

# 2017 Sustainability Report

**Ansaldo STS** A Hitachi Group Company







WE PROVIDE THE HIGHEST STANDARDS OF **SECURITY,**





Watch the video on Ansaldo STS



# Letter from the Chief Executive Officer and General Manager

*Build the future, fuelling the present.*



**Andy Barr**  
Chief Executive Officer and  
General Manager of Ansaldo STS

A handwritten signature in black ink, reading "Andy Barr".

***“Our industry is considered to play a key role in answering the demand for a better, smarter and safer mobility with a clear social and environmental responsibility”.***

2017 has been an important year and I am particularly pleased with the work of my team. I would like to thank all the staff for their effort in reaffirming the Company's commitment to being a reliable partner to many of the major rail and transit authorities worldwide.

Key figures and achievements of the year confirmed the Company's growth trend across all regions, its high level of competitiveness and strong delivery capabilities.

Ansaldo STS is unique in the business it conducts and the projects it delivers. Our industry is considered to play a key role in answering the demand for a better, smarter and safer mobility. At Ansaldo STS we are at the forefront of this challenge.

Being part of the Hitachi Group we have already been able to benefit from access to new exciting technologies maximizing the technical expertise aimed at supporting our established product. This helps us to widen our horizons and our business opportunities: we are heading towards

2018 Best CEO in  
Sustainable Transport Industry.





multimodal solutions and a full service approach to Operations.

Our company is changing into a market of major project delivery. However the rail signalling market, core of what we deliver, calls for increasingly innovative, reliable and competitive solutions in terms of savings in costs, time and energy, in addition to safety and environmental impact.

We are particularly proud to be testing our innovative technology today, for which many statements of interest have already been received from infrastructure managers and rail operators both in Italy and in Europe due to the numerous benefits of this system.

Our future focus will be on integration and innovation in order to become a full provider of mobility solutions where the rail system is the key contributor, integrating information with other transport systems, leveraging its technological competitive advantages, and safety / security expertise.

We are working to develop new applications creating a solution package for smart utilizations. The use of Big Data and the Internet of Things helps to precisely pinpoint the position of a train on the line and to analyse the behaviour of travellers in order to better meet their actual needs. This trend is increasing a need of personalised offer. This is why Ansaldo STS took into consideration these topics within many areas of our activities, maintaining a clear Corporate Social Responsibility mission. Today, we continue following the principle and the possible future developments with the utmost care.

We continue seizing the new opportunities by sharing the ethics and principles that have always characterised Ansaldo STS. Particularly with one vision of the Social Innovation mission and the awareness, as consequence of our work for the daily lives of millions of people, for their movements and for the transport of goods that everyone needs.

**This is sustainability for social development**, contributing with safe, efficient, reliable and ecologically compatible solutions, with direct relation between the existing major business and the well identified **UN Sustainable Development Goals** focusing on technical solutions in response to the user's needs in increasingly complex and diverse contexts and lifestyles. For Ansaldo STS it means proactively explore and respond to business opportunities and risks for future growth. Our strategy is to develop a responsible corporate activity in an innovative business, by addressing the issues and contributing to the achievement of Sustainable Development Goals, through shared and concrete initiatives.

All of this is possible thanks to our customers, colleagues, shareholders, partners and all the stakeholders, which I thank for this great effort.

This is why we continue to share this vision both outward and within our company, to create opportunities for gaining knowledge about us and the development of our human resources. We continue providing priority support to the business through consolidation actions that increasingly strengthen the potential of our company, which has now become a certainty in an ever more complex and evolving market.

Visit the website: [www.ansaldo-sts.com/en](http://www.ansaldo-sts.com/en)







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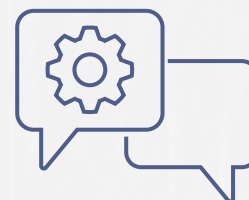
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# Company Profile





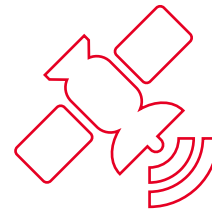


**Ansaldo STS considers the social, economic, logistics, architectural, environmental and structural context of each project it handles, planning, designing and building signaling and railway and mass transit systems that provide the best possible combination of safety, efficiency and return on investment.**

**32 new sustainability objectives**



Leadership in  
**ERTMS satellite technologies**



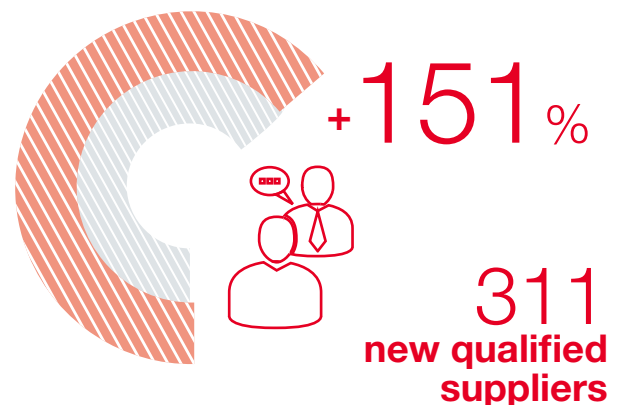
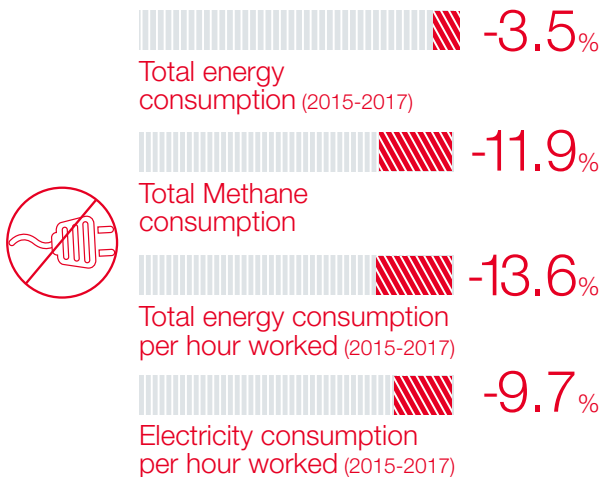
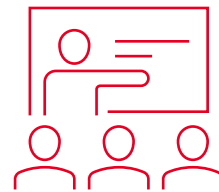
**93,368**  
total hours of training

**+25.7%**

(average of 22.1  
hours per employee)

**88 events:**

**70 openings,  
13 trade shows,  
5 conferences**





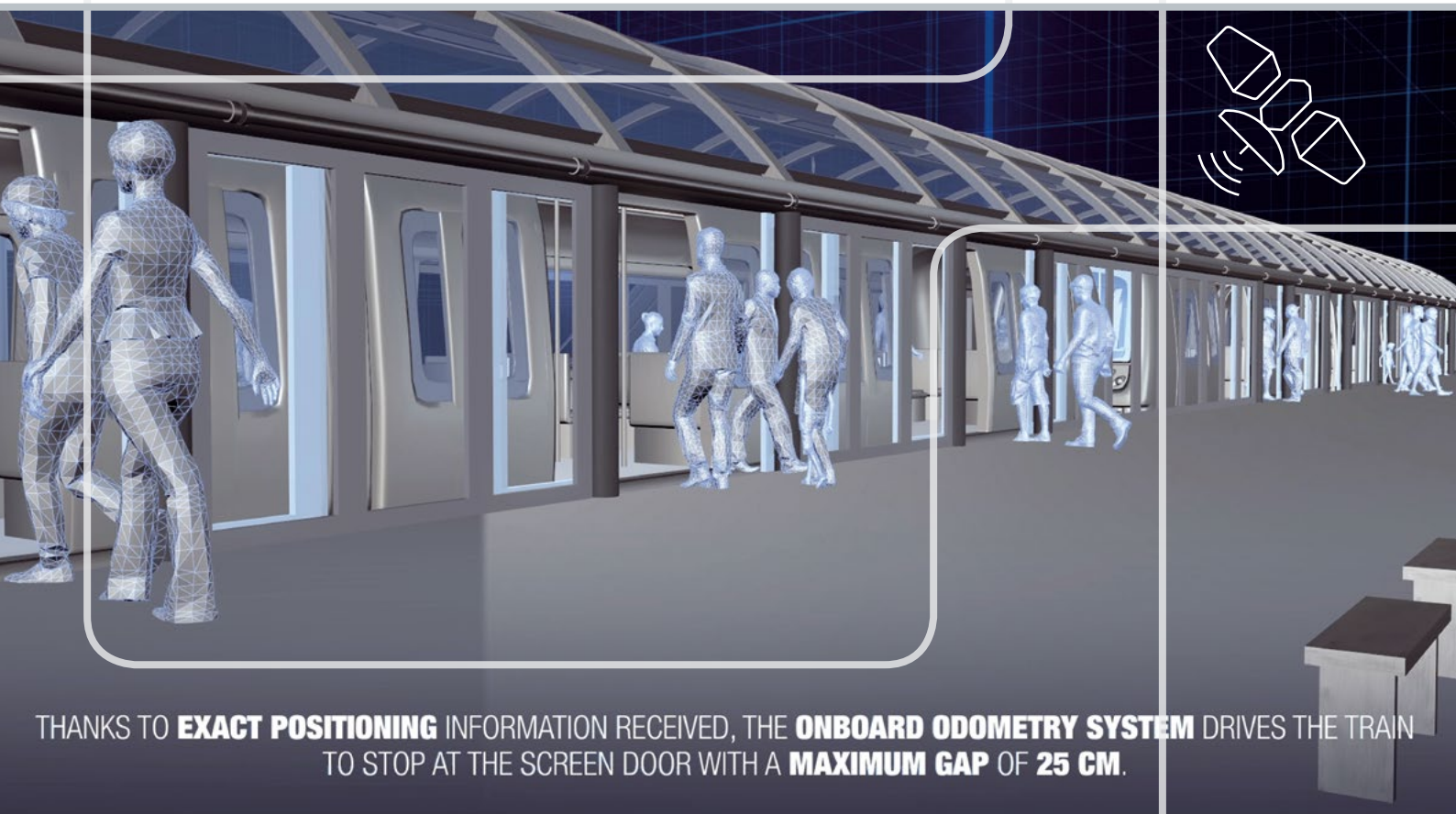


## Ansaldo STS

Ansaldo STS<sup>1</sup> creates value for society by designing and implementing solutions and components for rail transport and mobility; is committed to provide innovative products that improve the quality of life and that responsibly support the world in which we live.

Ansaldo STS combines experience and human, financial and technological resources to provide innovative solutions in the design and construction of equipment and systems for conventional and high-speed railway lines and mass transit rail network signalling and automation for passengers and freight.

The more we make sustainable long-term decisions, the better the interaction between our company, society and the environment will be. This approach is part of our competitive edge.



THANKS TO **EXACT POSITIONING** INFORMATION RECEIVED, THE **ONBOARD ODOMETRY SYSTEM** DRIVES THE TRAIN TO STOP AT THE SCREEN DOOR WITH A **MAXIMUM GAP OF 25 CM.**

1. In this report, the terms "Ansaldo STS" and "Group" refer to all companies included in the 2017 scope of consolidation. "Ansaldo STS S.p.A." refers to the Parent Company.





To achieve its objectives and growth and maintain its sector leadership, Ansaldo STS bases its operations on solid, unwavering ethical values and principles. Everyone in the Organization is required to uphold this culture and make the same commitment to ethical conduct, embracing the company's principles and values.

It is an international Organization based in Europe, the Middle East, North Africa, the Americas and the Asia Pacific region.

#### Ansaldo STS's values on which it has based its business are:

- **CUSTOMERS FOCUS** – Our technologies safely move millions of people every day. This drives Ansaldo STS to do its best to increase and maintain high excellence services for rail transport users.
- **INNOVATION AND EXCELLENCE** – Understanding, studying and developing solutions to improve responses to customers and market offers lie at the crux of Ansaldo STS's activities, in which work is constantly focused on providing customers with innovative and excellent products that represent the company's competitiveness on the market.
- **PEOPLE** – Customer satisfaction and the development of new products depend on the abilities of the professionals working to achieve them, Ansaldo STS's employees. This is why Ansaldo STS is a company founded on people. Everyone in our organization works to make Ansaldo STS a good environment and place to work, where people learn, achieve and celebrate success. Ansaldo STS always prioritizes its people and their safety.
- **TEAM SPIRIT** – None of these operating objectives can be achieved by one person alone. The company's professionals work in a single, integrated organization, capable of making the most of their different cultures and professional training. This team spirit can also be found in managers who ensure cooperation and the growth of the company culture, while achieving established objectives and the company's mission.
- **INTEGRITY** – If people are to work together effectively, mutual trust must be fostered, and this is only possible if everyone works and acts in a way that is transparent, loyal, honest and proper. Similarly, customers must have the absolute certainty that integrity is a fundamental value for Ansaldo STS, and that this value is reflected in its products, through the utmost care and attention to safety.

# Ansaldo STS



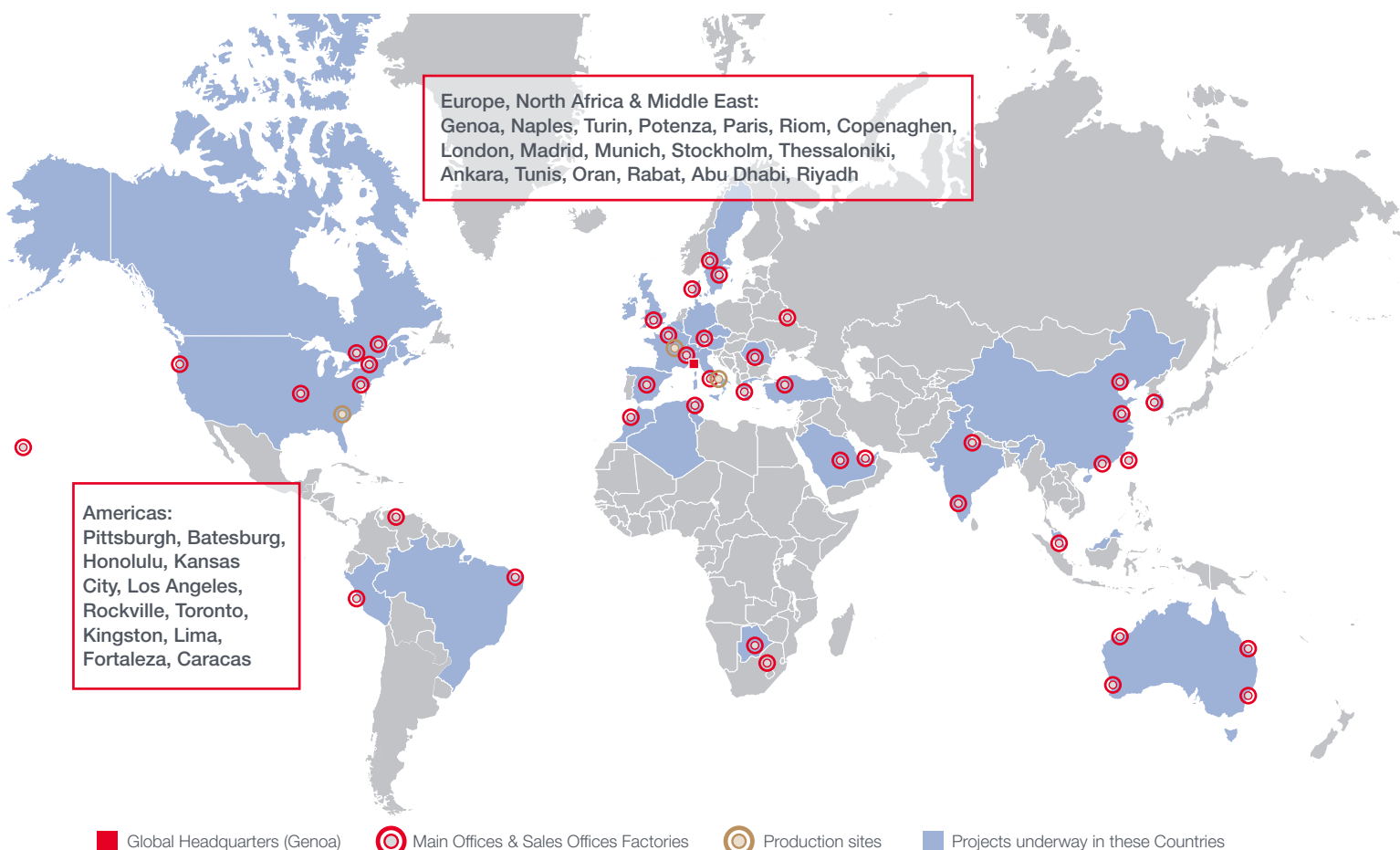


## Global presence

Ansaldo STS, headquartered in Genoa, has four main operating companies:

- Ansaldo STS S.p.A. with offices in Genoa, Naples, Piosasco (TO) and one production site in Tito Scalco (PZ);
- Ansaldo STS US, with offices in Pittsburgh (Pennsylvania) and one production site in Batesburg (South Carolina);
- Ansaldo STS France, with offices in Les Ulis and one production site in Riom;
- Ansaldo STS Australia with offices in Brisbane, Perth and Karratha.

Ansaldo STS also owns operating entities in Germany, Sweden, the UK, Spain, China, India, Malaysia, Botswana, South America and Canada as well as many permanent establishments and partnerships in other countries such as South Korea and Turkey.



HEADCOUNT (units)						REVENUE (K€)		ORDERS (K€)	
LEGAL ENTITIES	2017	2016	GEOGRAPHICAL AREAS	2017	2016	2017	2016	2017	2016
● ASTS ITALY*	1,863	1,712	● Italy	273,513	308,403	761,761	429,311		
● ASTS FRANCE**	913	868	● Rest of Europe	398,549	390,653	209,938	427,345		
● ASTS USA	754	712	● North Africa and Middle East	135,697	122,057	28,722	3,659		
● ASTS APAC	635	597	● Americas	325,577	255,194	321,789	129,508		
● ASTS CHINA	63	62	● Asia Pacific	227,631	251,079	178,613	486,013		
<b>Total</b>	<b>4,228</b>	<b>3,951</b>	<b>Total</b>	<b>1,360,967</b>	<b>1,327,386</b>	<b>1,500,823</b>	<b>1,475,836</b>		

\* Includes Ansaldo STS Deutschland GmbH.

\*\* Includes Ansaldo STS UK Ltd., Ansaldo STS Sweden AB.



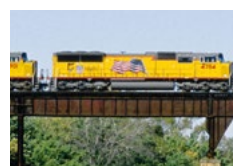
## Business segments<sup>2</sup>

Ansaldo STS operates globally to support its customers in the creation and development of reliable and sustainable solutions for rail transportation networks, helping to provide an increasingly effective and secure mobility service; from passenger transport networks to freight, from urban transport to regional and international high-speed or conventional lines, Ansaldo STS designs and implements cutting-edge technology to meet operators' needs and optimise service performance.

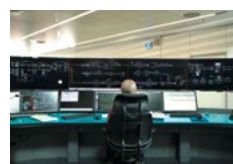
### HIGH SPEED



### MAIN LINES AND FREIGHT



### PLANNING, SUPERVISION AND TRAFFIC CONTROL



### OPERATION AND MAINTENANCE



### COMPUTER BASED INTERLOCKING



### METROS AND TRAMWAYS



### EQUIPMENT & COMPONENTS



As a part of the Hitachi Group, Ansaldo STS further integrates its technological expertise into various projects and solutions, bringing a real competitive advantage and offering economically and technologically innovative solutions for our customers.

The complementary nature of the products and services, along with the distribution of production facilities and development sites will help to further consolidate the Company's presence in existing markets and increase its effectiveness in new markets.

2. For more information on market segments and products visit: <http://www.ansaldo-sts.com/en/business/business-segments>





## Integrated system solutions

Ansaldo STS has made its mark on the railway sector by using state-of-the-art technologies for large projects, such as:

- ERTMS / ETCS technologies, adopted to make high speed lines safer and more interoperable;
- satellite positioning technology for the effective and safe management of railway traffic;
- driverless and unmanned solutions for better operating efficiency and flexibility and to cut operating and maintenance costs;
- CBTC signalling technologies to improve service using the distancing logic based on moving blocks, mainly used for metros;
- a large component portfolio, which includes all signalling aspects and system solutions (such as point machines, signals, level crossings, relays, etc.).

## Organisational structure

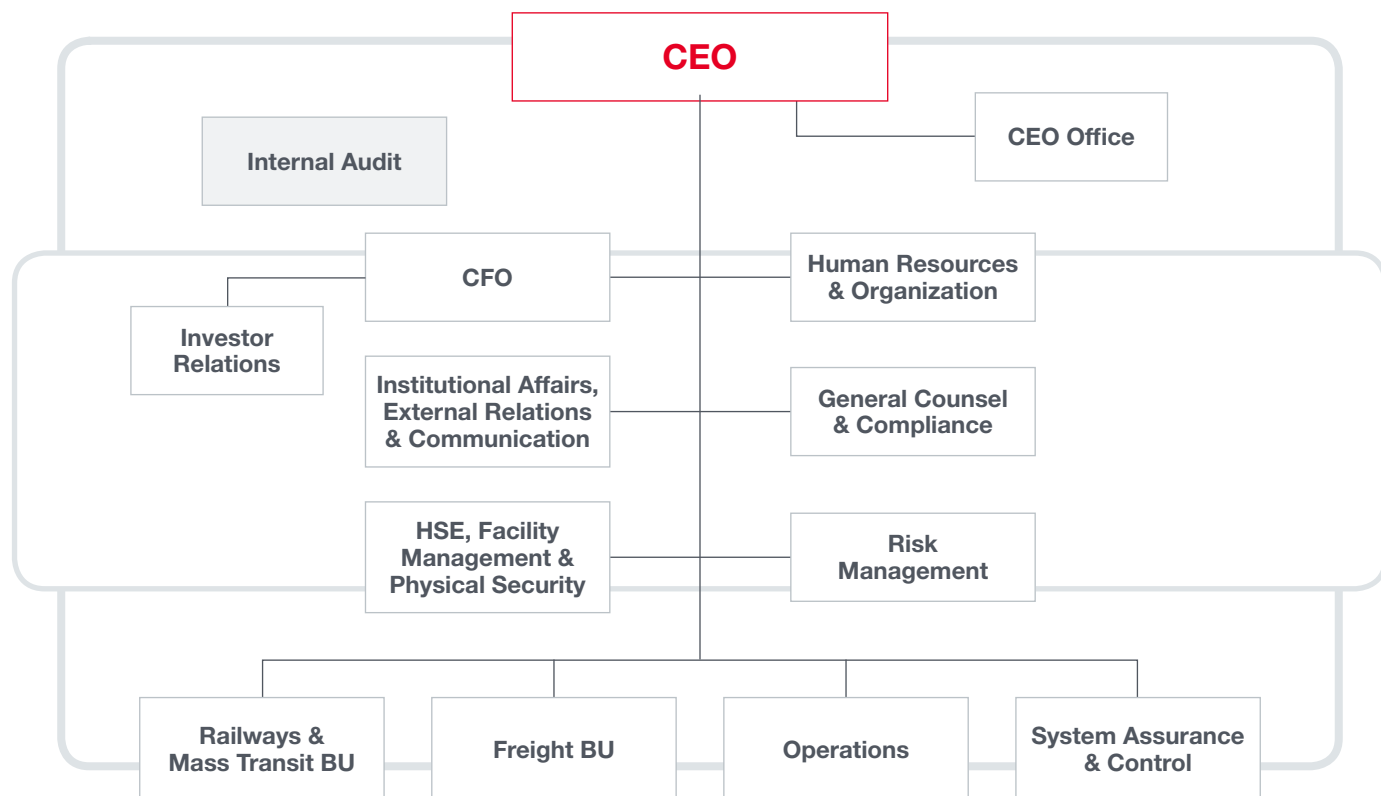
Ansaldo STS is unique in the business it conducts and the projects it delivers. Our industry is considered to play a key role in answering the demand for better and safer mobility, together with having a key social and environmental responsibility.

The Ansaldo STS target is to keep growing; in 2018 the Company will evolve its operating model according to the vision for the future, in addition to benefitting from being part of Hitachi Group.

Ansaldo STS boasts an integrated, global Organisation capable of providing an adequate response to demand for standardised solutions in the railway transport market and, in particular, the signalling technology market.

Its structure is based on the coexistence of:

- **ORGANISATION:** organisational units with specific professional areas of expertise;



- **TEAM-BASED ORGANISATION:** functional teams that aim to achieve an objective in order to ensure the effective and efficient functioning of the main business processes: offer, execution, development and innovation.



## Significant events in 2017<sup>3</sup>

### FEBRUARY

On 24 February, Ansaldo STS launched ERSAT and ERSAT EAV, the first **satellite technology** in Europe to be applied to railway traffic management. The first test in Europe was carried out in Sardinia in collaboration with Rete

Ferroviaria Italiana and Trenitalia, with a trial journey from Cagliari to Decimomannu.

The project, coordinated by Ansaldo STS, is part of the European research project Horizon 2020 and aims to define

and develop the evolution of the ERTMS signalling system thanks to train geo-positioning using satellite technology. The satellite technology used has been designed to safely control and manage rail traffic on conventional secondary, local and regional lines.

**Andy Barr**, Managing Director of Ansaldo STS, commented: “*The rail signalling market, which represents the core business of Ansaldo STS, demands increasingly innovative, reliable and competitive solutions in terms of cost, time and energy efficiency, as well as high standards of safety and environmental sustainability. We are particularly proud to test this innovative technology today, which has already generated significant interest among infrastructure and rail operators in Italy and Europe thanks to the numerous advantages offered by the system*”.

### MORE INFORMATION



The technology uses the results of the previous 3InSat project funded by the European Space Agency and supported by the Italian Space Agency. ERSAT EAV uses satellite technology to geo-position trains and interfaces with the system used to supervise rail traffic (ERTMS). This exchange of data and information has been made possible through special devices installed on the trains and the radio receivers located on the wayside along the railway line. The information points used by the current signalling system - the coils along the line - will be replaced with virtual coils managed by the satellite receiver which are integrated into the ERTMS signalling system. The latest-generation ERSAT signalling project interfaces and supplements - for the first time in Europe - the European Traffic Management System (ERTMT) with Galileo satellite navigation and positioning technology.

The trial at the site in Sardinia also represents the conclusion of the Roy Hill Iron Ore project in Australia, the first rail signalling system in the world to use this type of technology for freight transportation. In fact, Roy Hill has

recently developed a proprietary project to extract iron minerals and transport 55 million tonnes of material by rail from the mine to the port each year, with a total of 350 km of railway line.



Roy Hill, Australia

3. For more details on the History of Ansaldo STS, visit <http://www.ansaldo-sts.com/en/about-us/history>





## JUNE

In June, Ansaldo STS signed a Memorandum of Understanding with the company Metroselskabet to develop a "Proof of Concept" (prototype) for the new Dynamic Headway Solution developed using Hitachi technology for the Copenhagen Metro M1/M2. The Dynamic Headway Solution will be developed using the railway control systems designed by Ansaldo STS and Hitachi IoT (Internet of Things)

technologies; able to analyse, through sensors, passenger flows on platforms, it will automatically optimize the number of available trains, responding dynamically to sudden changes in the number of service users.

This technology is particularly useful in cases where the demand for transport increases during the normal operation of the Metro. It is a

dynamic solution that helps to resolve possible congestion before it affects passengers' experience, thus increasing the level of customer satisfaction. For the operator, this highly reactive solution adapts the number of trains to effective demand in real time and offers the possibility of reducing energy and operating expenses with a consequent improvement in service performance.



Metro Copenhagen

### HSE Award in Riyadh: Ansaldo STS sees off the competition to win the award for safety

Ansaldo STS has won the "Best line HSE" (Health, Safety and Environment) award for its current construction works on Metro Line 3. The 3D3 station received the award, while the 3A2 station was named as the safest place to work of all

the sites along the six lines under construction.

The competition concerned the six lines which are currently being constructed by three consortia (BACS, FAST and ANM, of which Ansaldo STS is a member),

involving the construction of 85 stations along a 176 kilometre route. Recognised for their professionalism and expertise, Ansaldo STS employees were named the best team compared to their peers belonging to other leading companies in the global civil railway sector.



HSE Award, Riyadh



## JULY

In July, Hitachi Ansaldo Baltimore Rail Partners LLC, a company formed of Hitachi Rail Italy S.p.A. and Ansaldo STS USA Inc. (the United States subsidiary of Ansaldo STS S.p.A.) signed a contract worth USD 400.5 million for the Baltimore Metro operated by the Maryland Transit Administration (MTA) for the supply of

new trains and Communication and Control systems (Communication-Based Train Control - CBTC) for the Baltimore Metro Subway Link. The project to replace the current signalling system with the innovative CBTC solution developed by Ansaldo STS is worth approximately USD 148 million.



Metro Baltimore

## DECEMBER

At the end of December, the CIPE approved the definitive project for the section of high-speed line between Verona-bivio Vicenza and authorised the construction of the first production batch of the AV/AC

Verona-Padua track. Ansaldo STS is contributing to the project through its participation in the consortium Iricav Due (composed of Astaldi 37.49%; Salini Impregilo 34.10%, Ansaldo STS 17.05%, Società Italiana per

Condotte d'Acqua 11.35%, Fintecna 0.01%), which holds the concession. The value of the contribution by Ansaldo STS is approximately EUR 336 million.





## Performance

### PROJECTS ACQUIRED

Country	Project	Customer	Value (EUR/mlin)
Italy	A.V. Verona-Padua	IRICAVDUE Consortium	336
US	Baltimore Metro	MTA	133
Italy	Framework Agreement with RFI	RFI	100
Denmark	Copenhagen Cityringen change of orders (including O&M)	Metroselskabet	82
Italy	Onboard equipment for Caravaggio trains	Hitachi Rail Italy	63
Australia	Rio Tinto change of orders	Rio Tinto	48
Italy	ACC and ACC-M signalling systems	RFI	40
Italy	Naples Line 6 - change of orders	Municipality of Naples	24
US	New Haven – signalling systems	MNRR	22
US	Los Angeles – Westside extension – section 2	LACMTA	21
Australia	Onboard equipment	Rotem	20
Other EU/Asia	Components	Other	82
Other EU/Asia	Service & Maintenance	Other	58
US	Components	Other	56

### ACTIVATIONS

PROJECTS  
DELIVERED

70

KM OF  
LINES

1,700 Km

STATIONS  
ACTIVATED

285



#### Conventional lines

**CTC Sapri Nord: Paola - Battipaglia****Activation of Gioia Tauro Sud SCMT****Upgrading of the Turin - Padua line /  
Reconfiguration of Module 4****ACC Multi-station hub in Genoa****ERTMS/ETCS level 2 - Milan-Lambrate-Treviglio****Revamping SEDT Rome/unscheduled  
maintenance****Technological upgrading of the Turin-Padua line****ACC Ventimiglia****Revamping of the Naples hub****Aarhus Denmark****Revenue service urban line****PBI 45 stations****KfW 1 station****Karagpur 1 station****State Railways of Thailand (SRT)****CBI upgrade of five stations**

#### Metro

**Green Metro Line****LIRR Ronkonkoma**  
(Completion of Phase 1)**Selangor Malaysia****(Subang Skypart Project)**

#### High speed

**Tours - Bordeaux** section of high-speed line  
between Paris and Bordeaux  
Le Mans - Rennes AV**Morocco AV Tangeri - Kenitra**

#### Freight lines

**Roy Hill Project****Heavy Haul - Western Australia****Rio Tinto****Completion of the entry into service of the  
ATO-assisted system**



## Sustainability at Ansaldo STS

Ansaldo STS considers the social, economic, logistical, architectural, environmental and structural context of each project it develops, planning, designing and building signalling, railway and mass transportation systems that provide the best possible combination of safety, efficiency and return on investment.

## The UN Sustainability Development Goals

On 25 September 2015, the United Nations approved the Global Agenda for sustainable development and defined 17 Sustainable Development Goals (SDGs) structured in 169 targets to be reached by 2030.

The Agenda requires significant engagement from all members of society, including **businesses**, civil companies, the public sector, philanthropic institutions, universities, research centres, news operators and cultural organisations.

Ansaldo STS has identified the goals that it is able to help reaching:

- directly, through management models which enable the Company to follow a path of sustainable growth and guarantee a cohesive culture of responsibility and promote sustainable actions by individual collaborators: **corporate commitment**;
- indirectly, through the achievement of the company's mission, which is to develop railway and mass transit systems and create increasingly sophisticated products and solutions that are safe and environmentally sustainable: **business strategy**.

### CORPORATE COMMITMENT



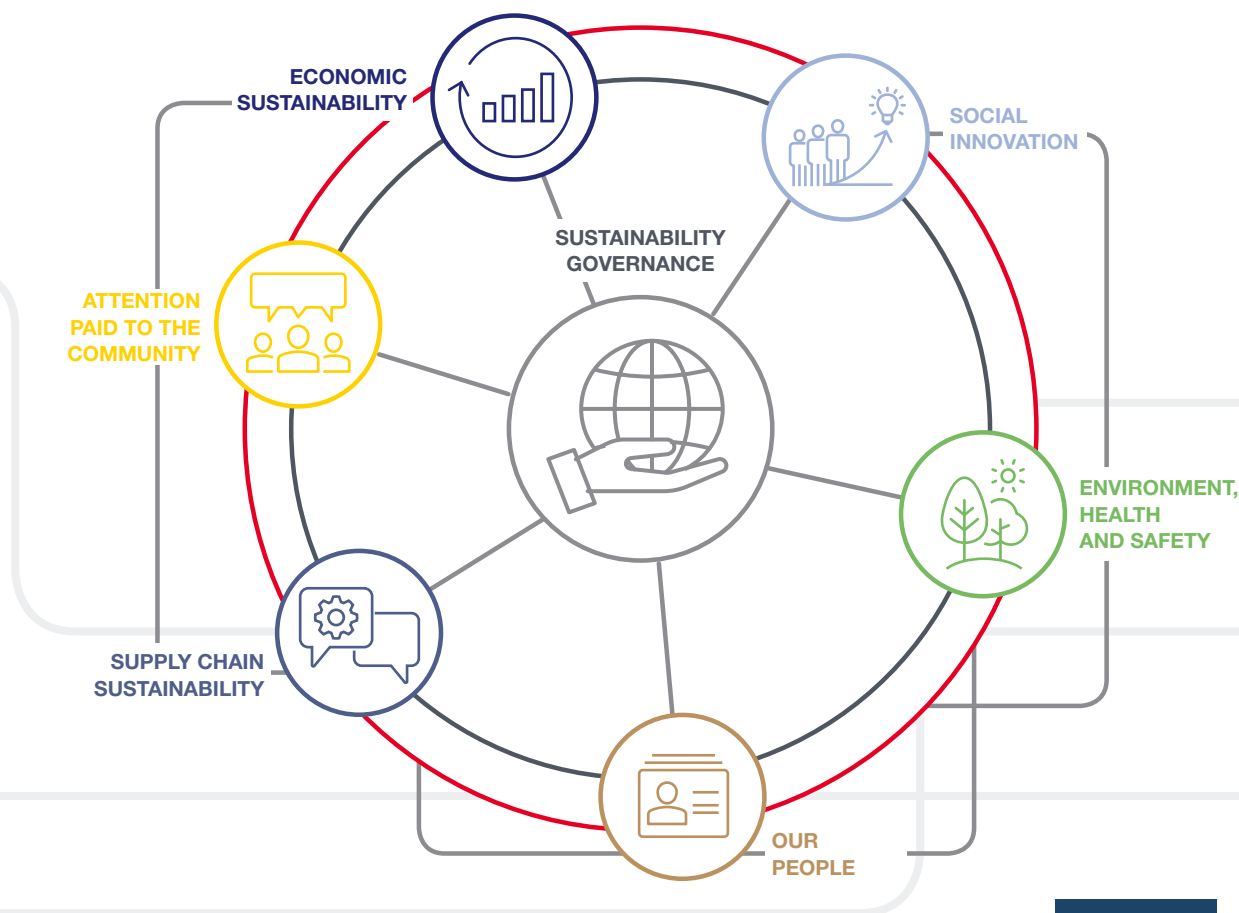
### BUSINESS STRATEGY







## Policies on Sustainability and SDGs



### SUSTAINABILITY GOVERNANCE

17 PARTNERSHIPS FOR THE GOALS



#### Materiality analysis

Ansaldo STS defines the content of its report by asking stakeholders which sustainability topics impact their judgement and decisions.

#### Sustainability programme

Reporting on its commitments, surveys to assess the quality of its interaction with its stakeholders and the results of the materiality analysis allow Ansaldo STS to compile an annual sustainability programme aimed at constant improvement.

#### Stakeholder engagement

Ansaldo STS is committed to understanding the needs and expectations of its people and involving them in projects to develop skills and expertise. It is focused on constantly monitoring its customers' satisfaction and plays an active part in handling relations with local communities, be they municipal authorities, citizen associations, users of metros and trains, companies or local laborers. It also participates in research and training projects with institutions and universities.

#### Corporate communication and a culture of sustainability

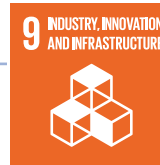
This is the ninth edition of the Ansaldo STS Sustainability Report produced in accordance with the GRI Sustainability Reporting Standards published in 2016 by the Global Reporting Initiative and is subject to limited assurance. Ansaldo STS adheres to the **Global Compact** and is a **Founding Member and Sponsor of the Global Compact Network Italy Foundation**. It also participates in the **Carbon Disclosure Project** and is on **UNICEF's Sustainable Transport Committee**.

#### Internal sustainability committee

Composed of the managers of the main company departments, this committee defines strategic guidelines, commitments and projects for sustainable development and social responsibility. It reports directly to the Managing Director and General Manager and, through him, to the Board of Directors.



## SOCIAL INNOVATION



In the course of its daily activities, Ansaldo STS aims to improve quality of life through:

- the design of transportation systems that transport millions of people and tonnes of materials safely each day, helping to reduce environmental impacts;
- the development of increasingly compact and energy efficient hardware and the development of new green technologies to streamline consumption and avoid waste.

Today the Ansaldo STS team within the Hitachi group can further develop its innovative approach by tapping the Group's references in the Big Data and Internet of Things field. As such, the Group is now able to devise solutions that improve performance and services offered by combining different technologies.

### Research and development for cutting edge products and solutions

In 2017, Ansaldo STS invested approximately EUR 41.3 million (EUR 36.7 million in 2016) to continue to supply its customers and end users with cutting-edge products and solutions and the very best railway and urban rail transport system design and construction methods and procedures in order to increase safety and reduce direct and indirect environmental impacts.

### Safety and reliability

Ansaldo STS ensures that it develops and delivers products, applications and systems that are safe, in compliance with Italian and international laws and reliable, in line with its customers' needs and its internal quality standards. It achieves this through RAMS (Reliability, Availability, Maintainability & Safety) activities.

### Products and solutions that respect the environment

For Ansaldo STS, innovation is synonymous with respect for the environment. It is committed to researching products and solutions that reduce the consumption of energy and raw materials. It pays increasing attention to using environmentally-friendly materials, starting at the design stage.

## OUR PEOPLE



### PEOPLE CARE

"People" is one of the five values selected by the Company to represent its identity: people are at the very heart of the Organisation, demonstrating the Company's aim to create a working environment where they can continuously gain experience, develop skills, forge relationships and find motivation. Flexible working hours, the provision of recreational circuits for employees, benefits such as health insurance, access to employee scholarships are just some of the corporate welfare tools established by the Company.

### Training and professional growth

Ansaldo STS considers professional, managerial and specialist training a fundamental lever to enhance the skills of its employees. The Global Job System is applied to the entire workforce and interacts with the Performance Development Plan to plan career objectives and individual development paths that match new business contexts.

### SOCIAL DIALOGUE

The relaxed relationship that Ansaldo STS maintains with its employees is reflected by an extremely low rate of trade union disputes. Through this approach, any issues with employees can be resolved internally and only rarely involve intervention by trade unions, which, in any case, act in an environment of general cooperation.

Ansaldo STS promotes equal opportunities, ensuring fair treatment on the basis of individual expertise and abilities and hiring people under legal employment contracts mainly on an open-ended basis.



## CSR AND COMMUNITIES



### Involvement of local communities

Acting in partnership with the customer, Ansaldo STS actively contributes to communication, engagement and development programmes focused on the local communities affected by its projects, including through participation in committees that represent local stakeholders.

### Protection of human rights

Ansaldo STS is committed to upholding and promoting human rights in every context in which it operates, by creating equal opportunities for its people and fair treatment for all – regardless of race, nationality, political creed, religion, gender, age, minority status, disability, sexual orientation, personal or social condition – and always respecting the dignity of each individual and each employee.

Ansaldo STS does not allow nor tolerate the establishment of employment relationships which violate the existing legislation on child, woman and immigrant labour, and carefully controls the risks associated with the employment of forced workers. Furthermore, the Company requires its contractors and subcontractors to ensure the same attention in order to contribute to abolish such illegal behaviours.

### Research programmes with institutions and partnerships with universities

Ansaldo STS contributes to our society's technological advancement by participating in research projects with Italian and EU institutions and training projects with universities on issues such as safety, energy efficiency, satellite signalling and the monitoring of railway transport system infrastructure.

## THE ENVIRONMENT, HEALTH AND SAFETY



### Fight against climate change

Ansaldo STS reports on **direct and indirect greenhouse gas emissions** (Scopes 1, 2 and 3) in accordance with the GHG Protocol, undertaking to decrease these emissions through people mobility policies, plans to cut energy consumption and improve energy efficiency, the use of energy from renewable sources and effective waste management.

### Consumption of resources

Ansaldo STS is committed to projects which aim to reduce **energy consumption** at its sites and offices. Each year, the Company obtains RECS certificates (Renewable Energy Certificate System) to incentivise the generation of electricity using renewable sources. Moreover, it has distributed a series of internal "Water Management Guidelines" with the aim of defining the methods to be followed by the Group's companies for the **sustainable management of water** at its industrial sites and offices. The focus on standardised designs and innovation will increasingly lead to an overall reduction in the **consumption of raw materials** both directly and indirectly through a reduced use of components.

### Waste and polluting emissions

Ansaldo STS's policy is to reduce waste production and increase the re-use, recycling and recovery of waste. All of the Company's sites feature waste collection facilities based on the type of waste and site layout. In particular, a specific policy has been introduced to promote the re-use of certain types of wood and plastic packaging to transport similar products. The commitment to reducing energy consumption (methane and diesel) for the operation of thermal systems helps to reduce the emission of pollutants into the atmosphere.

### Workers' health and safety

Protecting the health and safety of its workers is a strategic commitment for Ansaldo STS. The Company also monitors "near misses" – which are accidents without consequences resulting from undesired or unexpected situations, which could potentially harm people or things – in order to identify the appropriate solutions before a real accident happens.

### Integrated quality, safety and environmental management system

Ansaldo STS has an Integrated Management System (IMS) for quality, safety and the environment, which integrates all Group processes in one single structure, enabling the Organisation to operate with shared objectives. It has also certified its individual sites in accordance with UNI EN ISO 14001 and OSHAS 18001 standards.



## ETHICAL MANAGEMENT OF THE SUPPLY CHAIN



Ansaldo STS is committed to defining, sharing and implementing a sustainability roadmap for its supply chain to promote a sustainable business culture with its suppliers.

The aim is to progressively improve the economic, environmental and social impact (labour and safety practices, respect for human rights and the development of local communities) along the entire supply chain.

Suppliers and contractors are selected according to a series of objective, transparent and documented evaluation criteria, in line with the principles of the Code of Ethics.

The supplier qualification process is coordinated by the Supplier Qualification and Monitoring Board which collaborates with the Procurement, Quality and Health, Safety and Environment departments, defining for the latter a list of "sensitive" goods.

The qualification questionnaire distributed to all suppliers includes questions on environmental and health and safety topics.

## ECONOMIC SUSTAINABILITY



### Business strategy and model

Ansaldo STS's economic sustainability is its strategic response to the macroeconomic context and transportation market trends, based on a business model that develops distinctive abilities and the necessary skills to boost the Company's competitiveness on markets.

### Corporate governance

Ansaldo STS's corporate governance system is designed to maximise value, monitor business risks and achieve transparency with the market, balancing the interests of all its shareholders and focusing specific attention on minor ones.

### Customer satisfaction

Customer satisfaction is central to Ansaldo STS's strategy: the ability to understand and meet customers' needs and expectations is the top value on which it bases its company culture. Market evolution in recent years has also led to the demand for turnkey transportation solutions that effectively respond to the needs expressed by local and national institutions. This new type of offer requires the ability to support our customers, who are increasingly considered less as buyers and more as partners, in the management of a project throughout its entire life cycle.

### Anti-corruption

Within the scope of its business, Ansaldo STS promotes the fight against corruption in all its different forms at all levels, whether active or passive, direct or indirect, involving subjects related to the public or private sector. In this context, the Company has adopted a "zero tolerance" approach, which entails that the Company does not tolerate any kind of corruption, in any form, manner or jurisdiction in which it may occur, including any such conduct that may be permitted, tolerated or not prosecuted in the countries in which the Group does business.



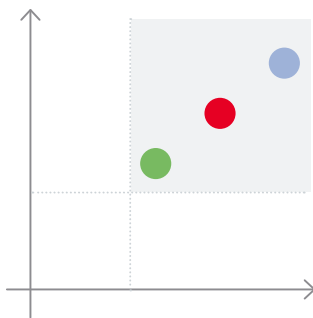
# Sustainability governance





*Ansaldo STS boasts a widespread presence on international markets with operations in varied contexts and a multitude of different stakeholders; consequently, the governance of sustainability issues and the management of relationships between Ansaldo STS and its stakeholders is of the utmost importance. Stakeholders include any public or private party - individuals, groups, companies or institutions - with a direct interest in the Company's activities.*

## New materiality analysis



## 32 new sustainability objectives



## Analysis of risks and opportunities



## Global Compact membership for the 7<sup>th</sup> year



## Carbon Disclosure Project membership for the 7<sup>th</sup> year



## Founding Member and Sponsor of the Global Compact Network Italy Foundation



Global Compact Network Italia



## Sustainability topics

To define which sustainability topics are considered material, Ansaldo STS has conducted a **new materiality analysis**. These topics were updated to take into consideration the content of Italian Legislative Decree no. 254/16 and the GRI Sustainability Reporting Standards published in 2016 by the GRI - Global Reporting Initiative, also considering internal factors such as mission, values, risk assessment activities, Quality, Safety and Environmental Management Systems, climate change strategies and research and development activities into increasingly safe and environmentally friendly products and solutions.

The external analysis was characterised by the broad engagement of different groups of stakeholders: 34 suppliers, 13 civil society players, 13 customers, 11 banks and insurance companies, 3 business partners and 8 financial analysts, totalling 82 stakeholders overall. Ansaldo STS asked these stakeholders to assign a priority level to the different

issues, taking into account the activities carried out by the Company, in order to understand to what extent they could influence their judgement and decisions.

The internal analysis, carried out by the Sustainability Committee, assessed the level of materiality of the various issues in relation to the

Company's performance and the possibility of improving its reputation and competitive advantage, taking into account the related risks.

The overall level of materiality originates from the intersection of the internal and external analyses and is shown in the following matrix.

### Materiality matrix





**Economic and governance topics** exert a significant influence both in terms of stakeholders' opinions and the impact on the Company's performance. Customer satisfaction and anti-corruption were considered as the most relevant topics both internally and externally, while the creation and distribution of economic value, stakeholder engagement and sustainability governance were deemed to have a greater impact on business performance.

**Social topics** have a medium to high influence on stakeholders' opinions and business performance. Health and safety, training and development, employee welfare, diversity and equal opportunities and ethical management

of supplies are of equal significance internally and externally; social innovation and dialogue with trade unions are considered as internal strategic levers, while respect for human rights and the development programmes for local communities were more relevant to stakeholders.

**Environmental topics** exert a medium influence over stakeholders and the business. This is mainly due to the fact that the types of business carried out by Ansaldo STS and its sector are considered to be of low impact in environmental terms; at an internal level, the Company is aware of the high levels of care required to manage these aspects.

## Management of risks and opportunities

One of the key elements of the Corporate Governance System of Ansaldo STS is the Enterprise Risk Management (ERM)<sup>4</sup> system, which involves all organisational levels with different roles and responsibilities. The aim of ERM is to:

- increase the awareness of business risks by identifying, measuring and monitoring risks;
- improve the sustainability of business performance through risk prioritisation and mitigation strategies;
- ensure transparency and strengthen the Company's reputation by

spreading the culture of risk, monitoring and compliance.

Risk Assessment<sup>5</sup> is an essential element of the ERM Framework and contributes to defining business strategies by identifying and managing potential risk events that are likely to affect the actual achievement of business goals and results. Risk Assessment also includes the identification and preparation of action plans which are implemented to mitigate the main risks.

In accordance with the European standard ISO 9001:2015, the Ansaldo STS Enterprise Risk Management model has been updated so as to consider the opportunities that may be presented by a situation that favours the achievement of an expected result, determined by considering as a reference the Company's Strategic Plan and Sustainability Report.

As such, certain sustainability topics are included in the ERM.

SUSTAINABILITY TOPICS	ENTERPRISE RISK MANAGEMENT	
	CATEGORY	SUB-CATEGORY
THE ENVIRONMENT, HEALTH AND SAFETY	HSE	HSE awareness
		OHS and Environmental non Compliance
	STRATEGIC	Process improvement
		Business Interruption
	BUSINESS CONTINUITY	Crisis management
		Technical standards evolution
HUMAN RESOURCES MANAGEMENT	RESOURCES	Resources allocation
SOCIAL ASPECTS	DELIVERY	Customer satisfaction
	SUBCONTRACT	Supplier qualification
ANTI-CORRUPTION	LEGAL	Export Compliance

The risks considered in the SUB-CATEGORIES of the ERM are described below.

4. The Enterprise Risk Management approach considers Article 7 of the Corporate Governance Code published by "Borsa Italiana" for publicly traded companies and complies with the principles of standard ISO 31000:2009.

5. The Risk Assessment process adopted by Ansaldo STS refers to the internationally recognised "Enterprise Risk Management" framework of the "Committee of Sponsoring Organisations of the Treadway Commission" (COSO report).





## THE ENVIRONMENT, HEALTH AND SAFETY

- **HSE awareness:** possible risks of extra costs in the tendering phase, concerning health, safety and the environment (HSE) with particular regard to emerging countries (with "low standards"), especially when particular issues can occur in business relations with partners who do not have the same attention levels adopted by Ansaldo STS.
- **OHS (Occupational Health and Safety) and Environmental non Compliance:** possible risks of non-compliance, by the Company or subcontractors, with requirements related to regulations on the environment, occupational health and safety and respect for human rights; possibility of accident occurrence, with suspension of works, reputational damage, delays and penalties. Opportunities to improve ECO design aspects and the reduction of environmental impacts in product design to exploit new business opportunities and, through the communication of these aspects, to enhance the image of the Company.
- **Process improvement:** opportunities to reduce electricity consumption of the lighting systems for Italian sites, with consequent environmental benefits.
- **Business interruption:** possible risks of catastrophic events (natural disasters, epidemics and communicable diseases, work conflicts, strikes, terrorism and political changes) that could have an impact on IT systems and services with consequent business interruption.
- **Crisis management:** issues related to the health and safety of workers caused by the worsening of the geopolitical situation of at-risk countries in which the Company operates, caused by natural disasters, accidents, conflicts, and terrorism.
- **Technical standards evolution:** risks of non-compliance of the Integrated Management System with international

standards such as IRIS or CENELEC EN 50128, which could result in lost opportunities, customer dissatisfaction and sanctions.

## HUMAN RESOURCES MANAGEMENT

- **Resources allocation:** possible risk of late development of the necessary skills for the Company's strategic needs.

## SOCIAL ASPECTS

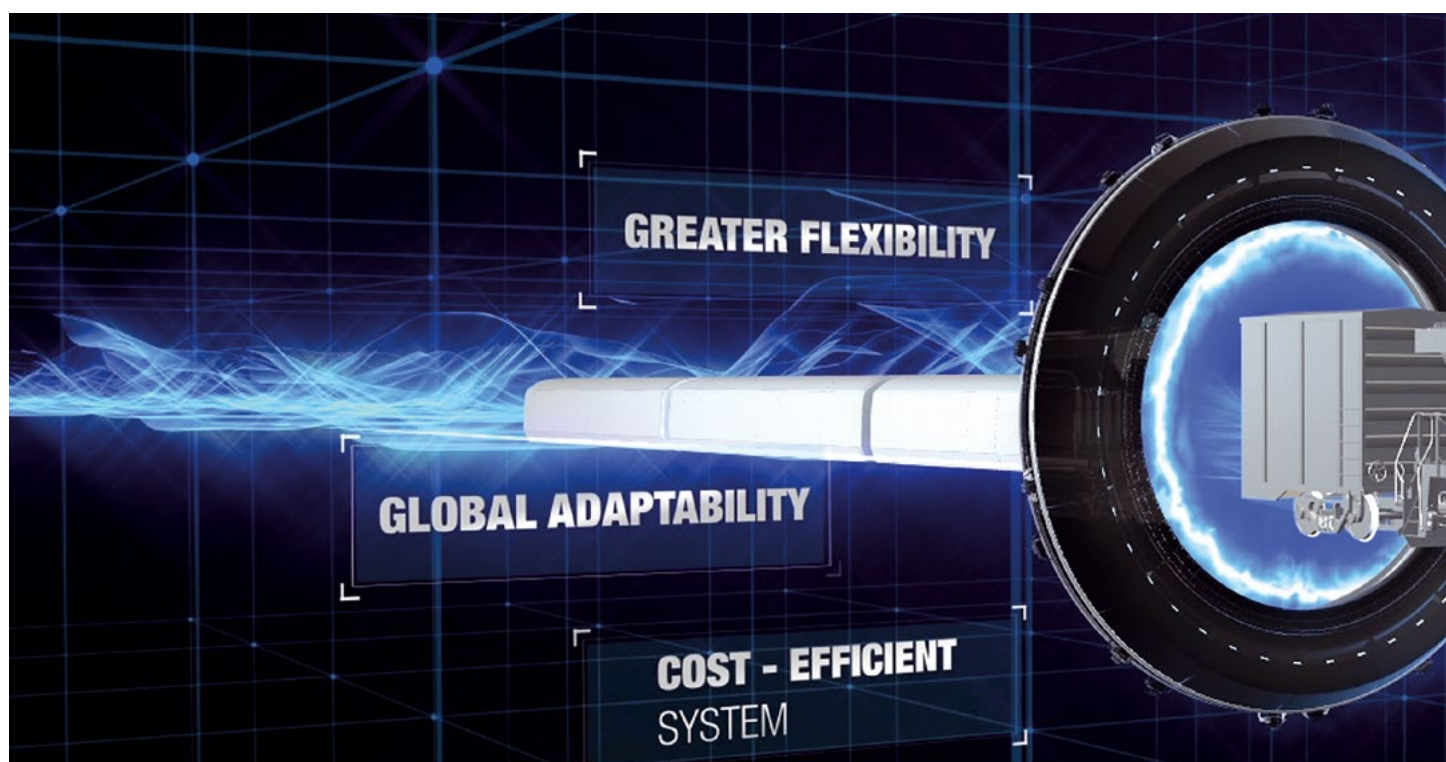
- **Customer satisfaction:** possible risk of not being able to respond to feedback from customers, thus impacting their level of satisfaction. Opportunities to improve the process of gathering feedback and managing the lessons learned.
- **Supplier qualification:** possibility of inadequate evaluations of the technical and financial reliability of suppliers due to the lack of preliminary analysis related to the information collected by the project teams.

## ANTI-CORRUPTION

- **Export Compliance:** possible risk of late implementation of the export control regulation; possible critical issues related to the application of an anti-corruption plan able to meet the different regulatory requirements at local level worldwide.

## BUSINESS CONTINUITY

In 2017 Ansaldo STS started the creation of a Business Continuity Management System integrated with the existing risk prevention and mitigation activities, that ensures the necessary operational continuity even against potentially disruptive events.





## Other risks assessed and managed

With a view to continuous improvement, Ansaldo STS carries out the assessment of specific environmental risks which, due to their low inherent and residual value, are not included in the ERM. The following is a brief description of these risks and the related management methods.

### DIRECT AND INDIRECT GHG EMISSIONS

#### Risk description

- Environmental impact of production processes, product composition and increase in energy consumption.
- Possible negative effects on the activities to be carried out influenced by climate change.
- Increased energy consumption costs.

#### Risk management

- Analysis and assessment of risk to climate change at the international level.
- Implementation of operational control procedures.
- Definition of environmental objectives.

### POLLUTING AIR EMISSIONS

#### Risk description

- Environmental impact of production processes, product composition and the need to reduce or eliminate hazardous substances.
- Increase in technology investment costs.
- Changes to laws that involve risks of penalties.

#### Risk management

- Implementation of monitoring systems for processes and plants.
- Specific training on company standards and changes in terms of process / product.

### ENERGY CONSUMPTIONS

#### Risk description

- Growth in costs related to energy consumption.
- Less ability to compete.

#### Risk management

- Investments to reduce consumption by verifying potential profitability.
- Adoption of projects aimed at reducing energy consumption in factories and using energy from renewable sources.

### WASTE AND WASTE WATER

#### Risk description

- Failure to comply with the regulations by the company and suppliers on projects / activities
- Changes to the legislation with sanctioning risks.

#### Risk management

- System for monitoring the evolution of regulations worldwide.
- Adoption of projects aimed at reducing the production of factory waste and waste water management.

### WATER RESOURCES

#### Risk description

- Increase in technology investment costs.
- Changes to laws that involve risks of penalties.

#### Risk management

- Implementation of monitoring systems for processes and plants.
- Specific training on company standards and changes in terms of process / product.



## Ethics and integrity

Considering its history and vocation, Ansaldo STS has always based its business development on the creation of safe, efficient, reliable and environmentally-friendly railway and metro transport systems and solutions, placing its full focus on the people these systems and solutions serve, who live in increasingly complex contexts with increasingly complex lifestyles.

### Our mission

We combine experience and human, financial and technological resources to provide innovative solutions in the design and construction of equipment and systems for conventional and high-speed railway lines and mass transit rail network signalling and automation for passengers and freight.

The more we make sustainable long-term decisions, the better the interaction between our Company, society and the environment will be. This approach is part of our competitive edge.







## Our values

To achieve its growth objectives and maintain its sector leadership, Ansaldo STS bases its operations on solid, unwavering ethical values

and principles. Everyone in the Organisation is required to uphold this culture and make the same commitment to ethical conduct,

embracing the Company's principles and values. Ansaldo STS's values, and those on which it has based its business are:

### PEOPLE

Customer satisfaction and the development of new products depend on the abilities of the professionals working to achieve them, Ansaldo STS's employees. This is why Ansaldo STS is a company founded on people. Everyone in the Organization works to make Ansaldo STS a good environment and place to work, where people learn, achieve and celebrate success. Ansaldo STS always prioritizes its people and their safety.

### FOCUS ON CUSTOMERS

Our technologies safely move millions of people every day. This drives Ansaldo STS to do its best to increase and maintain high excellence services for rail transport users. Because of its customers, Ansaldo STS is able to understand and meet their specific requirements with advanced solutions.

### TEAM SPIRIT

None of these operating objectives can be achieved by one person alone. The company's professionals work in a single, integrated Organization, capable of making the most of their different cultures and professional training. This team spirit can also be found in managers who ensure cooperation and the growth of the company culture, while achieving established objectives and the company's mission. Ansaldo STS strongly encourages attainment of its people's aspirations through team objectives.

### INNOVATION AND EXCELLENCE

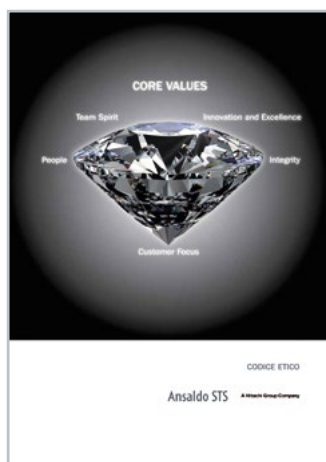
Understanding, studying and developing solutions to improve responses to customers and market offers lie at the crux of Ansaldo STS's activities, in which work is constantly focused on providing customers with innovative and excellent products that represent the company's competitiveness on the market.

### INTEGRITY

If people are to work together effectively, mutual trust must be fostered, and this is only possible if everyone works and acts in a way that is transparent, loyal, honest and proper. Similarly, customers must have the absolute certainty that integrity is a fundamental value for Ansaldo STS, and that this value is reflected in its products, through the utmost care and attention to safety.



## Code of ethics



The Code of Ethics clarifies the commitments and responsibilities that should guide the Company's business and activities, requiring compliance by anyone involved in any way with Ansaldo STS.

The Code of Ethics, which is available on the Company's website<sup>6</sup>, is a key element of the internal control system. Compliance with the Code of Ethics enables

Ansaldo STS and Group companies to prevent certain irregularities or illegal acts which are prohibited by the regulations of the various countries where Ansaldo STS operates. In Italy, Legislative Decree no. 231/01 is of particular note.

The Code of Ethics was formally adopted by Group companies by resolution of the respective Boards of Directors or equivalent management bodies. It was shared with all Group personnel using the same methods as those applied by the Parent Company Ansaldo STS S.p.A.

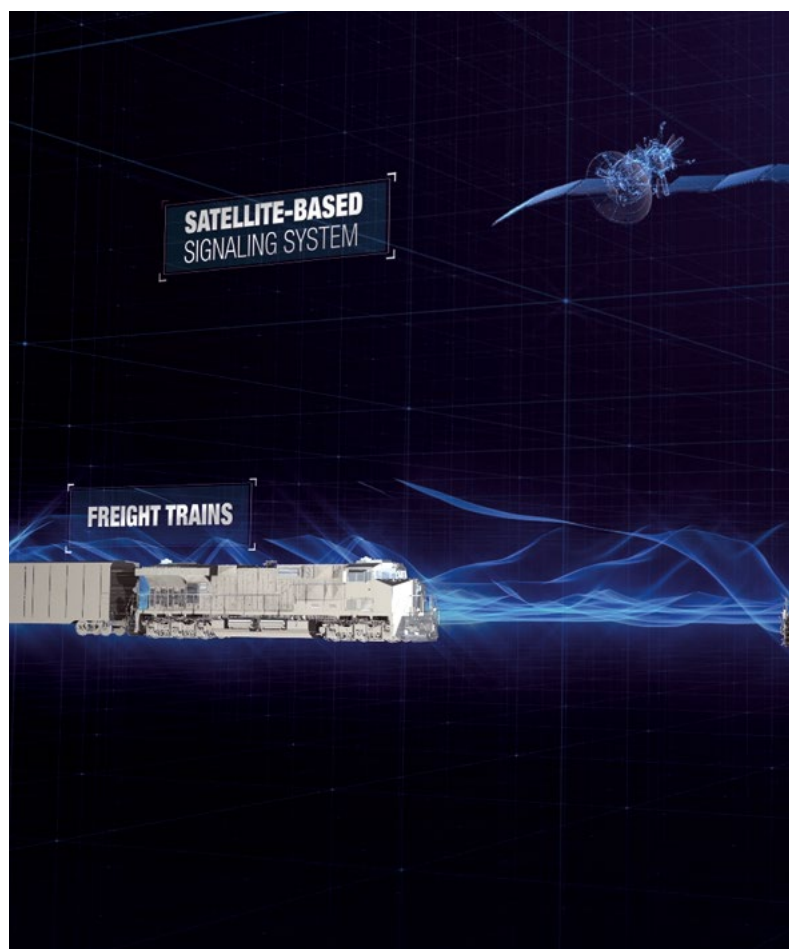
In addition, a Code of Ethics control body was set up within each Group company to promote the implementation of the Code of Ethics. A special information channel for the Code of Ethics was also created, and can be used to report any conduct that is inconsistent with the principles of the Code of Ethics by sending an email. The reports are sent and managed in accordance with a Group procedure.

In 2017, the Code of Ethics control body did not receive any reports of violations of the code relating to Ansaldo STS S.p.A. or other companies belonging to the ASTS Group.

## Training on the Code of Ethics

Ansaldo STS relentlessly promotes and fosters awareness of the Code of Ethics and the related protocols and updates, as well as knowledge of the areas of activities in the various functions with responsibilities, hierarchical relationships, duties and training. It informs employees on the Code of Ethics and the related protocols first by distributing specific documentation to all employees and workers collaborating with the Company in any way, and requires, when the material is delivered, that they sign a statement certifying that they have read the documentation received.

In addition, company personnel can, at any time, ask supervisors for guidance and clarifications on the content of the Code of Ethics, protocols and duties assigned to them. When new employees are hired and/or contracted, Ansaldo STS immediately gives them the information necessary to gain an adequate understanding of the Code of Ethics and protocols, with particular respect to those that concern them specifically.



6. <http://www.ansaldo-sts.com/en/governance/governance-system/code-ethics>



## Partnerships for sustainable development

### Commitment to the Global Compact



Once again, this year Ansaldo STS has signed up to Global Compact, a voluntary United Nations initiative to encourage respect for human rights, labour, the environment and fight against anti-corruption through a series of 10 principles. The confirmation of the Group's membership in the initiative reiterates its commitment to considering the Global Compact and its main principles as an integral part of the Company's strategies and culture.

### Global Compact Network Italy Foundation

Global Compact Network Italy (GCNI) was founded in 2002 to contribute to the development of the "Global Pact" in Italy. In June 2013, the GCNI created the **Global Compact Network Italy Foundation**, with **Ansaldo STS as Founding Member and Sponsor**, along with 17 other organisations, private companies, universities and research institutes, non-profit foundations and civil society organisations.

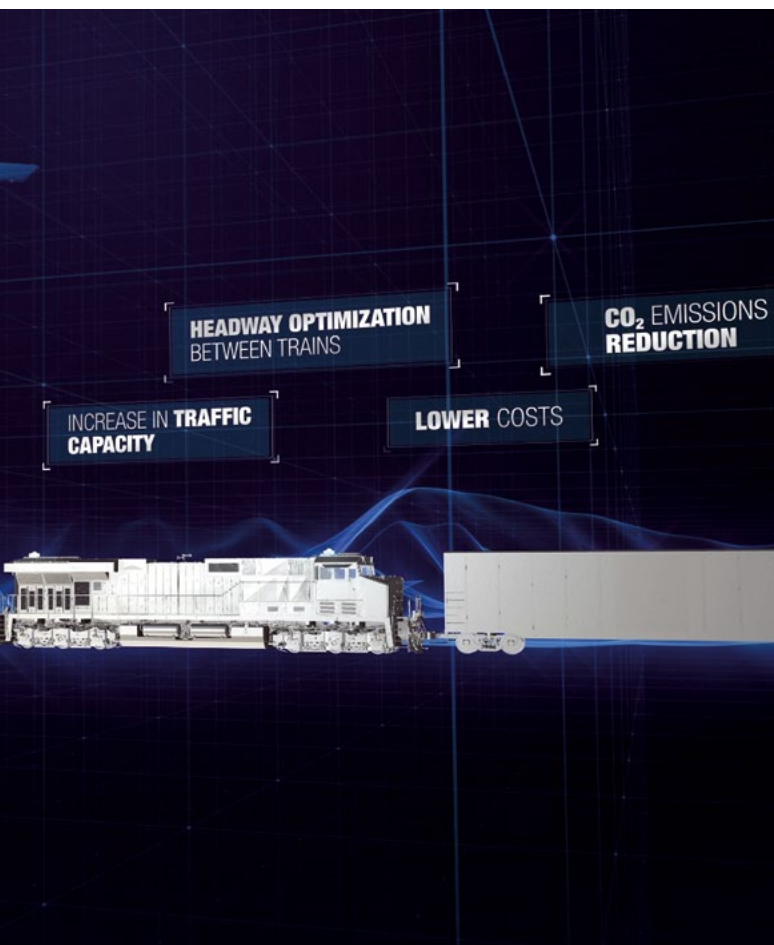
### CSR manager network

Through Andrea Razeto – External Communications, Ansaldo STS participates in the CSR Manager Network, the National Association that unites the professionals of the main Italian companies committed to sustainability issues. The Association is a place to discuss Italian and foreign best practices and acts as a representative body and communicates with the world of politics, business associations, trade unions, environmental associations and other NGOs. It also promotes and tests sustainability and actively participates in national and international discussions. It is the Italian network hub for similar associations that are being set up around the world. The CSR Network is Italy's official representative in the Global Network of the World Business Council for Sustainable Development (WBCSD).

### Trade associations

Ansaldo STS actively participates in UNIFE projects (association of European railway builders), UNISIG (association of European railway signalling companies) and UITP (international public transportation association), ANIE (National Federation of Electrotechnical and Electronic Companies), AICQ (Italian Association for a Quality Culture), the Italian partner of EFQM (European Foundation for Quality Management), Cosila (consortium for safety in the workplace) and Unione degli Industriali/ Confindustria (Industrialists' Union/Italy's main organisation representing Italian manufacturing and service companies), in Naples and Genoa, specifically.

In the scope of UNIFE, Ansaldo STS collaborates to, among other things, promote the extension of the use of railway transportation through the implementation of technological standards (ERTMS and TSI) and by proposing European research projects to improve safety, energy efficiency and environmental protection in the field of railway transportation. Specifically, this project, proposed as a Joint Undertaking in the railway sector, SHIFT2RAIL, aims to reduce emissions and promote for a modal shift in transportation, in line with the indications of the transportation white book published by the EU Commission. Furthermore, also as part of UNIFE, Ansaldo STS sits on the Sustainable Transport Committee, which aims to define a common, consistent and effective consensus in the railway industry with respect to environmental issues and, particularly, energy efficiency (reliable standards to measure energy consumption), the evaluation of the life cycle as one of the main criteria in the decision-making process, eco-procurement and noise and emission reduction.







## Stakeholder engagement

For Ansaldo STS, social responsibility translates into the daily focus and care of its relations with stakeholders, understanding their needs and expectations through the definition and implementation of specific tools for dialogue and interaction.

### Stakeholder mapping

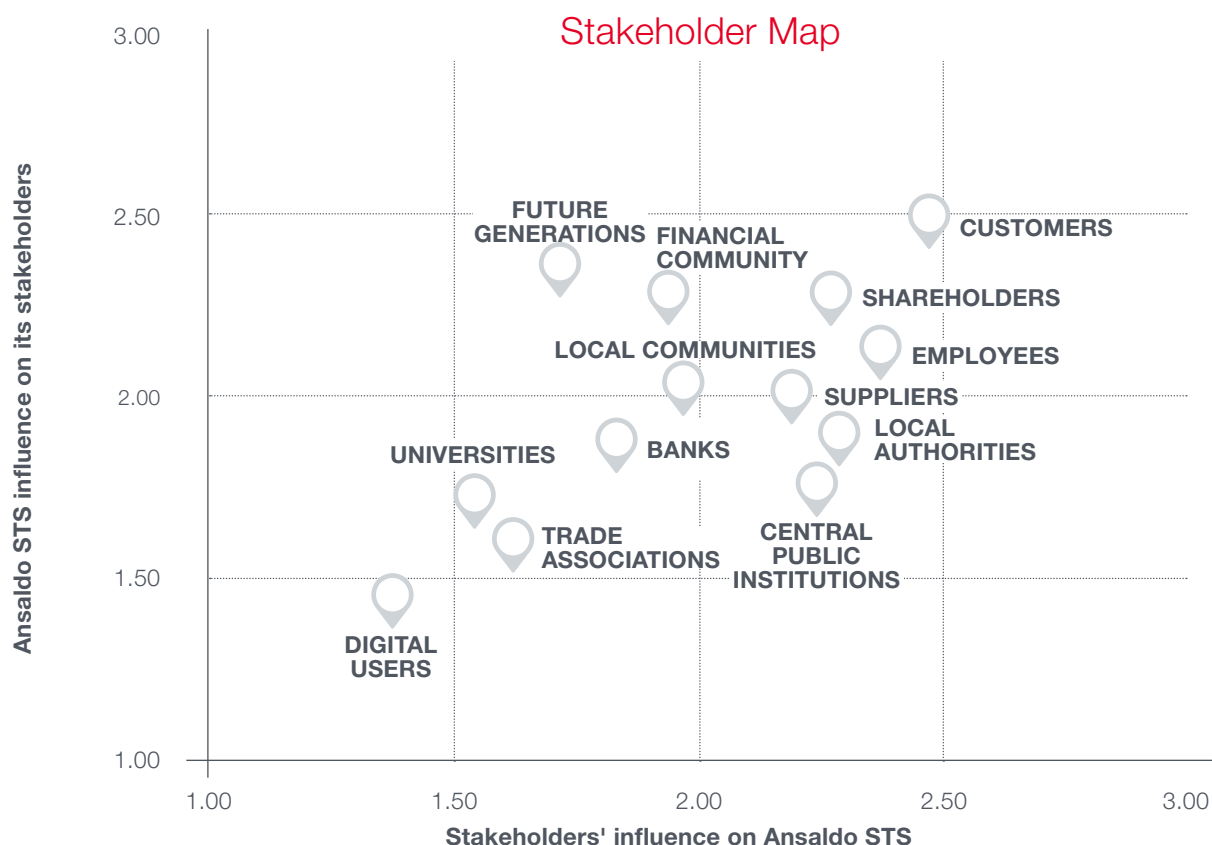
Ansaldo STS has analysed the nature of its relations with different stakeholder categories to understand to what extent and in what way these may impact business performance and, at the same time, to what extent the Company can influence the welfare of its stakeholders.

Ansaldo STS's performance is evaluated considering the three components that characterise sustainable growth:

- economic, i.e. attainment of turnover, new customers, order backlog and profitability objectives;
- social, i.e. the Company's capacity to create "shared value" (not just economic) by satisfying requirements and expectations;

- environment, health and safety, i.e. meeting objectives to reduce the Company's direct and indirect impact on the environment and its workers' health and safety.

The scores assigned by each member of the Sustainability Committee are reflected in the following map:



The stakeholder category perceived to be most strategic for the Company, in line with its culture and values, is that of the customers, followed by employees, members and shareholders. Employees' influence on the Company is seen to be greater than the Company's influence on them. This assessment reflects Ansaldo STS's **culture of placing its people at the heart** of its organisation which is an essential component of its success.

Suppliers, local authorities and central public institutions are slightly lower on the matrix. Once again, their influence on Ansaldo STS is seen to be greater than Ansaldo STS's influence on them. Local communities, the financial community and future generations are more influenced by the Company's operations.



## Relations with stakeholders

In this sustainability report, Ansaldo STS has aimed to present the different ways in which it interacts with its stakeholders, distinguishing between:

- **information sessions:** one-way communication by the Company to stakeholders;
- **consultation/dialogue:** when the Company asks for stakeholders' opinions (e.g., through surveys, polls, focus groups, etc.) or sets up permanent discussion groups;

- **partnerships:** specific projects carried out and/or managed with stakeholders.

This description is useful to understand how to improve the interaction methods with different stakeholder categories to gradually **increase the opportunities for dialogue and partnerships, and in so doing create shared value.**

STAKEHOLDERS	INFORMATION SESSIONS	CONSULTATION/DIALOGUE	PARTNERSHIPS
<b>CUSTOMERS</b>	<ul style="list-style-type: none"> <li>• Periodic project meetings</li> <li>• Meetings with customer senior and top management</li> <li>• Participation at trade fairs, conferences and opening ceremonies</li> <li>• Communication via the social media</li> </ul>	<ul style="list-style-type: none"> <li>• Customer satisfaction survey</li> <li>• Hazard Workshop to test the safety of products and solutions</li> <li>• Open Day to collect feedback from end users</li> </ul>	<ul style="list-style-type: none"> <li>• Joint venture agreements</li> </ul>
<b>HUMAN RESOURCES</b>	<ul style="list-style-type: none"> <li>• Communications about the Company's performance, delivery of its main projects, acquisitions of new orders</li> </ul>	<ul style="list-style-type: none"> <li>• Climate analysis through launching of a global yearly survey</li> <li>• Assessment of managers by groups of peers (360° for executives)</li> <li>• Talent selection and development programmes</li> <li>• Coaching sessions for international work teams (Project team effectiveness)</li> </ul>	<ul style="list-style-type: none"> <li>• Partnership with the Electrical Engineering Department of the University of Genoa, joining the career guidance committee. Laying the foundations for a scholarship initiative aimed at promoting engineering studies and investing in new graduates</li> <li>• Collaboration with the Department of Civil, Construction and Environmental Engineering of the University of Rome "La Sapienza" in relation to the Level II Masters in "Infrastructural and Rail Systems Engineering"</li> </ul>
<b>SUPPLIERS</b>	<ul style="list-style-type: none"> <li>• Requests for information, references, catalogues, etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Requests for technical and price bids; negotiations</li> <li>• Online survey of sustainability issues (TenP of Global Compact Network Italy Foundation)</li> </ul>	<ul style="list-style-type: none"> <li>• Medium to long-term supply contracts</li> </ul>
<b>BANKS</b>	<ul style="list-style-type: none"> <li>• Invitations to participate in deals</li> <li>• Communication and presentation of project data</li> </ul>	<ul style="list-style-type: none"> <li>• Meetings to present projects and their details</li> <li>• Negotiation of terms and prices</li> </ul>	<ul style="list-style-type: none"> <li>• Partnership for the guarantees related to the O&amp;M Riyadh Metro and O&amp;M Riyadh Princess Noura, mRing 3 Copenhagen, Tel Aviv Red Line, Mumbai Line 3 and the Florence Hub projects</li> <li>• Partnerships and beauty contests for the guarantees related to the newly acquired projects: Framework ERTMS Germany, Transitio Mälåb Sweden and IRICAV 2</li> <li>• Partnership for the negotiation of new credit letters</li> </ul>
<b>INVESTORS/ FINANCIAL ANALYSTS</b>	<ul style="list-style-type: none"> <li>• Roadshows</li> <li>• Conferences</li> <li>• Video Conferences</li> </ul>	<ul style="list-style-type: none"> <li>• Roadshows</li> <li>• Conferences</li> <li>• Video Conferences</li> </ul>	
<b>ITALIAN AND EU PUBLIC INSTITUTIONS</b>	<ul style="list-style-type: none"> <li>• Institutional communications (internet news, press releases, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• Consultations about potential partnerships for research projects</li> </ul>	<ul style="list-style-type: none"> <li>• Joint research projects</li> </ul>
<b>LOCAL AUTHORITIES/ PUBLIC ADMINISTRATION</b>	<ul style="list-style-type: none"> <li>• Regular institutional communications</li> </ul>	<ul style="list-style-type: none"> <li>• Charity Day</li> </ul>	
<b>LOCAL COMMUNITIES</b>	<ul style="list-style-type: none"> <li>• Reports on the progress of projects to the local community (together with the local institutions)</li> </ul>	<ul style="list-style-type: none"> <li>• Participation in local stakeholder committees</li> <li>• Customer satisfaction of rail users</li> </ul>	<ul style="list-style-type: none"> <li>• Participation in programmes to develop local communities</li> </ul>
<b>TRADE ASSOCIATIONS</b>	<ul style="list-style-type: none"> <li>• Institutional communications (internet news, press releases, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• Consultations about potential partnerships for research projects</li> </ul>	<ul style="list-style-type: none"> <li>• Joint research projects</li> </ul>
<b>THE MEDIA</b>	<ul style="list-style-type: none"> <li>• Regular institutional communications</li> </ul>	<ul style="list-style-type: none"> <li>• Consultations for more details of specific issues</li> </ul>	
<b>DIGITAL USERS/SOCIAL NETWORK</b>	<ul style="list-style-type: none"> <li>• Regular institutional communications</li> </ul>	<ul style="list-style-type: none"> <li>• Ongoing communications and regular updates of the website</li> </ul>	<ul style="list-style-type: none"> <li>• Partnerships with social networks to develop web communications and relations</li> </ul>



## Sustainability programme

Ansaldo STS draws up a sustainability programme each year, made up of the objectives to be targeted to ensure the ongoing improvement of its performance using annual reports of its commitments, surveys on the quality of its engagement with stakeholders and the aspects that emerged from the materiality analysis as a base.



### SUSTAINABILITY GOVERNANCE



#### REPORTING PROCEDURE

- Definition of a specific internal procedure that formalizes contents, roles and responsibilities of the reporting process for the realization of the Sustainability Report and the Consolidated non-financial disclosure- DNF (2018).

#### BUSINESS CONTINUITY

- Formalization of Governance for the management of the Business Continuity System (2018).
- Launch of pilot projects on critical processes and scenarios shared with company management (2018).
- Extension of the management system to the remaining business processes and sites (2019/2020).



### SOCIAL INNOVATION



#### RESEARCH AND DEVELOPMENT

- Evolution of the Interlocking System platform, responsible for the safe movement of trains, with the possibility of a dynamic configuration that avoids interruption of service.
- Automation 2.0 the new evolution of management software for "control centers".



### OUR PEOPLE



#### PEOPLE CARE

- Extension of corporate welfare (2018/2019).
- Increase in flexible working hours (2019).
- Smart working trial (2018).

#### SOCIAL DIALOGUE

- Launch of integrated second level bargaining in 2018.

#### TRAINING AND DEVELOPMENT

- Completion of the *Talent* development programme (2018).
- Further integration between development and organisation procedures to optimise skills and career paths (2018).
- Analysis and consolidation of personal development plans (PDP) with a special focus on project groups (2018).
- Promotion and consolidation initiatives to develop the effectiveness of on-the-job training (2018).
- Training initiatives on data protection, staff and management development and the consolidation of project management and financial skills (2018).
- Extension of the e-learning training platform (2017-2019).





## CSR AND COMMUNITIES



### CSR PLAN

- Development, sharing and implementation of a CSR plan with the aim of increasing internal culture and company social commitment (2018-19).

### HUMAN RIGHTS

- Formalization of a specific policy on the protection of human rights (2018).

### PARTNERSHIP FOR RESEARCH

- Continue with the commitment of the Shift2Rail European research program in particular on the following projects (2018-20):
  - X2Rail1 - flexible and intelligent traffic management system;
  - X2Rail2 - signaling innovation (satellite and train integrity technologies) in the supervision and management of the development process;
  - X2Rail3 - new adaptable communication system, protection systems and cybersecurity;
- SBS fase2 - construction of a railway line that uses the satellite communication system;
- IN2Smart - innovative solution for maintenance railway assets.

### PARTNERSHIP WITH UNIVERSITIES (2018)

- Continue the collaboration with Italian major universities in order to share training activities and find smart students that meet Company needs.

## THE ENVIRONMENT, HEALTH AND SAFETY



### ENERGY (2018)

- Reduce energy intensity performance indicator by 2% [GJ/no.h]
- Increase the percentage of electrical energy obtained from renewable sources by 2%.

### GREENHOUSE GASES (2018)

- Reduce the GHG emission intensity indicator by 10% [tCO<sub>2</sub>e/€million revenues].

### WASTE (2018)

- Reduce the weight of waste per hour worked by 5%
- Increase the percentage of recycled waste at production sites by 10%

### WORKERS' SAFETY (2018)

- Reduce the injury frequency and severity indicator and / or environmental accidents by 2%.

### HSE MANAGEMENT SYSTEM (2018)

- Complete the update the HSE management systems according to new standard ISO14001:2015, in line with new ISO9001:2015.
- Maintain or increase the number (> 25) of sites with HSE management system certified ISO 14001 and OHSAS 18001.

## ETHICAL MANAGEMENT OF THE SUPPLY CHAIN



### GLOBAL PROCUREMENT PLATFORM (2018)

- Implementation of the global Procurement platform with particular advantages in terms of risk management (procedural, achievement of objectives, financial and business disruption risks) and environmental sustainability (dematerialisation).

## ECONOMIC SUSTAINABILITY



### BUSINESS STRATEGY

- Tune current organizational structure and deliver model with the future market trends.
- Strengthening capabilities in local markets and project financing models.

### ANTICORRUPTION (2018)

- Formalization of a specific anti-corruption policy.



## Our 2018/19 Corporate Social Responsibility Plan

Ansaldo STS considers the behaviour of an organisation that contributes to sustainable development, grown out of a shared and concrete commitment to Corporate Social Responsibility (CSR), as a crucial element to improve its performance, enhance its reputation, increase its ability to attract talent and strengthen its relationships with customers, business partners, suppliers and local communities. Ansaldo STS wants to develop a coordinated CSR corporate strategy, with an action plan that aims to:

- improve its internal culture;
- stimulate proposals and ideas from the bottom up in order to achieve shared business and social objectives;
- increase the Company's social participation and commitment so that it stands out as an influencer in its field.

Inspired by these principles, our 2018/19 Corporate Social Responsibility (CSR) plan has identified the following action areas for the two-year period:

1. develop an external communication strategy that highlights the integration between corporate objectives and social responsibility initiatives;
2. provide internal training in order to improve the culture of ethics and sustainability;
3. adopt new CSR-specific ISO 26000 guideline;
4. propose new and concrete initiatives to the Executive Committee, to stimulate a sustainable development of the business and contribute to achieve the Sustainable Development Goals (SDGs) of the UN's 2030 Agenda.





## Internal Sustainability Committee

In 2011, Ansaldo STS set up the Internal Sustainability Committee (also referred to as the “Committee”), made up of the managers of the main internal departments. The Committee’s mission is to define the Company’s strategic guidelines for sustainable development and the promotion of social responsibility initiatives and see that they are implemented. The Internal Sustainability Committee reports directly to the Managing Director and General Manager of Ansaldo STS and collaborates and coordinates with the Company’s organisational units.

The Committee is responsible for:

- the assessment of social and environmental risks that concern the Company’s operations and evaluating the related performance;
- the definition and monitoring of the sustainability programme, made up of financial, social and environmental objectives;
- the implementation of the codes of conduct in terms from an ethical, social and environmental point of view, such as the Code of Ethics and the CSR and HSE policies and procedures;
- the observance of the reporting standards of the Global Reporting Initiative and initiatives such as the Global Compact and CDP (the former Carbon Disclosure Project);
- the definition and coordination of stakeholder dialogue, discussion and engagement and the sharing of results and the steps to be taken;
- definition and implementation of an internal and external sustainability communication plan.

In 2017 the Internal Sustainability Committee met on two occasions:

- on **16 April 2017** to discuss the following topics:
  - New developments on the subject of sustainability and CSR; Italian Legislative Decree no. 254/16 on non-financial reporting; London Stock Exchange and Borsa Italia - ESG Reporting; New Tendering Code and assessment of corporate social responsibility by the Italian Railway Network (*Rete Ferroviaria Italiana*, RFI); 2030 Agenda for Sustainable Development of the United Nations.
  - Confirmation of commitment to and participation in: UN Global Compact, Global Compact Network Italy, Carbon Disclosure Project;
  - 2017 reporting activities: Project plan; improvement objectives, new materiality analysis.
- on **19 December 2017** to begin the preparation of the Consolidated Non-Financial Statement (NFS).

### Involvement of the Board of Directors

In the current governance of the issues relating to sustainability, the Board of Directors is involved in approving the Consolidated Non-Financial Statement and the Sustainability Report while

the Managing Director and General Manager approve the sustainability programme, i.e. the action plan to be implemented, the targets to be achieved and the reporting activities.





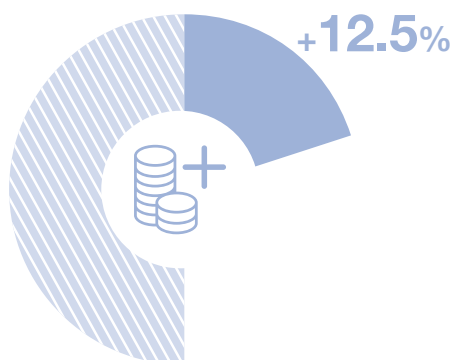
# Social Innovation





**Ansaldo STS has always devoted ongoing attention to research and development, in order to identify and create innovative technical solutions and develop products of the very highest quality, safety and environmental standards.**

R&S: invested € **41.3** mln

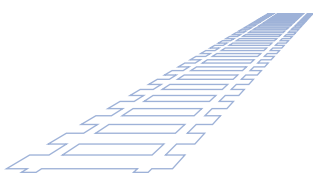


directly ascribed to profit & loss

Leadership in  
**ERTMS satellite  
technologies**



**TCCS™** – Train  
**Conformity Check System** the  
multi-functional portal for automatic  
detection of irregular conditions  
affecting rolling stock in transit



Innovations and technologies  
for **energy efficiency** and the  
**reduction of raw material  
consumption**



**Safety and reliability**  
of products, applications and  
systems. Maximum level (SIL4)  
for critical applications



**ECO-DESIGN -**  
Re-usability and recyclability of  
materials - Compliance with REACH  
- **Life Cycle Assessment**





## Targets achieved in 2017

### Social Innovation: Innovation and the Environmental Impact of Products and Solutions

SDGs	COMMITMENTS UNDERTAKEN IN 2016	ACTIVITIES CARRIED OUT IN 2017	
<b>9</b> INDUSTRY, INNOVATION AND INFRASTRUCTURE	<ul style="list-style-type: none"> <li>Renewal of the CMMI (Capability Maturity Model Integration) Level 3 Certification for Software Development.</li> </ul>	<ul style="list-style-type: none"> <li>In April 2017 SCAMPI V1.3 A was successfully passed for the CMMI Maturity Level 3 certification of the Software Development and System Assurance &amp; Control Units.</li> </ul>	
<b>11</b> SUSTAINABLE CITIES AND COMMUNITIES	<ul style="list-style-type: none"> <li>ISO 9001 certification in compliance with the new 2015 version.</li> <li>Upgrade of third generation entities in order to meet all market demands.</li> </ul>	<ul style="list-style-type: none"> <li>In November 2017 the audit campaign for the certification of the company QMS according to the ISO9001: 2015 standard was successfully completed.</li> <li>Certification of 3<sup>rd</sup> generation bodies has been achieved for the entities present in the Turin-Padua line.</li> </ul>	
<b>15</b> LIFE ON LAND	<ul style="list-style-type: none"> <li>Active contribution to the definition of the pilot regional line "Pinerolo – Sangone" with RFI, based on satellite technology.</li> </ul>	<ul style="list-style-type: none"> <li>Contribution in defining the phases of construction of the Regional Pinerolo-Sangone Pilot Line with RFI based on satellite technology.</li> </ul>	

Target achieved
 Target partially achieved
 Target not achieved
 Target postponed

## The value of innovation

Ansaldo STS operates daily with the aim of improving quality of life by designing new transport systems which safely carry millions of people and freight every day while fully respecting the environment, by developing increasingly compact and energy-efficiency hardware integrated in increasingly advanced solutions able to respond to the new frontiers of community needs, by the search for new green technologies and above all by trying to rationalise consumption while avoiding waste.

Today the Ansaldo STS team, operating within the Hitachi Group, can further develop its innovative approach by tapping into the Group's references in the fields of Big

Data and Internet of Things; it is now possible to develop integrated solutions and offer new performance and services by combining different technologies.







## Main products conceived and in development<sup>7</sup>

Over the years, its development of products and solutions (Development and Engineering) has enabled Ansaldo STS to seize a leading position in the Signalling Systems and Railway and Mass Transit Sectors.

- **OTP - Optimizing Traffic**

**Planner™** - an innovative rail traffic management system that enables the redirection of traffic in real time.

- **ATC** (Automatic Train Control) and **ATP** (Automatic Train Protection) **Systems** - automatic train speed control systems in line with ERTMS (European Rail Traffic Management System) standards.

- **CBTC Communication-Based Train Control** - two-way, radio-based train distancing communications system between wayside and train.

- **Wayside platform** - integrated security, diagnostics and traffic regulation functions in a single, centralised platform.

- **Satellite signalling** - a globally significant technological innovation which uses satellite geo-positioning technology as an alternative to traditional systems, reducing costs and environmental impacts.

- **TCCS - Train Conformity Check System** - the multi-functional portal for automatic detection of irregular conditions affecting rolling stock in transit.

Research and development expense ascribed directly to profit or loss for the year ended 31 December 2017, net of grants, totalled EUR 41.3 million (EUR

36.7 million in 2016). In particular, total research and development expense was EUR 43.6 million (EUR 38.6 million in 2016), against grants approximating EUR 2.3 million (EUR 1.9 million in the previous year).

The majority of investments regarded the on-board systems product line aimed at facilitating alignment to the ERTMS standards and improving the performance of CBTC applications; furthermore, the new platform for automation products was launched, aimed at promoting the digital development of technology. In detail:

- CBTC development activities to supplement the general functions required by recent acquisitions and the safety testing and verification activities for ongoing projects continued;
- developments to the ATS Metro system are continuing in line with the CBTC roadmap;
- the activities of the new multi-year programme “Automazione v2.0” began, involving resources in Italy and the United States. The new development aims to standardise hardware and middleware to increase the platform's efficiency, develop new infrastructure able to host “added value services” in the future and support a new User Interface. Automazione v2.0 aims to satisfy the demand for digitalisation and respond to new trends;
- the evolutionary development of the Interlocking MacroLok platform continued, aiming to improve and

extend the features offered by the platform to meet the demands of the global market;

- the RBC functions of the MacroLok platform were also developed, aiming to align the General Application to the evolving ERTMS and general product standards;
- the development of the new “Fast” tool suite for the MacroLok platform for system design and configuration;
- as regards the Interlocking MacroLok platform, the development of the new CPU (ViPro) continued, which is able to manage PTC traffic without the need for additional HW;
- as regards Onboard systems, activities to resolve the problems presented by the obsolete Italian platform (ALA) continued with the design of a new microprocessor which adapts the architecture and components of other developments created by Ansaldo STS as part of the standardisation of HW solutions. In terms of SW, the development of Baseline 3 continued, focused on its first application in the contract with SNCF and other recently acquired contracts.

In 2017, new evolutionary developments on the onboard platform DIVA were launched. The activities aim to standardise HW configurations mainly for ERTMS applications, as well as improving the general performance of the platform.

7. Further information on the product segments of Ansaldo STS is available at: <http://www.ansaldo-sts.com/en/business/business-segments>



## Product and solution safety and reliability

Ansaldo STS implements RAMS (Reliability, Availability, Maintainability and Safety) activities to ensure that it develops and delivers products, applications and systems that are safe, in compliance with Italian and international laws applicable to railway systems, reliable and in line with its customers' needs and its internal quality standards. These activities are performed on all Ansaldo STS projects in which safety and reliability are relevant, which constitute over 90% of total business activities.

Safety and reliability are achieved through hazard analysis, a structured

process in line with sector standards. It begins with the identification of hazards based on previous experience, the assessment of specifications for the various processes stages and hazard workshops during which experts from Ansaldo STS and from the customer discuss the various issues. Potential hazards are then included in a hazard log, which is constantly updated over the life cycle of the project. For each hazard mapped, the log also includes the mitigation measures, activities to check that they were effectively implemented and an assessment of the residual hazard.

The residual hazard level is assessed and accepted only if it is below the limits established by standards and customer requirements.

The main safety standards are those issued by CENELEC - European Committee for Electrotechnical Standardization. Specifically, relevant standards are:

- CEI 50126 on RAMS applicable to the railway sector;
- CEI 50128 on software security;
- CEI 50129 on electronic device safety;
- CEI 50159 on railway communications security.

### Recording and assessment of non-conformities and accidents to improve safety

Any non-conformities with safety specifications during the development, testing and, obviously, roll-out, are carefully analysed and recorded. In general, no conduct of this type is tolerated and any instances of the same require a review and changes to the hardware or software of the element that does not meet the technical specifications required. In general, Ansaldo STS gathers two types of data to assess the reliability of its products: data on parts (fault charts), beginning with the assistance requests sent to the Service unit, and data on systems affecting the key service parameters (frequency of trains, skipped runs, delays, etc.). Data on parts is analysed to identify the most defective parts and alternative solutions are sought to improve performance, while for data on systems, all service interruptions are analysed to determine the causes.

### Reliability of solutions

The reliability of solutions is also due to the use of redundant platforms that provide fault tolerant configurations, i.e. those that can continue to function even when certain sections present faults. This type of approach was successfully applied in Italian high-speed railways, where specific systems have been developed for the diagnostics and control of the electrical substations. These tools make it possible to plan "preventive maintenance" on lines, i.e. monitoring all substations and reporting when one of them is at risk of faults. In this way, greater environmental sustainability is ensured, with the resulting reduced consumption of spare parts and lower risk of service interruptions on the line due to faults.

### Safer spaces for customers and end users

Ansaldo STS offers passengers safe and controlled spaces by equipping network vehicles with sensors that constantly monitor railway areas. The sensors operate around the clock.



## Energy efficiency and respect for the environment

Ansaldo STS's unwavering commitment to providing its customers and end users (passengers and freight) with the best products and system solutions, the use of the best design methodologies and procedures and the best existing construction methods and processes contributes to increasing safety and reducing direct and indirect impacts on the environment.

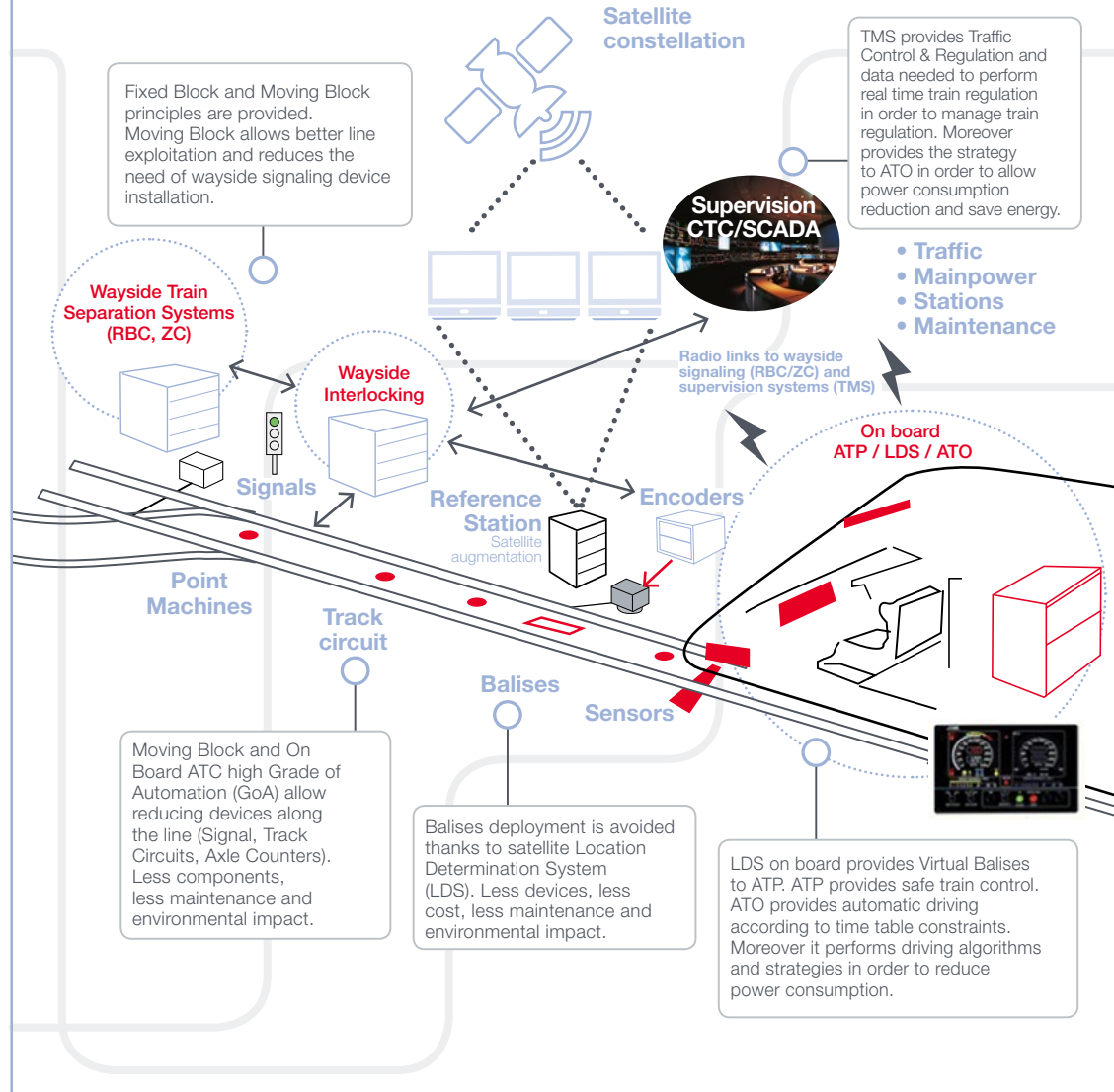
### Energy efficiency

Ansaldo STS's research into energy efficiency concentrates on the following macro-areas:

- "Assistance with the design of turnkey systems", through holistic hardware-in-the-loop simulators to provide a transport system that uses energy efficiently.
- "Operation – rail & driverless", focused on searching for the optimum speed profile, considering scheduling and driving conduct.
- "Technologies for energy savings", for ground recovery systems, geothermal heat pumps, simulators for the optimal size of supercapacitor accumulation systems.

The Company developed these areas as part of the MERLIN (Management of Energy in Railway Systems), OSIRIS (Optimal Strategy to Innovate and Reduce energy consumption in urban rail Systems) and SFERE (Sistemi

### ANSALDO STS'S MEASURES TO IMPROVE THE SUSTAINABILITY OF ITS PRODUCTS AND SOLUTIONS



FERroviari: ecosostenibilità e Risparmio Energetico) research projects.

Two important innovations introduced by Ansaldo STS in signalling systems for train control relate to the use of public telecommunications networks and GPS - Global Positioning

Satellite - technology. The use of these new control systems will replace track equipment, which requires greater energy consumption. These systems will especially be used on low traffic lines in Europe, which make up about 50% of the total network length.





## Reducing raw materials consumption

The use of powerful technological platforms integrating several functions in the same subsystem enables Ansaldo STS to reduce the size of equipment and their connectors, using simple and effective systems for scheduling, testing and roll-out. In addition, the search for increasingly standardised designs encourages innovation and a reduced use of components.

Specifically, over the past few years, methods to compact hardware of the central and outlying units of the railway control systems produced by Ansaldo STS were introduced and refined. They are based on both mechanical and technological solutions and allow a reduction in volumes, size, heat dissipation and waste to be eliminated of roughly 35%-40%.

Other methods to eliminate and simplify hardware included:

- the use of software from different subsystems on the same machine, such as for example, interlocking and radio block centre, usually used on separate hardware;
- the use of environmental sensors already in place as standard features on the CPUs instead of the previously used external sensor units;
- replacement of very bulky (and energy consuming) sophisticated industrial monitors with commercial equipment that meets the modern Green IT paradigms including with respect to the environmental impact of the materials used (this approach had already been implemented in the Turin-Padua Northbound Line and is of great interest for the revamping of the existing systems);
- centralised diagnostics (via web) rather than located in the outlying sites;
- maintenance systems based on commercial handheld devices replacing the traditional “heavy” equipment (this approach had already been implemented for the Roy Hill project);
- study and testing of embedded highly efficient innovative systems for railway applications (NEMBO research project).

## Eco-design

Partly in response to certain new contracts (e.g., the Montreal MPM-10 TRAIN CONTROL SYSTEM project), Ansaldo STS is paying greater attention to studying eco-design aspects, including to meet customers’ environmental standards, such as:

- Analysis of compliance with REACH – Registration, Evaluation and Authorization of Chemicals regulation (an integrated registration, evaluation, authorisation and restriction system for chemicals established in the EU);
- Analysis of the re-usability and recyclability of materials;
- Life Cycle Assessment (LCA).

The methodological approach entails a comparison of processes, materials and products in order to evaluate whether choices are ecologically compatible. The design stage, along with an analysis of costs and quality level, makes it possible to identify critical points in the product life cycle. The analysis process is carried out using software and considering the applicable legislative requirements and UNI ISO 14040 standards.

There is also more focus on the choice of materials, increasingly based on their ecological compatibility, starting from the product’s design stage (e.g., resins and paints of tropicalised circuit boards).

New approaches to hardware testing make the simultaneous testing of thousands of units possible, whereas previously tests were performed on one “box”, or controller, at a time. This solution, called SimWSP, has already been used for the Pisa system (northbound line).

The environmental management requirement for some ongoing contracts (e.g., the Copenhagen Cityringen) is to define an environmental policy to be applied during all the system implementation stages and requires preparation of an environment impact plan, an environmental action plan, etc. In particular, with respect to eco-design, environmental impact considerations must be included in the project flow in line with the environmental policy. The following objectives are set:

- base the environmental management system on the DS/EN ISO 14001 standard;
- consider environmental issues when taking decisions and include them in the project characteristics;
- work to high environmental standards and improve performances as much as possible over the project term;
- use raw materials and energy efficiently, optimising their re-use and recycling to minimise waste and waste products;
- safeguard environmental values and culture;
- prevent unwanted environmental consequences and reduce the project’s environmental impact;
- make a separate, specific and measurable commitment to respect nature.

## LED technology

For the last few years, Ansaldo STS has produced LED-based traffic lights at the Tito Scalo and Batesburg sites. This innovation has a positive impact on energy consumption, the management of maintenance and the disposal of maintenance material. Suffice it to say that bulbs were normally changed every four months, while LED bulbs last at least ten years.

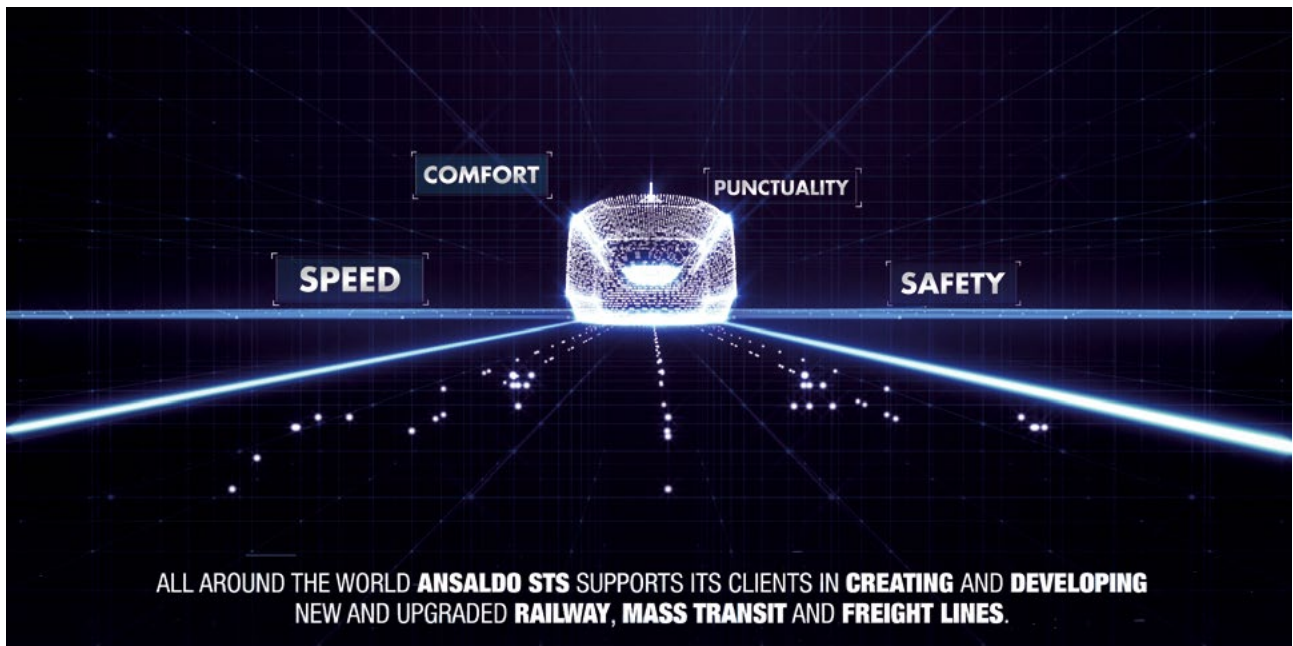


## Reliable and efficient traffic timetables

The tools that Ansaldo STS has designed and produced enable operators to create more efficient timetables for trains running on railway infrastructures, identifying, in particular, the optimum locations for stops, junctions and passing, and determining travel times to minimise waits and consumption. Therefore, these tools make it possible to prevent, and supply pro-active measures to combat,

traffic caused by train delays, scheduled and non-scheduled maintenance, natural disasters and personnel shifts. This technology is also used to significantly cut down on fuel by increasing the average speed of trains, concurrently reducing the waste of fuel for acceleration closely followed by braking due to temporary slowdowns or stop signals.

## Ansaldo STS Joining Hitachi's Social Innovation Forums



### Social Innovation forum in Milan, Italy

The importance of the event, attended by more than one thousand visitors, was linked to the extraordinary nature of products that have opened the door to a future that already exists. The members of Hitachi family showcased the most advanced products and technologies available on the market, or under development, which will quite for sure change the lives course for many millions of us across the world.

During the event, Ansaldo STS presented a video to explain the complexity of the company: design, operational and economic activities:

<http://www.ansaldo-sts.com/en/media/mediagallery/video/corporate-ir#video-2>



### Social Innovation Forum in Brisbane, Australia

More than 200 people attended the event, held to improve understanding of Hitachi's Social Innovation activities in Australia. The topic of the session concerned "Strategic drivers of innovation in Ansaldo STS and Hitachi". An Innovation showcase was also featured, which included demonstrations of ASTS' innovations in rail automation such as satellite-based signalling, along with a simulation of ETCS/ERTMS Level 2 systems.



# Our People





***Our people are essential to successfully compete in the market. Honesty, loyalty, aptitude, professionalism and technical preparation are aspects in which Ansaldo STS invests and which it requires from its employees so that they can achieve personal and corporate growth objectives.***

€ **334.2** mln  
Economic value  
distributed to  
employees



**98%** of employees  
hired with open-ended  
contracts



**95%** of employees  
in the skills assessment  
and development plan  
(PDP)



### **People Care:**

listening, motivation,  
multi-cultural  
environment, growth  
and development  
programmes, benefits,  
fair remuneration



### **Knowledge Owners**

strategic program  
for corporate  
know-how sharing

### **Global Job System**

the skills management  
system for  
all employees,  
integrated with  
performance  
assessment (PDP)

**93,368**  
total hours of training



(average of 22.1  
hours per employee)

Internationalisation  
and  
**multicultural  
approach**









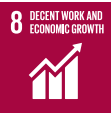

**New Intranet** to  
promote the sharing  
of experiences  
and skills





## Targets achieved in 2017

### Our people

SDGs	COMMITMENTS UNDERTAKEN IN 2016	ACTIVITIES CARRIED OUT IN 2017
	<b>TRAINING AND DEVELOPMENT</b> <ul style="list-style-type: none"> <li>Improve the performance evaluation system in order to make the process of assignment and evaluation of the 2017 objectives more efficient.</li> <li>Upgrade the Talent Management process in order to ensure a better integration of development and organisation processes and their conformity with corporate strategic objectives.</li> </ul>	<ul style="list-style-type: none"> <li>Streamline the calculation system under evaluation and implement new internal reporting activities (for employees) to support the conclusion of the process and the assignment of new objectives.</li> <li>The Talent Management process was updated in line with the 2016 report. Connection to business is a key element both in terms of process architecture and inside the development plan.</li> </ul>  
	<b>CORPORATE WELFARE</b> <ul style="list-style-type: none"> <li>Implement flexible benefits measures for all employees in the period 2017-2019.</li> <li>Carry out further corporate welfare initiatives as part of the renewal of the second level supplementary contract.</li> </ul>	<ul style="list-style-type: none"> <li>In 2017 the flexible benefits measures envisaged by the national labour agreements were implemented through the signing of an agreement with a specialist provider to offer company employees a broad range of options of how to invest the available funds.</li> <li>For the renewal of the second level national labour agreement, in December 2017 the platform was presented by the trade unions and will be discussed with the same in 2018 to assess the possibility of introducing additional welfare elements into the performance bonus.</li> </ul>  
	<b>COMPENSATION AND BENEFIT</b> <ul style="list-style-type: none"> <li>Implement a worldwide compensation and benefit model aimed at middle managers.</li> </ul>	<ul style="list-style-type: none"> <li>Construct and implement benefit management policies dedicated to key middle managers and technical fellows.</li> </ul> 



Target achieved



Target partially achieved



Target not achieved



Target postponed

## Human resource management policy

**Ansaldo STS offers equal opportunities beginning with the recruitment process, ensuring equal treatment while considering individual skills and abilities.**

Over the course of employment, Ansaldo STS undertakes to create and maintain the necessary conditions to further expand upon employees' abilities and expertise on an equal opportunity basis, through a policy based on the recognition of merits and equal opportunities and the provision of specific refresher and specialisation courses. As such,

employees are required to cultivate and draw on new expertise, abilities and knowledge, while executives and function heads must devote the utmost attention to enhancing and developing the professionalism of their workers.

In the pursuit of company objectives, workers must be aware that ethics

are of immense value to the Company and accordingly, no conduct is tolerated that, although it may appear in the abstract to benefit Ansaldo STS, is in violation of the law, current regulations, the organisational, management and control model or the Code of Ethics.



## Company workforce

At year end, Ansaldo STS's workforce totals 4,228, as follows:

NUMBER OF COLLABORATORS BY REGION <sup>8</sup>	2016				2017			
	MEN	WOMEN	Total	% W on total	MEN	WOMEN	Total	% W on total
Central and Eastern Europe and the Middle East	1,381	331	<b>1,712</b>	19.3%	1,495	368	<b>1,863</b>	19.8%
Western Europe	689	179	<b>868</b>	20.6%	719	194	<b>913</b>	21.2%
The Americas	526	186	<b>712</b>	26.1%	556	198	<b>754</b>	26.3%
Asia Pacific	505	92	<b>597</b>	15.4%	532	103	<b>635</b>	16.2%
China	39	23	<b>62</b>	37.1%	36	27	<b>63</b>	42.9%
<b>TOTAL</b>	<b>3,140</b>	<b>811</b>	<b>3,951</b>	<b>20.5%</b>	<b>3,338</b>	<b>890</b>	<b>4,228</b>	<b>21.1%</b>

Compared to 2016, the increase in the total number of collaborators totalled 277 units (+198 men and +79 women). This is the result of an increase in employees in Central and Eastern Europe and the Middle East (+151), Western Europe (+45) and the Americas (+42), and the Asia Pacific (+38) and China (+1) regions.

The total percentage of women making up the workforce is 21.1%, showing a growth of 0.6 percentage points.

The increase in the number of collaborators concerns all professional categories.

With regards to the subdivision by gender, a particular increase was observed in the percentage of women in the Executives category (10.5% of the total).

PROFESSIONAL CATEGORIES	2016				2017			
	MEN	WOMEN	Total	% W on total	MEN	WOMEN	Total	% W on total
Executives	71	6	<b>77</b>	7.8%	77	9	<b>86</b>	10.5%
Middle managers	360	66	<b>426</b>	15.5%	370	64	<b>434</b>	14.7%
White collars	2,471	669	<b>3,140</b>	21.3%	2,629	745	<b>3,374</b>	22.1%
Blue collars	238	70	<b>308</b>	22.7%	262	72	<b>334</b>	21.6%
<b>TOTAL</b>	<b>3,140</b>	<b>811</b>	<b>3,951</b>	<b>20.5%</b>	<b>3,338</b>	<b>890</b>	<b>4,228</b>	<b>21.1%</b>

Gender analysis shows that the female workforce, in line with the total workforce, grew in absolute value across almost all age groups. The percentage of the workforce represented by women grew particularly among the under 30s (26.4%, up 4.2 percentage points) and over 50s (19.50%, up 0.6 percentage points).

AGE	2016				2017			
	MEN	WOMEN	Total	% W on total	MEN	WOMEN	Total	% W on total
< 30	274	78	352	22.2%	292	105	397	26.4%
30-35	597	155	752	20.6%	599	153	752	20.3%
36-40	566	148	714	20.7%	635	167	801	20.8%
41-45	425	125	550	22.7%	481	139	620	22.4%
46-50	337	85	422	20.1%	349	88	437	20.1%
>50	941	220	1,161	18.9%	982	238	1,220	19.5%
<b>TOTAL</b>	<b>3,140</b>	<b>811</b>	<b>3,951</b>	<b>20.5%</b>	<b>3,338</b>	<b>890</b>	<b>4,228</b>	<b>21.1%</b>

8. The regions are defined as follows:

- **Central and Eastern Europe and the Middle East:** Italy and Italian branches (Denmark, Turkey, Greece, Taiwan, Honolulu, United Arab Emirates, Saudi Arabia and Peru) and Germany
- **Western Europe:** France and branches in South Korea, Morocco, United Kingdom, Spain and Sweden
- **The Americas:** US and Canada
- **Asia Pacific:** Australia, Malaysia and India
- **China:** China



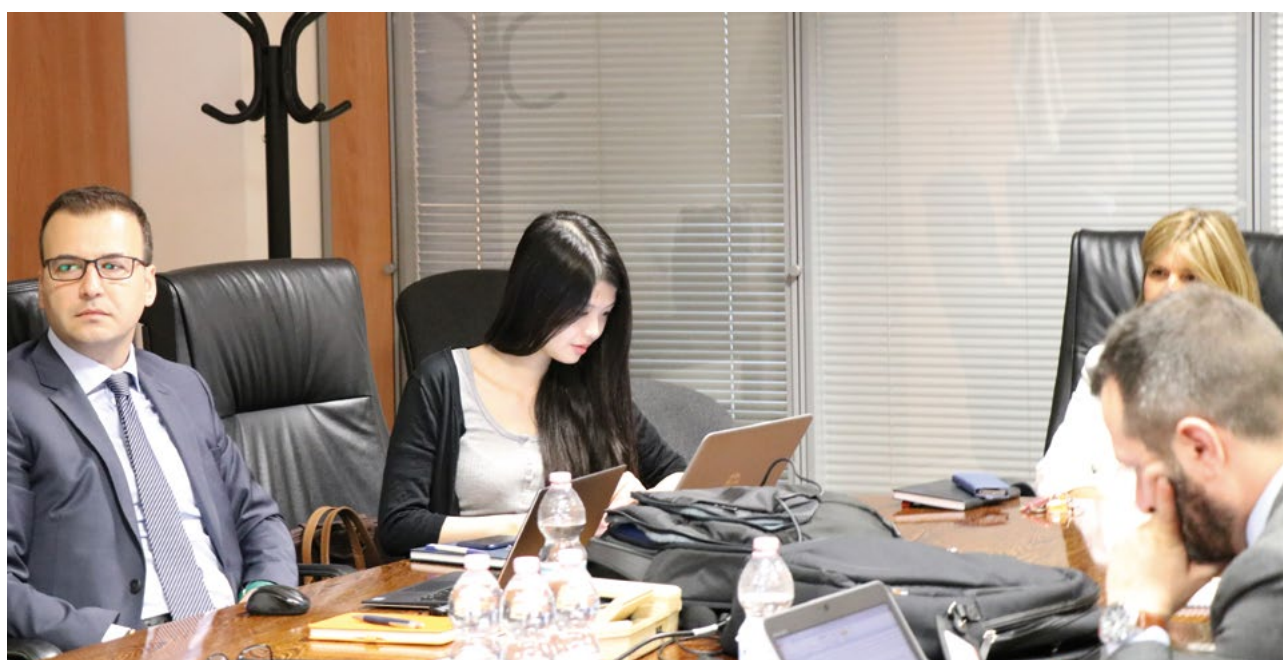


An increase in terms of absolute value and percentage distribution was observed in university graduates with technical degrees (+175 employees) and in high school graduates with technical diplomas (+109 employees).

DEGREE/DIPLOMA <sup>9</sup>	2016				2017			
	MEN	WOMEN	Total	% W on total	MEN	WOMEN	Total	% W on total
Technical High school	807	132	939	14.1%	898	150	1,048	14.3%
Other High School	279	192	471	40.8%	273	196	469	41.8%
Technical graduated	1,657	284	1,941	14.6%	1,811	305	2,116	14.4%
Other graduated	211	165	376	43.9%	270	191	461	41.4%
Other education	186	38	224	17.0%	86	48	134	35.8%
<b>TOTAL</b>	<b>3,140</b>	<b>811</b>	<b>3,951</b>	<b>20.5%</b>	<b>3,338</b>	<b>890</b>	<b>4,228</b>	<b>21.1%</b>

In particular, in absolute terms an increase in the population with a company seniority of 16 to 20 years (+84) was reported, which also increases its weight in the percentage distribution. This trend can be seen in both men and women.

COMPANY SENIORITY	2016				2017			
	MEN	WOMEN	Total	% W on total	MEN	WOMEN	Total	% W on total
< 5 years	991	263	1,254	21.0%	1,122	323	1,445	22.4%
5-10 years	691	178	869	20.5%	708	177	885	20.0%
11-15 years	639	170	809	21.0%	636	174	810	21.5%
16-20 years	185	49	234	20.9%	252	66	318	20.8%
21-25 years	131	32	163	19.6%	119	31	150	20.7%
> 25 years	503	119	622	19.1%	501	119	620	19.2%
<b>TOTAL</b>	<b>3,140</b>	<b>811</b>	<b>3,951</b>	<b>20.5%</b>	<b>3,338</b>	<b>890</b>	<b>4,228</b>	<b>21.1%</b>



9. The relevant framework, compared with the Italian framework, is as follows: Technical Graduates – university graduates with technical degrees (mainly engineering); Other Graduates – university graduates with non-technical degrees (humanities, for example); Technical High School – high school graduates with technical diplomas (electrical studies, for example); Other High School – high school graduates with non-technical studies (classical studies, for example); Other education – below high school level (middle school degrees, for example).



## Contract types

The percentage of employees on open-ended contracts increased from 97.3% in 2016 to 98.0% in 2017, demonstrating the importance that Ansaldo STS places on the provision of stable employment.

CONTRACT TYPES	2017										
	Central and Eastern Europe and the Middle East		Western Europe		The Americas		Asia Pacific		China		Total
	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	
Employees with open-ended contracts	1,491	363	710	192	556	198	495	93	25	19	<b>4,142</b>
Employees with fixed-term contracts	4	5	9	2			37	10	11	8	<b>86</b>
<b>TOTAL</b>	<b>1,495</b>	<b>368</b>	<b>719</b>	<b>194</b>	<b>556</b>	<b>198</b>	<b>532</b>	<b>103</b>	<b>36</b>	<b>27</b>	<b>4,228</b>

CONTRACT TYPES	2016										
	Central and Eastern Europe and the Middle East		Western Europe		The Americas		Asia Pacific		China		Total
	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	
Employees with open-ended contracts	1,374	329	680	177	526	186	457	84	21	10	<b>3,844</b>
Employees with fixed-term contracts	7	2	9	2			48	8	18	13	<b>107</b>
<b>TOTAL</b>	<b>1,381</b>	<b>331</b>	<b>689</b>	<b>179</b>	<b>526</b>	<b>186</b>	<b>505</b>	<b>92</b>	<b>39</b>	<b>23</b>	<b>3,951</b>

The number of temporary contracts has fallen, while the percentage of work experience placements grew significantly.

OTHER CONTRACT TYPES	2016			2017		
	MEN	WOMEN	Total	MEN	WOMEN	Total
Temporary staff	34	11	45	24	18	<b>42</b>
Contract workers	0	0	0	0	0	<b>0</b>
Work experience	14	11	25	40	19	<b>59</b>
Other contract categories	6	7	13	0	0	<b>0</b>
<b>TOTAL</b>	<b>54</b>	<b>29</b>	<b>83</b>	<b>64</b>	<b>37</b>	<b>101</b>



Bangalore, India



## Recruitment and hiring

Several years ago, Ansaldo STS introduced sophisticated IT tools to its global recruitment process so that each recruiter has access to a single database of CVs gathered from a variety of sources. This made it possible to increasingly minimise the use of employment agencies and head hunters.

An agreement signed in 2014 with LinkedIn enabled the Company to improve Talent Acquisition strategies and achieve positive results both in terms of CVs received, applications considered and employer branding.

The constant updating of the Company profile and publication of news on the Company's business development (handled by the External Affairs Office) have kept the participation in social networks alive, partly as a result of the new line of editorial content managed by the LinkedIn Narrative Team, consisting of several HR personnel from around the world.

The success of the Ansaldo STS LinkedIn page can be seen from the number of followers which has increased exponentially in recent years, reaching over 70,000 in 2017.

The direct connection between LinkedIn and the Talent Management System (TMS), the internal tool used to coordinate the selection process at global level which was updated in 2017, enables the Company to automatically publish details about vacancies in real time and access a wide network of candidates and CVs which, in 2017,

reached unprecedented numbers. This gives the recruiters greater freedom and faster access to candidates. They can monitor specific user targets, narrowing their selection criteria.

In any case, universities, with which Ansaldo STS has forged many partnerships, continue to be a preferential channel for the recruitment and selection of personnel. Thanks to arrangements with universities, and with engineering departments in particular, each year the Company is able to interview and meet top students and new graduates, exemplary young people at the end of their university career who could become the shining lights of Ansaldo STS in the non-too-distant future.

Given the international nature of the Company's activities and business, personnel, including senior management, are hired on the basis of the specific skills required for the role, regardless of where they are based. However, when projects require many years of maintenance after their roll-out (operation & maintenance), Ansaldo STS prefers to hire local technicians and staff and may seek to hire an entirely local team.







## New employee hires and employee turnover

In 2017, 565 new resources were hired by Ansaldo STS (428 men and 137 women). In percentage terms, most new hires were in the under 30s category (+39%); in absolute terms, the 30-50 age group received the most new hires (+355 people).

In terms of geographic location, Central and Eastern Europe and the Middle East recorded the highest number of new hires in absolute terms (+227 people); in percentage terms, Asia Pacific and the Americas were the most significant categories.

### 2017

Employee hires in 2017	Central and Eastern Europe and the Middle East		Western Europe		The Americas		Asia Pacific		China		TOTAL		
	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	Total
< 30	37	14	14	8	26	9	35	11	1	-	113	42	<b>155</b>
	53%	41%	22%	36%	47%	90%	36%	37%	14%	0%	39%	40%	<b>39%</b>
30-50	126	31	45	10	39	23	59	16	1	5	270	85	<b>355</b>
	13%	12%	9%	8%	15%	25%	17%	26%	4%	28%	13%	16%	<b>14%</b>
>50	16	3	8	2	16	4	5	1	-	-	45	10	<b>55</b>
	3%	4%	5%	4%	7%	4%	6%	8%	0%	0%	5%	4%	<b>5%</b>
<b>TOTAL</b>	<b>179</b>	<b>48</b>	<b>67</b>	<b>20</b>	<b>81</b>	<b>36</b>	<b>99</b>	<b>28</b>	<b>2</b>	<b>5</b>	<b>428</b>	<b>137</b>	<b>565</b>
	12%	13%	9%	10%	15%	18%	19%	27%	6%	19%	13%	15%	<b>13%</b>

### 2017

Employee turnover in 2017	Central and Eastern Europe and the Middle East		Western Europe		The Americas		Asia Pacific		China		TOTAL		
	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	Total
< 30	6	2	8	0	6	1	7	3	-	2	27	8	<b>35</b>
	9%	6%	13%	0%	11%	10%	7%	10%	0%	22%	9%	8%	<b>9%</b>
30-50	39	8	14	4	25	15	50	13	5	0	133	40	<b>173</b>
	4%	3%	3%	3%	10%	16%	14%	21%	21%	0%	6%	7%	<b>7%</b>
>50	20	1	15	1	20	8	15	1	-	-	70	11	<b>81</b>
	4%	1%	9%	2%	8%	8%	17%	8%	0%	0%	7%	5%	<b>7%</b>
<b>TOTAL</b>	<b>65</b>	<b>11</b>	<b>37</b>	<b>5</b>	<b>51</b>	<b>24</b>	<b>72</b>	<b>17</b>	<b>5</b>	<b>2</b>	<b>230</b>	<b>59</b>	<b>289</b>
	4%	3%	5%	3%	9%	12%	14%	17%	14%	7%	7%	7%	<b>7%</b>



2016

Employee hires in 2016	Central and Eastern Europe and the Middle East		Western Europe		The Americas		Asia Pacific		China		TOTAL		
	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	Total
< 30	19	11	29	8	14	1	31	9	3	2	96	31	<b>127</b>
	33%	50%	38%	50%	26%	11%	39%	38%	50%	29%	35%	40%	<b>36%</b>
30-50	140	33	41	10	46	5	44	9	3	2	274	59	<b>333</b>
	16%	14%	9%	9%	19%	6%	13%	16%	11%	13%	14%	12%	<b>14%</b>
>50	0	0	5	0	25	7	7	1			37	8	<b>45</b>
	0%	0%	3%	0%	11%	8%	7%	10%	0%	0%	4%	4%	<b>4%</b>
<b>TOTAL</b>	<b>159</b>	<b>44</b>	<b>75</b>	<b>18</b>	<b>85</b>	<b>13</b>	<b>82</b>	<b>19</b>	<b>6</b>	<b>4</b>	<b>407</b>	<b>98</b>	<b>505</b>
	12%	13%	11%	10%	16%	7%	16%	21%	15%	17%	13%	12%	<b>13%</b>

2016

Employee turnover in 2016	Central and Eastern Europe and the Middle East		Western Europe		The Americas		Asia Pacific		China		TOTAL		
	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	Total
< 30	10	0	5	2	8	0	11	3	4	4	38	9	<b>47</b>
	17%	0%	6%	13%	15%	0%	14%	13%	67%	57%	14%	12%	<b>13%</b>
30-50	36	4	20	4	19	7	90	13	5	4	170	32	<b>202</b>
	4%	2%	4%	4%	8%	8%	27%	22%	18%	27%	9%	6%	<b>8%</b>
>50			14	2	20	4	33	9			67	15	<b>82</b>
	0%	0%	9%	4%	9%	4%	34%	90%	0%	0%	7%	7%	<b>7%</b>
<b>TOTAL</b>	<b>46</b>	<b>4</b>	<b>39</b>	<b>8</b>	<b>47</b>	<b>11</b>	<b>134</b>	<b>25</b>	<b>9</b>	<b>8</b>	<b>275</b>	<b>56</b>	<b>331</b>
	3%	1%	6%	4%	9%	6%	27%	27%	23%	35%	9%	7%	<b>8%</b>





## Training and development

In the current market scenario, Ansaldo STS is confronting commercial, technological and managerial challenges which require measures that enable the Group to constantly update its key skills and manage the development and training of its workforce worldwide, in line with its business objectives and the Company's strategic vision.

In this context, professional, managerial and specialised training is, and will continue to be, an increasingly crucial lever in the development of human resources and to ensure that skills remain consistently in line with the market scenario.

Ansaldo STS's approach to the management of the training and development of human resources is based on translating the Company's strategic goals into development paths consistent with the Group's business model, by defining development paths that are in line with the required profiles and developing both core skills (needed to supervise working activities) and managerial skills aimed at supporting employees' full compliance with the Group's distinctive values.

Training is developed through projects in four main areas:

- regulatory training;
- language training;
- managerial training;
- technical and specialised training.

Furthermore, Ansaldo STS offers specific training courses to many groups of employees who exhibit technical and managerial aptitude, providing development paths that will help them to progress in their career or expand upon the skills needed to meet the responsibilities of their job.

In 2017, 93,368 hours of training were provided, up 25.7% compared to 2016.

HOURS OF TRAINING	2016	2017
	74,269	93,368

The average yearly hours of training per employee in 2017 totalled 22.1 (22.9 for men and 19.0 for women), up 17.5% on 2016. Details are provided below, subdivided by category.

AVERAGE HOURS OF TRAINING PER YEAR	2016		2017	
	MEN	WOMEN	MEN	WOMEN
Executives	11.9	2.3	11.6	3.3
Middle managers	19.0	28.2	24.1	25.8
White collars	18.8	19.9	23.3	19.6
Blue collars	17.0	12.4	20.6	9.3
<b>Average hours per year per employee</b>	<b>18.8</b>		<b>22.1</b>	

Average hours by region and gender in 2017 are illustrated below:

AVERAGE HOURS OF TRAINING PER YEAR BY GENDER AND REGION	Central and Eastern Europe and the Middle East		Western Europe		The Americas		Asia Pacific		China		TOTAL	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
2016	18.1	17.0	23.3	24.8	15.6	13.3	16.8	34.5	11.9	14.7	18.5	19.8
2017	26.2	19.5	31.7	23.6	13.6	17.2	11.7	13.1	18.0	16.3	22.9	19.0





## 2017 “Global Job System” updating project

The ongoing maintenance and updating of the Global Job System (GJS) is a key element in the strategic alignment of business targets and distinctive position-based core competencies.

In 2017, the process to update the “Shared Services” professional family was completed. All employees were informed about the updating of the model in a series of meetings organised by the professional family, and the new model was published on the Company Intranet and implemented in the IT systems.

## “Knowledge Owners” Programme

The “Knowledge Owners” pilot programme, which has reached its target of enabling the diffusion of the technical skills deemed essential to the Company, has been completed. For a second year, 76 colleagues selected at global level took part in the provision of specialised technical courses, with approximately 60 sessions delivered to 940 trainees and totalling 10,000 hours of training (more than 10% of the global plan) in 2017. Some of the courses delivered in Italy will be repeated next year. From today, these courses will be included in the training catalogue offered by Ansaldo STS. The catalogue of technical courses offered as part of the “Knowledge Owners” Programme and the network of experts further supports the development of technical skills.

## “TALENT” project

The analysis and fine tuning of the people strategy process, which began in 2016, has developed considerably in 2017 and is still ongoing.

This initiative has led to the partial review of the Talent Management model, redefining its general structure and development programme with a view to ensuring greater consistency between development processes and organisational procedures and to providing increasingly effective support to the business. This model also seeks to bring coherence and integration to the development paths related to the different model profiles and to define custom plans that are consistent with business needs and with the aspirations and skills of the people involved in the various programmes.

In 2017, the “talent selection” project was launched. Supported by an assessment process, the initiative led to the identification of 120 resources at international level. The profiles involved included: Junior, Senior (managerial stream) and Senior (technical stream).

The resources who were selected as part of the project were inserted into the new annual development programme which began in November 2017, with a kick-off meeting and initial workshop on knowledge management.

Key elements of the programme include knowledge and skills management, using innovation as a competitive advantage, understanding the business and evolving trends concerning the market, technology and the reference industry, networking, the management of partnerships and project groups within a global corporate Group, and proactivity.

A project work, the topics for which will be defined with top management, will represent the guiding thread of the initiative and will facilitate the sharing of skills and experience between individuals from different geographic areas and professional backgrounds, at the same time enabling the immediate application and learning of the themes covered by the programme and guaranteeing a strict connection with the business.

The programme’s objectives include the strengthening of personal skills and the transfer and sharing of know-how, aiming to ensure that the flow of experience and expertise remains strong and continues within the Company, supporting growth and promoting other new and alternative ways of thinking.



## Performance assessment

Performance assessment is a key tool in managing the development of human resources. Ansaldo STS has adopted a global, structured and consistent process at international level called the Performance Development Plan (PDP), which provides for the assignment and assessment of performance and development targets for all Ansaldo STS personnel. The process, which is fully managed online, is structured into three phases:

- **phase 1 - planning:** relates to the formalized assignment of targets linked to business and/or individual performance indicators and professional development indicators;
- **phase 2 - coaching:** involves the continuous monitoring of performance by the employee's direct supervisor and mentor;
- **phase 3 - review:** the final assessment phase in which all the employee's assessments are combined (self-assessment, direct supervisor's assessment and those of other people selected from within the Organisation for a more comprehensive vision of individual performance).

The process, which extends to all Group companies, has been consolidated in terms of management and development practices and involves more than 95% of the total company workforce. Thanks to the integration of the Global Job System, PDP is an even more complete development tool, as the assessment of abilities and skills, performed concurrently with the performance assessment, makes it possible to define individual targets and development paths that are effectively in line with expectations for the position.

In 2017, an analysis aimed at improving the performance assessment process to enhance the evaluation mechanism was launched. Employee self-assessment, while remaining a key element in the process to assess performance and define development objectives, is not automatically integrated into the overall evaluation but is instead

applied as a standalone comparison element used to analyse performance together with the employee's organisational manager.

PDP is also applied to the appraisal process for Executives. There are some 80 company executives around the world who, in addition to having been assigned challenging performance targets in connection with business priorities for the current year, managed through the MBO incentive process, have been set position-holding targets derived from the roles and mandates outlined for each managerial position.

In line with its internal strategies to promote managerial development, Ansaldo STS applies a 360° appraisal process to all staff included in an MBO incentive scheme as a tool to assess management skills. The use of this more structured, challenging approach in the assessment of managers is considered one of the

tools to strengthen a managerial culture more focused on putting into practice the soft skills that the Company values, such as team spirit, people management skills, change management skills and international cooperation. By including executives in the PDP-based assessment and development process, the system is now consistent throughout all levels of the Organisation.

Over the past two years and in line with the empowerment programmes, the PDP has been fine-tuned further so that as well as department managers, Project Managers (PMs) and Project Engineers (PEs) are also assessed. These employees were given the task of managing their team's output by defining, monitoring and assessing project objectives. This strong commitment assigned to the key roles in the project teams (PMs and PEs) is designed to enhance the independence, effectiveness and leadership of these teams.



## Internationalisation and multiculturalism

In 2017, Ansaldo STS continued its commitment to maintaining a high level of internationalisation and a multicultural approach towards its employees in line with its global dimension and the interests of its stakeholders, customers and staff. As in previous years, this was enabled by consolidating the management process of international mobility of personnel. Quantitative data continues to give a clear indication of the high percentage of “non-local personnel” (foreign employees hired in different countries to their native land) operating in the Company and highlights the importance of international assignments which, although temporary in nature, nonetheless require spending a long period abroad (2-3 years on average).

	2016			2017		
	Local personnel	Non-local personnel	Workforce abroad	Local personnel	Non-local personnel	Workforce abroad
Central and Eastern Europe and the Middle East	1,599	113	70	1,735	128	81
Western Europe	809	59	8	848	65	11
The Americas	652	60	3	700	54	1
Asia Pacific	509	88	2	548	87	3
China	59	3	1	63	0	0
<b>TOTAL</b>	<b>3,628</b>	<b>323</b>	<b>84</b>	<b>3,894</b>	<b>334</b>	<b>96</b>

In this respect, some of the steps taken in recent years and continued during the year are reported below:

- preliminary ad hoc meetings, which not only provide basic technical and logistic information for staying abroad, but also strengthen staff engagement;
- special training, including the new language;
- constant monitoring of immigration issues, which are increasingly common around the world and differ widely from one country to the other, bearing in mind the global trend that on the one hand seeks to promote international mobility, while on the other seeks to protect the local population, for both political and economic reasons, especially in certain countries;
- training to help encourage greater awareness of multiculturalism and assist the overcoming of any cultural/conduct barriers, while respecting each person's values (home and host);
- supervision of the integration process in the various countries, beginning with the management of job opportunities on a global scale;
- implementation of a system that monitors connections activities between development of personnel and international experiences;
- commitment to governing the structured connection between the performance provided during an international

experience and remuneration policies, especially with the use of performance-based bonuses connected to the results achieved during the work abroad;

- focus on repatriation and retention, which are always particularly critical aspects of personnel management;
- continuation of a network of relationships and information between HR specialists to support the internationalisation process with an integrated approach and also through a cross-cutting HR International Mobility Team;
- ongoing attention to internal communication, using all of the channels provided by the Company, especially technologically advanced and user-friendly solutions;
- continuing integrated activities with Health & Safety and Security to ensure safe working conditions abroad;
- ongoing cooperation with the Administration department with respect to taxes and accounting, in order to comply with all relevant legislation and corporate procedures.

Finally, the Company has successfully implemented, including at procedural level, a global corporate commitment to extend a special welcome to new "non-local" personnel joining the Company, providing information on immigration, tax and social security issues to encourage integration in the new country.





## Remuneration systems

Ansaldo STS manages employment relationships with its employees in accordance with the laws in place in the various countries in which it operates. The employment terms set forth in individual contracts are usually more rather than less favourable to employees than those defined under general labour legislation or collective agreements.

The ratio of entry-level remuneration and the minimum legal remuneration for women and men is shown in the following table:

<b>RATIO OF ENTRY-LEVEL REMUNERATION AND THE MINIMUM LEGAL REMUNERATION</b>	2016	<b>2017</b>
Central and Eastern Europe and the Middle East	1.10	1.10
Western Europe (FRANCE)	1.14	1.01
The Americas	1.71	2.90
Asia Pacific	1.00	1.00
China	1.00	1.00

Furthermore, Ansaldo STS periodically evaluates organisational positions (including the lowest levels of the Organisation using the results of the Global Job System project) through the contribution of specialist companies in the field, and compares its own remuneration policies with those of the reference market, considering the weighting of the position. If

the remuneration is not in line with the market (and, obviously, if the employees have received positive performance assessments), their remuneration is adjusted.

This has enabled the creation of a tool which can be used to globally assess the consistency between the responsibilities and remuneration,

without distinguishing by country, sex, culture, etc., in accordance with Company's values which protect and promote the equal treatment of people.

The following table illustrates the ratio of women's gross average remuneration compared to men's, broken down by category and region:

	<b>Central and Eastern Europe and the Middle East</b>	<b>Western Europe</b>	<b>The Americas</b>	<b>Asia Pacific</b>	<b>China</b>
<b>YEAR 2017</b>	<b>WOMEN/MEN</b>	<b>WOMEN/MEN</b>	<b>WOMEN/MEN</b>	<b>WOMEN/MEN</b>	<b>WOMEN/MEN</b>
Executives	81%	-	89%	-	-
Middle managers	96%	87%	82%	-	31%
White collars	95%	94%	84%	72%	74%
Blue collars	100%	92%	87%	-	-

Ansaldo STS can establish higher levels of remuneration than general market brackets for positions that are particularly critical and important or to limit the risk of employees leaving the Company, with a resulting loss of expertise.

The following table illustrates the ratio of the highest paid employees' remuneration to the median remuneration of all other employees in the different regions:

<b>HIGHEST REMUNERATION AS A RATIO TO MEDIAN REMUNERATION</b>	2016	<b>2017</b>
Central and Eastern Europe and the Middle East	7.1	7.1
Western Europe	3.3	6.0
The Americas	2.1	2.2
Asia Pacific	3.3	3.6
China	2.9	2.8

## Performance-based incentive systems<sup>10</sup>

Performance-based incentive systems are mainly linked to the management by objectives (MBO) process or key performance indicators (KPI) for strategic projects entailing bonuses upon their successful conclusion. Executives, certain middle managers in key positions for the business and strategic project team personnel are included in these programmes. The bonuses, which are calculated as a percentage of gross annual remuneration, vary depending on the responsibilities held. Over the past few years, in keeping with Company strategies, the MBO programme has been integrated within one single system that is increasingly electronic and less paper-based. The following table shows the number of executives included in the incentive system at the end of 2017:

YEAR 2017	Central and Eastern Europe and the Middle East		Western Europe		The Americas		Asia Pacific		China	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
STOCK GRANTS	27	3	3	-	3	1	4	-	-	-
CASH (long-term)	6	-	-	-	-	-	-	-	-	-



10. More information is available on page 120 of the "Corporate Governance" chapter.



## People care

The “People Care” concept has a broad application within Ansaldo STS and applies to employees’ wellbeing as both professionals and individuals. The basic concept is linked to the “Total Reward” strategy, based on tangible and intangible measures to improve staff satisfaction. It is no coincidence that “People” represents one of the Company’s five values in its identity: people are at the very heart of the Organisation, demonstrating the Company’s aim to create a working environment where employees can continuously gain experience, develop skills, forge relationships and find motivation.

Ansaldo STS’s focus on people can be first seen in the way it guarantees a comfortable and motivational working environment by actively supporting, through its corporate processes, relationships between managers and

employees and relationships between colleagues. Furthermore, there are various support services available in different countries for both part time and full time employees and, in some cases, their families as well.

Flexible schedules, arrangements with entertainment and sports centres, benefits such as health insurance, employee scholarships, corporate welfare and celebrations of successful projects are some of the tools used.

## Employee initiatives

Ansaldo STS follows an extensive policy to manage initiatives that support employees. This policy includes a series of benefits allocated and used on the basis of an employee’s professional position and the social

and cultural customs in their respective countries. Below is a list and brief description of the main benefits and initiatives supporting employees under the Company’s policy.

**Corporate Welfare.** Ansaldo STS Italy provides a Welfare plan to its employees through a dedicated portal, “Easy Welfare”. In line with the provisions of the national labour agreement for the industry, offers numerous services and possibilities that have enabled beneficiaries to access the tax and social security benefits provided by current law. The contribution to the welfare plan offered to employees in 2017 was EUR 100 per employee, with a phase-in process that will reach EUR 150 in 2018 and EUR 200 in 2019.

**Company health insurance.** Ansaldo STS Italy offers its employees supplementary health insurance cover. These policies cover a wide range of medical needs (e.g. specialist examinations, hospitalisation, medical services, etc.) and vary according to each employee’s professional position (executives and middle managers, white and blue collars have different limits of indemnity). In 2017, in line with the provisions of the 26/11/2016 renewal of the Collective Labour Agreement for the Metal/Mechanics and Systems Installation Industry, all employees (excluding those on probation) received supplementary health insurance coverage for themselves, any physically dependent relatives and cohabitants. Employees may decide whether to take out these additional policies. Should they decide to do so, a monthly contribution is

withheld from their payslips to cover part of the cost, while the Company bears the residual amount.

Ansaldo STS France offers a supplementary health insurance plan which covers employees and their families and which has been made mandatory through a Company agreement.

Ansaldo STS Australia has consolidated the agreement with Medibank Private and RT Health (a fund established in Australia to offer specific support to workers in the transport industry), providing access for employees to an excellent and comprehensive health plan at very competitive rates, as well as a range of special membership benefits such as shorter waiting times and free gifts.





### Company accident insurance.

Ansaldo STS Italy offers its employees insurance for work and non-work related accidents covering accidents both in the workplace and outside the workplace, for all employees, seven days a week, 24 hours a day. The cost of this policy, which covers all employees, is fully covered by the Company. The same policy is offered in France, Australia and China to all white-collar workers. It is not offered in the US, as this kind of cover is included in the Company's life insurance policy.

### Salary continuance insurance.

Ansaldo STS Australia offers salary continuance insurance to employees who work more than 15 hours per week. The policy provides for the assignment of 75% of their income for a maximum of two years if the employee is unable to work due to illness or injury.

**Health checks.** Ansaldo STS Italy offers executives the chance to have an annual medical check-up with the full cost covered by the Company. In China, these check-ups are offered to all employees. In Spain, the Company is contractually obliged to offer periodic health checks to all employees as this is an established workers' right; similarly, all employees are required to see a doctor when it becomes necessary to assess the effects of working conditions, to establish whether the workers' health could present a danger to themselves, to other workers or to other parties associated with the Company, or when otherwise provided for by law.

### International travel insurance (e.g. Europe Ass).

In Italy, France, China, Malaysia, Australia and the US, Ansaldo STS offers an accident insurance policy covering any accidents or first aid and medical care (as well as luggage and personal item coverage) to employees working abroad (either on a business trip or under secondment). The costs of this policy are fully covered by the Company. Ansaldo STS China has also begun offering this policy.

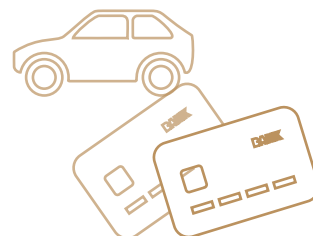
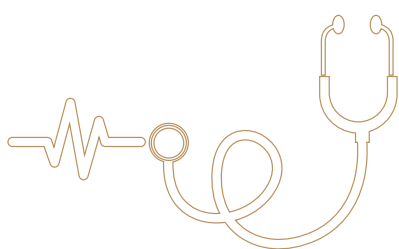
**Company life insurance.** Ansaldo STS provides life insurance to its employees. The costs of this policy are fully covered by the Company. This policy is offered to Ansaldo STS executives in Italy and Spain, and to executives and all full-time employees in the US (Company life insurance, accidental death & dismemberment & LTD insurance). In France, in line with local legislation, a supplementary health insurance plan is in place which covers employees and their families, the conditions of which are specified in the Company agreement.

**Company Car.** Ansaldo STS Italy offers certain categories of employees' access to company cars on a policy similar to a lease. The car may also be used for personal reasons and may be used by employees and their family members or close friends with prior notification to the Company. Employees pay a monthly contribution, while the Company pays the remaining amount. Company cars may be assigned to executives and middle managers with high profiles in Italy and Spain, and to Ansaldo STS executives in the US. They are also offered in France and China. In Australia, company cars are assigned to employees exclusively for business purposes, while key executives receive a car allowance as part of their remuneration package.

**Fuel allowance.** Ansaldo STS Italy offers executives with company cars a fuel allowance up to an annual limit. The costs are fully covered by the Company.

**Company Housing.** Ansaldo STS offers housing to employees seconded in the medium to long-term. The cost of the housing is fully covered by the Company.

**Corporate credit cards.** Ansaldo STS Italy offers employees the possibility to obtain corporate credit cards linked to the employee's bank account at special terms agreed by Ansaldo STS and the bank. The credit cards available to Ansaldo STS employees are Visa and American Express. The costs of Visa cards are fully covered by the Company, whereas employees contribute to a small portion of the costs charged by American Express. Ansaldo STS also offers its Italian employees the possibility to open current accounts under special terms with selected banks. Furthermore, bank branches and ATMs are located at some of the main offices of Ansaldo STS US, making it easier and more efficient for employees to access the main banking services. In Spain and Australia, credit cards are linked to the employees' bank accounts and only offered to people who travel frequently for work to cover business expenses. In France, credit cards are also linked to employees' bank accounts and are provided to all employees who require one to cover travel expenses.





### Professional membership allowance.

Ansaldo STS offers its employees the possibility of joining professional associations (e.g. Register of Engineers). The cost of membership is fully covered by the Company. This benefit is offered to executives of Ansaldo STS Italy and the entire workforce in the US, but is not provided to employees of Ansaldo STS France where the benefits are granted on a case-by-case basis. In Ansaldo STS Australia and China, the Company refunds membership costs to engineers and managers if they have been approved by HR. In Italy, the Company is carrying out a project with the Register of Engineers to organise training courses at its sites so employees can earn the credits needed for membership.

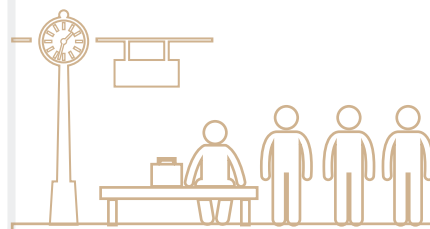
### Canteen and break area service.

Ansaldo STS Italy, France and US provide a canteen service at all main offices (e.g. Genoa, Pittsburgh, Les Ulis, Tito, etc.). In France, employees contribute to the canteen costs through deductions in payslips, whereas in the other offices services are paid for directly. This service is provided under special terms which are regulated by agreements between Ansaldo STS and the companies that operate the canteens. In Italy, meals are covered by the Company.

### Travel Tracker: travel safe.

Ansaldo STS's expansion in markets and its current organisational model require the presence of its personnel in many different countries, which often present challenging safety conditions and weak healthcare and welfare systems. To mitigate critical issues arising from travel and relocation abroad, Ansaldo STS has implemented a system at all sites to ensure adequate protection from outside events<sup>11</sup>.

**Recreation Centres.** Ansaldo STS Italy employees have set up recreation centres, referred to as "CRAL". These are a form of free association of workers and are structured as separate entities from the Company. Employees who join the CRALs pay a fee deducted from their payslip. Membership entails a contribution by the Company. CRAL members may participate in a number of activities (sports or other) and take advantage of discounts at partnering shops (bookshops, opticians, etc.).



## Taking care of occupational health and well-being

In Australia, the creation of the Health and Wellbeing Committee has led to significant improvements in employees' work-life balance. The Committee – a work group formed of volunteers from various departments and supervised by a local HSE manager and the vice chairman of HR – meets once a month to discuss initiatives and measures to improve employees' wellbeing and, with the support of the Company (including the provision of a budget), promotes events and initiatives on health issues in connection with local traditions. Recently, the Health and Wellbeing Committee has reached new horizons,

succeeding in offering employees at the Perth office access to a "silent room", a space designed to be available to all employees at any time of the working day for use as a relaxation area. This room serves as a mixed faith silent space for silent prayer, meditation and yoga, a place to rest if feeling unwell and a space to perform first aid and annual skin and health checks. Meanwhile, employees at the Brisbane office have access to the "square", a covered outdoor space just outside the office equipped with picnic tables at which to eat or read and a table tennis table for those who want to relax during their lunch break.



Boston, USA

11. For more information, see page 102 of the Environment, Health and Safety chapter.



### ASTS Australia - Main initiatives organized in 2017 by the Health and Wellbeing Committee

- **R U OK ?** (Brisbane / Perth / Karratha). Australian Day to raise awareness on the importance of mental health and to remind the importance of caring for each other's wellbeing. The event in particular was designed to remind employees how dialogue with colleagues, friends and family can help to overcome difficulties.
- **National Harmony Day** (Brisbane / Perth). Celebration of cultural diversity as a wealth of Australia. The employees joined together to share a series of traditional foods of the many cultures which make up the Ansaldo STS Australia's workforce.
- **Work Life Balance** (Brisbane / Perth / India / Malesia). Workshop organized by the Health and Wellbeing Committee in collaboration with the ASTS Academy on the reconciliation of life and work timelines.
- **White Ribbon Day**. Awareness-raising initiative against women-related violence.
- **Social Day** (Brisbane/Perth). Day in which employees and their families meet to enjoy each other's company away from the work place.
- **Morning Connections**. Meetings every 15 days among staff groups from different departments for a morning tea.
- **Red Apple Day** (Brisbane). Cancer awareness day.
- **Wear Red Day** (Brisbane). Fundraising day for financing heart disease research.
- **Sun Cancer Skin Checks** (Brisbane / Perth). Australia has one of the highest rates of skin cancer in the world. More than 50 employees underwent a medical check-up.
- **5 minute seated massages** (Brisbane / Perth). Employees that were interested were provided with 5 minute massages in order to improve their wellbeing at the workstation.
- **Bike to Work Day** (Brisbane / Perth). Staff who were interested in fitness, health and wellbeing took part in Bike to Work Day.
- **Fitness Challenge**. Staff were encouraged to walk, run, swim or cycle to reach the 1,000 km goal in 31 days.
- **City to Surf Fun** (Perth/Brisbane). Employees from the two cities joined together to take part in the great Perth City to Surf Fun Run event.
- **Table Tennis Tournament** (Brisbane / Perth).

### Ansaldo STS India Social Committee

Ansaldo STS India Social Committee is an employee engagement initiative with an objective to plan, organize and implement social events for the company throughout the year. The idea was to bring more engagement and enthusiasm to the workplace, ensuring entertainment and participation in staff events, enriching employee interactions, networking between different office locations in India and much more.

The initiatives that have been organized are:

- "Designathon", a forum for employees to demonstrate their designing and verification skills and to recognize the innovators. Eight teams across Bangalore, Noida & Kolkata participated in a challenge to design and verify a station. The objective was to act as faster, safer & without errors as possible, proposing the best possible solution within 36 hours. All eight teams did complete the task with innovative solutions. The team with the best solution was recognized and rewarded.
- "Green Ansaldo Vision", green event derived from the idea to reach the maximum benefits from cultivated areas by creating more green areas in Ansaldo STS India office premises, in order to reduce Ansaldo STS India's carbon.
- Other initiatives: "International Women's Day"; "Secret Santa Week"; "Office Christmas Party"; "Annual Day"; "Leap Year Day"; "ASTS Sports Day"; "Ganesh Mahotsav"; "Swache Ansaldo Green Initiative"; "Diwali Celebration".



Bangalore, India





## Pension plan

Ansaldo STS manages pension plans with its employees in accordance with the laws in place in the various countries in which it operates. Changes in defined benefit plans and post-employment benefits are shown below:

(EUR k)	Post-employment benefits	Defined benefit plan
<b>Value as at 31 December 2016</b>	<b>18,294</b>	<b>17,754</b>
Cost (of the service and interest)	932	1,170
Contributions paid	(666)	(960)
Other changes	(1)	(25)
Actuarial gains (losses) recognized in equity	938	136
<b>Value as at 31 December 2017<sup>12</sup></b>	<b>19,497</b>	<b>18,075</b>

The average term of post-employment benefits is 14 years while that of the other defined benefit plans is 18 years.

## Protected categories

The policies for the inclusion of persons with disabilities in the workforce fall within the framework of a programme defined at European level with respect to social inclusion policies.

In Italy, Law no. 68/99 introduced the key concept of “targeted” employment, defined as “a set of technical and support tools which make it possible to adequately assess the working capacities of persons with disabilities and to recruit them for the most suitable position by analysing positions, forms of support, positive actions and solutions to issues related to environments, tools and interpersonal relations in the daily place of work and contact”.

In particular, the quota of workers with disabilities required by law for Ansaldo STS S.p.A. is 7%.

The Company has reached agreements with labour centres for the hiring of people in protected worker categories. In 2017, one such person was hired, bringing the total number in the workforce to seven. The Company expects to hire more workers with disabilities in 2018.

The table below shows the total number and percentage of the workforce represented by people with disabilities in Central and Eastern Europe, the Middle East and Western Europe.

PEOPLE WITH DISABILITIES BY REGION*	2016				2017			
	Central and Eastern Europe and the Middle East		Western Europe		Central and Eastern Europe and the Middle East		Western Europe	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
People with disabilities	55	20	6	9	60	21	5	7
<b>% of total workforce</b>	<b>3.98%</b>	<b>6.04%</b>	<b>0.87%</b>	<b>5.03%</b>	<b>4.01%</b>	<b>5.71%</b>	<b>0.70%</b>	<b>3.61%</b>

\* This figure is not available for Asia Pacific, and Ansaldo STS has not hired any people with disabilities in China. Information on disabilities cannot be gathered in the US.

Furthermore, Ansaldo STS acknowledges the need for its employees to balance family life with their work commitments and offers flexible hours and part-time opportunities to personnel with children under 12 or family members with disabilities.

12. The main actuarial assumptions applied are as follows: post-employment benefits - discount rate 1.5%, turnover rate 2.09%-5.69%; defined benefit plan - discount rate 1.4%, salary increase rate 2.5%, turnover rate 0.91%-3.26%.



## Parental leave

Ansaldo STS has implemented the indications of the Collective Labour Agreement and grants parental leave on an hourly basis, while still providing the possibility of taking such leave on a daily or continuous basis in compliance with existing legislation.

In 2017, 142 employees took parental leave (79 women and 63 men) and 132 returned to work (72 women and 60 men), compared to the 125 (78 women and 47 men) who took parental leave in the previous year.

2017 - PARENTAL LEAVE	Central and Eastern Europe and the Middle East		Western Europe		The Americas		Asia Pacific		China		TOTAL	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
No. of employees who have the right to parental leave	1,258	307	719	194	478	170	257	56	36	26	2,748	753
No. of employees who took parental leave	21	53	40	10	0	10	2	5	1	0	64	78
No. of employees who returned to work after their period of parental leave	21	41	37	7	0	8	2	3	1	0	61	59

2016 - PARENTAL LEAVE	Central and Eastern Europe and the Middle East		Western Europe		The Americas		Asia Pacific		China		TOTAL	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
No. of employees who have the right to parental leave	1,258	307	719	194	478	170	257	56	36	26	2,748	753
No. of employees who took parental leave	6	42	37	27	0	4	4	5	0	0	47	78
No. of employees who returned to work after their period of parental leave	0	34	36	18	0	4	2	3	0	0	38	59

The return to work rate is showed in the following table.

Rates	Central and Eastern Europe and the Middle East		Western Europe		The Americas		Asia Pacific		China		TOTAL	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
Return rate*	100%	77%	93%	70%	-	80%	100%	60%	100%	-	95%	76%

\* The rate is calculated as the number of people returning to work in 2017 compared to the number of periods of leave granted in 2017. Parental leave granted in 2016 with a return to work in 2017 was not considered in the calculation, nor was leave granted in 2017 with a return to work in 2018.



## Social dialogue

The relaxed relationship between Ansaldo STS and its employees is reflected by an extremely low rate of trade union disputes. This context often leads to the resolution of any issues with employees internally, with scarce recourse to intervention by trade unions, which, in any case, act in an environment of general cooperation. The only strikes declared have been due to general political and trade union issues, which have nothing to do with the Company.

At Group level, Ansaldo STS has reached formal agreements with the trade unions in the various countries concerned. In Central Europe and Western Europe, the agreements relate to, *inter alia*, work hours, remuneration and health and safety conditions in the workplace.

In Australia, trade union relations are extremely positive and the next 3-year Company contract is due to be negotiated soon.

In Malaysia there are no formal agreements and employees must only comply with the Employment Act of 1955 (which establishes that the number of hours worked per week

may not exceed 48) and specific Acts passed by the Government with respect to health and safety.

In Italy, Ansaldo STS's system for trade unions relationships is based on two levels of participation, given the fact that the Company has various operating sites scattered throughout Italy: 1. Strategic Observation; 2. National Coordination.

The system for trade unions relationships in Italy makes it possible to act upon the requests of the Company's workforce and improve the wellbeing of workers. In this context, in December 2017 trade unions presented a proposed platform for the supplementary second level

agreement which will be discussed with the Company in 2018. The topics proposed, which will help to improve working conditions for employees, include the possibility of extending flexible working hours and the launch of a smart working trial.

Each month, in France, staff representatives may present individual or collective issues to their employers, in relation to the application of the law, regulations and collective agreements.

The system of trade union relationships at Ansaldo STS in Spain is based on the following: 1. strategic lines provided by Parent Company; 2. national coordination.

## Collective labour agreements

The total number of employees covered by national labour agreements, where this type of trade union negotiation is applicable, is shown below:

2016	Central and Eastern Europe and the Middle East		Western Europe		Asia Pacific	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
Executives	56	8	11	0	0	0
Middle managers	298	51	53	10	0	0
White collars	1,103	303	574	163	0	0
Blue collars	38	6	62	20	6	0
<b>TOTAL</b>	<b>1,495</b>	<b>368</b>	<b>700</b>	<b>193</b>	<b>6</b>	<b>0</b>

The percentage of employees covered by national labour agreements in Central and Eastern Europe and the Middle East is 100%, while in Western Europe it is 97.8%. The percentage is minimal in the Asia Pacific due to Ansaldo STS's ongoing efforts to invest in a fair work environment with respect to the market. The data are not meaningful for the Americas and China as there are no national labour agreements in these areas.





## Prior notice in the event of organisational changes

The adjustment of the organisational structure, along with the operating procedures that support it, is an ongoing and continuously evolving process that meets the similarly ongoing and continuously evolving scenario in markets where Ansaldo STS operates. In the event of particularly significant organisational

changes, specific communications initiatives targeting broad categories of employees are envisaged to explain the reasons for the changes. Furthermore, in Italy the currently applicable national labour agreement provides for a specific meeting to inform the trade unions of decisions that have a material impact on labour

organisation. A similar procedure is provided for in France, requiring a mandatory document to be sent to the work council explaining the reasons for the organisational change, followed by a meeting with work council representatives no later than 15 days after the document is sent.

## In-house communications

The primary objective of Ansaldo STS's internal communication is to involve all employees in order to connect people, establish departments, set processes in motion and interact with the systems by defining connections that give the Company added value. This involves gaining an understanding of what Ansaldo STS colleagues are doing around the world in order to better define future identity, priorities and goals, as part of a communication process aimed at reinforcing the sense of belonging and participation in order to achieve organisational well-being and the creation of a better work environment within a large network where knowledge and experience can be shared.

In-house communications are promoted through various activities: in-house communications campaigns to support the communications requirements of the various internal departments; meetings where colleagues have the opportunity to request additional information on topics of particular interest; the use of screens at office entrances, which are currently available at all Italian offices, where each day the Company publishes internal bulletins (campaigns by various departments to promote events or initiatives) and external notifications (press releases, stocks, weather reports, etc.). In 2018, the Company aims to install screens at its offices outside Italy. Finally, another important in-house communications management tool is the Intranet.

## The Intranet

Use of the Intranet as a strategic internal and organisational communication tool has intensified considerably. Today Ansaldo STS is able to quickly share the most important corporate news throughout the Company.

In 2017, around 180 articles on corporate initiatives and the main successes of Ansaldo STS around the world were published, as well as the Hitachi newsletter and 14 notifications from Top Management. Specially, the articles are associated with a series of tags defined by theme, as shown below:

- Events: articles about tradeshow, conferences, internal events.
- The environment, health and safety: articles on the activities of the HSE body (certifications, safety training days, etc.).
- Milestones: articles on activations, inaugurations.
- Business: articles on the status or progress of projects.
- Hitachi: newsletters, general information on the Hitachi Group.
- CSR: articles about Corporate Social Responsibility initiatives (charity initiatives, focus on the environment, etc.).
- Top Management: communications from Top Management.
- HR: articles on initiatives, programmes, communications from HR department.
- Talent: articles on the "Talent" programme.
- Daily life: articles on certain celebrations and activities carried out at offices around the world.
- Other: articles on "extraordinary" themes (launch of the new website, participation by Ansaldo STS in social projects, etc.).

## Welfare Plan, take off in Italy for the new benefit platform

03/07/2017 Narrative Team

### Welfare


**Ansaldo STS** A Hitachi Group Company

In December 2017 wave 2 of the Intranet went online, following a content restyling project and the addition of new functions.

The new interface offers a range of new features which, if properly used, will facilitate a more dynamic and effective use of the Intranet. In particular, the new features include a new email alert system to enable users to stay constantly up to date with the themes that interest them, a new layout for the IMS page and the creation of a new “Operational Alerts” section on the homepage which features announcements focusing on certain topics (IT, HR, Intranet, IMS, Events). Moreover, the homepage

now includes a link to the corporate website “ansaldo-sts.com” to provide easier access for internal users.

Another new feature of the Intranet is the addition of a new “Regulations and Certifications” page in the “Our Knowledge” section. This section provides up-to-date information and enables users to consult or download the regulations or certifications issued to Ansaldo STS companies.

The new Ansaldo STS Insight section has also been added to the Intranet, offering information on Investor Relations activities in terms of financial communications, market research and business analysis.

Like all corporate tools, the Intranet allows to gain a more in-depth understanding of Company’s activities, the opportunities created within the Company and the new ways in which people can participate. It is a highly useful and effective tool which, when used well, can accelerate the process of searching for and acquiring information.

## Complaints

Ansaldo STS has a limited number of pending disputes that are managed through the courts; this is due to the policy to resolve conflicts on a daily basis, meaning that most complaints are settled without involving the labour courts.

COMPLAINTS	2017				
	Central and Eastern Europe & the Middle East	Western Europe & North Africa	The Americas	Asia Pacific	China
Total number of formal complaints concerning work practices, of which:					
reported in 2017	6	5	0	2	0
resolved in 2017	4	1	0	1	0
resolved in 2017	0	3	0	1	0
Number of complaints reported before 2017 and resolved in 2017	3	3	0	0	0



# Corporate Social Responsibility and Communities







**Ansaldo STS is actively involved in programmes to communicate and interact with the communities in which it operates. It promotes scientific, cultural and social progress by taking part in research projects with national and EU institutions on ICT and the sustainability of transportation systems, and also encourages technological and managerial training through partnerships with universities.**

**Founding member of Shift2Rail** European public-private partnership for managing and coordinating research in the rail sector



Participation in **European and Italian research projects** on satellite signalling, safety, infrastructure monitoring and energy efficiency



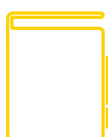
### **Regional Transport Rail Line industry**

Ansaldo STS -  
Confindustria Genova  
- SIIT (Intelligent Integrated Systems Technological district in Liguria region) - National Research Center - Universities - SME

**Communication:**

**180** articles

published on the new Intranet



Member of the **UNIFE Sustainability Committee** (European Railway Manufacturers Association)



**in** **67,000** followers



**tw** **2,340** followers

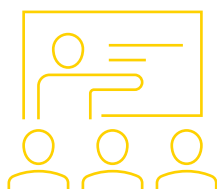


**f** **2,150** followers



**88 events:**

70 openings,  
13 trade shows,  
5 conferences



**Framework agreements and partnerships with universities** in

Genoa, Turin, Rome, Milan,  
Dresden and Basilicata





## Targets achieved in 2017

### Focus on communities

SDGs	COMMITMENTS UNDERTAKEN IN 2016	ACTIVITIES CARRIED OUT IN 2017
	<b>RESEARCH PROJECTS</b> <ul style="list-style-type: none"> <li>Participation in the IN2STEM PO project that aims to define solutions for smart energy management.</li> <li>Participation in the CONNECTIVE project that will provide a technical framework and a set of tools for a rail sector digital transformation.</li> </ul>	<ul style="list-style-type: none"> <li>Launch of the project and the participation of Ansaldo STS in IN2STEMPO for the definition of intelligent energy management system solutions and future solutions for stations.</li> <li>Launch of the project and the participation of Ansaldo STS in CONNECTIVE, which will define a new level of interoperability and access to the services and data of transport systems in a multimodal distributed environment.</li> </ul>
	<b>UNIVERSITIES</b> <ul style="list-style-type: none"> <li>Continue the collaboration with major Italian universities in order to share training activities and find talented students that meet Company needs.</li> </ul>	<ul style="list-style-type: none"> <li>The premises were set for being part of the steering committee for studies at the Faculty of Electrical Engineering of the University of Genoa.</li> <li>An investment program has been defined for 2018 that involves recruiting young electrical and mechanical engineers to grow and train on our worldwide projects.</li> </ul>
	<b>TRADE ASSOCIATIONS</b> <ul style="list-style-type: none"> <li>Continue to play an active role in trade associations and, in particular, take initiative as part of the UNIFE Sustainability Committee.</li> </ul>	<ul style="list-style-type: none"> <li>Ansaldo STS continued to play an active role in trade associations. It is part of the Steering Committee of IRIS (International Railway Industry Standard) and the Advisory Board which manages the interface between IRIS and the main European railway operators. The IRIS standard is promoted by UNIFE, the Association of European Railway Industries.</li> </ul>
	<b>THE MEDIA AND SUSTAINABILITY COMMUNICATIONS</b> <ul style="list-style-type: none"> <li>Develop initiatives related to CSR and to internal corporate culture.</li> <li>Participate in Hitachi social Innovation Forum and share and present products and objectives on social innovation.</li> <li>Participate in CSR Forum ("Salone della CSR") as external proof of the commitment of Ansaldo STS.</li> </ul>	<ul style="list-style-type: none"> <li>180 articles have been published on the corporate intranet, including many concerning CSR and the Environment, Health and Safety. Ansaldo STS India has also set up the Social Committee to promote many Corporate Social Responsibility initiatives.</li> <li>Ansaldo STS participated in the Hitachi Social Innovation forum in Milan (Italy) and Brisbane (Australia).</li> <li>The company took part in the CSR and innovation Exhibition held in Milan on 3 and 4 October on the topics of web sustainability reporting and sustainable mobility. An article was also published on Ansaldo STS's commitment to the magazine "CSR Oggi."</li> <li>Ansaldo STS founding member of the Global Compact Italia Network Association has signed for the seventh consecutive year the commitments to the Global Compact.</li> </ul>



Target achieved



Target partially achieved



Target not achieved



Target postponed

## Involvement of local communities

Ansaldo STS's active role varies depending on the type of project and the part played in handling relations with local communities, be they municipal authorities, residents' associations, metro and rail service users, businesses or local workers.

Ansaldo STS is actively involved in programmes to communicate and interact with the communities affected by its works in various ways:

- Participation in committees that represent local stakeholders;
- Promotion of communication between the local authorities and citizens;
- Engagement in direct communication;
- Participation in programmes to develop local communities.







## Main initiatives

### HONOLULU METRO

Metro Honolulu will be the first fully automated driverless transit system in the USA. A line built with the purpose of reducing traffic congestion in the 'Ewa-to-Downtown' corridor by connecting West Oahu with downtown Honolulu through a 20-mile elevated rail line. Hitachi companies Ansaldo STS & Hitachi Rail Italy were assigned the design-build work for trains and core systems, and 12+ years of Operation & Maintenance.

#### Social Value

- Provide a fast, affordable, safe and reliable transportation alternative, and reduce by 50% the daily commuting time for workers and students.
- Hitachi will create local workplaces, full-time employees in the railway business - 35 already created, 300+ to be created by 2025.

#### Environmental Value

- Elimination of 40,000 daily car trips from jammed roads and highways, and reduction of polluting emissions by 3.9 to 4.6%.
- Rail transit will be electrically powered and, with Hawaii moving toward the goal of 100 percent clean energy by 2045, trains will be synonyms of ecological transportation as the percentage of renewable energy increases.

#### Communication and involvement of the local community

Ansaldo Honolulu, the general contractor led by Ansaldo STS S.p.A. of which Hitachi Rail Italy S.p.A. is a partner, developed a special communication plan to keep the local community up-to-date with the project. Moreover, since 2012 it has coordinated the communication activities with the community in collaboration with the contractor.

Ansaldo Honolulu is a member of Move Oahu Forward, a local stakeholder committee whose mission is to promote initiatives that improve mobility and the quality of life, to contribute to developing the economy and future growth, safeguarding the island's unique ambience and lifestyle. This committee believes that the Honolulu metro project is a step in this direction.



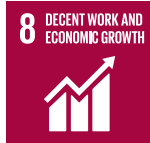
**Action:** Provide fast, safe and reliable transportation for residents and tourists.



**Action:** Move people with trains.

**Issue:** Honolulu is one of the most congested cities in USA. People spend up to 4 hours in daily commuting.

**Issue:** Tens of thousand of cars and buses take people to school and work every day on the island.



Support the University of Hawaii system and create 300 + local career jobs.



**Action:** Create the most advanced rail transit system in the USA.

**Issue:** Lack of local skilled personnel.

**Action:** Contribute to the creation of the next generation of rail transit professionals in Hawaii.

**Issue:** Hawaii has an ageing highway and bus system, with no rail transit.

Ansaldo Honolulu has set up a website to update the local population and stakeholders: <http://www.ansaldohonolulu.com/>

#### Sustainability and Safety

The Ansaldo Honolulu website contains a section on sustainability, aimed at highlighting the Company's focus on occupational health and safety and environmental protection in accordance with US federal laws, state laws in the State of Hawaii and international regulations, in line with Ansaldo STS's model.

Ansaldo Honolulu distributes regular information to all of the stakeholders involved (schools, businesses, citizens) regarding the potential risks associated with the metro, and also provides periodic training for the police, fire service and emergency medical teams.

#### Development programmes for the local community

Ansaldo Honolulu, the client Honolulu Authority for Rapid Transportation (HART) and the University of Hawaii have worked together since 2011 to provide training and enable the hiring of 300 employees to carry out operations and maintenance activities for the metro.

Furthermore, since 2015 Ansaldo Honolulu has also participated in many job fairs in the State of Hawaii, and approximately 45% of its 75 staff are local.

#### Communication and involvement of the community at a national level

Every year, a delegation from Ansaldo Honolulu meets with members of the US Congress in Washington DC as part of the "Hawaii on the Hill" programme organised with the support of the Chamber of Commerce of the State of Hawaii.

The meetings with congress members and federal office directors cover transport, the employment market and business relationships with Hawaii, the rest of the United States and Asia.

#### Support for local communities affected by flooding and volcanic eruptions

Ansaldo Honolulu recently provided support in the form of financial donations to the communities affected by flooding on the island of Kauai and the volcanic eruption on the island of Hawaii, once again proving itself to be a "good corporate citizen".



## LIMA METRO

Lines 2 and 4 of the Lima metro is a project worth USD 5.658 billion and is one of the most ambitious works in Peru's in terms of both high engineering and required technology.

The works cover 35 km of underground tunnel (27 km for line 2 and 8 km for line 4), for a total of 35 stations and 2 depots for the maintenance and parking of trains. Total journey time between the two terminals of line 2 is 45 minutes, a saving of approximately 90 minutes.

Lima will benefit from efficient and sustainable transport which will contribute to stimulating economic and social development and resolving traffic congestion.

The new line features a sophisticated driverless train system and will serve over 600,000 passengers per day.

Its construction saw the participation of leading international design,

construction and management companies. Ansaldo STS is part of this group and contributed its experience in railway technology and equipment.

### Communication and citizen participation

The Line 2 Lima Metro Consortium, of which Ansaldo STS is a member, hired a local company to implement a social and communication management programme which includes:

- management of relationships with the community directly affected by the construction (project's area of influence);
- full communication: in the area directly affected, with the public, the authorities and the social networks. As part of this project, a website was created which provides updates on the construction of line 2 <https://www.facebook.com/linea2metrolima?fref=ts>;
- social indicator monitoring;
- managing relations with the press and the media;

- social risk surveillance and prevention, crisis management and immediate reply.

### Development programmes for the local community

During the entire construction phase, the project will create around 300 direct jobs and 8,000 indirect jobs. In the Ansaldo STS offices alone, more than 20 young engineers have been hired. Furthermore, over 2 million people in the directly affected areas will be able to benefit from:

- more jobs opportunities during construction and operations
- travel safety
- shorter travelling time
- greater productivity
- more family time
- more customers for companies when the metro becomes operational
- more safety
- more value for the whole local area.





## COPENHAGEN METRO AND CITYRINGEN

Ansaldo STS is carrying out two relevant turn-key projects in Copenhagen: Metro Copenhagen and Cityringen.

The first project started more than 20 years ago. In 1996 Ansaldo STS was awarded with a main contract for the transportation system of the Metro Copenhagen lines M1 and M2. The first section of Metro Copenhagen was completed in 2002. The whole infrastructure has been operative since 2007. Ansaldo STS has always managed the Operation and Maintenance and in the last 8 year contract (2010-2018) many renewal projects have been carried out, as well.

In 2011 Ansaldo STS was awarded with a main contract for the transportation system of the new metro of Copenhagen, called Cityringen. It shall be a fully automated driverless metro ring line under the central part of the city. The line shall consist of two single track tunnels - each approximately 24 km in length - and 24 stations, 23 of them underground. The first phase of the project will be completed and released to revenue service in 2019.

The customer, Metroselskabet, analysed the socio-economic, environmental and health and safety impacts before defining the metro's specific characteristics. Ansaldo STS was able to satisfy its requests thanks to its design and technological expertise and its capacity to reduce environmental impact and guarantee safety.

### Involvement of the local community

Local community involvement is promoted by the customer Metroselskabet. Ansaldo STS participates in the following initiatives:

- monthly meetings with a work group comprised of the customer, other contractors (CMT, Salini), employers and trade unions. The group's key objective is to prevent and monitor all complaints or disputes about labour conditions;
- the MSURR committee, a group consisting of first aid personnel,

the head of the local police and the Danish emergency management agency (Beredskabstyrelsen). The committee is in charge of all issues related to evacuations, first aid and other emergency management problems both with respect to the metro's operation and construction of the Cityringen. Its members discuss and agree on principles and procedures to ensure very high safety levels based on documented descriptions.

### Development programmes for the local community

A "gentlemen's agreement" provides for the hiring of local labour (more than 200 employees) with incentives for additional hires.

### Customer satisfaction

Ansaldo STS was awarded the contract to operate and maintain the Copenhagen Metro until the end of 2018. This contract was agreed in January 2010 following a European tender. The contract remuneration is linked to service availability, punctuality and the results of customer satisfaction surveys. Customer satisfaction is indeed of vital importance to the Metro, both in terms of maintaining existing customers and attracting new ones. Accordingly, the Danish customer, Metroselskabet, and Ansaldo STS devote considerable attention to customer feedback.

Various tools are used to understand Danish metro passengers' needs and expectations. They include quarterly customer satisfaction surveys.

In 2012, for the third year in a row, the Copenhagen Metro was named the world's best automated metro. This award was given at the Metrorail conference of leading experts in metro systems around the world. A key element in the selection of the awardees was the high level of control and customer satisfaction.

Since the metro was rolled out in 2002, customer satisfaction with Metroselskabet has been carefully monitored through surveys conducted

by an independent entity. However, only after the M1 and M2 lines were completed were customer satisfaction results included in the contractual agreements. Metroselskabet and Ansaldo STS continue to analyse and report on the survey results, which are published quarterly.

Surveys were performed on a sample of approximately 5,000 users and their satisfaction is regularly monitored in accordance with the following aspects: Satisfaction with the journey, Cleanliness of the stations, Cleanliness of the trains, Timeliness, Service quality, Updating of information and Safety. Each of these performance factors is directly assessed by passengers and then compared with specific, predefined targets.

### A royal smiley

In 2015, the Danish authority for the working environment awarded the Ansaldo STS team the highest score in the assessment of health and safety compliance: a royal smiley.

The authority uses smileys to assess companies' compliance with applicable provisions. The assessments are posted on the website to enable the public to monitor a company's performance. There are four health and safety assessment levels: red, yellow, green and royal smileys. The latter reflects the top level awarded to companies that have obtained an officially-recognised health and safety certificate, confirming the extraordinary efforts made and the results achieved to ensure a high level of compliance.

The target was achieved thanks to the involvement and the support of the entire project team from the beginning of the project in 2012. During this period of time, Ansaldo STS's HSE management department worked hard to meet all requirements and confirm compliance with the highest environmental, health and safety standards of the Cityringen project.





## Protection of human rights

The protection of human rights is considered a very relevant issue by the Company and its stakeholders, as highlighted by the materiality analysis.

Ansaldo STS, despite not having formalised its commitment in a specific policy, applies policies in order to uphold and promote human rights in every context in which it operates, by creating equal opportunities for its people and fair treatment for all - regardless of race, nationality, political creed, religion, gender, age, minority status, disability, sexual orientation, personal or social condition – and always respecting the dignity of each individual and each employee.

Ansaldo STS does not allow nor tolerate the establishment of employment relationships, even by external collaborators, suppliers or business partners, violating the existing legislation on child, woman and immigrant labour, and carefully controls the risks associated with the employment of forced workers. The Company, besides, requires its contractors and subcontractors to ensure the same attention in order to contribute to the elimination of such illegal behaviours.

As regards the respect of human rights in the working relationship, Ansaldo STS offers equal opportunities, ensuring fair treatment on the basis of individual expertise and abilities and hiring people under legal employment contracts, mainly on an open-ended basis, in accordance with laws, national labour agreements, company agreements and current regulations. Ansaldo STS guarantees that its workers are free to join trade unions, and sees that its relationships with the unions are cooperative and friendly, providing mechanisms which enables workers to report their opinions to Human Resources directly or via staff representatives.

The main instrument through which Ansaldo STS guarantees its commitment to respecting human rights is the **Code of Ethics**, to which members of the governing and controlling bodies, executives and employees - including those of the companies directly or indirectly controlled by the Group – comply. This also extends to all those who

enter into contractual relationships which require the observance of certain obligations specified by the Company.

In 2017 specific training on human rights was provided, involving 32 people for a total of 224 hours of training. No training courses of this kind were provided in 2016.





## Research partnerships



Ansaldo STS participates in research projects funded by the European Commission, the European Space Agency and the Ministry for Higher Education and Research.

## European research projects

The projects funded by the European Commission include:

- NGTC (Next Generation Train Control), to develop future railway and metro traffic control systems, in which Ansaldo STS played a leading role in the satellite positioning work package and actively participated in the definition of the "IP Communication"; the project was concluded in the third quarter of the year;
- MANTIS, funded by the ECSEL Joint Undertaking (public-private party that disburses European Commission funds for innovating embedded systems) and by the Ministry of Research, whose goal is to increase knowledge of the decision-making process for the railway system maintenance;
- IN2RAIL, in connection with the Shift2Rail initiative; the project goal is to optimise the railway infrastructure by cutting its construction and maintenance costs and increasing its capacity.

### THE SHIFT2RAIL PROJECT

With regard to European research, the Shift2Rail project began in the latter part of 2016. The initiative's main goals are:

- to double the capacity of the European rail network;
- to improve reliability and quality of service by 50%;
- to halve the costs over the entire life cycle.

A challenge for "smart, green & integrated" transport.

Ansaldo STS is a founding member of this "joint undertaking", involving another 7 founding members, 19 associates and 32 member states of the European Union for a total investment of approximately EUR 450 million.

As part of this research programme, the following projects are currently being carried out with the participation of Ansaldo STS:

- CONNECTA – *CONtributing to Shift2Rail's NExt generation of high Capable and safe TCMS and brAkes* – which aims to contribute to the next generation of TCMS architecture and components with wireless capabilities, as well as to the upcoming generation of electronic braking systems;
- X2RAIL1 – *Start-up activities for Advanced Signalling and Automation System* – whose goal is to meet the long-term requirements of a future, flexible and smart traffic management system;
- IN2SMART – *Intelligent Innovative Smart Maintenance of Assets by integRated Technologies* – which

aims to provide an innovative holistic solution for railway asset maintenance;

- ATTRACKTIVE – *Advanced Travel Companion & Tracking Services* – whose purpose is to improve the travel experience of passengers who use railway transportation systems by developing an integrated solution;
- FR8RAIL – *Development of functional requirements for sustainable and attractive European rail freight* – intended to take on the major challenges for developing sustainable and attractive rail freight traffic in Europe;
- PLASA – *Smart Planning and Safety for a safer and more robust European railway sector* – whose objective is to enhance the customer experience and the robustness of the system in the European railway sector. On the one hand, the objectives regard the improvement of the planning activities of the various railway system operators through railway simulation and, on the other, the provision of a methodology for managing railway system safety based on risk assessment;
- IMPACT-1 – *Indicator Monitoring for a new railway PARadigm in seamlessly integrated Cross modal Transport chains: Phase 1* – the creation of an integrated subsystem which represents all Shift2Rail innovations;
- ARCC – *Automated Rail Cargo Consortium* – in relation to freight traffic.

In early September the programme was extended to include the following projects:

- IN2STEMPO – *Innovative Solutions in Future Stations, Energy Metering and Power Supply* – aiming to define solutions for the management of smart energy systems and future solutions for stations;
- CONNECTIVE – *Connecting and Analysing the Digital Transport Ecosystem* – which will define a new level of interoperability and access to services and transport data systems in a multi-modal environment;
- FR8HUB – *Real-time information applications and energy efficient solutions for rail freight* – which aims to increase the quota of freight stock on rolling stock thanks to the increased efficiency of the transport systems, with particular reference to terminals and hubs;
- IMPACT-2 – *Indicator Monitoring for a new railway PARadigm in seamlessly integrated Cross modal Transport chains: Phase 2* – aiming to assess and increase the effects on mobility and the environment of the technological solutions and the developments made in the context of the Shift2Rail project;
- X2RAIL-2 – *Enhancing railway signalling systems based on train satellite positioning; on-board safe train Integrity; formal methods approach and standard interfaces, enhancing Traffic Management System functions* – which aims to promote innovation in the signalling field (introduction of satellite technology and train integrity), supervision (Traffic Management evolution) and the management of development processes (Introduction of Formal Methods).



## Other european projects

Other initiatives funded by the European Commission include the satellite technology projects. First and foremost there is ERSAT EAV, of which Ansaldo STS is project coordinator. Its objective is to adopt and characterise satellite technologies for railway signalling applications, with particular reference to checking the suitability of EGNSS/EGNOS technology and the new Galileo services to be used in ERTMS signalling. Furthermore, audits have been carried out to assess the Open and Modular Architecture of the Augmentation System defined by Ansaldo. Demonstrations of the successful operation of the trial site in Sardinia were subsequently presented at national workshops. ERSAT EAV was concluded at the end of April.

Still in terms of satellite technology, the activities of the STARS project are still ongoing while the RHINOS project was brought to a close in October. Both projects are part of the Horizon 2020 Research Programme of the European GSA Agency.

In particular, with regard to the STARS project important research activities were carried out concerning the definition of the methodology and tools required to calculate the Ground Truth (temporal and spatial reference), which will be used as a reference to measure performance. Meanwhile, measurement activities were continued at the trial sites in Sardinia and Pontremolese with the aim of acquiring Signal In Space (RF signal) and Observation data regarding GPS, EGNOS and Galileo in different railway

environmental conditions. The evolution of the EGNSS service was also defined in order to meet the performance and safety requirements of the railway sector and to identify any impacts on the ERTMS / ETCS systems.

In terms of the RHINOS project, the definition of a functional ERTMS system architecture based on future satellite technology was completed. This technology meets the most stringent performance requirements such as platform discrimination, high availability and integrity. The results of the activities were shared as part of an international workshop held in 2017 at Stanford University.

The following satellite technology projects funded by the European Space Agency were also launched in the final quarter of 2017:

- DB4RAIL (Digital Beamforming for RAIL), which will develop a digital beamforming platform in the ERTMS context and implement an advanced GNSS antenna and signal processing method to increase system immunity to intentional electromagnetic interference (EMI);
- SAT4TRAIN, which aims to develop an economically efficient Multi Link Communication Platform (MLCP) to replace the GSM-R system which will soon become obsolete;
- SIM4RAIL, whose purpose is to specify and develop highly configurable laboratory tools to test and support the development of PNT technology for rail signalling applications, including the GNSS-based virtual balise detection system of the ERTMS platform.

## Italian research projects

As regards projects funded by the Ministry of Research in Italy, the following initiatives are noted:

- Tesys Rail, whose goal is to define expedient strategies for railway traffic energy optimisation;
- PON3 through the DATTOLO (High-Tech Transport and Logistics District) in Campania and the TOP IN laboratory (Innovative Optical-electronic Technologies) in Campania:
  - the MODISTA project, which deals with innovative solutions for remote monitoring and preventive diagnostics of infrastructures and

fleets of vehicles in order to raise their availability, efficiency and safety levels; the project was concluded at the end of June;

- the OPTOFER project, which covers the application of the innovative optical-electronic technologies for railway infrastructure monitoring and diagnostics; the project was brought to a close at the end of March;
- the FERSAT project, which studies a railway signalling system suitable for urban environments, based on the innovative use of satellite

technologies and their integration with existing technologies; the project was concluded at the end of June;

- the NEMBO project, which studies and tests highly efficient and innovative embedded systems for railway applications; this project ended at the end of the third quarter.





## Partnerships with universities: Technological and Managerial Training



**In 2017, Ansaldo STS continued to maintain its relationship with Italian and foreign universities and training schools in order to contribute to the students' theoretical and practical knowledge and to offer traineeships, scholarships and other opportunities for young, motivated and enterprising people.**

After completing their internship, the young people are assessed by internal tutors who followed them during their training in the Company. If the results reach the high expectations set, they are placed at Ansaldo STS, either in Italy or abroad.

In 2017, Ansaldo STS participated in a school-work placement initiative thanks to an agreement signed with the Cassini college, the leading college for science in the Genoa region. Through this partnership, the Company has welcomed various alumni selected for their

entrepreneurialism and desire to achieve, helping and guiding them in their future university carrier.

Moreover, Ansaldo STS has laid the foundations for a partnership with the D'Oria college in 2018, extending the opportunity to humanities students.

The engineering faculty of the University of Genoa supports the young people during this stage with explanations and guidance in making decisions.

## Framework agreements and partnerships

Ansaldo STS has framework agreements in place with the Italian Universities of Genoa, Turin, Rome and Basilicata, relating to a number of three-year PhD partnership programmes, annual or two-year research contracts as well as numerous theses and internships. The Company also has a framework agreement with the German University of Dresden, specialised in railway signalling, and is also

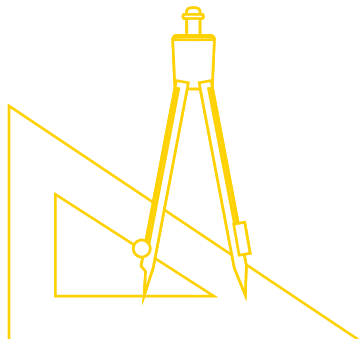
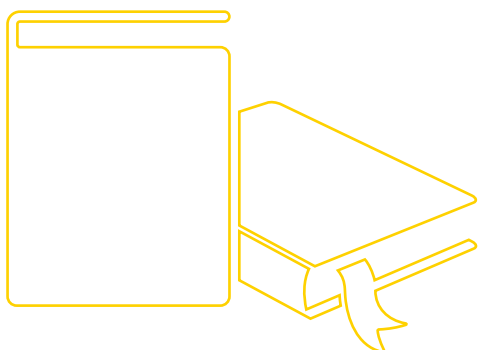
developing partnerships with the Universities of Rome and Milan.

In 2017, the Company continued to work closely with the University of Genoa.

In particular, during the year Ansaldo STS consolidated its relations with the electrical engineering department by joining the Career Guidance Committee.

The Company is constantly committed to developing a scholarship initiative which aims to promote continuous study and discourage young people from abandoning their studies after the first few years.

Thanks to these contacts, Ansaldo STS is able to share a targeted training programme with universities in order to find interested potential candidates who meet the business' requirements.





## Promotion of safe and sustainable mobility

### G7 Transport Meeting in Cagliari

Ansaldo STS was a key participant in the international transport summit held in Cagliari in June 2017. The meeting was attended by institutional delegates from Canada, France, Germany, Japan, UK, US and Italy (including the Transport Minister

Graziano Delrio) as well as by leading transport companies. The presence of Ansaldo STS was characterised by the presentation of the "Catenary-Free Electric Rail and Tram Transport" project. The initiative, developed in cooperation with Hitachi Rail Italy,

was selected as one of the top six "best practices" which were the main focus of the "Nice to meet you G7" meeting held in the buildings of the former Tobacco Factory in Cagliari.

### Sicurlnsieme project

In Genoa, Ansaldo STS sponsored the Sicurlnsieme project, contributing to the purchase of various granite and

concrete bollards aimed at improving security and preventing terrorist attacks. This project received the

thanks of the Mayor Marco Bucci in a public ceremony at Palazzo Tursi.

### Science Festival 2017

As one of the most significant scientific events at an international level and closely linked to the city of Genoa and the Liguria region, Ansaldo STS once again took part in the Science Festival 2017,

reprising its role of sponsor and presenting a stand dedicated to Virtual Reality. This provided visitors with the opportunity to experience travelling on the driverless metro systems developed by Ansaldo STS

in Copenhagen, Rome, Honolulu and Riyadh, while seeing the route and admiring the different towns and natural beauty that surrounds these places as though experiencing it first-hand.



Science Festival 2017, Genoa



## Digital communities and the media

### The Group website

In mid-September, after a lengthy comparison and market research project, the new Group website was launched. The new site aims to reflect our business, the needs of our stakeholders and our brand identity to offer the outside world a portal which is institutive, attractive and functional.

When creating the site, the decision was taken to aim for a high-impact design that expresses the spirit of Ansaldo STS, its way of doing business and its objectives, while being easy to navigate: immediate, accessible and up-to-date communications.

The homepage includes direct links to the business pages and content which faithfully represents the commitment and performance of Ansaldo STS, enabling the user to quickly access the information they are looking for. New content and a new graphic interface contribute further to providing a clear understanding of the Company.

New features, interactive areas and animations enhance the browsing experience to promote the discovery of Company's business.

The site, which develops over 500 webpages and hosts over 5,000 documents, is flexible and supports future expansions, providing a platform on which to share new ideas, communications and future successes.

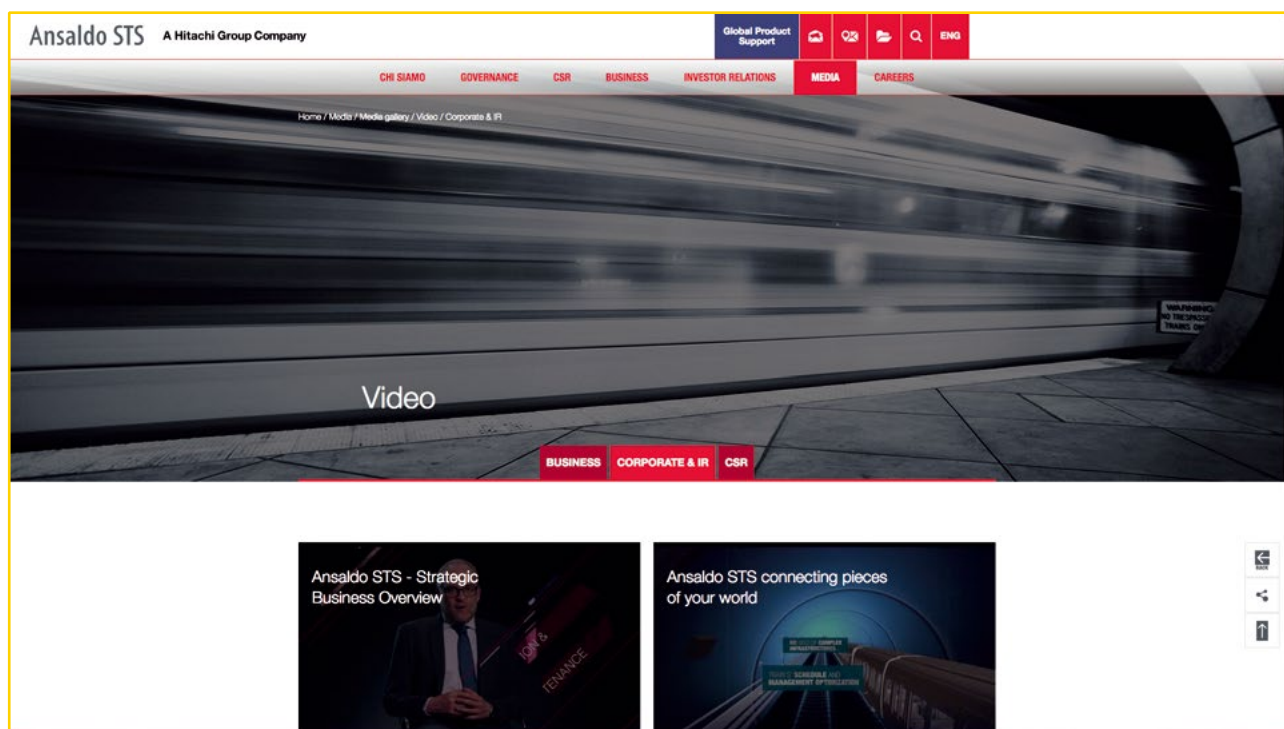
Ansaldo STS communicates through the site via the new NewsHub and its social media channels, while details of its products and solutions are provided on the Global Product Support section.

This vast universe of information can be easily navigated thanks to the menu and the website's improved usability, as well as a search engine which also extends to document files, with an in-built spellchecker and smart suggestions triggered by keywords offered in the two languages used

(Italian and English). In addition, the user can further refine the search results by filtering by content category.

The site's mantra is "interactivity", this means not only improving the browsing experience thanks to engaging and effective graphics but also enabling users to interact more easily with the site and, therefore, with Ansaldo STS. The creation of the website is the result of the effort and dedication of the Institutional Affairs, External Relations and Communication team.

Customer communications take many shapes and develop across many channels. The External Communications department at Ansaldo STS always follows the principle of timeliness and expediency: to arrive on time and in the right way, when and where the strategy requires, to meet the target customer's informational needs, in addition to those of other potential stakeholders such as investors, partners or suppliers.







## Social Media Communications

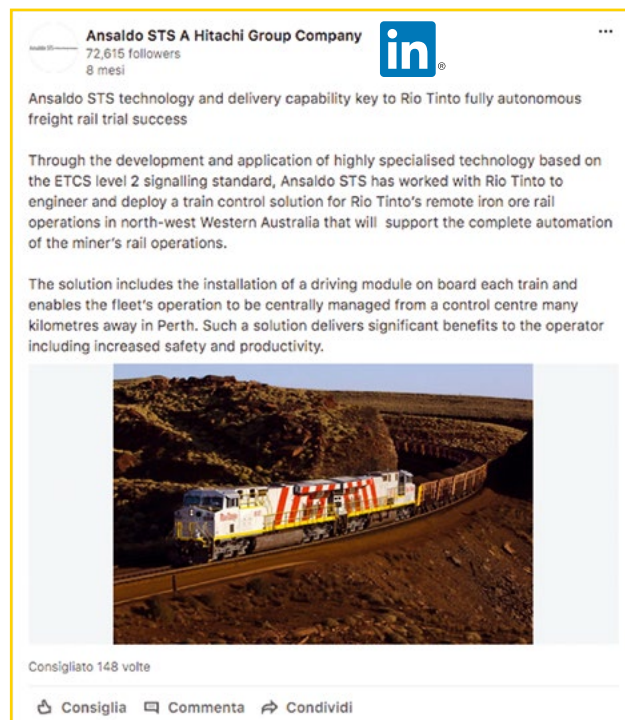
In 2017, Ansaldo STS consolidated its communications on social media.

During the year, new initiatives were kicked off to develop existing digital communication channels, improve their content and format and communication functions, and above all, to facilitate dialogue outside the Company.

The channels available to stakeholders are updated with the most important information in real time.

On its social media channels, Ansaldo STS aims to give visibility not only to its commercial successes but above all to important moments in the Company's life: exhibitions are regularly reported and, as analytics have shown, are followed with great interest by the public.

The success garnered by the investments in communications and content can be seen by the development of the LinkedIn platform, where the Company's followers have grown from roughly 60,500 in 2016 to 67,000 at the end of 2017; meanwhile, followers on Twitter and Facebook increased from 1,840 to 2,340 and 1,500 to 2,150 respectively.



In 2017 the Company posted over 200 tweets and almost 80 LinkedIn posts, and enhanced its communication via Facebook to reach over 70 posts; this is the result of a media plan aimed at around 4 tweets per week and approximately 6 posts per month on LinkedIn and Facebook.

Of all the social media channels, LinkedIn represents the main showcase of the Company's activities and professional communications, information which increasing numbers of industry users want to access.

Interestingly, nearly 90% of employees follow the Company on LinkedIn, fully reflecting the positive results of Ansaldo STS's efforts to improve values in general and, above all, team spirit.

Following a positive result, this year the Company has launched the "Rio Tinto" campaign, concerning the first fully autonomous freight line in Australia.



## The Media

The foundations have been laid to develop a more visible communications strategy and the goal for 2018 is to generate more multimedia content: in 2017, seven new videos were posted on YouTube and the Company plans to grow this presence further.

Another important development in 2018 is the complete revamping

of the LinkedIn page: not only will Ansaldo STS's profile be made more captivating, but more visibility will be given to all of the HR programmes within the Company, while navigation will be made simpler by a search function by geographic area.

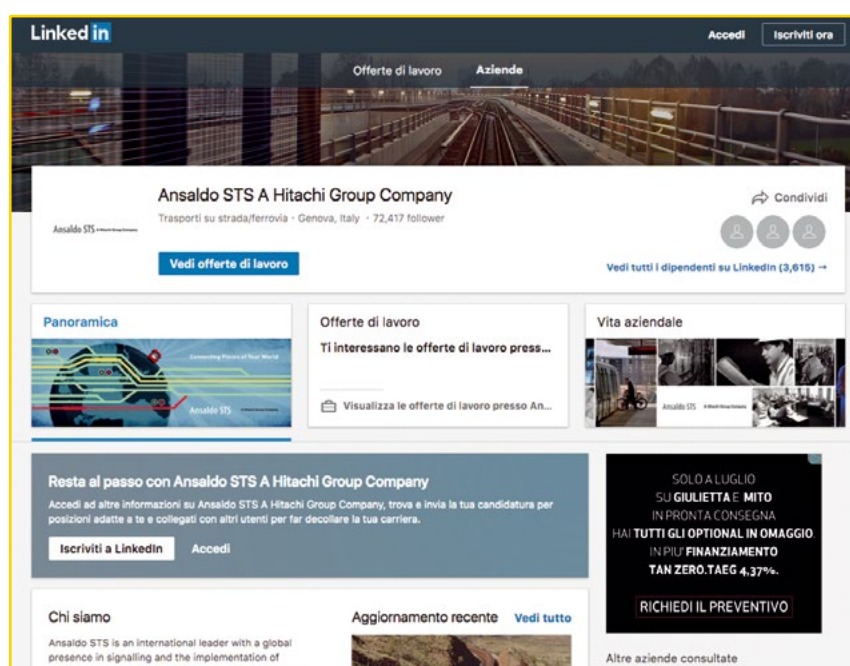
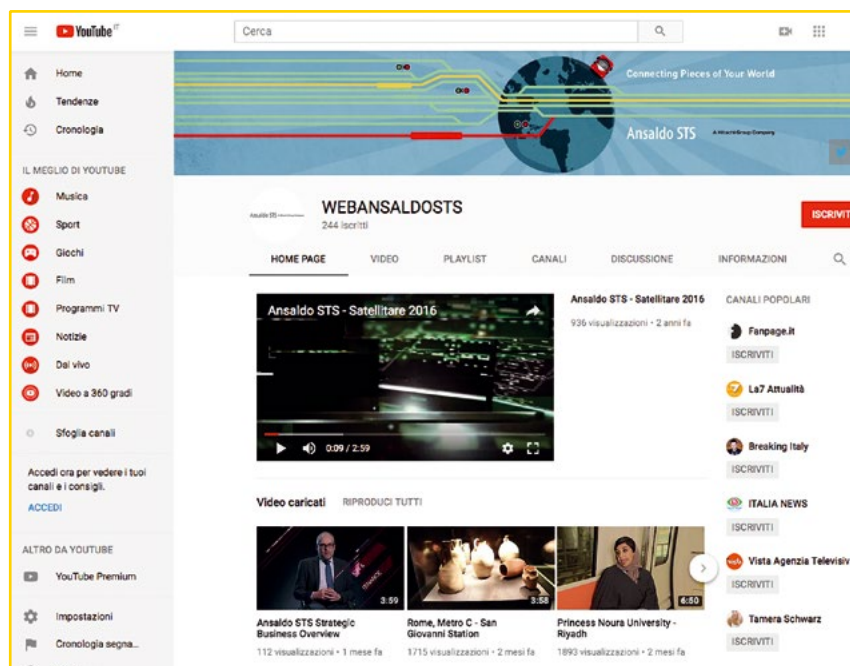
Ansaldo STS develops its relationships with the media by focusing utmost attention on

the quality of information, which must always meet requirements of transparency, timeliness, truthfulness, complete ease of use and widespread distribution. These characteristics enable Ansaldo STS to base its communications on the constant symmetry of information to all media outlets, also considering the fact that the Company is listed on the stock market. Relationships with journalists are managed at several levels: from the highest, with directors and deputy directors of publications, to middle range, with head editors and senior editors, to writers. Indeed, relationships must be forged across the board for constant support with respect to issues relating to Ansaldo STS's business.

In its communication activities, Ansaldo STS mainly targets sector leaders:

- national press agencies, including generalist organisations (e.g. ANSA, ADN-Kronos, AGI) and financial agencies covering national (e.g. Radiocor, Mf Dow Jones, Reuters) and international (Reuters International, Dow Jones, Bloomberg) issues;
- daily newspapers (e.g. Il Sole 24 Ore, MF, Italia Oggi, Repubblica, Secolo XIX, Messaggero, Il Mattino and others);
- periodicals (e.g. Milano Finanza, Corriere Economia, Repubblica Affari&Finanza, Il Mondo, The Economist);
- radio (Radio 24);
- television (Class CNBC);
- online media;
- blogs, such as "Lettera all'investitore" and similar posts.

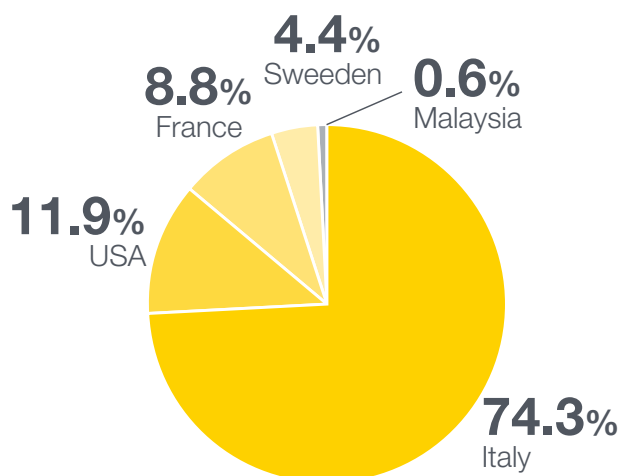
The Company enjoys ongoing and fruitful relationships with local business and general media outlets in which it has sites (particularly Genoa and Naples) or where it carries out projects, such as Rome, Milan and Brescia.





## Donations and sponsorships

Each year, Ansaldo STS commits to various charitable events, investments in the community and sponsorships. In 2017, total donations and sponsorships amounted to roughly EUR 864 thousand (up 17% on 2016), as shown below by geographical area:



Donations alone totalled EUR 110,756 (up 75.0% compared to 2016) and related to education and young people's development, health and social welfare, art and culture.

### Sponsorships and donations procedure

Ansaldo STS has a procedure for sponsorships, advertising initiatives and contributions to associations and bodies that sets out the general principles, scope of application, roles and responsibilities for making decisions and the costs incurred for sponsorships and donations. It checks the party that receives the sponsorship or advertising fee or is given the grant to ensure that they will be able to carry out the related project, that there are no conflicts of interest or convictions for crimes, and that the party does not reside in a tax haven.





# The environment, health and safety







*In the management of its activities, Ansaldo STS abides by principles of environmental ethics and attention to the physical security and health of its workers; these are strategic aspects and are the focus of the Company's commitment to pursuing continuous improvement objectives. The Company's choices are therefore not limited to complying with the law but instead aim towards the achievement of high standards of prevention and control through the adoption of specific policies and the promotion of virtuous behaviour by its collaborators and stakeholders.*

**25.7 %**  
electricity from  
renewable sources



**-6.7 %**  
**Greenhouse gas**  
emissions tons  
per million of revenues



Total energy  
consumption (2015-2017)



Total Methane  
consumption



Total energy consumption  
per hour worked (2015-2017)



Electricity consumption  
per hour worked (2015-2017)

**Integrated  
Management System**  
quality, safety  
and environment



**Polluting emissions**

SOx **-19.3%**

NOx **-10.0%**

CO **-11.6%**

PM10 **-13.6%**



## Targets achieved in 2017

### The environment, health and safety

SDGs	COMMITMENTS UNDERTAKEN IN 2016	ACTIVITIES CARRIED OUT IN 2017
	<b>ENERGY</b> <ul style="list-style-type: none"> <li>Reduce energy consumption performance indicator of buildings /offices by 5% [GJ/m<sup>2</sup>].</li> <li>Reduce the energy consumption performance indicator of buildings /production sites by 1% [GJ/m<sup>2</sup>].</li> <li>Increase the percentage of electrical energy obtained from renewable sources by 5%.</li> </ul>	<ul style="list-style-type: none"> <li>The energy consumption index for Company offices has fallen to 11.7% due to the reduced consumption of EE, methane and district heating.</li> <li>The energy consumption index for production sites has risen by 13.6% due in particular to the increase in consumption of EE.</li> <li>The objective has not been achieved due to the lower weight of Italian energy consumption certified by renewable sources at global level.</li> </ul>
	<b>GREENHOUSE GASES</b> <ul style="list-style-type: none"> <li>Reduce the GHG emission intensity indicator by 10% [tCO<sub>2</sub>e/EUR million revenues].</li> </ul>	<ul style="list-style-type: none"> <li>The objective was partially achieved. The GHG emission intensity indicator was reduced by 6.7%.</li> </ul>
	<b>WASTE</b> <ul style="list-style-type: none"> <li>Reduce the weight of waste per hour worked at production sites by 5%.</li> <li>Reduce the weight of waste per hour worked at offices by 5%.</li> <li>Increase the percentage of recycled waste at production sites by 10%.</li> <li>Increase the percentage of recycled waste at offices by 10%.</li> </ul>	<ul style="list-style-type: none"> <li>The Kg data per hour worked is not available by offices and production sites. Overall, there was a 48% reduction in kg of waste per hour worked due to the significant decrease in non-hazardous waste and the increase in hours worked.</li> <li>At the production sites there was a 71.7% increase in the percentage of waste recovered.</li> <li>In the offices there was an increase of 11.4% in the percentage of recovered waste.</li> </ul>
	<b>WORKERS' SAFETY</b> <ul style="list-style-type: none"> <li>Reduce the injury frequency and severity indicators at production sites by 10%.</li> <li>Reduce the injury frequency and severity indicators at offices by 10%.</li> </ul>	<ul style="list-style-type: none"> <li>With the use of the new Intelex software - Health and Safety and the Integrated Management System - data on the frequency and severity of injuries will no longer be divided between production sites and offices. The overall objective was not achieved because the low starting values of the frequency and severity indices of the injuries of Ansaldo STS make them particularly sensitive to slight variations in the number of accidents.</li> </ul>
	<b>HSE BEST PRACTICE</b> <ul style="list-style-type: none"> <li>Increase the sharing of HSE operating control best practices.</li> </ul>	<ul style="list-style-type: none"> <li>Publication of best practices on the company intranet.</li> <li>Pilot projects on best operational practices (eg emergency simulation with VVFF intervention) participation in meetings, conferences and prizes.</li> </ul>
	<b>HSE TOOL</b> <ul style="list-style-type: none"> <li>Implement a tool for managing and monitoring HSE activities.</li> </ul>	<ul style="list-style-type: none"> <li>The Intelex (Health and Safety an Integrated Management System) software was implemented. The software makes it easy to manage, track and report on HS data.</li> </ul>
	<b>HSE MANAGEMENT SYSTEM</b> <ul style="list-style-type: none"> <li>Update the HSE management systems according to new standard ISO14001:2015, in line with new ISO9001:2015.</li> </ul>	<ul style="list-style-type: none"> <li>The transition of HSE management systems according to the ISO 14001: 2015 standard has almost come to an end; by August 2018 the transition phase will be completed.</li> </ul>



Target achieved



Target partially achieved



Target not achieved



Target postponed





## Environmental sustainability

Protecting the environment is part of Ansaldo STS's corporate responsibility and is a key element in its business strategy, which aims to promote the long-term growth of the Company's value.

As part of its commitment towards sustainable development, Ansaldo STS focuses on guaranteeing quality of life and carrying out its production activities in the most secure way possible, reducing its use of natural resources and protecting and safeguarding the environment, involving employees, customers, suppliers, institutions and local communities to achieve these goals.

### The commitment of Ansaldo STS: the four strategic objectives

#### 1. Application of Environmental Management Systems

- recognised at the international level to the entire Organisation, inspired by the principle of continuous improvement and the definition of environmental indicators to measure the environmental performance of the Organisation.
- Annual preservation of the ISO 14001 certifications.
  - Rationalisation and simplification of the certifications in the various organisational areas.

#### 2. Reporting to citizens, institutions and other stakeholders on the management and environmental performance of the Company.

- Publication of the Sustainability Report and open access given to the key environmental parameters.
- Communication with analysts and participation in various Sustainability indices.



#### 3. Promotion of sustainable environmental practices with suppliers, contractors and customers.

- Use of environmental performance-based supplier qualification criteria.
- Informative/training meetings on the important environmental aspects at the commencement of works through the diffusion of the Environmental Policy and exploring the ways in the impacts generated by the activities carried out (waste, emissions, discharges, etc.) are to be managed.
- Assessment of the suppliers based on the environmental performance of the activities carried out on Ansaldo STS's behalf.

#### 4. Observance of the legal obligations of compliance and voluntary commitments

- Ensure that the activities are carried out in compliance with said obligations and commitments.
- Assess observance of the subscribed obligations and commitments.
- Correct any non-conformities on observance of subscribed obligations and voluntary commitments.

To this end, Ansaldo STS has adopted an environmental policy based on the application of UNI EN ISO 14001:2015 requirements, other relevant international standards and compliance with applicable domestic and international legislation, developing a programme focused on the continuous improvement of environmental standards. This policy is shared with all Ansaldo STS personnel and all concerned parties online and via the Company Intranet<sup>13</sup>.

13. <http://www.ansaldo-sts.com/en/csr/environment/environmental-policy>



## Integrated management system

Ansaldo STS has considered it strategic to include its Quality, Safety, and Environment System (IMS - Integrated Management System) within its Governance framework and, in particular, to develop strategic synergies with the Internal Auditing and Risk Management system: the Quality, Safety, and Environment Integrated Management System is thus considered a reference architecture to integrate systems and to implement principles and values within the organisation. In this context, the assessment of business risks and their proper management requires the correct identification of the processes and their interpretation from a systemic perspective.

The Integrated Management System has been established at corporate level, implementing global policies and procedures in order to guarantee a controlled management of processes. Subsequently, each company has established local environmental and safety policies, on the basis of legislative requirements and corporate policies and procedures.

The main advantages arising from the Integrated Management System are:

- **Uniform management:** the creation of a single corporate management system ensures the same methods are used for the organisation of all Health, Safety and Environment activities.
- **Optimisation of resources:** the uniform management of the Health, Safety and Environment areas makes exploitation of potential synergies in the Organisation possible (audit and training).
- **Standardisation of improvement objectives:** integration allows univocal decision-taking criteria to be identified for the selection of Company objectives and the definition of programmes to implement them.
- **Involvement of personnel at all levels:** rationalisation in the use of human resources and the assignment of responsibilities in order to engage personnel and raise their awareness.
- **Single document and data management system:** even at the documentational and administrative level, integration prevents the duplication of records common to the various areas, while sharing information simplifies in-house communication.



- **Identification of new strategic approaches:** by analysing processes not only from the quality viewpoint but also in terms of environmental impact and reduction of risks for workers, we are able to single out new requirements, design alternatives and opportunities to save.

Enhanced usability of documents has been achieved by implementing the new Company Intranet, which allows all employees to more easily consult the corporate and local IMS documentation.



All the production sites and offices listed in the tables below have been certified for quality (ISO 9001), health and safety (OHSAS 18001 and AS/ZNS 4801:01 for Australia) and environmental management (ISO 14001). The Tito Scalo production site also has EMAS Registration (Eco Management and Audit Scheme).

COUNTRY	PRODUCTION SITE	ISO 9001	ISO 14001	OHSAS 18001
US	Batesburg	•	•	•
FRANCE	Riom	•	•	•
ITALY	Tito Scalo	•	• EMAS	•

COUNTRY	OFFICES (NON-PRODUCTION SITE)	ISO 9001	ISO 14001	OHSAS 18001
EUROPE	UNITED KINGDOM London	•	•	•
	FRANCE Les Ulis	•	•	•
	SPAIN Madrid	•	•	•
	Zaragoza	•	•	•
	SWEDEN Stockholm	•	•	•
	DENMARK Copenhagen	•	•	•
	Genoa	•	•	•
	ITALY Naples	•	•	•
	Piossasco	•	•	•
SAUDI ARABIA	Riyadh	•	•	•
PERÙ	Lima	•	•	•
TAIWAN	Taipei	•	•	•
MALAYSIA	Kuala Lumpur	•	•	•
USA	Pittsburgh	•	•	•
AUSTRALIA	Brisbane	•	•	• AS/ZNS 4801:01
	Newcastle	•	•	• AS/ZNS 4801:01
	Perth	•	•	• AS/ZNS 4801:01
	Sydney	•	•	• AS/ZNS 4801:01
	Karratha	•	•	• AS/ZNS 4801:01
INDIA	Kolkata	•	•	•
	Noida	•	•	•
	Bangalore	•	•	•
CANADA	Toronto	•	•	•

The production sites of Tito Scalo, Riom and Batesburg and the offices of Genoa, Les Ulis, Pittsburgh and Beijing have obtained the IRIS (International Railway Industry Standard) certification.

The IRIS standard is promoted by UNIFE, the Association of European Railway Industries, which guarantees its supervision and control. The IRIS standard was developed starting from the ISO 9001 standard, integrating it with specific railway sector requirements.

Ansaldo STS is also part of the IRIS Steering Committee that rules the IRIS activities and of the Advisory Board which manages the interface between IRIS and the main European railway operators.





## Training activities

Ansaldo STS's training path has been implemented with the cooperation of Training Needs Managers (TNM). This initiative aims to identify personnel who can serve as contacts for Human Resources in the definition of specific training and development plans for operational structures, in order to facilitate understanding of the specific needs of each operational unit and make it possible to define projects that more accurately target their actual needs. Training Needs Management is distinguished by the concept of "Community", which translates into encouraging the

creation of a network to reduce geographical distances. In 2017, Ansaldo STS carried out training and information sessions to draw attention to:

- the procedures and requirements of the Integrated Management System;
- the roles and responsibilities needed to achieve compliance with the environmental policy and the procedures and requirements of the Integrated Management System, including preparing for emergency situations and developing response capacity;

- the potential consequences of not complying with the specified operating procedures.

The training sessions were held by personnel competent in the relevant field. The specialised technical focus of the training demonstrates Ansaldo STS's aim of targeting operating positions involved in duties and activities that are potentially critical in terms of environment, health and safety.

HSE AND QUALITY TRAINING	2015	2016	2017
Total hours of HSE and Quality training	14,523	8,628	4,707
Total hours of training	78,222	74,269	93,369
Health and safety training as % of the total	18.6%	11.6%	5.0%

## Environmental performance

The Reporting Scope considered to process health, safety and environmental performance comprises the 18 sites and offices of Group companies (Pittsburgh, Genoa, Brisbane, Les Ulis, Bangalore, Solna, Batesburg, Naples, Karratha, Riom, Kolkata, Kuala Lumpur, Piosasco, Noida, Tito Scalo, Perth, Madrid and Zaragoza), which represent the most significant sites and employ 91% of the Group workforce.

### Production sites

The Group's production sites are the **Tito Scalo** site in Italy, the **Riom** site in France and the **Batesburg** site in the United States. These sites produce electro-mechanical components and electronic

apparatus for rail security, control and supervision systems. Site activities mainly consist of mechanical processing, the treatment of metallic and non-metallic materials, thermal treatments, superficial treatments and

applying glue and resins. Activities important from an environmental viewpoint are mainly painting, welding, moulding and cleaning circuit boards using solvent.

	Total area	Plants, storage and warehouses		Dirt car parks and roads		Green areas		Runways of airfields		Employees
	mq	mq	%	mq	%	mq	%	mq	%	n.
TITO SCALO	40,000	8,400	21%	7,600	19%	24,000	60%	0	-	125
RIOM	17,000	5,610	33%	510	3%	10,880	64%	1,700	10%	148
BATESBURG	146,330	19,023	13%	45,362	31%	81,945	56%	0	-	219
<b>Total</b>	<b>203,330</b>	<b>32,523</b>	<b>16%</b>	<b>53,472</b>	<b>27%</b>	<b>115,635</b>	<b>57%</b>	<b>1,700</b>	<b>0%</b>	<b>492</b>

The three production sites cover a total surface area of 203,330 square metres. The total number of employees is 492 (up 5.1% on 2016). The Batesburg and Tito sites are located in areas that are included in the list of contaminated sites of national interest.



## Office sites

Activities performed at the 15 administrative sites mainly consist of signalling systems design, the analysis of safety, reliability and availability, laboratory testing, contract management and control, research and development, procurement, and prevention and protection. In geographical terms, the locations of office sites are:

- three in Italy: Genoa, Piossasco (Turin) and Naples;
- four in Europe: Les Ulis (France), Solna - Stockholm (Sweden), Madrid and Zaragoza (Spain);
- one in the US: Pittsburg;
- seven in the Asia Pacific: Brisbane, Perth and Karratha (Australia); Kuala Lumpur (Malaysia); Bangalore, Noida and Kolkata (India).

The non-production sites considered within the reporting scope cover a total surface area of 149,137 m<sup>2</sup> and employ 3,350 workers (up 4.3% compared to 2016).

None of the 18 Ansaldo STS sites are subject to the IPPC (Integrated Pollution Prevention and Control) directive.

## Fight against climate change

Ansaldo STS sees climate change as an opportunity. As part of this approach, it analyses the potential impact of its strategic decisions regarding greenhouse gas emissions in the short, medium and long-term, aiming to find opportunities to develop the business and improve efficiency in all aspects of its operation.

Actions to reduce greenhouse gas emissions are part of the environmental management system that Ansaldo STS has established at a global level, defining a carbon management strategy based on the following principles:

- **global approach:** the development of mechanisms to increase commitment in all offices and production sites;

- **reasonable and feasible long-term objectives:** the establishment of a clear and realistic vision of the steps to be taken;
- **support for the development of technologies:** the development of advanced technological solutions.

This strategy focuses mainly on three spheres of influence:

- in-house activities and direct emissions (Scope 1 emissions);
- energy suppliers and their indirect operating emissions related to the Company's activities (Scope 2 emissions);
- Ansaldo STS's supply chain and the emissions resulting from personnel transfers and the production and delivery of goods and services (Scope 3 emissions).



Metro 5 Milan



## Carbon Management System

In 2011 Ansaldo STS adopted a Carbon Management System (CMS) which enables the planning, implementation and measurement of targets for the reduction of greenhouse gas emissions.

An efficient carbon management policy enables the Company to decrease consumption and reduce energy costs, thereby improving its bottom line and offering the possibility of investing the savings.

The CMS has been developed in line with the relevant international standards.

This system enables the Company to perform:

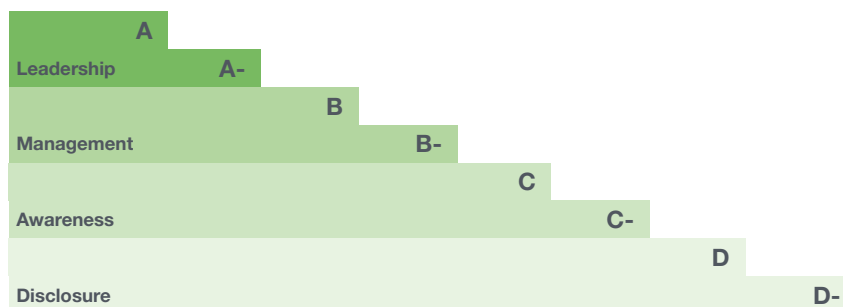
- analyses of actual emissions produced;
- monitoring and reporting activities on emissions;
- comparisons between historical data and forward-looking analyses;
- an assessment of the impact of products, in terms of emissions over their entire life cycle;
- economic/environmental analyses in relation to current regulations on emission reduction to determine assets' potential value-at-risk;

- the measurement of the effectiveness of emission reduction projects;
- communication on Ansaldo STS's emission reduction performance to stakeholders, the media, investors, rating agencies and other organisations.

Within its organisation, Ansaldo STS has appointed a Carbon Manager, an Energy Manager responsible for providing guidance and carrying out activities and projects with respect to energy savings at all of the Company's operating sites.

### Carbon Disclosure Project (CDP)

The adherence to the **CDP Climate Change** questionnaire for the seventh consecutive year confirms that climate change represents one of the issues relevant to Ansaldo STS. The consolidation of the **Carbon Management** strategy involves the definition of an overall emission reduction target. The CDP Italy 100 **Climate Change Report** 2017, issued by First Carbon Solutions, analyzes in detail the responses of the largest Italian companies, by market capitalization listed on the Italian Stock Exchange, evaluating them on the basis of the following scale:



F: Failure to provide sufficient information to CDP to be evaluated for this purpose.

In 2017, Ansaldo STS achieved a score of C on an A scale in the Industrial sector, corresponding to the **Awareness** evaluation, that states the following "considers the extent to which the company has assessed environmental issues, risks and impacts in relation to its business".

## Direct and indirect greenhouse gas emissions

Between 2016 and 2017, total direct and indirect emissions of greenhouse gases decreased from 11,082 tCO<sub>2</sub>e to 10,599 tCO<sub>2</sub>e, with a reduction of 483 tCO<sub>2</sub>e (-4.4%). This is due in particular to a reduction in the consumption of methane for the production of heat and a reduction of indirect emissions relating to electricity consumption.

GREENHOUSE GASES	UoM	2016	2017
Emissions due to energy production (methane and diesel)	tCO <sub>2</sub> e	1,420	1,249
Emissions due to transport (cars, lorries and forklifts)	tCO <sub>2</sub> e	578	598
<b>Total Scope 1 (direct emissions)</b>	<b>tCO<sub>2</sub>e</b>	<b>1,998</b>	<b>1,846</b>
Emissions due to electricity consumption	tCO <sub>2</sub> e	9,084	8,753
<b>Total Scope 2 (indirect emissions)</b>	<b>tCO<sub>2</sub>e</b>	<b>9,084</b>	<b>8,753</b>
<b>Total direct and indirect emissions (Scope 1+2)</b>	<b>tCO<sub>2</sub>e</b>	<b>11,082</b>	<b>10,599</b>
GHG emission intensity (Scope 1)	tCO <sub>2</sub> e/EUR mln of revenue	1.51	1.36
GHG emission intensity (Scope 2)	tCO <sub>2</sub> e/EUR mln of revenue	6.84	6.43
<b>Total GHG emission intensity (Scope 1+2)</b>	<b>tCO<sub>2</sub>e/EUR mln of revenue</b>	<b>8.35</b>	<b>7.79</b>



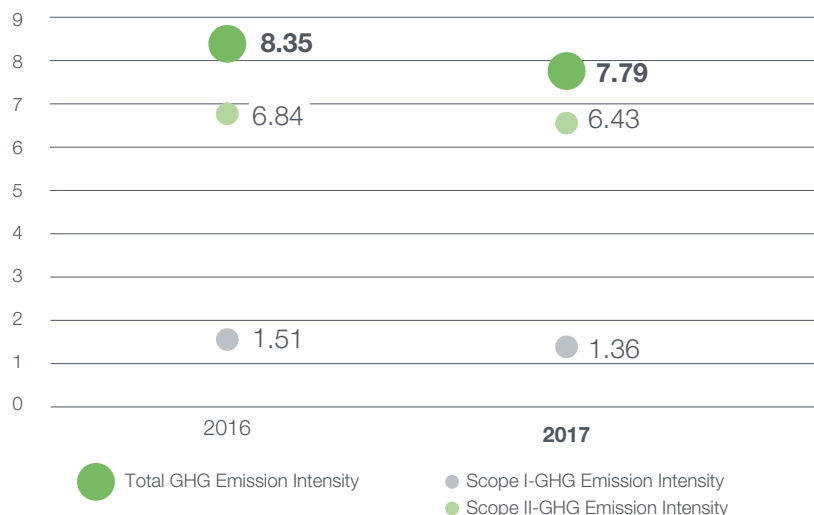


The Scope 2 emissions reported in the table refer to the location-based approach. According to the market-based approach, the Group's Scope 2 emissions amounted to 6,693 tCO<sub>2</sub>e in 2016 and 5,486 tCO<sub>2</sub>e in 2017, considering the certified electricity supply from renewable sources in Sweden and Italy.

The Total GHG emission intensity, which measures tonnes of CO<sub>2</sub>e per EUR million of revenue, has fallen (-6.7%). This result is the effect of the reduction of emissions in absolute value and of the increase in revenue (+2.5%).

### TOTAL GREENHOUSE GAS EMISSION INTENSITY SCOPE (1+2)

(tCO<sub>2</sub>e/mln EUR Revenues)



## Energy consumption

The majority of the energy used by Ansaldo STS is electricity, which is used for lighting, the operation of plants and temperature control in Company buildings.

Ansaldo STS uses fossil fuels, mainly methane, and district heating to heat the workplaces.

In order to reduce electricity consumption, the Company conducts constant maintenance works on its real estate assets to increase their environmental efficiency. Energy-saving lighting and heating/cooling technologies are used as much as possible, such as:

- LED lighting systems;
- building envelopes and thermal insulation for windows and doors;
- direct-expansion heating/cooling systems (heat pumps);
- presence detectors or clocks/timers to control the on and off switching of the systems;
- improvement in the data centre's energy efficiency;
- affixing of signs to remind personnel about energy saving initiatives, such as turning off lights, laptop computers and devices that consume energy;
- reduction in the number of vehicles used by the Company.

In 2017, in order to further reduce electricity consumption at the Genoa and Tito Scalco sites, we installed a new smart lighting system, with state-of-the-art Wireless and DALI technology that adjusts the brightness of the lamps on the basis of the actual intensity of natural light measured by sensors installed in each room.

The estimated annual energy saving is about 510 MWh for the Genoa office and 258 MWh for Tito Scalco, representing a reduction in consumption of over 70%.

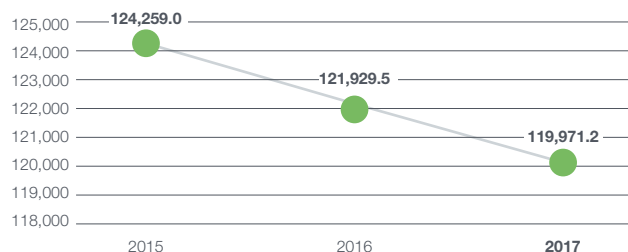




## Energy consumption trend

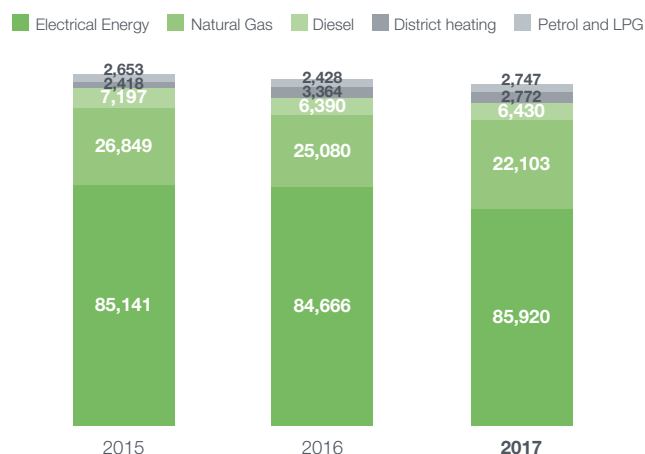
In 2017, total energy consumption - electricity, methane, diesel, LPG and district heating - amounted to 119,971 GJ, down 1.6% compared to 2016 despite an overall 4.7% increase in hours worked. In the three-year period 2015-2017, overall consumption fell by 3.5%.

### Total energy consumption (GJ)



In absolute terms there has been an increase of 1.5% of total electricity consumption against a reduction of 11.9% of methane compared to 2016.

### Total energy consumption (GJ)



The energy consumption trend of the three-year period 2015-17 at the production and office sites is illustrated in the following table.

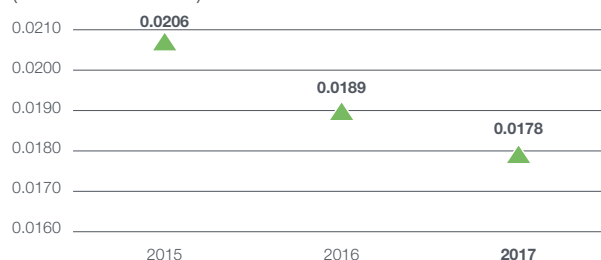
	PRODUCTION SITES			OFFICE SITES		
	2015	2016	2017	2015	2016	2017
Electrical energy (GJ)	28,834.3	27,102.2	31,165.6	56,307.0	57,564.3	54,754.0
Methane (GJ)	3,711.2	3,888.9	4,102.8	23,138.2	21,191.3	17,999.8
Diesel (GJ)	42.9	231.5	295.9	7,154.5	6,158.9	6,134.2
District heating (GJ)	-	-	-	2,417.6	3,363.9	2,772.0
Petrol and LPG (GJ)	389.7	342.3	199.2	2,263.7	2,086.2	2,547.8
<b>TOTAL [GJ]</b>	<b>32,978.11</b>	<b>31,564.8</b>	<b>35,763.5</b>	<b>91,281.0</b>	<b>90,364.6</b>	<b>84,207.7</b>

In absolute terms, about 70% of total energy consumption is due to the 15 office sites, while the remaining 30% relates the three production sites.

The **Energy intensity** performance indicator showed a reduction of 5.8% in the 2016-2017 period due to the combined effect of the increase in hours worked (+4.7%) and the decrease in consumption (-1.6%).

## ENERGY INTENSITY

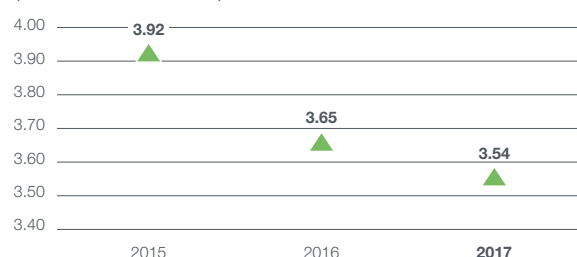
### Total Energy Consumption per hour worked (GJ/no. of hours)



Performance in 2015-2017 confirms the general downwards trend of the indicator: -13.6% due to the combined effect of the reduction in consumption (-3.5%) and the increase in hours worked (+11.8%).

Considering electricity consumption only, the performance indicator **Electricity consumption** per hour worked showed reductions of 3.0% compared to 2016 and 9.7% compared to 2015.

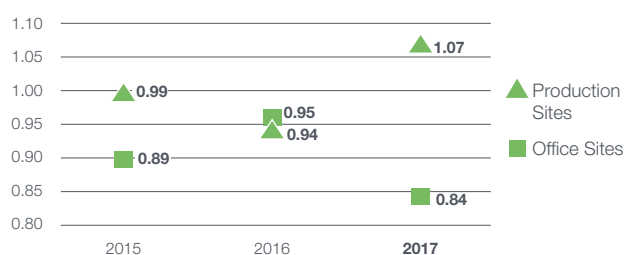
### KPI - Electricity Consumption per hour worked (kWh/no. of hours)





The **Energy intensity indicator for buildings**, calculated on the consumption of electricity, methane and gas for heating and district heating by square metre, demonstrated an increase at production sites (+13.6%) due mainly to the increased consumption of electricity, while a considerable reduction was observed at offices (-11.7%) due to the reduced consumption of all energy components.

#### KPI - Energy intensity for buildings (Gj/m<sup>2</sup>)



## Renewable energies

Once again, in 2017 Ansaldo STS requested the cancellation of its GO certificates (Guarantee of Origin), an electronic certification attesting the renewable origin of the sources used, for the Italian sites and offices.

By acquiring and subsequently cancelling the certificates (the latter entails the withdrawal of the certificate from the market), Ansaldo STS demonstrates its commitment to environmental sustainability through its willingness to pay the positive difference with the price of electricity from conventional sources.

In addition, the Solna site uses a mix of totally renewable energy (wind, water and biomass).

<b>ELECTRICAL ENERGY FROM RENEWABLE RESOURCES</b> (kWh)	2015	2016	<b>2017</b>
Energy from renewable sources	6,399,993	6,513,346	6,133,428
% renewable sources of total	27.1%	27.7%	25.7%

The slight reduction in the percentage of renewable energy relates to the reduction in electricity consumption at Italian sites and offices.







## Consumption of raw materials and other resources

Ansaldo STS is aware of the contribution that each company can give to safeguarding the world's resources by adopting policies to reduce the intensive use of raw materials, an objective promoted by the OECD Council and in the sustainability strategies of many nations.

It is however difficult to make a reliable estimate of the raw materials used by the Company and contained in the electronic and electromechanical components for making signalling equipment. This is due to the fact that considerable and substantially diversified types of small

parts (electric cables, screws, bolts) and accessories (boards, monitors, inductive connections, light signals, cabinets) are needed for production.

Moreover, the making of the product can follow different paths: complete production inside the plants - from the printed circuit to the finished circuit board, or from the shell to the inductive connection, or assembly of products purchased "semi-finished" (circuit boards, monitors, computers) in the case of more complex systems such as complete cabinets or, as an alternative, processed by outside suppliers.

However, Ansaldo STS's search for increasingly standardised designs and innovation will increasingly lead to an overall reduction in the consumption of raw materials directly and indirectly through a reduced use of components. The use of powerful technological platforms integrating several functions in the same subsystem enable Ansaldo STS to reduce the size of equipment and their connectors, using simple and effective systems for scheduling, testing and roll-out.

The consumption of paper and packaging materials used for shipping is shown below.

PAPER AND PACKAGING MATERIALS	2016 <sup>14</sup>	2017
Paper [t]	81.89	89.03
Cardboard packaging [t]	316.7	59.2
Wood packaging [t]	359.0	355.5
Plastic packaging [t]	1.7	4.4
Mixed material packaging [t]	2.5	2.5

## Polluting emissions

For Ansaldo STS, polluting emissions relate to the consumption of non-renewable resources used to run thermal plants (methane and diesel) and to the production processes that emit volatile organic and inorganic compounds, and heavy metals.

ATMOSPHERIC EMISSIONS <sup>15</sup>	2016	2017
SOx (Kg)	54.9	44.3
NOx (Kg)	1,519.1	1,367.9
CO (Kg)	4,216.2	3,727.7
PM 10 (Kg)	76.6	66.2
Volatile organic compounds (Kg)	429.0	1,012.4
Volatile inorganic compounds (Kg)	3.6	11.8



14. The 2016 data have been recalculated applying a more precise estimation methodology.

15. Emissions are calculated using the coefficients issued by the European Environmental Agency (Air Pollutant Inventory Guidebook 2016). Emissions in 2016 were calculated according to these coefficients.



## Water management

The sustainable management of site water during withdrawal and use encourages the maintenance and improvement of water use efficiency, ensuring less waste of the resource and reduced environmental impact. The water is mainly used for sanitary purposes and for the operation and cooling of air conditioning systems; in certain locations it is also used for watering the green areas. Ansaldo STS's water procurement sources include aqueducts and water tables where water is drawn through wells.

To reduce water consumption, Ansaldo STS has installed devices that mix water and air or, alternatively, photocells or timed controls that effectively control the water flow, in order to minimise the waste of the resource.

Rainwater recovery projects at the Riom plant in France and the replacement of cooling towers with "dry" systems also contribute to sustainable water management.

The use of water is mainly for civil purposes. Water consumption at the

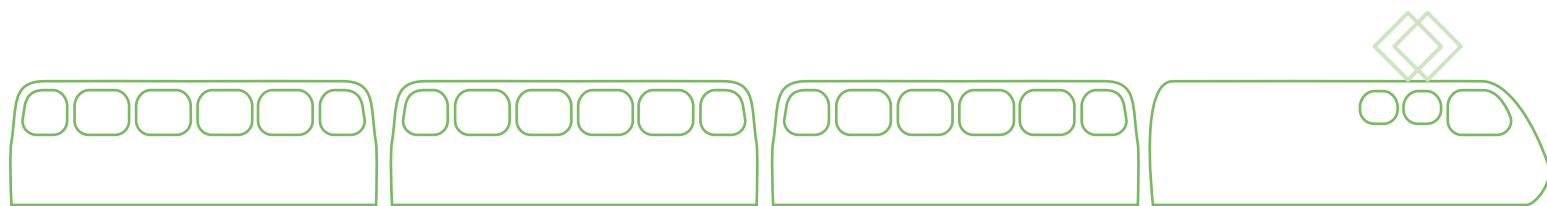
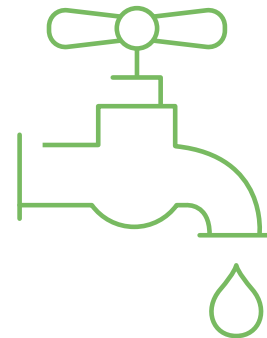
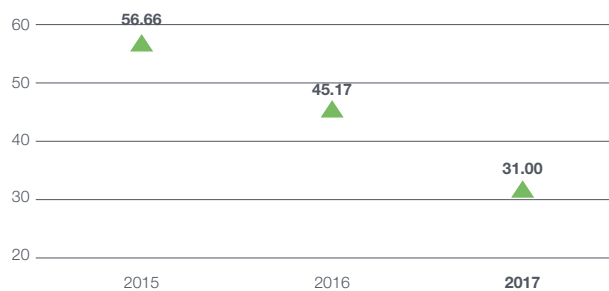
Tito Scalco (Italy), Riom (France) and Batesburg (US) sites is very low. From 2016 to 2017, these sites reduced their water withdrawals (-6.5%), also considering that the Tito Scalco plant cut the amount of industrial water it used for fire drills and irrigation of green areas, while the amount of water used for production decreased because electrical circuit boards are no longer rinsed. Compared with 2016, withdrawal also fell at the office sites (-30.0%); particularly affecting this result was the decrease recorded at the Naples site.

	PRODUCTION SITES			OFFICE SITES			TOTAL		
WITHDRAWAL OF WATER	2015	2016	2017	2015	2016	2017	2015	2016	2017
Water drawn from aqueducts (m³/year)	14,726	12,329	11,529	160,942	143,153	98,468	175,668	155,482	109,997
Water drawn from wells (m³/year)	-	-	-	41,906	10,616	9,128	41,906	10,616	9,128
Other sources (m³/year)	-	-	-	132	-	-	132	-	-
<b>TOTAL</b>	<b>14,726</b>	<b>12,329</b>	<b>11,529</b>	<b>202,980</b>	<b>53,769</b>	<b>107,596</b>	<b>217,706</b>	<b>166,098</b>	<b>119,125</b>

The **water consumption per employee indicator**<sup>16</sup> shows a reduction of 31.4% compared to 2016, due to the combined effect of reduced consumption and increase in the number of employees.

### KPI - Water withdrawal per employee

(m³)



16. The number of employees considered by the calculation does not represent the entire Group workforce but rather the scope of the environmental data (see Reporting Scope in the Note on Methodology).



## Management of waste and effluents

The production of waste is an environmental aspect that is assessed and measured at all Ansaldo STS sites and offices when the environmental aspects of work sites and the construction of civil and technological works are analysed.

Ansaldo STS's policy is to reinforce prevention and the re-use, recycling and recovery of waste. All its sites have

waste collection areas based on the type of waste and site layout. External specialist companies collect and process the hazardous and non-hazardous waste.

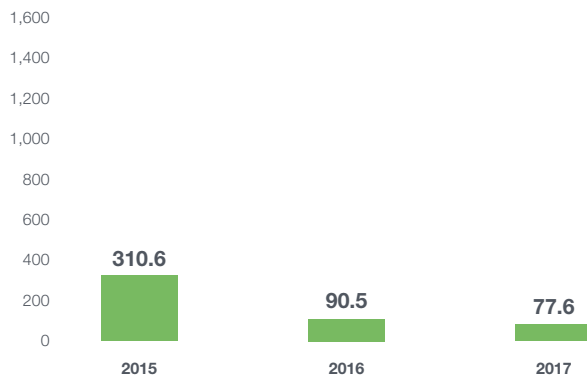
The most prominent waste in production sites relates to paper, cardboard and wood packaging, metal and out-of-order equipment.

	PRODUCTION SITES			OFFICE SITES		
WASTE PRODUCTION	2015	2016	2017	2015	2016	2017
<b>Hazardous (t)</b>	<b>14.50</b>	<b>13.03</b>	<b>14.86</b>	<b>14.72</b>	<b>15.19</b>	<b>6.53</b>
% recovered	29%	6%	82%	28%	66%	85%
% disposed of	71%	94%	18%	72%	34%	15%
<b>Non-hazardous (t)</b>	<b>296.12</b>	<b>77.44</b>	<b>62.74</b>	<b>306.43</b>	<b>1,549.17</b>	<b>816.17</b>
% recovered	33%	60%	93%	55%	44%	49%
% disposed of	67%	40%	7%	45%	56%	51%
<b>TOTAL WASTE (t)</b>	<b>310.62</b>	<b>90.47</b>	<b>77.60</b>	<b>321.16</b>	<b>1,564.36</b>	<b>822.70</b>
% recovered	33%	53%	91%	54%	44%	49%
% disposed of	67%	47%	9%	46%	56%	51%

### PRODUCTION SITES

#### Total waste

(t)



**Production sites** – In 2017, overall production of waste fell due to the reduction in non-hazardous waste. Furthermore, the proportion of recovered waste increased compared to disposed waste.

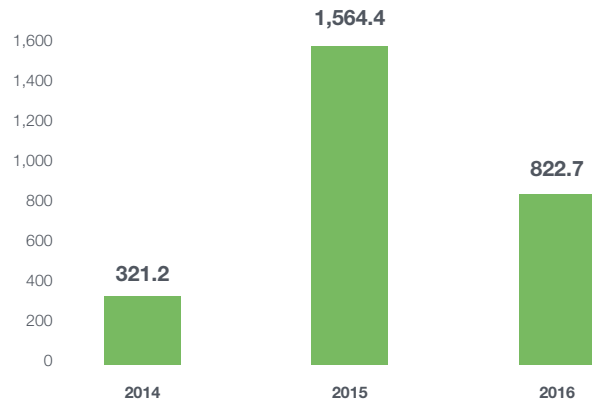
**Offices** – In 2017 the total quantity of waste produced fell considerably, particularly in terms of non-hazardous waste which in 2016 was concentrated in the Australian sites in Brisbane and Perth. Furthermore, the proportion of recovered waste increased compared to disposed waste.

The trends described above are also reflected by the index of kilograms of waste produced per hour worked, which fell by 48.0% compared to 2016 due to the effect of the constant reduction in non-hazardous waste at sites and the increase in hours worked.

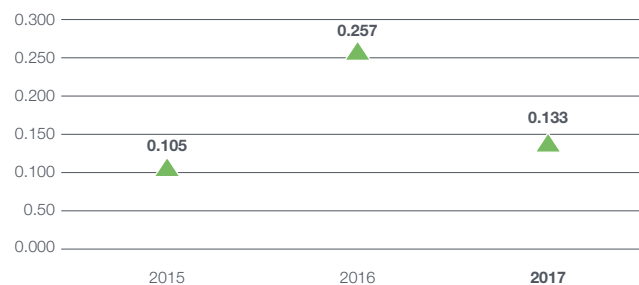
### OFFICES

#### Total waste

(t)



### KPI - Kg. of waste produced per hour worked







## Packaging: waste and recycling

In terms of packaging, Ansaldo STS uses mixed material packaging, plastic, cardboard and wood (crates). As a result of a specific policy introduced by Ansaldo STS, part of the wood and plastic packaging is reused to package similar products, especially at the central warehouses at the Piosasco and Tito Scalo sites.

Packaging waste sent for recovery	2016	2017
Cardboard packaging [t]	69.63	71.91
Wood packaging [t]	28.20	39.78
Plastic packaging [t]	-	-
Mixed material packaging [t]	9.50	9.44

## Waste water

The waste water produced at the sites can be classified on the basis of its use upstream from disposal, as domestic (or similar) and industrial.

All Ansaldo STS sites produce waste water that can be exclusively classified as domestic or similar, except for the Tito site. All the domestic or similar waste water is discharged into the sewers. The Naples site uses an organic wastewater treatment system.

The sites use authorised disposal points. The Batesburg and the Tito Scalo sites' disposal points are monitored.

## Biodiversity

There are two Ansaldo STS sites in proximity of protected areas:

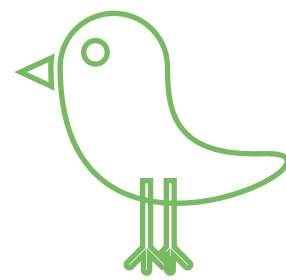
- Les Ulis (France) – total area 20,000 m<sup>2</sup> (40% offices, 30% streets and parking lots, 30% green areas) where administrative and sales activities, as well as tests on electronic systems are carried out. The site is certified according to ISO 14001 and is close to the Bois del Gellesche which extends for 16 hectares.

- Tito Scalo (Pz) – total area 40,000 m<sup>2</sup> (21% plants, warehouses and offices, 19% streets and parking lots, 60% green areas) where activities of manual and automated welding, as well as painting of circuit boards, are carried out. The site is certified according to ISO 14001 and is EMAS registered. It is less than 3 km from the lake of Pantano,

Regional Natural Reserve and Oasis of WWF. Pantano di Pignola is located in a Site of Community Importance and in a Special Protection Area (SIC-ZPS IT9210142), in the municipality of Pignola (Pz). It is also RAMSAR Area (Convention on Wetlands of International Importance). Due to the insignificant activity of the site with respect to biodiversity, the only biodiversity indicator considered by the EMAS is the number of employees compared to surface area.

### International Environment Day

Ansaldo STS participates to the International Environment Day, established in 1972 by the United Nations General Assembly, to promote positive global actions to preserve the environment. The initiative aims to raise awareness of the concept of "green economy" and represents one of the opportunities to invite everyone to actively contribute to the environment protection and to the sustainable use of natural resources.





## Health and safety

Ansaldo STS is very mindful of the health and safety of all its employees and of their safety while travelling for work purposes. It has therefore implemented a specific policy for business travels.

The **Travel Security** policy was implemented to minimise the exposure of its international business travellers and assignees to medical and security risks. Its objectives are:

- to identify, manage and reduce all current and emerging risks related to working abroad, in accordance with the provisions of the Consolidated Safety Act and Italian Legislative Decree 231 of 2001;
- to inform and train workers about potential risks in carrying out work abroad;
- to develop appropriate countermeasures to continuously monitor and manage accepted risks;
- to require each employee to comply with the risk mitigation measures set by Ansaldo STS;
- to ensure access to adequate assistance in the event of medical and safety emergencies for all international business travellers and assignees of Ansaldo STS;
- to maintain awareness of the risk levels for travel health and safety in the countries where Ansaldo STS sends its travellers.

The Company **Health and Safety in the Workplace policy** is based on the application of the requirements of relevant standards, namely OHSAS 18001:2007, and other international standards, regarding compliance with national and international regulations. Ansaldo STS develops a

plan focused on continuously improving health and safety standards.

In terms of health and safety, Ansaldo STS undertakes to:

- ensure and maintain a safe and healthy working environment and prevent injuries, illnesses or damage to the health of employees, suppliers, customers and visitors;
- extend the OHSAS 18001 certification to all Ansaldo STS sites, continuously improving the effectiveness of the health and safety in the workplace management system;
- continuously improve the aforementioned management systems' performance, not only with respect to the prevention of injuries and work-related illnesses, but also in terms of more general employee wellbeing;
- adopt risk assessment criteria for all dangers relating to work activities which, in compliance with national and international legislation, also consider best practices;
- increase the training and updating of all employees in order to make them more aware of the risks related to their activities;
- continue developing activities to promote a culture of safety among all suppliers and concerned parties.

This policy is shared with all Ansaldo STS personnel and all concerned parties online and via the company Intranet.





## Health and safety performance

Health and safety performance indicators are monitored and analysed over time, and used to set objectives by breaking them down by risk factor and location. Safety is therefore a strategic must for Ansaldo STS with all workers contributing every day to ensure safety for end users.

INJURIES – FREQUENCY AND SEVERITY INDEX	2016	2017
No. of injuries to Group employees (>1 day of absence, excluding injuries in transit)	14	21
Injury frequency rate (n. injuries / total hours worked x 200,000)	0.44	0.62
Injury severity rate (n. lost days due to injuries / total hours worked x 200,000)	3.73	21.91

The low values recorded by the injury frequency and severity rates at Ansaldo STS over the years make them particularly sensitive to slight variations in the number of accidents and related lost days. This explains the extent of growth to these rates recorded in 2017.

In order to acquire the information needed to improve injury frequency and severity rates, in accordance with the Health and Safety Policy, Ansaldo STS also tracks near misses (accidents without consequences that arise out of undesired or unexpected situations that could have put people at risk), in order to gather and analyse data and information and identify potential solutions in advance.

The main initiatives concerned:

- the implementation of the procedure to manage accidents and near misses at global level: Ansaldo STS has created a procedure to provide information on how to correctly manage events entailing injuries, accidents and near misses. This procedure is a valid prevention and information management tool for statistical purposes, to identify the causes of an accident and meet legal requirements relating to health, safety and hygiene in the workplace;
- the implementation of quarterly HSE reporting to monitor and gather main information on the performance of activities carried out in relation to the application of SGS/SGA. These reports are prepared by all HSE officers of work sites;
- safety meetings for all main work sites.

## Health and Safety Committee

Ansaldo STS also holds meetings pursuant to Article 35 of Italian Legislative Decree no. 81/08, which are attended by the employer (or a representative), the prevention and protection service manager, the doctor, the safety officer and the workers' safety representative. These meetings are called at least once a year and represent 100% of employees of the Italian Group companies to which Italian Legislative Decree no. 81/08 applies.



### Health and Safety and Diversity Management

Ansaldo STS adopts solutions in management and design related to the application of Diversity Management for Health and Safety.

Regarding the design solutions, the Engineering Department considered design requirements deriving from cultural and religious differences; for the subway of Princess Noura University in Riyadh a particular ergonomics of the Operative Central Station has been studied according to the female operator personnel, as well as the requirements and the design constraints of the vehicles (glass, lighting, set-up) for the "privacy" of the female passengers.

To respect the different cultures, religions and customs of colleagues, customers or external interlocutors, Ansaldo STS is very attentive to how it communicates; an example of this is the use of simple "neutral" greeting messages such as "Seasonal Greetings".



# Ethical management of the Supply Chain





*In view of the increasing importance of the supply chain's social and environmental aspects, Ansaldo STS has drawn up new criteria to assess and monitor its suppliers and to define a new action plan to assist them in improving their sustainability.*

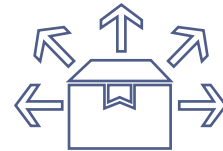
**3,321**  
active suppliers  
in 2017



€ **1,235** mln  
orders in 2017



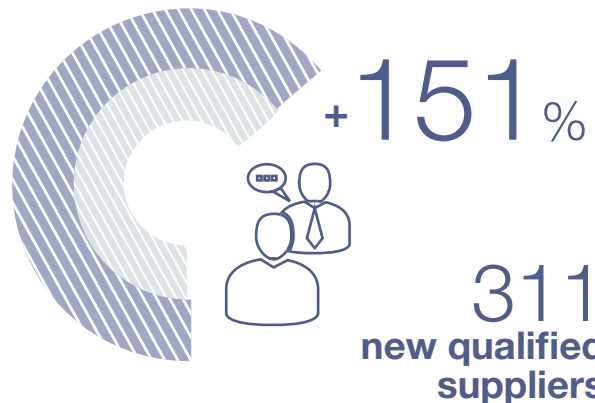
€ **766** mln  
estimated  
remuneration for  
supply chain labour



**150 audits**



on strategic suppliers



**Interdisciplinary  
qualification process**  
coordinated by the  
Supplier Qualification &  
Monitoring, which involves  
the technical office,  
Procurement, Quality  
and the Health, Safety and  
Environmental department

**Commencement  
of work to develop  
the digital platform**



**Qualification  
questionnaire  
integrated with HSE  
aspects:** adoption of  
ISO 14001 and OHSAS  
18001 management  
systems; application  
of REACH/ROHS/  
RAEE regulations,  
data on accidents, non  
conformities, training and  
emergencies



## Targets achieved in 2017

### Ethical management of the supply chain

SDGs	COMMITMENTS UNDERTAKEN IN 2016	ACTIVITIES CARRIED OUT IN 2017
	<ul style="list-style-type: none"> <li>Implement a digital procurement platform with advantages in terms of environmental sustainability and risk management.</li> </ul>	<ul style="list-style-type: none"> <li>Scout and select partners for the implementation of the platform. In recent months, a questionnaire was distributed to the global procurement community (Proof of Concept) to assess this decision and its general implementation.</li> </ul>



Target achieved



Target partially achieved



Target not achieved



Target postponed

## Types of supplies and suppliers

Ansaldo STS considers the supply chain management process a critical factor for the success of its business. Strategic procurement management requires a broad vision of the process along the entire value chain, from the definition of product specifications and service to delivery. Ansaldo STS has adopted an interdepartmental management approach which provides for the involvement and approval of all bodies concerned by the overall logistics.

Given that it designs, builds and operates transportation and signalling systems for railways and urban rail transport, Ansaldo STS's supplies include:

- Materials** – purchase of circuit boards, mechanical and plastic parts, wayside equipment, cables, racks, cabins, industrial PCs, on-board equipment and electromechanical components.
- Services** – facility management and HSE, payroll services, professional and ICT services, logistics services and travel.
- Business services** – engineering and development services and RAMS activities (reliability, maintenance, availability and security).
- Turnkey projects and subcontracts** – the award of a turnkey contract relates to systems that interact with the rest of the technologies for the specific contract, such as installation systems, telecommunications systems, auxiliary braking systems, power supply and systems, supervision and control systems, depots for equipment, signalling systems, rails and civil works.







Orders in 2017 by suppliers' geographic location were as follows:

**2017 ORDERS<sup>17</sup> BY GEOGRAPHIC LOCATION OF SUPPLIER (EUR)**

	Italy/EU <sup>18</sup>	The Americas <sup>19</sup>	Asia Pacific <sup>20</sup>	Other	TOTAL
Materials	107,547,799	65,307,057	64,903,337	3,698,580	<b>241,456,773</b>
Services	313,220,596	17,910,019	15,733,693	2,667,574	<b>349,531,882</b>
Business services	76,669,180	13,060,421	4,314,506	1,224,956	<b>95,269,064</b>
Turnkey projects and subcontracts	231,364,305	139,354,464	147,916,155	29,980,501	<b>548,615,425</b>
<b>TOTAL</b>	<b>728,801,880</b>	<b>235,631,961</b>	<b>232,867,691</b>	<b>37,571,611</b>	<b>1,234,873,143</b>

The number of active suppliers in 2017 increased from 3,250 to 3,321, as shown by geographical area below:

- 58% are European suppliers;
- 21% are suppliers in North/South America;
- 19% are suppliers in Asia Pacific;
- 2% are suppliers based in other areas.

The economic benefit of working with Ansaldo STS can be measured by considering the intensity of its suppliers' workforces. Accordingly, the following should be considered:

- 36% of Ansaldo STS's orders are for labour-intensive services (100%);
- 44% of its orders are for turnkey projects and subcontracts which have an average labour intensity factor of 50%;
- 20% refers to supplies of materials with a medium labour intensity factor of 20%.

Therefore, the labour intensity factor of Ansaldo STS's orders is roughly 62%: approximately EUR 766 million is paid to suppliers to cover their labour costs.

17. Intragroup orders were excluded.

18. Mainly Italy and France, followed by Spain, Sweden, Germany, UK, Belgium, Switzerland and Denmark.

19. Mainly US, followed by Canada and Brazil.

20. Mainly Australia and India, followed by Malaysia and China.





## Selection and qualification criteria

Supplier vetting and the process for the purchase of assets, goods and services are carried out in accordance with the principles of the Code of Ethics and internal quality procedures, as well as current health, safety and environmental regulations. In the management of relationships with suppliers and subcontractors, as for all business and financial dealings of any kind, Ansaldo STS requires its counterparties to conduct themselves in accordance with the principles of loyalty, fairness, transparency, efficiency and legal compliance.

To this end, suppliers and subcontractors are vetted on the basis of objective, transparent and documentable evaluation criteria, in accordance with the principles of the Code of Ethics and all procedures provided for by specific protocols, in writing and in line with the current hierarchical structure.

Supplier qualification is coordinated by the Supplier Qualification and Monitoring Board which operates within the Quality Assurance department. Furthermore, Ansaldo STS has specified that the qualification process

is interdisciplinary and based on the opinions of several units involved therein. This includes the technical, procurement, quality and HSE departments.

Ansaldo STS has revised its supplier questionnaire, introducing specific questions about the environment and safety, directly involving the HSE unit in supplier qualification and defining a list of "sensitive" goods, where the latter unit's involvement is mandatory.

The questionnaire update covered the following HSE aspects:

- introduction of a safety management system compliant with the BS OHSAS 18001 standard;
- introduction of an environmental management system compliant with the UNI EN ISO 14001:2007 standard;
- introduction of sustainability procedures/programmes;
- application of the legislative requirements to comply with the REACH/ROHS/RAEE regulations;
- collection of data about accidents, non-compliance, training and emergencies.

The questionnaire is sent to all new suppliers during the qualification phase.



## Supplier mapping according to HSE criteria

Ansaldo STS has conducted an initial mapping of its supply chain with respect to compliance with Environmental, Social and Governance (ESG) criteria. Indeed, the standard purchase order model includes general supply conditions and compliance with the Code of Ethics; furthermore, when vetting new suppliers, Ansaldo STS gathers information on their compliance with quality, hygiene, health and safety in the workplace standards and their environmental policies and requires certification according to standards ISO 9001, ISO 14001 and OHSAS 18001. These characteristics are preferential requisites and are considered in the eligibility score awarded to each supplier. The results of the mapping were as follows:

SUPPLIER MAPPING	2017	2016	2015
Number of suppliers in the register by direct and indirect product types	16,146	15,025	17,059
Total active suppliers (with orders issued in 2017)	3,321	3,250	2,983
Number of suppliers covering 80% of the value of orders in 2017	136	190	192
Qualified suppliers in 2017 (Classes A and B)	311	124	167
of which <sup>21</sup> :			
ISO 14001 certified suppliers	42	17	15
OHSAS 18001 certified suppliers	37	15	8

21. The figures for 2017 have been estimated in proportion to the 2016 data.



As Ansaldo STS continues to increase its operations in emerging countries, when vetting and qualifying suppliers the Company has established a preference for large companies that, ideally, hold quality, environmental and safety certificates. For this reason, in 2017 there was an increase in the number of qualified Class A and B<sup>22</sup> companies and an increase in those in possession of ISO 14001 and OHSAS 18001 certifications.

Mapping is the first step in the definition of the specific sustainability policy for the supply chain. The main guidelines of this policy will be:

- audit activities on site suppliers, including a review of sustainability performance, with technical controls on products for suppliers of materials;
- collaboration between Ansaldo STS and suppliers in product design;
- activities to inform suppliers about sustainability issues;
- the extension of annual monitoring activities to A Class suppliers.

## The selection process

The supplier vetting and assessment process entails the following stages, in accordance with the procedures established for the management of this process.



Ansaldo STS's Procurement department vets potential suppliers of materials, service providers and, in particular, suppliers of packages/subcontractors, with the support of other company departments (Engineering, Administration and Finance, Legal Affairs, Quality, HSE and Construction). Throughout the entire assessment process, Ansaldo STS verifies that suppliers meet requirements in order to approve them and include them in the list of eligible suppliers for specific goods categories; suppliers registered to the list may then be issued

with purchase orders. Depending on the importance of the product types, the assessment methods used range from a simple analysis of the documents requested and received from the supplier to the preparation of assessment reports following an inspection of the supplier's site. The following departments may request the inspection:

- the Procurement department, for a more reliable assessment of strategic suppliers;
- other departments, when they do not have enough information;

- the Quality department, when the assessment of the supplier's organisational system, quality management system or overall capabilities is not sufficient considering the type and importance of the supply. The assessment team examines the various business areas depending on the type of purchase (materials, services, packages, etc.), on the basis of the required processes (design, supply, assembly, etc.) and, finally, on the basis of their importance.

22. Class A = suppliers with higher business impact; suppliers with medium business impact.





## Eligibility criteria

Drawing on the technical and specialised expertise of the company bodies concerned, the Supplier Qualification and Monitoring department assembles the assessments of potential suppliers prepared by the departments involved in the qualification process according to highly detailed requirements that fall under the following categories:

- financial position and results;
- management, sales and logistics organisation;
- production potential and technical expertise;
- whether it has quality management systems certified by accredited bodies, giving priority to companies with the International Railway Industry Standard (IRIS) certification;
- whether it has environmental management systems and health and safety management systems certified by accredited bodies;
- its willingness to be inspected;
- whether it has been endorsed by the Italian Railway Network or other bodies;
- the identification and traceability of production lots.

Since 2012, the part of the eligibility process entailing the gathering of the above subset of information has been extended to the bidding procedure as well, with the subsequent advantage of reducing the time needed to complete the process once the supplier has been selected.

With a view to continuous improvement, organisational changes have been implemented and the process has been fine-tuned.

150 audits were performed in 2017 on the most important qualified suppliers and 1,300 new suppliers were qualified.

## Contractual tools

Ansaldo STS uses various supporting contracts, depending on the goods and services purchased from a given supplier.

For the product categories relating to basic services, such as ICT (Information & Communication Technology), the supply of energy, global services and logistics (outsourcing of warehouses and transport contracts), Ansaldo STS uses framework agreements.

For standard materials and services, all initiatives favouring long-term arrangements are preferred (framework agreements, partnerships, memoranda of understanding, etc.) with vetted suppliers, and periodic controls on the suppliers' processes are performed, in addition to scrupulous checks of supplies to monitor suppliers' ethical conduct, adequacy, reliability and timeliness.

For project-specific materials and services, Ansaldo STS uses purchase orders. The standard order includes a summary of the general supply terms, legal requirements – with specific reference to the protection of workers

In the United States, it is common practice for customers to require the mandatory allocation of a percentage of the contract to DBEs (Disadvantaged Business Enterprises), which are regulated by federal and state departments. Each DBE must be certified by the relevant Transit Authority.

To meet its contractual obligations in the US, Ansaldo STS has identified and vetted various DBEs with which it may now operate in order to meet the quota required by the contractual targets.

In general, this includes training employees of DBEs to carry out the work usually performed by Ansaldo STS employees in line with labour standards.



and the protection of personal data – and a notice of compliance with the Code of Ethics.

The order includes a description of the characteristics and requirements, quantities and delivery times for the materials and services, and may also refer to specific documents clarifying the technical specifications for more complex devices.

For turnkey packages and contracts, Ansaldo STS agrees ad hoc contracts whereby the contractors undertake, through their organisation, using the necessary means and with management at their own risk, the operation or provision of the relevant plant or service.

Furthermore, all contractual documentation is attached to the contract. This documentation normally consists of the main contract (the contract agreed by Ansaldo STS with the customer), the technical documents defining the scope of the work in detail, detailed project plans, Ansaldo STS's Code of Ethics and legally-required documents (safety and coordination plan and facsimile of workers' protection statements), etc.

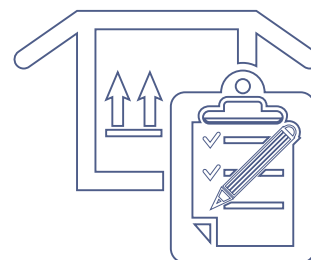


## Monitoring activities

Suppliers are constantly monitored through meetings or communications between them and the Ansaldo STS departments with which they operate (Procurement, PM, Engineering, Quality and Supply Chain Quality, Logistics and Construction). At least once a year, personnel working with suppliers participate in a vendor rating process that takes into account the suppliers' conduct and performance vis-à-vis the supplies ordered, in order to update the suppliers' assessment and establish whether they will remain in the list of Ansaldo STS suppliers. Scores are given in four main areas: Quality, Timeliness, Flexibility and Charges. This monitoring system is applied on a continuous basis only to suppliers of strategic materials, and the results are assessed each quarter. The parameters considered are:

- Price (calculated as the variation in the cost of the product);
- Quality (calculated as the percentage of faults);
- On-time delivery.

The global performance of suppliers remained high, with only 10 suppliers receiving unsatisfactory ratings.



### ACE PROJECT

In 2017, Ansaldo STS continued to strive for the technical and commercial optimisation of external costs, carrying forward the inter-departmental **ACE** project (formerly the **V2A-New Road project launched in 2014**). A few macro categories of costs were considered strategic as part of this project. For each macro category, international and inter-departmental teams were identified to evaluate and implement specific ways of increasing efficiency in the medium and long-term. The performance level achieved is in line with the targets.





# Economic sustainability







*Ansaldo STS's economic sustainability is its strategic response to the macroeconomic context and transportation market trends, based on a business model that develops distinctive abilities and the necessary skills to boost the Company's competitiveness on markets.*



+9.7%

**Orders  
acquired**  
from € 1,476  
to € 1,501 mln



+2.5%

**Revenues**  
from € 1,327  
to € 1,361 mln



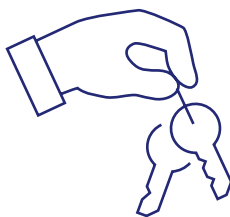
+2.2%

**Value  
distributed to  
stakeholders**  
€ **1,326** mln

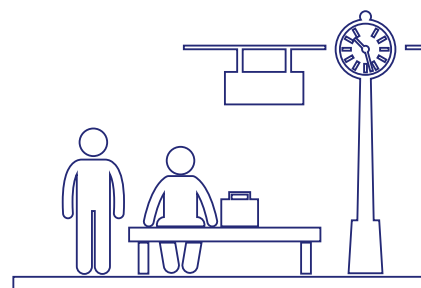
**1,700 Km**  
of lines activated



**70 projects**  
delivered



**285 stations**  
activated



Order portfolio of  
€ **6,457.5** mln



**Customer  
Satisfaction:**  
a system of  
customer monitoring,  
control, reporting  
and discussion tools

**Project Lifecycle  
Management**  
processes to control  
operating risks



## Our Business model

**Economic sustainability is increasingly tied to social and environmental aspects, both at company level and in terms of market scenarios.**

Ansaldo STS has evaluated the repercussions that macrorends involving variables related to the environment, health and safety, demographic growth and economic development in emerging countries will have on the transportation system. According to the analysis, such trends will result in the ever-increasing shift of the global transportation market towards rail transport that is safe, efficient and capable of meeting growing environmental concerns.

Ansaldo STS's abilities and organisation fully meet the need to innovate in order to boost transportation efficiency and safety and reduce the environmental impact.

Indeed, Ansaldo STS is a company that operates in the context of a global market. It boasts great flexibility in meeting international demand and is open to new markets. It carries out research and development for transportation solutions that focus in particular on the environment and safety, facilitating the standardisation of solutions while also developing the ability to create customised products to meet different customer needs. It has the necessary financial stability to meet future challenges, lead innovation and seize growth opportunities by promoting new projects.

With the change in focus on new technologies and capabilities, the Company will develop additional specific competences and adapt its future way of doing business to the evolving transportation and mobility trends.

Ansaldo STS's business model is customer-based, enabling it to forge fruitful, long-lasting relationships at global level.

- **TECHNOLOGICAL LEADERSHIP FOR SAFETY AND ENVIRONMENTAL MATTERS**

Ansaldo STS offers integrated solutions based on technological leadership in terms of safety and the environment, and boasted pronounced technical leadership in certain market segments (ERTMS, driverless, mass transport, high speed).

- **PREFERENTIAL PARTNERSHIPS WITH ROLLING STOCK SUPPLIES**

Ansaldo STS has a consolidated partnership with Hitachi Rail Italy. However, the Company is also capable of adapting to any rolling stock supplier and is flexible in the design and construction of the chosen solution.

- **SOLID ROOTS AND GROWTH WHEREVER THE DEMAND IS**

Ansaldo STS is a technological leader in the west, as well as wielding a presence on emerging markets. It carries out investments in research and development and continually monitors timescales and costs.

- **A PARTNER THROUGHOUT THE CUSTOMER'S ENTIRE VALUE CHAIN**

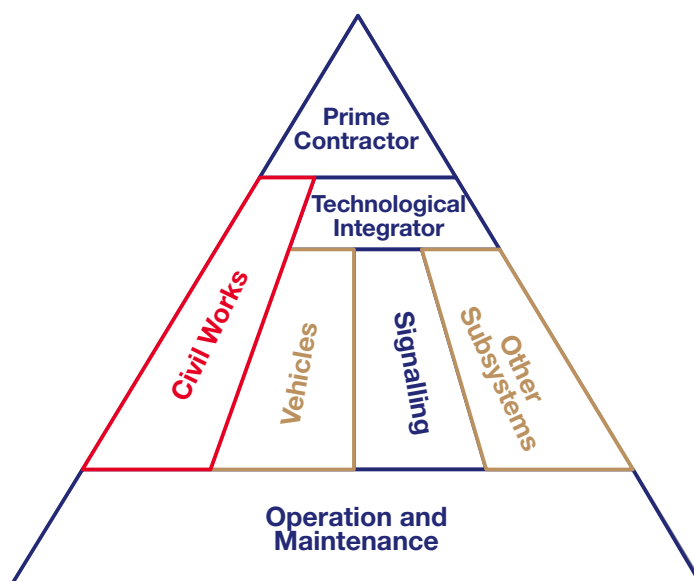
Ansaldo STS is a leader in the supply of cutting-edge integrated transportation solutions, combining traditional and non-traditional technologies and operation and maintenance services.

- **SERVING THE CUSTOMER'S FUTURE NEEDS**

Ansaldo STS can meet new market requirements, such as driverless transportation and the introduction and integration of extremely secure digital technology.

- **GLOBAL ORGANISATION**

The Company is supported by around 4,200 professionals who offer global research, expertise, experience, know-how and best practices wherever the market needs them.





## Strategy

Ansaldo STS is committed to maintaining and developing a series of distinctive abilities and expertise that create value and guarantee long-lasting company growth over time.

This commitment can be seen in the Company's four strategic directions:

**1. ORGANIC GROWTH:** to leverage its strong position in growing geographical areas and business lines to achieve better results than the reference market.

**2. NON-ORGANIC GROWTH:** to define strategic partnerships and evaluate investments that are instrumental to the Company's growth in specific areas and/or business sectors.

**3. ORGANISATIONAL STANDARDISATION:** to adapt the operating model in accordance with business requirements and its future developments.

**4. EFFICIENCY AND EFFICACY:** to optimise the product platforms in line with future technologies, and continue to work on the continuous improvement process in order to strengthen its competitive position and ensure excellence in the execution of its activities.

## Economic value generated and distributed

Ansaldo STS recognises the importance of balancing the distribution of value generated by its activities to stakeholders who have directly or indirectly contributed to its creation.

By analysing distributed economic value, Ansaldo STS studies the flow of resources directed towards its employees, suppliers, service providers, lenders, public authorities and the communities in which it operates.

ECONOMIC VALUE GENERATED AND DISTRIBUTED (figures in EUR/000)		2017	2016
<b>Economic value generated</b>		<b>1,414,318</b>	<b>1,362,831</b>
Revenue		1,360,967	1,327,386
Other revenue		24,567	18,659
Financial income		28,784	16,786
<b>Economic value distributed</b>		<b>1,325,922</b>	<b>1,297,730</b>
Operating costs (procurement, services and investments)		913,115	849,608
Employee remuneration		334,220	332,338
Shareholder remuneration		0	36,000
Lender remuneration		40,315	37,466
Public administration remuneration		37,408	41,579
Donations and sponsorships		864	739
<b>Economic value invested into the business</b>		<b>88,396</b>	<b>65,101</b>
Depreciation, amortisation, impairment losses and adjustments		23,528	23,198
Self-financing		64,868	41,903

The **value generated** by the Group in 2017 amounts to approximately **EUR 1.41 billion** (+3.8% compared to 2016), while the **value invested by the Company** - mainly consisting of self-financing, amortisation, depreciation, impairment losses and accruals to provisions for risks - is **EUR 88.4 million** (+35.8%).

Almost **EUR 1.33 billion** (+2.2% compared to 2016) was distributed and divided among the following stakeholders as shown below:

- the largest amount, EUR 913.1 million, relates to costs incurred to purchase materials (suppliers), services (contractors and subcontractors) and other goods;
- approximately EUR 334.2 million was distributed to employees, mainly for wages, salaries, social security and pension contributions and defined contribution plans;
- approximately EUR 40.3 million relates to lenders for interest and commissions, financial expense and operating exchange rate differences;
- EUR 37.4 million was paid to the tax authorities and other local bodies for direct and indirect taxes;
- EUR 0.86 million went to the community in the form of gifts, donations and sponsorships (with or without publicity).



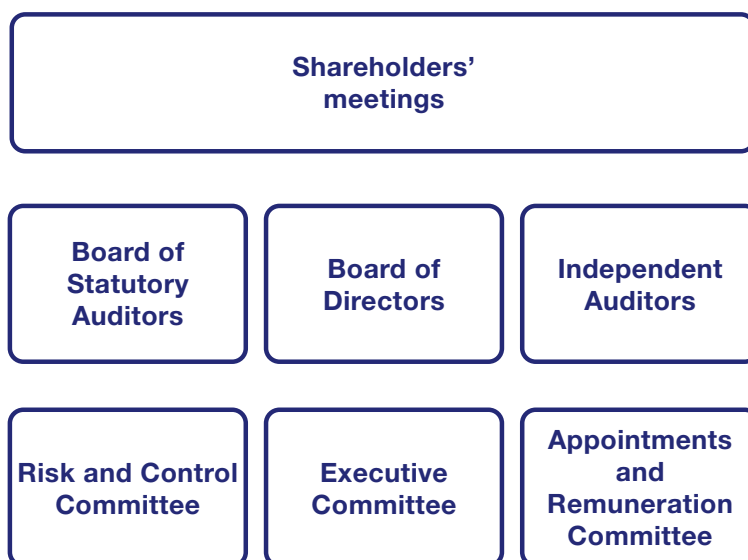


## Corporate governance

Ansaldo STS adopts a Corporate Governance System that is based on the highest standards of transparent business management and fair practice. The system complies with the provisions of law and with the regulatory provisions of CONSOB and Borsa Italiana. It is also in line with the contents of the Corporate Governance Code for listed companies adopted by Borsa Italiana S.p.A. which Ansaldo STS has implemented, and international best practices.

The Corporate Governance System is aimed at maximising value for shareholders, monitoring business risks, transparency with the market and reconciling the interests of all shareholders, with particular attention to minority shareholders.

Ansaldo STS's Corporate Governance System is based on a traditional model and is composed as follows:



The company's main corporate governance tools today are listed below:

### STRUMENTI

- By-laws;
- Code of ethics;
- Organizational, management and control model pursuant to Legislative decree no. 231/01;
- Shareholders' meeting regulations;
- Board of directors' regulations;
- Risk and control committee regulations;
- Appointments and remuneration committee regulations;
- Executive committee regulations;
- Related party transactions - procedure adopted pursuant to article 4 of Consob regulation no. 17221 of 12 March 2010;
- Procedure for keeping and updating the list of persons with access to privileged information;
- Procedure for the management and communication of privileged and confidential information;
- Internal dealing code of conduct.



## Management bodies

### Board of Directors

Ansaldo STS's Board of Directors has the broadest powers for the management of the Company, with the power to take any and all suitable action to achieve the Company's mission. Directors are appointed for up to three years and can be re-elected.

The current Board of Directors, appointed by the Shareholders' Meeting of 13 May 2016, is composed of nine Board Members.

BOARD OF DIRECTORS IN OFFICE										Control and Risks Committee		Appointments and Remuneration Committee		Executive Committee	
Office	Members	In office since	In office until	List (M/m)*	Executive	Non executive	Independent from Code and TUF	No. Other appointments	**	*	**	*	**	*	**
Chairman	<b>Alistair Dormer</b>	2 November 2015	Shareholders' Meeting to approve the 2018 Financial Statements	M	x	-	-	1	11/13	-	-	-	-	Chairman	8/10
Deputy Chairman	<b>Alberto De Benedictis</b>	13 May 2016	Shareholders' Meeting to approve the 2018 Financial Statements	M	-	x	x	-	13/13	Chairman	9/9	x	9/9	-	-
Managing Director	<b>Andrew Thomas Barr</b>	13 May 2016	Shareholders' Meeting to approve the 2018 Financial Statements	M	x	-	-	-	13/13	-	-	-	-	x	10/10
Director	<b>Rosa Ciprotti</b>	13 May 2016	Shareholders' Meeting to approve the 2018 Financial Statements	m	-	x	x	3	12/13	-	-	-	-	-	-
Director	<b>Michele Alberto Fabiano Crisostomo<sup>23</sup></b>	19 January 2017	Shareholders' Meeting to approve the 2018 Financial Statements	m	-	x	x	-	13/13	-	-	-	-	-	-
Director	<b>Mario Garraffo</b>	13 May 2016	Shareholders' Meeting to approve the 2018 Financial Statements	M	-	x	x	2	9/13	x	8/9	x	7/9	-	-
Director	<b>Fabio Labruna</b>	13 May 2016	Shareholders' Meeting to approve the 2018 Financial Statements	m	-	x	x	1	12/13	-	-	-	-	-	-
Director	<b>Katherine Jane Mingay</b>	13 May 2016	Shareholders' Meeting to approve the 2018 Financial Statements	M	-	x	-	-	13/13	-	-	-	-	x	10/10
Director	<b>Katharine Rosalind Painter</b>	13 May 2016	Shareholders' Meeting to approve the 2018 Financial Statements	M	-	x	x	-	13/13	x	9/9	Chairman	9/9	-	-

\* Elected from the list by majority (M) or minority (m) vote.

\*\* Participation in Board and Committee meetings respectively during the period considered (no. of meetings attended/no. of meetings held during the term of office).

### Activities of the Board of Directors and assessment of its performance

In 2017, the Board held 13 meetings. The average length of the Board meetings in 2017 was approximately three hours and twenty minutes.

At the meeting of 28 July 2017, the Board of Directors considered the appointment of an external consultancy firm to carry out a "Board performance evaluation" in order to jointly share the approach to be adopted; the consultancy firm was subsequently instructed to carry out the evaluation.

### Executive and non-executive authority

The Board is mainly composed of non-executive directors who exercise, due to their number and authority, a significant weight in the assumption of Board decisions.

At present the remaining 7 members, not including the Managing Director and Chairman, are non-executive directors.

Although not holding an executive position within the Company, the Chairman is considered as an executive member due to the position held within the Hitachi Group<sup>24</sup>.

23. It is noted that the Ordinary Shareholders' Meeting of 19 January 2017 resolved to initiate a corporate liability action pursuant to Article 2393 of the Italian Civil Code against Mr. Bivona - a Director appointed by the Ordinary Shareholders' Meeting of 13 May 2016 - whose appointment was subsequently revoked. The Meeting proceeded to appoint Mr. Michele Alberto Fabiano Crisostomo as a Director of the Company to replace Mr. Bivona, the former having declared possession of the requirements of independence provided for by the Code.

24. Pursuant to the provisions of the Corporate Governance Code.



## Independence

Based on the statements of the above parties or on the information at the Company's disposal, the Board of Directors evaluates whether the independent directors are party to relationships that could jeopardise their independent judgement.

Furthermore, the Board of Statutory Auditors confirms that the evaluation criteria and procedures have been correctly implemented.

The current Board of Directors is composed of six Independent Directors. In 2017, no meetings between these Directors were deemed necessary or convened.

## Requirements and skills

Pursuant to the Articles of Association, in order to take office as Director, one must not only meet the requirements of honourableness provided for by current legislative and regulatory provisions but must also meet the specific requirements of professionalism. In particular, candidates may not be appointed as Directors of the Company if they do not have at least three years of overall experience in the following:

- administration or supervision activities or managerial duties with companies with a share capital of at least EUR 2 million;
- professional activities or university teaching as a full professor of legal, economic, financial or technical/scientific subjects closely related to the Company's business activity; or
- senior management functions with public bodies or administrations active in the credit, financial and insurance sectors or, in any case, in industries which are closely related to the Company's business activity.

The Board of Directors verifies that these requirements are met by each of its members.

## Induction programme

On 26 October 2016, a specific "induction" session aimed at Company Directors and Auditors was held, aimed at providing an appropriate understanding of the sector in which Ansaldo STS operates, the Company dynamics and their evolution, the principles of correct risk management and the relative legislative and corporate governance framework. In 2017, a session was also held to explore legal issues relating to the Company's specific business, aimed at the new Board of Statutory Auditors appointed at the Ordinary Shareholders' Meeting of 11 May 2017.

In 2018, general induction courses on business topics are being considered, as well as other specific sessions on certain themes of interest to the Company.

## Other positions held by Directors

The Board of Directors has adopted an internal regulation regarding the "Guidelines for the maximum number of positions which may be held by Directors of Ansaldo STS S.p.A.", aimed at regulating the maximum cumulative limit of Director or Auditor positions that Ansaldo STS Directors may fulfil.

As at 27 February 2018, the composition of the Board of Directors is in line with the above general criteria, as demonstrated by the self-assessment process.







### Diversity policies

The diversity policies adopted by the Company regard the gender balance of members of the Board of Directors and the Board of Statutory Auditors. Pursuant to the Articles of Association, at least one third of members of the Governance and Control bodies must be composed of members of the least represented gender<sup>25</sup>.

The current composition of the Board of Directors and the Board of Statutory Auditors demonstrates suitable diversity in terms of age, professional and educational background, independence and representation of minority groups, as can be inferred in the Report of the Board of Directors on the Corporate Governance System and in the curricula of the relative members<sup>26</sup>.

BOARD OF DIRECTORS BY AGE AND GENDER	2016		2017	
	MEN	WOMEN	MEN	WOMEN
< 40	-	-	-	-
40-50	2	1	2	1
51-60	2	2	2	2
> 60	2	-	2	-
<b>TOTAL</b>	<b>6</b>	<b>3</b>	<b>6</b>	<b>3</b>

BOARD OF STATUTORY AUDITORS BY AGE AND GENDER	2016		2017	
	MEN	WOMEN	MEN	WOMEN
< 40	-	-	-	-
40-50	-	-	2	1
51-60	1	1	-	-
> 60	1	-	-	-
<b>TOTAL</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>1</b>

### Appointment of Directors

The Directors are appointed at the Ordinary Shareholders' Meeting according to a list voting system. Each list must include two candidates who meet the independence requirements provided for by law, indicating them separately and placing one at the top of the list.

Lists with three or more candidates must include candidates of different

genders, so that the new Board of Directors includes members of the least represented gender.

In order to ensure the effective participation of non-controlling owners in corporate management and the transparency of the selection and appointment process for directors, the Articles of Association explicitly enable each shareholder to submit or participate in the

submission of one list only, that each candidate can be presented in one list only or will be considered ineligible and that each eligible voter can vote for one list only.

For additional information on the appointment of the Board of Directors during the Ordinary Shareholders' Meeting of 13 May 2016, reference should be made to the Company's website<sup>27</sup>.

25. In line with the provisions of Article 147-ter, paragraph 1-ter of the Consolidated Law on Finance [TUF] and current law on gender equality.

26. <http://www.ansaldo-sts.com/en/governance/board-directors>

27. <http://www.ansaldo-sts.com/en/governance/board-directors/appointment>



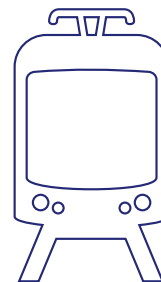
### Directors' remuneration

The Company remuneration policy aims to attract, retain and motivate a management team characterised by highly professional qualities which is able to successfully manage the Company.

On 24 March 2017, the Company's Board of Directors, following prior approval by the Appointments and Remuneration Committee, approved the Company's remuneration policy for 2017 and the remuneration report, which are published on the Company's website<sup>28</sup>.

In line with the recommendations of the Corporate Governance Code, the remuneration policy envisages:

- a fixed component, represented by:
  - for the Managing Director and General Manager: the amount resolved at the Meeting at the time of appointment; the amount resolved by the Board of Directors upon the proposal of the Appointments and Remuneration Committee (for the Managing Director, the opinion of the Board of Statutory Auditors is also considered);
  - for Non-Executive Directors: the amount resolved at the Meeting at the time of appointment;
  - for Managers with Strategic Responsibilities: the gross annual fixed salary envisaged by the individual contract signed with the Managers with Strategic
- Responsibilities, in line with the provisions of the applicable Collective Labour Agreement.
- a variable component, comprising, for the Managing Director, General Manager and Managers with Strategic Responsibilities:
  - a variable short-term bonus scheme based on the achievement of pre-determined performance objectives set on an annual basis (Management by Objectives or "MBO");
  - a cash-based Long Term Incentive Plan, structured on the basis of rolling three-year periods and subject to the achievement of economic and financial targets;
  - a variable medium/long-term Stock Grant Plan, structured over a number of years<sup>29</sup>.



## Committees

In order to increase the efficiency and effectiveness of the work of the Board of Directors, the Risk and Control Committee, the Appointments and Remuneration Committee and the Executive Committee have been established within the Board and in accordance with the criteria of the Corporate Governance Code adopted by the Company.

### Risk and Control Committee

The Committee is composed of three Non-Executive and Independent Directors. The Committee was appointed on 16 May 2016 by the Board of Directors, which examined the accounting and financial experience of its members. The Committee meetings are governed by an internal regulation which is available on the Company website<sup>30</sup>.

### Appointments and Remuneration Committee

The Committee is composed of three Non-Executive and Independent Directors. It was appointed on 16 May 2016

by the Board of Directors, which evaluated and confirmed that at least one member possesses appropriate knowledge and experience of financial matters or remuneration policies. The Committee's activities are governed by an internal regulation which is available on the Company website<sup>31</sup>.

### Executive Committee

The Executive Committee was formed upon the resolution of the Board of Directors. It is composed of three Board Members, including the Chairman and the Managing Director, and is responsible for the assessment and approval of tenders aimed at securing, for public and private clients, contracts worth between EUR 150 million and EUR 350 million per individual operation. The Committee's activities are governed by an internal regulation which is available on the Company website<sup>32</sup>.

28. <http://www.ansaldo-sts.com/en/documents/report-remuneration-2>

29. For more information, refer to the Stock Allocation Plan Document available on the Company website <http://www.ansaldo-sts.com/en/documents/informative-document>

30. <http://www.ansaldo-sts.com/en/governance/control-and-risk-committee>

31. <http://www.ansaldo-sts.com/en/governance/nomination-and-remuneration-committee>

32. <http://www.ansaldo-sts.com/en/governance/bid-committee>



## Management of conflicts of interest

### Internal dealing

As regards the internal procedures for the management and disclosure of Company information, on 24 March 2006 the Board of Directors resolved to adopt a Code of Conduct for Internal Dealing; this Code was subsequently updated on 28 July 2017<sup>33</sup>. The Code aims to regulate the data streams regarding operations on the shares issued by the Company or other associated financial instruments, by parties, including by way of third parties, who hold administrative, management or control positions within the Company or who are otherwise closely related to them<sup>34</sup>. Furthermore, these include transactions carried out by “relevant parties”, or rather parties holding a stake of at least 10% of the share capital of the Issuer or with a controlling interest in the Company, as well as parties closely related to them<sup>35</sup>.

Furthermore, the Code of Conduct on Internal Dealing envisages<sup>36</sup> a so-called “Blocking period” i.e. a closure period of 30 calendar days before the announcement of the approval of a financial report, during which parties who exercise administrative, control or management powers are expressly prohibited from performing operations on their own behalf or on that of third parties, directly or indirectly, in relation to Company shares and credit securities, or other associated derivatives or financial instruments.

Disclosures on internal dealing are published on the Company website<sup>37</sup>.

### Related Party Transactions

CONSOB Regulation no. 17221 of 12 March 2010 contains a set of rules for transactions by publicly traded companies or regarding shares held by the public with related parties, aimed at improving the transparency and effective and procedural fairness of such transactions carried out by the companies, both directly or through subsidiaries. The primary aim of these guidelines is to reinforce the protection of minority shareholders and other stakeholders, combating any abuse that may arise from the transactions made with related parties and pursuing the effective and procedural correctness of the operations.

In order to implement the provisions of the Regulation, on 26 November 2010, the Board of Directors of Ansaldo STS S.p.A., upon prior approval of the Procedures Committee, approved the *Procedure for Related Party Transactions*<sup>38</sup>; on the same date, the Board of Statutory Auditors of the Company certified the consistency of the same with the principles indicated in the Regulation. On 4 November 2013, having consulted with the Procedures Committee, the Board of Directors confirmed the adequacy of the procedure and did not make any substantial amendments.



33. [http://www.ansaldo-sts.com/sites/ansaldosts/files/downloadspage/asts\\_internal\\_dealing\\_code.pdf](http://www.ansaldo-sts.com/sites/ansaldosts/files/downloadspage/asts_internal_dealing_code.pdf)

34. As defined by Article 19 of EU Regulation no. 596/2014.

35. According to the provisions of Article 152-sexies of CONSOB Regulation no. 11971/1999

36. In compliance with the provisions of Article 19 of EU Regulation no. 596/2014.

37. <http://www.ansaldo-sts.com/en/governance/internal-dealing-communications>

38. [http://www.ansaldo-sts.com/sites/ansaldosts/files/downloadspage/procedure\\_related\\_parties\\_transactions.pdf](http://www.ansaldo-sts.com/sites/ansaldosts/files/downloadspage/procedure_related_parties_transactions.pdf)





## Internal control and risk management system

Ansaldo STS's internal control and risk management system provides for the involvement of the following officers:

- Board of Directors and Risk and Control Committee
- Director responsible for the internal control and risk management system.
- Internal Audit department and Manager.
- Executive responsible for preparing the Company's financial reports.
- Board of Statutory Auditors.
- Supervisory Body pursuant to Italian Legislative Decree no. 231/2001.
- Employees.

With the assistance of the Risk and Control Committee and on the basis of the activities of the Director responsible for the internal control and risk management system, the Board of Directors defines guidelines for this system, in order that the main risks to which the Company and its subsidiaries are exposed are correctly identified, measured, managed and monitored, in line with the Company's strategic objectives.

The methodological approach taken to evaluate and manage the internal control and risk management system refers to the internationally recognised Enterprise Risk Management framework of the Committee of Sponsoring Organisations of the Treadway Commission (COSO report).

The Internal Audit department prepares the audit programme which is then approved by the Board of Directors, while the department manager reports regularly to the Risk and Control Committee.

In order to ensure that the conduct of all those operating on the Company's behalf or in its interests is always consistent with the principles of correctness and transparency in all business dealings and Company activities, Ansaldo STS has adopted an Organisational, Management and Control Model (the "Model") in line with the requirements of Italian Legislative Decree no. 231/01 and the guidelines issued by Confindustria. The Code of Ethics is an integral part of this Model. Furthermore, the Company has set up a Supervisory Body to monitor application of the Model.

The Model was most recently updated with the Board of Directors' resolution of 28 July 2017 and is available on the Company website<sup>39</sup>.

All employees, to the extent of their role and within the limits of the duties entrusted to them and their respective skills and responsibilities, contribute to the effective operation of the Internal Control and Risk Management System, reporting to their manager any anomalies that may come to their attention.

Any conduct contrasting with the ethical principles provided by the Code of Ethics or the indications of the Model can be anonymously reported to the Supervisory Body, which evaluates the reports in accordance with the relevant company procedure currently in place.

No reports of non-compliance to the Code of Ethics and/or the Model adopted by the Company were received in 2017.



39. <http://www.ansaldo-sts.com/en/governance/internal-control-and-risk-management-system/organizational-model>



## Board of statutory auditors

The Board of Statutory Auditors carries out inspections and audits in order to oversee compliance with the law, the Articles of Association and the principles of correct management. It is also charged with supervising the statutory audit of the annual separate and consolidated accounts and certifying the independence of the Independent Auditors, including with regard to services not related to the Company audit<sup>40</sup>.

The current Board of Statutory Auditors was appointed by the Ordinary Shareholder' Meeting held on 11 May 2017. The Board is composed of three Standing Auditors and three Alternate Auditors. The Board met 18 times in 2017; the average duration of the meetings was around three hours.

The members of the Board, their characteristics and their participation at meetings are shown in the tables below.

## Board of Statutory Auditors in office as of 11 May 2017

Office	Members	In office since	In office until	List (M/m) *	Independent (from the Code)	No. other positions	Participation at Board of statutory auditors meetings **	Participation at Board of Directors' Meetings **
Chairman	<b>Antonio Zecca</b>	11 May 2017	Shareholders' Meeting to approve the 2019 Financial Statements	m	x	-	8/8	8/8
Standing auditor	<b>Giovanni Naccarato</b>	11 May 2017	Shareholders' Meeting to approve the 2019 Financial Statements	M	x	1	8/8	8/8
Standing auditor	<b>Alessandra Stablini</b>	11 May 2017	Shareholders' Meeting to approve the 2019 Financial Statements	M	x	5	8/8	6/8

## Board of Statutory Auditors in office from 1 January to 11 May 2017

Office	Members	In office since	In office until	List (M/m) *	Independent (from the Code)	No. other positions	Participation at Board of statutory auditors meetings **	Participation at Board of Directors' Meetings **
Chairman	<b>Giacinto Sarubbi</b>	15 April 2014	Shareholders' Meeting to approve the 2016 Financial Statements	m	x	9	10/10	5/5
Standing auditor	<b>Renato Rigetti</b>	15 April 2014	Shareholders' Meeting to approve the 2016 Financial Statements	M	x	-	10/10	5/5
Standing auditor	<b>Maria Enrica Spianrdi</b>	15 April 2014	Shareholders' Meeting to approve the 2016 Financial Statements	M	x	-	9/10	4/5

\* List from which each auditor was appointed (majority [M] or minority [m]).

\*\* Participation at Board meetings (no. of meetings attended/no. of meetings held).

40. For more details on the activities of the Board of Statutory Auditors, reference should be made to the "Directors' Report on the Corporate Governance System and the Implementation of the Corporate Governance Code for Listed Companies for 2017" [http://www.ansaldo-sts.com/sites/ansaldosts/files/downloadspage/corporate\\_governance\\_report\\_ex\\_art\\_123\\_-\\_bis\\_of\\_the\\_consolidation\\_act\\_on\\_finance\\_tuf\\_0.pdf](http://www.ansaldo-sts.com/sites/ansaldosts/files/downloadspage/corporate_governance_report_ex_art_123_-_bis_of_the_consolidation_act_on_finance_tuf_0.pdf)



## Anti-corruption

**Ansaldo STS promotes the fight against corruption in all its different forms at all levels and within the scope of its business, whether active or passive, direct or indirect, involving subjects related to the public or private sector.**

In this context, Ansaldo STS has adopted a "zero tolerance" approach, which entails that the Company does not tolerate any kind of corruption, in any form, manner or jurisdiction in which it may occur, including therein any conduct that may be permitted, tolerated or not prosecuted in the countries in which the Group operates.

Ansaldo STS, despite not having a specific formalised policy - that the company aims to adopt during the year 2018 - has implemented a corruption risk management system based on several control tools to combat and prevent corruption-related behaviour that together constitute the system of policies adopted by Ansaldo STS in the fight against corruption. Among these tools, Ansaldo STS S.p.A. considers particularly important its adoption of the Organisation, Management and Control Model pursuant to Italian Legislative Decree no. 231/2001, the body of corporate procedures and also the due diligence activities carried out on the third parties with which Ansaldo STS deals.

The main risk areas, including direct risks and the areas that could potentially facilitate acts of corruption, subject to the requirements of the Model, are mainly sales, contract management, procurement, sites, administration, finance and control, HR and soft loans.

The Group's Code of Ethics serves as a tool to control and mitigate corruption risk. Compliance with the principles and rules of conduct contained therein enable Ansaldo STS and the Group companies to prevent certain illegal conduct or offences - including those that are corruption-related and as required by the regulations of the various countries in which the Ansaldo STS Group operates - from being committed by corporate representatives. In particular, through the Code of Ethics, the Company promotes and applies a corporate culture inspired by responsibility, correctness and integrity in the conduct of daily activities, paying maximum attention to the professional conduct of its recipients.

The above-mentioned Code of Ethics is complemented by the Organisation, Management and Control Model pursuant to Italian Legislative Decree no. 231/2001 approved by the Board of Directors of Ansaldo STS, which contains specific principles of conduct and control aimed at preventing and mitigating the risk of committing corruption-related offences as set out by Italian Legislation and specifically referred to in Articles 25 and 25-ter of Legislative Decree no. 231/2001.

In order to ensure the comprehensive acknowledgement of the Organisational, Management and Control Model pursuant to Italian Legislative Decree no. 231/2001 by all personnel, all employees receive a report whenever updates

are made to the Model. In addition, a new e-learning training programme was recently offered to nearly all employees of Ansaldo STS S.p.A. Employees working in at-risk areas, as well as executives and middle managers, sign periodic statements to certify the respect of the Model and, when needed, to describe the most significant relationships with customers and representatives of the public authorities.

The prevention and fight against corruption-related conduct are also supported by a well-structured and comprehensive body of corporate procedures, applicable - where possible - to all Group companies. These procedures govern the conduct of company transactions and operations so as to ensure the identification of the persons responsible for the decision-making and authorisation process and provide traceability, enabling the identification, *inter alia*, of the reasons for the decisions made and the persons to be held accountable for them. The corporate body of procedures specifically governs and defines those which, due to their very nature or to the type of parties involved, including external parties, are potentially vulnerable to the risk of corruption.

In order to mitigate, *inter alia*, the risk of corruption, Ansaldo STS has defined, as a tool to combat this problem, a process to assess the various types of third parties with whom it deals, both within the scope of business activities and for ordinary corporate operations. This process includes, in view of the multiple risk profiles that can be associated with the third parties involved, a range of assessment tools aimed at verifying, *inter alia*, the existence of potential indicators of a high risk of corruption.

In order to further equip itself with effective prevention tools against the occurrence of potential corruption-related events, Ansaldo STS has launched a process at Group level aimed at analysing its own corruption risk management system and to identify possible areas for improvement. This activity was carried out in compliance with the Company's international vocation and took into consideration the Best Practices in this area and the main international Guidelines and Conventions concerning the prevention and fight against corruption. To ensure the uniformity and completeness of the risk management systems adopted by the Company, the activity was carried out in a fully integrated manner and in full coordination with the risk management tools defined pursuant to Italian Legislative Decree no. 231/2001.

The improvement initiatives identified at the end of the aforesaid analysis will refine the current corporate corruption risk management system, with a view to increasing the effectiveness of the mitigation instruments that concern combating and preventing corruptive phenomena, including





those at an international level. In this regard, Ansaldo STS has drawn on industry's best practices to support the analysis described above.

As a result of this analysis, Ansaldo STS is in the process, *inter alia*, of:

- refining its Corporate Governance system, by means of an extensive allocation of further specific roles and responsibilities within the corruption risk management system, also from a Group perspective;

- strengthening the existing monitoring tools and control mechanisms designed to control the corruption risk, and to define additional tools;
- strengthening the tools for disseminating the elements of its corruption risk management system to its staff, and improving its awareness and training.

Finally, it should be noted that no cases of corruption involving the Company and/or its employees were observed during the year.

## Customer satisfaction

**Customer satisfaction is central to Ansaldo STS's strategy: the ability to understand customers' needs and expectations and meet them is the most important value upon which it bases its company culture. In general, each customer is assigned a specific contact at Ansaldo STS, generally the Project Manager overseeing its contract.**

The Project Manager is responsible for ensuring the customer is satisfied, responding to any issues that might arise over the course of the contract.

The organisation of proposal and project management activities is fundamental to carrying out a project that meets the quality requirements of the products and services offered and ensures their provision according to deadline and budget restrictions.

To this end, the objective of project management is to protect the interests of Ansaldo STS's stakeholders, including shareholders, who are mainly focused on the results of the business, and its customers, who want to receive top quality responses according to established schedules in line with the transportation needs of a city or the community at large.

In this area, the most significant development in market dynamics

in recent years has entailed the progressive shift from the provision of products and technologies to the increased customer demand for turn-key transportation solutions that efficiently meet the needs of local and national institutions. This new type of offer requires the ability to support our customers, who are increasingly considered less as buyers and more as partners, in the management of a project throughout its entire life cycle.





## Management of customer satisfaction

Customer Satisfaction (“CS”) activities are handled by a dedicated team made of the managers of the various departments: System Assurance & Control, Railways & Mass Transit Business Unit, Freight Business Unit, Operations and HSE, Facility Management & Physical Security.

Customer Satisfaction activities take place at various stages and are carried out using different tools to accurately monitor the level of customer satisfaction and project status until the completion of the project. These tools include:

- **Customer Satisfaction Monthly Meeting:** monthly meetings via video-conferencing to discuss CS activities and reach decisions on the steps to be taken.
- **Customer Satisfaction Quarterly Reports:** quarterly reports prepared with the support of the business unit managers on projects where Customer Satisfaction is critical. The Project Manager is responsible for reporting on critical points (in terms of planning, quality and costs) and the related mitigation action. A statistical analysis on the development of these critical points is attached to the report.
- **Customer Satisfaction Survey:** a series of one-on-one interviews with top representatives of a sample of customers. The survey is carried out using a specific questionnaire.

CUSTOMER SATISFACTION SURVEY	2016	2017
Number of customer satisfaction surveys received	8	7

- **Complaints Management:** the Project Managers are responsible for recording customers’ complaints, which are sent each quarter to the Customer Satisfaction Coordinator, until the complaint is resolved. The Customer Satisfaction Team checks and records

all information and, twice a year, prepares a global analysis. This analysis is used as the basis to calculate the “customer complaint” KPI.

- **Customer Satisfaction of Project Teams:** customer satisfaction is evaluated for each key project considering the following main aspects: costs, planning, service quality and product quality. The Regional BU managers gather the results of these surveys from the Project Managers. Finally, the CS Team checks the global results and their consistency with expectations.
- **Customer Satisfaction Reports:** reports prepared twice a year by the Customer Satisfaction Process Owner. These reports summarise CS activities in the period (CS of the Project Teams, complaints analysis and focus on various projects) and are sent to the Company’s top management. Such reports are included in the Management Review.

### Control of operational risks and opportunities related to projects

Actions to mitigate risks and increase opportunities linked to the quality, timing and costs of projects include:

- the adoption of Project Risk Management processes, both during the bidding and project performance stages, to minimise the consequences of negative events and maximise the impact of positive events, through constant monitoring of risks, mitigation possibilities and opportunities;
- the clear assignment of responsibilities to the Project Manager, project controller and project team;
- the periodic review of the project and the estimates during the tendering phase;
- the periodic monitoring and reporting of projects by the Risk Management department;
- the independent review of key projects by the Risk Management department.

## Customer communications

Ansaldo STS communicates with its customers and the market in general in order to contribute to the creation of value, improving the way in which the brand is perceived by the many professionals who participate the decision-making process regarding investments and the main operating activities.

Institutional communications target the top management of major national railway companies and the public authorities of urban areas interested in transportation solutions,

the operating units of customers assigned to the performance of contracts, the technical and contractual supervisory bodies appointed by customers or required by local legislation, professional industry associations and opinion makers.

The objective of technical and business communication is to inform the various professionals who are most active in areas such as qualification with customers, design, implementation, commissioning, approval, after-sales

service, staff training and workers’ safety at the sites.

It pursues these objectives by creating a work community that can adjust its response to the market in terms of timing and procedures by participating in trade fairs, appearing in specialised publications with institutional and product advertisements, along with articles detailing certain aspects, company publicity on the website, publishing leaflets and broadcasting of videos for sales and marketing.



## A year of events: tradeshow and advertising campaigns

MONTH	EVENT	LOCATION
March	2-4 EurasiaRail	Istanbul
April	5-6 Smart Rail Europe	Amsterdam
	25-26 MetroRail	London
	25-27 MetroLatam	Lima
May	9-11 RailTex	Birmingham
	15-17 UITP	Montreal
	16-19 RailExpo	Teheran
September	17-19 RSSI	Indianapolis
October	3-5 Expoferroviaria	Milan
	8-11 APTA	Atlanta
	10-12 Elmia Nordic Rail	Jonkoping
November	6-8 CBTC World Congress	Paris
	21-23 AusRail	Brisbane

For Ansaldo STS, the trade fair is without a doubt one of the most important sales and marketing tools, where privileged contact is made between the exhibitor company and the stakeholder. It is a strategic tool for being in the front line and for building customer relations.

The following trade fairs are of particular note:

### APTA EXPO, Atlanta (Georgia)

For the first time, Ansaldo STS, Hitachi Rail Italy and Hitachi Vantara participated in the most important Mass Transit trade fair in the United States.

The event is attended by more than 12,000 leaders in over 75 countries, with over 800 exhibitors united in an exhibition space extending for around 27 thousand square metres.

During this event, Ansaldo STS was able to introduce North American customers to products such as: CBTC, Full System Capabilities, High Speed Rail, Switch Machine, Central Office Solutions, MicroLok-Vipro and MTA Project.

### Expoferroviaria, Milan (Italy)

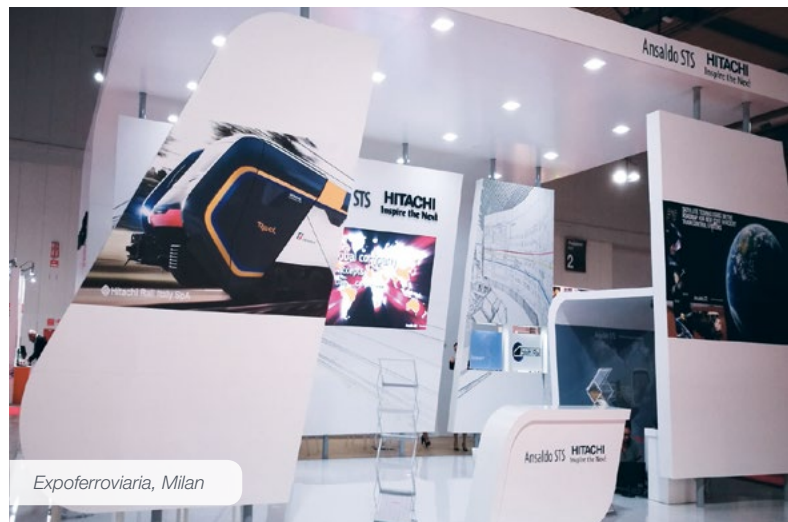
Ansaldo STS attended the most important Italian trade fair in the Rail sector with a high-impact stand shared with colleagues from Hitachi Rail Italy.

Visitors and experts had access to special areas dedicated to meetings as well as an advanced virtual reality device made available by the Company, which enables users to explore driverless Ansaldo STS stations throughout the world.

ExpoFerroviaria was also the ideal occasion to present the Company's products, technological innovations and business results achieved in the course of the last year to the audience of sector operators and experts attending the event.



APTA EXPO, Atlanta



Expoferroviaria, Milan





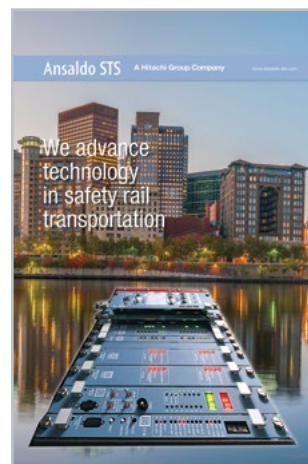
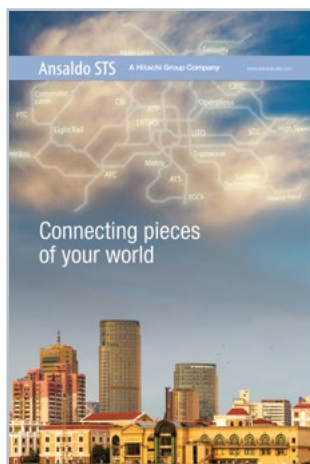
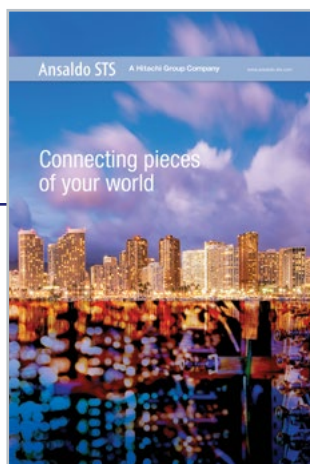
## Advertising campaign 2017

Ansaldo STS recognises the close synergy between trade shows and advertising, concentrating its advertisement spots in the periods immediately prior to the trade fairs which, in turn, have been carefully studied and identified according to a defined marketing plan.

In the context of an increasingly digital and dynamic world, Ansaldo STS has naturally adapted to and focused on online publications such as IRJ, RAILWAYGAZETTE, INGEGNERIA FERROVIARIA, CLIMATE 20 Witan Media

UNA-UK and FUTURE RAIL, while still retaining a presence in paper publications such as UIP MAGAZINE, The Official Journal of the UITP Summit, DOVE e CHI, and LIGURIA ECONOMY.

The advertising campaign implemented by Ansaldo STS aims to define the Company's identity, constructing an increasingly consolidated and instantly recognisable brand identity and aiming to promote the brand's values through a slogan.





## Relations with shareholders and members

Ansaldo STS is listed on both the FTSE Mid Cap and STAR indexes, which include top-ranking companies that meet specific, binding requirements: high levels of transparency and disclosure, excellent liquidity and corporate governance in line with international standards. Ansaldo STS's Corporate Governance System is designed to maximise value for its shareholders, monitor business risks and achieve transparency with the market, balancing the interests of all its shareholders and focusing particular attention on minor ones.

### Share capital

As at year-end 2017, Ansaldo STS's subscribed and paid-in share capital amounted to EUR 100,000,000.

The share capital is composed of 200,000,000 ordinary shares with a unit value of EUR 0.50. No other categories of shares or financial instruments convertible into or exchangeable with shares were issued.

In addition to relevant legal requirements, in each announcement Ansaldo STS has given great

emphasis to the methods of the share capital increase, also providing explanations to shareholders and investors and verifying that the media and other entities have correctly presented the type of transaction.

INVESTOR	No. of shares	% held
HITACHI RAIL ITALY INVESTMENTS	101,544,702	50.772%
PAUL E. SINGER (as a direct and indirect general partner in the limited partnership Elliott International LP and the Liverpool Limited Partnership)	51,330,030	25.665%
UBS	10,068,228	5.034%
<b>OVERALL LONG POSITIONS</b>		
PAUL E. SINGER	63,588,837	31.794%
UBS	10,085,623	5.043%

### Investor relations

Ansaldo STS's main objective is to maintain ongoing dialogue with the Italian and international financial community, providing sensitive information to the market in a timely and transparent manner and ensuring the correct valuation of the Company, in line with its business model, strategies and targets.

This is why the Investor Relations department, which reports directly to the Chief Financial Officer, constantly meets with the financial community to gain an understanding of its information needs and to support top management in communication decisions.

Various surveys with counterparties confirmed the overall positive opinion of the Investor Relations team's work, acknowledged as the Company's

main point of contact with the financial community.

Total actual coverage generally remained unchanged compared to the previous year across 10 investment banks; in particular, only five of them kept up active involvement after the conclusion of Hitachi's take-over bid on Ansaldo STS's capital and the entrance of the US fund Elliot in the shareholding structure, while the other five - although they did not officially reject the coverage - maintained a more detached attitude while awaiting future developments.

Some investment banks provide periodic sector research and competitor analyses, which the Investor Relations department gathers, studies and distributes internally, together with the official market disclosures.

On a quarterly basis, before the financial results are released, the Investor Relations department requests that brokers who carry out security hedging activities provide their latest forecasts on the Company's key performance indicators, and then calculates the averages. This represents an accurate update of the sell-side analysts' perception, which is discussed and considered by Company management. This underscores the attention that Ansaldo STS devotes to considering financial communications as a two-way street, recognising the importance of gathering data on markets perception and suggestions, as well as disclosing information.

With regard to communication activities, the annual communication plan is used to schedule and develop



Investor Relations activities, aimed at promoting and communicating the Company's market analyses, policies and strategies.

During the year, the Investor Relations department continued to support Company Management by monitoring and analysing the market and the competitive scenario.

In addition to the usual daily focus on "rumours", major market news and weekly news reports (IR NEWS), the department periodically distributes in-depth analyses and updates on the performance of competitors, markets and main business sector analyses. In 2017, an area was created on the Intranet dedicated to the internal sharing and distribution of

gathered material and the related analyses.

The website, which features a specific area dedicated to all Investor Relations matters, continues to represent the main tool for the collection of financial information and its distribution to stakeholders.



Shareholders' Meeting

## Transparency and accuracy of information

The Investor Relations department also pursues its mission by ensuring total transparency of communications and offering the market all the necessary information to enable investors to base their decisions on complete, correct and timely information. Accordingly, all of the Company's communications entail absolute compliance with legislative and regulatory provisions, are comprehensible, thorough, timely and offer consistent disclosure to all investors. The external communication of information regarding Ansaldo STS is performed exclusively by departments appointed for this purpose and in accordance with the Company procedures aimed at ensuring the truthfulness and correct disclosure of such information.

## Price sensitive communications to the market

All Ansaldo STS information that can be defined as price sensitive (i.e. that could materially affect the share's price on the stock market and disclosed via Borsa Italiana's NIS - Network Information System) is subject to a standard procedure, revised again in 2016, that requires the Company's External Communication department, which is in charge of press releases, to work closely with the Investor Relations, Legal and In-House Communications departments.

The Company issued 53 press releases in 2017. Ultimate authorisation for the issue of press releases always lies with the Managing Director and CFO.





## Share performance and analysts' rating

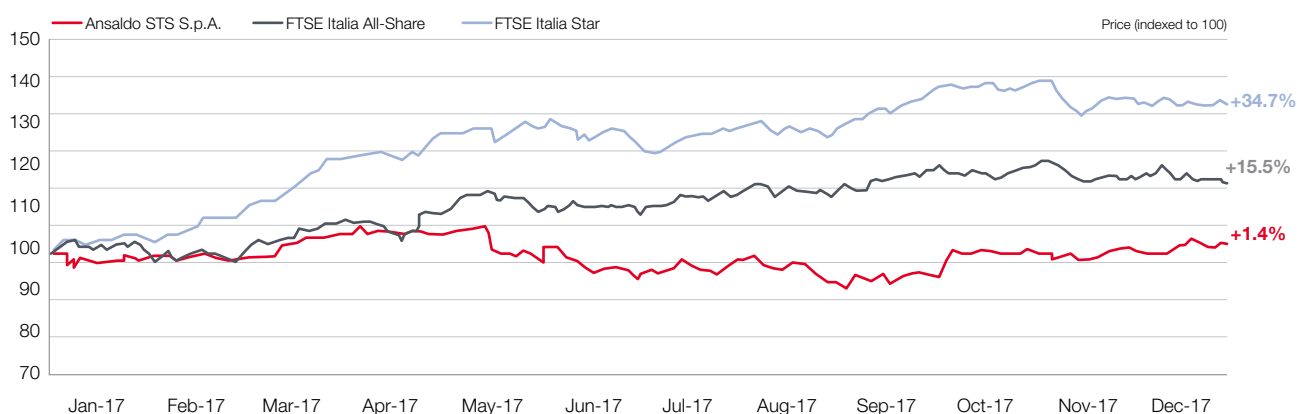
From 31 December 2016 to 31 December 2017, the share price rose from EUR 11.84 to EUR 12.00, gaining a slight increase of 1.4%.

The share's peak for the period and overall Company record of EUR 12.50 was recorded on 5 April 2017, while its low of EUR 10.78 was recorded on 4 September 2017.

On average, 112,750 shares were traded daily in the period compared to 201,762 shares traded in 2016. This reduction is a direct result of the reduction in free float.

In the period considered, the FTSE Italy All Share index and the FTSE Italy STAR index gained 15.5% and 34.7% respectively.

### Share performance compared to the main indices (base 100)





## Relations with banks and insurance institutions

**Ansaldo STS aims to create true partnerships with leading banks in order to optimise the support it receives in its business activities, which are developing in ever more far flung countries and which thus pose difficulties and unique aspects in relation to finance and banking.**

As a result, the Company needs reliable banks, preferably with a local branch abroad, in order to support the various stages of the operating process, from assessing tenders to setting up local branches to finalise projects acquired.

Ansaldo STS's strategy is therefore rooted in stable, well-established relations with banks, using a multi-product approach in order to avoid amassing specific businesses at one bank while simultaneously achieving cost efficiency.

Ansaldo STS has relationships with leading global banks, including: Intesa Sanpaolo, UniCredit, CitiGroup, ING, Credit Agricole, BNP Paribas, JP Morgan Chase, HSBC, Nordea, Saudi British bank, Riyad bank, Sumitomo, Bank of Tokyo, Mizuho Bank and Deutsche Bank. Its "primary" bank transactions relate to bank guarantees, bonds, project financing, documentary credits, treasury transactions, treasury management (liquidity, payment and collection management) and financial consultancy.

With a view to obtaining the utmost effectiveness from the partnership relationship, Ansaldo STS is aiming to standardise the consultation and discussion stage with all credit institutions as much as possible, both in terms of presenting projects and in terms of negotiating pricing and special terms and conditions for the financial instruments required.

Ansaldo STS is increasingly focused on obtaining structured and definitive technical feedback from its credit institutions, along with an indicative economic offer that makes it possible to compare the various solutions proposed.

## Securities and bonds - types and amounts

Having recognised that the inability to obtain guarantees could prevent contracts from being clinched with customers, Ansaldo STS has negotiated a set amount of credit lines in order to support its bond and guarantee requirements and promote business growth.

In 2017 alone, the Company negotiated and obtained new credit lines for a total of EUR 863 million, which include the increase of existing lines with leading insurance companies in the US (Zurich and Chubb) for a total of around EUR 520 million.

In terms of percentage, over 50% of guarantees issued for Group companies are indirect, i.e. issued through banks

and insurance companies in favour of the beneficiary. Advance payment bonds are an extremely useful and widespread guarantee instrument; these enable the customer to recover payments made in advance or on account should the supplier breach the terms of the contract.

As at 31 December 2017, guarantees amounted to approximately EUR 3.406 billion. The main issuers were:

- 25 banks (about 36% of the guarantee amounts were used);
- 14 insurance companies (approximately 25% of the guarantee amounts were used).



## Methodological note

Ansaldo STS' Sustainability Report at 31<sup>st</sup> December 2017, in its 9th edition, has been prepared in accordance with the "GRI Sustainability Reporting Standards" of the Global Reporting Initiative, using the "in accordance – core" reporting option.

In order to ensure the quality of the report, Ansaldo STS follows the reporting principles for defining report content and quality in accordance with the GRI Standards, which provide a set of criteria to select the information to be included in the report and the related representation methods.

### Principles for defining report content

- **Stakeholder Inclusiveness** – Various activities of stakeholder engagement were carried out, as described in the "Sustainability Topics" chapter.
- **Sustainability Context** – In the paragraph "Sustainability at Ansaldo STS", we have tried to give

a clear definition of how the company interprets the sustainability as related to the business sector to which it belongs. Further, without losing an overall view, we have tried to describe local initiatives, reporting the features of the different markets (see "Our people" chapter and "Corporate Social Responsibility And Communities" section).

- **Materiality** – To define the sustainability issues considered relevant, Ansaldo STS carried out a new materiality analysis. The internal analysis, carried out by the Sustainability Committee, assessed the different issues in relation to the Company's performance, the possibility of increasing its reputation and competitive advantage and taking into consideration associated risks. The external analysis was characterized by a broad involvement of the stakeholders (82) belonging to the most significant categories for the Company. To facilitate a comparison between the Aspects defined by the GRI Standards and the material Topics identified by Ansaldo STS, the following table cross-references them, providing information about any limitations regarding the aspect boundary too.

MATERIAL TOPIC IDENTIFIED BY ANSALDO STS	MATERIAL ASPECTS GRI STANDARDS	ASPECT BOUNDARY		LIMITATION REGARDING THE ASPECT BOUNDARY	
		INSIDE	OUTSIDE	INSIDE	OUTSIDE
CUSTOMER SATISFACTION	Stakeholder engagement	Group	-	-	-
ANTICORRUPTION	Anti-corruption	Group	-	-	-
SOCIAL INNOVATION	Customer health and safety; Marketing and labeling	Group	-	-	-
HEALTH AND SAFETY	Occupational health and safety	Group	Suppliers	-	Reporting scope partially extended to suppliers
PEOPLE CARE	Employment; Non discrimination	Group	-	-	-
CREATION AND DISTRIBUTION OF ECONOMIC VALUE	Economic performance; Market presence; Indirect economic impacts	Group	-	-	-
PEOPLE TRAINING AND DEVELOPMENT	Training and education	Group	-	-	-
ETHICAL MANAGEMENT OF THE SUPPLY CHAIN	Procurement practices; Supplier environmental assessment; Supplier social assessment	Group	Suppliers	-	Reporting scope partially extended to suppliers
DIVERSITY AND EQUAL OPPORTUNITY	Diversity and equal opportunities	Group	-	-	-
STAKEHOLDER ENGAGEMENT	Reporting practices; Stakeholder engagement	Group	-	-	-
SUSTAINABILITY GOVERNANCE	Governance	Group	-	-	-
INTEGRATED MANAGEMENT SYSTEM FOR ENVIRONMENT, SAFETY AND QUALITY	Environmental compliance; Customer health and safety	Group	-	-	-
SOCIAL DIALOGUE	Stakeholder engagement; Labour management relations; Freedom of association and collective bargaining	Group	-	-	-
PROTECTION OF HUMAN RIGHTS	Human rights assessment; Child labor; Forced or compulsory labor; Rights of indigenous peoples	Group	Suppliers	-	Reporting scope partially extended to suppliers
ENERGY CONSUMPTION	Energy	Group	Suppliers	-	Reporting scope not extended to suppliers
LOCAL COMMUNITIES DEVELOPMENT PROGRAMS	Local Communities	Group	-	-	-
RAW MATERIAL CONSUMPTION AND RECYCLING	Materials	Group	-	-	-
MANAGEMENT OF EFFLUENTS AND WASTE	Effluents and waste	Group	Suppliers	-	Reporting scope not extended to suppliers
GHG EMISSIONS	Emissions	Group	Suppliers	-	Reporting scope partially extended to suppliers
POLLUTING EMISSIONS	Emissions	Group	-	-	-
WATER CONSUMPTION	Water	Group	-	-	-
BIODIVERSITY PROTECTION	Biodiversity	Napoli, Les Ulis and Beatesburg sites	-	-	-





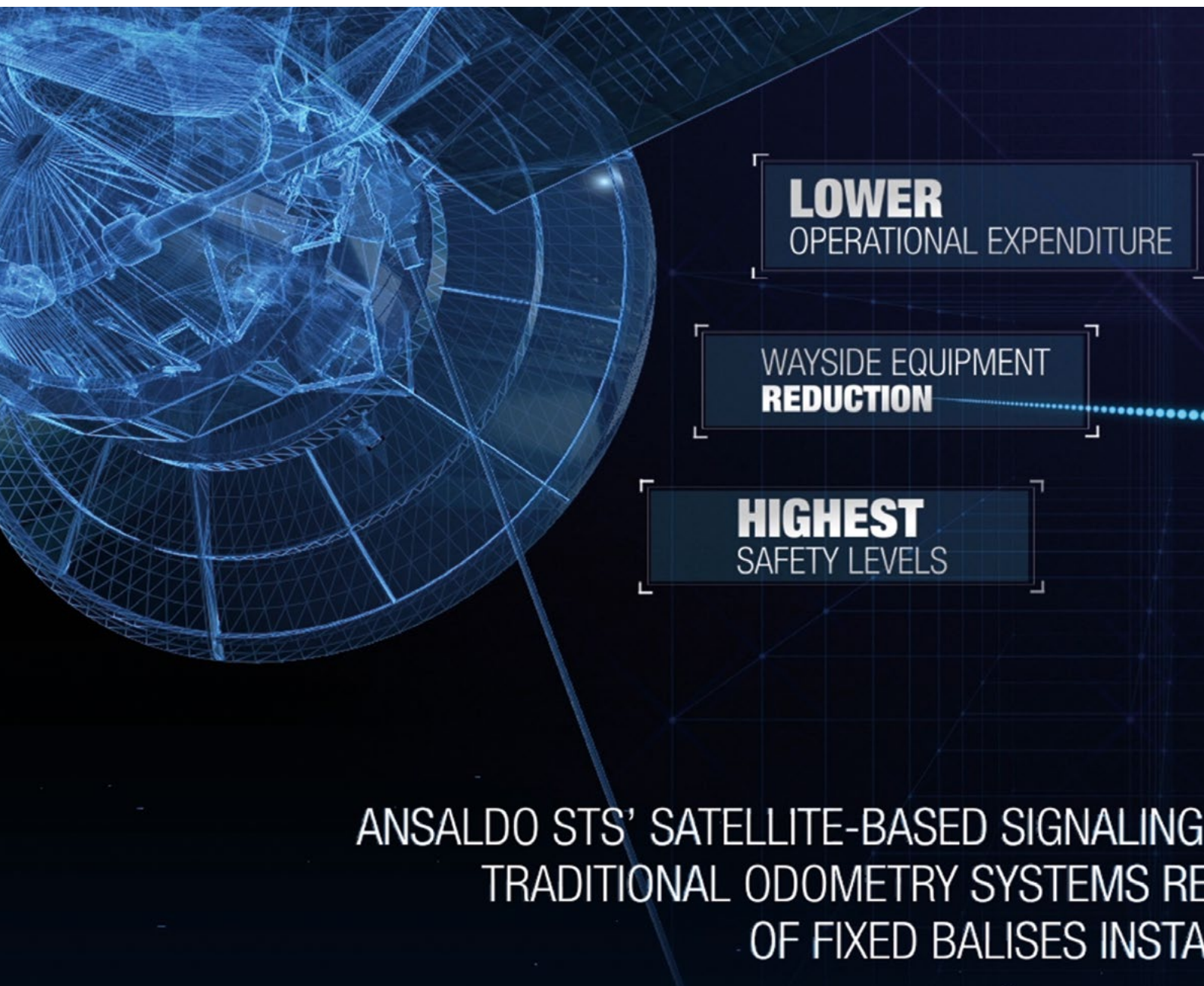
- **Completeness** - The report has been issued in order to give stakeholders a complete picture of Ansaldo STS' activities. The scope of the report refers to the Group, as indicated in the Annual Report at 31/12/2017. The issues relating to the environment, health and safety refer to subsidiaries' sites that are considered as more significant, therefore representing 91% of employees of the entire Group, as specified in the "Environmental Performance" chapter.

## Principles for defining report quality

- **Balance** - In describing the outcomes of Ansaldo STS' activities, we have sought to reflect both the positive and negative aspects (e.g. when reporting partially achieved goals in 2017 compared with commitments undertaken) to give a balanced view of the overall performance.
- **Comparability** - To enable stakeholders to analyze changes in the Group's performance, the Sustainability Report includes comparative data of the two-year

period 2016-2017. Where significant the comparison covered the three-year period 2015- 2017. Income statement figures, expressed in Euros, have been translated at the exchange rates indicate in the 2017 consolidated financial statements. The scope of the data is always indicated (in the text or within specific notes), along with changes compared to previous years. The report structure has undergone some changes to make it easier to read.

- **Accuracy** - Qualitative and quantitative financial information refer directly to the 2017 Consolidated Financial Statements, while the accuracy of Environmental, health and safety data and information come from certified management systems (ISO 14001 and OHSAS 18001). Social data have been mainly extracted from Ansaldo STS' operating systems. Estimated data, as well as the formulas used are explicitly indicated. The conversion rates used for the calculation of direct GHG emissions (Scope 1) are those defined by the Greenhouse Gas Protocol Tool 2014 and for indirect emissions (Scope 2) by the Greenhouse







Gas Protocol Tool 2012 and 2014. The values relating to the calorific powers refer to the Table of standard parameters used in the UNFCCC national inventory of CO<sub>2</sub> emissions (average values of the years 2014-2016) for the calculation of emissions from 1 January 2017 to 31 December 2017.

- **Timeliness** - The Sustainability Report is prepared annually. To better meet the informational needs of stakeholders, where material, events that occurred after the reporting year end were also reported.
- **Clarity** - The report has been structured to make the information easily identifiable by stakeholders (using icons for different sections and a navigation system). The 2017 Sustainability Report opens with the sustainability pillars and the letter from the CEO and General Manager, and includes seven sections: Company profile; Sustainability governance; Social Innovation; Our people; Corporate Social Responsibility and Communities; The Environment, health and safety; Economic Performance. This document ends with the Methodological Note, the Content Index and the

Report of the independent auditors. The level of detail of information has been defined in order to make the report comprehensible, accessible and usable by the various stakeholders. The document refers to the Group's website for certain matters, indicating the relevant web page address. The Sustainability Report will be distributed in a dedicated refurbished section within the Group's website.

- **Reliability** - The 2017 Sustainability Report has been approved by the Board of Directors and subjected to limited assurance by an independent body (EY) in accordance with the criteria included in the principle "International Standard on Assurance Engagements 3000 – Assurance Engagement other than Audits or Reviews of Historical Financial Information" (ISAE 3000 Revised), defined by the International Auditing and Assurance Standard Board (IAASB). EY was involved in the various stages of the reporting process in order to facilitate its review, in a constructive climate of collaboration.



SYSTEM **SUPPORTS** AND **COMPLEMENTS**  
 REDUCING **DRASTICALLY** THE NUMBER  
 CALLED ALONG THE LINE.



# GRI - Content Index

## General information

		Cross-reference/ Direct answer	Omission/Reason/ Explanation
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102-4	Location of operations	pp.10; 16; 49; 92-93	
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102-25	Conflicts of interest	p.121	





		Cross-reference/ Direct answer	Omission/Reason/ Explanation
102-30	Effectiveness of risk management processes	pp.25-27; 122	
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102-36	Process for determining remuneration	p.59-60; 120	
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<b>5. STAKEHOLDER ENGAGEMENT</b>			
102-40	List of stakeholder groups	p.32	
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102-42	Identifying and selecting stakeholders	pp.32-33; 73-76	
102-43	Approach to stakeholder engagement	pp.24; 33	
102-44	Key topics and concerns raised	pp.24-25; 126	
<b>6. REPORTING PRACTICE</b>			
102-45	Entities included in the consolidated financial statements	p.10; 133-134	
102-46	Defining report content and topic Boundaries	p.24-25; 92-93; 133-134	
102-47	List of material topics	p.24-25	
102-48	Restatements of information	p.98	
102-49	Changes in reporting	There were no significant changes with respect to the previous periods	
102-50	Reporting period	p.133	
102-51	Date of most recent report	2016 Sustainability Report has been published on August 2017	
102-52	Reporting cycle	p.135	
102-53	Contact point for questions regarding the report	p.148	
102-54	Claims of reporting in accordance with the GRI Standards	p.133	
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## Specific disclosures

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<b>Economic</b>			
<b>ECONOMIC PERFORMANCE</b>			
103-1	Explanation of the material topic and its Boundary	pp.24-25; 133	
103-2	The management approach and its components	pp.114-115	
103-3	Evaluation of the management approach	pp.35; 114-115; 122	
201-1	Direct economic value generated and distributed	p.115	
<b>MARKET PRESENCE</b>			
103-1	Explanation of the material topic and its Boundary	pp.24-25; 133	
103-2	The management approach and its components	p.59	
103-3	Evaluation of the management approach	p.59	
202-1	Ratios of standard entry level wage by gender compared to local minimum wage	p.59	
<b>INDIRECT ECONOMIC IMPACTS</b>			
103-1	Explanation of the material topic and its Boundary	pp.24-25; 133	
103-2	The management approach and its components	pp.20; 73	
103-3	Evaluation of the management approach	pp.73-76	
203-1	Infrastructure investments and services supported	pp.73-76	
<b>PROCUREMENT PRACTICES</b>			
103-1	Explanation of the material topic and its Boundary	pp.24-25; 133	
103-2	The management approach and its components	Ansaldo STS tends to procure materials, services and labour mostly on local markets, also with the aim to contribute to the development of local economies (e.g.: Honolulu Metro or Copenhagen Metro).	
103-3	Evaluation of the management approach	p. 35; p.111	
204-1	Proportion of spending on local suppliers	pp.52;107 When the project provides for several years of O&M, nearly 100% of personnel is local	
<b>ANTI-CORRUPTION</b>			
103-1	Explanation of the material topic and its Boundary	pp.24-25; 133	
103-2	The management approach and its components	pp.124-125	
103-3	Evaluation of the management approach	pp.124-125	
205-3	Confirmed incidents of corruption and actions taken	p.125	



		Cross-reference/ Direct answer	Omission/Reason/ Explanation
<b>Environment</b>			
<b>MATERIALS</b>			
103-1	Explanation of the material topic and its Boundary	pp.24-25; 133	
103-2	The management approach and its components	p.44	
103-3	Evaluation of the management approach	pp.90-91; 98. Regarding the management system the management approach assessment is carried out yearly during the management review	
301-1	Materials used by weight or volume	p.98	No detailed information about raw materials other than packaging materials and chemicals is currently available. Furthermore, distinction between non-renewable and renewable materials is not indicated. Ansaldo STS undertakes to collect data needed to fully cover the indicator requirements in the future
<b>ENERGY</b>			
103-1	Explanation of the material topic and its Boundary	pp.24-25; 133	
103-2	The management approach and its components	pp.27; 43; 95-97	
103-3	Evaluation of the management approach	pp.26-27; 90-91. Regarding the management system the management approach assessment is carried out yearly during the management review	
302-1	Energy consumption within the organization	p.96	
302-3	Energy intensity	p.96-97	
302-4	Reduction of energy consumption	p.96	
302-5	Reduction in energy requirements of products and services	p.43	Calculation of the energy consumption reductions is not currently available. Ansaldo STS undertakes to collect data needed to fully cover the indicator requirements in the future
<b>WATER</b>			
103-1	Explanation of the material topic and its Boundary	pp.24-25; 133	
103-2	The management approach and its components	p.27; 99	
103-3	Evaluation of the management approach	pp.90-91. Regarding the management system the management approach assessment is carried out yearly during the management review	
303-1	Water withdrawal by source	p.99	
303-3	Water recycled and reused	In general, Ansaldo STS does not have processes or production cycles that reuse water	





		Cross-reference/ Direct answer	Omission/Reason/ Explanation
<b>BIODIVERSITY</b>			
103-1	Explanation of the material topic and its Boundary	pp.24-25; 133	
103-2	The management approach and its components	p.101	
103-3	Evaluation of the management approach	pp.90-91. Regarding the management system the management approach assessment is carried out yearly during the management review	
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	p.101	
<b>EMISSIONS</b>			
103-1	Explanation of the material topic and its Boundary	pp.24-25; 133	
103-2	The management approach and its components	pp.27; 93-95	
103-3	Evaluation of the management approach	pp.90-91. Regarding the management system the management approach assessment is carried out yearly during the management review	
305-1	Direct (Scope 1) GHG emissions	p.94	
305-2	Energy indirect (Scope 2) GHG emissions	p.94	Consumptions related to district heating have not yet been included in the calculation of Scope 2 emissions. Ansaldo STS undertakes to integrate the consumptions in the calculation form the next reporting cycle.
305-4	GHG emissions intensity	p.95	
305-5	Reduction of GHG emissions	p.95	
305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	p.98	
<b>EFFLUENTS AND WASTE</b>			
103-1	Explanation of the material topic and its Boundary	pp.24-25; 133	
103-2	The management approach and its components	pp.27; 100-101	
103-3	Evaluation of the management approach	pp.90-91. Regarding the management system the management approach assessment is carried out yearly during the management review	
306-2	Waste by type and disposal method	pp.100-101. Hazardous waste is treated by external specialised agencies that pick it up directly from the company	No detailed information about disposal methods is currently available. Ansaldo STS undertakes to collect data needed to fully cover the indicator requirements in the future



		Cross-reference/ Direct answer	Omission/Reason/ Explanation
<b>ENVIRONMENTAL COMPLIANCE</b>			
103-1	Explanation of the material topic and its Boundary	pp.24-25; 133	
103-2	The management approach and its components	pp.89-91	
103-3	Evaluation of the management approach	pp.90-91. Regarding the management system the management approach assessment is carried out yearly during the management review	
307-1	Non-compliance with environmental laws and regulations	During 2017 there were no fines and non-monetary sanctions for non-compliance with environmental laws and regulations	
<b>SUPPLIER ENVIRONMENTAL ASSESSMENT</b>			
103-1	Explanation of the material topic and its Boundary	pp.24-25; 133	
103-2	The management approach and its components	pp.21; 108-111	
103-3	Evaluation of the management approach	p.111	
308-1	New suppliers that were screened using environmental criteria	pp.108-110	
<b>Social</b>			
<b>EMPLOYMENT</b>			
103-1	Explanation of the material topic and its Boundary	pp.24-25; 133	
103-2	The management approach and its components	pp.19; 48; 52; 61;65 ; 66	
103-3	Evaluation of the management approach	pp. 25-26; 34; 48; 52; 61; 66	
401-1	New employee hires and employee turnover	pp.53-54	
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	pp.61-64	
401-3	Parental leave	pp.66	It was not possible to take into account the leave granted in 2016 with return in 2017 or the leaves granted in 2017 with return in 2018. Ansaldo STS will in future undertake to collect the data necessary for the full coverage of the indicator
<b>LABOR/MANAGEMENT RELATIONS</b>			
103-1	Explanation of the material topic and its Boundary	pp.24-25; 133	
103-2	The management approach and its components	p.67-68	
103-3	Evaluation of the management approach	p.34; 67-68	
402-1	Minimum notice periods regarding operational changes	p.68	No detailed information about minimum number of weeks' notice in the various Countries where the Company operates is currently available. Ansaldo STS undertakes to collect data needed to fully cover the indicator requirements in the future



		Cross-reference/ Direct answer	Omission/Reason/ Explanation
<b>OCCUPATIONAL HEALTH AND SAFETY</b>			
103-1	Explanation of the material topic and its Boundary	pp.24-25; 133	
103-2	The management approach and its components	pp.102-103	
103-3	Evaluation of the management approach	pp.25-26; 35. Regarding the management system the management approach assessment is carried out yearly during the management review	
403-1	Workers representation in formal joint management-worker health and safety committees	p.103	Calculation of the percentage required by the indicator is not currently available. Ansaldo STS undertakes to collect data needed to fully cover the indicator requirements in the future
403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	p.103	No detailed information about - breakdown of injury rates by gender and geographical region - occupational disease rate - absentee rate is currently available. Ansaldo STS undertakes to collect data needed to fully cover the indicator requirements in the future
403-4	Health and safety topics covered in formal agreements with trade unions	p.67. In most countries in which Ansaldo STS operates, national labour agreements govern workers' health and safety. In Italy, these aspects are included in the national labour agreement. The aspects covered by such agreements relate, inter alia, to the following: • occupational health and safety risk assessment; • prevention and management of emergencies; • environmental protection; • monitoring of anti-injury data; • proposing new initiatives to update workers on any specific risks and/ or issues relating to site environmental impacts	





		Cross-reference/ Direct answer	Omission/Reason/ Explanation
<b>TRAINING AND EDUCATION</b>			
103-1	Explanation of the material topic and its Boundary	pp.24-25; 133	
103-2	The management approach and its components	pp.55-57	
103-3	Evaluation of the management approach	pp.25-26; 34; 57	
404-1	Average hours of training per year per employee	p.55	
404-2	Programs for upgrading employee skills and transition assistance programs	pp.55-56	
404-3	Percentage of employees receiving regular performance and career development reviews	p.57	
<b>DIVERSITY AND EQUAL OPPORTUNITYNON-DISCRIMINATION – FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING – CHILD LABOR – FORCED OR COMPULSORY LABOR – RIGHTS OF INDIGENOUS PEOPLES - HUMAN RIGHTS ASSESSMENT – LOCAL COMMUNITIES</b>			
103-1	Explanation of the material topic and its Boundary	pp.24-25; 133	
103-2	The management approach and its components	pp. 19-20; 26; 28-31; 35-36; 73-76; 77; 119. Ethical Code	
103-3	Evaluation of the management approach	Ethical Code p.14	
405-1	Diversity of governance bodies and employees	pp.49-54; 58-59; 65; 119	
405-2	Ratio of basic salary and remuneration of women to men	p.59	
406-1	Incidents of discrimination and corrective actions taken	No discrimination was noted	
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Ansaldo STS does not have suppliers or activities believed to present risk of limitations to freedom of association	
408-1	Operations and suppliers at significant risk for incidents of child labor	Ansaldo STS does not have suppliers or activities believed to present risk of child labour	
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	Ansaldo STS does not have suppliers or activities believed to present risk of forced labour	
411-1	Incidents of violations involving rights of indigenous peoples	During 2017 there were no violations involving rights of indigenous peoples	
412-2	Employee training on human rights policies or procedures	p.77	
413-1	Operations with local community engagement, impact assessments, and development programs	p.73-76; p.85	Calculation of the percentage required by the indicator is not currently available. Ansaldo STS undertakes to collect data needed to fully cover the indicator requirements in the future



		Cross-reference/ Direct answer	Omission/Reason/ Explanation
<b>SUPPLIER SOCIAL ASSESSMENT</b>			
103-1	Explanation of the material topic and its Boundary	pp.24-25; 133	
103-2	The management approach and its components	pp.21; 108-111	
103-3	Evaluation of the management approach	p.111	
414-1	New suppliers that were screened using social criteria	pp.108-110	Calculation of the percentage required by the indicator is not currently available. Ansaldo STS undertakes to collect data needed to fully cover the indicator requirements in the future
<b>CUSTOMER HEALTH AND SAFETY - MARKETING AND LABELING</b>			
103-1	Explanation of the material topic and its Boundary	pp.24-25; 133	
103-2	The management approach and its components	pp.19; 42	
103-3	Evaluation of the management approach	p.42	
416-1	Assessment of the health and safety impacts of product and service categories	p.42	
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	There were no cases of non-compliance related to service and products health and safety impacts.	
417-1	Requirements for product and service information and labeling	p.42 There is a methodology in place to control safety risks, and it is in line with regulations and standards (which are "labelled" on the product) applicable to all products and systems	Calculation of the percentage required by the indicator is not currently available. Ansaldo STS undertakes to collect data needed to fully cover the indicator requirements in the future
417-2	Incidents of non-compliance concerning product and service information and labeling	There were no case of non-compliance due to product and service labelling.	

## Independent auditors' report on the "2017 Sustainability Report" of Ansaldo STS Group (Translation from the original Italian text)

To the Board of Directors of  
Ansaldo STS S.p.A.

We have carried out a limited assurance engagement of the "2017 Sustainability Report" (hereinafter also the "Sustainability Report") of Ansaldo STS S.p.A. and its subsidiaries (hereinafter also "Ansaldo STS Group") as of 31<sup>st</sup> December 2017.

### Directors' responsibility on the Sustainability Report

The Directors are responsible for the preparation of the Sustainability Report in accordance with the "GRI Sustainability Reporting Standards" issued in 2016 by GRI – Global Reporting Initiative, that are detailed in the paragraph "Methodological Note" of the Sustainability Report, as well as for that part of internal control that they consider necessary in order to allow the preparation of a Sustainability Report that is free from material misstatements, even caused by frauds or unintentional behaviours or events. The Directors are also responsible for defining Ansaldo STS Group's commitments regarding the sustainability performance and for the reporting of the results achieved, as well as for the identification of the stakeholders and of the significant matters to report.

### Auditors' responsibility

It is our responsibility the preparation of this report on the basis of the procedures carried out. Our work has been conducted in accordance with the criteria established by the principle "International Standard on Assurance Engagements 3000 (Revised) – Assurance Engagements other than Audits or Reviews of Historical Financial Information" (hereinafter "ISAE 3000 Revised"), issued by the International Auditing and Assurance Standards Board (IAASB) for the engagements that consist in a limited assurance.

This principle requires the respect with the independence and other ethical requirements in compliance with professional standards and applicable legal and regulatory requirements and the maintenance of a comprehensive system of quality control ISQC (Italy) n. 1 as well as the planning and the execution of our work in order to obtain a limited assurance that the Sustainability Report is free from material misstatements.

These procedures included inquiries, primarily with company's personnel responsible for the preparation of the information included in the Sustainability Report, document analysis, recalculations and other procedures in order to obtain evidences considered appropriate.

The procedures were related to the compliance with the standard "GRI 101: Foundation 2016" for defining report content and quality of the Sustainability Report and are summarised below:



- a. comparison of economic and financial data and information included in the Sustainability Report with those included in Ansaldo STS Group's consolidated financial statements as of 31<sup>st</sup> December 2017 on which we issued our audit report on the 27<sup>th</sup> March 2018;
- b. analysis, through interviews, of the governance system and management process of the issues related to the sustainable development regarding Ansaldo STS Group's strategy and operations;
- c. analysis of the process relating to the definition of material aspects included in the Sustainability Report, with reference to the criteria applied to identify priorities for the different stakeholders categories and to the internal validation of the process outcomes;
- d. analysis of the operation of the processes that support the generation, recording and management of the quantitative data reported in the Sustainability Report. In particular, we have carried out the following procedures:
  - interviews and discussions with personnel of the Management of Ansaldo STS S.p.A., to obtain an understanding about the information, accounting and reporting systems in use for the preparation of the Sustainability Report, as well as about the internal control processes and procedures supporting the collection, aggregation, data processing and transmission of data and information to the department responsible for preparation of the Sustainability Report;
  - on-site verifications at the site of Piossasco of Ansaldo STS S.p.A. and the sites of Batesburg and Pittsburgh of Ansaldo STS USA INC.;
  - analysis on a sample basis of the documentation supporting the compilation of the Sustainability Report, in order to confirm the processes in use, their adequacy and the operation of the internal control for the correct processing of data and information in relation to the objectives described in the Sustainability Report;
- e. analysis of the compliance and internal consistency of the qualitative information included in the Sustainability Report to the guidelines identified in paragraph "Director's responsibility on the Sustainability Report" of the present report;
- f. analysis of the process relating to stakeholders engagement, with reference to procedures applied, through review of existing documentation relating to the main topics arisen from discussions with them;
- g. obtaining of the representation letter, signed by the legal representative of Ansaldo STS S.p.A., relating to the compliance of the Sustainability Report with the guidelines indicated in paragraph "Directors' responsibility on the Sustainability Report", as well as to the reliability and completeness of the information and data presented in the Sustainability Report.

Our engagement is less in scope than a reasonable assurance engagement in accordance with ISAE 3000 Revised and, as consequence, we may not have become aware of all the significant events and circumstances which we could have identified had we performed a reasonable assurance engagement.

## Conclusion

Based on our work, nothing has come to our attention that causes us to believe that the "2017 Sustainability Report" of Ansaldo STS Group as of 31<sup>st</sup> December 2017 is not in compliance, in all material aspects, with the "GRI Sustainability Reporting Standards" issued in 2016 by the GRI - Global Reporting Initiative, as stated in the paragraph "Methodological Note" of the Sustainability Report.

## Other aspects

The Sustainability Report for the year ended 31<sup>st</sup> December 2015, which data are presented for comparative purposes, has been subjected to limited assurance procedures by another auditor, who, on 3<sup>rd</sup> November 2016, expressed an unqualified conclusion.

Genova, 1<sup>st</sup> August 2018

EY S.p.A.

Signed by: Enrico Lenzi (Partner)

*This report has been translated into the English language solely for the convenience of international readers*

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The 2017 Sustainability Report is available online at:  
[www.ansaldo-sts.com](http://www.ansaldo-sts.com)

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