing an "early warning" of missing children. In this context, in 2011, Telecom Italia signed the "Allarme Scomparsa Minore" (missing child alert) agreement with the Ministry of the Interior's Public Safety Department;

■ participation in the FOSI. In September 2015, Telecom Italia was involved in the organisation of the conference "Global Trends in Online Safety: Creating a National Framework", an opportunity to share international experiences in matters of internet safety with some important international stakeholders, including the European Commission;

■ Telecom Italia is a member of the COP (Child Online Protection) Board of the International Telecommunication Union (ITU), seeking to protect children.

The Group has also implemented appropriate filtering and abuse prevention systems for services delivered in Brazil. In particular, WAP services with adult content require user authentication while the delivery of adult videos on IP platforms, which is only available in on demand mode, requires a PIN to be entered. All the content is monitored and rated by the suppliers and, subsequently, by TIM Brasil, which limits their portfolio to level 3.2 of the international rating system.

Customers who wish to purchase adult content, have to access the relevant portal, click on "ADULT", confirm that they are adults and enter a password (parental control).

TIM Brasil has signed an agreement with Safernet to prevent sexual abuse and paedophilia on the internet. The agreement covers cooperation and the centralisation of any reports regarding abuse of a sexual nature and the development of an awareness-building campaign on the appropriate and safe use of the internet.

Product responsibility

Telecom Italia is primarily an operator of telecommunications services, which do not endanger the physical health of users[1], and it does not produce the telecommunications equipment it sells[2].

In order to verify that the products placed on the market comply with health and safety legislation, the Company has:

■ appropriate internal structures that check the incoming quality of the products it markets (telephones, modems, etc.), both in Italy and in the production centres of manufacturers overseas;

■ laboratories that test the products marketed by the Group, particularly as regards the electromagnetic emissions of the mobile devices.

In this way, any non-conformities of products are detected prior to their market release, ensuring that products that do not conform with the essential requirements of the European Directives do not reach the end customer.

Services provided to customers are subject to the requirements set out in the Service Charters and in the Terms & Conditions of Subscription, available at telecomitalia.com.

[G4-DMA Customer Health and Safety] [G4-PR1] In its laboratories, Telecom Italia validates the satisfaction of the essential requirements envisaged by the current Directives for the release of CE marking; conformity with these requirements is certified at source by the manufacturer. For products sold in Italy, the reference framework is the set of standards that support Directive 1999/5/EC, arranged by product macrofamily[3].

With regard to protection and the safety of customers in using the equipment, the Group carries out checks on:

■ levels of electromagnetic emissions (SAR) of technologically-innovative smartphones/tablets/modems comply with Standards IEC 62209-1/2;

■ the technical provisions aimed at reducing the risk of electric shock, overheating, fire and mechanical dangers, through the application of standards EN 60950-1 and EN 60065.

The following were also verified:

■ the energy efficiency aspects required by the EuP (Energy-using Products) Directive: equipment placed on the market is checked against the stand-by/off-mode power consumption and performance limits set by European Regulations 1275/2008/EC, 801/2013/EC and 278/2009/EC, for equipment and their external power supplies (available as accessories);

■ functionality in different environmental conditions of installation and use of terminals and accessory components for connection to the fixed network: checks are carried out on compliance with temperature and humidity ranges established by ETSI (European Telecommunications Standards Institute) for the specific "service condition", on which different "severity" levels are based. Checks are carried out on the basis of the following standards: IEC-EN Series 60068-2-1 (cold), 2 (dry heat), 14 (temperature changes), 30 (humidity changes), 78 (continuous humidity). For the most widely available products, with external plastic parts (e.g. AG), "flame resistance" is checked in the event of malfunctions of the internal electrical parts;

■ electromagnetic compatibility aspects, regulated by Directive 2004/108/EU (in future 2014/30/EU): every item of electronic equipment is checked for unintentional electromagnetic signal emissions - in order to avoid interference harmful to radio communication - and the fulfilment of certain immunity from electromagnetic interference requirements. In Telecom Italia constant checks are carried out on terminals and network equipment to determine whether they comply with the requirements of international ETSI, CENELEC (European Committee for Electrotechnical

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[1] Threats of a psychological nature or relating to security and privacy are dealt with in the *Child Protection, E-security and Privacy* sections.

[2] At Olivetti, the Group company that operates in the IT sector, there are hardware production plants. In the context of the Group as a whole, these activities are not significant as the entire turnover of Olivetti amounts to 0.97% of the Group.

[3] For "Corded terminals", the following standards may be applied: EN 60950, EN 55022 and EN 55024; for "Cordless terminals" standards EN 60950, EN 50371, EN 62311, ITU-T P360, EN 301489 and EN 301406; for "Mobile terminals (smartphones, data cards etc.)" standards EN 60950, EN 62209, EN 302291, EN 301908, EN301893, EN 301511, EN 300440, EN 300328 and EN 301489.

Standardization) standards regarding electromagnetic compatibility. In particular, checks are carried out on the compliance of equipment with the limits set by standards to limit the emission of electromagnetic disturbances which, in addition to polluting the surrounding environment, can interfere with radio communications.

By law, telecommunications equipment sold in Brazil must be approved by the regulatory authority ANATEL, which verifies, in its laboratories, the conformity with Brazilian legislation on electrical and electromagnetic safety. There is specific legislation to be complied with for each kind of equipment. TIM Brasil asks its suppliers to ensure that equipment has the ANATEL certificate of approval.

[G4-PR2] Over the past three years, no non-conformities with European customer health and safety legislation have been found in any product that has reached the final marketing stage, neither in Italy nor in Brazil.

[G4-PR3] When contracts are drafted, for all fixed telephony products, Telecom Italia requires packaging to include an environmental statement, a statement about the origin of the tantalum possibly used in components, a user manual containing safety information, details of any hazardous materials in the product and disposal information. In respect of labelling of mobile devices, as they are consumer products that the Company merely resells and do not need any customisation, the Company simply requires national legislation to be complied with.

In Brazil, in addition complying with national legislation, labels are required to contain information about the correct use of devices. For a particular product range, TIM eco-friendly, discussed in detail in the *Environmental protection* chapter, all the relevant environmental parameters are also shown (e.g. energy consumption).

[G4-PR4] Over the past three years, no non-conformities regarding product information and labelling have been found in any product that has reached the final marketing stage.

There have however been a few cases in which non-conformities with regulations concerning information about services have been found. More specifically, in Brazil in 2015, an incident occurred resulting in a total penalty of 2,897,416 reais; in 2014, 3 incidents occurred, resulting in a total penalty of 1,533,820 reais and in 2013, 2 incidents occurred, resulting in a total penalty of 9,474 reais[1].

In Italy, the regulatory Authority's sanctioning procedures for non-conformities with regulations regarding information on services are part of the system of "penalties for the violation of regulatory legislation regarding consumer protection in the supply and use of TLC products and services"; which means that, for Italy, non-conformities regarding information on services have been merged with non-conformities regarding the supply and use of services (table below)[2].

[G4-PR9] The number and total monetary value of the fines for non-conformities with laws and regulations regarding the supply and use of products and services in Italy[3].

Description	2015	2014	2013
Number of fines for non-conformities regarding the supply and use of products and services	4	7	10
Total monetary value of these fines (in euros)	2,833,000	1,102,000	727,619

[G4-PR9] The number and total monetary value of the fines for non-conformities with laws and regulations regarding the supply and use of products and services in Brazil[4].

Description	2015	2014	2013
Number of fines for non-conformities regarding the supply and use of products and services	3	5	12
Total monetary value of these fines (in R$)	13,592,963	13,214,257	11,268,560

[1] In 2015, 2014 and 2013, in Brazil, there were no incidents of this kind, other than the cases reported, which all resulted in financial penalties.
[2] It has not been possible to obtain a complete picture of the non-conformities that resulted in "warnings" in Italy in the current year because the concept of "warning" is not clear cut. The issue of whether and how to assess the various kinds of "warnings" that arrive from the regulatory authority will be considered in detail in future. Furthermore, as things stand at the moment, there is no system for receiving reports on the violation of self-regulatory codes concerning customers other than the reporting mechanisms
[3] Cases include the supply of Premium services, "Losai" and "Chiamaora", not requested, and teleselling.
[4] Only final decisions are recorded. The cases include the supply of unsolicited services, failure to comply with established quality targets, unforeseen interruptions to the service, coverage by means and at times other than those established with the authority, service and billing irregularities. stated in chapter *Sustainability and Governance*.

[G4-PR7] Overall number of non-conformities with legislation and voluntary codes regarding marketing communications in Italy.			
Type of nonconformity	2015	2014	2013
Number of non-conformities with legislation resulting in a fine or penalty	0	0	1
Number of non-conformities with legislation resulting in a warning.	0	0	0
Number of non-conformities with voluntary codes	0	2	4

In Brazil, the only notifications relating to advertising and marketing communications are issued by CONAR (Conselho Nacional de Autorregulamentação Publicitária), non-governmental self-regulation organisation for advertising which does not impose financial penalties and assesses non-conformities with the Advertising Self-Regulation Code. Anatel can impose fines or warnings in cases of "general marketing communications" that are not compliant.

In 2015, TIM Brasil received 5 notifications of non-conformities: 4 proposed by competitors and one by CONAR. Of the 5 notifications, 1 entailed no penalties, for 2 the change in advertising has been arranged, the last 2 were still being examined at end December 2015[1]; in 2014, CONAR did not report any type of non-conformity, whilst in 2013 it reported 5, for which the advertising was changed or suspended. Moreover, in relation to cases of non-conformity with the legislation, taking concrete form in a notice, CONAR issued 1 notification in 2013, for which no intervention was required.

Safeguarding privacy and personal data protection

[G4-DMA Customer Privacy], [G4-PR8] In order to ensure that personal data is protected in the performance of business activities, Telecom Italia has applied an organisational model, since 2003, which includes a Privacy Function supervising correct application of the relevant regulations throughout the Group (according to Legislative Decree 193/03, known as the "Privacy Code"). In this context, when it establishes or acquires new companies, the Parent Company also provides the support required to identify and carry out the formalities required.

The adoption of legal measures and the instructions of the Privacy Guarantor for personal data protection is assured by constantly updating the Group regulations and policies. Among these, the "System of rules for the application of the privacy regulation in the Telecom Italia Group" is particularly important, which defines the provisions and operating instructions for each commitment concerned and which in 2015, was completely revised and updated, according to the regulatory evolution and the introduction of new customer services.

In 2015, the framework of the Company's personal data processing provisions was enhanced with a policy on compliance requirements for the processing of anonymised or pseudonymised data, under the scope of big data type analyses. This policy also considers the opinions on the matter issued by the Group of European Privacy Guarantors (article 29 Working Party) and the indications given by the Italian Data Protection Authority regarding the examination and approval of the procedures established by Telecom Italia to protect the personal data of its customers in the context of a project to analyse the mobility of the population devised to respond to the information requirements expressed by public organisations and government offices that manage land and transport infrastructure.

The Company policy has also been updated, which defines the compliance requirements for the systems dedicated to the supply of ICT services (e.g. storage, disaster recovery, systems management, etc.) for business customers.

Also during the course of 2015, Telecom Italian continued to take the steps required to implement provisions in its internal processes to deal with any violation of personal data security relating to electronic communication services (so-called "data breaches).

In particular, 9 training meetings were organised involving over 220 officers and managers, to disseminate and illustrate the specific internal procedure, which describes the activities to be undertaken and the related responsibilities should events defined as data breaches occur.

The constant training activity, carried out in order to disseminate and ensure the correct application of internal privacy legislation, in 2015 took concrete form in a specific update for the operators involved in the compulsory procedures for

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[1] On 23 December 2015, for one of the two notifications, a preliminary provision for the suspension of advertising was issued.

the judicial authorities and in investigations of privacy aspects as part of a cycle of seminars for employees on big data matters. Other training interventions involved the sales network, as regards matters relating to the possibility of contacting customers and the resources appointed for staff recruitment. Furthermore, meetings centred on the management of telephone and electronic traffic data were held both during periodic training seminars to train conciliators, which are attended by representatives of Telecom Italia and consumer protection associations - and also during specific activities dedicated to the external sales force of Business Department and to commercial compliance.

The effective application of the regulations is monitored through a control system based on regular self-assessment procedures by those responsible for handling the data, and on sample checks carried out by the relevant central departments, based on established procedures and methodologies. In consideration of these activities, a Report has been prepared on the status of adoption of the security measurements envisaged by privacy legislation that, in a company document, formalises the activities carried out to guarantee compliance with the provisions on personal data processing, the results achieved and the status of plans for improvement.

With regard to privacy protection relating to new technologies, Telecom Italia is also involved in initiatives of the European Commission (EU) to promote in the EU the development of cloud computing services that fulfil the requirements of EU law. In particular, Telecom Italia is actively involved in international working groups assigned by the European Commission to develop standards for establishing service levels (https://ec.europa.eu/digital-agenda/en/news/cloud-service-level-agreement-standardisation-guidelines), model contracts and a reference code of conduct (https://ec.europa.eu/digital-agenda/en/cloud-select-industry-group-code-conduct) for the suppliers of these services.

The following table shows:

■ the information requests made to Telecom Italia, in Italy, by the Italian Data Protection Authority, including those made following reports from customers;

■ the percentage of such requests filed by the Italian Data Protection Authority based on explanations supplied by Telecom Italia[1]

Description	2015	2014	2013
Requests received	220	435	368
Percentage of requests filed	>98%	>98%	>99%

With regard to Brazil, in accordance with the Federal Constitution, article 3 of the general law on telecommunications no. 9.472 of 1997 establishes the right of customers to the confidentiality of their personal data. The personal mobile service regulation, in articles 89, 90 and 91 of Resolution 477 of the national telecommunications agency (ANATEL), requires companies to take responsibility in this respect and establishes that any waiver of confidentiality must take place only if requested by the relevant authority in the cases provided for by law.

In order to ensure the confidentiality of its customer information, in accordance with national legislation (including Articles 10 and 11 of the "Marco Civil"), TIM Brasil has issued relevant internal policies and procedures based on the "need to know" (personal data processing is restricted to the minimum required to carry out the work) and separation of functions principles. These policies and procedures recall the methods for the classification and management of information in order to guarantee suitable protection levels. In Brazil, no violations have been noted in relation to privacy in 2015 and 2013 and only 1 case in 2014[2]. It should be noted that the difference between the legislations of Italy and Brazil does not allow for any comparisons to be drawn between homogeneous data.

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[1] Other reports received regarding alleged small breaches of privacy are handled by the 187 service and relate for the most part to unsolicited inclusion in the telephone directory.
[2] The 2014 case refers to an extraction of telephone data without legal authorisation. The penalty applied was 5,000 reais.

RESEARCH & DEVELOPMENT AND INNOVATIVE SERVICES

The Telecommunications sector has undergone a quick, but major transformation in recent years, characterised by the decline in traditional voice services and the ever-greater growth of fixed and mobile broadband and the new services enabled by it, thereby contributing towards the rapid digitisation of the life of consumers and business processes.

Coherently with this sector context, in recent years, Telecom Italia has launched its own evolution route by which to gain standing as a supplier of services and platforms, and not just connectivity. This route envisages two parallel lines of action:

- on the one hand, the acceleration of the development of enabling platforms, namely fixed and mobile ultrabroadband, data centres, big data and IT;
- on the other, the enrichment of connectivity with innovative digital services towards the development of a digitised society and an automated industry (industry 4.0)

The technological and business innovation is therefore increasingly confirmed as a central element of the Telecom Italia strategy in order to respond to the change in the technological, market and competitive context.

The efforts made regarding investments in new generation infrastructure, both fixed and mobile, and in new services, were accompanied by action to support innovation across the board. Internally, Telecom Italia has strengthened the Company laboratories, bringing alongside the traditional Research and Development centred on infrastructures, a focus on digital innovation, also with a view to supporting the evolution of a demand that has increasingly varied, sophisticated characteristics and which is met by the activities of the Innovation Centre.

The digital innovation is based on a paradigm of open innovation that is realised by accompanying the internal generation of ideas and development routes with the generation of ideas and development paths coming from outside the Company. In these terms, Telecom Italia has reviewed and renewed its relations with the universities, financing 25 triennial PhDs scolarships in 2015 and a total of 165 from 2011 to date. Again on the academic front, the Joint Open Labs, research laboratories that propose a new way for industry and universities to work together, have been created. These laboratories stem from agreements on specified fields of scientific and technological interest and "live" inside the university campuses (Trento, Turin, Milan, Pisa and Catania). In the last three years, these public-private partnerships have enabled Telecom Italia to obtain 5 million euros in European funds for research, in addition to 2 million euros received from the universities with which it collaborates.
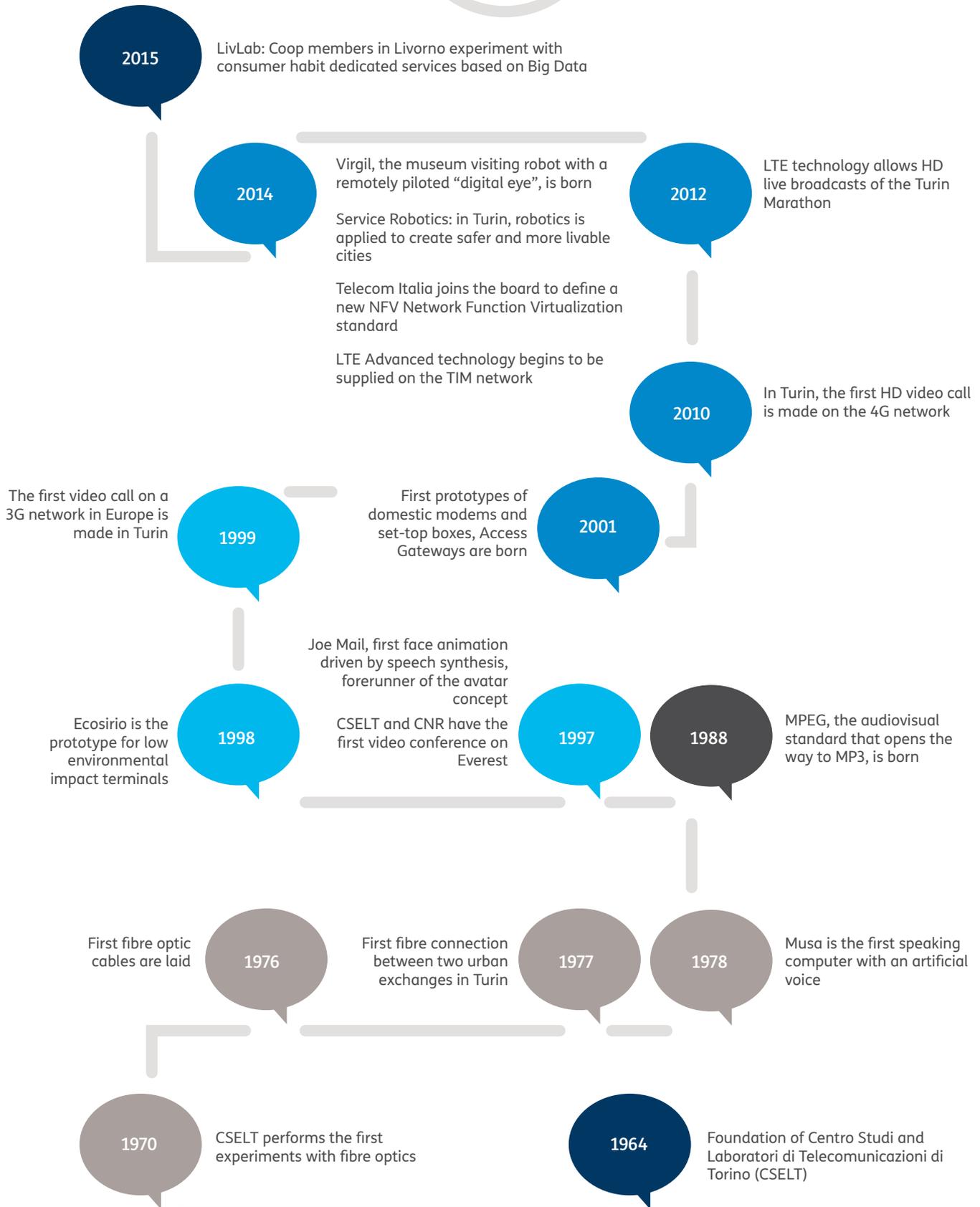
In addition to open innovation, the digital innovation is hinged on another important cornerstone: co-innovation, a development model that envisages the full optimisation of the ecosystem of stakeholders and strategic partners of the company as bearers of innovation on the market. Through the application of "two-sided" models, Telecom Italia creates a common framework of interaction (e.g. platform) from which two different user groups can gain mutual benefit, thereby creating further value.

TIM #Wcap is the business accelerator of the Telecom Italia Group that each year selects, finances and accelerates digital start-ups. From 2009 to 2015, more than 8,000 business ideas were received and examined and approximately 260 projects selected and supported. Moreover, 11 TIM #Wcap start-ups were invested in by TIM Ventures. In the last two years, the TIM #Wcap start-ups launched 25 go-to-market activities within TIM, thanks to which turnover was generated. With three of these, TIM also created a commercial offer. The survival rate of TIM #Wcap start-ups has exceeded 90% and in two years, thanks to TIM #Wcap, 215 jobs have been created. TIM #WCAP is an incubator certified by the Ministry for Economic Development.

Starting from TIM #Wcap, Telecom Italia has debuted in seed investment, launching TIM Ventures, the Group Company created with the aim of investing in options or share capital in the most innovative start-ups in the Digital, Internet, Mobile and Green ICT sectors. In just one year of activity, TIM Ventures has already invested in 12 start-ups and is mentioned amongst the most active European VC investors in 2015[1].

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[1] Source: Venture Pulse Q2'15 – KPMG and CB Insights.

OVER 50 YEARS OF INNOVATION

2015 — LivLab: Coop members in Livorno experiment with consumer habit dedicated services based on Big Data

2014 — Virgil, the museum visiting robot with a remotely piloted "digital eye", is born

Service Robotics: in Turin, robotics is applied to create safer and more livable cities

Telecom Italia joins the board to define a new NFV Network Function Virtualization standard

LTE Advanced technology begins to be supplied on the TIM network

2012 — LTE technology allows HD live broadcasts of the Turin Marathon

2010 — In Turin, the first HD video call is made on the 4G network

1999 — The first video call on a 3G network in Europe is made in Turin

2001 — First prototypes of domestic modems and set-top boxes, Access Gateways are born

1998 — Ecosirio is the prototype for low environmental impact terminals

1997 — Joe Mail, first face animation driven by speech synthesis, forerunner of the avatar concept

CSELT and CNR have the first video conference on Everest

1988 — MPEG, the audiovisual standard that opens the way to MP3, is born

1976 — First fibre optic cables are laid

1977 — First fibre connection between two urban exchanges in Turin

1978 — Musa is the first speaking computer with an artificial voice

1970 — CSELT performs the first experiments with fibre optics

1964 — Foundation of Centro Studi and Laboratori di Telecomunicazioni di Torino (CSELT)

In Italy, Telecom Italia employs approximately 1,300 resources in engineering, technological innovation and service activities. Investments in innovation and transformation amount to 1.7 billion euros, equating to 44% of total investments on the domestic market.

The relevant stakeholders for research and development are:

- the areas of the Company involved (e.g. Marketing and Purchasing);
- the suppliers, for the joint development of solutions in accordance with the technical requirements of the Telecom Italia Group;
- the traditional (e.g. car makers) and digital (e.g. eCommerce players) partners, for the joint Go2market of digital services;
- research centres and universities, for cooperation and joint projects; in 2015, 38 new cooperation agreements with Italian universities were launched on research topics relating to new technologies, coding algorithms, new communication services and paradigms;
- the standardisation bodies and discussion groups (including NGMN, OpenIPTV Forum, OMA, 3GPP, ETSI, TM Forum, W3C, ITU-T) in which Telecom Italia is actively involved;
- the Ministries (Ministry for Economic Development and Ministry of Education, Universities and Research), the European Union and public authorities (e.g. CNR and local authorities) for projects funded through participation in competitive tenders, and partnership initiatives;
- non-governmental organisations, associations, alliances and industry forums (e.g. GSMA, m-health) which bring together all the entities involved in the value chain of the specific market;
- international research and development organisations (e.g. EURESCOM and Joint Technology Initiative).

Relevant issues

The themes on which projects are developed are identified on the basis of the Three-Year Technological Plan, the reference document for the Group, which provides guidelines for the evolution of the network, platform and services. Published annually, following a wide-ranging process involving all the areas of the Company involved, the Plan identifies the main external factors (regulations, standards, vendors, other market operators) that may influence the Company's strategies and highlights the emerging and cross-cutting technologies in other sectors that may be of interest to the Group.

These guidelines also cover the Patents project[1], which for Telecom Italia represents a continuous activity that is structured into numerous processes, involving various corporate departments, aimed at promoting, supporting and optimising patenting activities in the Company and, thanks to collaboration with universities, more generally in Italy.

Applying the metrics of the CSV model, the contribution generated[2] in Italy thanks to patents led Telecom Italia to have a portfolio of more than 3,143 patents (of which 667 deposited), enriched by 33 new deposits in 2015. Premiums of 142,000 euros have been disbursed to 115 innovating employees who developed patents. The patenting areas regard the entire ICT segment (quality of networks, qualifying technologies, multimedia, data analytics and service concepts) with peaks of excellence in the Mobile segment, that put the Company in a 6th place worldwide and second in Europe[3].

Thanks to the collaboration with Italian universities, patenting by the Group helps the rate of innovation of our Country, helping "patent" the universities themselves to a greater extent and making the results of the university research more tangible.

In this new context, the Joint Open Labs[4] (JOLs) play a key role. With the "company on campus" model, they encourage a natural osmosis between the academic and industrial world. Within the Innovation & Industry Relations department, Telecom Italia has launched this innovative model of cooperation, promoting the development of different JOLs distributed throughout national territory and localised within the various Italian universities.

[1] For more details, refer to the CSV sheet *Patents*.
[2] For more details, refer to the CSV sheet *Digitisation of the Country*.
[3] Source: Chetham Sharma.
[4] For more details, refer to the the CSV sheet *Joint Open Lab*.

In applying the metrics of the CSV model, the impact generated in Italy by the Group, thanks to the JOLs saw approximately 150 students, 5 universities, 8 applied research and innovation laboratories involved in 2015.

In a world in which technology facilitates contact with people, by disseminating broadband technology and the services it enables, Telecom Italia is making a contribution to overcoming the socio-cultural barriers that restrict the opportunity to take part in the information society and enjoy its benefits. The innovative services aimed at promoting the digitisation of important areas of activity (e.g. healthcare) include those listed in the following paragraph.

Smart Services

[G4-EC7], [G4-EC8] In the context of public sector services, in accordance with the Italian Digital Agenda (ADI) and European Directives, in 2015 Telecom Italia consolidated and streamlined its offer of Smart Services (a range of services for energy efficiency and digital services in urban areas), Urban Security (providing new services dedicated to security, the environment and optimal energy management) and Digital School. The aim is to promote the "Smart City" model to improve quality of life by developing innovative digital services to ferry communities towards a Smart Community model (as described in the Digital Agenda) that enables new forms of cooperation between citizens and public authorities.

LIGTHING SUITE	SMART BUILDING	NUVOLA IT ENERGREEN	NUVOLA IT URBAN SECURITY	NUVOLA IT DIGITAL SCHOOL
Integrated management of the local infrastructural networks and construction of the Smart City environments. Enabled services: ■ planning of electricity consumption and maintenance. Energy saving is estimated within a range 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; ■ video surveillance; ■ digital communication with citizens and users in general (e.g. tourists); ■ Wi-Fi hot spots (broadband access).	Intelligent management and automation of buildings thanks to specifically designed solutions able to be implemented on a project basis through the components of the Lighting Suite and Nuvola IT Energreen offers. 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 efficiency projects.	Remote management of energy consumption, implemented on Telecom Italia assets and services, for the purpose of saving energy. Enabled services: ■ on-site energy audit: on-site analysis for energy efficiency; ■ Metering & Reporting; ■ Efficiency strategy (advanced reporting and Energy Management consulting services); ■ Energy Cost Management Services; ■ Special Projects: ad hoc efficiency improvement work.	Management of participated security and urban territory control. Enabled services: ■ computerised management of the penalty issuing process for traffic and other violations for local public administration; ■ participated management of urban issues, with reporting of safety-related issues, antisocial activities and urban decay; ■ real time monitoring of the urban and natural environment of cities (humidity, temperature, noise pollution, CO_2, gaseous pollutants, etc.); ■ monitoring of available public parking spaces.	Integrated digital management of teaching and school administration. The offer can be configured according to the requirements of the schools and includes a range of integrated, but modular, services, accessible via a single portal-showcase. Enabled services: ■ enabling infrastructure (fixed internet, wi-fi & security connectivity); ■ management services for the school (administrative management, cloud electronic register); ■ digital teaching services (application integrated with school e-book stores); ■ devices (for users and for classes).

As regards the innovation of business, Telecom Italia aims to supplement its offer of connectivity with new innovative services that satisfy the new digital needs of the customer.

The business innovation enriches the "traditional" Research and Development activities, both by developing prototyping and experimentation options for solutions based on an in-depth understanding and meeting of new digital service needs internally, through the Innovation Centre, and by opening up to external sources of ideas, which can help construct an open innovation model based on a valuable network of players (Joint Open Lab, TIM #Wcap, Tim Ventures, Foundry, Partnerships, etc.).

In this context, Telecom Italia is overseeing the various areas of digital services, namely Enriched Communication, Trusted Digital Life, Business Life, Indoor Life, Mobile Open Life, Digital Entertainment and Big Data; below is a summary of some of the main projects that Telecom Italia has developed or is developing in these areas:

- **Smart Green:** this is the assessment of innovation projects connected with the environment and potential partnerships with the local government offices for the monitoring of air in public offices and urban areas, using networks of sensors connected to the Telecom Italia Cloud.

- **Social Reading:** under this theme, the shared reading app for schools, already tried out by several schools throughout Italy, has been further developed and accompanied by a shared reading solution for Italian libraries, licensed to a specialised partner and which makes it possible to share comments and viewpoints about the book borrowed with others who have already read it or are going to read it. The library solution has a series of settings that facilitate reading even by readers with specific learning difficulties (SLDs).

- **Solutions for "good schooling":** as part of the collaboration between Telecom Italia JOL in Turin and the Regional Education Department of Piedmont, a training course was held for secondary school teachers to teach them how to use the Open Source ROS (Robot Operating System) framework, which is the "standard de facto" framework for writing "hardware dependent" robotic applications.

- **Digital tourism 2.0:** "Virgil, robot a corte" is a project designed to optimise Cultural Heritage, developed by the Telecom Italia JOL in Turin, the Regional Directorate of Cultural Heritage for Piedmont, Museum Hub and with the collaboration of the Turin Politecnico University Department of Architecture and Design. The project aims to provide the museum guides with a digital tool that enables them to show visitors part of the heritage that is otherwise inaccessible for various problems (security, works, unavailability of means for the disabled, etc.) and, above all, place this environment in the centre of a network of interconnected tourism sites thanks to the Telecom Italia data network.

- **Smart Home:** under the scope of the JOL in Milan, in collaboration with Milan Politecnico University, new technologies and services are being tested for future smart spaces. In the smart spaces, internet technologies, proximity wireless connections (Bluetooth Low Energy, Wi-Fi Direct, LTE-Direct) and smart and wearable objects (smart screens, smart glasses, smart watches, etc.) are being studied and used to create new ways of interacting and communicating between people, objects and physical spaces themselves. More specifically, in the project financed - EIT Digital P3S "Playful Supervised Smart Spaces" - a smart space has been developed for children with special therapeutic needs (e.g. suffering from autism) and tested at two specialised centres. Thanks to the work carried out in the Joint Open Labs, Telecom Italia is investing in the design and testing of robotic telepresence solutions, namely robots that can be remote controlled, thereby allowing the person to attend an event and interact with those present.

- **Friend TV (Innovation Center):** (Innovation Centre): the latest versions of FriendTV for smartphones and tablets, initially released at the beginning of 2014, continued to be available in the Apple and Android app stores. FriendTV is a guide for the main television channels, strongly integrated with social media, which allows users to participate in real time in the most highly commented programmes on the Web. The ARTES platform developed by the Telecom Italia laboratories of Strategy & Innovation in Turin, allows for the creation of augmented reality apps very quickly indeed, offering those creating content an interface by which to enrich them and alter them, without having to resort to developers.

- **Big Data:** in this regard, Telecom Italia has launched an evolutionary process based on various different project "activities", within which several initiatives were started in 2015, and completed with the development of the first "internal" applications (aimed at improving the customer experience), the launch of the first services for the business market on anonymous data (with the "Data Visual Insights" offer of presence maps and mobility per segment of interest and reference period) and the first projects aiming to increase the ecosystem of partners ("TIM BD Challenge" contest), also enriching internal competences (training through Master Big Data TIM). Big Data was also worked on by the Joint Open Labs. After the success of the Mobile Territorial Lab experience[1], the Telecom Italia JOL in Trento developed the LivLab project, a new instance of living lab on another territory, relying on the competences acquired and lessons learned. My Data Store, an example of personal data store that came amongst the top reference cases of the World Economic Forum[2], has been enriched by new data connectors that enable transparent management also of social personal data. Working with local institutions in Trentino, the JOL is experimenting with advanced solutions for citizen services based on personal data. One example is Familink, the service that shares opportunities for families throughout Trento, intended for community-trusted hyperlocals. The service was successfully tested by the Provincial Agency for the family, birth rate and family policies of the Autonomous Province of Trento with the families belonging to 3 large parent associations operating on the territory. One of the Open Innovation initiatives was the second Telecom Italia Big Data Challenge[3], which brought together over 1,000 participants from around the world to discuss the creation of smart city projects using large amounts of geo-referenced data.

- **Smart City App - Expo 2015:** Milan developed the subject of "Feed the Planet, Energy for Life" starting with the creation of a Digital Smart City through which all participants had the most innovative technologies available, able to enhance the experience connected with the visit. Telecom Italia has developed and tested the entire ICT chain that required the use of dedicated resources with a high technological standard. In applying the metrics of the CSV model, the contribution generated[4] by the investments of Telecom Italia in terms of ultrabroadband infrastructures developed at the display site and in the near future available for area projects, determine 2.5 million euros in impact on the national GDP. In addition to the internal project resources (approximately 500 resources), the employment generated at the suppliers of the various goods and services of the project, estimated as approximately 250 units, the indirect economic contribution of Telecom Italia can be estimated as around 6.5 million euros.

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[1] www.mobileterritoriallab.eu.
[2] http://www3.weforum.org/docs/WEF_IT_UnlockingValuePersonalData_CollectionUsage_Report_2013.pdf.
[3] telecomitalia.com/bigdatachallenge.
[4] For more details, please refer to the CSV sheet *Expo 2015*.

Innovative e-health services

Telecom Italia is actively involved, either alone or in partnership with external partners, in devising and developing healthcare services at national, regional and local level. Designed to improve the Italian health service and the quality and effectiveness of healthcare, the services allow doctors, nurses and patients to carry out many activities remotely.

The main electronic healthcare service applications available or being developed include:

- value products and services for general practice, aimed at enabling new primary care models and proactive medical services (e.g. screening campaigns managed by general practitioners);
- legal archiving of digital diagnostic images on the network, with a guarantee of the authenticity and integrity of documents;
- management of both healthcare, administrative and logistical processes and a patient's healthcare information throughout the period of hospitalisation;
- the management and coordination of operational facilities dedicated to emergencies (118) and continuity of assistance;
- healthcare monitoring (Nuvola IT Home Doctor).

All the solutions comply with the data privacy and transaction security requirements of healthcare processes.

Nuvola IT Home Doctor

This allows patients suffering from chronic illnesses, or in post-hospital care, to monitor their physiological parameters (body weight, blood pressure, heart rate, blood oxygen levels, glycaemia, lung capacity, electrocardiogram, etc.) directly from their own homes or in properly equipped facilities (medical centres, medical practices etc.). The system consists of a technological platform and software configured on the patient's mobile phone (or alternatively a PC or tablet) and on the healthcare personnel's PC. Based on the plans established by the doctor, patients receive reminders on their mobile phones regarding the measurements to be taken, they take these measurements using portable electro-medical devices equipped with a bluetooth interface and, using their mobile phone, they send the measurement automatically to the online platform.

The benefits of the service are that it improves the patient's quality of life while optimising costs for the healthcare organisation. In order to enhance the functionality of the service and increase Telecom Italia's presence in the social care solutions sector, the following developments are under way:

- adding new devices aimed at increasing the measurements that can be monitored (e.g. physical activity and quality of sleep via wearable devices, blood and urine testing via Point of Care systems);
- the use of internet-connected TVs to improve the usability of healthcare services using various ways of displaying measures and accessing services;
- prevention and wellness services aimed at providing solutions for healthy people to help them maintain, if not improve, their health, particularly in unconventional environments such as schools or workplaces, by means of solutions based on healthcare booths;
- services to support mobility in patients with severe limitations who lose their way very easily and might find themselves in dangerous places, using tracking solutions and mechanisms for family members or service centres to provide assistance;
- video-communication services to support telecare and telerehabilitation activities (e.g. patients can engage in rehabilitation while being monitored by doctors interactively from a remote location);
- services for health and personal well-being, which can be used from a smartphone by means of wearable devices for the monitoring of parameters with the availability of cloud space on which to share information.

The evolution of services is also strengthened by the results achieved through the participation in State-financed projects, such as, for example:

- SSMARTHEALTH 2.0, a project financed by the Ministry of Education, University and Research in which 26 partners take part, which aims to create an innovative technological infrastructure in the cloud computing environment, in which to develop various high added value services and activate new models in the area of health and well-being. In using the clinical competence of La Sapienza University of Rome, Telecom Italia Lab developed the Smart Ageing platform for prevention in adult age conducted on fragile elderly members of the population, at risk of cognitive decline. The platform processes the data and measurements obtained from medical devices, health booths and POCs (Proof of Concepts), questionnaires and cognitive tests acquired by tablets. The doctors draft the prevention programme on the basis of the trends and results of the processing and send patients e-mails with feedback, once a week. The platform is being used for a clinical trial at ITGP2 (Giovanni Paolo II Cancer Institute) in Bari, which ended late 2015.

- MC3CARE, a project financed by the Ministry of Education, University and Research, which aims to develop a technological prototype enabling access to and the use of integrated services connected with citizen health, by means of mobile devices such as smartphones and tablets. Through MobileC3-Care, the citizen is at the heart of an ideal network, interconnected with all the structures forming part of the ecosystem of health, welfare and wellness. The prototype comprises a set of services, including information, tele-medicine (remote monitoring and drug surveillance), wellness, localisation and geofencing, access to digital health systems (FSE, Electronic Health File and CUP, Centralised Booking Centre), agenda and reminds (synchronising events with those coming from integrated systems), personal notebook (with data synchronised with that coming from the integrated systems), discussion forums, privacy management and SSO (Single Sign On). The prototype is currently being validated through interviews with sector stakeholders and a focus group of end users.

Fisio@Home

This is an experimental motor telerehabilitation service which allows medical personnel remotely to monitor the conditions of patients with orthopaedic or neuromotor problems. The prototype, currently being tested, has been developed for the rehabilitation of knees, although the application can be used for other conditions. The system allows doctors to evaluate compliance with the established programme and the correctness of exercises performed.

Movement data is collected by sensors worn by the patient, which measure acceleration, angular speed and magnetic field along the reference axes. The data is sent by bluetooth to a PC, where an application processes it in real time in order to extract information that can be used to define the movements and store them.

In the field of orthopaedic tele-rehabilitation, activities took place in two main directions: extension to new clinical cases and optimisation of the performance. In the first case, thanks to a new collaboration between JOL WHITE[1] and the Viareggio hospital, an activity was launched to establish tele-rehabilitation protocols for functional post-operative recovery in cases of partial or total prosthesis of the knee. With regard to optimising performance, the old sensors are being replaced with new, more efficient ones that are easier to use. This requires integration with the Android app used by the patient when performing the exercises.

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[1] I t is one of the eight Joint Open Labs (JOLs) opened by TIM in 5 universities: WHITE stands for Wellbeing and Health Innovative Technologies Lab and it is located at the Sant'Anna school of advanced studies of Pisa.

Cassiel 2.0
The service provides remote assistance to elderly people, monitoring them and receiving alarm signals in cases of emergency. The sensors located in dwellings process the data collected, to perform behavioural analyses with a view to improving quality of life. The complete solution includes a reminder service, called RicordaMI, to monitor therapies and ensure their completion. With the involvement of pharmacies in entering dosages and adopting a simple tablet app, the system also is usable by people with mild cognitive impairments.

Tele-monitoring of Parkinson's disease
As part of the development of a tele-monitoring system for patients affected by Parkinson's disease, Telecom Italia has filed two patent applications relating to the upper and lower limbs. Furthermore, the option of monitoring new motor tasks was considered and, thanks to a collaboration with the Italian Auxology Institute, an activity was launched to extend its use to the tele-rehabilitation of neurological patients. Finally, based on the data collected during the trials, machine learning techniques were applied to developing a UPDRS[1] automatic assessment algorithm to emulate the assessment provided by the neurologist according to this standardised scale.
WebSensor is a prototype for remote monitoring of progress in Parkinson's disease developed with the support of neurologists. A set of sensors worn on the feet and hands monitors the exercises performed by the patient and sends the data to a platform that processes them and supplies parameters that can be used to assess the status of the disease. The hand sensors, which are often uncomfortable to wear, can be replaced by an appropriate stereoscopic (LeapMotion) camera that frames the hand and automatically extracts the exact position of the fingers in space.

PAPI
It is a prototype tested on 30 people aged over 65, suffering from slight cognitive function deficits, for their remote rehabilitation. The system provides a kit of interactive games for Android tablets, designed with neurologists to simulate the patient's various cognitive functions. The games, tested in collaboration with NeuroCare from Cascina (Pisa) communicate with a remote server to send data relating to the patient's performance and to download their settings. The experiments have allowed the games to be improved, making them more interesting for users and integrating them with other games created by third parties involving the rest of the family, in a kind of game show that encourages their use (GameBus project).

Playful Spaces
Personalized Playful Spaces is a project funded by EIT ICT Labs[2] for the rehabilitation and monitoring of autistic children. Children can interact with a space or sensorised objects that stimulate them when playing and provide the specialist with information on the state of the child. The project is developed in partnership with JOL SCUBE[3], which works on sensorised environments, and with the Politecnico University of Milan and SAM Foundation for scientific and medical support.

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[1] The Unified Parkinson's Disease Rating Scale is the assessment scale most used in evaluating the prognosis of Parkinson's disease.
[2] European Institute of Innovation and Technology.
[3] It is one of the 8 Joint Open Labs (JOLs) opened by TIM in 5 universities; SCUBE (Smart Social Spaces Lab) is based at the Politecnico University of Milan.

Research and innovation in e-security

Telecom Italia is involved in research and innovation regarding cyber security and more generally the security of information and networks.

Activities carried out in 2015 included the following:

- the design of a proprietary platform based on open source technologies for the collection and management of security Big Data;
- the study and development of new examination models to be used with visual analysis tools for security Big Data;
- the study and testing of new approaches for safety analysis and risk management on LTE networks and telco cloud platforms;
- implementation of various scouting and testing campaigns on innovative security solutions;
- the pursuit of activities for the security analysis of mobile apps and mobile devices;
- the collaboration, within the scope of 3GPP[1] SA3 SECAM[2], for the definition of the security requirements and test methods on devices for 3GPP standard networks;
- completion of activities in the international projects IST NEMESYS (Information Society Technologies, enhanced NEtwork security for seamless service provisioning in the smart Mobile EcoSYStem) project and CIP (Competitiveness and Innovation framework Programme) Advanced Cyber Defence Center project;
- the participation, with another 15 partners, in the works of the 5G-ENSURE consortium (5G Enablers for Network and System Security and Resilience), in order to obtain a loan under the scope of the European H2020 programme and study, define and test the security measures and resilience of the future 5G networks, developing a 5G Security Architecture;
- the development, in the context of ETSI[3], of the works of TC CYBER focused on Cyber Security;
- the continuation of other monitoring and guidance activities in the area of GSMA Fraud and Security Group;
- development of cooperation launched in 2013 with EIT (European institute of Innovation and Technology), Digital and the Action Line Guide to Privacy, Security & Trust.

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[1] The 3rd Generation Partnership Project.
[2] SECurity Assurance Methodology.
[3] European Telecommunications Standards Institute.

Public initiatives consistent with the core business

By way of example, here are some of the projects carried out in 2015 in response to the needs of the Community using Telecom Italia technologies.

Fund raising

In a national and international context in which crisis and conflict scenarios multiply, against an ever-increasing number of individuals in need and emergency situations, private fund-raising is a key factor in the cohesion and support "from person to person".

For over ten years, Telecom Italia has been a key player in the solidarity chain associated with humanitarian, scientific or environmental projects which it supports by allowing people to make a donation of 1 or 2 euros by sending a text message and of 2, 5 or 10 euros by calling a dedicated free number from a land line.

Of the 100 numbers intended for the voluntary sector, 20 are shared with other operators, of which 2 are for emergencies. The amounts collected are returned in full, with no withholdings applied by either the tax authority or the Company for the costs incurred.

113 fund raising events were organised in 2015 and a total of around 20 million euros were collected[1].

In 2015, "Dono per..." (meaning "I give for...") was established, a limited liability consortium company founded by Telecom Italia, Vodafone Italia and Wind, that will deal with all initiatives for the raising and distribution of funds for charity as well as loans to political parties or movements, as envisaged by the new legislation. The company is a non-profit organisation and, therefore, any operating profit will be used for social projects. The new legal entity will guarantee a standardised, shared approach with regards to non-profit organisations, political parties, institutions and the media. The Consortium is open to adhesion by other telecommunications operators.

Social Innovation

The term *Social Innovation* defines the set of new ideas that respond to the needs of society more effectively than existing alternatives, while at the same time developing new relationships and collaborations to strengthen it.

The recent WithYouWeDo crowdfunding platform receives requests for donations from public and private entities intending to implement projects in the fields of social innovation, environmental protection and digital culture. In order to promote crowdfunding, in addition to making the technological platform available as necessary for on-line collections (withyouwedo. telecomitalia.com), the company also undertakes to contribute 25% (up to a maximum of 10,000 euros) towards the financing of projects reaching the objective (8 in 2015) and supports, with communication, both aspiring designers (approximately one thousand are involved in the tour that in 2015 involved 13 Italian cities) and projects selected to enter the platform, also through a partnership with the radio broadcast SmartUp of Radio105. In all, more than 270,000 euros were collected.

Applying the metrics of the CSV model, the contribution generated[2] in Italy, in terms of social value is equal to 320,000 euros in addition to the positive impact on the Company reputation due to the 12 million social reaches, 168 press releases, 1 million page views and 225,000 video views generated by the project.

Furthermore, Telecom Italia is a founding member of the Digital Champions Association. The Digital Champion, a position created by the European Union in 2012, is an innovation ambassador, appointed by each Member State of the European Union and the European Commission to promote the benefits of an inclusive digital society. The project involves the appointment of a Digital Champion for each municipality (in the Country) to represent European authorities across the Country. This partnership qualifies Telecom Italia as the first Company to be linked to a wider and geographically extensive network of Italian innovators. The joint projects between Telecom Italia and the Association are: Italiani.Digital a true online

[1] The amount collected by the date the 2015 Sustainability Report was presented, has been estimated; moreover, the amount collected is not directly attributable to the campaigns run in the calendar year due to the time lag between invoicing and payment.
[2] For more details, please refer to the CSV sheet *WithYouWeDo*.

help desk to answer questions Italians have about digital technology, #DigitalDays on e-billing and Digital Championship, a digital talent show to bring out the Country's digital talents and gather together the best practice developed in the different geographical areas.

Applying the metrics of the CSV model, the contribution generated[1], in terms of social value it is equal to 85,000 euros in addition to the positive impact on the Company reputation due to the 22 million social reaches, 82 press releases, 54,697 page views and 5,205 video streaming generated by the project.

Research and development in Brazil

In the 2014-2015 period, TIM Brasil has invested over 2 billion euros in innovative infrastructure, and the plan for the 2016-2018 period is to invest around 4 billion euros, almost entirely dedicated to boosting the Country's 4G coverage.

At TIM Brasil, Research and Development is carried out by the Innovation & Technology department - headed by the Chief Technology Officer - numbering 32 telecommunications, electrics and electronics engineers, IT experts and other technicians of varying origin, competence and experience, which cover all the network competences, pursue the innovative needs and provide support to R&D. The main responsibilities of this department are the definition of the network's technological innovation, the evolutionary needs for new technologies and devices and the architectural guidelines together with the development of strategic partnerships, so as to exploit the new business models and guarantee the evolution of the network infrastructures according to business strategy. In terms of infrastructures, one important result was the constitution of the Innovation Lab, which consists of a multi-purpose test environment based in Rio de Janeiro, which is able to guarantee the assessment/validation of innovative services, products and technologies, certifying their functional efficiency and performance and developing new models and configurations, thus consolidating the innovation flow. The Innovation Lab plays a strategic role in providing support for the conduct of Credibility Test, Trials and Proofs of Concept, for the validation of the services in collaboration with the main suppliers of technology and partners, through the sharing of knowledge and the technological infrastructures for interoperability tests, the assessment of capacity and the definition of technical requirements; in synergy with the R&D department, it facilitates innovation and promotes collaborations with universities and research institutes.

In 2015, more than 200 projects of validation and innovation were completed, which will tend to increase in view of the extensive range of innovation and research and development initiatives underway. In this sense, the 2016-2018 technological plan envisages investments in excess of 30 million reais in this project, which also includes the construction of a new Innovation centre in Guaratiba, in the state of Rio de Janeiro, a building with a surface area of 1,000 square metres able to hold more than 60 people. This new office, which will operate as a national reference point for R&D activities will host technicians and researchers and will be used as an open space of innovation for new opportunities and the development of innovation for the Brazilian telecommunications market.

The Innovation & Technology department has worked on projects aiming to ensure the evolution of the business of TIM Brasil through the recommendation of sustainable, efficient network platforms and "disruptive" models, including anticipating the availability of new services.

The reassignment of the 1,800 MHz spectrum from 2G to 4G is bringing about three important competitive advantages for TIM Brasil: 1) reduction of the costs for the deployment of LTE; 2) increased area of LTE coverage; and 3) improvement of indoor coverage. In addition to the expansion of coverage, use of the 1,800 MHz bandwidth can supply an increase in capacity to cities already covered by the LTE bandwidth at 2.6 GHz, at only a small additional cost. Another important consideration in this scenario is that 70% of current LTE terminals are already compatible with the bandwidths 1,800 MHz and 2,600 MHz, hence the implementation of LTE 1,800 MHz is proving to be a great strategy thanks to the dissemination of devices. On October 30, 2014, TIM acquired a national block (10 + 10 MHz) in the 700 MHz bandwidth. Its use, however, is subject to the cleaning of the spectrum (at present, it is used for the transmission of analogue TV). To this end, in order to manage the switch-off, in Brazil the successful bidders on the auctions of the 700 MHz bandwidth have created a new entity, the EAD (Entidade Administradora fare Processo de Redistribuição e Digitalização de Canais de TV e RTV), in order to manage the spectrum cleaning and avoid problems with interference. TIM plays a guiding role in the group of operators, identifying opportunities to support the switch-off of analogue TV.

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[1] For more details, please refer to the CSV sheet *Digital Champions.*

SUSTAINABILITY THROUGHOUT THE SUPPLY CHAIN

Digital represents the new collective progress factor, offering new opportunities that impact the economy and society in different ways. Suppliers have a direct influence on the communities and in the areas within which they go about their activities and, last but not least, the involvement of the organisations that monitor the related social and environmental aspects, must be considered. The procurement process adopted by Telecom Italia is based on the competitive comparison of the technical and economic characteristics of the offers that are presented by the suppliers selected, based on corporate procedures founded on business ethics. The selection of the Group's suppliers involves a pre-contractual qualification stage in which the economic/financial and technical/ organisational characteristics are assessed. If the result of this assessment - which also includes consideration of the business ethics and respect for human rights and the environment - is positive, the suppliers are registered on the Group Supplier Database (the Database).

Products and services are acquired at the best market conditions possible and must meet specific requirements of functionality, quality, safety and respect for the environment, in complete compliance with current laws and legislation.

[G4-HR1a] In all the contracts signed, there is a specific clause which makes it mandatory for the supplier to accept the principles expressed in the Group's Code of Ethics and Conduct[1] .

[G4-HR1a], [G4-HR1b] As regards the domestic operations, the Italian suppliers on the Database with considerable yearly purchase order value (the threshold is just 3,000 euros cumulative per year) receive[2] initial screening in relation to respect for the principles of the Code of Ethics and are subject to regular assessment. The action taken by Telecom Italia to verify suppliers varies according to the supplier risk level and the amount of the purchase: it varies from simple questionnaires to increasingly complex ones and document checks to inspections at the supplier premises and specific audits on sustainability matters. **[G4-HR10]** Specifically, in 2015 100% of new suppliers enrolled in the Database signed a specific questionnaire in which they undertook for themselves and for any authorised subcontractors, collaborators and employees to observe the principles of behaviour contained in the Group's Code of Ethics and Conduct[3] .

While the supply is taking place, enrolled companies which have received purchase orders normally undergo incoming quality control checks (a requirement for the acceptance and use of the purchased goods) and monitoring of the vendor rating. Environmental and social checks are also carried out[4].

The purchasing departments focus on specific sectors, so as to provide accurate responses to the requirements of internal customers and stakeholders. These expectations are constantly monitored through surveys of both internal customers and suppliers in order to verify the quality of the services delivered (see *Involvement initiatives*).

[G4-12] Telecom Italia's purchases are made principally in the two geographical area where the Group's major operations are sited, that are Italy and Brazil, and are directed for the most part towards the following categories of products/services:

- Telecommunications networks
- Telecommunications products
- Information Technology
- Technical and professional services
- Power systems
- Other

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[1] [G4-DMA Investment] The Group Code of Ethics (CE) reads: "Compliance with the Code must also be guaranteed by external collaborators and, where envisaged in the company procedural system, by third parties that do business with the Group". In particular, the internal procedures require suppliers to accept the principles laid down by the CE and contracts for temporary consortia or corporate investments to contain clauses for safeguarding the 231 Organisational Model (which is based on the CE). The UN Global Compact is, on the matter of human rights, the point of reference of the Group's CE, which reads: "Telecom Italia has signed up to the United Nations' Global Compact on human rights, work standards, environmental protection and the fight against corruption, and ensures that this institutional commitment is fully implemented by undertaking regular initiatives on environmental and social issues". Moreover, the CE contains specific clauses on the prohibition of discrimination, intimidation, corruption and the protection of health and safety. Moreover, the Group policy on respect for Human Rights specifies that "Fundamental Human Rights (e.g. working hours, fair remuneration, minimum age for starting work, workplace conditions, accessibility to the disabled, protection of maternity, prohibition of harassment, forced/compulsory/restricted labour)" and "rights regarding health and safety (we consider the high standards of health and safety as a milestone of our success and our aim is to minimise injuries and occupational illnesses)" must be guaranteed for both the people of the Group and the human resources of suppliers.
[2] Excluding local government offices.
[3] In 2015, in Brazil, such percentage was 98%.
[4] [G4-DMA Supplier Human Rights Assessment] In particular, checks are envisaged on health and safety and the environment, the result of which goes towards forming the supplier rating, to which the system of penalties/incentives is connected. [G4-DMA Employment] Checks are also envisaged in relation to respect for employment legislation.

[G4-12] In total, in 2015 there were 6,595 suppliers which had purchase orders with the Group[1], (-2% compared with 2014 and -11% compared with 2013), of which 3,641 were for the domestic BU (+4% compared with 2014 and +6% compared with 2013), 1,865 for Brazil (-12% compared with 2014 and -19% compared with 2013) and 442 for the Media BU (+5% compared with 2014 and -48% compared with 2013).

[G4-12] For some sectors, the Group also measures and monitors subcontracting suppliers; in particular, for network works, there were 819 subcontracting businesses (+9% compared with 2014 and -6% compared with 2013). In this sector, therefore, the estimated total number of suppliers involved in the supply chain is 839[2].

[G4-13] In the last three years no significant changes have occurred in the structure of the Group's supply chain, excluding those caused by the changes in the Group's perimeter through the sale of assets in Argentina and television assets.

Sustainability initiatives

In 2015 the implementation of the new process that defines the activities aimed at improving the sustainability of the supply chain continued with a more comprehensive system of elements used to assess the sustainability of suppliers during the qualification stages, incoming quality and vendor rating.

[G4-DMA Supplier Human Rights Assessment] In particular, the suppliers were classified according to the potential risks associated with their sustainability performance, carried out using a specific method that considers the social-environmental and business continuity aspects associated with the procurement markets in which they operate. For this reason, the procurement markets (i.e. procurement categories homogeneous among themselves) have been classified in accordance with parameters such as:

- the geographical areas of reference and the risks connected with them,
- the potential impact on the environment and on the society of the suppliers' activities and of the products/ services supplied throughout their entire life cycle, including risks relating to violations of human, employment and environmental rights,
- the impact on the reputation of Telecom Italia as a customer.

A matrix has therefore been created which, by relating the spending associated with the specific purchase market to the risk index calculated on the basis of the parameters listed, has allowed purchase markets to be divided into four classes, identifying those most critical from the point of view of sustainability and economic impact. Suppliers belonging to the classes at greatest risk are the subject of sustainability audits carried out by Company personnel or by personnel from third party companies specialising in the sector. These audits are repeated periodically to monitor the implementation of corrective actions and, if the results are positive, in order to verify that the standard of performance found is being maintained. The tools developed and used for the Domestic BU have been explained and transferred to TIM Brasil, which is finalising the methods of application to its suppliers.

[G4-HR4a], [G4-HR5a], [G4-HR5b], [G4-HR6a], [G4-HR11] All suppliers of the Domestic BU have been assessed to consider the social/environmental risk[3]; in 2015, 40 were considered to be at greatest risk (-31% as compared with 2014 and + 33% on 2013). 20 purchase markets[4] and suppliers operating in the following geographical areas are considered to be at greatest social risk: Asia, Central and South America, North Africa and Eastern Europe.

[G4-HR7] For workers in companies which supply security services in Italy, the Consolidated Law on Public Security must be

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[1] In this section, the data on Olivetti is included in the Group but not in Domestic.

[2] In the Brazilian BU, at present there is no systematic monitoring of level two suppliers. Assessments are currently underway on how to carry out this monitoring in the future

[3] [DMA Freedom of Association and Collective Bargaining] The Group policy aimed at preventing the risk of violation of trade union rights is that relating to "Relations with Suppliers in the Telecom Italia procurement process", which reads "...the Group demands of its suppliers and promotes, through them, and including with regards to sub-suppliers, respect for the following principles and provisions of law in force in the countries where these stakeholders operate. ... all workers must enjoy the legal right to establish and/or subscribe to trade union organisations to protect the individual and collective interests. The role of the workers' trade union representatives must be acknowledged, and they must not be subject to any form of discrimination; in order to go about their union activities, they must be guaranteed remunerated permits and the means necessary to communicate with the workers on the workplace". The same concepts are also stressed in the Group's policy on respect for Human Rights.

[4] Access gateway-marketing, 3G access, access/release software - mobile, NGAN devices, infrastructural applications, production/collaboration applications, assurance, call centre, cables, creation, data – GBE, delivery, development software, handset, materials-cables/masts/transmissions, middleware, environmental-civil maintenance services/facility management, service layer-vertical applications, server/storage, tablet, WAN - VOIP.

complied with, in particular article 138, subsection 2 which specifies the professional and training requirements of sworn guards. In Brazil, Law 7102/83 lays down rules on private guards. Amongst others, it establishes that all those intending to be hired as guards for a guard business must have attended an advance training course, delivered by schools accredited by the Federal Police. After hiring, once every two years the guards must attend an update course.

[G4-DMA Supplier Human Rights Assessment] In 2014, a self-assessment questionnaire was prepared, to be submitted during the qualification of new suppliers belonging to the highest risk purchase categories, in terms of sustainability. Suitable refresher campaigns were also delivered for suppliers previously qualified. Periodically updated based on the results and evolution of the qualification process, the questionnaire was developed according to the main requirements of the relevant responsible corporate management standards relating to respect for ethical values and to safeguarding the environment (including SA 8000, Global Compact and ISO 14001) and to the best industry practices.

[G4-HR10], [G4-LA14] The self-assessment sustainability questionnaire is integrated into the application that handles the supplier qualification process, which automatically extended it to all new suppliers operating in markets where sustainability is considered to be at risk. Refresher campaigns were mounted for suppliers previously qualified in Telecom Italia's Register of suppliers. The results of the questionnaire will make it possible to refine the risk matrix described above.

In 2015, a self-assessment questionnaire was sent out in Brazil on matters of sustainability to suppliers whose orders exceed one million reais, thereby involving 18% of the total number of suppliers. At end 2015, responses had been obtained from the 357 suppliers involved. The results will help direct future selection processes.

In October 2015, the ISO 9001:2008 certificate of conformity of the "Quality Management System" was confirmed for the Purchasing and Service Center Logistics Departments under the responsibility of the Business Support Office, with specific recognition for the initiatives taken in the field of sustainability. This initiative has led to the mapping of 23 department processes with the identification of 117 performance indicators that permit the monitoring and improvement of the administration of services supplied to internal clients and suppliers.

The application of the green procurement policy, which contains guidelines for establishing the environmental requirements of products/services purchased, continues to be an integral part of the procurement policy. The policy covers all stages of the product life: design, production, use and end of life. Published on the "Vendors Hub" supplier portal of Telecom Italia and in the sustainability section of the telecomitalia.com website, the document helps to orient purchasing policies towards low environmental impact products and services.

Some questions on the annual satisfaction survey (see Involvement initiatives) relate to the green procurement policy and to principles relating to human and employment rights, as well as on their implementation by suppliers, with a view to increasing their involvement in matters of sustainability.

Sustainability checks

[G4-DMA Supplier Human Rights Assessment], [G4-DMA Employment] Activities intended to verify the sustainability performance of common suppliers and sub-suppliers continued in 2015 in the framework of the Joint Audit Cooperation (JAC)[1] initiative, in accordance with the Memorandum of Understanding signed at the end of 2009 by Telecom Italia, Orange and Deutsche Telekom. In 2011, Proximus (former Belgacom), KPN, Swisscom and Vodafone Group signed up to the memorandum, followed by Telenor and TeliaSonera in 2012 and Verizon in 2013.

The purposes of the Joint Audit Cooperation initiative are:

- to verify the sustainability of the most important suppliers/sub-suppliers that are common to the members of the JAC, with production plants located in geographical areas with a significant degree of socio-environmental risk. The checks are carried out by means of audits conducted by third parties using a specific method developed by the JAC members themselves, who share the results of the verifications;
- to contribute to the increased sustainability of suppliers/sub-suppliers involved by devising and implementing corrective actions and ongoing improvement programmes, establishing long-lasting and mutually beneficial cooperation with them in terms of efficiency, productivity and risk reduction in the supply chain.

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[1] http://jac.initiative.com.

[G4-HR4b], [G4-HR5c], [G4-HR6b], [G4-HR11c], [G4-HR11d], [G4-LA15] Between 2010 and 2015, thanks to the gradual increase in the number of members of JAC, 209 audits were carried out – including 61 in 2015[1] - in production plants (suppliers and sub-suppliers) located in Asia, Central and South America, North Africa and Eastern Europe. The checks were carried out through international specialised companies selected by competitive tender, and related to a total of more than 600,000 workers. The suppliers included in the audit campaign belonged to the user devices and equipment, network equipment and IT equipment production sectors.

The table below shows the non-conformities recorded during audits on Group suppliers, including those relating to Human Rights. The higher number of non-conformities detected in 2015 is basically a consequence of the higher number of audits conducted last year (61) as compared with 2014 (37) and 2013 (37).

	2015	2014	2013
Environment	27 (22)	14 (12)	13 (3)
Discriminations	5 (3)	2 (2)	2 (1)
Business ethics	38 (35)	18 (18)	32 (19)
Forced Labour	8 (7)	5 (4)	5 (4)
Child labour	7 (5)	8 (8)	11 (5)
Freedom of association	2 (2)	2 (2)	5 (1)
Working hours	33 (27)	23 (20)	34 (19)
Pay	22 (18)	6 (3)	11 (7)
Disciplinary proceedings	5 (4)	4 (3)	2 (1)
Health and Safety	130 (115)	79 (68)	79 (31)

(data relating to suppliers also operating for the Brazil BU is given in brackets)

For all the non-conformities encountered, specific corrective action plans were drawn up that established resolution procedures and timetables amongst others. The implementation of these plans is monitored on a constant basis by the JAC members[1].

On 22 January 2015, Suzhou (China) hosted the fourth annual forum with suppliers involved in the JAC programme, on the matter of: "Transparency of the Supply Chain". The event was attended by approximately 150 delegates, representing members of the JAC, suppliers, members of the press, entities operating in sustainability and NGOs.

Involvement initiatives

Use of the suppliers' portal (Vendors Hub), launched at the end of 2011 to improve communication and optimise operational processes by applying social networking systems to the business context, is now well established. The portal now includes around 3,500 enabled vendors on the application platform.

The portal allows suppliers to access a private area to view important data and events connected to their relationship with Telecom Italia and manage all their own details, thus improving the smooth operation and transparency of the relationship. The Vendors Hub also includes a public area containing information for potential suppliers. Documentation is exchanged electronically (e.g. offers, purchase orders, contracts, qualification documentation, surveys), thus reducing the environmental impact resulting from the use of paper and from transporting and storing documents.

For the ninth consecutive year, the Group's main suppliers have been involved in the survey on satisfaction with the Purchasing department and, more generally, with Telecom Italia. The online questionnaire, consisting of 28 questions, remained active

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[1] 52 of Telecom Italia suppliers, of whom 23 in 2015 alone.
[1] [G4-DMA Supplier Human Rights Assessment], [G4-HR11e] As the aim of the initiative is to help suppliers in the countries at greater risk in terms of the application and respect for sustainability principles improve their performance, non-conformities always result in corrective action and not the termination of the purchase contract.

for 3 weeks. The analysis involved 1,078 active suppliers in the Vendors Hub, with a participation rate of 59.1%, higher than the one recorded in previous editions and around 4.2% higher than the one achieved in 2014. The overall assessment of the supply relationship with the Telecom Italia Group achieved a score of 81/100, having improved by three percentage points compared to 2014. The positive satisfaction rating achieved in previous surveys was therefore confirmed.

Commitment

[G4-DMA Non-discrimination], [G4-DMA Child Labor], [G4-DMA Forced or Compulsory Labor], [G4-DMA Security Practices], [G4-DMA Indigenous Rights], [G4-DMA Supplier Human Rights Assessment].

2015 results and 2016 objectives: Italy

INDICATOR	OBJECTIVE	2015 OBJECTIVE	2015 TOTAL	2016 OBJECTIVE
% suppliers audited.	Total amount of high risk suppliers who have undergone an in-depth sustainability audit since 2010[1].	90% of high risk suppliers, as defined in the paragraph on "sustainability initiatives".	90%	80% of high risk suppliers, as defined in the paragraph on "sustainability initiatives".
% of suppliers assessed.	Suppliers assessed with a basic ethics questionnaire. Moreover, suppliers belonging to risk sectors are assessed with a more complex questionnaire[2].	100% of qualified suppliers, as defined in the introductory part of this section.	100%	100% of qualified suppliers, as defined in the introductory part of this section.
% procurement staff who received training on ESG risks relating to purchasing decisions.	% staff directly involved in procurement, who participated in at least one training session on social, environmental and governance matters.	90%	94%	90%
% contracts containing clauses connected with ESG risks.		100%	100%	100%
% suppliers with ISO 14001 or equivalent certificates.		25% of network suppliers.	60% of network suppliers.	50% of network suppliers.
Integration of the ESG risk profile in the general supplier risk profile.	All suppliers that are qualified and enrolled in the Supplier Register are assessed via a comprehensive "Key Risk Indicator" (KRI) which includes also sustainability considerations.	100% of qualified suppliers, as defined in the introductory part of this section.	100%	100% of qualified suppliers, as defined in the introductory part of this section.

[1] The number of high risk suppliers changes every year, since it depends on both the yearly purchase order value and the procurement market in which they operate. The same applies, in general, to the total number of suppliers operating in the various procurement markets.
[2] This KPI refers to both new and existing suppliers in case of qualification renewal or extension.

2015 results and 2016 objectives: Brazil

INDICATOR	OBJECTIVE	2015 OBJECTIVE	2015 TOTAL	2016 OBJECTIVE
Supplier management	Number of the main suppliers assessed under sustainability criteria	60	357	200

CORPORATE SHARED VALUE PROJECTS

DIGITISATION OF THE COUNTRY

Social Need
Innovative and secure IT infrastructure

Results:
22,200 jobs could be created thanks to the UBB network

ECONOMIC SHARED VALUE

Social Value:
1,906 million euros

Business Value:
3,166 million euros

Scenario

In line with the objectives established by the Digital Agenda in 2020, and the Governments super-fast broadband strategy, the Company's investment plan is strongly oriented towards ensuring access to fixed and mobile super-fast broadband access to the greatest possible number of Italians, reducing the gap that still separates them from more developed European countries, providing ever faster connection speeds and making the most of technological evolution.

Aim

High quality super-fast broadband access becomes a distinctive asset on which to focus the Group's strategy, both to consolidate its current position and, in the medium to long term, to complete its transition from a traditional Telco into a Digital Telco & Platform Company: the country's digital life enabler. The plan provides for the position in multimedia entertainment to be strengthened to include activities in the fields of video, music, gaming and publishing, amongst others. A basic aim of the new plan's development strategy is also gradually to cover an increasing number of areas with the FTTCab service and 100 cities and 51 municipalities with FTTH technology by 2018.

The achievement of the Digital Agenda objectives, the increasing demand for connectivity and services that require large amounts of bandwidth on the move, are also supported by the deployment of TIM's LTE network.

Strategy

By the end of 2015, the fixed super-fast broadband service was available in 772 municipalities, covering 42% of the country's households in total. As a result of the new investments, this will increase to 84% by the end of 2018.

The 2016-2018 plan also boosts the structural transformation of the Network. Investments in innovation, decommissioning and network modernisation will benefit and improve Network architectures and the operating model.

In the mobile arena, the operational plans will allow commercial LTE coverage of the outdoor population to increase by 2018 from the current 88% to 98%, supporting customer growth with positive effects on data traffic.

The expected increase in customer numbers will be supported by bundle offers (fixed/mobile, voice/data/video) that will provide Internet access from a variety of devices (PC, TV, smartphone, tablet) while promoting the replacement of old terminals with next generation ones.
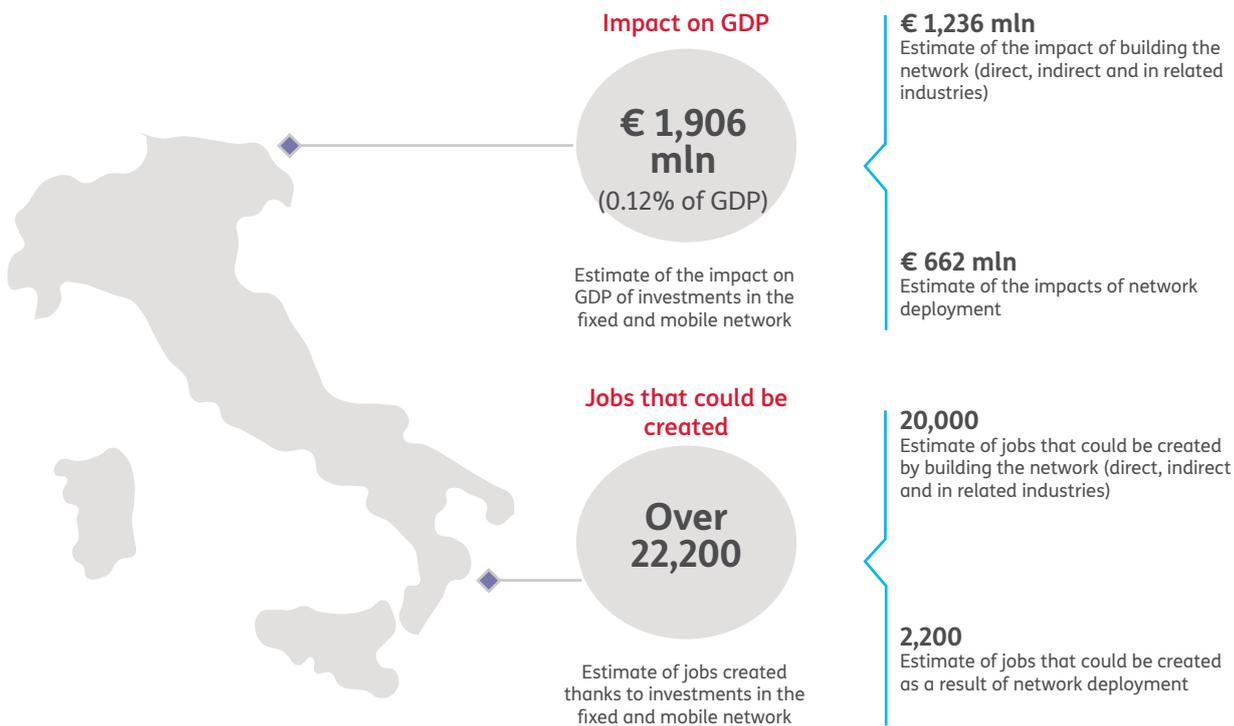
Methodology

The Social Value consists of the following:

- 1,236 million euros: investments made in Italy, in 2015, to build the fixed network (broadband and super-fast broadband) and mobile network (LTE and 3G) multiplied by 0.93[1].
- 670 million euros: obtained by multiplying the 2015 GDP (ISTAT estimate for December 2015) by the increase in the penetration of broadband and super-fast broadband in 2015 compared to 2014 and multiplying this by 0.0256%[2].

The Business Value is Telecom Italia S.p.A.'s revenue from broadband and super-fast broadband (fixed and mobile) for 2015.

Impact on GDP

€ 1,906 mln
(0.12% of GDP)

Estimate of the impact on GDP of investments in the fixed and mobile network

€ 1,236 mln
Estimate of the impact of building the network (direct, indirect and in related industries)

€ 662 mln
Estimate of the impacts of network deployment

Jobs that could be created

Over 22,200

Estimate of jobs created thanks to investments in the fixed and mobile network

20,000
Estimate of jobs that could be created by building the network (direct, indirect and in related industries)

2,200
Estimate of jobs that could be created as a result of network deployment

[1] Impact of broadband on the economy, ITU, 2012 – National Broadband Plan in Germany. The value expresses the euros of GDP generated per euro invested in building the super-fast broadband networks and includes direct (generated by the companies that build the network), indirect (generated by supplier companies) and induced impacts (generated by greater consumption deriving from direct and indirect impacts).

[2] Penetration rate multiplier from the Impact of broadband on the economy study, ITU, 2012. The multiplier used comes from the R. Katz et al. study (2010) and refers to countries with a high penetration (over 31% of the population served by broadband connections). This multiplier estimates the effects of implementing the network (e.g. on increasing productivity) and indicates the potential growth in GDP per percentage point of increased penetration.

EMPLOYMENT IMPACT

Social Need
Economic well-being

Results
around 110,000 direct and indirect jobs

ECONOMIC SHARED VALUE

Social Value:
8,437 million euros
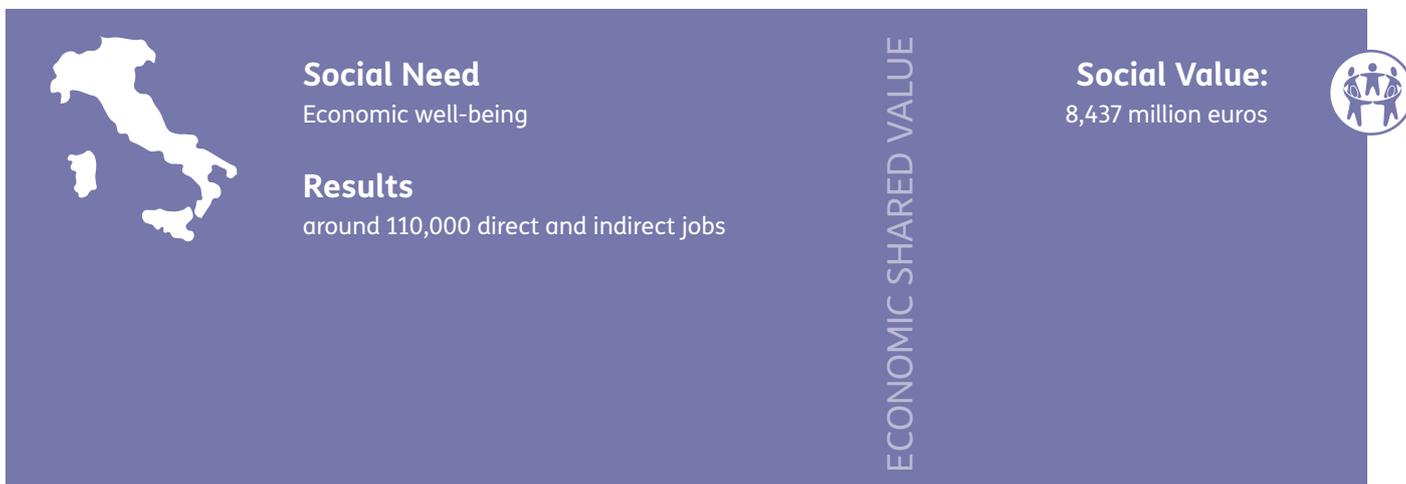
Scenario

The Group's activities generate direct employment for over 52,000 people in Italy. This means that for every 225 employees of the private sector, one belongs to Telecom Italia. The phenomenon becomes even more significant when you consider the indirect employees, i.e. the ones working on projects connected with the activities of the Group. A total of around 110,000 people, corresponding to around 1% of employees in the whole private sector, are either directly or indirectly employed by the Group in Italy.

Direct employment: the direct impact on employment is measurable based on the number of employees. In Italy, the Company can count on a workforce of 52,554 as of 31/12/2015.

Indirect employment: estimated number of workers in the supply chain that is structurally interdependent with the business of Telecom Italia. 57,000 workers are estimated to be employed indirectly by the Company.

Methodology

The Social Value consists of the followin:

- 2,754 million euros: direct contribution to the families of the Domestic Business Unit.
- 1,437 million euros: indirect contribution to the families[1].
- 4,246 million euros: indirect contribution to businesses[2] and public administration.

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[1] The contractual remuneration for the product categories of suppliers were considered for an accurate calculation.
[2] The figures consists of the economic resources distributed to supplier companies in Italy, net of the indirect contribution to families.

Direct and indirect jobs
around 110,000

Direct jobs

Around 53,000

This means that... For every 225 employees of the private sector, one belongs to Telecom Italia

■ **Around €2,754 mln** the direct contribution to households

Indirect jobs

Around 57,000*

This means the employees of all Telecom Italia suppliers (working on projects connected with Telecom Italia's activities)
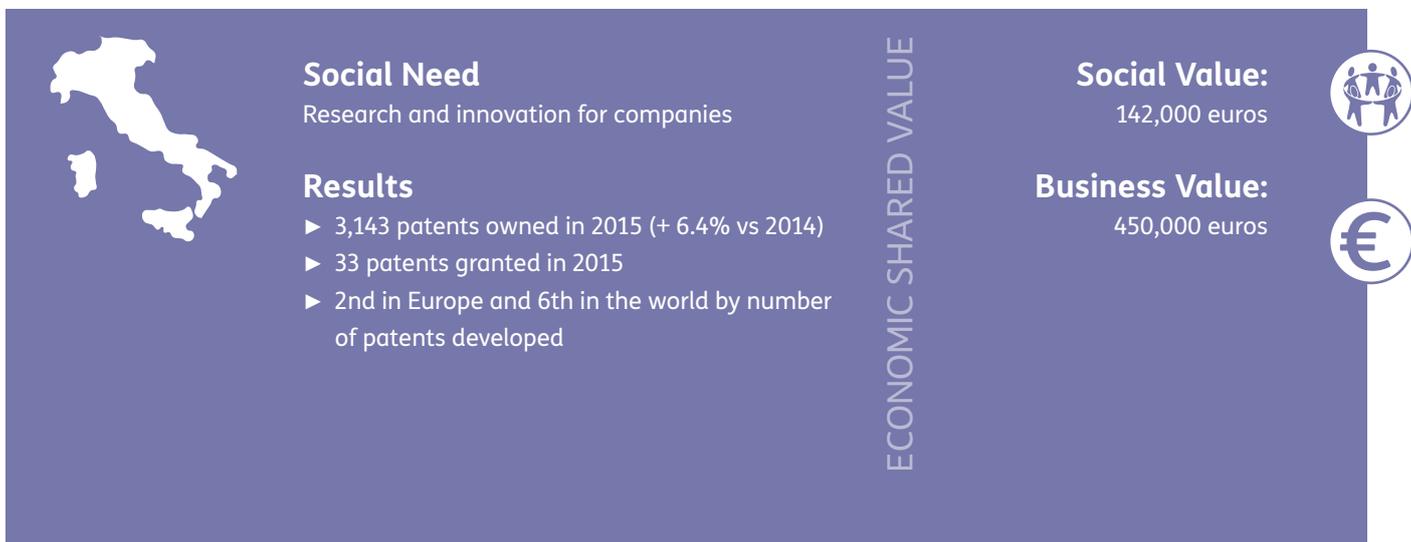
■ **Around €1,437 mln** the indirect contribution to families

■ **Around €4246 mln** the indirect contribution to businesses and local government offices

Value generated: 8,437 mln €

* Source BS data (related industries data updated as of 2014)

PATENTS

Social Need
Research and innovation for companies

Results
► 3,143 patents owned in 2015 (+ 6.4% vs 2014)
► 33 patents granted in 2015
► 2nd in Europe and 6th in the world by number of patents developed

ECONOMIC SHARED VALUE

Social Value:
142,000 euros

Business Value:
450,000 euros

Scenario

From an individual company's point of view, patents are a commercial tool with which to protect investments made in research and innovation and obtain additional financial resources by managing the rights of use. In practice, a patent results in the effective enrichment of a company, in addition to strengthening its market position.

However patents are also an important asset for the country as a whole. This is essentially for two reasons:

■ patenting promotes a wider dissemination of knowledge through publication;
■ patenting helps companies monetise their innovations and grow.

Technical standardisation in the ICT sector is a clear synthesis of the two outcomes just described.

The Patents project is an ongoing activity for Telecom Italia and is split into numerous processes involving various company functions.

The innovation areas of the TILAB and Strategy & Innovation departments make a great contribution to producing patents for the company, often working with the best Italian universities, thus providing a stimulus for patent production across the country as well. The Legal Affairs department provides support with drafting patents, thanks to a team of experts who can investigate the originality and patentability of ideas, follow their entire life cycle and explore the monetisation opportunities.

Strategy

By the end of 2015, the Group's portfolio of patents had grown to include 33 new patents filed and dozens of other proposals undergoing assessment, strengthening a trend that has been growing over the past 3 years. The patenting areas relate to the whole ICT sector, with areas of excellence in the mobile sector.

Since 2014, a new process has been launched to enhance the patents portfolio in standards, in the knowledge that patenting and standardisation activities can interact in synergy, generating value for the community, by increasing the wealth of knowledge, and for the companies that hold the patents. Thanks to this process, 14 patents have so far become essential components of standard technologies.

In details:

■ 3,143 patents owned by Telecom Italia as of December 2015 (667 filed and 476 granted),

■ 33 patents granted in 2015,

■ 174 patents resulting from collaboration with universities and research institutes since the collaboration was launched (1997).

A similar process of encouraging and enhancing patenting activity is also planned in Brazil, by supporting the creation of a new centre of excellence in innovation within the TIM Brasil company.

Moreover, in order to enhance the efforts made in recent years, the People Value department has implemented a policy aimed at rewarding the authors of patents granted and filed the previous year.
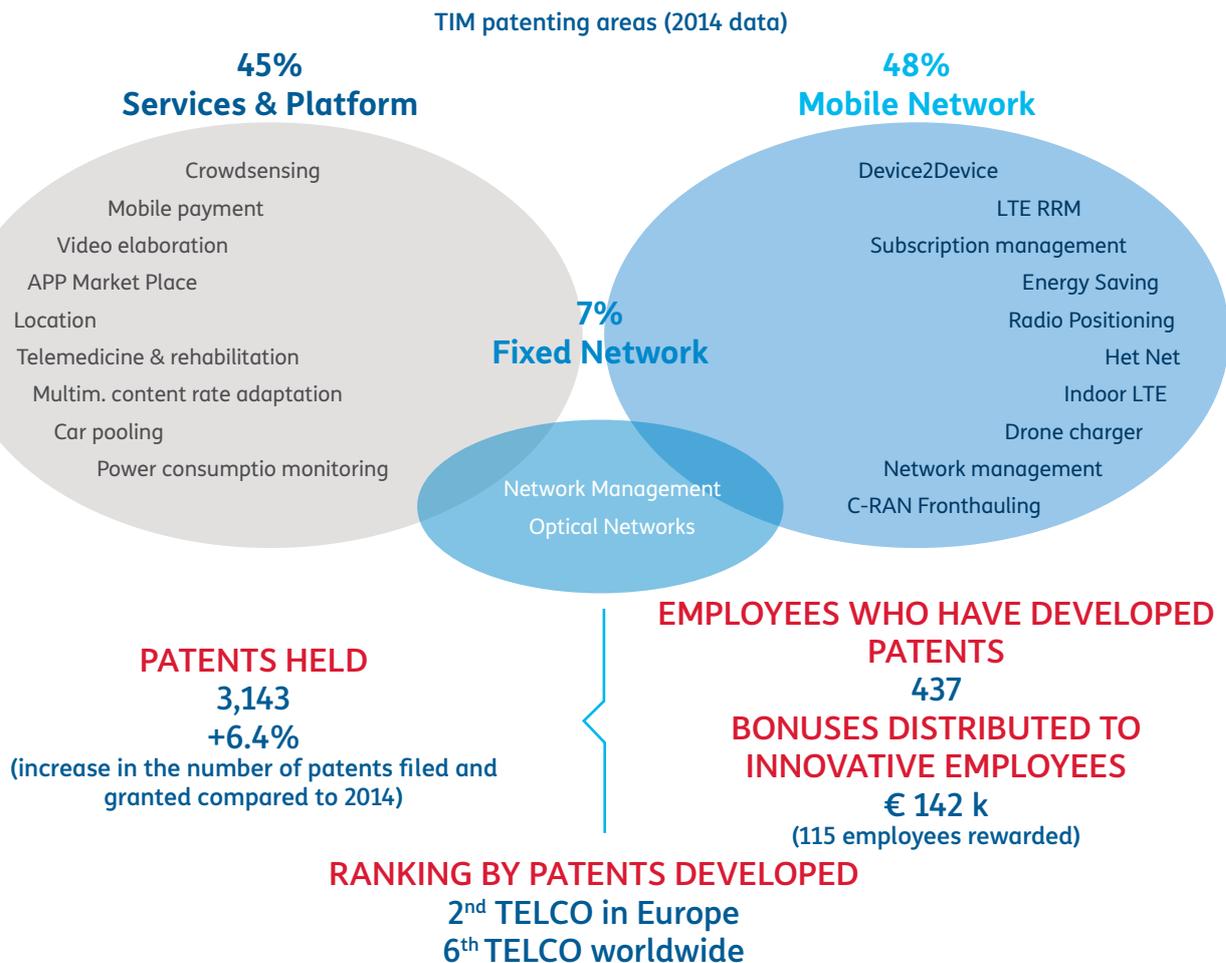
The Group's commitment to technological innovation, which is manifested through its patents, is the shared heritage of a constantly evolving company.

Methodology

The Social Value, which amounts to 142,000 euros, refers to the awards given to innovative employees.

The Business Value, which amounts to 450,000 euros, consists of the following:

■ 250,000 euros: licensing revenue from a global contract of 2.2 million euros over 4 years (2015-2018).

■ 200,000 euros: revenue from compensation arising from the infringement of patent rights.

TIM patenting areas (2014 data)

45%
Services & Platform

Crowdsensing
Mobile payment
Video elaboration
APP Market Place
Location
Telemedicine & rehabilitation
Multim. content rate adaptation
Car pooling
Power consumptio monitoring

48%
Mobile Network

Device2Device
LTE RRM
Subscription management
Energy Saving
Radio Positioning
Het Net
Indoor LTE
Drone charger
Network management
C-RAN Fronthauling

7%
Fixed Network

Network Management
Optical Networks

PATENTS HELD
3,143
+6.4%
(increase in the number of patents filed and granted compared to 2014)

EMPLOYEES WHO HAVE DEVELOPED PATENTS
437
BONUSES DISTRIBUTED TO INNOVATIVE EMPLOYEES
€ 142 k
(115 employees rewarded)

RANKING BY PATENTS DEVELOPED
2nd TELCO in Europe
6th TELCO worldwide

■ The Telecom Italia "policy" used for patents is to use them as a measure of innovative capacity and an instrument of "defence" and "competition". Where possible, the Group makes commercial use of patents and prefers licensing and participation in planet pools, while also resorting to sale in special cases.

■ The number of employees refers to the people who developed at least one patent.

EXPO 2015

Social Need

Innovative and secure IT infrastructure

Results:

► over 100 million euros in revenue
► over 42 million euros invested in sponsorship by the Group
► around 500 employees involved
► almost 70 million digital visits
► over 70,000 events managed

ECONOMIC SHARED VALUE

Social Value:

51,6 million euros

Business Value:

98,9 million euros

Scenario

By investing over 42 million euros, the company has become an Integrated Connectivity & Services Partner, with a pivotal role in implementing and managing all the Information & Communication Technology infrastructure of the event.
Telecom Italia was the first Official Global Partner chosen by Expo 2015, providing state-of-the-art technological infrastructure and solutions and its expertise as an international operator to welcome guests and participants from many countries.
The partnership involved support provided by Telecom Italia to developing a sustainable and smart city – the first Smart City of the future – of which the exhibition site was an example.
As part of the project, the Group installed fixed network, mobile and IT infrastructure, supplied cutting edge technological solutions, including mobile payment and mobile ticketing solutions and smart solutions for visitors and public administration bodies.

Mobile network infrastructure

LTE broadcasting coverage of the whole exhibition site.
137 TB of data downloaded on the Expo site and over 16 million TIM calls, more than 70% of traffic on LTE.

Fixed network infrastructure

Generated almost 1 Petabyte of data (972 Terabytes) across the whole purpose-built Internet network.
Almost 285 Terabytes to support the Wi-Fi network, with peaks of almost 25,000 users at the same time.

The Cloud

■ Over 90 mission critical app services managed in the cloud.
■ Over 21 million tickets issued in the cloud.

Digital Systems

Expo Milan 2015 was also the first Digital World Fair. Advanced technological solutions, for the most part supplied by the Group, helped promote and disseminate its content via web platforms. The Digital Expo offered recorded 70 million visits. Within the exhibition site as well, the visit was enriched by digital tools: via the management platform provided, the 100 interactive totems handled over 10 million sessions and over 1.7 million selfies sent by visitors.

Command and Control Centre (EC3)

The Group created the innovative and complex EC3, a kind of external control room to the exhibition site, which ensured the operational management of the event integrated with the police forces.
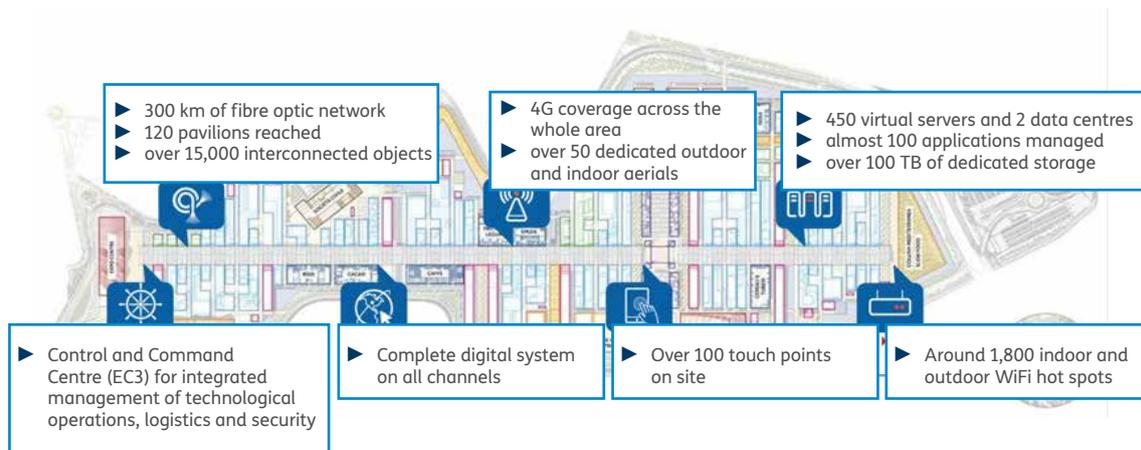
At the request of Expo 2015, Telecom Italia also operated as a Security Operations Centre for the operational management of IT security at the event. Thanks to the technological security platform, the efficiency of the agreed incident management process implemented with the cooperation of the other parties involved, and the effectiveness of the countermeasures, the volume of IT incidents was reduced by over 80% between the inauguration and the end of the event, and no incidents occurred that could be classified as critical.

Methodology

The Business Value is Telecom Italia S.p.A.'s revenue arising from Expo 2015.

The Social Value, which amounts to 51.6 million euros, consists of the following:

- 32.1 million euros: enhancement in kind of the Expo 2015 sponsorship.
- 10 million euros: Expo 2015 sponsorship.
- 6.5 milion euros: indirect contribution[1] to businesses and families.
- 2.5 milion euros: PIL generated by the amount of investment for the construction of the Expo 2015 Network multiplied by 0.93[2].
- 0.5 milion euros: enhancement in kind of the Italy Pavillon.

- ► 300 km of fibre optic network
- ► 120 pavilions reached
- ► over 15,000 interconnected objects

- ► 4G coverage across the whole area
- ► over 50 dedicated outdoor and indoor aerials

- ► 450 virtual servers and 2 data centres
- ► almost 100 applications managed
- ► over 100 TB of dedicated storage

- ► Control and Command Centre (EC3) for integrated management of technological operations, logistics and security

- ► Complete digital system on all channels

- ► Over 100 touch points on site

- ► Around 1,800 indoor and outdoor WiFi hot spots

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[1] The contractual remuneration for the product categories of suppliers were considered for an accurate calculation.
[2] *Impact of broadband on the economy*, ITU, 2012 – National Broadband Plan in Germany. The value expresses the euros of GDP generated per euro invested in building the super-fast broadband networks and includes direct (generated by the companies that build the network), indirect (generated by supplier companies) and induced impacts (generated by greater consumption deriving from direct and indirect impacts).

EXTENDED EXPO 2015

Social Need
Innovative and secure IT infrastructure

ECONOMIC SHARED VALUE

Business Value:
7 million euros

€

Scenario

With the Extended Expo project, resulting from a decision to extend best practice to the whole country, in terms of innovative IT solutions created for Expo 2015 and for the Countries participating in the World Fair, over 500 contracts were signed with public and private companies amounting to 7 million euros in revenue.
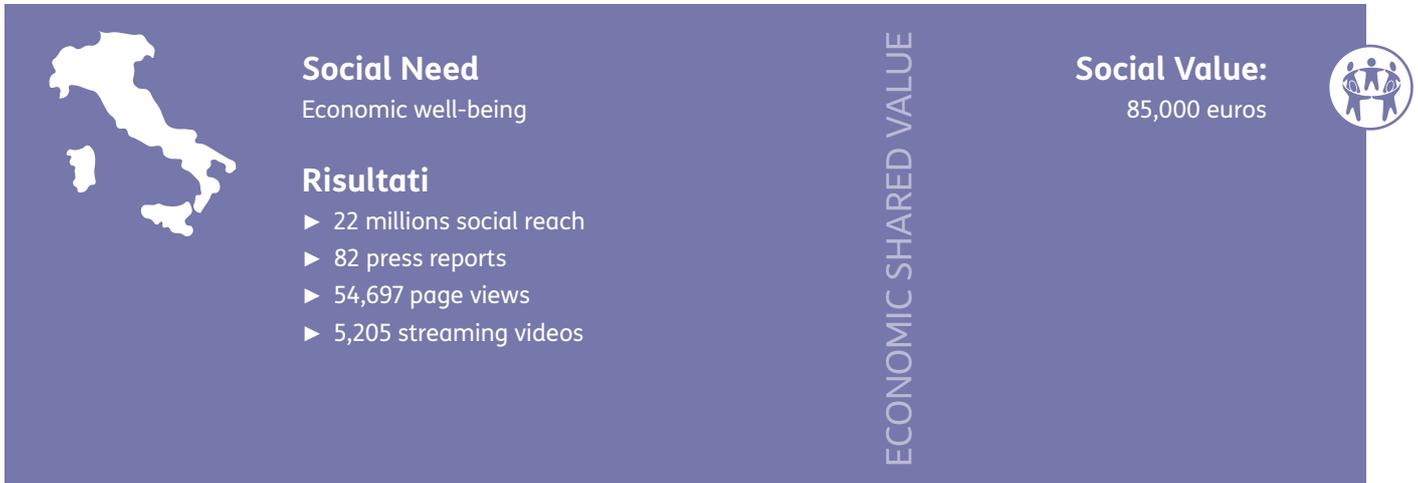
The over 500 companies that became involved in the Extended Expo project had access to an innovative tool (mobile app, web portal or digital signature solution) to enter the Smart City world and make their services and products more visible to the end client.

Methodology

The Business Value consists of the over 500 contracts signed after the event.

DIGITAL CHAMPION PARTNERSHIP

Social Need
Economic well-being

Risultati
► 22 millions social reach
► 82 press reports
► 54,697 page views
► 5,205 streaming videos

ECONOMIC SHARED VALUE

Social Value:
85,000 euros

Scenario

The Digital Champion, a position created by the European Union in 2012, is an innovation ambassador, appointed by each Member State of the European Union and the European Commission to promote the benefits of an inclusive digital society. Digital Champions work with citizens, communities, companies, governments and the academic world, encouraging the dissemination of digital technology in communities, by promoting digital skills in education and e-Government services.

The current Italian Digital Champion, Riccardo Luna, has decided to appoint a digital champion in every Italian municipality, launching the digitalchampions.it website, a point of reference for the network of activists, volunteers and digital enthusiasts tasked with mobilising the Country.

Digital technology is a means of enabling change in society and the Digital Champions initiative addresses digital technology, both as an enabler and in terms of education and training, contributing to creating social value (literacy, digital education) and economic value (opening to new markets/clients) as well.

The Group is a founding member of the Association and at the foundation ceremony on 20 November 2014 it was recognised as the first industrial partner. The closeness to this project is aimed at establishing effective collaboration with the network of Italian innovators across the Country.

Digital Championship is the digital talent show created and produced with the Digital Champions Association. A 6-stop tour during which 5 local Digital Talents are selected each time to illustrate 5 best practices, in 6 minutes each, in order to share them on social media and make them replicable.

Local open calls attracted 100 projects, 5 of which were selected for each of the 6 stops. During the live event, these were voted and commented on by 4 judges, 2 top managers from the Group and 2 leading figures from the relevant area.

All the events were broadcast in live streaming and on-demand on telecomitalia.com/digitalchampionship.
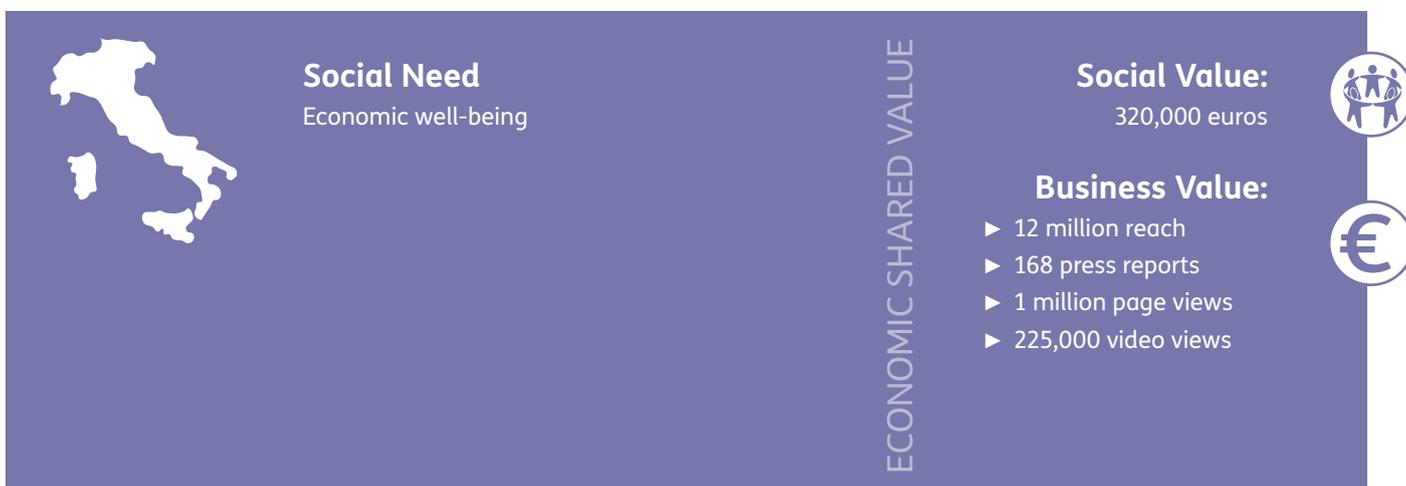
A few figures relating to the project
■ 5,205 streaming users (live + on demand) in 2015;
■ 1,450 physical participants in the 2015 events;
■ 104,655 conversations generated on Twitter in 2015;
■ 300 employees involved.

Methodology

The Social Value consists of the investments made by Telecom Italia to support the project.

WithYouWeDo

Social Need
Economic well-being

ECONOMIC SHARED VALUE

Social Value:
320,000 euros

Business Value:
▶ 12 million reach
▶ 168 press reports
▶ 1 million page views
▶ 225,000 video views

Scenario

WithYouWeDo provides citizens and charities or non-profit-making organisations with an innovative digital tool to raise funds, with a few distinct advantages over other crowdfunding platforms already on the market, supporting projects in the social, cultural and environmental fields. No commissions on the amount donated are taken and the same terms and conditions apply to participants as those applicable to the Group, which reduces transaction costs on payment systems.

To take part you simply need to register at WithYouWeDo.telecomitalia.com and submit your project proposal to the portal. The WithYouWeDo team, which consists of Company experts and crowdfunding platform specialists, checks and selects the ones considered most suitable for each of the proposed areas (Social Innovation, Environment, Digital Culture). The selected projects are then published online for at least three months, during which the funding offered by interested donors can be raised.

The Company provides strong communication support and visibility for the initiatives through the various relevant communities and special dedicated initiatives.

In order to make donations, all you need to do is register on the platform supplying your email address and a password, or using your Facebook, Google or Linkedin account. Donations can be made of between 2 euros and 5,000 euros maximum.

A few figures relating to the project

- 900 donations
- average donation above 260 euros per person
- average project goal: 21,000 euros
- 2,400 registered users
- 240 projects presented
- About 1,000,000 pages visited
- around 500,000 unique users
- over 400 project proposals received from organisations and associations since the launch
- in the first two calls, 27 of the 240 projects received were selected, for which a financial contribution of 25% of the target was guaranteed, up to a maximum of 10,000 euros per project
- in the call, as many as 8 out of 15 projects achieved the target set, raising over 270,000 euros (125% of the target), including the Telecom Italia contribution of around 55,000 euros.

Methodology

The Social Value consists of the investments made by Telecom Italia to support the project.

JOINT OPEN LAB (JOL)

Social Need
► Research and innovation for companies
► Education and training

Results
involving 5 Italian universities of excellence and 10 foreign universities in partnership with the JOLs

ECONOMIC SHARED VALUE

Social Value:
1,6 million euros

Scenario

The role of innovation is ever more crucial for the growth, performance and sustainable renewal of companies, in terms of the transfer of advanced technologies to the market, systematic product and service improvement, radical changes to business and the rules of the game. The distinctive factors of competitiveness, particularly in periods of financial and industrial crisis, are increasingly tied to how able a company is to innovate and invest in innovation.

In this new context, the JOLs play a key role. With the "company on campus" model, they encourage a natural osmosis between the academic and industrial worlds, in which the co-design and co-development of innovative solutions are not just the result of a process but its fundamental reason for existing.

Strategy

Telecom Italia has launched this innovative cooperation model within the Innovation & Industry Relations department, promoting the development of different JOLs across the country, located within Italian universities.

In this context, universities play an outreach role, promoting the direct application, enhancement and use of knowledge to contribute to the social, cultural and economic development of society.

With the JOLs, Telecom Italia has anticipated the Open Innovation paradigm, in which new ideas can come from multiple sources, not always from within conventional organisational structures. Direct and ongoing contamination with an expanded ecosystem of actors encourages the openness of the value creation process, which becomes an essential vehicle for developing entrepreneurship, and in turn generates opportunities for the Company.

The multidisciplinary nature of the partnerships has also promoted an exchange of knowledge and approaches that create new business opportunities.

Thanks to the results achieved, the participation and involvement of the ecosystem created, the JOL project has been renewed for the 2016-2018 period, with plans to extend it to three new Italian universities.

In the last three-year period (2013-2015), Telecom Italia achieved significant results with the JOLs in six important areas:

■ market proposition: over 10 innovative ideas which were transformed in the JOLs into mature business propositions and commercial opportunities;
■ financials: over 5 million euros of funding for Telecom Italia, 1.6 million euros of funding by the Company for the university ecosystem with which the JOLs work;
■ knowledge: 27 patents filed, 4 patents filed with MPEG standardisation body, 1 patent undergoing SpinUp;

- international footprint: collaboration with over 30 centres of excellence and universities abroad; over 15 nationalities in the team making up the JOLs;
- way of working: exchange of new working methods applied to innovation to improve internal skills within the Company;
- brand reputation: over 250 papers, more than 20 events, 40 training seminars at JOLs, over 30 articles a month in JOL blogs, 2 Big Data Challenges involving over 1,100 people, 650 international teams and over 40 university teams.

Methodology

The Social Value consists of the following:

- 450,000 euros invested in material for the JOL programme
- 960.000 euros invested in research projects among the universities involved in the JOL programme
- 200.000 euros invested in structures for the JOL programme

MOBILE BROADBAND

Social Need
- ▶ Innovative and secure IT infrastructure
- ▶ Economic well-being

ECONOMIC SHARED VALUE

Social Value*:
- ▶ Over 5 billion euros of impact on GDP (0,4% of Brazilian GDP)
- ▶ around 13,000 direct jobs generated

Business Value:
Over 1 billion euros in mobile broadband revenue

* The above figures are a preliminary estimate subject to further investigation.

Scenario

By the end of 2014, 24 million fixed broadband and 158 million mobile broadband connections were registered[1], making a contribution of around 87% to the spread of broadband.

In this context, TIM Brasil offers its customers solutions that allow processes to be made more efficient, technological innovation to be improved and competitiveness to be boosted, while increasing the number of jobs available. TIM Brasil therefore has a positive influence on the development of Brazilian society.

All these factors have a positive impact on well-being and the growth of Gross Domestic Product (GDP).

An authoritative study entitled "The Mobile Economy - Latin America 2014", conducted by the GSM Association, revealed that throughout South America the incidence of the mobile phone industry on the trend in overall GDP is significant and growing; more specifically:

- ▪ In 2013, the mobile sector accounted for 4.1% of overall GDP.
- ▪ By 2020, the percentage will increase to 4.5%.
- ▪ The 2013 figure includes a direct impact (1.35%) and an indirect impact (2.75%); in other words the indirect impact is twice the direct one.
- ▪ The impact on the resulting society is considerable. In particular, the mobile sector employs around 2.2 million people, including around 1 million direct jobs and around 1.2 million indirect ones (ratio 1:1.27).

TIM Brasil in particular contributes to producing around 0.4% of Brazilian GDP, if only the direct impact is considered, but if this is added to the indirect impact, its total contribution is 1.1%. The Company's activities generate direct employment for around 13,000 people in Brazil, while the indirect impact in terms of jobs generated is estimated to be in the region of 23,000 (higher than average for South America).

In 2015, the efforts made by TIM Brasil focused on four pillars:

- ▪ expansion: increasing the capacity of existing aerials, installing new aerials and expanding the fibre optic network;
- ▪ network optimisation: upgrading of equipment and processes to minimise noise and interference;
- ▪ flexibility: preventive measures to avoid service interruptions;
- ▪ customer service: expansion and enhancement of service channels.

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[1] Total 3G and 4G connections.

In the coming years, the focus will be on the high speed (Mobile broadband – MBB), data network with the use of 3G+ and 4G technologies. By the end of 2015, 411 cities were reached.

In the 2014-2015 period alone, investments in innovative infrastructure amounted to over 2 billion euros, and the plan for the 2016-2018 period is to invest around 4 billion euros, almost entirely dedicated to boosting the country's 4G coverage. The number of sites with 4G coverage grew by 50% compared to December 2014, from 3,700 to over 5,600 in September 2015. The growth of the 3G network was proportionately smaller (14%), reaching 11,800 sites. The investment in infrastructure allowed the fibre optic network (both urban and long distance) to be extended to 68,000 km.

Methodology

The Social Value consists of the following:

- over 5 billion euros: estimate of the impact of TIM activities on Brazilian GDP; in details, the direct impact of mobile TLC consists of 1.35%[1] of the local GDP. 2015 TIM market share (26,2%) has been applied to this value.
- More than 13,000 direct jobs that increase to about 30,000 considering the indirect impact.

The Business Value is TIM's revenue for innovative services.