



Sustainability Report

2016

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ABOUT TIM

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ABOUT TIM





OUR PROFILE

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TIM Participações S.A. is a holding company, with shares traded on the São Paulo Stock Exchange (B3) and on the New York Stock Exchange - NYSE. TIM is the only company in the telecommunications industry listed on B3's "Novo Mercado," recognized for requiring the highest level of corporate governance. At the end of 2016, the company secured its position within the select group of companies that integrate the Corporate Sustainability Index (ISE), as the only company in the telecommunications industry listed in the index for nine consecutive years. In 2014, TIM established the Statutory Audit Committee according to the Company's Bylaws, with a view to further improve its governance processes.

In May 2016, the Board of Directors appointed economist Stefano De Angelis as the new chairman of TIM Brazil. De Angelis' experience working for the Telecom Italia Group spans 20 years, formerly serving as CFO (Chief Financial Officer) at TIM Brazil (2004 to 2007), Director of Planning and Control (2007 to 2013) and Commercial Director at Telecom Italia S.p.A (2007 to 2013), and chairman of Telecom Argentina between 2013 and 2014.

Controlled by TIM Brasil Serviços e Participações S.A., TIM Participações is a subsidiary of Telecom Italia group, sharing experiences and adopting a policy of good practices with the parent company to build up synergies

that benefit both its operations and customers. The company operates in mobile telephony, fixed telephony and data transmission across the Brazilian territory, through the subsidiaries TIM Celular S.A. and Intelig. TIM provides the benchmark for ultra-broadband services with TIM LIVE, covering the metropolitan areas of the states of Rio de Janeiro and São Paulo.

Based in Rio de Janeiro, the company employs 10.4 thousand people in all regions of Brazil, and is at the forefront of 4G coverage, reaching 1,255 cities, twice as many locations compared to the second placed operator. Keeping its commitment to a long-term vision and to improving customer experience, TIM invested 29% of its total revenue in infrastructure, which amounted to BRL 4.5 billion.

The macroeconomic scenario in 2016 remained relatively challenging, with high unemployment rates and contraction of the gross domestic product (GDP). We achieved BRL 22.7 billion in gross revenue, with an annual negative variation of 11.7%. Our net equity was BRL 17.2 billion while current and non-current loans amounted to BRL 1.1 billion and BRL 5.6 billion, respectively.

[Read more about TIM's economic performance in the Taking care of business section.](#)

4G
Leadership



1,255
cities covered



**Twice
more cities**
than the 2nd place



**Only
telecommunications
company**

listed on the
São Paulo Stock
Exchange's
"Novo Mercado"





A LETTER FROM THE CEO G4-1

I took on the role of chairman of TIM Participações in a challenging moment for both the industry and the country. Despite this scenario, we have attained very positive financial and operational results and we look ahead to a bright future. Without a doubt, TIM remains confident and prepared to take solid steps to keep ruling the industry from on high.

TIM's initiatives are focused on four key pillars – infrastructure, commercial offer, customer experience and efficiency –, which will guide the entire planning and all actions taken by the company over the next three-year period. In short, this means we will continue investing heavily in the expansion and modernization of our network – today, TIM is the leading provider of 4G in cities covered with that technology –, combined with innovative and improved offers to ensure the best customer experience.

We all know that a large company's business operation goes beyond strictly economic and financial goals. TIM reinforces its commitment to sustainable and efficient management of resources, ongoing development of

its human capital, large investments in technology and transparent dialogue with institutions and society. Its mission to broaden access to science, technology and innovation in the Country is also reflected by the principles and strategies of Instituto TIM [TIM Institute].

TIM remains the only company in the telecommunications industry listed on the São Paulo Stock Exchange (B3)'s "Novo Mercado," – which requires the highest level of corporate governance –, and is the company listed on B3's Corporate Sustainability Index (ISE) portfolio for the longest time. As signatories of the Global Compact, we reaffirm our commitment to adopting its principles in our strategy, culture and daily operations. As such, this report serves as the company's Communication on Progress regarding the application of those principles. We also run our business according to the principles set out in the Code of Ethics and Conduct and in the Anti-Corruption Policy.

I would like to thank all of you who have striven to reach our goals, particularly our employees and partners. TIM is a company made of people working for people.

Stefano De Angelis
Chief Executive Officer
of TIM Participações



“Our activities are focused on four key pillars – infrastructure, commercial offer, customer experience and efficiency”



ABOUT THIS REPORT

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This is TIM's ninth sustainability report, developed according to the guidelines of the Global Reporting Initiative (GRI), version G4, Core option. For the period of 2016 (January 1 to December 31), the reporting of indicators comprises activities of TIM Participações S.A. in Brazil, including its two subsidiaries – TIM Celular S.A. and Intelig Telecomunicações Ltda., fulfilling the company's commitment to disclose its economic, social and environmental goals and results to society. This report describes the performance of 47 indicators in 2016 and the historical series of the previous two years, where applicable and for comparisons purposes. The last report, relating to 2015 and published in 2016, contained the same number of indicators.

The information contained in this publication has been audited by KPMG, based on limited assurance, according to statement on page 92.

To learn more about our sustainability initiatives, go to www.tim.com.br/sustentabilidade. Queries, suggestions or comments on the content of this report can be sent to respsocialcorp@timbrasil.com.br.





Materiality

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The company carried out its first materiality test in 2008, and has been working since then to further improve and develop this aspect, which involves identifying critical topics that are essential for managing the company, its corporate strategy and its approach to sustainability. The second materiality test was held in 2011. This included the company's first stakeholder panel, involving consultations with representatives of the main stakeholder groups at TIM (employees, suppliers, commercial partners, customers and public authorities). The material topics compiled in this consultation guided the communication of the company's progress in social, environmental and economic affairs. In the following year, with the introduction of the Engagement Policy, TIM defined principles for dialogue with and involvement of its stakeholders.

At the beginning of 2014, a third materiality test was

conducted, according to GRI guidelines version G4. As internal perspectives, the 2014 TIM materiality matrix took into account consultations with employees via face-to-face dynamics and online surveys, face to-face interviews with senior executives, and analysis of strategic internal documents (policies and guidelines). The 'Relations and Impacts' face-to-face dynamics involved the participation of key personnel from 11 areas of the company, primarily resulting in the Stakeholder Map, which introduced TIM's stakeholder groups and their impacts on the business. From this map, TIM selected stakeholders to participate in the external perspective stage, which included online consultations with customers, commercial partners and suppliers, and an interview with a representative of the Ministry of Communications. The process also comprised the analysis of internal policies and procedures, as well as comparative studies with other companies in the industry.

The list below features the eight topics considered material, which are addressed in this report and taken into account when managing sustainability.

- **Customer satisfaction and service quality**
- **Incentives to innovation applied to products and services**
- **Transparency and accountability to stakeholders**
- **Ethical conduct in business**
- **Digital inclusion**
- **Dialogue and communication with stakeholder groups***
- **Managing electronic products***
- **Investment in infrastructure and development of new technologies.**

In addition to the aspects related to the topics above, the company continued monitoring and reporting other GRI aspects and indicators that are considered relevant to accountability and aligned with its culture of transparency.

*For better understanding of material topics, TIM joined "Communication between the company and its stakeholder groups" and "Dialogue with stakeholder groups." In the topic described as "Managing electronic products," the term "waste" was substituted with "products."





Impacts within and outside the company G4-20 G4-21

MATERIAL TOPICS	GRI G4 ASPECTS	INDICATOR LIMITS	LEARN MORE IN
Customer satisfaction and quality services	Customer Data Privacy Product and Service Labeling	Internal and External	Taking care of customers
Incentives to innovation applied to products and services	Energy	Internal and External	Taking care of the environment
Transparency and accountability to stakeholders	Materials Water Effluents and Waste Emissions Procurement Practices Labor practices and decent work Human rights Local communities Biodiversity Indirect economic impacts	Internal and External	Taking care of people Taking care of society Taking care of the environment
Ethical conduct in business	Compliance Anticompetitive practices Anti-corruption Public Policies	Internal and External	Corporate governance Taking care of the environment
Digital inclusion	-	External	Taking care of society
Dialogue and communication with stakeholder groups	Marketing communications Stakeholder engagement	Internal and External	Taking care of society Legal compliance
Electronic product management	Products and Services	External	Taking care of the environment
Investment in infrastructure and development of new technologies	Economic Performance	Internal and External	Taking care of business



ABOUT TIM

COMMITMENT

INNOVATION AND AGILITY

CONNECTING AND CARING
ABOUT EACH ONE

TRANSPARENCY

GRI



COMMITMENT





TIM believes its business activities should be aligned with all of its stakeholders' expectations. Its values include recognizing to be a part of a broader common project and collaborating by investing its talent and efforts in each and every action.

The company continues pursuing the motto "Evolving is doing things differently," which guided its institutional campaign to launch TIM'S new logo and marketing positioning in 2016. TIM is aware of the challenges ahead. The Brazilian mobile telephony industry is one of the most competitive in the world, and one of the very

few featuring four major competitors with nationwide presence and a market share ranging from 17% to 30%.

To secure its position in such a competitive market – as a quality-oriented operator with leverage to compete in high value segments –, the company will follow-up its strategy towards greater operational and organizational efficiency, infrastructure expansion, refining customer service channels, as well as recovering the postpaid segment, by adopting a more comprehensive portfolio and the concept of "more for more". **G4-56**

Our mission

Connecting and caring about each one so that everyone is able to achieve more.

Our vision

Be the country's number one choice in telecommunications services.

- Because we are constantly evolving and innovating in all aspects.
- Because we fulfill our promises.
- Because we take care of our customers respectfully and efficiently.
- Because we make continuous investments in a competitive and up-to-date infrastructure.
- Because we offer user-friendly and quality services and plans.
- Because we lead the transformations in the industry.
- Because we are sustainable and add value to our shareholders, customers, collaborators and stakeholders.

Our values

CUSTOMER CARE

- We ask legitimate questions to find out what customers truly want.
- We listen carefully and curiously to what customers have to say.
- Our decision making process takes heavily into account our customers' experience.
- We are proud to have a positive impact on the lives of our customers.

COMMITMENT

- We are accountable.
- We recognize we are part of a broader common project.
- We collaborate by investing our talent and effort in each and every action.

TRANSPARENCY

- We establish clear and true relationships with everyone.
- Transparency and integrity in our actions build trust.

INNOVATION

- We innovate by finding new ways to do things.
- We rely on creativity to go further.

AGILITY

- We do "more", "better" and "faster" in an increasingly complex and dynamic world.
- We plan, decide and execute quickly, making things easier for everyone around us.



Human rights

TIM believes that companies must play a major role in protecting human rights, and had been committed to the subject long before joining the UN's Global Compact in 2008. In 2015, the operator reiterated this commitment by joining the Human Rights Working Group organized by the Global Compact Network Brazil.

For TIM, the concept of human rights means respecting and ensuring non-violation of internationally recognized rights that go beyond the common understanding of workers' rights and non-discrimination. On a broader scale, it also comprises data privacy, internet security, access to information, freedom of speech, among others.

Its actions are aligned with internal rules governing the subject, such as Telecom Italia group's Human rights policy, TIM's Code of Ethics and Conduct, the Social Responsibility Policy as well as the Policy for Relations with Suppliers in a TIM Purchasing Process.

Internal monitoring and control of respect to human rights is performed through the human rights due diligence process, improved by the company on an ongoing

basis. This process comprises assessment of impacts, integration and action, monitoring, communication and reporting, among other steps. TIM also applies the UN Guiding Principles on Business and Human Rights, also known as John Ruggie's Principles, in addition to adopting German Global Compact Network's guidebooks².

TIM adopted the Organizational Capacity Questionnaire Assessment Instrument (OCAI) developed by the German Global Compact Network, carrying out a self-assessment to identify its level of engagement with human rights issues.

On a 1 to 6 scale of engagement, ranging from "unaccountable" to "promoter of human rights," the company reached the average score of 3.2 in the last assessment, held in 2015. One of the weaknesses identified was the lack of a specific policy on Human Rights.

In parallel, the Telecom Italia Group launched its Human Rights Policy in 2016, aimed at addressing the human rights issue as a key requirement for all activities carried out by TIM. Its principles applies to all Telecom Italia Group employees.

In 2016, TIM attended the Due diligence training on Human Rights organized by Global Compact Working Group as well as the Free Conference on Business and Human Rights for development of public policies on these subjects in Brazil. As a result of this meeting, several proposals and motions were approved by the attending companies, which initially identified 15 aspects with potential impacts on human rights related to the telecommunication industry. TIM prioritizes actions towards four topics:

- Work conditions in the supply chain
- Customer and employee data privacy and security
- Adult content and sexual exploitation of children and teenagers
- Discrimination in the workplace and in the selection process.

Among the people most vulnerable to these impacts, we identified children and adolescents, women, the elderly and people with disabilities.

² Five steps towards managing human rights impacts of your business and assessing human rights risks and impacts.



To disseminate this agenda internally, the company organized meetings with the main areas involved to evaluate these potential impacts, review and identify existing actions (prevention, mitigation, remediation and management), as well as identify gaps and draw plans for improvement.

TIM also offers a Whistleblower Channel, monitoring and analyzing grievances reported by internal and external stakeholders. In 2016, eight complaints on human rights were reported. The increase in the number of complaints received was due to greater exposure to the channel. After proper analysis, the company identified four justified complaints, and implemented all correction and/or alignment and feedback measures. [G4-HR12](#)

NUMBER OF GRIEVANCES ABOUT HUMAN RIGHTS IMPACTS FILED, PROCESSED AND ADDRESSED THROUGH FORMAL GRIEVANCE MECHANISMS G4-HR12	2015		2016	
	RECEIVED	JUSTIFIED	RECEIVED	JUSTIFIED
Total number of complaints received	0	0	8	4
Total number of complaints processed	0	0	8	4
Total number of complaints addressed	0	0	8	4
Total number of complaints received in the previous period and addressed during the reporting period	1	0	0	0

Among the actions to disseminate the subject in the company on a weekly basis, TIM promotes the diversity campaign in its internal communication channels. In 2017, a new self-assessment will be carried out using the OCAI questionnaire.





Policies

TIM counts on a set of regulatory policies and documents that guide the company's activities within several internal processes, and according to the rules set out in the Code of Ethics and Conduct. TIM believes that complying with such tools to fulfill the commitments undertaken with its stakeholders translates into responsible management. The full versions of some of the policies highlighted below are available on the investor relations site, at www.ri.tim.com.br.

SOCIAL RESPONSIBILITY POLICY

Reports our guidelines on matters such as health and safety, diversity, child labor and slave or forced labor, freedom of association and the right to collective bargaining, non-discrimination, psychological and sexual harassment, working hours and compensation.

ENVIRONMENTAL POLICY

It is aimed at fostering continuous improvement in environmental performance. This includes compliance with existing legislation, with the requirements of regulatory authorities and with the Telecom Italia Group's guidelines, reinforcing the company's commitment to sustainable development.

CLIMATE CHANGE MANAGEMENT POLICY

Comprises principles to be applied to TIM's activities with the goal of promoting proper and efficient management of greenhouse gas (GHG) emissions, complying with the applicable laws, regulatory authorities, and Telecom Italia Group's guidelines.

SAFETY AND OCCUPATIONAL HEALTH POLICY

Establishes principles to be applied to all our activities in Brazil, aimed at promoting continuous performance improvement in safety and occupational health initiatives, in compliance with applicable laws, regulatory authorities, and the guidelines of the Telecom Italia Group, reinforcing TIM's commitment to preventing occupational diseases and accidents among its employees in Brazil.

FREE MARKET DEFENSE POLICY

This document is aimed at informing employees and workers of the principles concerning fair competition in Brazil. Thus, professionals, in particular those who deal with external stakeholders, are apprised of antitrust legislation and of the activities of the authorities responsible for its application in Brazil, which enables them to identify and avoid breaches of laws and standards.



RELATED-PARTY TRANSACTION POLICY

This sets forth the guidelines and procedures to be followed by TIM companies in Brazil with respect to transactions with private individuals or companies that are considered related parties. According to law, no special favors may be granted in these transactions.

RELATIONS WITH SUPPLIERS IN A TIM PURCHASING PROCESS

In Brazil, TIM adopted measures to establish a more efficient purchasing process aimed at reducing costs while maintaining quality and excellence, and ensuring social and environmental responsibility in the goods and services acquired. Additionally, purchases should be made within technical specifications, should involve supplier qualification assessments and should be priced competitively. Similarly, suppliers are expected to behave ethically, respecting freedom of association, the right to collective bargaining and diversity, combating discrimination and harassment, as well as having proper monitoring and control systems in place.

ENGAGEMENT POLICY

This policy is aimed at guiding and encouraging participative relations among employees. It also promotes the debate and greater involvement with the company's key stakeholder groups, seeking to multiply these actions in their spheres of influence.

MARKETING COMMUNICATION POLICY

Intended to align TIM's marketing communication actions and projects with its Purpose and sustainability principles. This process should be conducted responsibly and transparently, mitigating risks in the company's commercial activities while respecting the self-regulatory codes of the industry and the legislation, in addition to incorporating guidance from recognized and respected authorities.

CORPORATE RISK MANAGEMENT POLICY

Aligned with Telecom Italia Group and inspired by the international COSO³ framework, this policy is aimed at defining and managing risks homogeneously, in order to build a reliable basis for decision making and planning; assist the company to manage risks, enabling the attainment of strategic goals; raise awareness; identify threats and opportunities; improve reliability and prevent or minimize social and environmental risks and damages to the company's reputation.

ANTI-CORRUPTION POLICY

Approved by the Board of Directors in 2013, the Anti-corruption policy includes global anti-bribery rules that prohibit offering, paying, asking for or accepting advantages or favors of any nature, and guide employees on how to act in such situations. Learn the mechanisms to control and apply the policy in [Ethics and transparency](#).

CONFLICT OF INTEREST MANAGEMENT POLICY

This policy was approved by the Board of Directors in 2013, and sets guidelines to prevent and manage situations involving conflicts of interest, in order to avoid or contain impacts that are detrimental to the interests of the company as well as support and protect the persons involved, of whom impeccable, transparent behavior is expected. It applies to all TIM employees and to the areas involved in managing potential cases of conflicts of interest.

INTANGIBLE ASSET MANAGEMENT POLICY

This policy aims to establish the main guidelines that serve as the basis for an efficient and effective management of intangible assets (those assets that are not physical or financial in nature and originate from innovation, organizational practices and human resources) at TIM Companies in Brazil.

NONPROFIT DONATION POLICY

It describes the principles to be followed in case of donations to charitable organizations, foundations and nonprofits. It also aims to regulate the management of donations made by TIM companies, according to the Code of Ethics and Conduct, company values, Organizational model, the anti-corruption policy, the conflict of interest policy, as well as any legal provisions and internal rules governing the accounting and fiscal aspects related to this topic.

³COSO (Committee of Sponsoring Organizations of the Treadway Commission) is a non-profit organization established in the United States, dedicated to combat corporate fraud in internal processes and procedures of companies considered to be a global benchmark.



Institutional Partnerships and Participation in Sustainability Indexes

G4-15 G4-16

TIM reaffirms its commitment to social, environmental and ethical demands by taking part in various initiatives and global treaties. TIM believes that engaging in this resolutions will not only broaden the visibility of important subjects for society, but will also allow the company to keep pace with the best practices in the market and incorporate more efficient actions to its management.

As a signatory of UN's Global Compact, TIM is engaged in collaborating with the 17 Sustainable Development Goals (SDGs), an important global agenda adopted by the 193 member states of the United Nations, intended to build on the Millennium Development Goals and complete what these did not achieve.

The SDGs seek to mobilize global efforts to meet several goals based on a broad set of commitments and targets by 2030. According to the United Nations, this agenda is a plan of action for people, planet and prosperity. It also seeks to strengthen universal peace in larger freedom and eradicate poverty in all its forms and dimensions, including extreme poverty.



All countries and stakeholders – governments, corporations, academia and civil society – have been called upon to act in a collaborative partnership to implement this plan. TIM recognizes the importance of the private sector in the development of sustainability, not only for the search for innovation and impact mitigation, but also for its influence in its value chain.

TIM actively participates in initiatives conducted by the telecommunication industry as a member of the National Union of Fixed and Mobile Telecom Companies of Brazil (SindiTelebrasil) and the Brazilian Association of Competitive Telecommunications Service Providers (Telcomp), as well as the GSM Association. [Read more in Public policies](#). Learn about the company's key initiatives below.



GLOBAL COMPACT

The Global Compact is a United Nations (UN) initiative aimed at mobilizing the corporate community to conduct their business in line with essential and internationally accepted values in the areas of human rights, work relations, environment and anti-corruption. TIM has been a signatory since 2008 and has incorporated the ten principles of the Global Compact in its strategy, culture and daily operations.

GLOBAL REPORTING INITIATIVE (GRI)

In 2008, TIM adopted GRI's international sustainability reporting guidelines, an important tool to assess results and reflect on actions taken within the three pillars of sustainability (economic, social and environmental), identifying gaps and points for improvement.

CORPORATE SUSTAINABILITY INDEX (ISE)

For the 9th year in a row, TIM integrates the Corporate Sustainability Index (in Portuguese, Índice de Sustentabilidade Empresarial - ISE) created by B3. ISE was designed as a reference for socially responsible investments. Rated for fomenting good practices and encouraging the implementation of new actions each year, the index is composed of shares of companies renowned for their commitment to corporate and social sustainability.

COMPANIES FOR THE CLIMATE (EPC)

TIM joined the Companies for Climate (Empresas Pelo Clima, in Portuguese) in 2010. This voluntary initiative – coordinated by the Center for Sustainability Studies of Fundação Getúlio Vargas (GVces) – is a permanent corporate platform intended to mobilize, raise awareness and articulate corporate leaders towards management and reduction of GHG emissions, climate risk management and the proposition of public policies and positive incentives within the context of climate change. [Read more in Climate change.](#)

CDP

CDP is a non-governmental organization that has built the largest global database of corporate information about climate change, queried by investors, government agencies, legislators, the academic community, and society. The company has answered the CDP questionnaire about its GHG (Greenhouse Gas) emissions and its strategy regarding climate change since 2007.

MSCI GLOBAL SUSTAINABILITY INDEX

TIM has been listed in the MSCI ESG (Environmental, Social and Governance) Research Global sustainability index since June 2015. MSCI (Morgan Stanley Capital International) is an independent organization with 40 years of experience in governance assessments and analyzes of social and environmental indexes for the global investor community, covering more than 5,700 public companies throughout the world.



OUR GOALS











Achieved



Not achieved

To move forward with its Corporate Social Responsibility program, TIM sets out annual performance goals in specific subjects, based on goals and outcomes recorded in the previous year. The table below displays the performance in 2016 and the targets for 2017.

SUBJECT	INDICATOR	UNIT OF MEASURE	2016 TARGET	OUTCOME	2017 TARGET
Volunteering	One working day allowed for employees who volunteer to work in the Citizens Without Borders program.	%	1.5	 1.6	1.5
Training	Training (total hours in the classroom + online + on the job).	No. of hours	Adjusted to 640,378 ¹	 692,571	450,000 ²
Training	New employees trained in sustainability issues.	%	90	 91	90
Environment / Batteries	Collection of end-of-life mobile phones, batteries and other accessories for recycling.	Tons	2	 0.96 ³	2
Environment / Waste	Recycling of waste generated in the offices (recycled waste / total waste generated).	%	25%	 21% ⁴	10% ⁵
Environment / Water	Reducing water consumption in the offices.	%	1% reduction	 18% reduction ⁶	1% ⁷
Energy / Network	Limit of increase in the mobile network power consumption.	%	22%	 21.7%	12%
Supplier management	Suppliers evaluated on sustainability issues.	No. of suppliers	200	 433	250

¹ The 820,000 target had to be adjusted to 640,378 due to budget cuts and staff reorganization.

² The 2017 target reduction was due to closure of two call centers (which accounted for a large volume of training hours) and budget cuts.

³ SIM cards discarded by the Distribution and logistics Centers (CDLs) will be taken into account in 2017.

⁴ TIM recycled nearly 17 tons of paper with the disposal measure; however, a very high volume of waste was generated with the construction works in the transfer of the headquarters in Rio de Janeiro.

⁵ The amount of recyclable waste generated in offices decreased compared to non-recyclable waste due to several actions implemented through printer pool efficiency, including paper reduction (read more in [Material and waste management](#)).

⁶ The 18% reduction was achieved with demobilization of many square meters of administrative offices throughout

2016, reducing the installed real estate plant volume (including two call centers that consumed a lot of water given the high number of employees and operating hours), as well as of water saving measures, such as rainwater collection and harvesting water from air conditioners.

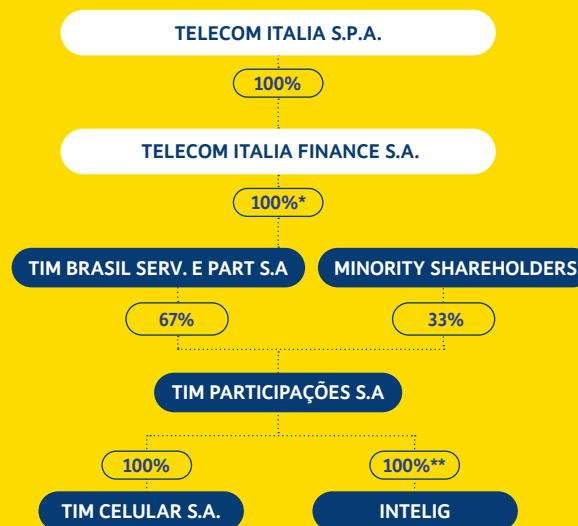
⁷ Despite the 18% reduction in water consumption in 2016 over 2015, the goal for 2017 was kept at 1%, still deemed a challenge due to the office plant resizing, the transfer of the headquarters in Rio de Janeiro to an energy-efficient building certified as LEED Silver, as well as improvement of equipment and expansion of the plant installed in technical areas of mixed-use buildings (which requires more air conditioning and higher water and energy consumption). The target attainment ratio will be calculated based on the average water consumption of the administrative buildings that remained in operation in December 2016. Learn more in [Water](#).



CORPORATE GOVERNANCE

G4-34

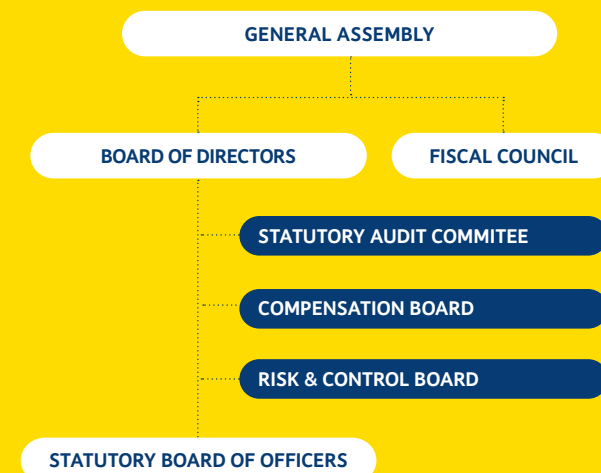
Ownership structure



* Telecom Italia S.p.A. holds one share of TIM Brasil Serv. e Part. S.A.

** TIM Celular S.A. holds 1 quota of Intelig Telecomunicações Ltda.

INSTANCES OF CORPORATE GOVERNANCE



TIM Participações' governance structure

TIM's Board of Directors is a joint deliberative body responsible for the senior management of the company. It consists of at least five and at most 19 members, who may be elected and removed by the General Assembly. They serve a term of two years, with re-election permitted.

The Board currently comprises ten members, three of whom are independent, in compliance with the rules of the "Novo Mercado" index – where TIM's shares are traded – that establishes the Board must have at least five

members, of which at least 20% must be independent. It is up to the members of the Board to choose their president, and no member may accumulate the positions of Chairman and CEO or main executive of the company.

To increase its corporate performance, the Board counts on three specialized committees with defined goals: Statutory Audit Committee (CAE), Compensation Board (CR) and Control and Risk Board (CCR). The Statutory Audit Committee currently consists of three independent members, appointed for a two-year term, which

coincides with the term of office for members of the Board of Directors, with their indication being allowed for a maximum period of ten years. The Control and Risk Board has five members and the Compensation Board, three. The Board of Directors chooses all members of these special committees, and each committee appoints its chairman/coordinator. The term of office for Control and Risk Board and Compensation Board members will coincide with the term of office for the Board of Directors, i.e. two years, and reelection or dismissal by the Board is permitted at any time.



MANAGEMENT STRUCTURE

BODY

COMPOSITION AND ATTRIBUTIONS

Board of Directors

TIM's Board of Directors consists of ten members, three of which are independent, who may be elected and removed by the Board of General Assembly. They serve a term of two years, with re-election permitted. The board is responsible for the overall administration of the company.

**Statutory
Audit
Committee**

This permanent committee is composed of at least three and at most five independent members, indicated by the Board of directors for a two-year term, which will coincide with the term of office for members of the Board of Directors, with their indication being allowed for a maximum period of ten years. Its key attribution is to provide assistance to the Board of Directors in all matters related to internal and external audits, risk exposures, internal control systems as well as drafting and disclosure of financial information. The Audit Committee should disseminate the importance of quality financial statements, corporate ethics and a sound internal control system to mitigate the Organization's main risk exposures.

**Compensation
Board**

Consisting of three members appointed by the Board of Directors for a 2-year term, which coincides with the term of office for members of the Board of Directors, its main attribution is to advise the Board of Directors on all matters related to compensation for Company members, such as drafting proposals and reviewing criteria to compensate company directors and senior executives.

**Control and
Risk Board**

Comprising up to five members, appointed by the Board of Directors for a two-year term, which will coincide with the term of office for members of the Board of Directors, this committee advises the Board of Directors on matters related to implementation and monitoring of the company's internal controls overall. Other attributions include regular updating of Corporate Governance rules and following-up and overseeing corporate social responsibility affairs.

**Statutory
Board of Officers**

Comprising at least two and at most twelve members appointed and removed by the Board of Directors. The CEO and other executive officers are selected by the Board of Directors and are responsible for the executive management of the company.

Fiscal Council

Comprising at least three and at most five permanent members, and an equal number of alternates elected by the General Assembly on an annual basis. Members of the Fiscal council must be independent and enjoy a flawless reputation, according to Law No. 6.404 of December 15, 1976, the company's Bylaws and the council's Internal Rules. The body oversees all company management activities.



The Investor Relations area offers the Fale com RI (Speak to IR) channel, enabling submission of recommendations to the Board. The board's secretary receives and screens the information to be analyzed by the Board. Another way to contact the company is the Whistleblower Channel, which aims to receive reports of violations or suspicious acts of non-compliance and any existing irregularity, from any person, including employees. Complaints are submitted to the company's Internal Audit department, then to the responsible areas and subsequently to the Statutory Audit Committee.

The compensation for members of the Board of Directors and Executive Board is recorded in the Minutes of the Ordinary and Extraordinary Shareholders' Meeting of the Organization, held on April 19, 2017 (available at www.tim.com.br/ri). The compensation for members of the Board of Directors is not linked with TIM's social, economic and environmental performance.

The Whistleblower Channel aims to receive reports of violations or suspicious acts of non-compliance from any person, including employees.

The Code of Ethics and Conduct applies to all corporate bodies, directors and executives, service providers from all TIM companies, as well as employees and anyone doing business with TIM.

It is worth emphasizing that Telecom Italia is a signatory and encourages all companies in the group to adhere to the UN's Global Compact (with TIM also as signatory), enforcing this institutional commitment through social and environmental initiatives. Based on the Italian legislative Decree 231/01, TIM adopts an organizational model consisting of the Code of Ethics and Conduct, the General Principles of Internal Control, Principles of Behavior towards Public Administration and Internal Control documents. All of these documents detail guidelines and establish processes to avoid fraud and corruption. This model also prevents the personal responsibility of those committing crimes described in the law from extending to the corporation. It guides an ethical and responsible management that strives to preserve business feasibility and minimize exposure to risks that may compromise its longevity.

More information on TIM's governance model, on the composition of the Board of Directors, as well as the Internal Rules of this management body are available at www.tim.com.br/ri.





Risk management

Risk management practices at TIM have been evolving and consolidating a culture of prevention and identification of opportunities, and serve as a strategic tool to create value for the company. The Corporate Risk Management Policy outlines our management model, known as Enterprise Risk Management (ERM). Aligned with the practices adopted by Telecom Italia, it enables identifying and managing the risks homogeneously within the group's companies, classifying risks in four categories:

- **Strategic:** refer to the goals at the highest level, according to the mission
- **Operational:** aimed at the effective and efficient use of resources
- **Communication:** related to report reliability, including financial information disclosed internally or externally, such as financial statements
- **Compliance:** are based on compliance with laws and regulations.

TIM carries out a risk assessment on company results and main goals on an annual basis. From that mapping, which involves directors and executive managers, the company defines its risk appetite and tolerance, which are reported to the Board of Directors every quarter. If the risk exceeds the set limit, the company implements an emergency action plan to monitor, control and evaluate performance.

Other risks potentially affecting the implementation of the business strategy include external factors, such as changes in the regulatory environment that lead to increased taxes. In the internal environment, the main challenges relate to TIM's ability to expand and maintain the quality of services provided, as well as to ensure maximum system automation, thus avoiding human errors. Anti-corruption practices are also the focal point of TIM's activities, comprising training and guidance on the Anti-corruption Law. [Read more in Ethics and transparency.](#)

In the context of opportunities, we realized that the innovations developed at TIM could generate revenue through patents. Since there was no standard procedure in place to file patent applications, TIM is reviewing its processes with the relevant areas and reinforcing the importance of intellectual property as an intangible asset for the company.

Managers also receive annual training on risk management, as part of an effort to increasingly improve and raise our level of awareness about this matter, enhancing the identification of threats and opportunities. Read more about risk management in the Form 20-F, available at www.tim.com.br/ri.





Sarbanes-Oxley Act and Internal Controls

Since 2006, TIM holds certifications under the U.S. Sarbanes-Oxley Act (SOx) – a requirement established for companies listed in the American Depositary Receipts (ADRs) and in the New York Stock Exchange –, which attest to its commitment to the highest degree of corporate governance.

According to the 2002 Sarbanes-Oxley Act, section 404, this certification process requires companies to undergo an annual review held by an independent auditing firm concerning the effectiveness of internal controls over financial reporting at the end of every fiscal year. It is aimed at adding more reliability and transparency to the information disclosure process.

TIM recognizes that, no matter how well designed an internal control system is, it has inherited limitations and can only provide reasonable assurance that the company's goals are being met. To minimize this risk, the company developed its system in a way to provide reasonable assurance on the integrity and reliability of financial statements. TIM also follows the criteria established by the “Committee of Sponsoring Organizations of the Treadway Commission (COSO 2013) in Internal Control-Integrated Framework”, which apply to environmental control, risk assessment, control activities, information and communication and monitoring.

Ethics and transparency

TIM is committed to running its businesses with ethics, professionalism, and transparency and according to law. To reinforce this commitment, the company has established an Organizational Model based on the analysis of public or private corporate relations and processes, which are sensitive to all Anti-corruption regulations, in particular Federal Law No. 12.846/2013, which rules on the administrative and civil liability of legal entities involved in harmful acts against the public/private administration, whether national or foreign.

This model is an integral part of Telecom Italia Group's Compliance Program and meets the provisions of the Italian Legislative Decree No. 231/01, the Anti-corruption Law, as well as of international regulations on the subject, such as the Foreign Corrupt Practices Act (FCPA) and the UK Bribery Act.

TIM rejects and condemns unlawful and improper behaviors (including acts of corruption of any kind) aimed at attaining economic goals. Its Anti-Corruption Policy is based on the values and principles of the Code of Ethics and Conduct and the Conflict of Interest Policy, and defines the sensitive areas and guidelines to control such processes. It applies to corporate bodies, directors, executives, employees and anyone doing business with TIM.

Since the creation of its Ethics and Compliance Channel in 2015, the company has made progress in disseminating its guidelines and engaging employees with this culture of compliance, especially with processes involving sensitive subjects, such as the distribution of gifts, donations and attendance at events. This channel does not address reporting of complaints; it is rather intended to support collaborators and ensure our processes

will comply with internal guidelines. It promotes an environment where internal stakeholders can submit suggestions to improve the anti-corruption control and prevention program, and share information they found in the media – including through police/ judicial authorities – regarding illegal and/or criminal activities that may bring potential risks for the company.

The company also offers the Unified Whistleblower Channel, through which internal or external stakeholders can report complaints concerning the violation of any rule or conduct described in TIM's Code of Ethics and Conduct, such as discrimination, moral and sexual harassment, human rights, unlawful or illegal behavior, conflict of interests, corruption, and fraud, among others. Users of the channel have their identity preserved and the information received is treated with confidentiality. It is available at www.tim.com.br/ri and on TIM's intranet.



In 2016, the company formalized two audits framed under corruption. Key facts are confidential. **G4-SO5**

The Anti-Corruption Program comprises risk assessment activities, which contemplate monitoring and assessment of processes involving sensitive subjects, such as the acceptance of gifts, donations and sponsorships. In 2016, TIM invested BRL 19.8 million⁴ in sponsorships primarily focused on publicity, such as soccer sponsorships and institutional networking events. The company also analyzes complaints received in the Whistleblower Channel and queries from the Ethics and Compliance Channel. In order to improve its contracting process, including the determination of potential conflicts of interests, TIM also applies due diligence questionnaires to identify suppliers who may pose any risks to the company.

This action resulted in the development of our assessment process, improving the identification of risks and mitigating

legal threats as well as threats to the company's reputation. TIM has made improvements to compliance clauses in contracts, and conducts specific training sessions to reinforce anti-corruption policy guidelines. One example was the course designed to the law firms hired by the company. There was a need to reinforce the program with these stakeholders, especially for conducting activities related to government agencies on behalf of TIM.

TIM employees also receive online training via intranet and attend on-site sessions. **G4-SO4**

The company continuously monitors compliance with its Code of Ethics and Conduct, well as the completion of online training. This is to ensure that all employees are aware of its guidelines, including expected attitudes and non-accepted illegal or improper behavior (including acts of corruption of any kind). The percentage of completion of the course is 96%, divided as follows:

ONLINE TRAINING (N° OF PARTICIPANTS) CODE OF ETHICS AND CONDUCT				
POSITION	2015		2016	
Directors	51	98%	53	100%
Managers	348	43%	671	99%
Other employees	12,155	100%	9,214	96%
Total	12,554	96%	9,938	96%

Additionally, TIM employees receive the 'Ser e Estar Compliance' [Be Compliant] training, which emphasizes topics such as ethics, anti-corruption, conflict of interests, and the benefits of the Whistleblower Channel. This content may be re-accessed online through the webinar tool.

⁴ 42% of this amount correspond to tax incentives.



Public policies

Technologies emerging from the Fourth Industrial Revolution are posing new challenges to society. According to the 12th edition of the Global Risks Report, published annually by the World Economic Forum, there is an urgent need to search for new models of governance that are capable of establishing rules, regulations and other mechanisms to shape the development and deployment of these innovations⁵.

The study highlights the challenge of achieving balance between rapid technological change and the institutions' management capacity. While a scenario of over-regulation can slow the progress, lack of governance can escalate the risks and create uncertainties, especially for investors and innovators.

Public policies play a major role within this context, not only in conducting discussions between the government, companies and society, but also by proposing guidelines and regulations. TIM actively participates in major debates conducted by the telecommunication industry as a member of the National Union of Fixed and Mobile Telecom Companies of Brazil (SindiTelebrasil) and the Brazilian Association of Competitive Telecommunications Service Providers (Telcomp). The activities carried out alongside

these and other institutions are based on international laws of corporate governance, on Brazilian and North-American anti-corruption laws, on the Code of Ethics and Conduct as well as on internal transparency and efficiency Policies.

Internationally, TIM also integrates industry associations, such as the GSM Association, which brings together Latin American companies to take part in discussion forums. The company is a corporate partner of the International Telecommunications Society (ITS) and participates in meetings, events and debates of the International Institute of Communications (IIC). All entities seek to contribute for the regulation of the industry using a constructive and ethical approach towards subjects that involve connectivity, quality, environment, taxation, among several others issues that affect and/or are affected directly by telecommunications operators and users of services.

In Brazil, the main debate topics in 2016 included the amendment of the General Telecommunications Law (LGT) and the regulation of the Civil Rights Framework for Internet Use (in Brazil), with special emphasis on net neutrality. The decree set out rules on equal treatment of data packages, exceptional cases of traffic degradation or discrimination, prioritization of emergency services, among others.

⁵ Source: The Global Risks Report 2017 – 12th edition, World Economic Forum. Available at: <https://www.weforum.org/reports/the-global-risks-report-2017>





As for the draft amendment to the General Telecommunications Law (PLC 79/2016), TIM believes that the goals proposed can add legal certainty, efficiency and incentives to investments in the industry. The revision of this legal framework can leverage the resources needed to expand an industry that is strategic for the Brazilian economy and paramount to society and to the country's development.

TIM has collaborated with Public policy makers in the efficient allocation of these resources – originally intended to the Federal government –, with the aim to

draft proper implementation guidelines, while ensuring full neutrality through sharing of infrastructure and deployment in non-competitive areas.

The right-of-way was one of the recurring topics in the discussions held by the telecommunications industry, due to disagreements between Federal Government agencies and the Ministry of Science, Technology, Innovation and Communications with regard to Law 13.116/2015 (Antenna Law), which establishes general rules for deploying and sharing the telecommunications infrastructure. Other topics included public safety, high tax burden, laws

restricting the implementation of Telecom infrastructure, coverage expansion, competition in the industry, quality of services and customer service. TIM's activities comprise participation in public hearings in the National Congress, in legislative assemblies and city councils, addressing topics such as broadband usage limit, signal jammers, including prison areas, among others.

In relation to political-party activities, TIM's Code of Ethics and Conduct prohibits any kind of contribution to politicians, political parties or related institutions. **G4-S06**

Internet of Things

The Brazilian Social and Economic Development Bank (BNDES, in Portuguese) and the Ministry of Science, Technology, Innovation and Communications (MCTIC) signed an agreement to initiate the preparation of a National Plan on the Internet of Things⁶, for a five-year term, between 2017 and 2022, to encourage the proposition of public policies on the subject.

The initial stage comprised a public consultation to society, followed by interviews with stakeholders, and development of short-and long-term action plans. Thirteen different

topics were raised through 120 questions, including: Technological Offer and Ecosystem Composition; Radio frequency; Financing and Taxes; Privacy and Security; Public Demand; Regulation and Role of the State.

As part of this digital ecosystem, TIM believes that the telecommunication companies' contribution to this discussion can go beyond infrastructure projects, by helping create digital platforms and solutions towards the development of intelligent cities, generating benefits for the entire society.

⁶ Expression based on the English term Internet of Things (IoT).





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INNOVATION AND AGILITY





NEW TECHNOLOGIES

Innovation and agility are two of TIM's cornerstones, paramount to thriving in a society driven by technology and to operating in an ever-evolving industry. In telecommunications, being at the forefront means having a competitive edge. That's why TIM taps into everyone's creativity to achieve more, better and faster in an increasingly complex and dynamic world.

With the aim of fostering this environment of digital ideas and solutions, TIM counts on the Innovation & Business Development department to orchestrate all of its innovation activities, with support from the Innovation & Technology department. Through TIM Lab – TIM's innovation and validation laboratory –, the company also intends to build an ecosystem of partners, including startups, to encourage entrepreneurship and strengthen the internal environment in the quest of new business models. Offering cutting-edge equipment and virtualized solutions, the Lab is the perfect environment to test products and services with a focus on improving customer experience. In addition, tests can be conducted in armored rooms and radio equipment, eliminating external and internal interference and ensuring higher quality results.

Besides taking actions internally, TIM recognizes the importance of being connected to other innovation

ecosystems established across the country. Aligning its business goals to the knowledge generated in the external environment is a major challenge for the company. TIM believes in the concept of open innovation, in the exchange of ideas and in collaborating with external environment to find innovative market-based solutions. Thus, TIM seeks to establish its presence in open spaces designed and structured for this purpose.

To this end, the company established a partnership with Fundação Centros de Referência em Tecnologias Inovadoras (CERTI), based in Florianópolis (Santa Catarina), which has been implemented initiatives to foster innovation in the market for 32 years. The agreement will enable access to approximately 60 startups developing nationwide projects in different industries, such as education, health, oil, energy, automotive, among others. In addition to exchanging experiences with entrepreneurs, TIM will also provide knowledge and guidance on the projects.

Two other partnerships in the same format were signed with Itaú Unibanco's Cubo Coworking space in São Paulo, which brings together 55 startups, and with Instituto Gênesis, a project incubator created by the Pontifical Catholic University (PUC) in Rio de Janeiro. Three innovation centers are expected to bring new values and get the company on track with the concept of entrepreneurship.

Starting in 2017, our 4G coverage will be transmitted also on the 700 MHz frequency,



**a range
four times
greater**

than the current 1,800 MHz and 2,600 MHz bands.



The Era of Hyperconnectivity

Technological progress is leading us to an increasingly connected world. Although the features available in smartphones today go far beyond making phone calls, the internet of things (IoT) is set to radically change our perception of the world in just a few years from now.

From clothes with sensors to connected appliances, the increased connectivity with the material world will allow transferring information much more efficiently and quickly to a larger number of people. Each connected sensor will generate an even greater amount of data, treated according to its nature, to manage quality and provide support to the decision-making process, and for service maintenance purposes, among others. Analysis

TIM recognizes the importance of being connected to other innovation ecosystems established across the country.

demands will no longer be based on historical data but in real-time references. Products and services need to be designed to include privacy and data security. Within this scenario, telecom operators will also be challenged to reassess their business model and their methods of interaction with customers. Taking part in these discussions is crucial for TIM's business.

Since 2013, the company has been structuring an area entirely dedicated to Big Data, for internal use, identifying opportunities to improve its network and deliver greater customer experience.

Other measures include looking for alternatives to apply anonymous data generated by the installed infrastructure. A partnership established in 2016 with the Operations Center of the City Government of Rio de Janeiro has enabled TIM to use the data provided to monitor the displacement of TIM service users in real time, helping the company make decisions about urban mobility and crisis management, among other decisions related to urban management.





New frequency range

Starting in 2017, our 4G coverage will be transmitted also on the 700 MHz frequency, a range four times greater than the current 1,800 MHz e 2,600 MHz bands, ensuring higher indoor coverage quality as well as greater reach. According to the spectrum clearance coordinated by Empresa Administradora da Digitalização (EAD), Brasília will be the first city to receive the frequency, followed by Teresina and Campo Grande, and other capital cities in the North and Northeast regions. The plan includes implementation in another 1,000 (non-capital) cities in 2017, exclusively related to the shutdown of analog TV channels. Starting in 2018, TIM will provide its 700 MHz coverage to the other Brazilian regions (South and southeast) as soon as the 700 MHz spectrum is made available, attesting to its commitment to offer improved customer experience.

From the BRL 4.5 billion invested in 2016, TIM allocated BRL 2.9 billion and BRL 889 million to information technology and information network, respectively, in order to expand coverage and capacity to support the growth of voice and data traffic.

Its nationwide operations cover more than 3,460 cities and approximately 95% of the Brazilian urban population. The company also offers extensive data coverage across the Country by employing the latest 3G and 4G technologies, available to 89% and 74% of the urban population, respectively.

We will continue investing on a high-performance mobile

broadband, enabling the network to provide high-quality data transmission services using 3G with High Speed Packet Access - HSPA+, which allows reaching up to 21Mbps per carrier, in addition to enabling the Dual Carrier feature (Dual Carrier - DC), totaling up to 42Mbps per antenna. These investments also include activating sites with Long Term Evolution (LTE - 4G), improving backhaul antennas through expansion of the Fiberto The Site (FTTS) network, installation of microwave radios and adoption of a new content management model (Cache infrastructure), reducing latency and improving customer experience.

In 2016, both the volume of eNodeB equipment facilities (network element for LTE implementation) and the number of sites connected by optical fiber and microwave increased by 51% - 9 % higher than in 2015 -, adding more data transmission capacity to the company.

It is worth mentioning that TIM has led 4G since the beginning of 2016, covering 1,255 cities and more than 130 million inhabitants by the end of that year (two times more cities than the second placed), which can now count on LTE technology.

With TIM Live, a fixed broadband internet service operated in the metropolitan areas of Rio de Janeiro and São Paulo, the company reached the mark of 306,000 customers by the end of 2016, 74,000 new additions to its customer base (32% increase over 2015), securing the first position in Netflix's speed ranking.

Academic Working Capital program

Created by Instituto TIM with the aim to foster technological innovation, the Academic Working Capital program provides support to college students who wish to design their business based on their final college projects in the end of their undergraduate studies. 39 projects were selected between 2015 and 2016. In 2016, 27 projects participated in the program, involving 72 college students who attended workshops throughout the year. By the end of the program, the products were introduced to investors, entrepreneurs and experts in an Investment Trade Fair. Learn more about the program at: <https://institutotim.org.br/project/academic-working-capital>.

	2014	2015	2016
Sites 3G	10.4k	12.4k	14.4k
Sites 4G*	3.7k	7.7k	11.6k
Fiber optic network	55,000 km	70,000 km	76,000 km

* Including sites covered by RAN Sharing (Oi e Vivo)



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TAKING CARE OF BUSINESS

Economic performance

In 2016, the Brazilian economy faced another year of GDP contraction, 3.6% down, in addition to high interest and double-digit unemployment rates, despite the forecast of fiscal and political stabilization starting in the second half of the year. From the political standpoint, the country saw the second impeachment process of its history, with the new Government team working to regain credibility, starting with changes in the economic guidelines, debates on the welfare reform, by launching granting programs and other economic incentives.

To recover and change its business performance path in view of such scenario, TIM carried out many actions after the first quarter, such as new offers, price repositioning, greater focus on postpaid plan, additional efforts towards efficiency and continuous deployment of networks with 3G and 4G technologies. Its efficiency plan, started in

2015, has evolved into a larger program with additional challenges and with the goal to save BRL 1.7 billion between 2016 and 2018. The company met a significant part of this goal along 2016, by attaining BRL 1.2 billion in savings and, despite upward pressures, with greater focus on postpaid and increased off-net traffic and inflation, the total normalized Opex of the year dropped by 11.5%, reaching BRL 10.4 billion.

The main actions of the efficiency plan include contract renegotiation; resizing of the structure; revision of commissioning strategies; adjustment and optimization of processes and systems to control network costs, and reducing the number of leased lines. TIM's efforts not only created a leaner organization, but also brought significant savings and helped raise the company's EBITDA margin to an unprecedented level.

TIM also continued its fast infrastructure deployment plan, confirming its strong leadership position with 1,255 cities covered with the 4G technology, an expressive mark of over 800 new cities in one year. BRL 4.5 billion were invested in 2016, approximately 29% of the company's total net revenue, reinforcing its commitment to a long-term vision and improved customer experience.

Efficiency plan results:
Leaner organization,
significant savings and
higher EBITDA margin.



**BRL 4.5
billion
invested**



**800+
new cities
with 4G coverage**



**BRL 1.2
billion
saved with
the efficiency
plan**



Below is a description of the economic figures generated and distributed in 2016:

VALUE GENERATION (IN THOUSAND BRL) G4-EC1	2014 (ADJUSTED)	2015 (ADJUSTED)	2016
(A) Revenues	25,977,474	23,160,218	21,045,857
(B) Goods and services acquired from third parties	-10,913,959	-7,522,366	-7,149,576
Costs related to services rendered and goods sold	-7,239,272	-5,163,332	-4,174,051
Materials, energy, third-party services and others	-3,674,687	-2,359,034	-2,975,525
(C) Gross added value (A - B)	15,063,515	15,637,852	13,896,281
(D) Retentions (depreciation and amortization)	-3,052,579	-3,361,971	-3,785,172
(E) Net added value (C - D)	12,010,936	12,275,881	10,111,109
(F) Transfers	1,015,555	2,010,723	2,449,495
(G) Added value for distribution (E + F)	13,026,491	14,286,604	12,560,604

DISTRIBUTION OF ADDED VALUE (DVA - IN THOUSAND BRAZILIAN REAIS)	2014 (ADJUSTED)	2015 (ADJUSTED)	2016
Personnel and charges	782,589	850,362	827,401
<i>Salaries</i>	446,788	498,148	462,338
<i>Social security contributions</i>	63,398	70,207	101,102
<i>Private pensions</i>	15,030	18,325	11,556
<i>Benefits</i>	139,576	159,978	166,386
<i>Profit sharing</i>	117,797	103,704	86,019
Government	8,850,707	8,448,296	7,413,798
<i>Taxes, charges and contributions, deducting allowances (exemptions)</i>	8,850,707	8,448,296	7,413,798
Financiers	1,844,093	2,902,504	3,566,262
<i>Interest and rents</i>	1,844,093	2,902,504	3,566,262
Shareholders	367,274	468,616	148,664
<i>Interest on own equity and dividends</i>	367,274	468,616	148,664
Retained	1,181,828	1,616,826	601,763
Profit/loss in the year	1,549,102	2,085,442	750,427
Private social investment*	-	-	2,716

* The amount was included in the Added Value Statement [DVA] in 2016 – regarding investments in Instituto TIM's projects not tied to mandatory social contributions provided for in contracts with financial institutions, sponsorship that is not based on the tax incentive law and contributions from sponsorship based on the tax incentive law – Read more about Private Social Investment on page 61.

**TOTAL FINANCIAL BENEFITS RECEIVED
FROM THE GOVERNMENT**
(IN THOUSAND BRL) **G4-EC4****2014****2015****2016****Tax and fee reductions**

137,192

93,123

118,250

**Grants and incentives for
investments, research and
development and other types**

13,283

18,670

28,133

During the preparation of financial information for the first quarter of 2016, the company identified inaccuracies in prior fiscal years/periods related to the recognition of revenues from recharge of prepaid credits sold by third parties (business partners). After carrying out quantitative and qualitative analyzes, TIM's board concluded that these adjustments were immaterial in the last three years. However, due to the materiality of the cumulative effect of these adjustments, if entered directly in the income for the period ended on March 31, 2016, the company decided to report the comparative figures for the years ended on December 31, 2015, 2014 and 2013.



Economic profit

Every year, TIM calculates and tracks its economic profit⁷, which is a financial indicator that takes into account the opportunity cost in the businesses, calculated based on the net operating profit after tax (NOPAT⁸) and the cost of capital invested.

In 2016, the economic profit was minus BRL 1.52 billion compared to minus BRL 73.4 million in the previous year. This performance is still explained by two main factors:

- **continuous acceleration in the average capital invested (+10% Y/Y) – a result of successive increases in infrastructure investments**
- **NOPAT drop (-53% Y/Y), due to loss of mobile voice revenues and incoming revenues, in addition to accelerated depreciation and amortization rates.**

Economic goals

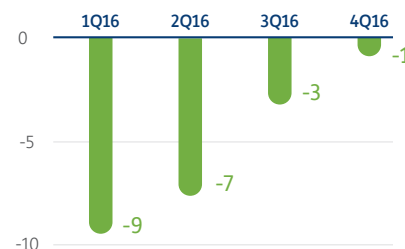
In February 2016, TIM introduced its strategic plan for the 2015-2017 period, establishing qualitative guidance for service revenues and EBITDA margin⁹, and quantitative guidance for investments and expenses. In June, however, after changes in management, the company updated its strategic planning by keeping the same indicators, but with new goals. The only exception was in services revenue, which is now exclusively related to mobile services.

At the end of 2016, the company's net revenue from mobile services was BRL 14 billion, with negative annual growth of 5.1%, despite a gradual recovery quarter after quarter, strongly affected by the drop in the interconnection tariff, long-distance services and the

challenging macroeconomic environment. The adjusted EBITDA¹⁰ performance experienced a slight drop of 3.2%, totaling BRL 5.2 billion; however, a positive performance was registered after the third quarter of the year.

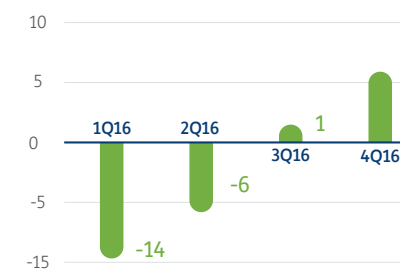
The adjusted EBITDA inflection reflects the consistent trend towards recovery of net revenues from services, strong performance of innovative service revenues and continued efforts within the Efficiency Plan. Combined with higher data revenue margins, this scenario led to a solid increase in the EBITDA margin, adjusted to 33.5% in the year, growing by two percentage points. Investments in 2016 amounted to BRL 4.5 billion (excluding the acquisition of licenses), a 5.5% reduction compared to the previous year.

NET REVENUE FROM MOBILE SERVICES (VARIATION % Y/Y)



ADJUSTED EBITDA* (VARIATION % Y/Y)

*Adjusted to exclude RBS sales and other non-recurring effects.



⁷ Economic profit = operating profit after income tax in the period - (average capital invested in the period x cost of capital).

⁸ Net Operating Profit After Tax.

⁹ Earnings Before Interest, Taxes, Depreciation and Amortization.

¹⁰ EBITDA adjusted by extraordinary RBS sale transactions, temporary human resources expenses and general and administrative expenses (G&A).



2016-2018 Industrial Plan

INDICATOR	DEFINITION	MEASURE	MEASURE HORIZON	GUIDANCE	RESULTS
Net Revenue from Mobile Services	Market share of net revenue from mobile services (Revenues after payment of taxes, sales returns and accounting of discounts in mobile services).	%	2018	Profit sharing above 24% in 2018	n/a
EBITDA Margin	Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA) on the Total Net Revenue.	%	2016, 2017 and 2018	Margin expansion in all years	Adjusted EBITDA margin increased by 2.0 p.p.
Capex	Medium and long-term investments in purchase, improvement, development or expansion of infrastructure, equipment, systems and properties. Excluding the amounts invested in the acquisition of frequency licenses.	BRL	2016, 2017 and 2018	Approximately BRL 12.5 billion in the three-year period	BRL 4.5 billion in 2016
Opex Efficiency¹¹	Savings in Operational Expenses, excluding interconnection effects.	BRL	2015, 2016 and 2017	Savings of BRL 1.7 billion in the sum of the three-year period	BRL 1.2 billion saved by 2016

In February 2017, TIM updated its strategic plan with guidance for the 2017-2019 period, classifying the Capex¹² estimates and indications of the EBITDA and mobile service revenue evolution into short-term and long-term goals. The new strategic plan is aligned to the Telecom Italia group's plan as well as to changes in the Brazilian macroeconomic environment outlook, giving emphasis to TIM's new positioning and network infrastructure.

¹¹ Operational Expenditure.

¹² Capital Expenditure.



2017-2019 Industrial Plan

INDICATOR	DEFINITION	MEASURE	MEASURE HORIZON	SHORT-TERM INDICATION	LONG-TERM INDICATION
Net Revenue from Mobile Services	Revenues after payment of taxes, sales returns and accounting of discounts in mobile services.	n/a	2017, 2018 and 2019	Positive performance in all quarters of 2017	Share in Net Revenue from Mobile Services - approximately 25% in 2019
EBITDA Margin	Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA) on the Total Net Revenue.	%	2017, 2018 and 2019	Positive performance in all quarters of 2017	EBITDA Margin above 36% in 2019
Capex	Medium and long-term investments in purchase, improvement, development or expansion of infrastructure, equipment, systems and properties. Excluding the amounts invested in the acquisition of frequency licenses.	BRL	2017, 2018 and 2019	Approximately BRL 4 billion in 2017	Capex below BRL 12 billion in the three-year period
Opex Efficiency	EBITDA minus the Company Capex, measured as a percentage of the revenues.	%	2017, 2018 and 2019	Result between 6.7% and 9.9% in 2017	Result greater than 15% of the revenues in 2019

Read more about TIM's economic performance at www.tim.com.br/ri.



TAKING CARE OF CUSTOMERS

Transparent communication

CUSTOMERS

One of TIM's four strategic pillars, customer experience took on a completely new level with a department specifically designed to manage the subject, whose guidelines TIM intends to implement across all processes, until it becomes part of the company's culture. At TIM, customer experience is much more than a concept; it is rather a customer-oriented business practice, with principles adopted from Telecom Italia and applied to TIM's portfolio and to the Brazilian reality. This initiative gave rise to three guidelines that TIM will adopt in all of its actions:

- **Clear and transparent communication**
- **Giving customers the autonomy to set up the service that best meets their needs, with convenience and agility**
- **Proactively repairing and informing customers about any issues and flaws with the services.**

The company is aware this is a great challenge, but firmly believes to be in the right path. With a current customer base amounting to 63.4 million users – reversing the negative result of prior periods –, TIM was able to achieve a solid performance in the postpaid segment last year, by adding of 1.3 million new lines, while securing its

leadership position in the prepaid segment, with 48.5 million customers.

The company remained the leading provider of 4G coverage, covering 1,255 cities, or 74% of the country's urban population. This increase represented three times the number of cities compared to 2015. As for 3G, TIM expanded its coverage to nearly a thousand new cities – a 55% increase –, reaching 2,833 cities and 89% of the urban population. With regard to fixed broadband, it is worth mentioning the 32% increase in TIM Live subscriptions by the end of 2016, totaling 306,000 users in the metropolitan regions of São Paulo and Rio de Janeiro.



**63.4
million
customers**



**+1.3
million
in postpaid
segment**



**Leadership in the
pre-paid segment:
48.5 million
users**



**55%
growth
in 3G coverage**



FOCUS ON IMPROVEMENT

TIM is making improvements on its digital channels and carrying out several customer experience actions in an effort to offer superior service, by identifying and meeting the needs of its users. In this sense, providing additional information can not only facilitate comprehension about the products but also improve the customers' relationship with TIM and perception of its products.

The new application Meu TIM [My TIM] was launched in 2016 to serve this specific purpose. Its unique format allows users to check their data plans, updated balance, consumption broken down by data and voice, among other information. For 2017, we will also review the section specifically designed for customers on TIM's website, known as Meu TIM [My TIM]. Through these measures, TIM is seeking to act across several channels and be more connected to market trends. In addition, these actions are aligned to the public commitment undertaken in April 2015 by TIM and other mobile phone operators, alongside the Ministry of Communications, the Brazilian Consumer Protection Agency (Senacon) and the National Telecommunications Agency (Anatel)¹³. The agreement includes the creation of a code of conduct for communicating mobile internet offers; refining

information about TIM plans as well as improving and disseminating tools to help consumers monitor their mobile data package consumption.

In 2016, Anatel ranked TIM on top of the list for number of complaints. TIM is keeping up with its Transparency principle, by taking full responsibility and using all reasonable efforts to address this issue. To improve customer experience, the company created four cross-functional working groups to collaborate with the business units, preventing failures related to the launch of new products and offers.

The focus is to turn mistakes into plans of action and act proactively to anticipate any issues by reviewing all complaints received, satisfaction surveys, root cause analysis, and monitoring of systemic errors. The company is also reviewing its regulatory procedures, including policies, documents, and processes, in order to align customer needs to the business evolution.

Another highlight is the Program to Improve Management of the Value-Added Service (VAS) Portfolio, which enabled TIM to migrate content suppliers to its own tool, ensuring greater control over the services offered. This measure is expected to minimize the number of complaints regarding these services.

The smartphone takeover

Smartphone owners currently represent more than 72% of our customer base. This percentage significantly increased over the last year, certainly as a result of our strategy to equip customers with these devices and foster the expansion of data services, especially 4G.

Unlike voice services, which are far simpler and intuitive, the data environment often raises questions and concerns on the part of users. Offering a quality experience to customers does not only include providing proper network infrastructure, but also the correct guidance on how data travels across the Internet.

The use of applications has brought several new functionalities to the mobile phone industry. On My TIM, the company clarifies all of these doubts, especially how to monitor consumption, in addition to providing tips on the website to help consumers understand the internet consumption in their smartphones. Read more at <http://www.tim.com.br/rn/para-voce/atendimento/internet/dicas-para-uso-dos-dados>.

¹³ It was established in response to inquiries made by customers, consumer protections organizations and telecommunications regulatory agencies regarding the decision to limit the mobile Internet access to the data package chosen, avoiding reduced speed. This triggered a broad discussion and exposed the need to build an industry-wide campaign to help consumers understand the concepts related to data service and the impacts the voice-to-data service migration has caused on telecommunications.



CUSTOMER SATISFACTION

Customer satisfaction surveys are an important tool for improving the company's relations with its consumers. TIM counts on the support of external research institutes to apply periodic surveys, offering customers a space to voice their opinion. Similarly, its customer service channels serve as a tool to collect user insights.

The overall average score for the satisfaction survey was 7.30, practically the same compared to 2015 (7.29). TIM resolved 100% of complaints submitted to its channels, 86% of which addressed within 5 days. As for complaints filed with Anatel, 99.82% were solved. 67.8 thousand complaints were registered with Procon agencies integrated with SINDEC (National Consumer Protection Information System), 7% less complaints compared to 2015. In most cases, complaints were related to coverage, quality of the network, slow customer service and failure to solve issues. As mentioned earlier, TIM is seeking to integrate actions to address the problems raised by users.

Customers can check information such as invoice data and credit balance or get a copy of the invoice both on My TIM app and the website.

CUSTOMER SERVICE INFORMATION G4-PR5

	2014	2015	2016
Total calls answered by Call Center	137,078,489	147,454,650	123,462,695
Total Ombudsman contacts	5,479	4,993	5,501
Total number of complaints received			
<i>In company</i>	6,175,552	6,924,976	11,554,589
<i>In Anatel</i>	345,067	493,724	563,790
<i>In court</i>	94,630	152,316	113,559
Total complaints and criticism resolved			
<i>In company</i>	99.94%	100%	101.31%*
<i>In Anatel</i>	91.69%	99%	99.82%
<i>In court</i>	106.51%*	86.34%	119%*
Customer satisfaction surveys – on a 0-10 scale			
<i>Average satisfaction rating for individual customers</i>	7.54	7.29	7.30
<i>Average satisfaction rating with CRC service for individual customers</i>	7.30	7.25	7.31

*Percentage considers cases opened in periods prior to 2016 and closed along the year.



CUSTOMER SERVICE CHANNELS

Customers can contact TIM through a number of channels. The most traditional channel is the call center, to which users can connect from their mobile by dialing ***144**, or from any landline by dialing **1056**. This service is available 24/7.

Customers with hearing disabilities count on specialized text communication service, which is free of charge, and also available 24/7. To access it, customers must call **0800 741 2580**.

“Meu TIM” (My TIM) can be accessed via mobile application or through the company’s site, allowing customers to check several information, such as invoice data, credit balance, print a copy of the invoice, among other actions. Telephone access can be made via the Portal ***144#** – which uses Unstructured Supplementary Service Data (USSD) technology to activate diverse services automatically from the mobile. This service does not use internal memory.

Self-service is also available via an Audible Response Unit, where customers can query several information and services from their mobile or landline.

Leaning on cutting-edge Artificial Intelligence to provide

responsive and tailored services, TIM also offers customers the option to make contact via Chat, interacting with a virtual Assistant or by sending an e-mail via digital form. On social networks, contact can be made via Twitter: **@TIM_AJUDA**, or Facebook, from Monday to Friday, from 9 AM to 6 PM. A detailed description of these services is available on TIM’s website: www.tim.com.br.

CUSTOMER DATA PRIVACY

As technology advances and the digital environment becomes increasingly relevant to society, so do the threats related to this universe. According to the 2017 Global Risks Report prepared by the World Economic Forum, data theft and fraud and cyber-attacks ranked 5th and 6th, respectively, in the top ten global risks in terms of likelihood.¹⁴

Customer data privacy is a primary commitment for telecommunications companies. TIM monitors its systems around the clock to prevent and detect any unauthorized access attempt. After classifying the information, the company carries out risk analyzes in systems that store that data, mitigating vulnerabilities that can be exploited to access confidential information. Employees and service providers are also made aware of the need to adopt data security measures, and all suppliers offering Value-added Services (VAS) must sign a non-disclosure agreement with TIM.

To stay up-to-date with discussions around the subject, TIM reviewed its Customer Data Privacy Policy, guaranteeing that access to customer registration and communication data is permitted only to employees who require such information in the course of their professional duties. TIM conducts its activities based on ISO 27001 – the international standard that describes best practices for information security management –, although the company has not yet acquired its certification.

In case a customer brings a privacy violation complaint, TIM will assess the situation and provide clarifications in order to solve any potential problems. Customers have access to data privacy practices when signing up for TIM’s plans, under the terms and conditions of the contract. In 2016, TIM experienced one proven case of customer data privacy violation involving unauthorized SIM card swap. The company was sentenced to pay BRL 12,000 as compensation, and is currently reviewing its processes to enhance control and security when validating data at the stores in order to prevent similar cases from occurring in the future. **G4-PR8**

Customer registration and telephone communication data is provided to authorities only to the extent required by law and to comply with court orders for wiretap.

¹⁴ Source: The Global Risks Report 2017 – 12th edition, World Economic Forum. Available at: <https://www.weforum.org/reports/the-global-risks-report-2017D>



TAKING CARE OF PEOPLE

Human resources

Ensuring the development and management of employees and developing the organizational model and corporate macro-processes according to TIM's strategic goals is the new mission of the Human Resources department, which values intellectual capital as its main asset.

TIM experienced major challenges and achievements last year, in view of another adverse macroeconomic period combined with the company's performance. The reduction of our staff was crucial to fulfilling the efficiency plan, which encompassed all areas of the company. TIM made all efforts to offer a special severance package to minimize the impacts on dismissed employees. The aid included compensation

for length of service of up to five salaries and extended compensation after termination, such as health insurance. Career transition support, financial consulting and social and psychological assistance were also provided. In addition, TIM trained and guided its managers in conducting this process, seeking to ensure due care and respect with people.

At the end of 2016, our workforce comprised 10.4 thousand employees – 51% women and 49% men. Our staff was reduced by 25% compared to 2015. Among the Brazilian regions, the majority of employees is located in the Southeast, representing 80%, as depicted in the chart below. **G4-10**

10.4 thousand employees

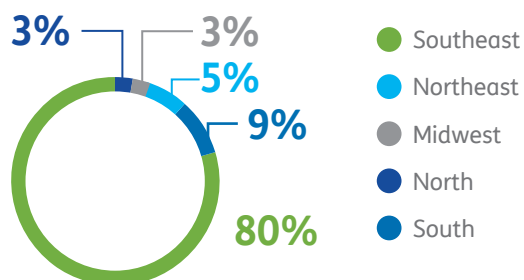


51%
women

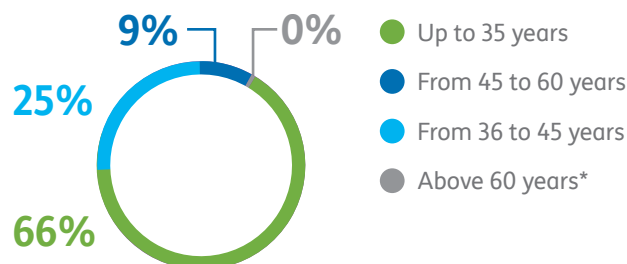


49%
men

DISTRIBUTION OF EMPLOYEES BY REGION



BREAKDOWN OF EMPLOYEES BY AGE GROUP



*32 employees are aged over 60.

80%

in the
Southeast
region





EMPLOYEES BY TYPE OF EMPLOYMENT

	2014	2015	2016
Employees	12,860	13,062	9,863
Interns	276	278	264
Apprentices	415	402	247
Total	13,551	13,742	10,374

EMPLOYEES BY TYPE OF CONTRACT

	2014	2015	2016
Permanent contract	12,860	13,062	9,863
Fixed-term contract*	691	680	511

*Interns and apprentices.

The turnover rate was 51.9%, 23.4% higher than 2015. **G4-LA1**

TURNOVER

	2014	2015	2016
Overall	35.2%	28.5%	51.9%
By gender			
Men	29.9%	26.5%	40.8%
Women	39.6%	30.2%	62.7%

* Calculation includes dismissals and terminations.

As part of its people management cycle, TIM regularly applies tools and mechanisms that allow identifying each employee's level of contribution to the business, in addition to identifying highlights and points for improvement. Other actions include special award, development and change management programs, which are regularly updated to keep pace with ever-evolving and dynamic labor relations.

The change of the headquarters in Rio de Janeiro brought significant progress in this subject. Alongside water saving and energy efficiency benefits ([read more in Taking Care of the Environment](#)), it also created a new way of interacting with the corporate environment. The company introduced the Flex Office Program – its

primary innovation action –, offering employees the opportunity to balance their personal and professional life, by taking advantage of all the mobility the telecommunications technology has to offer. According to this program, and based on guidelines set out in a specific policy, employees working at the headquarters are allowed to work remotely, from anywhere with internet access, with the same commitment they would have undertaken when working on company premises, while enjoying extra quality of life and productivity in their projects and activities.

It is a win-win relationship that also helps tackle the urban mobility challenges in large cities and reduce GHG emissions.

Salary policy

There is no discrimination in TIM's salary policy, which reflects market behavior. In 2016, the decrease in the difference between men and women's average salary is seen in the directors, professionals and sales force/stores categories. [G4-LA13](#)

PROPORTION OF MEN'S TO WOMEN'S SALARIES, BY FUNCTIONAL CATEGORY*	2014	2015	2016
Directors	1.56	1.17	0.99
Managers	1.13	1.13	1.17
Professionals	1.11	1.12	1.06
Sales force/stores	1.08	1.11	1.02
Relationship Consultants (CRCs)	1.10	1.07	1.13

*The average salary amount indicated corresponds to the following calculation: (men's salary/women's salary). The amount indicates how much more men received, based on the base salary, compared to women, in the years presented, by functional category.

In 2016, the ratio between the highest compensation paid by the company and the average salary of all other employees was 44.2.





Conexão TIM (TIM Connection)

Training and managing its human capital knowledge is paramount to a telecommunications company that seeks to be at the forefront of technological solutions. The company offers the Conexão TIM system (TIM Connection), which contains all types of capacity-building and training courses, seminars and actions that will contribute to the professional development of its employees, in the classroom or online.

All training and development plans are aligned with TIM's Training Policy guidelines and with its strategic goals, competence models, purposes and values. Last year, the company carried on with its knowledge management actions, such as the Innovation and Technology Forum (Knowledge Forum), and conducted round table discussions known as Conexão para Resultados [Result-oriented Connections]. These meetings sought to highlight and boost our employees' expertise, enabling the exchange of best practices and experiences.

Although TIM's investments in education dropped by 55% compared to the previous year – with BRL 5.1

million invested in 2016 – there was a 14% increase in the number of internal multipliers through the Multiplying Ideas Program, leading to a 63% growth in the number of actions implemented through this initiative. The program comprised a total of 17,000 hours of training provided to 1.7 thousand people. TIM continues pursuing different training methods, valuing its own knowledge and remaining aligned to the process and cost efficiency plan, the same guidelines adopted in 2015.

Training sessions can now be accessed through the webinar tool. The new method was widely accepted among employees, as it added agility and capillarity to the training.

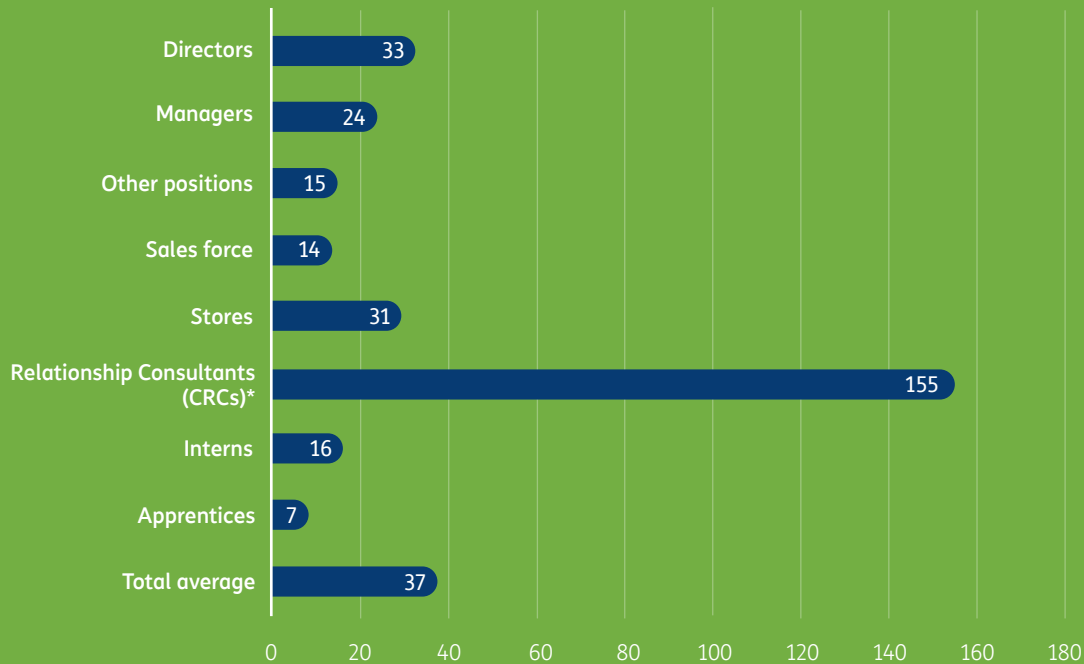
As part of our continuous improvement process, all training courses are evaluated through a reaction form, filled out by the participants, with the aim to collect their insights on content, methodology and infrastructure. In addition, we monitor all classes to provide better feedback and make quick adjustments over the course of training, ensuring greater assertiveness. **G4-LA9**

FUNCTIONAL CATEGORY	TRAINING HOURS*		
	2014	2015	2016
Directors	1,320	2,537	1,771
Managers	42,222	31,768	16,485
Other positions	105,453	130,852	60,227
Sales Force	216,720	112,155	7,021
Relationship Consultants (CRCs)	721,499	630,349	381,461
Total	1,087,215	907,662	539,669

**Hours spent on training and development (technical, management, specific and others). It does not include coaching by supervisors in the company, nor hours of financed formal education.*



AVERAGE NUMBER OF HOURS SPENT ON TRAINING PER YEAR, PER EMPLOYEE, BROKEN DOWN BY FUNCTIONAL CATEGORY (H)



**Due to the restructuring of the call center service in 2016, with two centers closing down, TIM changed its consultants' service skills, also applied to third-party consultants. Such changes led to an increased number of training sessions..*

FUNCTIONAL CATEGORY

NUMBER OF EMPLOYEES IN FORMAL EDUCATION COURSES FINANCED BY THE COMPANY

	2014	2015	2016
Directors	1	2	24
Managers	10	4	3
Other positions	48	53	45
Sales Force	2	1	1
Relationship Consultants (CRCs)	72	75	106
Total	133	135	179

TIM also supports the development of young talent, allowing them to experiment different areas within the company, acquire new knowledge and further develop in this dynamic and booming market. As a result, trainees are eligible to undertake important positions in the company, while interns will undertake junior positions, bringing fresh perspectives to the organization.





Performance appraisals

TIM has made progress since adopting the new skills model based on the concept of self-leadership, where employees should become their own leader and the main actor of their professional growth. This change was inspired by Telecom Italia, which also influenced the company to start using four macro skills:

- **Systemic Vision**
- **Execution**
- **Agility**
- **Proactivity**

These actions are developed in line with the company's strategic goals to reinforce its organizational culture.

TIM's employees receive performance appraisals on an annual basis. In 2016, 94% of employees were evaluated.

G4-LA11

EMPLOYEES RECEIVING PERFORMANCE APPRAISAL	2015	2016
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By functional category

<i>Directors</i>	47.8%	52.6%
<i>Managers</i>	82.2%	85.1%
<i>Supervisors (CRCs)</i>	96.0%	97.3%
<i>Experts</i>	93.4%	99.3%
<i>Analysts and Advisors</i>	91.4%	97.3%
<i>Assistants</i>	85.6%	93.8%

By gender

<i>Men</i>	91.1%	95.4%
<i>Women</i>	89.6%	92.6%

The Leadership Development Program is aimed at current and future TIM managers, and comprises four stages of leadership: Operational, Team, Managers and Strategic. Last year's topics of discussion included innovation, communication and team management. The company also reviewed the leadership training tracks as well as the training tracks based on the current skills model.

The new Career Program, which encompassed the revision of the variable compensation for employees at TIM stores, was launched with the aim to recognize and reward those who reach or surpass their targets, by speeding up the payment of bonuses. It also allows employees to automatically move up in their careers upon surpassing a number of monthly targets. Another advantage is that the variable compensation payment is no longer tied to attaining all goals, that is, employees will be paid whenever they reach a target, regardless of the outcome for other targets.



Diversity

TIM believes that diversity is a reflection of society and, consequently, of the labor market. The company fosters a culture of respect and appreciation of differences, trusting the fact that the more diverse a group is, the greater is the exchange of experiences and solutions, which helps build a healthy work environment and a competitive advantage in the market.

As described in its Social Responsibility Policy, any expression or form of discrimination, whether based on sexual orientation; ethnic origin; gender; disability; age, among others, is expressly forbidden.

The 2016/2018 collective labor agreement allowed employees, from January 2017, to use their preferred

name (known in Brazil as “social name”) on the badges, according to their gender identity. The request may be made regardless of formalization with the State.

The company is confident that this measure strengthens its diversity practices, and encourages internal and external stakeholders to send suggestions, questions, compliments or complaints through its communications channels, such as the Whistleblower Channel ([read more information on Ethics and transparency](#)).

The Fale com Human Resources (Speak to Human Resources) channel, available on the corporate intranet, was designed to open the communication and relationship between all employees and the HR.

Employees can access the Code of Ethics and Conduct (available on TIM’s intranet and on the website), and attend specific training with cases and practical situations that will help them learn, apply and duplicate the instructions and guidelines of the Code in the workplace. New employees also receive this training at the time of admission. All attendees are required to sign a declaration of acceptance to seal the commitment with the Code guidelines.

In 2016, TIM received 12 complaints about labor practices through the Whistleblower Channel, nine were justified. Two other complaints concerned discrimination, one of which was justified, as shown in the tables below. [G4-LA16](#) [G4-HR3](#)

NUMBER OF GRIEVANCES ABOUT LABOR PRACTICES FILED, PROCESSED AND ADDRESSED THROUGH FORMAL GRIEVANCE MECHANISMS [G4-LA16](#)

2016

	RECEIVED	JUSTIFIED
Total number of complaints received	12	9
Total number of complaints processed	12	9
Total number of complaints addressed	12	9
Total number of complaints received in the previous period and addressed during the reporting period	7	3

TOTAL NUMBER OF INCIDENTS OF DISCRIMINATION AND REMEDIATION ACTIONS TAKEN [G4-HR3](#)

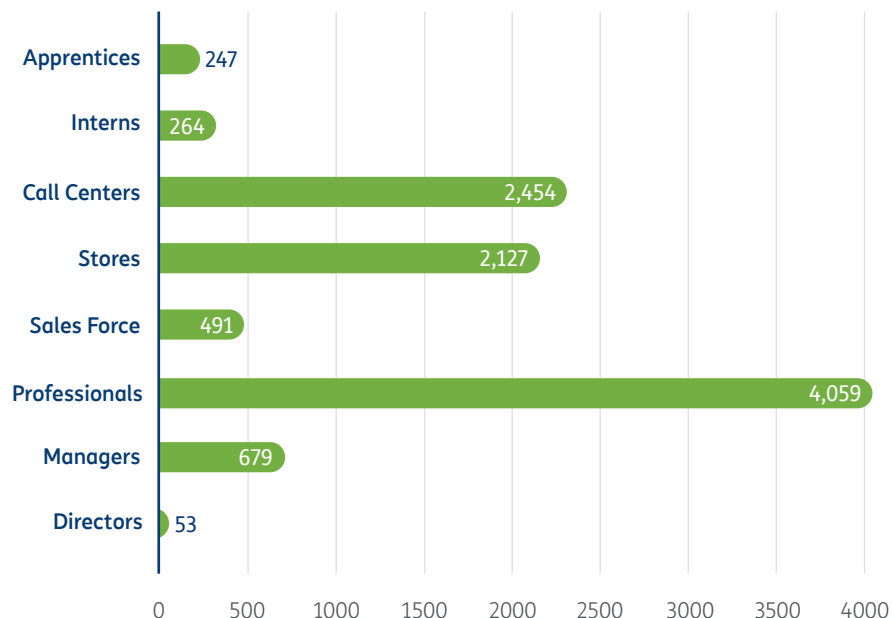
2016

	RECEIVED	JUSTIFIED
Total number of complaints received	2	1
Total number of incidents reviewed by the organization	2	1
Number of remediation plans being implemented	0	0
Number of remediation plans implemented	1	0

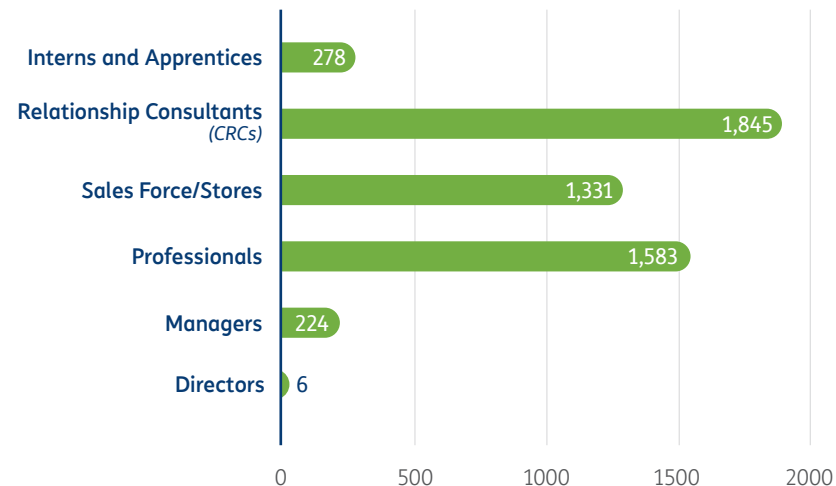


The group responsible for TIM's corporate governance ([see composition in Management Structure](#)), comprises 17 white members – sixteen men and one women. Eight members belong to the 30 to 50 year age group and nine are over 50 years old. The following charts display the current portrait of diversity at TIM. TIM reaffirms its commitment to creating an increasingly heterogeneous work environment. [G4-LA3](#) [G4-LA12](#)

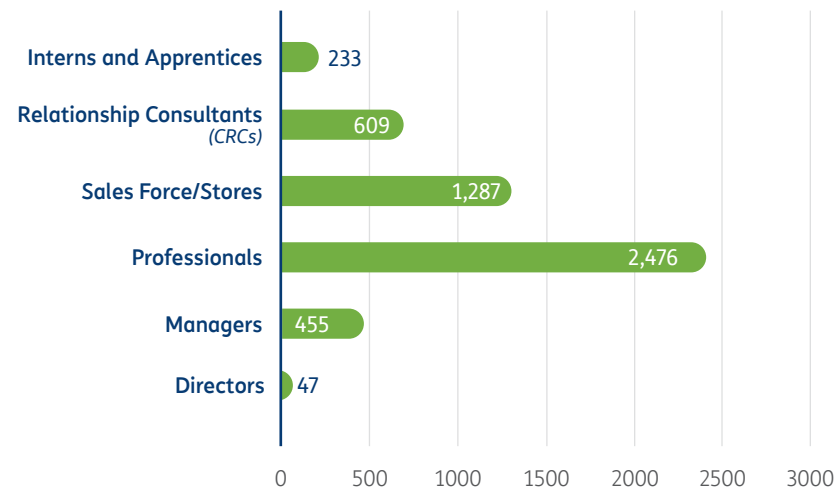
EMPLOYEES BY FUNCTIONAL CATEGORY



DISTRIBUTION BY GENDER – WOMEN

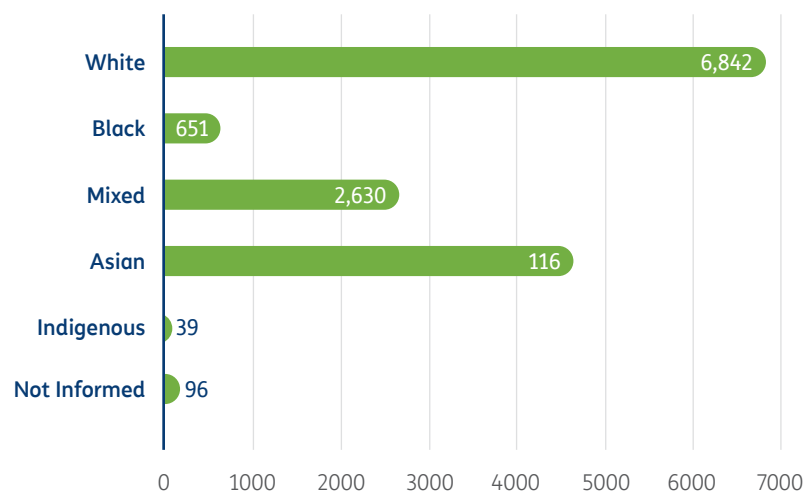


DISTRIBUTION BY GENDER – MEN

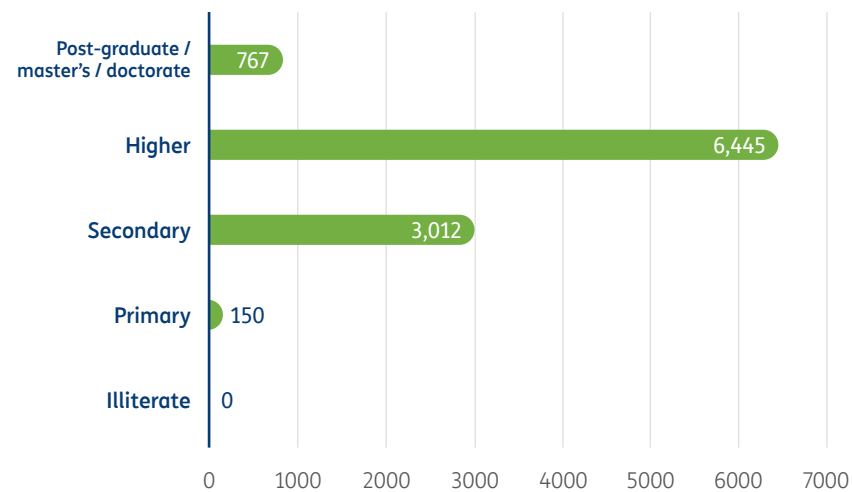




BREAKDOWN OF EMPLOYEES BY RACE / COLOR



LEVEL OF EDUCATION



Note: Illiterate - including functional illiteracy - person who has learned to read, write and count, but does not have reading comprehension, writing and arithmetic skills.



Inclusion

To promote the inclusion of people with disabilities (in Portuguese, pessoas com deficiência – PCD) in the company, TIM developed the PCD program, ensuring that the available positions are also accessible to this group. Its Internship Program launched in 2016 also gave special attention to young PWDs. The company attended eight career fairs for people with disabilities, and implemented several actions to make its facilities and furniture accessible to these employees, ensuring quick adaptation to the internal environment, in addition to conducting awareness-raising activities with managers and teams.

In 2017, TIM attained 50% of the disability hiring quota, a 5% increase compared to 2015, in compliance with the Conduct Adjustment Agreement, signed with the Brazilian Public Prosecutor's Office (Law No. 8213/91, which establishes the quota system).

**Adherence to the 2016
Organizational Climate Survey
reached 87%, two percentage
points higher than in 2015.**

Quality of life

To ensure the well-being of employees in case of pregnancy, TIM joined the Empresa Cidadã program (Corporate Citizen program), which extends the maternity leave in 60 days, in addition to the 120 already foreseen in Law. The extension of this right is reflected in improved health for both mother and baby, enabling the mother to breastfeed for at least six months.

TIM's collective labor agreement also allows male collaborators to take up to fifteen consecutive days of paternity leave, starting from the first working day after the child is born, i.e., ten days longer than provided by law.

Organizational Climate Survey

Adherence to the 2016 Organizational Climate Survey reached 87% of employees, surpassing last year's participation by two percentage points. This attests to the reliability of our tool and to results that are more faithful to reality. The methodology identifies the factors influencing employee engagement and organizational support – one as a lever to the other – to reflect on the effectiveness of the professionals of the company.

The results highlighted a favorability index (level of employee satisfaction) of 62%, representing the

percentage of employees who agree or fully agree with all statements in the survey, which comprises 70 questions. The percentage of those who were unfavorable and neutral grew by one percentage point each, exactly the two percentage points lost in the total favorability index compared to 2015.

The question related to team workflow management registered the highest increase in the favorability index, with 63 points, seven percentage points higher than in 2015. Proper planning of activities and cooperation among the teams were the key aspects leveraging this perception. The survey also identified that employees feel they are playing a part in decisions related to their work routines. When asked “At TIM, do employees propose and take responsibility for their decisions,” the perception has increased 6 points, reaching 64%, while “We take responsibility for the day-to-day activities in our department,” remained at 86%, both in 2015 and 2016.

When comparing results of 2015 and 2016, engagement dropped 3 points, returning to the score registered in 2014. As for aspects related to organizational support, the index remained the same between 2015 and 2016. The 2016 Climate Survey results show we are a long way from achieving our goals, but we must work together and realize each one of us plays a key role in the development of our company. Managers are attending presentations on the results, to better assess each item and discuss critical issues and priorities. The senior management will establish the strategic organizational climate guidelines for 2017, to be adopted in the next plan of action.



Health & Safety

TIM's priority is to maintain the physical safety and health of employees and service providers and ensure compliance with all labor and union laws in force. Safety & Occupational Health and Social Responsibility Policies guide the company's activities and commitment to fostering ongoing performance improvement in all its safety and occupational health and initiatives. One of the challenges is to enhance the health platform, expand the environmental platform and improve our current management model by adopting and integrated management system.

TIM is also committed to managing any potential risks to the physical safety and health of its collaborators, contractors and visitors in the workplace. Mandatory measures for prevention of work-related accidents and occupational diseases have been implemented in all of its operations. There are emergency plans in place designed to remedy and minimize damages arising out of potential work accidents and fire incidents. In addition, periodic audit or inspections are conducted to assess the efficiency of preventive measures in work processes and facilities, aiming at the continuous development of health and safety conditions.

TIM counts on Internal Commissions for Prevention of Work Accidents (Cipas)¹⁵ distributed across all company units, as

required by law. These commissions are formed by TIM representatives and employees, the latter chosen by their peers through secret ballot while TIM makes one referral. The percentage of employees represented by health and safety committees in 2016 was 75%. **G4-LA5**

All work accident cases are filed with the Brazilian Social Security Institute (INSS) through the Occupational Accident Communication System (CAT), and are subject to analysis and investigation, in line with the procedures set forth in the OHSM System Assessment Method. All incident records are available in each responsible area. Employees have access to the Work Accident Communication Policy via the company intranet. No serious accidents were registered in 2016. **G4-LA6**

TIM is also committed to managing any potential risks to the physical safety and health of its collaborators, contractors and visitors in the workplace.

¹⁵ To prevent work-related illnesses and accidents, Cipas operate according to guidelines of Decree 3.214/78 - Regulatory Standard ("NR") No. 05 issued by the Ministry of Labor and Employment. Actions are developed in conjunction with the Environmental and Occupational Health and Safety (EOHS) department.



Although TIM employees do not perform activities with high incidence or risk of specific occupational diseases, the company implements the Program for Medical Control of Occupational Health (PCMSO) and the Environmental Risk Prevention Program (PPRA) on an annual basis. **G4-LA7**

TIM held the Internal Week for Prevention of Work Accidents (SIPAT), using the corporate intranet for the first time on an integrated basis. Counting on the Cipas' support, the company implements flu vaccination campaigns

and stimulates healthy habits among the employees, by disclosing information via intranet.

Through the Qualidade de Vida TIM Program (TIM Life Quality Program), employees are encouraged to engage in physical activities and receive a Gympass benefit, comprising free pass to more than 8,000 gyms across the country. By joining the program, employees get up to 70% off the gym monthly fee, and can enjoy any type of activity in any registered gym.

OCCUPATIONAL SAFETY INDICATORS G4-LA6		2014	2015	2016
Total number of employees*		12,860	13,062	9,863
Number of accidents without leave Leaves registered in the CAT (Work Accident Communication System)	Nº	1	3	2
Number of accidents with leave Leaves registered in the CAT (Work Accident Communication System)	Nº	23	29	13
Frequency rate Number of accidents with leave per million man-hours worked	Rate	0.4	0.4	0.7
Severity rate Number of days lost due to accidents per million man-hours worked	Rate	3.99	5.92	6.01
Number of days lost	Nº	216	395	111

*Not including interns and apprentices.





TAKING CARE OF SOCIETY

Generating value

Value generation at TIM goes way beyond the infrastructure projects developed by the company. We are driving innovation in an increasingly digital world, where the development of high speed networks have been creating transformations the same way the telecommunications and electric power networks did in the past.

Information and Communication Technologies (ICTs) are emerging in the most diverse sectors of society, contributing

to economic and social growth. TIM's participation in this area has been mainly focused on the construction of public policies and on open spaces of innovation, whether corporate or academic.

It is also worth emphasizing that, in addition to job generation, TIM's business activities have a major indirect economic impact on tax revenues, with payment of municipal, state and federal taxes.

Externalities

Since 2015, we hold an annual meeting with different areas of the company to carry out qualitative analyzes on the positive and negative environmental externalities generated by TIM activities. One positive externality is human development, fostered through TIM Tec Platform's distance education courses ([read more in Instituto TIM's initiatives](#)). On the other hand, high energy consumption in the company accounts for negative externality ([read more in Energy](#)).

Biosite

300 +
biosites installed
in Brazil

Unprecedented
technology

One pole can gather
2G, 3G and 4G
equipment

Adds street lighting and
security cameras

A partnership established
with Embrapa and Qualcomm
will allow the use of drones,
broadcasting plantation
information in real time via 4G
to farmers all across Brazil.





Benefits to the population

In addition to providing telecommunication services, TIM intends to create positive synergies to foster sustainable development using digital solutions, platforms, and other innovations. Developed in 2014, the biosite is one of TIM's most successful projects. It comprises a structure similar to a pole that mimics the antennas of the operator and can accommodate all telecommunications equipment (2G, 3G and 4G), as well as urban furniture, such as public lighting and security cameras.

This technology can significantly reduce the visual impact and help harmonize the urban infrastructure and the environment. From an environmental standpoint, the Biosite also has advantages, such as reduced energy consumption and a fixture structure that uses 99% less steel than the traditional base stations. Therefore, installation costs one-third less.

TIM has installed over 300 biosites across the country, 76 of which were dedicated to the Olympic Games held in 2016 in Rio de Janeiro. The fact that this antenna is built as a lighting pole streamlines its licensing process, for it is qualified as urban furniture when installed in public areas. TIM also installed biosites in private areas such as condominiums, shopping malls, parking lots, aimed at providing better customer experience with less visual pollution in the urban landscape.

For rural areas, we established an important partnership in 2016 with the Brazilian Agricultural Research Corporation (Embrapa) – under the aegis of the Brazilian Ministry of Agriculture, Livestock, and Food Supply (Mapa) – and Qualcomm. TIM will deliver 4G signal to drones, broadcasting plantation information in real time to farmers and environmental agents all across the country. The data collected by the drones from sensors installed on the field will enable a more accurate detection of crop deficiencies, pest occurrences, water scarcity, deficit of nutrients and environmental damage. This diagnosis will allow better control of aspects such as irrigation and use of agrochemicals and agricultural fertilizers, reducing environmental impacts and increasing productivity.

To help disseminate the digital culture, TIM has been monitoring a group of 100 small cities that are covered with its 4G technology. Data traffic increased by an average of 60% in these locations, which include the archipelago of Fernando de Noronha, off the Pernambuco coast. Because it is an isolated area of the continent, internet access is changing the way residents and visitors communicate, both socially and at work. For TIM, enhancing these digital technology applications is an effective way to foster social and economic development. [Check out other initiatives in Innovation and agility.](#)

Rio 2016 Olympic Games

TIM established a partnership with the Rio de Janeiro city government and the Research Center of the Federal University of Rio de Janeiro (UFRJ) to assist in the management of urban mobility during the Olympic Games held in Rio in 2016. Actions included monitoring the movement of people around the city using data from our customer base. Programming algorithms and other mechanisms were developed to ensure customer data privacy when managing this information.

The experience proved the effectiveness of big data applied to building smart cities, improving management with the use of data technologies that are often available. The main challenge is to combine information that will add value to society.

The free software ZUP (Participatory Urban Governance) was upgraded with a specific module for management of mega events, used for the first time during the Olympic Games. **[Learn more in Instituto TIM's projects.](#)**





Digital inclusion

According to the United Nations, five billion people in the world still lack access to mobile broadband¹⁶. The biggest challenges lie in rural and remote areas. The UN study also points that digital exclusion affects 12% more women than men, and this gap can increase by 31% in the least developed countries. According to the organization, the best way to foster technological progress and development is to make the digital revolution a human rights revolution.

Taking care of customers is one of our key values, and we are proud to have a positive impact on their lives. We follow all UN guidelines on digital inclusion initiatives. TIM was the first operator to enable the digital inclusion of low-income groups, offering services that allowed these customers to increase the use of voice and data. The introduction of affordable rates for unlimited on-net calls (TIM to TIM calls) is one example. Also, customers making calls to other operators are no longer charged a differentiated off-net fee.

In addition to these actions, TIM believes that digital technologies can lead to important social transformations, enabling access to education, generating income and fostering social inclusion. Through Instituto TIM, the company makes efforts to promote and open access to technological solutions, such as distance education and software development platforms. ZUP (Participatory Urban Governance) is an excellent example of a free software that can help managing public services more efficiently. Its implementation has enabled public managers to receive more than 35,000 reports from citizens, speeding the resolution of several issues. Learn about Instituto TIM's initiatives below. [G4-EC7](#) [G4-EC8](#)

¹⁶ Source: United Nations, available at: <https://nacoesunidas.org/onu-5-bilhoes-de-pessoas-ainda-nao-tem-acesso-a-banda-larga-movel/>





Instituto TIM

In 2016, Instituto TIM continued developing educational and free technology projects across the country, reaching more than 250,000 people through its initiatives. Committed to creating and strengthening resources and strategies for democratization of science and innovation in order to promote human development in Brazil, Instituto TIM operates in four dimensions:

EDUCATION

Creating and democratizing resources and strategies to teach science and math.

APPLICATIONS

Investing in free technological solutions that will improve people's lives.

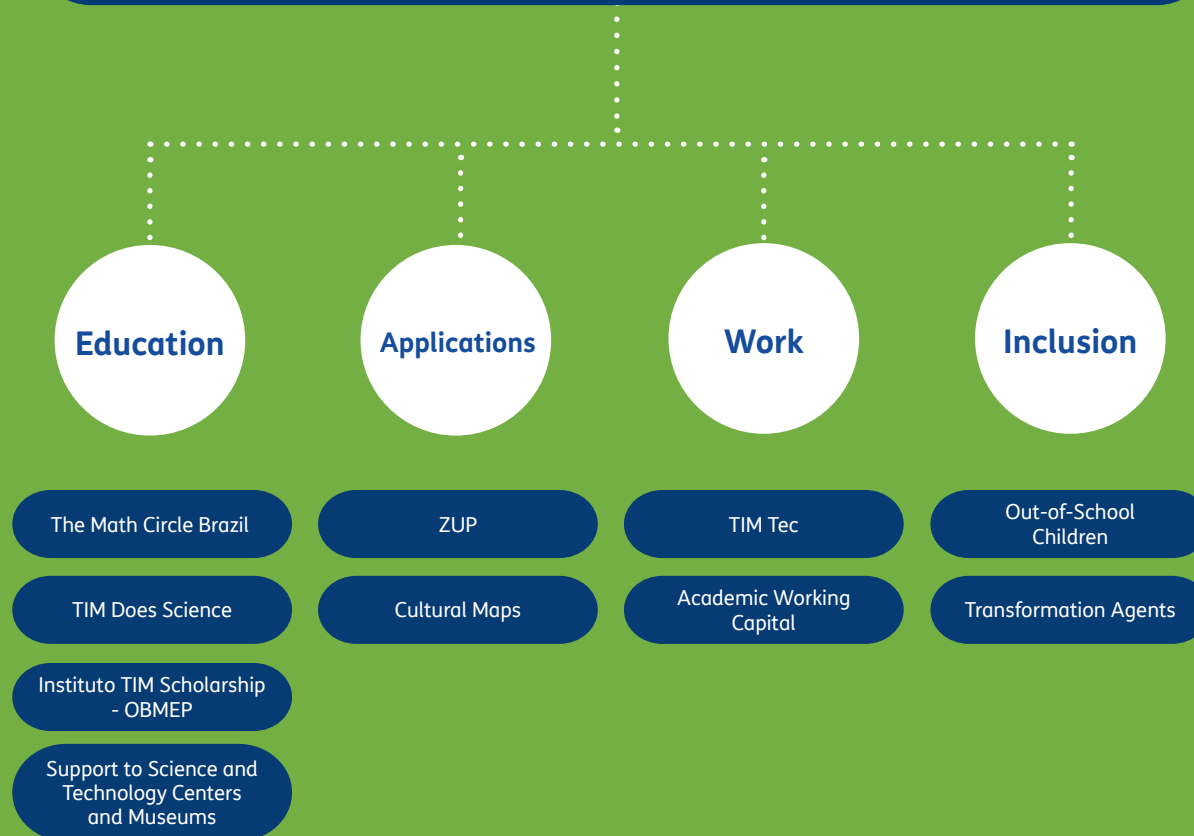
WORK

Creating and democratizing teaching strategies to foster a productive technological inclusion of young people.

INCLUSION

Disseminating new information and communication technologies to support citizenship.

PRINCIPLES AND STRATEGIES







Instituto TIM's projects include:

THE MATH CIRCLE BRAZIL

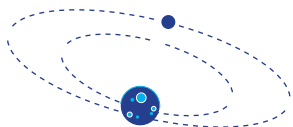


In an effort to change the paradigm that Math is too difficult, this project brings to the country the Math Circle approach, created by Harvard professors Robert and Ellen Kaplan, according to which student participation and reflection are essential elements to build up mathematical knowledge and skills. The idea is to work on the concept: “tell me and I’ll forget, ask me and I’ll find out.”

Targeting students from 2nd and 4th grades of public elementary schools located in underprivileged areas, the project offers Math Circle

sessions as an after school activity and also provides teacher training. In 2013 and 2014, the mathematics skills of the participating students increased by 5.7% and 7.3%, respectively. In 2015, the methodology applied to the evaluation was replaced by Provinha Brasil – a tool for the diagnosis of literacy –, which set the development of math skills at 4.7%. UNESCO recognized the success of the project in 2016, and launched a partnership to implement the initiative in Brazil, supporting training for teachers and the production of a book about the project's best practices over the past four years.

TIM FAZ CIÊNCIA [TIM DOES SCIENCE]

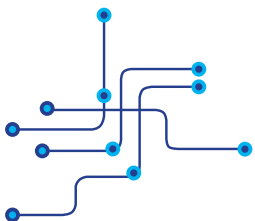


This project was developed to disseminate basic scientific concepts in this challenging area of education in Brazil. Carried out in partnership with Municipal Departments of Education, TIM Faz Ciência provides public schools with teaching materials, videos and other aids, and conducts training sessions with teachers, who also receive support from a relationship center throughout the school year. The program materials can be downloaded for free on the TIM Faz Ciência website, and can be used by any teacher, in any school in the Country.

According to an assessment conducted in 2015 with the participating students, student performance increased 12.5%. Since its creation, 44 municipal education departments have adopted the program, training over 10,000 teachers and benefiting 330,000 students between 2014 and 2016. In 2016, TIM Faz Ciência became the official course of the Municipal Public Schools of the City of Curitiba, and has been also adopted in all administrative regions of Distrito Federal.



TIM TEC



Aiming at the expansion of vocational and technological education in Brazil, the project is based on three pillars: courses, free software development and support to public education institutions that intend to install and use the software. TIM Tec offers free online courses in line with the information and communication technology axis of the National Program for Access to Technical Education and Employment (Pronatec).

Winner of the Prêmio ARede Educa 2016, which recognizes public and private experiences and initiatives towards integration of new technologies in educational environments, the project came in third in Educational Platforms for Civil Society, which evaluated distance

learning and education products and solutions.

It has become the MOOC (Massive Open Online Courses) platform whose technology and content are being shared with public education institutes from Rede e-Tec Brasil, with support from the Department of Professional and Technological Education of the Ministry of Education (SETEC/MEC). Thirteen Federal Institutes have already launched their platforms created from TIM Tec software, and other ten are in the installation phase. In addition to offering the courses developed by the project, Institutions can add their own courses to the tool. Between 2013 and 2016, 25 courses were created and over 40,000 students registered in the platforms.

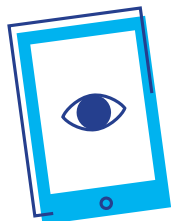
CULTURAL MAPS



Instituto TIM engaged in the construction of a collaborative culture mapping and management platform, to enable cultural agents, administrators and the society to learn, share and manage the cultural production of a region in Brazil. Mapas Culturais (Cultural Maps) is a software designed to map and disseminate cultural activities, enabling the development of networks, promoting access and visibility to the general population, the government and the market.

A cooperation agreement signed in 2015 between Instituto TIM and the Ministry of Culture (MinC) will take the platform to a national level. In three years of existence, platforms were created and implemented in three states and 12 cities. Other four platforms were designed for Minc (Mapa da Cultura [Cultural Map], Rede Cultura Viva [Living Culture Network], Museus BR [Brazilian Museums] and Mapa das Bibliotecas [Library Map]). Almost 27,000 projects and 77,000 agents have been registered.

ZUP: PARTICIPATORY URBAN GOVERNANCE



ZUP is a free software created to help public administrators and citizens participate in urban governance activities and operations. The initiative is aligned with the guidelines of the Brazilian Digital Government Policy, which guides public managers to interact with citizens, improve the internal management and integrate with partners and suppliers.

ZUP is an important management tool that can be used by any municipality that has an interest in managing their public services in a more efficient and participatory manner. It comprises four modules: ZUP Cidadão (ZUP Citizen), ZUP Gestão (ZUP Management), ZUP Inventários (ZUP Inventories) and ZUP Fiscal (Fiscal ZUP), through

which administrators are able to collect, analyze, organize, share and monitor information about their cities. In addition, the tool automates document flows and allows managing inventories and services provided by partner companies, among other features. The information added into the system is stored in a database, enabling the analysis of data and facilitating decision-making.

ZUP operates in the cities of São Bernardo do Campo (São Paulo), Boa Vista (Roraima), Rio de Janeiro (RJ) and Cascavel (Paraná). In 2016, the unit in Rio de Janeiro was upgraded with a specific module for management of mega events, used for the first time during the Olympic Games.

INSTITUTO TIM SCHOLARSHIPS – OBMEP

The Brazilian Public School Mathematical Olympiad was created in 2005 by the National Institute for Pure and Applied Mathematics (IMPA), with support from the Ministry of Education and the Ministry of Science, Technology, Innovation and Communications (MCTIC). Instituto TIM and IMPA established a partnership in 2015 to launch the Instituto TIM-OBMEP scholarship program, granting monthly scholarships worth BRL 1,200.00, for a period of twelve months, renewable on an annual basis up to 48 months. Eligible students include medal winners enrolling in public universities to attend Astronomy, Biology, Computer Science, Economy, Engineering, Statistics, Physics, Mathematics, Medicine and Chemistry courses. 100 students were selected in 2015 and 2016.

REQUEST FOR PROPOSAL TO SUPPORT SCIENCE AND TECHNOLOGY CENTERS AND MUSEUMS

In 2015, Instituto TIM released a RFP intended for science and technology centers and museums, in partnership with the Ministry of Science, Technology, Innovation and Communications (MCTIC), supported by Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq). The goal was to expand the scope of investments and the access to users in various regions of Brazil.

The supported actions focused on initiatives aimed at disseminating science and making it interesting for the audience, which comprise children aged 4-10 years. Science and technology centers and museums from all parts of the country participated in the RFP, also joined by Extension course departments from federal and state universities. The 50 projects selected in 2016 are already carrying out activities across all five Brazilian regions.



NINGUÉM FORA DA ESCOLA [OUT-OF-SCHOOL CHILDREN]

The TIM Institute and the United Nations Children's Fund (Unicef) have teamed up to develop the technological solution Busca Ativa Escolar [Active School Search], which will help and stimulate municipalities to actively search for 3.8 million children and teenagers who are out of school. The goal is to offer public managers an innovative approach to this active search using Information and Communication Technologies (ICTs).

The participating cities will form local teams with professionals from different departments within the city government (health workers, social workers, educators etc.), as well as Guardianship Councils, NGOs or other institutions. In 2016, the project helped bring 14 children back to school and other 39 were considered into the re-enrollment process. The tool is being finalized, currently incorporating improvements identified in the assessments carried out in the second stage of the pilot project. Once the software is adjusted, the municipalities will be mobilized to use the tool and the methodology widely. Managers and civil servants will receive training online.

PRIVATE SOCIAL INVESTMENT

The company's social investment initiatives comprise donations, projects developed by the Instituto TIM and sponsorship of cultural and sports initiatives carried out in communities. In 2016, TIM provided donations to the following institutions: Casa de Passagem, Instituto Ronald McDonald, Escola Técnica Redentorista, Instituto Ayrton Senna and Fundação Amazonas Sustentável.

PRIVATE SOCIAL INVESTMENT (IN THOUSAND BRL) ¹	2014	2015	2016
Donations	1,933	686	487
Instituto TIM projects²	15,291	13,859	18,199
<i>Education</i>	4,664	7,195	9,358
<i>Applications</i>	1,571	1,306	2,904
<i>Labor</i>	2,202	3,329	2,156
<i>Inclusion</i>	1,960	927	1,557
<i>Others</i>	4,895	1,102	2,224
Initiatives in the community³	23,919	18,968	1,278
<i>Sports sponsorship</i>	1,112	3,750	80
<i>Cultural sponsorship</i>	22,807	15,218	698
<i>Others</i>	0	0	500
Total	41,143	33,513	19,964

¹ The Private Social Investment amount considered in the Added Value Statement [DVA] (BRL 2,716,000.00) – regarding investments in Instituto TIM's projects not tied to mandatory social contributions provided for in contracts with financial institutions, sponsorship based on the tax incentive law and contributions from sponsorship that is not based on the tax incentive law – is included in the total amount of the Private Social Investment stated on the DVA table, on page 32.

² In 2016, Instituto TIM invested approximately BRL 17 million as a mandatory social contribution to the credit granted by the Brazilian Social and Economic Development Bank (BNDES, in Portuguese) to TIM Celular S.A. The credit was opened in December 2013.

³ Tax incentives are included in the total amounts invested in that category and, in 2016, accounted for 48% of the investment in Initiatives in the community. The significant variation in this line is due to a reduction in the budget.

Learn more about Instituto TIM's projects and initiatives at institutotim.org.br.



SUPPLIERS

The purchasing process at TIM is aimed at acquisition of cost-effective, competitive, quality, safe, socially responsible and eco-friendly products and services, as well as at the continuous improvement of our relationship with suppliers.

Business ethics, transparency and commitment towards sustainability comprise the guidelines for Relations with Suppliers in a TIM Purchase Process. All agreements include clauses requiring compliance and fulfillment of TIM's Code of Ethics and Conduct and the Global Compact's Principles, such as respect to labor and human rights, environmental protection and anti-corruption.

The company's value chain comprises suppliers of telecommunications network equipment and products (mobile phones, modem, etc.), technology service providers, electric utilities, as well as providers of services to other areas that support TIM's business purposes, such as consulting firms, audit companies, communication agencies, among others. **G4-12**

Dependence on key suppliers is one of the aspects included in our risk management matrix. The activities developed in our industry require network equipment, mobile devices and accessories that are provided by Apple,

Samsung, Ericsson, Alcatel-Lucent S.A, Huawei and Nokia, among others. Suppliers that are unable or do not wish to provide us with equipment or supplies on a regular basis can jeopardize our operations, negatively affecting our operational results and limiting our ability to enter into concession contracts. On the other hand, we also monitor smaller suppliers that may become dependent on TIM and risk closing their business in case the partnership with TIM is not renewed.

With regard to information security, TIM also enumerates critical suppliers that have access or treat TIM's confidential information. These risks are managed and minimized according to our Information Security Risk Management Policy. The procedures and guidelines in this policy are intended to mitigate, monitor and control the probability and impact of adverse events. Risk sources may vary, ranging from human error, errors in processes, legal liabilities, credibility-related events, accidents and natural disasters, to deliberate attacks to assets that are intended to cause loss of information.

TIM makes use of competitive methods to select its suppliers – equally, without preferences –, always seeking the best commercial agreement and the best technical service quality. By local supplier, the company means one

In 2016, we surpassed our goal to assess suppliers on sustainability issues by 49%, with 433 suppliers evaluated.

that is located in the same country of TIM's headquarters. Although its purchasing procedures and policies do not contain guidelines for prioritizing local suppliers, TIM seeks to build relationships with those located in Brazil, whenever possible.

All suppliers with contracts over one million Brazilian reais undergo social and environmental assessments during the qualification stage, within social, environmental, and occupational health and safety aspects. Suppliers considered critical in any aspect will receive a supplementary profile assessment. At the end of that stage, the reviewers will issue an opinion indicating the level of compliance with the criteria addressed. Those who are still considered critical shall commit to implement an action plan. In 2016, we surpassed our goal to assess suppliers on sustainability issues by 49%, with 433 suppliers evaluated. The target for 2017 is set to 250 suppliers.



ASSESSMENT AND MONITORING

TIM monitors supplier performance through its own performance evaluation methodology. To control compliance with labor rights, the company checks the suppliers' reputation on the websites of the Business Pact for Integrity and Against Corruption and the Brazil's National Pact for the Eradication of Slave Labor. Suppliers that appear in any of the two lists may not be qualified. All TIM suppliers must sign a declaration stating their commitment to comply with the company's Code of Ethics and Conduct and its sustainable development principles.

They are also required to fill out a due diligence questionnaire, used to collect information exclusively for the purpose of verifying compliance with national and international anti-corruption laws, as well as with internal rules.

TIM also requires its suppliers to comply with a specific clause under the terms and conditions of the purchase order, providing that no products purchased by TIM contain conflict minerals¹⁷. In the document, suppliers agree to abide by the rules and regulations established by the Securities and Exchange Commission¹⁸, and adopt a reasonable and appropriate due diligence conduct to ensure their products do not contain these minerals. [G4-EC9](#)

LOCAL PURCHASES (IN THOUSAND BRL)

	2014	2015	2016
Local suppliers	9,458,860	8,226,002	6,624,563
Network Infrastructure	2,999,021	3,239,383	3,166,998
Trade products	3,557,420	2,154,926	1,133,742
Information Technology	698,211	761,616	811,678
Professional technical services	1,762,406	1,632,134	1,118,046
Energy purchase	127,888	137,739	141,383
Others	313,913	300,205	252,716
Foreign suppliers	140,074	146,121	134,002
Network Infrastructure	30,293	32,721	45,335
Trade products	3,561	-	-
Information Technology	93,412	101,894	82,226
Professional technical services	12,424	11,505	6,441
Energy purchase	385	-	-
Others	-	-	-
Total	9,598,934	8,372,123	6,758,565

The decrease in spending with suppliers was due to efficiency efforts made by the company in 2016, resulting in a smaller volume of procurement contracts.

Among the suppliers who responded to the social and environmental questionnaire, the company did not identify possible risks for occurrence of forced, slave or child labor. [G4-SO9](#) [G4-LA14](#) [G4-HR5](#) [G4-HR6](#) [G4-HR10](#)

¹⁷ Minerals extracted in armed conflict zones and in violation of human rights, which may be used to perpetuate fighting through the purchase of weapons. Affected countries include: Democratic Republic of Congo, Central African Republic, South Sudan, Zambia, Angola, Republic of the Congo, Tanzania, Burundi, Rwanda and Uganda.

¹⁸ The Securities and Exchange Commission of the United States created by the U.S. Congress to regulate the securities markets and protect investors.



STAKEHOLDER ENGAGEMENT

The company addresses the need to engage stakeholders through the principles set forth in its Engagement Policy, which guides and encourages participative relations among its employees. It is also intended to create, maintain and strengthen trustworthy, inclusive, ethical and mutually beneficial bonds.

At TIM, engagement translates into results. Therefore, we seek to develop transparent communications with all stakeholders, starting with the employees. We encourage them to voice their ideas and share experiences. Our purpose, vision and values are widely disseminated and put into practice. Financial results and indicators, improvement of products and offers, changes to the organizational structure and market achievements are reported on a regular basis. We run specific campaigns and events for each internal stakeholder group to keep them aligned and integrated with the company's strategy.

The corporate intranet is the primary content channel, providing institutional information and internal news, as well as access to the main work tools and systems. Internal corporate TVs are also available in common areas of the administrative buildings, with internal programming tailored to each region. Employees are engaged via SMS messaging, e-mail, and weekly newsletters featuring the highlights of the week.

Each year, we conduct organizational climate surveys to obtain employee insights about the company's practices. **Read more in Human Resources.** In addition, TIM takes part in ongoing dialogue about labor relations with the unions.

Training and development actions also contribute to engage our employees. All new employees go through an onboarding process and join guided visits to call centers and stores to experience TIM's customer service. The Mutiplicando Ideias (Multiplying Ideas) program provides employees a structured and innovative method to share knowledge and ideas.

TIM takes a coherent stance towards external stakeholders, maintaining consistent and transparent communication with shareholders, investors and financial analysts. The company releases its financial results on a quarterly basis, and makes calls in English and Portuguese to journalists and analysts to disclose its three-year industrial plan, among other information.

This group of stakeholders is also engaged through internal and external visits, and on TIM Day, an annual event held in New York with the aim to clarify their doubts and disclose the company's business strategies. The event is attended by the chairman and directors of the company. Our Shareholders' meeting is another important event to disclose company results.

Besides these initiatives, investors and analysts have access to applications containing institutional information about the company. All information about TIM's financial performance, such as disclosure of results, press releases, relevant facts and stock quotes are available on the website (www.tim.com.br/ri) and on Twitter (www.twitter.com/tim-ri). Stakeholders can also ask questions, send suggestions and messages to the email (ri@timbrasil.com.br), and subscribe to receive our e-mails with newsletters.

G4-24 G4-25 G4-26

Our stakeholders

- Employees
- Service providers
- Consumers/ customers
- Suppliers
- Shareholders
- Financial institutions
- Unions
- Consumer protection and defense organizations
- Community
- Government
- Regulatory agencies
- Competitors
- Society



STAKEHOLDERS	FORMS OF ENGAGEMENT
Customers	<ul style="list-style-type: none"> Customer Service via the Customer Relationship Center (CRC), Meu TIM, Portal *144# and Audible Response Units (URA) for requests, queries to accounts and balances complaints, and changes to data Social Networks: Facebook and Twitter (@TIM_Ajuda) Monthly satisfaction surveys Fale pelo Cliente (Speak for the Customer), used by employees to address customer requests Portas Abertas website (http://portasabertas.tim.com.br), a relationship portal through which customers can keep track of antenna deployment, and network and coverage expansion.
Suppliers	<ul style="list-style-type: none"> Social and environmental questionnaire (assessment and identification of improvement opportunities for critical suppliers) TIM Commerce website (www.timcommerce.com.br), for registration and information.
Competitors	<ul style="list-style-type: none"> Cooperation and collaboration with various associations and working groups aimed at advancing the industry as a whole Free market defense information guide (aimed at TIM employees).
Environmental regulatory agencies	<ul style="list-style-type: none"> Regular contact with bodies associated with the relevant state and municipal authorities and with the Brazilian Institute of Environment and Renewable Natural Resources (Ibama) Environment and Climate Change channel ssma@timbrasil.com.br (questions and suggestions).
Community and civil society organizations	<ul style="list-style-type: none"> Contact with the communities via e-mail (respsocialcorp@timbrasil.com.br, projetosocial@timbrasil.com.br e ssma@timbrasil.com.br) and in regional offices Donation and volunteer work campaigns, investments in specific causes and social programs Support to social, environmental, cultural and educational initiatives.
Employees	<ul style="list-style-type: none"> Corporate Intranet Internal corporate TV E-mails with newsletters Safety and Occupational Health Channel (ssma@timbrasil.com.br); Induction Week for New Employees Organizational Climate Survey Speak to Human Resources channel Ethics and Compliance channel
Shareholders	<ul style="list-style-type: none"> IR site (www.tim.com.br/ri) with relevant information and integrated and complementary services Speak to IR channel, to resolve doubts and provide information.
Business partners	<ul style="list-style-type: none"> Information about offers and campaigns via Mundo TIM (intranet), Sales Business Newsletter (e-mail), SMS messaging and email marketing.



TAKING CARE OF THE ENVIRONMENT

Impact management

Our risk matrix considers environmental accidents as having high potential impact, although there have been very remote chances of occurrence. For that reason, the implementation and operation of Radio Base Stations (RBS or antennas) connecting customer mobile phones to TIM's fixed stations are considered low risk activities.

There are two types of RBS – Greenfield, which is installed on the ground, and Rooftop, a tower built on the roof of the buildings. All RBS premises have urban and environmental licenses, where applicable. In the case of potential environmental impacts, TIM carries out reparations as required in the environmental licensing process, which may include replanting trees to compensate for the vegetation removed for the installation of RBS. Antennas emit noise and non-ionizing radiation¹⁹ as they come into operation.

In Brazil, the National Telecommunications Agency (Anatel) is the regulator of radio frequency bands for mobile telephony, also responsible for regulating the limits of exposure to electromagnetic fields according to Resolution No. 303 and the Law No. 11934 of 2009. Both the resolution and the law provide for reference standards

listed in the guidelines of the International Commission on Non-Ionizing Radiation Protection (ICNIRP), and endorsed by the World Health Organization (WHO).

In order to minimize environmental risks, TIM is committed to monitor the operational aspects of the sites, ensuring compliance with internal standards, legal and regulatory requirements, as set forth in its Environmental Policy. TIM monitors and analyzes the electromagnetic emissions from its RBSs based on Anatel's ruling methods, remaining within the limits established. This procedure also extends to the structures shared with other operators.

Noise emissions are measured upon the installation of new antennas, for licensing purposes, and upon the request of the municipal government, government agencies, the Public Prosecutor's office, the local community and as required by law, although no federal regulation directly addresses this procedure. In 2016, 22% of TIM sites received electromagnetic emission measurements. Compared with 2015, the measurement of electromagnetic emissions decreased by 5 percentage points, due to a smaller demand for this type of measurement by the relevant environmental authorities.

Given its nationwide presence, TIM has RBSs installed in 153 preservation areas, such as hilltops and Conservation Units, and uses the same procedures applied to urban areas to conduct periodic monitoring in these antennas, ensuring its activities will not bring impacts to biodiversity.

G4-SO2 G4-EN12 G4-EN27

According to WHO studies, there is insufficient evidence to show that the use of mobile phones and emissions from antennas are harmful to health, as long as limits and precautionary standards are observed. Other recent studies also have shown that exposure to RF signal from RBS sites varies from 0.002% to 2% of the levels set out in international guidelines, depending on factors such as the proximity to the antenna and the environment around you. These levels are lower or comparable to the exposure to radio or TV transmitters.

¹⁹ Radiation emitted by radio waves used in mobile telephony. They do not pose risks to health, causing only increase of temperature or thermal effect.



New headquarters in Rio de Janeiro certified as LEED Silver



Energy and water
consumption reduced by
**13% and 33%,
respectively,
in six months**

Search for excellence

Always searching for continuous improvement of its internal processes and services, TIM has expanded its Environmental Management System (EMS) and implemented the Safety & Occupational Health (SGSST) system in administrative offices and sites in the states of Rio de Janeiro, São Paulo, Belo Horizonte, Curitiba, Recife, Brasília and Belém. In addition, the company maintains important certifications, as shown in the following table:

CERTIFICATION	CERTIFIED AREA	SCOPE
ISO 9001:2008 Quality Management Certification <i>Acquisition: since 2000</i>	Management of the TIM Celular Network.	National. Operational Units where the processes are carried out: Minas Gerais, Rio de Janeiro, São Paulo, Pará, Paraná, Pernambuco and Brasília.
ISO 9001:2008 Quality Management Certification <i>Acquisition: since 2005</i>	Management of the GSM pay-as-you-go and postpaid billing of TIM Celular and Intelig's TIM fixo [landline] billing.	National. Operational Units where the processes are carried out: Rio de Janeiro and São Paulo
ISO 14001:2004 Environmental Certification <i>Acquisition: since 2010</i>	Management and Operation of the TIM Celular Network.	Rio de Janeiro, São Paulo and Espírito Santo
SMP Quality Regulatory Certification <i>Acquisition: since 2004</i>	Method for collection, consolidation and reporting of quality indicators of the Personal Mobile Service – SMP.	National
STFC Quality Regulatory Certification <i>Acquisition: since 2014</i>	Method for collection, consolidation and reporting of quality indicators of the Switched Fixed Telephone Service – STFC	National
SCM Quality Regulatory Certification <i>Acquisition: since 2015</i>	Method for collection, consolidation and reporting of quality indicators of the Multimedia Communication Service – SCM.	National



3,913 MWh
of energy savings

**TIM met the target to
limit growth of the energy
consumed by its mobile
network in 22%.**

Energy

Energy is the oxygen of industries, paramount to the operation of virtually all the equipment in modern society. The challenge of growth in any productive sector is directly related to the search for new energy sources. Added to this equation, climate change makes this challenge even greater, as the use of fossil fuels increase global warming.

According to a study conducted by the United Nations Environment Programme (UNEP) in partnership with Bloomberg New Energy Finance (BNEF) and other institutions, US\$286 billion were invested in renewable energy in 2015. For the first time, this amount accounted for more than twice the investment made in coal and gas. That year also saw an unprecedented shift, with developing countries investing more in clean energy than the developed nations. Brazil ranked among the world's top investors²⁰.

TIM believes that investing in energy efficient processes is key to leverage the company's competitiveness and to fulfill its Environmental Policy. Its guidelines provide for the development of actions aimed at reducing the waste of energy and materials, ensuring sustainable use of natural resources and of primary ecosystem services.

TIM achieved savings of 3,913 MWh in 2016, as a result of initiatives to drive energy efficiency. As for the energy consumed by its mobile network, which accounts for 80% of the total energy consumed in the company, TIM met the target to limit growth in 22%, compared to last year. For 2017, that limit is set to 12%. If TIM had not implemented these energy efficiency initiatives, the increase in energy consumption would have been considerably higher, in proportion to the expansion of its network infrastructure, which made the company the absolute leader in 4G.

The first step to improve processes is to monitor consumption and identify possible deviations. To implement these tasks, we started a project in Rio de Janeiro, which has already covered 100% of the industrial buildings and 90% of RBSs. The goal is to measure both the energy consumed and the ambient temperature, optimizing the use of air conditioning to prevent cooling or heating beyond the necessary. Through this analysis, TIM detected higher consumption in some sites, due to frequent power outages, which required restarting the batteries and systems to resume operations. We have contacted the electric companies to ascertain the causes of instability in the power supply.

²⁰ Source: *Global Trends in Renewable Energy Investment 2016*, prepared by United Nations Environment Programme (UNEP) in partnership with Bloomberg New Energy Finance (BNEF) and the Frankfurt School-UNEP Collaborating Centre for Climate & Sustainable Energy Finance. Available at <https://nacoesunidas.org/brasil-e-um-dos-dez-maiores-investidores-em-energia-renovavel-do-mundo-aponta-relatorio-do-pnuma/>



The LEED silver certification ([learn about LEED certification](#)) acquired for the new headquarters was also a major contribution to our energy-saving actions. From July to December, our power consumption dropped by 13% compared to consumption in the old building over the same period last year. TIM maintained its commitment to reducing energy consumption in the administrative offices, through employee awareness measures, including internal newsletters. The company also followed-up its building maintenance actions, such as reducing the hours of operation of air conditioners and lifts and intensifying maintenance routines.

TIM is constantly looking for solutions to maximize the use of resources and minimize urban impacts. One example is the RAN²¹ sharing agreement for the 4G network, which enables sharing the RBS with other operators. The first agreement approved by Anatel was signed between TIM and Oi in 2013. In addition to reducing costs (that are now divided among TIM, Oi and Vivo), sharing infrastructure also reduce energy consumption, as it eliminates the need to build new stations.

From the sustainability standpoint, RAN Sharing brings benefits within economic, environmental and social aspects. The 90,000 MWh reduction in 2016 corresponded to cost savings of approximately BRL 140,000,000 (Opex). Another achievement was the prevention of approximately 7,000 tons of CO₂ equivalent emissions, which would otherwise have been released if the power had been consumed in new non-shared towers. Also in the

environmental aspect, the initiative reduced the demand for equipment (which may be reduced by 50%) and fuel for tower maintenance activities, optimizing the flow of operators. Lastly, resources that would be invested in the construction of new radio base stations can be reverted to other projects, contributing to the development of telecommunications in the country.

The FreeCooling Project consists of a ventilation system for equipment containers, where a cooler is installed in shelter-type sites (enclosures) in the South and Southeast regions to reduce the use of energy and refrigerant gases in air conditioning equipment. With this initiative, TIM achieved savings of 2,175 MWh, corresponding to approximately 180 tCO₂e of emissions avoided. [G4-EN6](#)

TOTAL ENERGY CONSUMED, DISCRIMINATED BY SOURCE G4-EN3	UNIT OF MEASURE	2014	2015	2016
Gasoline	L	1,489,469	1,322,984	900,823
Diesel – Vehicles	L	33,149	43,122	31,009
Diesel – Generators	L	165,451	222,169	313,538
Ethanol*	L	-	-	32,917
Electricity	MWh	483,934	562,952	619,930
In GJ				
Gasoline	GJ	44,664	39,671	27,012
Diesel – Vehicles	GJ	1,174	1,525	1,096
Diesel – Generators	GJ	5,857	7,855	11,131
Ethanol*	GJ	-	-	736
Electricity	GJ	1,742,161	2,026,627	2,231,750
Total energy used	GJ	1,793,855	2,075,678	2,271,724

* Ethanol consumption was included in the report in 2016.

²¹ Abbreviation of the term in English: Radio Access Network.



About the LEED Certification

The LEED (Leadership in Energy and Environmental Design) certification is awarded by the United States Green Building Council (USGBC), a non-profit organization that aims to promote environmental sustainability in building design, construction and operation. The three LEED rating levels are LEED Silver, LEED Gold or LEED Platinum. LEED projects earn points by adhering to seven prerequisites:

- *Rational use of water*
- *Energy efficiency*
- *Reduction, reuse and recycling of materials and resources*
- *Building indoor quality*
- *Sustainable site*
- *Innovation and technology*
- *Meeting local needs.*

SOLAR POWER

Aware of the potential of Brazilian renewable energy sources, TIM installed 33 photovoltaic panels in RBSs in 2016, in the Northeast and Southeast regions of the country, which resulted in savings of 113,788 kWh and BRL 72,000. The panels bring more stability to the network, compensating for potential power outages in the utility company. TIM uses the power generated by the solar panel during daytime, after which the power consumed will come from the utility. Our goal in 2017 is to install seven new panels and continue monitoring the performance of those installed in 2016, in order to identify which actions can improve the efficiency brought by this initiative. In addition to providing greater stability, solar panels are the company's strategic choice for renewable energy investments, fostering sustainable development and the low-carbon economy.



33 photovoltaic
panels
installed

Savings of 113,788 kWh and BRL 72,000

WATER

Even though the United Nations declared access to water and sanitation as human rights, it still constitutes a global challenge. According to the UN, the percentage of people with access to safe-drinking water in 2015 was 91%, compared to 76% in 1990. Despite the progress achieved over the last 25 years, 663 million people around the world still lack access to this essential resource.²²

As a signatory of UN's Global Compact, TIM acknowledges its strategic role in society. Even though its activities do not involve heavy use of water – the largest consumption takes place in its headquarters –, the company is committed to fostering several practices and initiatives to protect this resource.

One of the key actions aligned to this goal was the transfer of the headquarters in Rio de Janeiro to a LEED Silver-certified building. Within six months, the water consumption dropped by 33% compared to the same period in 2015. In addition to rainwater collection and treatment of water for reuse in the irrigation system and in air-conditioning cooling towers, the building features an automated irrigation system suited for each consumption area of the gardens.

²² Source: Progress on Drinking Water and Sanitation Report: 2015 update and Millennium Development Goals (MDG) Assessment prepared by WHO and UNICEF. Available at https://www.unicef.org/publications/index_82419.html



The water consumed at TIM comes mainly from the urban supply networks, but the São Paulo office also consumes water from an artesian well. Since 2015, TIM has been developing initiatives that together saved 14% of the water consumed from the urban supply network in 2016. Another initiative developed in the office of Santo André (SP) captures rainwater from the roofs and rainwater galleries, including physical-chemical treatment for reutilization. In 2016, it accounted for 43% of the water extracted from the public network in the building and 7% of the total consumption of administrative and mixed buildings. Rainwater collection is also adopted in the Giovanni Gronchi (São Paulo) and Brasília (DF) offices. In the unit located in the neighborhood of São Cristóvão, Rio de Janeiro, the company reused water from the air-conditioning water (condensation) through a box that can be used to clean patios and irrigate gardens. **G4-EN10**

TIM continued implementing measures to reduce water consumption, such as inspections in bathrooms and pantries to detect leaks and the installation of tap timers and close coupled toilets. Cleaning of the office courtyard remains

suspended. These initiatives have been helping the company reduce the water intake from the public network or other water supply companies, resulting in 33% savings over the last two years.

TIM also returned administrative offices in 2016, including two high-water consuming call centers that had a large number of employees and operated long hours (6 a.m. to 1 a.m.) All of these initiatives allowed us to exceed the 1% target to reduce water consumption over 2015, reaching the 10% mark. For 2017, the goal is to reduce water consumption in offices by 1% compared to 2016, considering the return of buildings in 2016 (reduction of approximately 16,800 sq. m. that accounted for 8.3% of TIM's administrative building area in early 2016).

Regarding effluents from the buildings, all the volume produced by the company goes to public sanitation grids, which are responsible for controlling the effluent treatment process. The company does not perform disposal with high environmental impact and no water body is significantly affected by the effluents generated at TIM.

TOTAL WATER CONSUMED, DISCRIMINATED BY SOURCE (CUBIC METERS)

G4-EN8
2014
2015
2016
Other water sources (artesian well, water truck, rainwater collection)

22,475

27,108

36,823

Water supplied by the municipal grid or other companies.

228,725

167,855

154,117

Total

251,200

194,963

190,940

Percentage of the volume extracted compared to the previous year.

+9%

-22%

-2%



MATERIALS & WASTE MANAGEMENT

The environmental impacts arising from the extraction of raw materials from nature and disposal of waste into the environment represent a major challenge for all industries. As described in its Environmental Policy, TIM is committed to sustainable and responsible management practices, guided by the continuous improvement of working processes and prevention of pollution. To foster recovery and recycling, these practices also include mitigation of waste production and incentives to selective collection.

The company takes several measures to reduce the internal consumption of paper and their respective costs, in addition to replacing independent printers, scanners, fax and copy machines for multi-functional devices that centralize all those tasks. In 2016, TIM reduced paper consumption by 71.46% compared to 2015; this percentage was more expressive with marketing materials (98.82%). These reductions were due to several initiatives, such as incentives for online billing and summarized invoices for unlimited voice and data services. We also changed the formats of campaigns, giving priority to electronic and digital media.

Since 2014, 100% of the paper for internal use is certified by the Forest Stewardship Council (FSC).

TOTAL MATERIALS USED, BY WEIGHT (KG) G4-EN1

	2014	2015	2016
Paper – billing	1,348,029	592,020	526,870
Paper – internal use	43,907	37,579	21,461
Paper – marketing	1,114,592	1,877,527	22,200
Paper – packaging	77,112	178,425	194,758
Total	2,583,640	2,685,551	766,506

The main waste generated in TIM's operations are end-of-life batteries from network equipment and lubricating oil. In the administrative areas, organic waste represents the largest volume. Its Waste Management Program includes awareness campaigns across the company, as well as the selective collection of paper, cardboard, plastic, aluminum and non-recyclable material (organic waste) in the administrative headquarters and industrial buildings.

Collection of recyclable materials is handled by cooperatives or suppliers enabled to provide this service, while organic waste is selected and made available for public collection carried out by municipal bodies or suppliers authorized by

the City Government. For the disposal of burned bulbs, TIM hires appropriate waste collection and disposal companies. The transfer of the headquarters in Rio de Janeiro to the new building was a great opportunity to reinforce the importance of selective disposal. Our employees were encouraged to scan and discard documents and other unnecessary materials. Although the action enabled the recycling of 16.9 tons of paper, 647 kg of plastic and 24.7 kg of metal, TIM has not achieved its target to recycle the waste generated in the offices, which was set to 25% of the total waste generated. This was mainly due to the amount of waste from the construction works carried out in the old and new headquarters.



Our goal for 2017 is to recycle 10% of the total waste generated in the offices. The amount of recyclable waste generated in offices decreased compared to non-recyclable waste due to several actions implemented, hence the target reduction. As shown by indicator EN1, paper consumption in the office dropped by 43% and 51% compared to 2015 and 2014, respectively. This was achieved through replacement of independent printers, scanners, fax e copy machines for multi-functional devices, as well

as badge-controlled printing and restriction on color printing. In addition, employees have no fixed workstations at the new headquarters, which prevents accumulation of paper on the desks. On the other hand, the proportion of non-recyclable waste (organic and sanitary waste) has increased due to the new cafeteria at the headquarters, where employees can have lunch and snacks. Widely accepted among the employees, the space produced a significant amount of organic waste, affecting the

company's plans to increase recycling rates in the offices in relation to the total waste generated.

The volume of hazardous waste decreased by 67% compared to the previous year, as depicted in the table below. The disposal of this material is periodic, as a minimum amount needs be accumulated to be collected by the supplier. TIM's non-hazardous waste generation decreased by 16%.

TOTAL WASTE GENERATED, BY TYPE AND BY METHOD OF DISPOSAL G4-EN23

GENERATED (T)	2014	2015	2016
Hazardous waste	11.43	223.88	74.25
Non-hazardous waste	428.15	560.14	471.28
Total	439.58	784.02	545.53

OFFICES			
Hazardous waste	3.75	5.53	5.81
Non-hazardous waste	412.73	518.12	431.24
Total	416.49	523.65	437.05

NETWORK			
Hazardous waste	7.682	218.35	68.44
Non-hazardous waste	15.42	42.02	40.04
Total	23.10	260.37	108.48

RECYCLING	2014	2015	2016
Hazardous waste	8.84	208.48	48.58
Administrative buildings	3.75	5.53	5.81
Network	5.09	202.95	42.77*
Non-hazardous waste	167.90	133.66	99.75
Administrative buildings	157.77	93.55	86.58
Network	10.13	40.11	13.17
Total	176.73	342.13	148.33

SANITARY LANDFILL			
Non-hazardous waste	206.26	426.49	371.53
Administrative buildings	254.97	424.58	344.66
Network	5.29	1.91	26.87

*The difference between the total amount of network hazardous waste generated (68,440 kg) and the amount of network hazardous waste sent for recycling (42,766 kg) is due to the interval between the generation and collection of waste. At the end of 2016, there were 25,674 kg of network hazardous waste awaiting collection for proper disposal through recycling.



RECARREGUE O PLANETA [RECHARGE THE PLANET]

In 2010, Brazil created its Solid Waste Policy, providing for shared responsibility among several players in the production chain, like consumers, public authorities, cooperatives, recyclers and industry.

Aligned with this guideline, TIM started collecting disused devices, batteries and accessories through the initiative Programa Recarregue o Planeta (Recharge the Planet Program), encouraging customers to place disused mobile handsets, batteries, cables and other accessories into special bins, and sending them to proper disposal sites. TIM fell short of its target to recycle 2 tons of devices and accessories, collecting only 961,045 kg. Starting in 2017, the SIM cards discarded by the Distribution and Logistics Centers (CDLs) will be included in Recarregue o Planeta's recycling program.

In 2016, TIM launched TIM Next, an offer that enables customers to replace their old smartphones by new ones at discount pricing, according to each phone's condition. The collected devices undergo cleaning, light polishing and have some parts replaced, if necessary, and are offered for sale in authorized channels. This reconditioning process helps reduce waste and disposal of devices, as well as raw material to produce new ones. **G4-EN28**



CLIMATE CHANGE

The Paris Agreement, approved by the 195 member countries of the United Nations at the 21th Climate Conference (COP21), established an unprecedented global commitment to reducing GHG emissions. One of the proposals is to keep global warming below 2°C, seeking further efforts to limit the temperature increase 1.5°C above pre-industrial levels.

Acknowledging the strategic nature of this issue, TIM strives to monitor and reduce its carbon footprint in the various stages of its activities, such as operation of equipment, transportation of products and commuting. We implement actions according to our Climate Change Management Policy, and all decisions are conducted by our Board of Directors, through the Control & Risk Committee, which among its tasks should supervise and follow up all social responsibility issues pertaining to the company and subsidiaries.

As part of its commitment to society in addressing climate change, TIM conducts periodic mapping of the sources of emissions in its activities. The company manages this issue through the Greenhouse Gas (GHG) Inventory, prepared annually in accordance with the guidelines of the GHG Protocol (which sets the global standard for how to measure, manage, and report greenhouse gas emissions). TIM also refers to the guidelines and emission factors published by the International Panel for Climate Change (IPCC). The results of the emissions inventory are disclosed through a number of channels, including the CDP, Brazil's Public Emissions Registry, and TIM's website (Sustainability section), as well as in the Sustainability Report.

The reduction in TIM's emissions under scope 1 was due to the reduced emissions related to the use of gaseous fire-fighting equipment with high global warming potential.



G4-EN15 G4-EN16 G4-EN17 G4-EN19

SCOPE	TYPE OF EMISSION		
Scope 1 <i>(direct emissions)</i>	1) Consumption of fuel in own fleet. 2) Consumption of diesel oil to generate energy. 3) Fugitive emissions from gases used in refrigeration and fire-fighting equipment.		
Scope 2 <i>(indirect emissions associated with energy generation)</i>	Consumption of purchased energy.		
Scope 3 <i>(other direct emissions)</i>	1) Fuel consumed in: <ul style="list-style-type: none"> • employee air travel • employee commuting between work and home • third-party fleet and sales reps' vehicles • cargo transported by air. 2) Waste management. 3) Production of inputs purchased. 4) Production of energy inputs (fuels). 5) Loss from electricity transmission and distribution.		
EMISSIONS BY TYPE	2014	2015	2016
Scope 1	2,195 tCO ₂ e	10,152 tCO ₂ e	4,992 tCO ₂ e
Scope 2	483,934 MWh	562,952 MWh	619,930 MWh
	65,565 tCO ₂ e	70,055 tCO ₂ e	50,638 tCO ₂ e



EMISSIONS DISCRIMINATED BY SCOPE AND TYPE (tCO ₂ e)	2014	2015	2016
Scope 1	2,195	10,152	4,992
<i>Own fleet</i>	735	867	634.5
<i>Generators</i>	414	546	770.1
<i>Fugitive emissions - coolants</i>	1,066	1,512	1.833.6
<i>Fugitive emissions - fire extinguishers</i>	-	7,227	1.753.6
Scope 2	65,565	70,055	50,638
<i>Electricity consumption¹</i>	65,565	70,055	50,638
Scopes 1 and 2	67,781	80,207	55,630
Scope 3	39,606	42,266	32,173
<i>Production of inputs purchased (Cat. 1)</i>	-	2,697	820
<i>Production and transportation of energy inputs (Cat. 3a)</i>	-	384	348
<i>Loss from transmission and distribution (Cat. 3c)</i>	-	14,779	12,739

	2014	2015	2016
<i>Air travel (Cat. 6)</i>	5,080	4,178	1,737
<i>Taxi trips (Cat. 6)</i>	-	315	188
<i>Employee commuting (Cat. 7)</i>	7,373	7,367	6,073
<i>Third-party fleet – Logistics (section Cat4 and 9)²</i>	23,714	9,221	7,439
<i>Third-party fleet – Others (section Cat. 4)³</i>	1,613	1,044	1,189
<i>Sales reps commuting (section Cat. 9)</i>	1,786	1,433	908
<i>Waste management</i>	40	848	732

¹ Emissions from electricity consumption reduced by 28% compared to 2015. The national grid emission factor provided by the Ministry of Science and Technology, which takes into account the Brazilian energy matrix and its supply via the Sistema Interligado Nacional (SIN) dropped by 34% (emission factors: 2015 – 0.1244 tCO₂/MWh; 2016 – 0.0817 tCO₂/MWh). During the same period, there was a 10% increase in the total consumption of electricity imported from SIN.

² The decrease in this source is due to the reduction in the transport of commercial products, both by road and by air.

³ This line refers to emissions associated with outsourced transport of network equipment, selective collection and collection of equipment, batteries and accessories.



Despite not being subject to any national, regional or industrial legislation on emissions, TIM believes that, in the short-term, the voluntary measurement of emissions will become a mandatory measure through national or state legislation. In this context, companies that already have an emission inventory in place will gain competitive edge in the market.

In addition to having quantified and published its GHG emissions annually since 2008, being part of the CDP database since 2007 and being a part of the “Empresas pelo Clima” [Companies for the Climate] platform since 2010, TIM wants to anticipate the challenges arising from this issue and society’s increasing demand for a more sustainable approach. Its target to reduce GHG emissions is indirectly connected with the energy target.

Since 2013, the company purchases carbon credits in

the voluntary carbon market to compensate its direct emissions, and made a new purchase in 2015 totaling 6,000 tCO₂e of carbon credits to offset its direct emissions under scope 1.

TIM is also a part of the REED+Jari Amapá project (Reducing Emissions from Deforestation and Forest Degradation), a partnership between Grupo Jari and Biofilica, located in Vale do Rio Jari, in the state of Amapá. The project generates carbon credit through the deforestation avoided, based on the standing forest economic development. Direct emissions in 2013 and 2014 were fully compensated. In 2015, TIM only compensated part of the direct emissions (29%). The remaining credits from the REDD+Jari Amapá project (1,448 tCO₂e) have been used to compensate a part of the direct emissions in 2016, which helped neutralize 29% of emissions under scope 1.

ENGAGEMENT ACTIONS

AT TIM, suppliers and employees are encouraged to engage in climate change initiatives. The company holds internal workshops that are also attended by transport suppliers, with the aim to raise awareness of the issue and promote mapping and management of emissions. TIM also seeks to contribute to a more detailed and quantified reporting of indirect emissions, to reducing the carbon footprint related to supplier services and finding innovative yet less polluting solutions. In addition, TIM participates in external forums and discussion groups to debate and propose good practices concerning the topic.

For TIM, employee participation is critical to an efficient use of resources and management of emissions in the company. They are encouraged to develop innovative and quality services for customers, while reducing the impacts on the environment.



Risks and opportunities arising from climate change

OPPORTUNITIES

For the telecommunications industry, the opportunities arising from climate change are mainly related to the development of solutions to mitigate emissions from operators and customers and to allow better adaptation to severe climate change. One example is the partnership agreements signed with the Ministry of Science, Technology and Innovation (MCTI) for the installation of rainfall data collection platforms.

Meanwhile, to prevent a scenario of scarcity in energy offering, caused by long periods without rain, TIM promotes initiatives aimed at reducing consumption of electricity in its services and installations. [\(Read more in Energy\).](#)

The company believes that strategic carbon management combined with transparent practices is an opportunity to attain more customers in an increasingly demanding consumer market. The company also considers that its telecommunication services may be used to reduce emissions resulting from people commuting. They serve as basis for optimizing production processes and logistic flows in various sectors, helping customers reduce their emissions as well.

Similarly, climate change influences the behavior of

investors, who prioritize companies that are open about how they manage their emissions. In this sense, in November 2016, TIM was confirmed for the ninth year in a row as part of the Corporate Sustainability Index (ISE), a portfolio of the São Paulo Stock Exchange (B3).

TIM has participated in CDP Investors since 2007 and responds to the CDP Supply Chain questionnaire upon customer request. With this, TIM also provides information that contributes to the sustainable development of its value chain.

RISKS

To meet the targets set by the Paris Agreement, countries undertake to achieve their own goals, based on the so-called Nationally Determined Contributions (NDC). The Brazilian NDC aims at the absolute reduction of 37% of emissions below the 2005 levels for the year 2025.

The National Policy on Climate Change (PNMC) – established through Law 12187 of December 2009, and regulated by Decree No. 7390, dated December 9, 2010 – also confirms Brazil's alignment with international initiatives aimed at reducing the impact of climate change. At the state level, there is a trend for even stronger restrictions on emissions. In São Paulo and Rio de Janeiro, the two states that are

most relevant for our business, specific legislation on climate change issues are already in place for sectors with the biggest carbon footprint.

A major part of GHG emissions quantified in TIM's inventory is associated to energy consumption (particularly by the network infrastructure). Therefore, policies that apply to the energy industry tend to raise the operating costs of services, causing the energy price increase to be passed on to consumers, and influencing TIM's operating costs. Similarly, rules that impact TIM's suppliers may result in increased cost for products and services contracted by the company. The removal of subsidies incident on the price of fossil fuels and/or the imposition of emission reduction targets in this sector can also affect TIM adversely.

Similarly, climate change influences the behavior of investors, who prioritize companies that are open about how they manage their emissions.



Most of the domestic electricity supply comes from hydroelectric generation— 64%, according to the Brazilian Energy Balance from 2016, base year 2015 (BEN, 2016). In 2016, the hydroelectric power generation was reduced by 1.2 percentage points compared to the previous year. Any change in the rainfall extremes and long periods without rain can end up compromising the water level at reservoirs and affecting the national energy offer. In this case, TIM might be affected by energy rationing measures and oscillations in the average price of kWh due to the effect of climate change.

In addition, a higher frequency and strength of storms could damage transmission towers, increasing company expenses on the acquisition of new equipment and maintenance of existing equipment. This could also lead to an increase in insurance costs for goods susceptible to such events, and interruption or loss of quality in the signal of mobile telephone and other telecommunications services. Changes in air humidity and salinity can decrease the use life of mobile devices.

In the event of increase in the average temperature, electronic appliances whose performance is directly related to their temperature of operation could lead to higher consumption of electricity for the purposes of cooling.

The assessment of risks and opportunities related to climate change is performed on an annual basis (available on CDP's website: <https://www.cdp.net/pt>). **G4-EC2**



Risks in the Southeast Region

TIM conducted a risk assessment study in 2016 to map the main threats associated with its operations in the Southeast region (where most of its assets are concentrated), based on the corporate risk matrix already used in the company.

The assets were separated by type of infrastructure (rooftop, greenfield, industrial building, biosite, among others) and grouped by sub-region. Other actions included surveying the history of weather events that affected TIM's operations and potential future risks in the run-up to 2040. These estimates were based on data provided by the Center for Weather Forecasting and Climate Studies (CPTEC), linked to the National Institute for Space Research (INPE).

After prioritizing the risks and opportunities, TIM identified options for adaptation projects with the aim to prevent or reduce possible negative impacts and enhance the likely positive impacts.



ABOUT TIM

COMMITMENT

INNOVATION AND AGILITY

CONNECTING AND CARING
ABOUT EACH ONE

TRANSPARENCY

GRI



TRANSPARENCY





LEGAL COMPLIANCE

TIM believes that conducting business with ethics is paramount to achieving success. Its Code of Ethics and Conduct reinforces the company's position in adopting organizational solutions to prevent any direct or indirect stakeholders from violating the law and the principles of transparency, honesty and loyalty.

To ensure legal compliance – a top priority for the company –, TIM has implemented tools to monitor and follow-up all legal requirements related to its activities. An interdisciplinary team within the Network area is also available to enforce all environmental laws relating to its Radio Base Stations (RBS). This team is supported by representatives of Legal, Institutional, Quality and Compliance. Its Environmental Management System includes a tool that tracks the issuance or amendment of existing legislation and forwards the matters to internal areas.

To ensure legal compliance – a top priority for the company –, TIM has implemented tools to monitor and follow-up all legal requirements related to its activities.

Within public policies, TIM engages in discussions related to the telecommunications industry as a member of working groups at SindiTelebrasil, where laws are identified and assessed in conjunction with other operators. **More information about TIM's activities in public policies.**

With respect to processes of a collective nature, our legal board constantly gives advice on the business model that is being created by other internal areas of the company, with the aim of mitigating possible impacts and non-compliance with legal requirements.

If any legal non-compliance is identified, the board is contacted to assess potential risks and communicate the guidelines to be adopted. The other areas involved in the issue are contacted to help solve the problem and/or minimize the risks. The legal department receives orders for compliance or penalties arising from audits carried out by public agencies, in the event of noncompliance with any requirement, law or conduct.

To prevent new non-compliance events from occurring, TIM has a licensing committee composed of various areas of the company, responsible for addressing environmental legislation matters and evaluating compliance issues to mitigate and resolve any problems. In the other cases, the area responsible for the breach of conduct or law is instructed and required to adjust the practice pursuant to the laws concerned.





For non-compliance with laws and regulations relating to the provision and use of products and services, TIM paid BRL 2.2 million in fines. The proceedings brought to court referred to nonfulfillment of quality goals defined by Anatel for the provision of services, as well as claims by consumer protection organizations. All proceedings and respective fines applied by Anatel to TIM and other operators are available on the website: https://sistemas.anatel.gov.br/Boleto/Internet/Index_Boleto.asp

TIM ended 2016 with 1,278 active administrative proceedings regarding environmental licensing of RBSs, involving regularization of structures and equipment (see next table). This 48% increase in the number of cases compared to 2015 was mainly due to increased enforcement activities held by the city governments in the Southeast and South regions.

TIM is committed to ensuring quality while complying with all standards set by regulators, continuously improving its activities to offer customers the best experience using our services.

TIM was prohibited from commercializing data and voice services during 2014, as a result of fluctuations in network quality in the cities of Ituruço (Bahia), Tabatinga (Amazonas), Paraibano (Maranhão), Paulo Ramos (Maranhão) and Marajá do Sena (Maranhão). The company has adopted all applicable judicial measures to reverse the decisions and resume sales in those locations.

We ensure transparent communication in cases of non-compliance by providing information as required by the relevant regulatory agencies. **G4-PR9** **G4-EN29**

FINES AND NON-MONETARY SANCTIONS RELATED TO THE ENVIRONMENT **G4-EN29**

	2014	2015	2016
Number of fines	71	54	430
Total sum of fines received (thousand BRL)	4,344.16 ⁽¹⁾	499.69	65,585.76 ⁽²⁾
Total number of infraction notifications	154	89	442
Conduct adjustment agreements relating to environmental aspects (number of TACs)			
Total TACs initiated in the period	0	0	0
Total TACs in place	5	5	3
Total TACs ended in the period	0	0	2
Environmental-related lawsuits and proceedings (number of cases)			
Administrative proceedings (Active)	683	861	1278
Administrative proceedings (Filed)	163	131	451
Lawsuits (Active)	37	41	41
Lawsuits (Filed)	1	5	3

¹ In December 2014, the Altamira (PA) Municipal Environment Department issued a notification related to the alleged installation and operation of a radio base station in the municipality without the respective environmental license, establishing a BRL 4 million fine. TIM presented its defense in the administrative proceedings and paid a fine amounting to BRL 100,000.00

² 2016 saw a significant increase in the number of environmental fines. This increase occurred mainly as a result of an inspection carried out by the Government in the cities of Goiânia (Goiás), São Gonçalo (Rio de Janeiro) and in the State of Santa Catarina. The fines applied to TIM and other operators were in most cases related to environmental license renewal or acquisition issues. TIM adopted all applicable judicial measures to reverse the decisions and several fines are being discharged.



Conduct Adjustment Agreement (TAC)

A conduct adjustment agreement (TAC) is a legal instrument used by government bodies to get companies to commit to modifying certain processes in line with legal requirements. In December 2016, TIM had three TACs in place related to the following cases:

- **Fortaleza (CE)** – TAC between TIM Celular and the State Environmental Authority Semace for the company to present all the documentation concerning 135 proceedings underway for the radio base stations installed in the state of Ceará. Underway.
- **Manaus (AM)** – TAC between TIM Celular and the city government due to the irregular installation of RBSs in the municipality. There was a reduction in the fines applied by the municipality and TIM was obliged to license the radio base stations. Underway.
- **Boa Vista (RO)** – TAC between TIM Celular and the local government to regularize the urban licenses of all the RBSs installed in the municipality, with a reduction in the penalties. Underway.

Anticompetitive practices

TIM condemns any anticompetitive practices, creation of monopoly or any other conduct that can be characterized as trust. The company carries out its initiatives according to its Free Market Defense Policy (available on TIM's intranet), which was updated in 2016 to reflect the changes made to legislation and the evolution of the competitive environment. TIM also complies with guidelines from regulatory bodies aimed at securing a competitive market and respect for consumers.

All employees (regardless of position) performing activities governed by the anti-trust legislation attend face-to-face training sessions on the subject, such as the Free Market Defense lecture, which is held on an annual basis. The company created a guidebook on Free Market Defense in 2016, and intends to develop an online training in 2017, providing its employees an additional tool to learn about the subject.

Through the Whistleblower channel, any person (employee or not) can report breaches or suspicions of non-compliance with TIM's Code of Ethics and Conduct, internal policies and laws. [Read more in Ethics and transparency.](#)

TIM recognizes the national advertising self-regulatory council CONAR as a competent body to oversee ethics in Brazilian advertising.

Lastly, TIM's contract management tool contains a questionnaire, which, according to the responses sent to the area responsible for the document, engages the team responsible for the antitrust assessment, in order to verify whether that partnership must be notified to the antitrust agency - CADE.

In relation to advertising, TIM recognizes the national advertising self-regulatory council CONAR as a competent body to oversee ethics in Brazilian advertising, and follows the country's Advertising Self-Regulatory Code, as well as the Consumer Defense Code.



To ensure compliance with these standards and regulations, all communications developed by the Marketing and Advertising teams are evaluated, and in case of potential risks, the advertising material shall be adapted according to the recommendations made.

One of TIM's best practices is to make its disclosures available for assessment and assurance through other sources and materials. Its ads must contain accurate information, expressed in clear and understandable language, to avoid leading consumers to misinterpretations or false conclusions.

In 2016, two representations were filed against the company with CONAR, both made by competitors. One has been concluded; the other was judged in December and currently awaits appeal decision. In addition, two representations filed in 2015 had their final judgment in 2016. All were dismissed. **G4-PR7**

As for the cases involving anti-competitive practices, there were 14 unresolved cases by the end of 2016, all related to previous years. No new cases were brought against the company in 2016. **G4-SO7**

In the administrative sphere, overseen by the antitrust agency CADE (Conselho Administrativo de Defesa Econômica), proceedings involving anticompetitive actions were brought against operators (including TIM), based on external complaints, relating to zero rating service offers and the decision to limit broadband access to the data package chosen. ANATEL ruled out the proceeding related to the zero rating service offer – which is still in early stage of evaluation by CADE –, as no anticompetitive practices among operators have been identified. CADE dismissed the proceeding concerning the broadband access limitation without imposing fines to the operators, as there was no evidence of violation against the economic order.





ABOUT TIM

COMMITMENT

INNOVATION AND AGILITY

CONNECTING AND CARING
ABOUT EACH ONE

TRANSPARENCY

GRI



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GRI G4 Content index - Core option

GENERAL STANDARD DISCLOSURES

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G4-5 Location of organization headquarters	04	
G4-6 Countries where either the organization has significant operations or that are specifically relevant to the sustainability topics covered in the report	04	
G4-7 Type and legal nature of the property	04	
G4-8 Covered markets	04	
G4-9 Organization size	04	
G4-10 Employee profile	41	
G4-11 Percentage of employees covered by collective bargaining agreements	100% of employees at TIM are covered by collective bargaining agreements.	
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G4-13 Significant changes regarding the organization's size, structure, ownership, or its supply chain	There were no significant changes during the reporting period.	
G4-14 Explanation of how the precautionary approach or principle is addressed by the organization	By participating in relevant trade unions and other associations, and interacting with society through public hearings, seminars and workshops.	
G4-15 Letters, principles and other initiatives	15	
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Description	Page	External assurance
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Material aspects	Indicators and disclosures on management approach	Page	External assurance	Global compact
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Material aspects	Indicators and disclosures on management approach	Page	External assurance	Global Compact
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Material aspects	Indicators and disclosures on management approach	Page	External assurance	Global Compact
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Limited assurance report issued by independent auditors

To the Board of Directors, Shareholders and Stakeholders of TIM Participações S.A.
Rio de Janeiro - RJ

INTRODUCTION

We have been engaged by TIM Participações S.A. (TIM or “Company”) to apply limited assurance procedures on the sustainability information disclosed in the 2016 Sustainability Report of TIM Participações S.A. and its subsidiaries TIM Celular S.A. and Intelig Telecomunicações Ltda., related to the year ended December 31st, 2016.

RESPONSIBILITIES OF TIM’S MANAGEMENT

The Management of TIM is responsible for adequately preparing and presenting the sustainability information in the Sustainability Report 2016 in accordance with the *Global Reporting Initiative (GRI) Sustainability Reporting Guidelines (GRI-G4)*, as well as the internal controls determined necessary to ensure this information is free from material misstatement, resulting from fraud or error.

INDEPENDENT AUDITORS’ RESPONSIBILITY

Our responsibility is to express a conclusion about the information in the Sustainability Report 2016 based on a limited assurance engagement conducted in accordance with Technical Communication (TC) 07/2012, which was prepared based on NBC TO 3000 (Assurance Engagements Other Than Audits and Reviews), both issued by the Brazilian Federal Accounting Council - CFC and equivalent to international standard ISAE 3000,

issued by the International Federation of Accountants and applicable to Non-Financial Historical Information. These standards require compliance with ethical requirements, including independence ones, and the engagement is also conducted to provide limited assurance that the information disclosed in the TIM’s Sustainability Report 2016, taken as a whole, is free from material misstatement.

A limited assurance engagement conducted in accordance with NBC TO 3000 (ISAE 3000) consists mainly of questions and interviews with the Management of TIM and other professionals of the Company involved in the preparation of the information disclosed in the Sustainability Report 2016 and use of analytical procedures to obtain evidence that enables us to reach a limited assurance conclusion about the sustainability information taken as a whole. A limited assurance engagement also requires additional procedures when the independent auditor acknowledges issues which may lead them to believe that the information disclosed in the Sustainability Report 2016 taken as a whole could present material misstatement.

The selected procedures were based on our understanding of the issues related to the compilation, materiality and presentation of the information disclosed in the Sustainability Report 2016, on other engagement circumstances and also on our considerations regarding

areas and processes associated with material sustainability information disclosed where relevant misstatement could exist. The procedures consisted of:

- a. Engagement planning: considering the material aspects for TIM’s activities, the relevance of the information disclosed, the amount of quantitative and qualitative information and the operational systems and internal controls that served as a basis for preparation of the information in the TIM’s Sustainability Report 2016. This analysis defined the indicators to be checked in details:
 - **Economic:** EC1
 - **Environmental:** EN3, EN12, EN15, EN16, EN17, EN28, EN29
 - **Labor Practices and Decent Work:** G410, LA1, LA16
 - **Society:** SO5, SO7
 - **Human Rights:** HR12
 - **Product Responsibility:** PR5, PR8, PR9
- b. Understanding and analysis of disclosed information related to material aspects management;
- c. Analysis of preparation processes of the Sustainability Report 2016 and its structure and content, based on the *Principles for Defining Report Content and Quality of the Global Reporting Initiative - GRI (GRI-G4)*;

**d.** Evaluation of non-financial indicators selected:

- *Understanding of the calculation methodology and procedures for the compilation of indicators through interviews with management responsible for data preparation;*
- *Application of analytical procedures regarding data and interviews for qualitative information and their correlation with indicators disclosed in the Sustainability Report 2016;*
- *Analysis of evidence supporting the disclosed information;*
- *Visits to TIM's operations and offices for application of these procedures, and items (b) and (c);*

e. Analysis of whether the performance indicators omission and justification are reasonable to be accepted associated to aspects and topics defined as material in the materiality analysis of the Company;**f.** Comparison of financial indicators with the financial statements and/or accounting records.

We believe that the information, evidence and results we have obtained are sufficient and appropriate to provide a basis for our limited assurance conclusion.

SCOPE AND LIMITATIONS

The procedures applied to a limited assurance engagement are substantially less extensive than those applied to a reasonable assurance engagement. Therefore, we cannot provide reasonable assurance that we are aware of all the issues that would have been identified in a reasonable assurance engagement, which aims to issue an opinion. If we had conducted a reasonable assurance engagement, we may have identified other issues and possible misstatements within the information presented in the Sustainability Report 2016.

Nonfinancial data is subject to more inherent limitations than financial data, due to the nature and diversity of the methods used to determine, calculate or estimate these data. Qualitative interpretation of the data's materiality, relevance and accuracy are subject to individual assumptions and judgments. Additionally, we have not examined data related to prior periods, to evaluate the adequacy of policies, practices and sustainability performance, nor future projections.

CONCLUSION

Based on the procedures carried out, described earlier in this report, we have not identified any relevant information that leads us to believe that the information in TIM's Sustainability Report 2016 is not fairly stated in all material aspects in accordance with the *Global Reporting Initiative - GRI (GRI- G4)*, as well as its source records and files.

São Paulo, June 27th, 2017

KPMG Financial Risk &
Actuarial Services Ltda.

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