Astaldi Group 2018 consolidated non-financial statement

(Pursuant to Legislative decree no. 254 of 30 December 2016)

GRI 102-14

Dear readers,

2018 has been a year of profound change for Astaldi.

The provisions of Legislative decree no. 254/2016 on the reporting of non-financial information provide Astaldi with an excellent opportunity to build on the "Sustainability profile" published for the first time in 2017. The group has taken this as an opportunity to launch a structured process for the communication and sharing of its strategic, industrial and sustainable governance approach in this legally-required "Astaldi Group 2018 consolidated non-financial statement".

The group's main aim is to present its commitments and the results achieved in 2018 to its stakeholders in a transparent manner, continuing the path undertaken in 2017.

2018 proved to be a difficult year, with efforts mainly directed at consolidating and honouring commitments and principles, in order to deal with the crisis and its fallout and take advantage of future opportunities. The changes within the group led it to make often difficult decisions, setting its personnel the daily challenge of achieving objectives and milestones in order to guarantee the group's ability to continue as a going concern.

Keeping a steady hand and trusting your intuition in economically and politically turbulent times is not always easy, but it is absolutely essential. This is why sustainability is an integral and decisive part of Astaldi's business, pursued in compliance with the UN's 2030 Agenda, with its 17 Sustainable Development Goals (SDGs): a commitment for the group, its investors and its customers, but also for the wider community and future generations.

We believe that the market has always been aware of and acknowledged the group's commitment and dedication to sustainable development. Over the years, this has motivated the group to improve its performance. We are aware that sustainability is no mean feat and as such, we have made it a pillar of our modus operandi, hinged on a culture based on people, as stated in the group's code of ethics.

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METHODOLOGY FOR REPORTING NON-FINANCIAL INFORMATION

This consolidated non-financial statement (NFS), which refers to the year ended 31 December 2018, demonstrates the Astaldi Group's commitment to reporting the non-financial impacts of its business, in compliance with Legislative decree no. 254/2016. It summarises how the group has strategically integrated the management of economic, social, environmental and governance topics through using a selection of significant indicators representing the most relevant and important topics to be progressively used as the basis for the group's sustainability planning, reporting and communication. 2018 was a decidedly complex year from many industrial and financial viewpoints. Specifically, in the first six months of the year, the group presented its 2018-2022 business plan and subsequently (September 2018) it applied for the composition with creditors procedure which is described in the required detail in the directors' report. The consolidated non-financial statement has been prepared in accordance with the aforementioned decree and the GRI Standards published by the Global Reporting Initiative in 2016.

"In accordance" option

The consolidated non-financial statement was drafted using the GRI Standards "core" option. In 2018, the group made the transition from G4 to GRI standards, choosing to adopt the core option. The reporting process aims to report all material aspects identified and reported in the materiality matrix. Cases of partial reporting or other justified omissions are disclosed in the GRI Content Index reported at the end of this non-financial statement.

This transition has allowed the group to better map and govern the preparation process for the non-financial disclosure, preparing an "operating manual for the collection of non-financial data and information" for the first time.

Reporting period

Given the characteristics of Astaldi's business and in line with the principles of comparability, accuracy and reliability issued by the GRI and with international best practices, the group decided to focus on 2016-2018, also reporting significant events occurring in early 2019.

Stakeholders

The stakeholders were mapped with the direct involvement of management in order to determine the relationship linking each stakeholder identified by Astaldi to the group, assessing their level of influence and interest.

Materiality

The materiality of economic, environmental and social aspects was assessed via the combined analysis of two parameters: "Materiality for the group" and "Materiality for the stakeholders", the latter meant as how the group sees its role in society. These parameters also consider the importance of comparing data and information provided at industry level.

Publication and communication of the NFS

This document is published separately from the financial statements, albeit using the same approval process, in accordance with Legislative decree no. 254/2016 and ruling regulations.

It can be viewed and downloaded from the group website: www.astaldi.com

Reporting scope

The scope of this statement includes the data of the parent, Astaldi, and the companies included in the consolidation scope, to the extent necessary to ensure an understanding of the group's operations, performance, results and the impact thereof.

Depending on the case, the information included in this statement refers to the Astaldi Group or Astaldi (including its headquarters, branches material in terms of their size or operations and material projects with direct contracts), subsidiaries and companies (e.g., consortia and joint ventures) that manage contracts with Astaldi as leading partner.[1]

The statement explicitly indicates to which companies the data and information refer and whether there are particular limitations.

The reporting scope excludes consolidated companies in which Astaldi is not a leading partner and/or the fully-consolidated companies/production units whose contribution to non-financial reporting is immaterial.

Considering the nature and size of the group's projects, information is grouped by project rather than by company in order to give a uniform view of value distributed at group level in the areas where the projects are performed.

The following table shows the reporting scope. The contract column shows the projects carried out, while the company column lists the name of the group company/companies involved.

Group company	Country
Astaldi S.p.A.	ITALY WITH FOREIGN BRANCHES
Astaldi Concessioni S.p.A.	
NBI S.p.A.	
3E System S.r.l.	ITALY
Consorzio Stabile Busi	
Sartori Tecnologie Industriali S.r.l.	
GE.SAT S.c.a r.l.	
A10 S.c.a.r.l	
Mondial Milas - Bodrum Havalimani Uluslararasi Terminal Isletmeciligi Ve Yatirim A.S.	TURKEY
NBI Elektrik Elektromekanik Tesisat Insaat Sanayi Ve Ticaret L.S.	
Astur Construction and Trade S.A.	
S.C. Astalrom S.A.	ROMANIA
Astaldi Polska Sp. z o.o.	POLAND
Astaldi Canada Design & Construction Inc.	CANADA
Astaldi Canada Enterprises Inc.	
T.E.Q. Construction Enterprise Inc.	
Astaldi Construction Corp.	USA
Astaldi Algerie Eurl	ALGERIA

Contract	Company involved in the project
ITALY	
Line C of the Rome metro	METRO C S.c.p.a.
Line 4 of the Milan metro	Metro Blu S.c.r.l.
Capodichino Station – Naples metro	Capodichino AS.M S.c.r.l.
Reclamation of the industrial area of Porto Torres	Project Nuraghe S.c.r.l.
Taranto port – container terminal	Astaldi S.p.A.
Monte Nieddu dam	Astaldi S.p.A.

[1] Meaning material contracts where Astaldi has substantial operating leadership.

Contract	Company involved in the project
Brenner base tunnel (lot "mules 2–3")	Brennero Tunnel Construction Società Consortile a Responsabilità Limitata - BTC SCARL
Quadrilatero Marche-Umbria road system (maxi lot 2)	Consorzio Stabile Operae Dirpa 2 S.c.ar.l. Astaldi S.p.A.
Monte Sant'Angelo railway connector	Infraflegrea Progetto S.p.A. Astaldi S.p.A.
Avigliana - technological conduits	Astaldi S.p.A.
Genoa Voltri Colombo and San Tommaso tunnels	Astaldi S.p.A.
NATO base in Sigonella	Astaldi S.p.A.
Cumana railway line	Astaldi S.p.A.
Design and building of third mega lot of highway SS106	Sirjo S.C.p.A.
TURKEY	
Gebze-Orhangazi-Izmir Motorway	Astaldi S.p.A. - Turkish branch Astur Construction and Trade A.S.
Etlik Integrated Health Campus, Ankara	Etlik Hastane PA S.r.l. Ankara Etlik Hastane Isletme Ve Bakim Anonim Sirketi Ankara Etlik Hastane A.S. Astaldi-Turkerler Joint Venture
ROMANIA	
Line 5 of the Bucharest metro	Asocierea Astaldi - FCC - Delta ACM- AB Construct Asocierea ASTALDI-FCC-UTI-ACTIV (Metro 5)
Line 4 of the Bucharest metro	Astaldi S.p.A. - Romanian branch Asocierii Astaldi S.p.A, Sc Somet sa, sc Tiab sa, sc Uti grup sa (Line 4 Bucharest)
Mihai Flamaropol ice-skating rink	Asocierea Uti Grup S.A. - Astaldi S.p.A.
Brasov-Targu Mures-Cluj-Oradea Motorway, Section 2A: Ogra-Campia Turzii Lot 2	Asocierea Astaldi S.p.A. – Max Boegl Romania S.r.l. – Astalrom Sa – Consitrans S.R.L. (Ogra-Campia Turzii)
Curtici-Simeria railway line - Lot 2A and Lot 2B	Asocierea Astaldi – FCC – Salcef – Thales, Lot 2a Asocierea Astaldi – FCC – Salcef – Thales, Lot 2b
Suspension bridge over the Danube River in the Braila area	Asocierea Astaldi S.p.A. - IHI Infrastructure Systems Co., Ltd
GEORGIA	
E-60 Motorway - Zemo Osiauri - Chumateleti section	Astaldi S.p.A. - Georgian branch
SWEDEN	
Civil works related to the "E04 Entreprenad Haga Projekt Västlänken" project	AGN Haga AB
POLAND	
Line 2 of the Warsaw metro	Astaldi S.p.A. - Polish branch
S-8 expressway Breslavia-Byalstok (Lots: Mezenin-Jezewo and Kobyłka-Radzymin Południe)	Astaldi S.p.A. - Polish branch Astadim S.C.
S-5 expressway Wrocław-Poznan (Lot 3, Korzensko-Widawa section)	Astaldi S.p.A. - Polish branch
S-7 expressway Naprawa-Skomielna Biała	Astaldi S.p.A. - Polish branch
S-2 expressway Warsaw Southern Bypass - Lot A	Astaldi S.p.A. - Polish branch
N-7 railway line – Deblin – Lublin (Lot C)	Consorzio Lublino (Astaldi - PBDIM)
E-59 railway line - Rawicz - Leszno (Lot IV)	Astaldi S.p.A. - Polish branch
ALGERIA	
Saida-Tiaret railway line	Astaldi S.p.A. - Algerian branch

Contract	Company involved in the project
CANADA	
Muskrat Falls hydroelectric project	Astaldi Canada Inc.
USA	
H20/13- I-95 & Spanish River Interchange DB	Astaldi Construction Corporation
H23/16 - SR-528 BeachLine Expressway	Astaldi Construction Corporation
H25/16 - CR 490A (Halls River) from West of Hall Rivers to East of Halls River	Astaldi Construction Corporation
H24/17 Bull Frog	Astaldi Construction Corporation
H27/17 - Wekiva Section 7A	Astaldi Construction Corporation
HONDURAS	
Expansion and improvement of “La Esperanza-Camasca” road	Astaldi S.p.A. - Honduran branch
CA-1 road, section 1 Jicaro Galán – Desvío El Transito (puente Los Corrales) and section 2 Jicaro Galán – Santa Elena (Desvío a Cedeño)	Astaldi S.p.A. - Honduran branch
Arenal Etapa	Astaldi S.p.A. - Honduran branch Consorcio Constructora El Arenal
NICARAGUA	
Improvement of “Camino Pantasma – Wiwilí”	Astaldi S.p.A. - Nicaraguan branch
Improvement of “El Comejen-Waslala” road (plot I and plot II)	Astaldi S.p.A. - Nicaraguan branch
Hospital de Chinandega	Consorcio Europeo Hospital de Chinandega Cehchi
PANAMA	
Omar Torrijos	Consorcio Astaldi-MCM
PERU	
Impulsion line and pumping system “Chilota-Chincune”	Concorcio Obrainsa - Astaldi
“Alto Piura” hydroelectric power plant	Concorcio Obrainsa - Astaldi
CHILE	
Chuquicamata mining project CC13	Astaldi S.p.A. - Chilean branch
El Teniente (Obras de Ventilacion)	Astaldi S.p.A. - Chilean branch
New West Metropolitan Hospital in Santiago “Felix Bulnes”	Astaldi S.p.A. - Chilean branch Sociedad Austral Mantenciones y Operaciones S.p.A.
“La Punilla” hydroelectric power plant	Astaldi S.p.A. - Chilean branch Sociedad Concesionaria Aguas de Punilla S.A. Transmisora del Sur S.p.A.
Normalizacion Hospital Basic de Linares	Astaldi S.p.A. - Chilean branch
Normalizacion Hospital Barros Luco Trudeau	Astaldi S.p.A. - Chilean branch
E-ELT “European Extremely Large Telescope”	DMS DESIGN CONSORTIUM s.c.r.l. Astaldi S.p.A. - Chilean branch

THE GROUP'S IDENTITY

WHO WE ARE

The Astaldi Group operates internationally in constructing large works with strong leadership in Italy and abroad, where it operates in four continents. It designs, constructs and operates avant-garde works in the transportation infrastructure, energy generation plants, civil and industrial construction, plant engineering and O&M business segments. It is one of the top 30 contractors in Europe.

The group recorded revenue of approximately €985 million in 2018.

GOVERNANCE SYSTEM

Astaldi S.p.A. (**"Astaldi"**) – incorporated under Italian law, the company is listed on the Italian Stock Exchange and its bonds are traded on the Luxembourg and Vienna Stock Exchanges. Its governance structure is based on a traditional administration and control model. The company has shareholders, a board of directors and a board of statutory auditors, as well as independent auditors and a supervisory body as per Legislative decree no. 231/2001.

Despite having asked the Italian stock exchange to voluntarily withdraw its shares from the STAR segment and to transfer them to the MTA segment, which subsequently took place on 5 October 2018, Astaldi adheres to the Code of conduct for listed companies and has set up a control and risk committee, an appointments and remuneration committee and a related parties committee to comply with relevant recommendations. Astaldi's governance model adopted by Astaldi is in line with international standards and best practices.

In January 2018, the Astaldi Group's general organisational chart was updated to include Astaldi Concessioni's newly created the O&M business segment. At the same time, a new unit headed by the "Group financial controller", was set up as part of the administration and finance general department and in September 2018, changes were made to responsibility within the group, affecting the corporate structures, head office departments and country managers and the chief executive officers of group companies.

COMPANY BODIES[2]

Board of directors[3]

Chairman
Paolo Astaldi

Deputy chairmen
Ernesto Monti
Michele Valensise

Chief Executive Officer
Filippo Stinellis

Directors
Caterina Astaldi
Paolo Cuccia
Piero Gnudi
Chiara Mancini

Board of statutory auditors [4]
Giovanni Fiori (*Chairman*)

Standing statutory auditors
Anna Rosa Adiutori
Lelio Fornabaio

Alternate statutory auditors
Gregorio Antonio Greco
Giulia De Martino
Francesco Follina

CONTROL AND RISK COMMITTEE
Nicoletta Mincato (Chairwoman)
Ernesto Monti
Paolo Cuccia

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[2] On 21 March 2019, the *Cavaliere del lavoro* (captain of industry) Vittorio di Paola resigned from his position as honorary chairman of the company. On 31 May 2019, Astaldi's board of directors resolved to revoke the powers assigned to him at the meeting of 23 April 2010. On 14 January 2019, the board of directors formally revoked the legal powers assigned to the general manager for Italy, Marco Foti, the general manager for abroad (Turkey, Iran, Far East), Fabio Giannelli, and the general manager for industrial services, Mario Lanciani

[3] Board of directors appointed on 20 April 2016 for 2016/2018

[4] Board of statutory auditors appointed on 27 April 2018 for 2018/2020

Nicoletta Mincato

GENERAL MANAGEMENT
Paolo Citterio *(Administration and finance)*
Cesare Bernardini (*Europe, Asia and Africa, Italy - Brenner*)
Francesco Maria Rotundi *(Abroad- Americas, Algeria, Morocco and Tunisia)*

APPOINTMENTS AND REMUNERATION COMMITTEE
Piero Gnudi (Chairman)
Paolo Cuccia
Ernesto Monti

RELATED PARTIES COMMITTEE
Chiara Mancini (Chairwoman)
Nicoletta Mincato
Paolo Cuccia

INDEPENDENT AUDITORS
KPMG S.p.A.

ORGANISATIONAL STRUCTURE

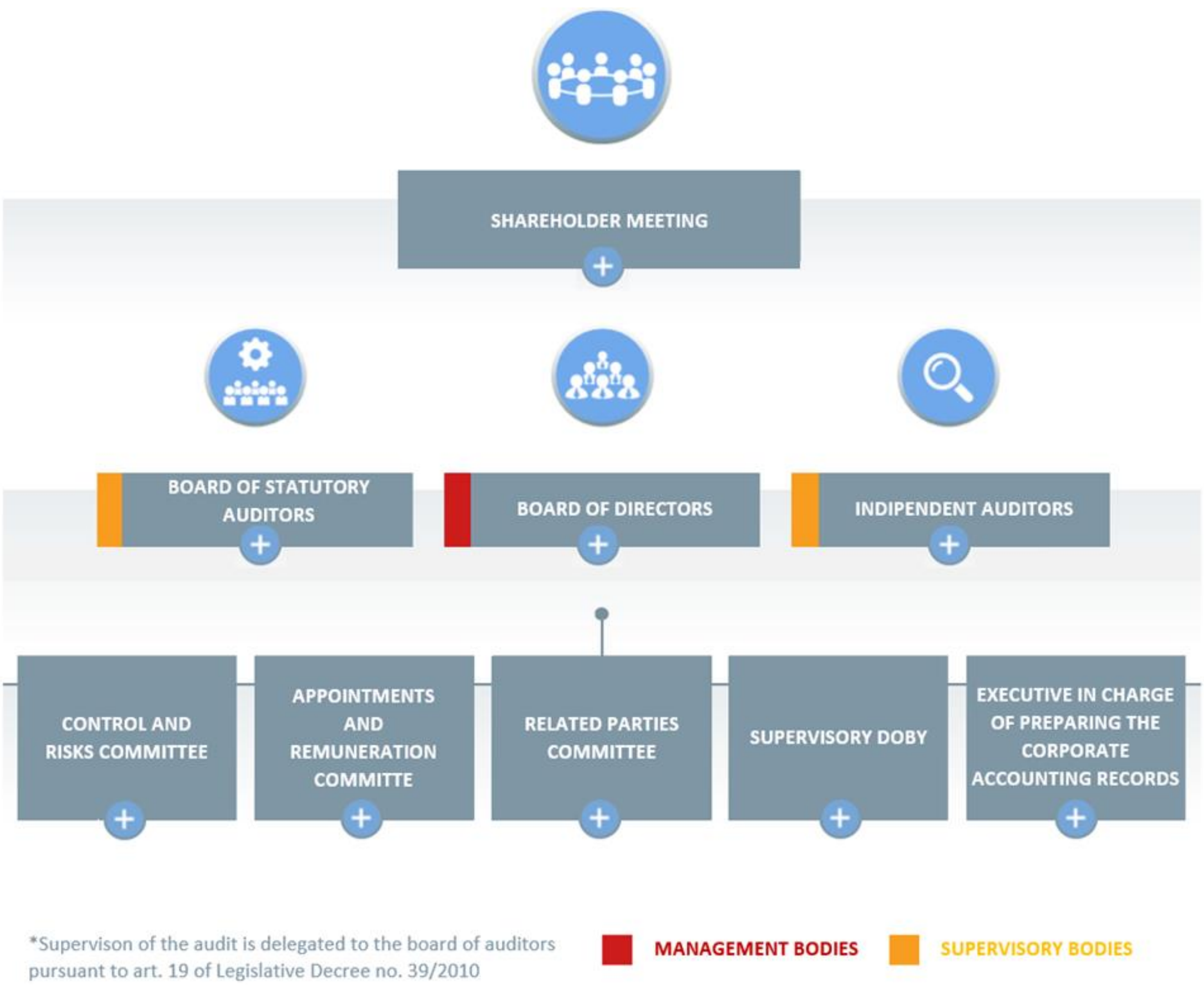

Figure 1: Astaldi Group organisational chart

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Its correct application of primary and secondary legislation and code of conduct means that Astaldi's governance is in line with best practices, including with regard to the prevention and management of conflicts of interest. In relation to the assumption that directors have interests, on their own behalf and on behalf of third parties, the parent's board of directors makes the most appropriate decisions on a case-by-case-basis (e.g., directors abstaining from voting or temporarily leaving the meeting). With regard to the composition of the board of directors, the presence of highly experienced directors, many of whom are independent, ensures balanced discussions in the board's decision-making processes.

Furthermore, set up to provide advice and make recommendations to the board, the committees add specific expertise, perform ad-hoc investigations and, in certain cases, add weight to resolutions where there is a higher risk of potential conflicts of interest (remuneration of managers and related party transactions).

In this regard, the components of directors' fees not resolved at shareholders' meetings are defined via proposal by the appointments and remuneration committee. In accordance with the code of conduct and primary and regulatory legislation, the board of directors approves a "Remuneration report" every year as proposed by the above committee. The report is divided into two sections. The first sets out the remuneration policy for members of the parent's board of directors, board of statutory auditors and key management personnel, which is submitted to the shareholders that vote thereon at their meeting. The results of the vote are published, in accordance with the law, within five days of the shareholders' meeting. The second section sets out the remuneration paid in the previous year to the parent's board of directors, board of statutory auditors and key management personnel.

With regard to related party transactions, in accordance with CONSOB (the Italian Commission for Listed Companies and the Stock Exchange) regulations, the parent has adopted a procedure for identifying, approving and carrying out transactions by Astaldi - directly or through its subsidiaries - with related parties. The parent has also set up an ad-hoc internal board committee (related parties committee) comprised exclusively of independent directors which is called to express an opinion on such transactions before they are carried out. The parent also has procedural rules in place which ensure that any relations with third parties are identified in advance (e.g., when signing contracts, consultancies, etc.).

In order to formulate diversity policies for its boards of directors and statutory auditors, Astaldi launched an analytical process aimed at assessing the profiles and parameters to consider in compliance with the law. After surveying legislation and codes of conduct along with the clauses of Astaldi's bylaws, the parent deemed the organisational solutions in place to be in full compliance with legislative requirements and recommendations. The drafting of the "Diversity policies" was further defined by considering indexes such as Astaldi's business type, international range and operation on specific markets, as well as analysing the composition of the company bodies of Astaldi's main Italian and foreign competitors. Following the prior endorsement of the appointments and remuneration committee, the board of directors approved the "Diversity policy of Astaldi's board of directors and board of statutory auditors" on 14 November 2017[5].

[5] In line with the incorporation by reference principle, reference should be made to the "Report on corporate governance and ownership structure" for a survey of its content.

VISION, MISSION AND CORE PRINCIPLES

"Building for progress and development in the countries where we operate"

Contribute towards the development and well-being of the countries where it operates, through its own style in which the design, construction, and operation of large infrastructure works go hand in hand with integration into the territory and the technical and managerial training of the people involved. Astaldi translates concepts into concrete reality, satisfying its customers' needs while opening new paths to progress, by carrying out distinctive, cutting-edge works capable of blending function and aesthetics. Astaldi stands for Italian-made quality in Infrastructure. For years, it has exported technology, know-how, and innovative solutions for customers worldwide, with an approach to dialogue to forge real partnerships with its clientele. In other words, it helps affirm our country's excellence in the world, cultivating talent and giving value to ingenuity, in an ongoing process of creation in Italy and abroad.

Figure 2: Astaldi's pillars

ETHICS AND COMPLIANCE

Corporate ethics is a key value for the group. The code of ethics applies to all directly and indirectly controlled companies, and regulates the behaviour of company bodies, control and supervisory bodies, employees and consultants. In addition, Astaldi requires commercial and financial partners, its main suppliers, contractors and independent contractors to act in line with the general principles of the code of ethics. Astaldi undertakes to promote compliance with the rules of behaviour of the associations it is involved with in Italy and abroad. To date, Astaldi has not signed any externally developed national or international economic, environmental and codes of conduct, principles, or other initiatives.

Astaldi S.p.A. decided to adopt an Organisational, management and control model - the 231 Model - in order to ensure fairness and transparency in its business and operations, to protect its position and reputation, the expectations of its shareholders and the work of its employees. It is aware of the importance of having an appropriate internal control and risk management system in place to prevent directors, control and supervisory bodies, employees, consultants, business partners, suppliers, independent contractors, service providers and consultants from acting illegally.

The main areas in the macro-category of risks related to corruption are: managing: relationships with local sponsors; initiatives, prequalfications, bids, negotiations and contract signing (public bids or private negotiations); authorisations/licences and certifications; partnerships; procurement and subcontracts; services and consultancies; purchase/sale/transfer of company assets; human resources and company organisation; in-court and out-of-court legal disputes, appointing legal advisors; intragroup transactions; corporate and contract planning and budgeting; tax fulfilments; corporate and

contract finance and treasury; loans, sureties and guarantees, facilitated loans, grants, subsidies from public or private parties; recurring and non-recurring transactions; relationships with public officials during the public administration's and supervisory body's inspection and control activities; property management activities.
The main risks identified are related to crimes against public administration (corruption in performing duties, an act contrary to official duties, in judicial documents, of public service officers, incitement to corruption and incitement to corruption of board members and officials of the European Union and foreign states) and corruption in the private sector with regard to both operational processes and administrative-accounting processes.
Following on from the project on fraud risk launched in 2013 and completed in 2017, and the issuing of a related policy, the internal audit department carries out continuous checks, with the aim of identifying and assessing the potential risks of corruption and the related controls, covering 100% of the group's transactions.
All managers, employees and external consultants (suppliers and independent contractors) are informed about the Astaldi Group's anti-corruption policies via the code of ethics and in the related company procedures. In addition, personnel at risk of corruption (due to their position or duties) receive specific training on these issues.

In 2018, as the e-learning training was suspended due to a cash short-fall the lack of funds, the supervisory body prepared a training brochure which was distributed to head office personnel on 12 February 2019 and communication activities focused on projects and foreign areas included in the scope of the audit plans.

The model is updated to reflect the main developments in the relevant regulations and to take into account organisational changes and the results of testing of the model's effectiveness.

In this regard, in order to ensure it is effectively applied and that it complies with the code of ethics, the supervisory body prepares an annual supervisory plan with specific audit activities aimed at safeguarding against potential crimes.

As part of the audit activities carried out on a six-monthly basis, action plans aimed at resolving issues to improve the working of the 231 model, which the supervisory body refers to the board of directors, are implemented. The results of the audits presented an opportunity to communicate directly with the affected departments. No incidents of corruption were reported during the reporting period.

Audit activities carried out for the purposes of the 231 model in 2018 allowed for the comprehensive valuation of compliance of behaviour with the general principles of the group's code of ethics and the monitoring protocols provided by Astaldi's 231 model, and the identification of certain areas of improvement which will be subject to careful follow-up activities, in some cases already underway in the first half of 2019.

ORGANISATION, EXPERTISE AND PERFORMANCE

Astaldi has adopted a matrix organisational model that ensures functionality and integration between the headquarters, countries and projects, based on criteria formulated to efficiently and synergically develop central and peripheral organisational structures.

Astaldi's organisational structure is summarised as follows:

- Chairman of the board of directors, who has powers to represent the parent and define company strategies to submit to the board of directors, mainly the annual budget and business plan;
- The deputy chairman, who, together with the chairman and the chief executive officer, identifies company development strategies to submit to the board of directors;
- Chief executive officer, who, supported by their staff departments, implements the sustainable development policies and strategies for the group's operations by defining policies for acquiring, managing and using resources and coordinating the organisational structure;

- Administration and finance general manager, which is charged with supervising all of the parent's administrative, tax, financial, etc. activities, in addition to providing assistance and services to the managers in charge of domestic and international activities;
- Domestic general manager and international general manager, which are charged with acquiring and managing contracts (each for their relevant geographical segment), depending on the goals set in the annual budget and business plan;

In addition to the deputy general management departments, which supervise and control their respective geographical segments, in both the acquisition and operating stages, the domestic general management and international general management departments also include:

- Country manager, in charge of acquisition and operating management in their respective countries;
- Project managers, who supervise contracts and achievement of the set cost, quality and time objectives.

In 2018, the group underwent the first streamlining phase, which was finalised in January 2019 following the analysis and assessment of the efficiency and optimisation of the processes, with the aim of making the structures more dynamic and efficient, focusing more on the business segments.

The main changes can be summarised as follows:

- streamlining the general managers from six to three, of which two business managers for geographic segments and one manager for administration and finance;
- shutting down the foreign central management departments;
- redistribution of certain responsibilities between head office departments, providing for the setting up of Industrial Services Management and Project Management departments relating to project management, procurement and engineering services and the merging of quality, the environment and safety project functions into the Sustainability and QHSE Management department which is responsible for ensuring compliance with management regulations concerning quality, safety and the environment.

RISK MANAGEMENT

Given the nature of its business and reference sector, the Astaldi Group is exposed to different types of risks both at company and project level.

It has a risk management system, which identifies, measures, manages and monitors the main risk sources identified, to mitigate its exposure to these risks. The system's main priority is to ensure timely, efficient and effective responses to any uncertain event that could have a positive or negative impact on attaining the group's objectives.

Again in 2018, the ERM (Enterprise Risk Management) model aimed to disclose and share by geographical segment and project the matters, methodologies applied and instruments to be used to suitably develop risk management at corporate and project level. In this regard, during the year, workshops were planned and rolled out in a number of countries between February and September. Furthermore, the reference procedures for risk management and the re-examination of the risk universe for the assessment of risks related to Astaldi Concessioni's O&M activities were updated.

The risk categories identified by the group and explicitly addressed in the Risk Appetite Statement[6] approved by the board of directors in March 2018, as the main critical sources that could influence the achievement of the strategic plan objectives, are:

MACRO-CATEGORY OF RISKS		
TOPICS IDENTIFIED	**MAIN RELATED RISKS**	**RISK MANAGEMENT MODEL**
Sustainability	Reputation risks due to non-achievement of CSR objectives.	Management system focused on the integration of social and environmental objectives in business.
Financial structure	Financial risks: related to lending agreements with the group's banks (financial covenants) and the related possibility that the group may not be able to meet its financial commitments assumed with the related implications for its ability to continue as a going concern.	Direct involvement of dedicated internal committees, the competent departments and specific interdepartmental teams, which define the most suitable strategies to be implemented in line with the group's procedures and policies.
Human resources	Risk related to ensuring that key personnel have the necessary professional specialist and technical skills.	Regular analyses of key risk indicators that include suitability for the key positions, turnover rate and the internal service level agreement that measures the group's ability to find the required resources with the requested profiles in the necessary time frame.
Partnerships	Risks connected to the cultural and organisational integration of partners, as well as their potential ability to meet their contractual commitments.	System for the regular monitoring of the group's partners' financial strength and solvency as well as their necessary technical, ethical and reputation requirements. Checks of the correct allocation of roles and responsibilities with the partner, defined and managed through shareholder agreements.
Reference scenario	Country risk arising from economic, political and social risks (not controllable by Astaldi).	Monitoring and updating of the risk profiles of all the countries where the group operates or that it is interested in for future developments. An information system is regularly maintained and updated to provide an internal rating for country risk, based on the country's credit standing, i.e., ratings from the main rating agencies.

[6] Risk appetite is the maximum level of risk that a company is willing to assume in carrying out its business in relation to main sources of critical issues (or "over the top" risks) in order to meet its strategic objectives, identified by company management as typical and recurring.

The group has set up dedicated intradepartmental teams composed of managers to regularly analyse, check and monitor risks, especially those listed above. The teams meet frequently to, inter alia:

- ensure implementation of the appropriate risk management and mitigation actions (risk response) defined after analyses of the specific key risk indicators;
- guarantee compliance with the guidelines set out in the group's risk appetite statement approved by the board of directors, which establishes the maximum risk level the group is willing to take on when carrying out its business (related to the main risk categories).

INTEGRATED BUSINESS MODEL

Astaldi's business model strives to create sustainable and shared value over time for the group and its reference community. The group presents an integrated offer, which puts to good use its internationally-renowned skills and which is based on two main drivers:

STRENGTHENING THE GROUP'S SKILLS WITH EPC CONTRACTS

VALUE CREATION THROUGH DIVERSIFICATION

This approach seeks to promote a project development model which will see Astaldi play a minor role in concessions and a leading one in construction work once the project has started. This will drive further growth in EPC (Engineering, Procurement, Construction) contracts, but with significantly smaller commitment in terms of invested capital.

Balanced geographical diversification of activities is an additional growth driver. Together with the already consolidated sector-level diversification, this aims to place the group in areas and sectors characterised by development cycles that are different and balanced in terms of effort on a combined basis, with consequent benefits in terms of the overall risk profile of the activities.

The group therefore intends to make the most of its current geographical presence and its expertise in order to focus on areas and sectors with high growth potential.

SUSTAINABILITY GOVERNANCE

THE SUSTAINABILITY COMMITTEE

As part of the group's planning of controls and supervision of its sustainability performance, it set up a sustainability committee in 2015 which coordinates the review of the group's management system at corporate level.

Comprised of the chief executive officer, managers and deputy general managers and the head of sustainability and QHSE management, the committee was reorganised early in 2019 to streamline the decision-making process. It provides guidance about sustainability and is in charge of analysing and monitoring the group's non-financial performance, assessing the adequacy of its integrated strategy and monitoring goals and targets in line with the directions provided by the board of directors.

OPEN WORK SITES

Sustainability is a strategic factor for the group and it aims to integrate it into value creation for all stakeholders.

To this end, the sustainability committee coordinated the identification of the three key activities to be developed in 2018-2020 to improve the control and monitoring of sustainability.

1. Development and improvement of processes supporting non-financial reporting
2. Implementation of the High level structure (HLS) model for QHSE management as part of the integrated management system
3. Inclusion of a mechanism to test the reliability of data and information in internal audits, which has been used to test and monitor the quality, reliability and efficiency of the data collection process starting from 2019.

ASTALDI'S STAKEHOLDERS

The geographical expansion of the market and the allocation of the group's operations to various business lines have led the group to liaise with numerous stakeholders with varied needs and expectations. As set out under the sustainability policy, the group considers dialogue and transparency as key elements for the ongoing integration of its stakeholders' point of view which reiterates the group's commitment to creating extended value.

The aim of mapping group stakeholders[7] is to boost awareness of the group's network while monitoring its reputation. Based on the study of some information in the media on the group, its main competitors and the construction industry in general, the mapping was made via meetings and interviews with top management in order to understand Astaldi's relationships with the various categories of stakeholders.

Identifying the stakeholders and thus understanding their perspective is a key component of Astaldi's sustainability strategy. The stakeholders have been classified by level of interest and level of influence. The following is a list of key stakeholders whose perspective was taken into consideration for the development of the materiality analysis described in the subsequent paragraph:

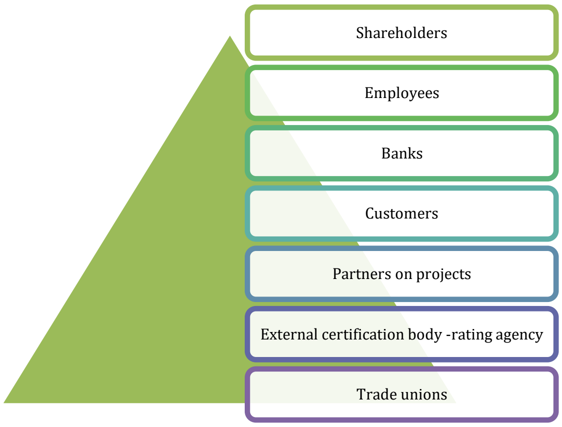

Figure 3: Stakeholders

The geographical diversification of its business is an intrinsic factor for the growth of the Astaldi Group and embarking on new markets is an ongoing challenge that requires particular care and dialogue with new and existing stakeholders.

The group builds its relationships with stakeholders around the general principles of its code of ethics: fairness, transparency, safeguarding assets, professionalism, protection of human resources and sustainability.

Meeting the needs and requests of the various stakeholder groups in order to make them compatible with the development of its business is the foundation of engagement activities undertaken by the group.

[7] Stakeholders are identified at corporate and local level according to a single mapping criterion. Right from the planning or start-up phase, each project team identifies the stakeholders with whom to engage, defining the type and frequency of engagement based on requirements.

ISSUES PRESENTED BY THE MAIN STAKEHOLDERS	
Employees and consultants	• sense of belonging and involvement in the identification of the group's values and strategies; • occupational health and safety; • identification, promotion and development of talents and skills; • training the workforce to boost their technical qualifications and upskilling; • strengthening consultants; • company-welfare quality of life and work-life balance.
Customers and partners	• monitoring of activities for environmental reasons; • safety of workers; • participation and planning of works; • commitments and contractual matters, • work practices; • economic/physical progress and goals achieved; • dispute management; • quality of work carried out and remedying any non-compliant issues.
Suppliers and independent contractors	• Responsibility and correctness in compliance with agreements; • business negotiations; • business opportunities; • work site problem solving.
Committees and trade unions	• Site safety, contractual conditions, activities with workers' representatives; • improvements in health, safety and security conditions at sites; • respect for contractual agreements; • work practices (compliance with the regulations about night shifts and groups of foreign workers).
Local communities and administrations	• Impacts related to the construction of infrastructure (noise/dust); • medical/social assistance and creating logistics hubs; • participation in and information about the planning of works; • impacts on roads and public areas - road safety culture; • protection of cultural heritage and water resources; • managing expropriations; • interference of works with the surrounding area; • setting up grievance mechanisms; • setting up agreements with training centres for promoting road safety awareness; • spreading project benefits: creating job and service opportunities for the local community; • inconveniences caused by delays in completing the works; • medical/social assistance needs.

MAIN ACTIONS UNDERTAKEN

- implementation of measures aimed at eliminating or reducing environmental impacts and ongoing communication with stakeholders about the measures carried out;
- actions to resolve disputes and assisted negotiation procedures;
- coordination and communication between the group and stakeholders to increase the latter's level of involvement;
- road safety meetings - guidelines, "travel safely" campaign;
- partnerships with instructors from training centres;
- implementing grievance mechanisms;
- consulting for local service providers and agricultural companies;
- vaccination campaign;
- periodic meetings, also on safety;
- control and supervision of operations;
- training and awareness campaigns provided through training centres about sexual education, sexually transmitted diseases and infections and teenage pregnancy;
- creation of jobs and providing services to the communities;
- creation of committees with suppliers and subcontractors to promote the spread of social policies;
- development, in collaboration with technical institutes, of a professional training course for unqualified workers;
- road maintenance;
- implementation of social centres;
- active participation in local community life;
- raising awareness of disease prevention.

Figure 4: Stakeholders and engagement actions implemented at local level

Based on its stakeholders' expectations, the group undertook various engagement activities in 2018, especially at project level.

The main activities were:

- written and verbal communications and information;
- educational meetings (also on health and safety) for all personnel and external consultants;
- coordination meetings;
- information meetings with representatives of the municipality and the business community;
- meetings with the local community;
- site visits and open days;
- home visits;
- focus groups and round tables;
- training and educational courses for employees and third parties;
- social media (youtube, twitter and blogs);
- implementation and development of a stakeholder engagement plan;
- leafleting;
- scheduling activities (together with the customer)/planning works;
- meetings, conferences and workshops;
- workplace safety (defibrillators);
- dedicated websites;
- public meetings;
- telephone numbers and email addresses dedicated to requests for information;
- trade shows and one-to-one meetings;
- creating a liaison office for interest groups;
- one-off events.

MATERIALITY ANALYSIS

Identifying material topics is the outcome of a process to identify, assess and classify in order of priority sustainability aspects that "matter" for stakeholders and that significantly impact the parent's ability to create value in the short, medium and long term. In other words, material topics for stakeholders are those issues that help stakeholders decide whether to invest in the parent, creating value for the latter. Astaldi's materiality analysis is broken down into two stages:

- identifying key topics for Astaldi to be included in its materiality analysis out of those identified by the Global Reporting Initiative.
- assessing the topics: with the help of management on the basis of two parameters: "material for stakeholders" and "material for the group",

For the purposes of understanding the group's sustainability strategy, a topic that is "material for the group" is defined in terms of its impact on strategy, reputation and financial performance, while a topic "material for stakeholders" chiefly relates to the perception - made as objective as possible by combining internal and external data and information - that the parent has of its role within the world where it operates over a period of time that more or less matches its strategic planning.

The materiality matrix was analysed with reference to two important factors:

1. the involvement of external stakeholders;
2. the need - as part of the large-scale assessment of important aspects from a company's point of view - to make the business strategy adopted clearer, reflecting its commitment to reducing the impacts of the group's value chain.

The sustainability committee launched a process to update the materiality matrix in 2019, with the aim of improving the analysis and completeness of communication about issues that are material for stakeholders as part of the group's non-financial performance.

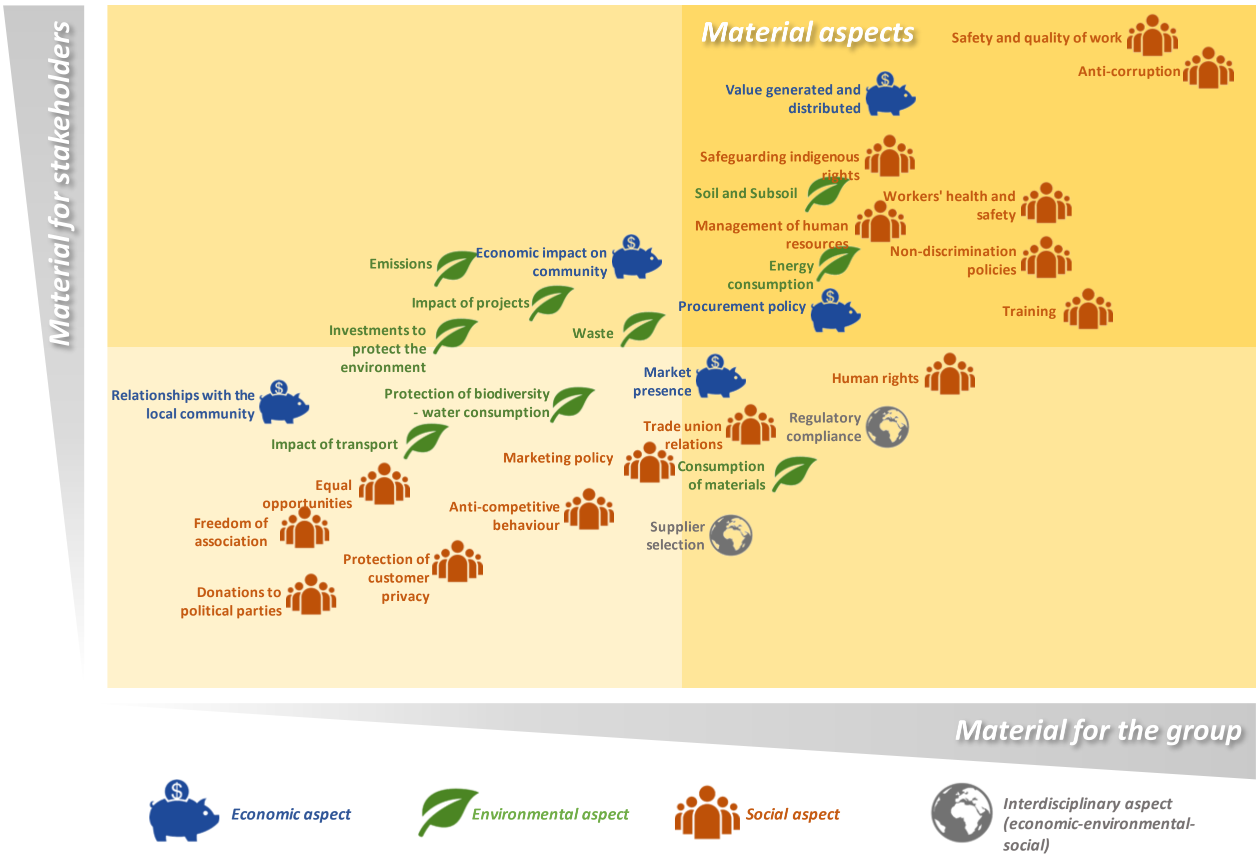

Figure 5: Material topics for Astaldi

A bridging table is provided below linking the material aspects identified by the group through its materiality analysis to the aspects set out in the GRI Sustainability Reporting Standards to show the standard used in each case and the objectives of the 2030 Agenda, which the group is committed to achieving over time. Furthermore, the categories of stakeholder which may be impacted by each topic are also included.

SCOPE	MATERIAL ASPECTS IDENTFIED BY ASTALDI	RELATED RISKS	GRI STANDARDS MATERIAL ASPECTS	REFERENCE GRI STANDARDS	EXTERNAL IMPACT	SDGs
ECONOMIC ASPECTS	**Value generated and distributed**	• Unethical and/or illegal behaviour of employees • Corporate crimes • Non-compliance or breach of reference legislation or applicable regulations	Economic performance	GRI 201-2 GRI 201-4	External consultants, partners, consultants, agents, proxies	8 DECENT WORK AND ECONOMIC GROWTH
	Procurement policy	• Non-compliance of product information • Reputation risk	Procurement practices	GRI 102-9 GRI 102-10 GRI 204-1		17 PARTNERSHIPS FOR THE GOALS
ENVIRONMENTAL ASPECTS	**Energy consumption**	• Increased costs for energy procurement • Difficulties in obtaining constant supply of electrical energy	Energy	GRI 302-1 GRI 302-2 GRI 302-3	Suppliers, subcontractors, customers	7 AFFORDABLE AND CLEAN ENERGY
	Soil and Subsoil	• Non-compliance with Kyoto protocol • Soil pollution	Significant spills (included under Effluents and waste)	GRI 306-3		13 CLIMATE ACTION
SOCIAL ASPECTS	**Human resources management**	• Increased turnover and loss of capable and key personnel	Employees	GRI 102-8 GRI 401-1	Customers, subcontractors and suppliers	5 PARITÀ DI GENERE
	Occupational health and safety	• Increased injury rate • Reputation • Higher costs	Health and safety in the workplace	GRI 403-2 GRI 403-3 GRI 403-4		3 GOOD HEALTH AND WELL-BEING
	Training	• Decreased value of human capital	Training and education	GRI 404-1		4 QUALITY EDUCATION
	Non-discrimination policies	• Discrimination and unequal treatment	Non-discrimination	GRI 405-1 GRI 406-1 GRI 411-1		10 RIDURRE LE DISUGUAGLIANZE

SCOPE	MATERIAL ASPECTS IDENTFIED BY ASTALDI	RELATED RISKS	GRI STANDARDS MATERIAL ASPECTS	REFERENCE GRI STANDARDS	EXTERNAL IMPACT	SDGs
	Safeguarding indigenous rights	• Reputation • Decreased value creation for the area	Indigenous rights	GRI 411-1		
	Quality and safety of works	• Reputation • Decreased value creation for the area	Health and safety of the user Product and service labelling	GRI 416-1 GRI 416-2		
	Anti-corruption	• Crimes related to corruption • Reputation	Anti-corruption	GRI 205-1 GRI 205-2 GRI 205-3		

Table 1: Bridging table linking the materiality matrix to GRI Standard material aspects

ASTALDI AND SUSTAINABLE DEVELOPMENT

Astaldi has always been committed to carrying out projects and providing services capable of fully meeting the needs of customers and the expectations of other stakeholders, to increase the value of the group in terms of sustainable development, which in turn guarantees the health and safety of its employees and the community and respect for and safeguarding of the environment in which it operates.

In line with the group's values, its social and environmental sustainability objectives refer to the following commitments:

- contributing to achieving the SDGs[8] by defining sustainable strategies, drawing on the ongoing improvement required to maintain certifications and the increasing diversification to low risk countries;
- continuously improving the group's performance and value;
- helping to improve well-being and shared value, recognising the need to integrate the group's interests with those of the local areas and societies in which it works;
- guaranteeing legislative compliance and respect for health, safety and environment agreements.
- satisfying the needs of customers;
- considering the point of view of stakeholders in making improvements;
- preventing and mitigating pollution;
- preventing injuries and occupational diseases and mitigating health and safety risks.

In order to develop its commitments, the group has implemented and maintains a management system which integrates and applies the management standards ISO 9001, ISO 14001, OHSAS 18001 – ISO 45001 and the ISO 26000 guidance.

The group has made its sustainability policy available internally and externally and it represents the reference framework used in defining the performance objectives. It is regularly assessed to ensure it is suitable.

8 The United Nation's 2030 Agenda for Sustainable Development, presented in New York in September 2015, sets out 17 Sustainable Development Goals which represent shared responses to the complex challenges of today. They represent an important point of reference for the international community.

ECONOMIC ASPECTS

THE GROUP'S FINANCIAL HIGHLIGHTS

With regard to the issues related to financial policies and performance, reference should be made to the information provided in the group's directors' report. Furthermore, information regarding Astaldi S.p.A.'s legal status is provided below:

COMPOSITION WITH CREDITORS ON A GOING CONCERN BASIS AS PER ARTICLE 186-BIS OF THE BANKRUPTCY LAW

On 28 September 2018, Astaldi S.p.A. ("Astaldi" or the "parent") filed its application (no. 63/2018) with the bankruptcy section of the Rome Court for its composition with creditors procedure as per article 161.6 of the Bankruptcy Law (the "composition with creditors procedure" or the "composition procedure") in order to present its proposal of composition with creditors on a going concern basis as per article 186-bis of the Bankruptcy Law.

On 17 October 2018, the Rome Court granted the parent a term of 70 days to file the proposal, the related plan and the other documentation required in accordance with article 161.2/3[9] of the Italian Bankruptcy Law. It also appointed Stefano Ambrosini, Vincenzo Ioffredi and Francesco Rocchi as the relevant judicial commissioners. The Rome court also stipulated that the parent must file the following documents on a monthly basis: (i) an updated report on its financial position and (ii) a report on the preparation status of the proposal and the plan, in addition to the current management and financial management of the parent, with indication of the main procedures carried out, both in terms of negotiations and with regard to management, industrial, financial or settlement procedures worth over €500 thousand, with indication of the parent's cash and cash equivalents and the most significant changes (disclosure obligation was duly complied with by the parent during the procedure).

On 18 December 2018, the deadline for the presentation of the composition proposal in accordance with the application filed by the parent as per article 161.6 of the Bankruptcy Law was extended for another 60 days given the complexity of the activities to be performed as part of the composition plan and the procedure. Therefore, the deadline set for the presentation of the composition plan[10] and proposal in accordance with article 160 and subsequent articles of the Bankruptcy Law was 14 February 2019.

MAIN RISKS AND UNCERTAINTIES TO WHICH THE GROUP IS EXPOSED AND ASSESSMENT OF ITS ABILITY TO CONTINUE AS A GOING CONCERN

GOING CONCERN

Due to the complicated situation of the group detailed in the directors' report, management carried out a meticulous examination of its ability to continue as a going concern.

Specifically, when approving the draft financial statements at 31 December 2018 (which were only approved on 16 June 2020 due to the composition with creditors procedure commenced on 28 September 2018), the board of directors made all the assessments required to ascertain the group's ability to continue as a going concern, taking into consideration all the information available on predictable future events.

Astaldi filed an application as per article 161.6 of the Bankruptcy Law on 28 September 2018, thus commencing a process to turn around itself and its group based on an integrated going concern manoeuvre over a period of five years (2019-2023), including four years after the date of authorisation of the composition with creditors proposal, as follows:

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[9] Bankruptcy Law – Royal decree no. 267 of 16 March 1942 as subsequently amended

[10] The composition plan as defined later in this report in the "Composition with creditors on a going concern basis as per article 186-bis of the Bankruptcy Law - the composition proposal" section.

(i) Astaldi's continuation of activities in order to ensure its ability to continue as a going concern by directly managing the parent;

(ii) a capital strengthening and refinancing manoeuvre, mainly via: (a) capital increases initially of €323.5 million with possible additional capital increases following the exercise of warrants and other share issues as a result of the conversion of unsecured claims presented subsequently, and (b) new financing granted and paid out for up to a maximum of €200 million by banks supporting the composition with creditors procedure;

(iii) the sale of activities and assets excluded from the core assets scope and transferred to a separate unit set up in accordance with article 2447-bis of the Italian Civil Code to satisfy unsecured creditors;

The above actions are part of an integrated manoeuvre under the composition with creditors proposal and are inextricably linked to one another. Therefore, the success of the entire manoeuvre depends on each individual transaction or event taking place.

In 2017 (see the 2017 Annual Report and Interim Financial Report at 31 March 2018 for further details), the parent began to look for potential industrial investors in order to acquire new resources to meet the financial requirements for the continuity of its contracts and exploit possible synergies with operators in the same sector.

Though the transaction has not yet been finalised, it should be noted that Astaldi, IHI Corporation and IHI Infrastructure Systems Co, a subsidiary of IHI Corporation, entered into an industrial strategic partnership agreement (the "global partnership agreement") on 15 May 2018 aimed at enhancing respective skills and strengths through synergies, including of a commercial nature. At the same time, Astaldi, its reference shareholders and IHI Corporation ("IHI") also signed an investment agreement (the "investment agreement"), under which IHI will acquire an interest in the parent equal to approximately 18% of Astaldi’s share capital and approximately 13% of its overall voting rights.

On 15 November 2018, Webuild S.p.A. (formerly Salini Impregilo S.p.A.) ("Webuild") issued a communication that, in short, set out its interest in acquiring an infrastructure construction business unit. On 13 February 2019, Webuild issued a binding offer, subsequently integrated on 28 March, 20 May, 18 June and 15 July 2019, proposing to acquire an investment in Astaldi as part of its restructuring process. On 14 February 2019, the parent filed its composition with creditors proposal, prepared on the basis of Webuild's binding offer, together with the relevant documentation. Finally, on 19 June 2019, the parent filed a brief replying to the request for clarifications received from the Rome Court, simultaneously filing an updated version of the composition with creditors proposal, the composition plan and the related report, followed by further integrations on 16 July, 20 July and 2 August 2019.

Specifically, the composition with creditors proposal provides for:

1. the parent's continuation of its activities in order to ensure its ability to continue as a going concern by directly managing the business unit solely comprising Engineering, Procurement & Construction (EPC) activities, facility management and complex system management and certain minor concessions implicit in EPC activities;

2. a capital strengthening and refinancing manoeuvre, entailing:

a) a cash capital increase of €225 million reserved to Webuild, excluding a rights offering for the current shareholders, at an issue price of €0.23 each (twenty-three cents) per share;

b) a divisible capital increase of €98.65 million, excluding a rights offering for the current shareholders, to service the conversion into Astaldi shares of the total filed unsecured claims or potential unsecured claims, accrued in the provision for risks, that may be filed in the meantime, at a rate of 12.493 shares for each €100 of filed or potential unsecured claim against Astaldi (the equivalent of an issue price of €0.23 per share);

3. the issue - as per the financing agreements (cash and bonding facilities) underpinning the composition with creditors proposal - of warrants for Astaldi's lending banks (the "bonus warrants") to be exercised against payment at the terms and conditions set out in the regulation attached to Webuild's

binding offer. The number of bonus warrants approved for issue shall be sufficient to allow Astaldi's lending banks to subscribe a number of ordinary Astaldi shares against consideration and during the established exercise window at a price of €0.23 per share for up to 5% of the share capital as it stands immediately after the two capital increases mentioned above;

4. Webuild's binding offer provides for a third possible divisible capital increase, excluding a rights offering for the current shareholders, of a maximum amount of €10 million to satisfy additional unsecured creditors, not included in the composition plan, that present claims subsequently, if the amounts claimed are higher than the accruals to the provision for the unsecured claims as per the plan with the right to receive 12.493 ordinary shares for each €100 of the filed or potential unsecured claim.

The impact of this possible capital increase is not included in the plan, but the possibility is provided for in order to clarify that any unsecured creditors not currently included in the plan will receive the same treatment as the other unsecured creditors. This complies with article 184 of the Bankruptcy Law as it enables all creditors existing before the application for the composition with creditors procedure is filed with the company registrar to be treated on like terms;

5. Webuild's binding offer also provides for the issue of anti-dilutive warrants to Webuild with the related possible issue of the parent's ordinary shares to ensure that its investment in Astaldi will not be diluted should other unsecured creditors that are not provided for in the composition plan present a claim ("anti-dilutive warrants"). The anti-dilutive warrants may not reverse any dilution of investments of all future Astaldi shareholders due to the exercise of the bonus warrants (and resulting share issue) by the banks involved in granting the new credit facilities;

6. a first issue of pre-preferential bonds on 12 February 2019 for €75 million (the "Fortress bonds" or "bonds") subscribed by Fortress and authorised by the court following the application presented by Astaldi as per article 182-quinquies.3 of the Bankruptcy Law;

7. actions taken by Webuild (via its wholly-owned newco Beyond S.r.l.) and illimity Bank S.p.A. to (i) repurchase the Fortress bonds (first issue), and (ii) subscribe an additional issue of the pre-preferential bonds for up to €125 million (second issue). €50 million was issued as part of the second issue on 2 December 2019 and €63.9 million on 10 February 2020, for a total bond issue of €188.9 million (first and second issues);

8. the granting of a revolving credit facility by banks for €200 million ("RCF 200"), to be used after the composition with creditors procedure is authorised and the Webuild capital increase is made, in order to fund Astaldi's ordinary activities, including the full redemption (with funds from the credit facility) of any residual portion of the pre-preferential bonds set out in points 6 and 7. The RCF 200 is a pre-preferential facility provided as per the composition with creditors procedure as per articles 111 and 182-quater of the Bankruptcy Law;

9. the granting of bonding facilities for a total of €384 million as per article 182-quinquies.1 of the Bankruptcy Law, aimed at providing Astaldi with the resources needed to issue guarantees for projects in progress and/or in stand-by or pending award (the contract was signed with banks on 10 August 2019);

10. the sale of specific assets excluded from the core assets scope and which will be transferred to a separate unit as per article 2447-bis of the Italian Civil Code along with other assets/liabilities set out in the composition plan of 19 June 2019. The proceeds from the sale of these assets will be used to satisfy the unsecured creditors through the allocation of participating financial instruments.

The main assets to be transferred to the separate unit set up as resolved by Astaldi's board of directors on 24 May 2020 are:

a. Astaldi's gross amount due from IC Içtas Inșaat Sanayi ve Ticaret A.Ş. (ICTAS) for the sale of its 20% investment in Ica Ic Ictas Astaldi Ucuncu Bogaz Koprusun Ve Kuzey Marmana Otoyolu Yatirim Ve Isletme Anonim Sirketi (an SPE that holds the concession to build and operate the Third Bosphorus Bridge - the "Third Bosphorus Bridge operator") (the "Third Bosphorus Bridge receivable" and with regard to the original investment, the "Third Bosphorus Bridge investment") and the related shareholder loan. The deed of sale for the Third Bosphorus Bridge investment and the Third Bosphorus Bridge receivable, originally included in the composition proposal, was signed by Astaldi and ICTAS on 17 March 2020;

b. the shareholder loans and investments held directly by Astaldi in the operators of: (i) the Gebze-Orhangazi-Izmir Motorway in Turkey, and (ii) the Etlik Integrated Health Campus in Ankara, Turkey;

c. the shareholder loans and investments held indirectly by Astaldi, via Astaldi Concessioni S.p.A., in the operators of: (i) the Arturo Merino Benitez International Airport of Santiago, Chile, (ii) the West Metropolitan Hospital in Santiago, Chile and (iii) the Etlik Integrated Health Campus mentioned above;

d. amounts due from Instituto de Ferrocarriles del Estado (IFE) of Venezuela for the projects to build the Puerto Cabello-La Encrucijada and San Juan De Los Morros-San Fernando de Apure and Chaguaramas-Cabruta railway line sections (the "Venezuelan receivables");

e. the building and appurtenance land in Via G.V. Bona 65, Rome, which houses the parent's current offices;

In accordance with the composition plan, as per the board of directors' resolution of 24 May 2020, the parent set up the separate unit as per article 2447-bis of the Italian Civil Code, which will include the investee Astaldi Concessioni S.p.A. which was, in turn, partially proportionately demerged, under notary public Salvatore Mariconda's deed of 28 May 2020, in order to separate the non-core assets which remain with the demerged Astaldi Concessioni from the core assets to be transferred to a newco also fully controlled by Astaldi;

The composition with creditors proposal covers the settlement of the following claims at the reference date (28 September 2018) amounting to €3,598 million, including:

(i) pre-preferential claims totalling €67.8 million, mainly comprised of the fees of judicial commissioners and consultants involved in the procedure and provisions for pre-preferential claims;

(ii) preferential claims totalling €96.7 million, mainly (i) tax liabilities of €28.3 million, (ii) provisions for preferential claims (i.e., the provision for tax disputes) of €22.1 million, (iii) preferential trade payables (i.e., artisans and professionals) of €20.5 million, and (iv) payables to employees of €12.7 million;

(iii) unsecured claims totalling €3,433.5 million, mainly (i) bank loans and borrowings and payables to bondholders of €2,557.1 million, (ii) trade payables of €329.5 million, (iii) intragroup payables of €155.8 million, and (iv) provisions for unsecured claims totalling €378.6 million.

With regard to such total claims, the composition with creditors proposal provides that:

1. pre-preferential claims and management costs will be paid in full when due;

2. pre-preferential claims related to the loans agreed as per article 182-quinquies of the Bankruptcy Law will be settled in full;

3. preferential claims will be satisfied in full within one year of the authorisation of the composition with creditors procedure as per the moratorium under article 186-bis of the Bankruptcy Law;

4. unsecured claims (not broken down by class), including preferential claims downgraded to unsecured as per article 160.2 of the Bankruptcy Law, will be satisfied within 120 days of the authorisation date via:

o new shares assigned to unsecured creditors at 12.493 new shares for each €100 of claim;

o participating financial instruments that give creditors the right to receive the net proceeds on the sale of the assets transferred to the separate unit, in the ratio of one participating financial instrument for each euro of their unsecured claim;

5. the tax and social security liabilities will be settled within one year from the authorisation of the composition with creditors application at the terms and conditions set out in the proposal to settle such tax and social security liabilities as per article 182-ter of the Bankruptcy Law. This provides for, in short: (i) the full payment of the preferential tax/social security liabilities within 12 months from the

authorisation date; (ii) the partial payment of any unsecured liabilities through the assignment of shares and participating financial instruments in the same ratio as that offered to the other unsecured creditors; and (iii) the complete elimination of the potential tax liability arising on the tax assessment (currently pending before the Campania Regional Tax Commission), without prejudice to that set out in point 3 above;

6. the subordinated claims will not be satisfied during the period of the composition plan;

The Rome Court accepted the parent's application for the composition with creditors procedure on 5 August 2019 and set the date for the creditors' meeting before the delegated judge as 6 February 2020. On 27 November 2019, the court postponed the meeting to 26 March 2020 and then postponed it further to 9 April 2020 on 23 March 2020.

After reading the minutes of the creditors' meeting of 9 April and the information provided by the judicial commissioners on the definitive outcome of the vote held on 30 April 2020, whereby the proposal was approved by a majority of 69.4% of the creditors eligible to vote, with its ruling of 4 May 2020, the court set the hearing date for the authorisation of the composition with creditors to be attended by the parties involved and the judicial commissioners as 23 June 2020.

Based on the above, the parent's directors made extremely thorough evaluations on the going concern assumption, duly considering the specific stages of its overall application for composition with creditors. Specifically, the directors took into account all information available on predictable future events, considering all aspects characterised by significant uncertainty that could raise considerable doubts as to the ability of the group to continue as a going concern, as follows:

a. Authorisation of the composition with creditors: As mentioned earlier, the hearing date for the authorisation of the composition with creditors was set for 23 June 2020. Astaldi, the judicial commissioners, any dissenting creditors and any interested parties must present themselves at least ten days prior to the hearing date, as per article 180.2 of the Bankruptcy Law. The judicial commissioners shall file their reasoned opinion within the same date. Following the hearing and after assessing any objections and the reasoned opinion of the judicial commissioners, the court shall decide whether to issue its decree authorising the composition with creditors as per article 180 of the Bankruptcy Law.

b. Conditions precedent of Webuild's binding offer:

i. Definitive authorisation of the composition with creditors procedure by 31 March 2021, i.e., the Rome Court issuing a decree as per article 180 of the Bankruptcy Law authorising Astaldi's composition with creditors application that is definitive and no longer subject to claims. Specifically, the decree is considered definitive and no longer subject to claims:

- when it has been filed, if no objections are made; or

- if objections are made, within 30 days after the last of the following requirements has been fulfilled: (1) filing of the decree authorising the composition with creditors procedure with the Rome company registrar; (2) notification of the decree to the creditors as per articles 17 and 180 of the Bankruptcy Law without any appeals being made in the meantime as per article 183 of the Bankruptcy Law; or

- if objections are made, if the decree authorising the composition with creditors procedure is appealed as per article 183 of the Bankruptcy Law, and (i) the appeal as per article 183 of the Bankruptcy Law is discontinued by the claimant(s) (even after settlement) resulting in the decree becoming definitive when the claimant formally discontinues the claim, or (ii) when the Rome Court of Appeal rejects the claim.

ii. No events or circumstances arising before the definitive authorisation date that (individually or together) could compromise the judicial, economic and/or financial feasibility conditions underlying the composition with creditors proposal and the composition plan prepared on the basis of Webuild's binding offer, as possibly amended or integrated as per article 162 of the Bankruptcy Law or subsequent amendments to the proposal and plan as per article 172.2 of the Bankruptcy Law, the content of which shall be agreed with Webuild.

In addition to the above conditions precedent, Webuild's binding offer also requires that:

- there are no significant changes to the amount and/or nature and composition of the claims for which proof was filed without Webuild’s prior written notification of its continued interest in the transaction;

- the statement of financial position in Astaldi's first separate and consolidated financial statements approved after the definitive authorisation of the composition with creditors, which therefore reflects the debt-discharging effect of the composition with creditors procedure, is substantially in line with that set out in the composition plan;

- Astaldi's subsidiaries owning contracts listed in Webuild’s binding offer terminate such contracts in a manner that ensures that their termination does not lead to payables, charges, liabilities or obligations for Astaldi to be borne outside the unsecured claims provided for as part of the composition (i.e., provided for in the related provision for risks in the plan attached to Webuild’s binding offer);

- Astaldi continues as a going concern, i.e., it can continue performing its contracts and operations and, specifically, continue its existing contracts and projects which at the offer date are mostly suspended or, in any case, restricted due to Astaldi's financial difficulties.

c. Capital strengthening and refinancing manoeuvre: the implementation of the capital strengthening and refinancing manoeuvre under the composition with creditors proposal described earlier provides for, in short: capital increases reserved to Webuild and unsecured creditors; obtaining revolving credit facilities of €200 million from banks; and the sale of specific assets excluded from the core assets scope and which will be transferred to a separate unit as per article 2447-bis of the Italian Civil Code along with other assets/liabilities. The proceeds from the sale of these assets will be used to satisfy the unsecured creditors through the allocation of participating financial instruments.

d. Meeting the targets set out in the composition plan: effectively reaching the financial and performance targets that will confirm the group's turnaround under the provisions of the plan. They also depend on future, uncertain variables that cannot be controlled, e.g., variables that could affect (i) the amount and timing of new contracts, (ii) the timing of collecting additional fees for variations, price revisions, incentives and claims compared to the contractually agreed amounts and (iii) the amount and timing of collecting advances from customers, estimated based on the parent's application for the benefits provided by urgent measures introduced to aid the liquidity of contractors under Decree law no. 34 of 19 May 2020 (the so-called "Relaunch Decree") issued following the Covid-19 emergency.

In light of the above, the parent's directors duly requested and obtained the information needed to assess the reasonableness that all of the above circumstances could occur, i.e., the significant uncertainties that could lead to material doubts as to the ability of the group to continue as a going concern. As a result, they deemed it appropriate to prepare the consolidated financial statements at 31 December 2018 under the going concern assumption.

Specifically, the parent's directors based their conclusions on the following considerations, with reference to each of the elements of uncertainty listed above:

1. with regard to points a) and b):

i. as mentioned earlier, the authorisation process of the composition with creditors procedure is at a very advanced stage. Indeed, with its decree issued on 5 August 2019, the Rome Court authorised the commencement of the procedure proposed by the parent. The creditors’ meeting was held on 9 April 2020. Then, after reading the minutes of the creditors’ meeting and the information provided by the judicial commissioners on the definitive outcome of the vote held on 30 April 2020, whereby the proposal was approved by a majority of 69.40% of the creditors eligible to vote, with its ruling of 4 May 2020, the court set the hearing date for the authorisation of the composition with creditors to be attended by the parties involved and the judicial commissioners as 23 June 2020. [Also based on the opinions of their external legal advisers, the parent's directors believe that the objections presented to the Rome Court to date which will be discussed at the authorisation hearing set for 23 June 2020 will not jeopardise the success of the composition with creditors application as they are mostly focused on matters already analysed and assessed during the procedure even should such objections lead to claims to the Court of Appeal subsequent to the authorisation decree.] Therefore, there is no reason to believe that the court will not authorise the composition with creditors application and that such authorisation would not be confirmed by the Court of Appeal in the event of any subsequent claims;

ii. based on the analysis performed by the parent's directors, at the date of approval of the draft consolidated financial statements, there have been no events or circumstances that (individually or together) could compromise the judicial, economic and/or financial feasibility conditions underlying the composition with creditors proposal and the composition plan prepared on the basis of Webuild's binding offer, or provisions such not to ensure that all the underlying assumptions of the offer are met;

2. with regard to point c), the parent's directors deem it reasonable to assume that the capital strengthening and refinancing manoeuvre under the composition with creditors proposal will be successfully implemented once definitive authorisation of the composition with creditors procedure has been granted. The project includes capital increases reserved to Webuild and unsecured creditors and revolving credit facilities of €200 million from banks to enable the parent's continuity. The directors' assumption is based on Webuild's binding offer as well as the commitments undertaken by the banks involved in the manoeuvre and formalised in specific commitment letters attached to the offer. In addition, Webuild completed a capital increase of €600 million on 12 November 2019. This is key to Progetto Italia as one of the essential elements of the project is acquiring control of Astaldi once it has completed its capital strengthening and refinancing manoeuvre. Astaldi's planned capital increase is naturally also subject to other conditions outside of its control, such as the shareholders approving the transaction and CONSOB authorising the publication of the relevant prospectus to be issued for the capital increase. It seems reasonable to assume that the voting of Astaldi's shareholders will be in line with Webuild's binding offer as the majority shareholder has already made binding commitments on 14 February, 14 June and 16 July 2019 to vote in favour of the resolutions needed to implement the manoeuvre. With regard to the CONSOB authorisation, on the other hand, it seems reasonable to assume that it will be granted, also considering that: (i) the capital increase is imperative for the capital strengthening and refinancing manoeuvre; (ii the latter has already been communicated to the market and CONSOB; *(iii)* the entire cash amount to be injected has already been guaranteed; *(iv)* the company documentation required by ruling legislation to obtain the authorisation is already being drafted and finalising and sharing it with CONSOB should not be an issue for the parent;

3. finally, with regard to point d) relating to uncertainties linked to the composition plan, the plan was certified by a professional appointed under the composition with creditors procedure in their reports dated 14 February 2019, 19 June 2019 and 16 July 2020. Based on this fact and the respective checks carried out, the feasibility of the plan was also approved by the judicial commissioners appointed by the Rome Court who issued their report as per article 172 of the Bankruptcy Law on 10 February 2020. At their meeting held on 9 April 2020, the creditors also approved the plan with a large majority (69.40%). Finally, the directors carefully monitored and assessed all subsequent events regarding the achievement of the plan targets, which is also impacted by the collection of slow-moving items and advances from customers as per the urgent measures introduced to aid liquidity under the Relaunch Decree issued following the Covid-19 emergency. The directors did not detect any critical issues further to the uncertainties mentioned previously. In conclusion, though the actions described above entail significant uncertainties that could lead to material doubts as to the group's ability to continue as a going concern, the parent's directors prepared the consolidated financial statements at 31 December 2018 under the going concern assumption. Based on the considerations listed above, they deem it reasonable to assume that the tough situation that the group is facing can be overcome by defining and implementing the composition with creditors procedure, the capital strengthening and refinancing manoeuvre and the related plan.

The existence and overcoming of such uncertainties depend only partly on variables and internal factors under management's control and depend on external factors that have been assessed using the criteria of reasonableness set out above.

RISKS RELATED TO COVID-19 (THE CORONAVIRUS)

At the date of preparation of this report, the Italian and other EU and non-EU governments have applied extraordinary measures to curb the spread of the Covid-19 virus (the Coronavirus), declared a pandemic by the World Health Organisation.

THE DRIVERS OF OUR GROWTH

RELATIONSHIPS OF TRUST WITH PARTNERS AND SUPPLIERS

The Astaldi Group contributes to creating value, advancing ideas and specialist expertise, also through its network of partners and suppliers. In managing its relationships with these parties, Astaldi draws on the principles set out in the code of ethics and requests conduct in line with its principles, in more serious cases sanctioning any violations by activating the withdrawal clause.

In both Italy and foreign countries, the group often operates through partnerships with other industry players who are chosen with the objective of ensuring maximum competitiveness on the various markets it intends to operate on.

In selecting its partners, the group screens the characteristics of possible candidates on the basis of their reputation, industrial criteria (technical abilities, experience in the relevant business, qualifications held, etc.), performance (revenue recorded in recent years, proven by their financial statements, etc.) and, finally, financial aspects (financial solvency, etc.). Proposals are approved by senior management before definitively choosing partners.

The group's main partners are:

- Italy: Salini-Impregilo, Ansaldo STS, Ghella
- USA: OHL - Obrascón Huarte Lain
- Chile: Vinci Grand Projets
- Peru: Obrainsa
- Poland and Sweden: Gulermak
- Romania: FCC Construcción, Max Bögl, IHI Corporation
- Turkey: IC İçtaş, Nurol, Gocay, Ozaltin, Makyol, Turkerler, Kalyon

Just like its partners, Astaldi's suppliers and independent contractors are valued allies in the group's growth. In 2018, the project for the implementation of the new Vendor Management portal was completed in July, with the go-live of the SAP-Ariba system. As the software was changed, the supplier/subcontractor qualification form was also amended and extended, particularly the section related to HSE issues, with a view to inserting assessment criteria in line with the indexes recognised at international level. The new system also provides for an approval workflow as part of the registration and qualification of the suppliers and independent contractors, in addition to the possibility to qualify the latter by category. During the transition from the former Vendor Management system to the new SAP-Ariba portal, the group decided to maintain the already qualified suppliers, a list of which has been made available for consultation on the procurement service's SharePoint site. In September 2018, the supplier qualification campaign was launched in the new Vendor Management system in order to assemble a reliable vendor list for the group.

Astaldi Vendor Management

Astaldi's management of its register of suppliers via the Vendor Management portal is based on two main processes:

- **qualification** (estimated rating): this consists of assessing, on the basis of a series of pre-defined criteria (financial data, quality certificates, safety and environment indexes and certificates, code of ethics, references, etc.), a supplier's potential, expertise and prior experience.
- **performance assessment** (actual rating): this consists of examining, on the basis of a series of pre-defined criteria, the qualitative performance and punctuality of the main suppliers that have provided services/carried out works or supplied materials/plant/machinery.

Depending on the results of the qualification and/or the performance assessment, each supplier included in the register is allocated a rating (from 0 to 100) and classified as follows:

- high rating (60-100 points);
- medium rating (40-59 points);
- not qualified (score of 0-39).

Working with suppliers that meet group standards is a primary objective for Astaldi and it is a selection criterion applied right from the qualification and selection stage. To this end, the sections on safety and the environment in the qualification questionnaires significantly influence the estimated rating and mainly regard:

- having ISO 14001 environmental management system and OHSAS 18001/ISO 45001 occupational health and safety management system certification
- the existence of HSE disputes;
- injury rates in terms of the number of work-related fatalities and accidents with permanent consequences in the last three years and the related corrective actions taken;
- LTIFR - Lost Time Injury Frequency Rate;
- SR - Severity Rate;
- TRCFR - Total Recordable Case Frequency Rate
- implementation of organisational and management tools (such as action plans and training on health and safety and the environment).

In this regard, building relationships of trust with solid, transparent counterparties is considered a priority. The suppliers and independent contractors are selected by assessing their financial statements, with particular focus on their financial soundness, expertise and experience in their specific business market, in order to check that they meet the requirements in terms of managerial ability, technical skills and ability to fulfil commitments undertaken. The current system uses a Vendor Management portal which is used to manage the supplier register, along with the supplier qualification process, performance assessment and rating.

With regard to the supplier qualification process in partnership contracts (consortia, temporary business partnerships, joint ventures), Astaldi sponsors the use of its Vendor Management portal if it is the agent. If Astaldi is the principal, it will propose the qualification procedure to the intercompany committees as a reference, in order to promote Astaldi's instruments and methodologies within the partnership processes. Alternatively, the partners will define an ad hoc procedure for the qualification of suppliers, drawing on any specific qualified vendor lists of the individual partners or, alternatively, making use of the qualified suppliers of the main customers.

Selecting partners and suppliers

GRI 204-1

The group's commercial partners, main suppliers, contractors and independent contractors must act in line with the general principles of the code of ethics and the sustainability policy, as well as complying with specific cultural and social requirements of the countries where the Astaldi Group operates.

Astaldi uses a system to manage suppliers and independent contractors that are selected via a pre-selection and screening process (described in § Astaldi Vendor Management) based on parameters of expertise, experience and financial soundness. The aim of this process is to check that they meet Astaldi's minimum requirements in relation to managerial, technical and practical skills, financial soundness and experience gained with the Astaldi Group and the market in general. Signing the code of ethics is a mandatory condition in agreeing contracts, as is compliance with general and specific standards related to health and safety and environmental requirements adopted by Astaldi S.p.A..

In line with its mission, the Astaldi Group strives to satisfy and exceed its customers' expectations, also contributing to the well-being of the countries where it operates. In this regard, Astaldi has grouped procurement categories into two macro-groups called "global categories" and "local categories". The latter group refers to those for which Astaldi tends to favour commercial relations with local companies from where the works are being carried out, also based on the composition of the local supply market and the characteristics of the goods to be purchased.

ONGOING PERFORMANCE IMPROVEMENT

Astaldi has adopted a certified integrated QHSE management system for all activities right from the planning stage. To ensure compliance with group standards and the highest international standards, Astaldi assigns roles and responsibilities to personnel with adequate expertise and training who manage all stages and aspects of the project, especially focusing on the organisational, operating, decision-making and control stages.

Once again in 2018 the group worked on constantly improving its management system, focused on excellence and responsibility. Like every year, it set improvement objectives in relation to quality, health, safety and the environment via projects and initiatives developed at both contract and corporate level. Audit activities performed on the group's integrated management system by a third-party independent international body confirmed the validity of its certificates of compliance with ISO 9001, ISO 14001 and OHSAS 18001 standards.
The operating and support processes of the contracts are formulated using project management methods.

SOCIAL ASPECTS

FOCUS ON INDIVIDUALS

Its people are at the heart of the group's strategy. As part of the transformation processes that Astaldi is implementing in order to prepare itself for future challenges, employees are increasingly called on to play an active role in promoting change. The combined knowledge, skills and abilities acquired by Astaldi's employees represent a fundamental asset for the group, which aims to establish a positive environment centred on the individual, directed at attracting the best talents and helping them grow in a dynamic and efficient work environment, by watching over the health and safety of workers and implementing widespread career development and training programmes.

In 2018, the group has a total of 14,924 employees (+10.8% compared to 2017), 84% of whom have open-ended contracts. At year end, 17 part time contracts were in place. As reported in 2017, again this year, with reference to the principle of comparability, the group deems it suitable to present data for the average workforce as this gives a better understanding of its HR trends.

GRI 102-7/ GRI 102-8

Average workforce[11]	MU	2018	2017	2016
Revenue by geographical segment				
Italy	**no.**	**1,816**	**1,509**	**1,404**
Abroad[12] of which:	**no.**	**13,108**	**11,964**	**13,526**
Poland	no.	765	700	597
Romania	no.	1,100	771	758
Turkey	no.	1,689	1,319	1,565
Algeria	no.	347	639	1,120
US	no.	170	262	303
Canada	no.	950	1,876	1,793
Central America[13]	no.	1,336	1,036	601
Chile	no.	2,913	2,046	2,567
Peru	no.	492	714	976
Sweden	no.	67	-	-
Georgia[14]	no.	32	-	-
Breakdown by position				
Managers	no.	348	346	366
Junior managers (only Italy and expatriates)	no.	278	268	250
White collars	no.	4,764	4,505	4,868
Blue collars	no.	9,533	8,354	9,446
Breakdown by contract				
Local personnel – Italy	no.	1,816	1,509	1,404
Expatriated personnel	no.	413	418	420
Local personnel – abroad	no.	12,695	11,546	13,106
Total workforce	**no.**	**14,924**	**13,473**	**14,930**

[11] In accordance with the principle of substance over form, considering the irregular trends of site work, the average number of employees of group companies is provided. Furthermore, in order to best present social and environmental trends, the figure includes the entire workforce of the group company even when it is not fully consolidated and, therefore, does not match the consolidated financial statements figure despite referring to the same company.

[12] The number of foreign personnel also includes those from out-of-scope areas

[13] Central America includes in-scope countries. (page 4).

[14] Sweden and Georgia were only included in the reporting scope in 2018, which is why there are no data for 2016 and 2017.

The group keeps two basic objectives in mind when selecting and assigning employees to projects:

1. Ensuring that a portion of employees belong to the local communities, thus generating benefits for the economy of the region (or entire country) where the group is operating, and simultaneously ensuring an indirect positive impact on the economy which is vital for the group's economic influence from a sustainable development point of view.
2. Ensuring the spread of the Astaldi Group's values and knowledge along with its integrated management approach to business, a distinctive feature of the Astaldi trademark worldwide, by sending employees to work abroad.

Breakdown of personnel by contract and gender (at 31/12/2018) **GRI 102-8**

	Employees at 31/12/2018	Contract type (%)			Gender (%)	
	(no.)	Open-ended	Fixed-term	Other types	Men	Women
Italy	1,879	92.4%	7.3%	0.3%	90%	10%
Poland	349	44%	54%	2%	62%	38%
Romania	1,133	44%	56%	0%	83%	17%
Turkey	787	100%	0%	0%	87%	13%
Algeria	195	4%	96%	0%	96%	4%
USA	143	100%	0%	0%	90%	10%
Canada	98	100%	0%	0%	71%	29%
Central America[15]	1,314	93%	7%	0%	90%	10%
Chile	2,831	94%	6%	0%	94%	6%
Peru	39	41%	44%	15%	82%	18%
Sweden	28	39%	61%	0%	86%	14%
Georgia	27	100%	0%	0%	78%	22%
Total	**8,823**	**84%**	**16%**	**0%**	**89%**	**11%**

Breakdown of personnel by contract and gender (at 31/12/2017)

	Employees at 31/12/2017	Contract type (%)			Gender (%)	
	(no.)	Open-ended	Fixed-term	Other types	Men	Women
Italy	1,496	94%	6%	~0%	87%	13%
Poland	867	20%	79%	1%	70%	30%
Romania	745	64%	36%	0%	80%	20%
Turkey	540	99%	0%	1%	86%	14%
Algeria	433	5%	95%	0%	97%	3%
USA	207	100%	0%	0%	85%	15%
Canada	797	99%	1%	0%	86%	14%
Central America	1,191	78%	21%	1%	91%	9%
Chile	3,981	81%	17%	2%	95%	5%
Peru	977	3%	6%	91%	95%	5%
Total	**11,234**	**69%**	**22%**	**9%**	**89%**	**11%**

[15] 2018 data also include Panama

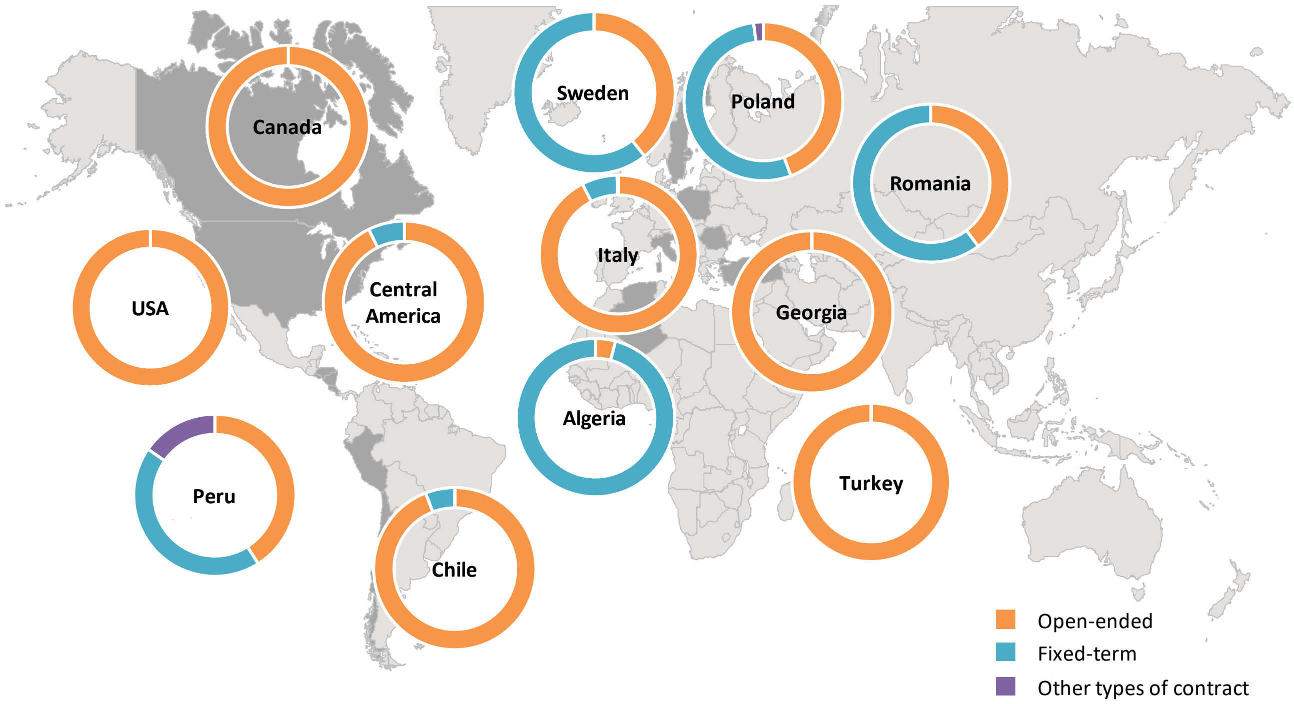


Figure 6: Employees by type of contract (at 31 December 2018)

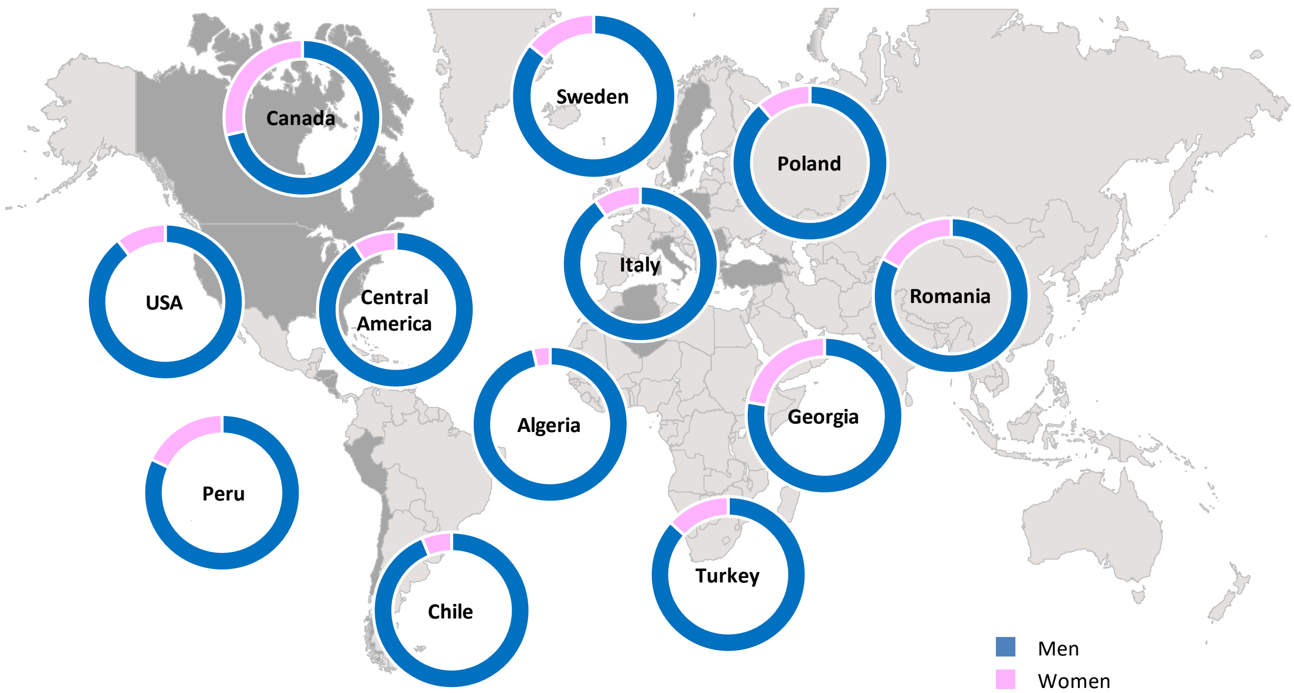


Figure 7: Total employees (expatriates and locals) by gender (at 31 December 2018)

In terms of gender, the construction sector typically employs a low percentage of female personnel compared to other sectors. Astaldi considers this trend to be mainly due to the geographical location of its projects and the socio-cultural context in the countries where the group operates. With regard to the workforce as at 31 December 2018, the total percentage of women was roughly 11%.

Considering the individual areas (also including expatriated personnel), countries with the highest percentage of female employees are Poland (38% of the workforce), Canada (29% of the workforce) and Georgia (22% of the workforce).

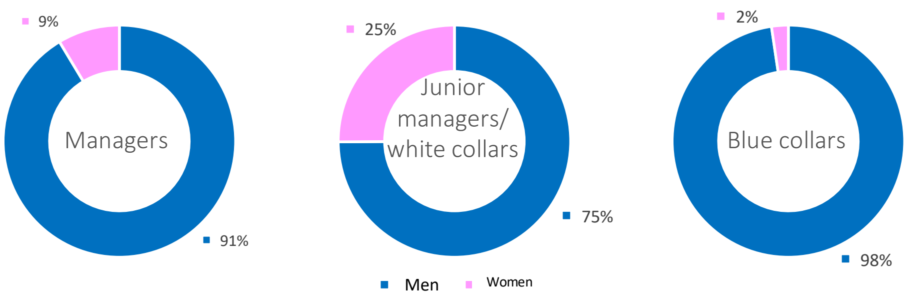
Furthermore, the following countries apply collective bargaining agreements as follows:

- Italy (100%)
- Turkey (94%)
- Algeria (3%)
- Canada (11%)
- Central America (41%)
- Peru (19%)
- Chile (70%)

Breakdown of personnel by professional category (at 31/12/2018)			**GRI 405-1**
	Managers	**Junior managers / White collars**	**Blue collars**
Number of employees			
Men	211	2,514	5,109
Women	20	847	122

Breakdown of personnel by professional category (at 31/12/2017)			
	-Managers	**Junior managers / White collars**	**Blue collars**
Number of employees	246	3,973	7,015

Figure 8: Professional categories by gender (at 31 December 2018)



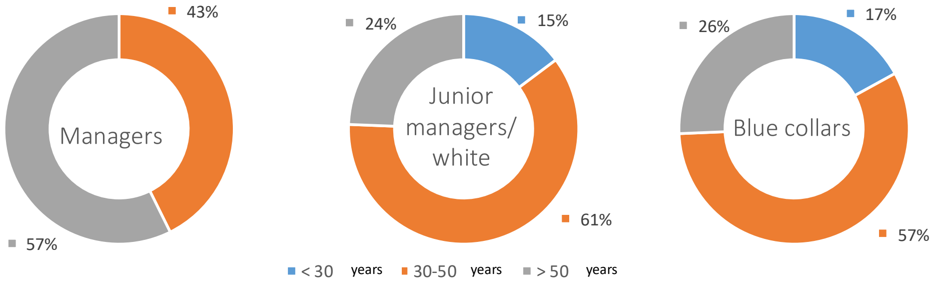


Figure 9: Professional categories by age bracket (at 31 December 2018)

MANAGEMENT OF THE GROUP CRISIS

Starting from the second half of 2018, the sudden change in the parent's circumstances, which led it to present the deed of arrangement, made it necessary to adapt its organisation, intensifying the streamlining of costs, while balancing the need to preserve the group's wealth of expertise and minimising the social impact; the actions implemented may be grouped together as follows:

- applying the extraordinary government-sponsored lay-off scheme to junior managers, white collars and blue collars at the Rome and Milan offices and to certain Italian projects. This scheme, which lasts a year (3 December 2018 - 2 December 2019) affects 439 employees, equal to approximately 305 full time equivalents, of which approximately 250 working on projects and the others being office personnel;
- freezing remuneration policies and promotions;
- amending and streamlining certain management policies (i.e., company cars, travel class for transfers, etc.);
- temporary reduction in the remuneration of management personnel with Italian contracts.

LOCAL SUPPLIER SELECTION

Astaldi considers its relationship with its suppliers to be of utmost importance, also from a moral point of view, as mentioned in the group's code of ethics.

Despite the financial difficulties of 2018 which prevented the group from fully honouring its contractual commitments with suppliers (see the directors' report for more details), the group is committed to developing a shared organisational process which is responsible and based on sustainability throughout the entire procurement chain.

Local acquisitions - % of procurement [16] — **GRI 204-1**

	2018	2017
Italy	93.2%	98.8%
Poland	97.2%	83.6%
Romania	90.9%	97.3%
Turkey	49.9%	98.4%
Algeria	100.0%	90.0%
USA	100.0%	100.0%
Canada	99.4%	99.0%
Central America	90.2%[17]	93.2%
Chile	99.7%	98.6%
Peru	100.0%	93.6%
Sweden	60.6%	-
Georgia	62.8%	-
Total	**92.0%**	**96.6%**

[16] 2017-2018 figures are reported. The group is currently upgrading the data and information collection, control and monitoring system, so that data in future reports can be compared with corresponding data of previous years.

[17] 2018 data also include Panama

HEALTH AND SAFETY: APPROACH, OBJECTIVES AND RESULTS

Protecting human resources is one of the basic principles of the group's code of ethics. The safety, health and well-being of employees and all the people who work for Astaldi in any capacity are fundamental to Astaldi's mission. Accordingly, carefully planning activities and implementing adequate prevention measures are key components in achieving the goal of "zero accidents".

In this regard, a "safety culture" is built by developing awareness and promoting responsible behaviour. All health and safety processes are thus directed at identifying and defining the following:

- risks for workers linked to their specific activities;
- standards and operating instructions for prevention and protection;
- training requirements on safety issues and relevant training methods;
- timeframes, roles and responsibilities for periodic inspections and supervision;
- monitoring and review mechanisms.

Employee awareness of and participation in day-to-day health and safety management is one of the prerequisites for implementing the principles of the sustainability policy. This is attained through an ongoing effort of informing, training and involving[18] individuals, awarding those who effectively implement measures to reduce risks and improve performance in relation to health and safety in the workplace.

Health and safety in the workplace are crucial values for Astaldi that considers them strategic and an integral part of its business. The spotlight is constantly shone on these values so that everyone is focused and determined to reach the group's objectives.

When this occurs, the success of each production unit reflects on the value, image and reputation of the entire group.

Monitoring third parties' HSE performance

Checks on third-party companies working on Astaldi Group projects in any capacity comprise daily safety walk-throughs and periodic audits on a sample basis and annually planned audits depending on the critical nature and level of risk associated with the activities.

322 internal audits on HSE management were carried out on projects in 2018, with 165 focused on health and safety in the workplace, 138 on the environment and 19 were integrated (sometimes also checking the quality component of the integrated management system).

The audits comprise checking requirements, also by project HSE departments, and assessing the performance of third parties working at group sites, in order to:

- check that activities are being performed in line with the operating instructions and Astaldi operating standards;
- ensure that activities are managed in compliance with the requirements defined by the group;
- promote ongoing improvement of the supplier's performance;
- stimulate development and preservation of a safety culture by suppliers.

The criteria for assessing third parties' HSE performance are based on contractual requirements (which provide for clauses on safety and environment management) and specific operating instructions in line with the demands and specific activities of the site.

Prevention measures are based on the idea that unsafe behaviour is not determined solely by real conditions of danger, but even just perceived danger. This is why Astaldi is always on the look out for on-site tools that keep attention levels high and prompt ongoing discussion on work methods and standards.

[18] Reference should be made to "Personnel development" for information on training in health and safety.

Astaldi is fully committed to developing and promoting the safeguarding of health and safety in the workplace. As the leading health and safety objective, injury prevention is pursued through the adoption of actions aimed at eliminating or reducing the typical risk factors associated with its type of work. Astaldi sets, monitors and periodically updates specific targets for health and safety issues in line with the "zero accident" philosophy of every project. The research and adoption of good practices are continuously promoted not only within the group but with suppliers, with the aim of expanding and improving collaboration in achieving optimum performance. Over time, the actions adopted have led to a decrease in the injury rate, both with regard to employees and subcontractors. In 2018, a total of 297 injuries were recorded (like in 2017), of which 215 requiring medication (222 in 2017) and 81 lost time injuries (75 in 2017). Sadly, a fatal injury was recorded in Peru. An Astaldi employee lost their life while performing activities at a central warehouse, which were not directly related to the projects underway in the area. Full assistance was provided to the family and from an industrial standpoint, an analysis was carried out to identify the causes of the accident and the improvement actions identified have been implemented.

Group employees are represented through health and safety committees. These committees meet periodically and participate in assessing risk, contributing to programmes to improve safety levels in projects and at group production units. In Italy, in line with the Consolidated act on safety in the workplace (Legislative decree no. 81/2008), these aspects are managed by designating worker safety representatives at each production unit.

Classification of injuries — **GRI 403-2**

		Direct personnel			Third-party personnel		
	MU	**2018**	**2017**	**2016**	**2018**	**2017**	**2016**
Breakdown of injuries at work by type							
Work-related fatalities	no.	1	0	2	-	3	1
Lost time injuries	no.	81	75	144	281	186	154
Injuries - medications	no.	215	222	413	776	357	224
Total number of injuries[19]	**no.**	**297**	**297**	**559**	**1,057**	**546**	**379**
Restricted work cases							
Total restricted work cases	no.	25	66	95	-	1	7

Communication and analysis of serious injuries

Astaldi monitors serious injuries involving all project personnel, including those of independent contractors.

In the event of serious injuries, the production units promptly activate the flow of information to the relevant corporate services and the ethics committee of Astaldi to be forwarded on to the supervisory body, in order to proceed with analyses and activate any disciplinary measures. In more critical cases, the analysis of the injury and implementation of remedial actions are carried out by a team who, together with the project management, directly involve certain corporate functions. The same is performed at group companies.

In order to provide a complete picture of injury rates along the entire value chain, Astaldi extended the monitoring of injuries using frequency indicators (the rate of the number of injuries against hours worked) and severity indicators (monitoring the number of days the injured person is absent from work) to all individuals working on projects, including third parties working for the group in any

[19] The breakdown by gender is not represented as, due to the type of production activities carried out, the professional category most exposed to these risks is blue collars which are almost all men.

capacity. The extension of the monitoring to third parties is also an important tool that enables the group to take action should their performance fall short of group objectives.

Injury rates **GRI 403-2**

	Direct group personnel			Direct group personnel and third-party personnel		
	2018	**2017**	**2016**	**2018**	**2017**	**2016**
FREQUENCY RATE[20]						
Astaldi Group	**5.51**	**6.75**	**10.86**	**8.10**	**7.45**	**9.67**
Italy	17.57	13.26	14.76	19.02	11.65	16.39
Poland	5.69	0.83	2.33	2.55	2.00	2.02
Romania	2.06	0.00	0.00	1.88	2.10	2.73
Turkey	6.57	8.64	1.11	15.88	11.12	6.64
Algeria	7.86	4.71	20.02	6.97	3.90	14.25
USA	7.58	12.53	16.43	7.39	9.78	12.01
Canada	8.31	14.37	22.35	8.86	13.08	21.48
Central America	5.79	6.79	7.03	6.18	6.70	6.78
Chile	1.76	2.22	5.93	2.57	7.64	7.71
Peru	3.33	2.16	6.06	2.97	1.98	6.37
Sweden	0.00	-	-	11.72	-	-
Georgia	0.00	-	-	0.00	-	-
SEVERITY RATE[21]						
Astaldi Group	**0.12**	**0.17**	**0.26**	**0.18**	**0.17**	**0.24**
Italy	0.56	0.43	0.84	0.84	0.51	1.08
Poland	0.11	<0.01	0.03	0.03	0.03	0.02
Romania	0.11	0.00	0.00	0.11	0.14	0.11
Turkey	0.04	0.10	<0.01	0.20	0.13	0.04
Algeria	0.07	0.06	0.46	0.06	0.04	0.35
USA	0.05	0.11	0.07	0.03	0.09	0.05
Canada	0.32	0.35	0.27	0.20	0.32	0.26
Central America	0.00	0.08	0.10	0.07	0.07	0.08
Chile	0.03	0.15	0.27	0.04	0.16	0.24
Peru	0.00	0.07	0.22	0.00	0.06	0.19
Sweden	0.00	-	-	0.01	-	-
Georgia	0.00	-	-	0.00	-	-

[20] The frequency index is the ratio between the number of injuries with at least one day's abstention from work and the cases of restricted work compared to hours worked. The frequency index is defined and calculated as follows:

Frequency index = [(injuries with lost time + Fatal injuries + cases of restricted work) x 1000000] / hours worked. An injury is defined as restricted work case when it involves restricted work or change of duties, but which does not involve death or days off work.

[21] The severity index is the ratio between the actual days of injury with incapacity of at least one day, or temporary change of duties, compared to hours worked. Severity Index is defined and calculated as follows:

Severity Index = [(days lost + days of restricted work) x 1000] / hours worked. Restricted work days are defined as the total number of days of restricted work or change of duties (consecutive or not), excluding the very day of the injury. The work days lost and restricted work days are calculated as calendar days.

In 2018, at local level, 100% of the formal agreements signed with trade unions for group projects contain health and safety clauses. These agreements mainly refer to identifying risk factors, methods to prevent professional risks, injuries and occupational diseases, commitment of workers to health and safety issues, investigating incidents, site visits, recognition/awards to workers for their compliance with the safety procedures and standards in carrying out their work activities and organisation, health and safety training and the right to refuse to carry out dangerous work. The health and safety risks for Astaldi S.p.A. employees are those linked to construction activities. The risk of occupational diseases chiefly relates to musculoskeletal disorders and hearing and respiratory problems. For each project, the group assesses the risks for all workers involved in line with corporate policies and in compliance with local legislation.

In 2018, direct employees at high risk of disease amounted to 841 (1,189 fewer than 2017) in Italy (48.6%), Chile (36.4%) and Central America (14.9%).

In 2018, occupational diseases rate by region (calculated by 1 million hours worked) in regions where occupational diseases were recorded is: 1.44. For Italy, the calculation also includes cases of occupational diseases where the prognosis was not yet known by the group in 2018. The occupational diseases rate for independent contractors is nil.

The absenteeism rate by region (calculated as the lost days rate[22]) is: Italy 10.3%; Poland 7.2%; Romania 4.0%; Turkey 0.9%; Algeria 0.3%; USA ~0.0%; Canada 0.6%; Central America 0.2%; Chile 3.4%; Peru 0.01%; Sweden 0.0% and Georgia 1.07%. The absenteeism rate for independent contractors is: Italy 1.0%; Poland 0.02%; Romania 0.11%; Turkey 1.04%; Algeria 0.4%; USA 0.0%; Canada ~0.0%; Central America 0.1%; Chile 0.05%; Peru ~0.0%; Sweden 0.07 and Georgia 0.0%.

Personnel safety and security

Astaldi has set up an emergency and crisis committee in order to protect the safety and security of its personnel abroad, promptly and suitably dealing with any emergency situations deriving from natural and/or socio-political events that may occur in the countries where the group operates.

Led by the chairman, the duty of the committee is to detect and monitor any situation changes in the areas and countries at risk, providing necessary guidelines to the national security unit on how to prepare and respond to emergencies and ensure that the security management process is correctly implemented.

22 Days works are calculated using total hours worked by direct and third-party personnel, assuming 10 man/hours per day.

Personnel development

Training

Given the group's sector, training plays a fundamental role in supporting management and all employees in developing their managerial and technical skills, in addition to expanding know how and innovation. The continued focus on the training and growth of employees, resulted in 227,265 hours of training in 2018.

The following table highlights the total pro-capita hours provided by the group.

Training of group employees				GRI 404-1/ GRI 412-2
	MU	**2018**	**2017**	**2016**
Total training hours	hours	227,765	181,323	134,009
Training hours per capita[23]	man/hours	19.5	16.7	11.5

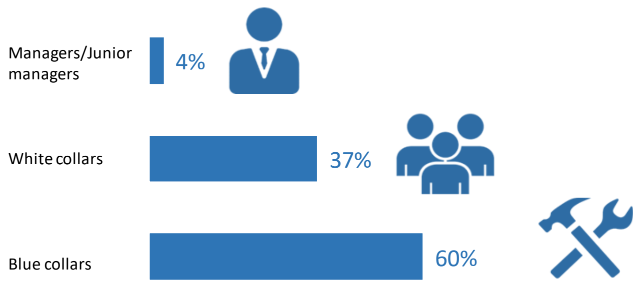


Figure 10: Training hours by category

Circulation of the group culture and enhancement of its human capital is a value transmitted to employees of its partners as well. Accordingly, Astaldi provided training courses to them and made them aware of its policies and standards for a total of 124,680 hours of training in 2018.

An analysis of training activities shows that the group paid particular attention to topics linked to managing environmental and health and safety in the workplace aspects in 2018. This awareness is reflected in the relevant training hours provided which accounted for 81% of total training hours provided to direct group personnel and almost all (99%) of those provided to third-party employees.

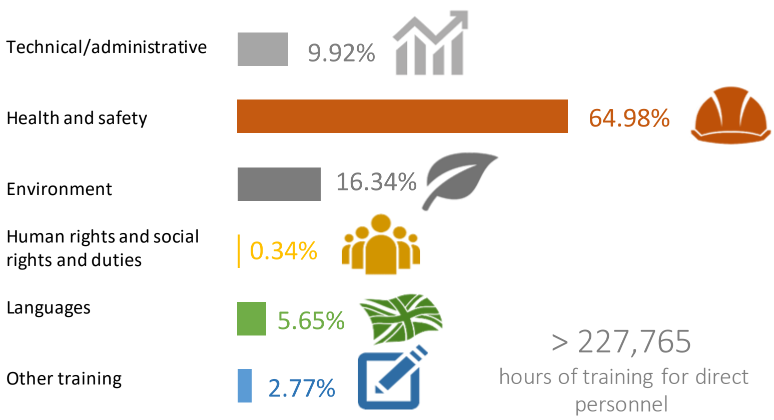


Figure 11: Training (by topic) provided to Astaldi group employees

[23] Calculated considering average employees at in-scope areas in 2018.

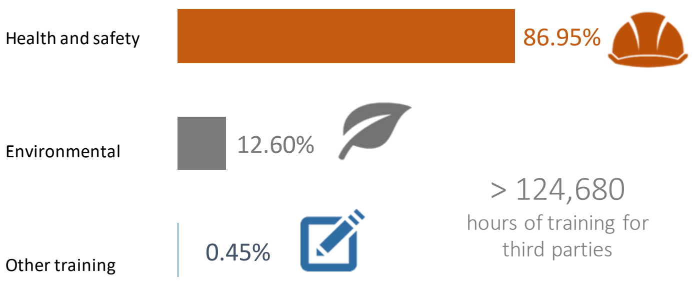


Figure 12: Training (by topic) provided to third-party employees

Recruitment and hiring

In 2014, Astaldi launched a programme to recruit and hire young university graduates with high growth potential, who can climb the ranks and eventually fill management positions in the group production companies. These youngsters, with technical and economic degrees, who graduated with top marks and speak more than one foreign language, were selected as part of a detailed process involving individual interviews, physiological and aptitude tests and assessments. This selection process facilitates identification of those candidates with the personal characteristics and skills necessary to successfully take on a challenging career, with many perspectives, such as those that typically can be experienced as part of the contracts that the group has today around the world.

Incoming and outgoing personnel (at 31/12/2018) — GRI 401-1

	Incoming		Outgoing	
	No.	Rate (%)	No.	Rate (%)
By country/area				
Italy	619	32.9%	193	10.3%
Poland	109	31.2%	146	41.8%
Romania	686	60.5%	343	30.3%
Turkey	394	50.1%	312	39.6%
Algeria	0	0.0%	63	32.3%
USA[24]	229	160.1%	203	142.0%
Canada[25]	1,431	1460.2%	1,600	1632.7%
Central America	376	28.6%	517	39.3 %
Chile	1,660	58.6%	1,062	37.5%
Peru	0	0.0%	45	115.4%
Sweden	26	92.9%	0	0.0%
Georgia	22	81.5%	8	29.6%
Total	**5,552**	**62.9%**	**4,492**	**50.9%**

[24] Figures do not include a breakdown of local personnel by age in accordance with the standards of the U.S. Equal Employment Opportunity Commission and the assessments supporting the published data were performed excluding such information. For the USA, the local personnel figures by age bracket cannot be mapped (pursuant to the Equal Employment Opportunity Commission)/the figures related to incoming local personnel are only available by gender.

[25] With regard to the Muskrat Falls project, the mapping of unionised employees by age bracket was not extended to incoming and outgoing personnel due to the requirements of the HR protocol regarding sharing information with unions.

Incoming and outgoing personnel (at 31/12/2017)				GRI 401-1
	Incoming		Outgoing	
	No.	Rate (%)	No.	Rate (%)
By country/area				
Italy	329	22.0%	168	11.2%
Poland	249	28.7%	127	14.6%
Romania	156	20.9%	143	19.2%
Turkey	161	29.8%	129	23.9%
Algeria	40	9.2%	338	78.1%
USA[26]	63	30.4%	181	87.4%
Canada[27]	1,060	133.0%	2,006	251.7%
Central America	557	46.8%	98	8.2%
Chile	1,400	35.2%	2,061	51.8%
Peru	434	44.4%	202	20.7%
Total	**4,449**	**39.6%**	**5,453**	**48.5%**

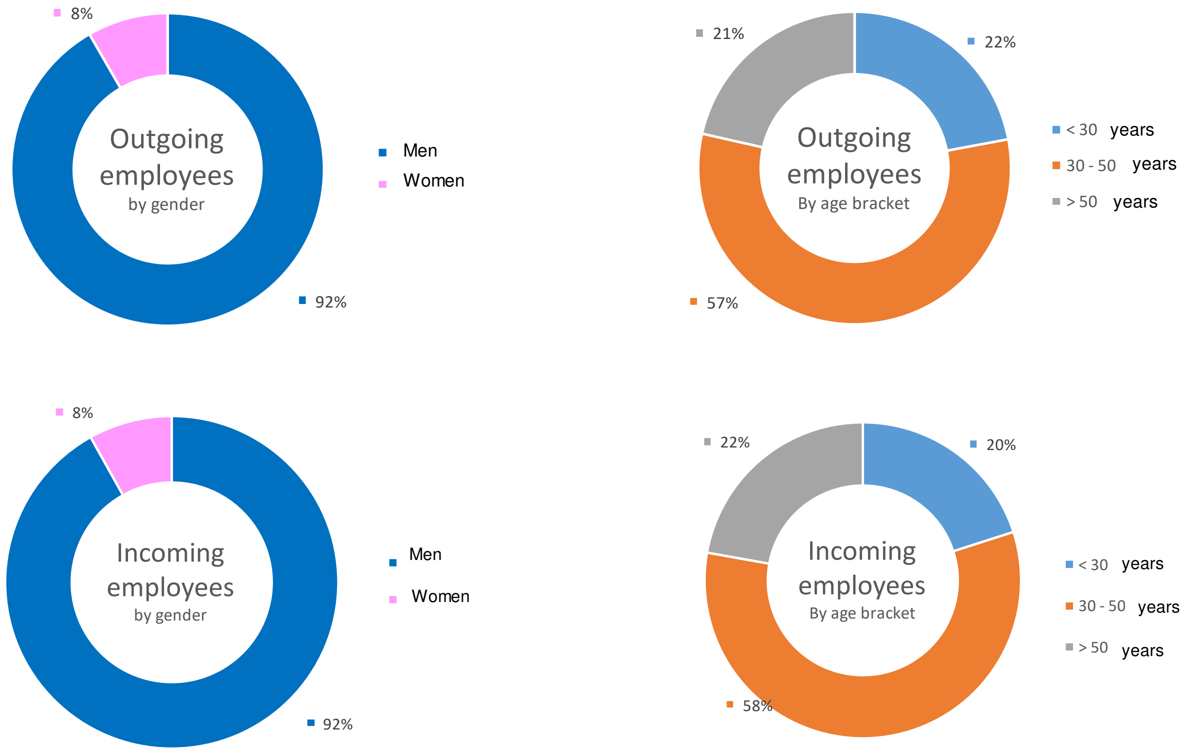


Figure 13: Incoming and outgoing personnel by gender and age bracket (at 31 December 2018)

WORKING TOGETHER FOR THE LOCAL AREA

Constructing and operating large public works requires building constructive and open relationships with the local communities throughout all stages of the value chain. Despite bolstering the area's attractiveness, infrastructure may create temporary inconveniences and alter the surrounding

[26] Figures do not include a breakdown of local personnel by age in accordance with the standards of the U.S. Equal Employment Opportunity Commission and the assessments supporting the published data were performed excluding such information.

[27] With regard to the Muskrat Falls project, the mapping of unionised employees by age bracket was not extended to incoming and outgoing personnel due to the requirements of the HR protocol regarding sharing information with unions.

landscape, especially during the construction phase. This requires the group's utmost commitment to resolving any critical situations and constantly communicating the progress of works in order to fully share the value generated by the project with the community.

Bodies and associations		**GRI 102-13**
Association	**Description**	**Involvement**
Confindustria	Italy's main association of manufacturing and service entities, with membership comprising over 150 thousand companies of all sizes	Member of the general council
Assonime	The association of Italian companies limited by shares. Its object is the study and discussion of issues that directly or indirectly affect the interests or development of the Italian economy.	Deputy chairperson
Bank of Italy (Rome office)	The central bank of the Italian Republic. It is a public institution regulated by Italian and EU regulations.	Member of the Council of regency
Italian stock exchange	One of Europe's main stock exchanges, it sees to the admission, suspension and exclusion of financial instruments and operators from trading. In addition, it manages and monitors trading and obligations of operators and issuers.	Member of the Advisory committee and the Corporate governance committee
Società Italiana Gallerie (SIG)	A cultural association that promotes, coordinates and disseminates studies and research on the field and art of constructing tunnels and large underground works.	Standing member of the Management board
UNI (Ente nazionale Italiano di Unificazione)	The private Italian National Unification association, recognised in Italy and in the European Union, which studies, develops, approves and publishes the voluntary technical "UNI standards" for all industrial, commercial and service sectors (except	Member of the commission for new Eurocodes

Therefore, creating a positive atmosphere of trust with local communities is vital for Astaldi. The group acts as a steady, credible point of reference for the community, both at the planning stage of the works and during the construction and/or maintenance and operating phase.

During all construction stages, specific actions are implemented to deal with any inconveniences deriving from the presence of work sites in order to reduce the impact on the area and the local people. In this regard, the website and project communication plans[28] are vital tools that are constantly updated to reflect local needs.

[28] Communication plans provide for information campaigns, guided tours of work sites and meetings with the local community, often assisted by opening public information centres.

RESULTING IMPACTS

Astaldi means to reinforce its role as springboard for growth and well-being, both in terms of its direct contribution to economic development in the areas involved, and via ventures aimed at improving the quality of life of the local people and areas where it operates.

With regard to education, Astaldi has helped young people breach the world of work by participating in career days organised by Italian universities, setting up work experience programmes, organising technical site visits, supporting university research programmes and establishing study grants.

The group's commitment to generating positive effects is also, and above all, focused on the areas where it works. Its investments in 2018 were for public use, related to the building of infrastructure and basic services, donations to culture and sport, donations to education and research, donations to social services and humanitarian solidarity and aid.

Its commitment to creating well-being for the areas where it operates also, and above all, takes the form of indirect economical effects, i.e., not directly related to financial investments. In this regard, the main impacts generated by the group on the local areas, broken down by type and location of its activities in the world, are:

- Creating jobs (hiring local people);
- Developing the professional skills of local employees;
- Improving working or environmental conditions;
- Changing the productivity of the local organisations, sector and economy;
- Economically developing areas with a high poverty rate;
- Changing the location of activities;
- Facilitating direct foreign investments (e.g., building infrastructure that facilitate connections);
- Making products and services available to lower income individuals (e.g., medicines).

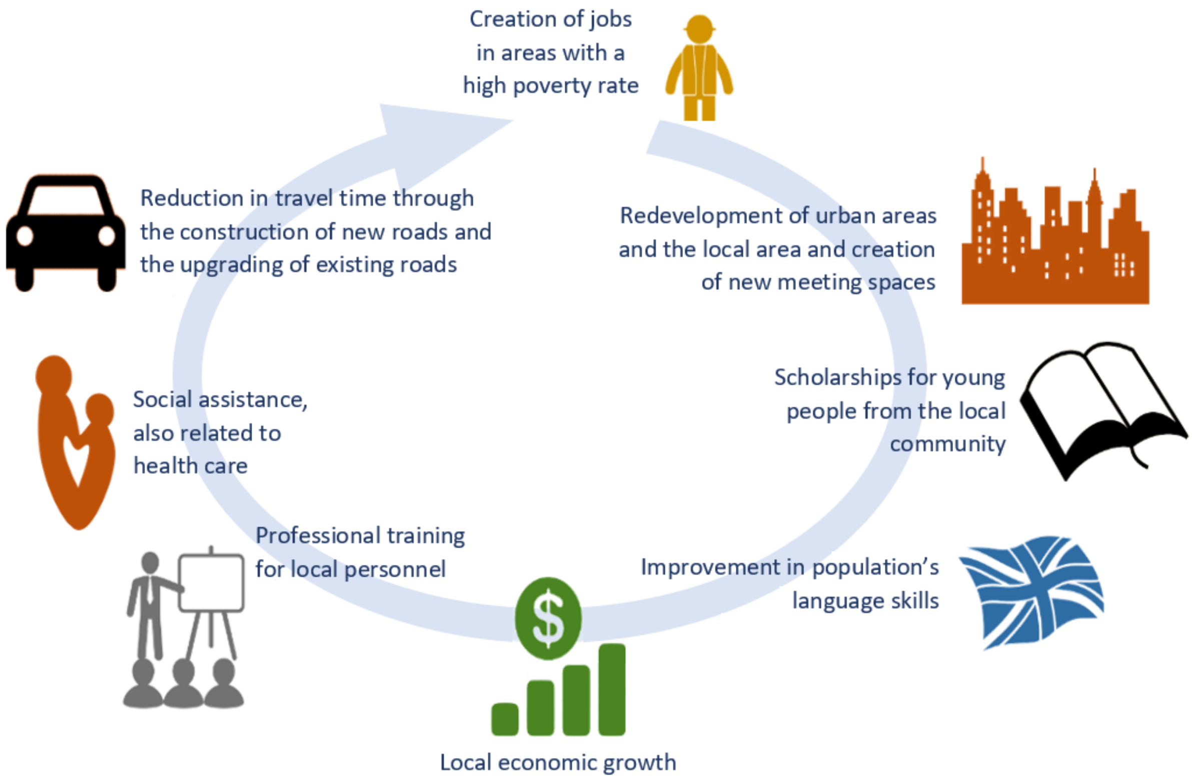


Figure 14: Positive impacts on the local communities

Nurturing the young generations

In 2018, Metro C s.c.p.a. (SPE in charge of building Line C of the Rome metro) once more took part in the work experience programme for school-goers, one of the innovations introduced by Law no. 107 of 2015 (La Buona Scuola educational reform). Participating students (eight from schools in Rome) began a programme comprising a theory (classroom-based) and practical (on-site) training project which covers various study areas: designing, safety, the environment, quality control, structural and geotechnical monitoring, topography, material control, accounting, etc.. Over 280 training hours were provided in 2018.

However, the group's construction and operating activities can also generate significant negative effects. To tackle this, the group assigns degrees of priority and identifies the best possible alternatives or actions to prevent and mitigate (real and potential) negative impacts on the local communities and on the surrounding area in general.

INNOVATION PROCESS

Innovation is a distinctive trait. Astaldi promotes research programmes, also in partnerships, aimed at fine-tuning and upgrading group techniques and processes. Sharing the expertise that makes Astaldi and Italy points of reference in the field of engineering, in all of the countries where the group operates, is a fundamental value.

Astaldi's engineering segment is the group's promoter and point of reference in collecting and centralising know-how. This means it is able to identify potential technical or application methods, products and processes of interest, searching for innovative solutions to use in individual projects. Its collaborations with universities in place in 2018 are detailed below.

Research programmes with universities

La Sapienza University, Rome (Structural and geotechnical engineering department)

The scope is researching and experimenting with conditioning agents in tunnelling with TBMs[29] with EPB[30] method. In tunnelling with the machine, the purpose of using foams to condition the ground is to facilitate tunnelling in soft, permeable ground, to avoid the earth turning into paste, keeping the shield and excavation chamber free. The research examines the main foam manufacturers, comparing them with the excavation earth to establish the best usage ratio and thus deduce the costs and benefits on the contract. In 2018, the scope of the collaboration was expanded by introducing strictly environmental issues, such as the foam's decomposition time in the tunnelling site and the environmental effects of the residues.

Tor Vergata University (Materials and concrete laboratory)

Through the SPE, Metro C, of which Astaldi is the main shareholder, a collaboration was set up with the Tor Vergata university, aimed at acquiring know-how about steel fibre reinforced prefabricated segments for TBM tunnel cladding. An essential part of the partnership was the application of steel fibre reinforced segments in the last section of the T3 line, which is currently being excavated in the centre of Rome.

Also as part of its innovation focus, Astaldi supports postgraduate masters courses via financial sponsorships, didactic contributions, logistical support (opportunities to visit work sites) and internships for masters students.

In 2018, Astaldi collaborated with La Sapienza University, Rome providing a Masters in Geotechnical planning (II level university masters course coordinated by Salvatore Miliziano - Structural and geotechnical engineering department). This collaboration has now reached its seventh consecutive year. The results achieved include the employment of numerous masters graduates by Astaldi, as shown again in 2018, when a 2017 engineering graduate joined the engineering service workforce.

Among the innovations already present on the market, the Building Information Modelling (BIM) project plays a strategically important role. BIM is a method used to manage the life cycle of a project, from design to construction to usage, which uses innovative IT tools for 3D and 4D modelling. The tool enables users to simulate the construction and operational stages, thus making adjustments and improvements in advance. It also gradually collects all the information relevant to the project in a single database as it progresses.

[29] Tunnel Boring Machine

[30] Earth Pressure Balance

The BIM methodology

The Astaldi Group has been systematically applying the BIM methodology to manage numerous projects all over the world for the past few years.

The main uses of BIM are listed as follows:

a) 3D design development: an essential part of a BIM project where a 3D model of the project is created. Each 3D object comprising the model is fitted with an information store containing all of its characteristic technical data.
b) Animations: the BIM model can be imported into virtual reality software that creates realistic pathways inside and outside the work.
c) Design coordination: using clash detection tools to automatically detect interferences.
d) Engineering analysis: using 3D models as the basis for energy, structural, lighting, etc. analyses.
e) 4D simulation of construction sequences: 3D animations can be made of construction sequences by importing a time schedule into a simulation software.
f) Virtual work site: by introducing 3D objects such as provisional works, safety systems, pollution reduction works, equipment and machinery, scenes are simulated in order to fine-tune and optimise processes linked to site activities.
g) Quantity take-off: the computerised 3D model is tested to deduce the quantity of components and materials needed, e.g., for procurement or project control purposes.
h) Facility management: the components of the 3D model are computerised with data that are useful for carrying out operational and, especially, maintenance activities. The model can be imported into software platforms for the operation/maintenance of the buildings.

In 2018, 28 contracts were managed using the Building Information Modelling (BIM) method and each one met the contractually-required levels.

By implementing the BIM, Astaldi aims to innovate its organisation and relevant operational processes and make them highly efficient. To this end, in 2018, a guide to implementing a BIM Execution Plan was introduced, along with a procedure containing criteria for measuring the progress of project designs made using the BIM method. A procedure to create 4D simulations is underway, involving engineering and project control services.

Again with the aim of sharing and spreading know-how and expertise, the group has agreed collaborations with top Italian universities (La Sapienza University, Rome; Federico II University, Naples and Milan Politecnico) providing internships for BIM management masters students at Astaldi.

Specifically, in 2018, five students from the aforementioned universities completed an internship period, during which they developed procedures regarding the integration of BIM models at the Naples Afragola HS station, using IWMS* and GIS** platforms and creating know-how about BIM 7D.

As part of the collaboration agreement with the Japanese company IHI, in 2018, the engineering service's Corporate BIM Team, in collaboration with certain BIM Managers responsible for contracts, provided a 9-week BIM training course to IHI, made up of 28 training modules.

The training material is available to all Astaldi personnel within the BIM Community, and can be accessed via the engineering service's website.

In closing, the group actively participates in the SMaRT project, a unique four-year training and interdisciplinary and cross-sector research programme that tackles the mitigation of sand around railway tracks in arid regions all over the world, specifically in arid areas of the Middle East, North Africa and the Arabian peninsula. The aim of the project is to develop standardised techniques for assessing the risks related to sand for railway tracks, conceive new and effective measures to mitigate sand and assess their performance by using innovative computerised simulations and field testing. This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Sklodowska-Curie Actions grant no. 721798.

The SMaRT project

A multidisciplinary and cross-sector team from two top research universities (Turin Politecnico and the University of Oxford) and a highly-qualified consultancy firm (Optiflow) are involved in the SMaRT project.

Other than Astaldi, which is responsible for aspects related to civil infrastructural works, the other partners include Salcef-Reco for the superstructure and Ansaldo STS for the signage.

Objectives: SMaRT aims to innovate the field of research on sand mitigation, by:

- developing knowledge in the main scientific sectors involved (fluid and granular mechanics, wind engineering and wind geomorphology) and blending it in a multidisciplinary approach for design and analysis;
- generating a computational engineering approach to planning sand mitigation measures;
- developing a new approach to modelling and simulating the multiphase wind-sand interaction system;
- designing operating procedures and standard skills for operating design, assessing sand mitigation measures and performing field tests thereon.

Progress: in 2018, the main activities developed starting in December 2017 were those related to research and training at Astaldi's Rome office, where technicians ran a 25 hour course called "Railway body and civil works" for candidates specialised in areas that are involved in the SMaRT project.

During the year, various working project activities continued, related to the SMM (Sand Mitigation Measure) project calculations and related models, with final field tests and the measurement of potential industrial impacts.

These activities were highlighted presented in a Mid-term Report prepared in December 2018, which will be presented to the customer in 2019.

ENVIRONMENTAL ASPECTS

Constructions are inextricably tied to their surrounding environment. Through the design, implementation and management of its projects, Astaldi promotes the environmental sustainability of its operations and undertakes to contribute to reducing the impacts generated by climate change by increasing renewable energy generation and launching "green mobility" projects.

Astaldi has performed numerous projects worldwide in the field of renewable energy generation plants (hydroelectric power plants) and "green mobility" (railways and metros), contributing to clean energy generation and reducing local emissions.

The following table shows financial risks, opportunities and implications related to climate change.

GRI 201-2

Global climate change challenges

DRIVERS	RISKS	OPPORTUNITIES	FINANCIAL IMPLICATIONS
Regulations and legislation	The group's business can be significantly influenced by changes in legislation on climate change. The uncertainty about such legislation is a risk that could lead to lower acquisitions. To tackle this issue, Astaldi breaks its business down into geographical segments (removing the risk of "depending" on certain areas) and constantly monitors the status of ruling legislation, including by being involved with trade committees and associations.	New possible legislation targeting the development of "low carbon" and "green energy" initiatives can represent a growth opportunity for the group's business, especially in the field of energy generation plants and "green buildings". Therefore, it is vital to constantly monitor present and future initiatives, which the group does via suitable organisational and managerial business development tools.	Higher or lower acquisitions of projects in the business segments linked to the fight against climate change: • renewable energy generation plants (hydroelectric power plants); • green mobility (railways and metros).
Changes to the climate and local area	Many countries where Astaldi operates are affected by extreme weather conditions (floods, hurricanes, etc.) which prompt uncertainty about business continuity, especially in certain periods of the year, leading to delays and spikes in energy consumption. Astaldi identifies the most adequate mitigation measures and develops suitable contingency plans through careful planning of operations and ongoing risk management activities.	Major climate change creates different needs in terms of new infrastructure and upgrading of existing structures. In addition, growing awareness of climate change issues among stakeholders has escalated the demand for "green" products. Astaldi intends to seize these opportunities via constant research focused on innovating current construction techniques and ongoing monitoring of stakeholder behaviour.	Climate change initiates extreme weather conditions that could lead to the suspension of operations, delays or damage to group assets, thus raising operating costs. Astaldi's ability to execute "green" projects enables it to carve out a slice of the market, thus giving it the possibility to boost revenue.
Customer behaviour	Failure to meet market demands with regard to climate change can be a risk, especially in terms of a "negative perception" of the group. Astaldi governs this risk through transparent communication with all of its stakeholders and ongoing investment and research in green technologies (e.g., LEED certification).	The current global attitude to the battle against climate change has notably heightened stakeholders' awareness of the topic, increasing the demand for "green" products. The main changes in consumer behaviour are constantly monitored and managed at local level and for corporate innovation and development projects.	Customers' pursuit of technical solutions with a lower environmental impact leads to a surge in the "green economy". The relevant impacts for Astaldi (in terms of opportunities or risk) could be: • Higher or lower acquisitions of projects; • Entering or exclusion from new markets.

The impacts generated can include the consumption of raw materials, water and energy resources and the generation of atmospheric emissions, discharge of waste water, waste, noise and vibrations, in addition to effects related to transport to and from work sites. The actual entity of impacts recorded - often temporary and limited to the construction stage - depends on numerous factors, including the geographical location of the work and the presence of particularly vulnerable areas locally.

Based on the local characteristics, Astaldi carries out a process to analyse and assess the environmental impacts, also in compliance with ruling legislative requirements, at all its production units. The analysis considers all processes and activities, including the design stage. This process is repeated and updated at regular intervals whenever required by changes and modifications, including organisational.

Adopting emergency management systems, defining improvement goals and plans, as well as constantly monitoring production sites, are equally crucial aspects of Astaldi's approach to safeguarding the environment. These are also developed and implemented through discussions with national and local stakeholders actively involved in all processing stages.

In line with this overall approach, Astaldi has prepared an integrated management system, with its environmental component UNI EN ISO 14001 certified. The system is applied to contracts via Environmental management plans. The application of group environmental standards is checked periodically through audits. The purpose of these is also to verify that projects can ensure compliance with legislation, that stakeholders' viewpoints are properly considered in improvement plans and that the group's commitment to preventing and mitigating pollution transforms into reality.

ENERGY AND EMISSIONS

Climate change represents a real threat for future generations. The increase in greenhouse gas emissions regulated by the "United Nations Framework Convention on Climate Change" and the "Kyoto Protocol" is so clearly due to anthropogenic activities that it has influenced the economic and energy policies of countries, which are now looking to sustainable development.
In order to overcome this change, Europe has set out key short, medium and long term targets related to the climate and energy, developing a series of legislation and strategic actions, including:

2020 CLIMATE AND ENERGY PACKAGE

The 20-20-20 climate and energy package contained in the Europe 2020 strategy is a set of binding legislation to ensure the EU meets its climate and energy targets for the year 2020.

The package sets three key targets:

- 20% cut in greenhouse gas emissions (from 1990 levels);
- 20% of EU energy to be obtained from renewables;
- 20% improvement in energy efficiency.

The targets were set by EU leaders in 2007 and enacted in member state legislation in 2009. They are also headline targets of the Europe 2020 strategy for smart, sustainable and inclusive growth and the EU is taking action in several areas to meet them.

KATOWICE CLIMATE PACKAGE:

On 15 December 2018, the UN's most recent COP24 conference on climate held in Katowice, Poland, came to an end.

The Katowice Climate Package sets out the detailed legislation and guidelines to make the 2015 Paris Agreement operational and it primarily establishes the way in which countries will provide information about their Nationally Determined Contributions (NDCs). The packet also includes guidelines for establishing new targets on finance from 2025 onwards and how to assess progress on the development and transfer of technology. Currently, the members have a rule-book and a register to communicate their actions regarding adaptation in response to climate change.

LONG-TERM STRATEGY FOR 2050

The Commission expects a climate-neutral EU by 2050.

On 28 November 2018, the Commission presented its strategic long-term vision for a prosperous, modern, competitive and climate-neutral economy by 2050.

The strategy shows how Europe can lead the way to climate neutrality by investing in realistic technological solutions, empowering citizens, and aligning action in key areas such as industrial policy, finance or research – while ensuring social fairness for a just transition.

The Commission's vision covers nearly all EU policies and is in line with the Paris Agreement objective to keep the global temperature increase to well below 2°C and pursue efforts to keep it at 1.5°C.

Energy consumption				**GRI 302-1/ GRI 302-2 / GRI 302-3**
	MU	**2018**	**2017**	**2016**
Energy consumption[31] by direct processes				
Total consumption of fuel (non-renewable sources)	GJ	919,596	989,225	1,076,205
Consumption of indirect - acquired energy (non-renewable sources)	GJ	520,167	318,844	188,493
Self-generated energy (renewable sources)	GJ	216	266	297
Total energy - direct processes	**GJ**	**143.9979**	**1,308,335**	**1,264,995**
Energy consumption by indirect third-party processes				
Total consumption of fuel (non-renewable sources)	GJ	929,263	1,003,799	289,374
Consumption of indirect - acquired energy (non-renewable sources)	GJ	12,711	18,978	15,377
Total energy - third-party processes	**GJ**	**941,975**	**1,022,777**	**304,751**
Energy intensity[32]				
Energy intensity (per €'mln revenue)	**GJ/MLN€**	**2.443**	**807**	**550**
Energy intensity (per hour worked)	kWh/hour	13.81	14.57	10.46

For Astaldi, as well as generating an environmental impact, energy consumption also has a direct effect on operating costs which are influenced by fluctuations in the energy supply market and the choices made in relation to the energy sources used.
In the group's line of business, energy sources are mainly not renewable and their use generates direct emissions (from the use of fossil fuels, such as petrol, diesel, LPG, etc. at the work sites) and indirect emissions (primarily deriving from the consumption of electricity purchased from the grid) alike.
Energy consumption for 2016-2018 is reported below.

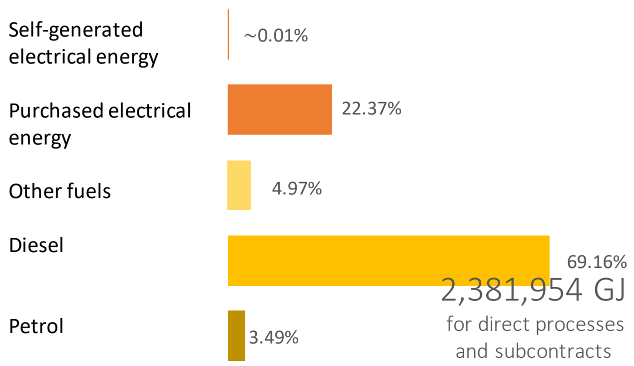


Figure 15: Energy consumption

[31] Direct consumption is calculated by applying the Intergovernmental Panel on Climate Change (2006 IPCC Guidelines for National Greenhouse Gas Inventories) factors to convert the quantities of petrol, diesel, kerosene, LPG and natural gas into Gigajoules. Indirect energy consumption is standardised using a factor of 0.0036 that converts kWh of electricity into Gigajoules.

[32] The denominator chosen to calculate the group's energy intensity ratio is total operating revenue for the year (in millions of Euros). Energy intensity was calculated considering internal and external consumption (GRI 302-1 and GRI 302-2).

In 2018, Astaldi generated total emissions equivalent to 204,167 tonnes of CO_2.

Emissions of CO_2 equivalent [33]		**GI 305-1/GRI 305-2/GRI 305-3/GRI 305-4**		
	In	**2018**	**2017**	**2016**
Direct processes				
Direct emissions of CO2 equivalent (Scope 1)	Ton	66,889	72,241	79,099
Indirect emissions of CO_2 equivalent (Scope 2)	Ton	67,407	39,634	20,782
Emissions of CO_2 equivalent (Scope 1 + Scope 2)	**Ton**	**134,296**	**111,875**	**99,881**
Third-party processes				
Direct emissions of CO_2 equivalent	Ton	67,893	73,932	21,408
Indirect emissions of CO_2 equivalent	Ton	1,977	3,422	2,377
Emissions of CO_2 equivalent (Scope 3)	**Ton**	**69,871**	**77,354**	**23,785**
GHG emission intensity				
Emissions of CO_2 equivalent per hours worked	**(kg/h)**	**4.26**	**4.26**	**2.97**

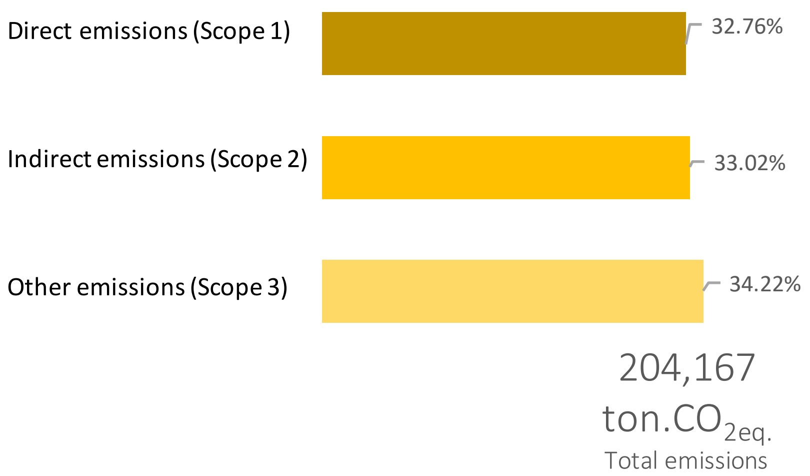


Figure 16: Emissions of CO_2-eq.

CDP 2018

Carbon Disclosure Project (CDP) is a not-for-profit charity that uses a global platform to collect, manage and disclose the environmental performance and strategies adopted by companies to reduce and mitigate the impacts of their activities.

In line with 2017, the group filled out the "Climate Change 2018" questionnaire, this time adopting a public profile, in line with the external transparency and communication policies on non-financial issues. Like in 2017, the result confirmed that the group is at the highest level of **"awareness" - score C,** placing it among the companies that, in addition to fully knowing being fully aware of and measuring their performance, also assess "environmental issues" in terms of risks, financial implications and impacts related to their business.

Astaldi actively contributes to the goals set by the 2030 Agenda, including fighting climate change, assisting customers to build renewable energy generation plants (hydroelectric power plants) and undertaking "green mobility" projects (trains and metros). Astaldi's corporate strategy is intertwined with the objective of reducing emissions through "green projects", seizing market opportunities linked to integrating the environmental component of business sustainability.

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[33] For information on the classification of emissions (Scope 1, Scope 2 and Scope 3), reference should be made to "The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised edition)". The emission factors published by the International Panel on Climate Change (2006 IPCC Guidelines for National Greenhouse Gas Inventories – Energy Stationary Combustion) were applied to calculate direct emissions due to fossil fuel consumption. The emission factors published by the International Energy Agency IEA (CO2 Emission from fuel combustion (2013) – CO2 emissions per kWh from electricity generation (2011), International Energy Agency) were applied to calculate indirect emissions due to electricity consumption for each country.

USE OF RESOURCES

Responsible consumption helps to create a more sustainable business from an environmental and social point of view, especially where specific resources are essential for the local communities. This is another goal of the 2030 Agenda integrated into Astaldi's business. By reusing materials or operating in a way to minimise waste production or production waste, the group is reducing the effects of its operations in terms of the intensity of its use of materials. Such factors help create a more sustainable business from an environmental and social point of view, especially where specific resources are essential for the local communities.

First and foremost, water resources are considered absolute primary goods all over the globe. Monitoring water consumption is the basis of identifying and implementing efficient use.

Water withdrawal by source and reuse[34]			GRI 303-1
	MU	2018	2017
Withdrawal by source			
Total consumption	**m³**	**1,459,419**	**1,129,029**
from aqueduct and other services	%	38%	51%
from surface water	%	26%	24%
from underground water	%	37%	24%
from other sources	%	0.00%	1%
Reused water			
Total reused water (as a percentage of total consumption) of which:	**%**	**2.9%**	**5.5%**
In closed circuit systems (as a percentage of total reused water)	%	27%	32%
Other uses (as a percentage of total reused water)	%	73%	68%

Given its business, most of the materials used by the group come from non-renewable sources. Materials from renewable sources (mainly wood) comprise 0.4% of total raw materials used (excluding semi-finished products).

Use and reuse of materials[35]			GRI 301-1- GRI 301-2
	MU	2018	2017
Non-renewable materials			
Total non-renewable materials, of which:	**ton**	**5,322,691**	**4,035,303**
Cement	%	6.3%	7.3%
Additives	%	0.5%	0.4%
Asphalt	%	0.7%	0.9%
Aggregates	%	84.4%	85.3%
Metal materials	%	7.7%	5.9%
Other materials	%	0.3%	0.2%
Semi-finished products			
Total semi-finished products, of which:	**ton**	**3,510,408**	**3,752,541**
Concrete made on site	%	47.2%	11.0%

[34] The figures related to water withdrawal have been measured directly (through the use of accurate meters installed at procurement points - e.g., water from water supply systems) estimated or modelled (i.e., calculated based on the capacity of the withdrawal systems used - e.g., pump capacity - or from production activities carried out during the reporting period).

[35] The figures related to the consumption of materials were measured directly (based on changes in inventory or delivery notes), estimated or modelled (i.e., through indirect measurement - e.g., stage of completion of projects).

Use and reuse of materials[35] GRI 301-1- GRI 301-2

Asphalt made on site	%	2.6%	4.1%
Pre-made concrete	%	9.0%	1.2%
Ready-mixed concrete	%	36.8%	60.1%
Ready-mixed asphalt	%	2.8%	22.9%
Other semi-finished products	%	1.5%	0.7%
Excavated materials			
Produced	Ton	23,710,763	19,752,716
Reused	Ton	12,215,104	12,310,706
Reuse percentage	**%**	**51.5%**	**62.3%**

Like for energy consumption (§ Energy and emissionss), rational use of resources allows cutting operating costs deriving from purchasing materials and waste management.

In this regard, embracing basic circular economy principles, Astaldi promotes reusing materials or, alternatively, salvaging/recycling waste rather than sending it to disposal plants.

In the construction sector, excavated materials make up a significant portion of materials whose reuse is an important variable in terms of the group's carbon footprint. Therefore, the group projects apply a policy of reusing excavated materials, where necessary activating legislative tools that regulate such practice at local level right from the planning stage, as part of the contract environmental management system.

PROTECTING HABITATS AND SAFEGUARDING BIODIVERSITY

As well as being among the 17 goals of the 2030 Agenda, conservation of life below water and life on land is a cornerstone of Astaldi's way of business. The group operates in full respect of the environment and pays particular care in areas where the works being built are near or within protected areas or areas of high biodiversity value.

In these cases, the group implements specific protection measures to maintain the habitats. Even though, by nature, constructing large works leads to significant changes and alterations to the surrounding areas, the group is committed to mitigating and minimising the impacts construction activities have on habitats, via constant environmental monitoring and appropriate actions to mitigate the impacts identified during the assessment stage with the participation and contribution of all bodies involved.

Monitoring activities carried out is the first step in detecting and then reducing the risk of generating negative effects within these ecosystems. In this way, Astaldi mitigates the risk of delays in its operations and pre-empts possible damage to its reputation.

Astaldi blends its efforts to monitor and mitigate impacts with its commitment to preserving and protecting biodiversity. Assessing environmental impact also includes analysing potential risks for the local flora and fauna, paying particular attention where these include protected species.

Some of the areas where the group operates are home to protected species of wild flora and fauna. The prevention and protection measures applied include careful management of water resources and creating protection systems (e.g., protective barriers to cordon off areas at risk or prevent access by animals in places where work is carried out). Furthermore, the group effects information and awareness campaigns for all personnel (employees and external consultants), both during their induction phase and at regular intervals so that everyone can contribute to safeguarding these protected species, even simply by reporting sights of them.

Figures for 2018 are as follows:

1. USA (22 species at risk of extinction; 2 vulnerable species; 1 species nearly at risk of extinction)
2. ITALY (2 vulnerable species, 1 species nearly at risk of extinction; 15 species at low risk of extinction)
3. CHILE (8 species at serious risk of extinction; 12 vulnerable species; 4 species at low risk of extinction)
4. HONDURAS (3 species at risk of extinction; 4 vulnerable species; 2 species nearly at risk of extinction; 13 species at low risk of extinction)
5. PERU (2 species at risk of extinction; 3 vulnerable species; 12 species nearly at risk of extinction; 17 species at low risk of extinction)
6. POLAND (8 vulnerable species; 12 species at low risk of extinction).

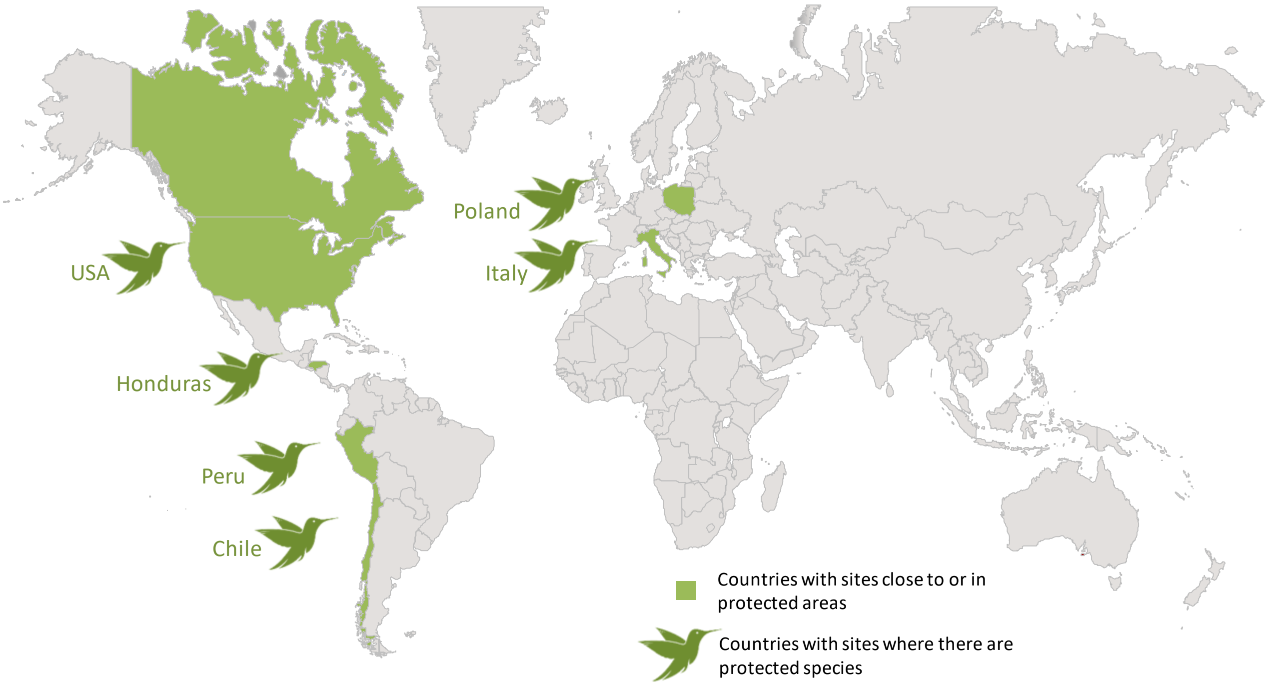

Figure 17: Map of countries where the group operates with protected habitats and biodiversity areas

GRI Content Index

The GRI Content Index provides an overview of the group's performance through the indicators set out in the GRI Standards guidelines related to the in-scope companies.

The bridging table between Legislative decree no. 254 of 30 December 2016 and the GRI Standards guidelines has been preliminarily included in this section.

REQUIRED BY LEGISLATIVE DECREE NO. 254/2016	GRI STANDARDS DISCLOSURE
General Statement	
Management and organisational model	102-1; 102-2; 102-3; 102-4; 102-5; 102-6; 102-7; 102-8; 102-9; 102-10, 102-11; 102-12; 102-13; 102-14; 102-15;
For companies that do not apply policies related to one or more of the mentioned aspects, the non-financial statement shall provide a clear and articulate explanation of the reasons therefor.	103-1; 103-2; 103-3; Clause 3.2. / Reasons for omissions
External assurance	102-56
Description of the diversity policy	102-22; 102-24; 103 (with reference to 401 and 405); 401-1; 405-1

REQUIRED BY LEGISLATIVE DECREE NO. 254/2016	GRI STANDARDS DISCLOSURE
	Environment
Brief description of the management and organisational model	102-1; 102-2; 102-3; 102-4; 102-5; 102-6; 102-7; 102-8; 102-9; 102-10, 102-11; 102-12; 102-13; 102-14; 102-15;
Description of the policies applied by the company, including due diligence procedures	103-1; 103-2; 103-3
Results obtained from the policies applied	103-3
Main risks linked to such aspects connected to company activities, also, where suitable and proportionate, with reference to its commercial relationships, products and services, including, where relevant, the supply and subcontracting chains, which could have negative repercussions in such areas, including the relevant management methods adopted by the company	102-15; 103 (applied to 302, 306)
Basic non-financial performance indicators relevant to the company's specific activities	302-1; 302-2; 302-3; 306-3
Other non-financial indicators relevan to the company's specific activities	301-1; 301-2; 303-1; 305-1; 305-2; 305-3; 305-4

REQUIRED BY LEGISLATIVE DECREE NO. 254/2016	GRI STANDARDS DISCLOSURE			
	Social	**Labour practices**	**Human rights**	**Anti-corruption**
Brief description of the management and organisational model	102-1; 102-2; 102-3; 102-4; 102-5; 102-6; 102-7; 102-8; 102-9; 102-10, 102-11; 102-12; 102-13; 102-14; 102-15;	102-1; 102-2; 102-3; 102-4; 102-5; 102-6; 102-7; 102-8; 102-9; 102-10, 102-11; 102-12; 102-13; 102-14; 102-15;	102-1; 102-2; 102-3; 102-4; 102-5; 102-6; 102-7; 102-8; 102-9; 102-10, 102-11; 102-12; 102-13; 102-14; 102-15;	102-1; 102-2; 102-3; 102-4; 102-5; 102-6; 102-7; 102-8; 102-9; 102-10, 102-11; 102-12; 102-13; 102-14; 102-15;
Description of the policies applied by the company, including due diligence procedures	103-1; 103-2; 103-3	103-1; 103-2; 103-3	103-1; 103-2; 103-3	103-1; 103-2; 103-3
Results obtained from the policies applied	103-3	103-3	103-3	103-3
Main risks linked to such aspects connected to company activities, also, where suitable and proportionate, with reference to its commercial relationships, products and services, including, where relevant, the supply and subcontracting chains, which could have negative repercussions in such areas, including the relevant management methods adopted by the company	102-15; 103 (applied to 416)	102-15; 103 (applied to 401, 403, 404, 405)	102-15; 103 (applied to 406, 411)	102-15; 103 (applied to 205)
Basic non-financial performance indicators relevant to the company's specific activities	102-40; 102-41; 102-43; 102-44; 416-1; 416-2	102-8; 102-41; 401-1; 403-2; 403-3; 403-4; 404-1; 405-1;	406-1 411-1	205-1; 205-2; 205-3

UNIVERSAL STANDARD – GRI 100

GRI 102 – GENERAL DISCLOSURES

GRI Standard	GRI G4	Description	Page	Notes and omissions
Organizational profile				
102-1	G4-3	Name of the organization	1	Astaldi Società per Azioni, in short Astaldi
102-2	G4-4 G4-PR6	Activities, brands, products, and services	8	
102-3	G4-5	Location of headquarters	-	Registered office: Via Giulio Vincenzo Bona 65, 00156, Rome (Italy)
102-4	G4-6	Location of operations	8	
102-5	G4-7	Ownership and legal form	8	For more information, reference should be made to the "Report on corporate governance and ownership structure" available on the website www.astaldi.com
102-6	G4-8	Markets served	8	
102-7	G4-9	Scale of the organization	33	
102-8	G4-10	Information on employees and other workers	33;34	In terms of type of employment, the number of self-employed workers or part-time employees is not significant at the group as almost all employees have full-time contracts. At the registered office in Rome (where the number of part-time employees could be considered significant with respect to full-time employees), the percentage of part-time (with open-ended contracts) to full-time is 7.2%.
102-9	G4-12	Supply chain	31- 37	
102-10	G4-13	Significant changes to the organization and its supply chain	31	For more information, reference should be made to the "Report on corporate governance and ownership structure" available on the website www.astaldi.com There were no significant changes in the location of suppliers, the structure of the supply chain or in relationships with strategic suppliers.
102-11	G4-14	Precautionary Principle or approach	14	
102-12	G4-15	External initiatives	11	
102-13	G4-16	Membership of associations	45	
Strategy				
102-14	G4-1	Statement from senior decision-maker	2	
102-15	G4-2	Key impacts, risks, and opportunities	14	
Ethics and integrity				
102-16	G4-56	Values, principles, standards, and norms of behavior	11	
Governance				
102-18	G4-34	Governance structure	9	For more information, reference should be made to the "Report on corporate governance and ownership structure" available on the website www.astaldi.com
102-19	G4-35	Delegating authority	9	
102-22	G4-38	Composition of the highest governance body and its committees	17	For more information, reference should be made to the "Report on corporate governance and ownership structure" available on the website www.astaldi.com
102-23	G4-39	Chair of the highest governance body	-	Reference should be made to the "Report on corporate governance and ownership structure" available on the website www.astaldi.com
102-24	G4-40	Nominating and selecting the highest governance body	9	For more information, reference should be made to the "Report on corporate governance and ownership structure" available on the website www.astaldi.com
102-25	G4-41	Conflicts of interest	9	The organisational solutions adopted are shown in the "Report on corporate governance and ownership structure" available on the website www.astaldi.com
102-26	G4-42	Role of highest governance body in setting purpose, values, and strategy	15	Reference should be made to the "code of ethics" available on the website www.astaldi.com
102-27	G4-43	Collective knowledge of highest governance body	12	
102-29	G4-45	Identifying and managing economic, environmental, and social impacts	12	The sustainability committee and the control and risk committee work in sync to analyse the risks and opportunities of the economic, environmental and social performance, in support of the group's highest governance bodies. As part of planning sustainability initiatives, information on the different needs of the interested parties is gathered through the various communication channels described in the report. Such information is used in assessing stakeholder interest for the materiality matrix.
102-35	G4-51	Remuneration policies	9	Reference should be made to the "Remuneration report" available on the website www.astaldi.com.
102-36	G4-52	Process for determining remuneration	9	Reference should be made to the "Remuneration report" available on the website www.astaldi.com.
102-37	G4-53	Stakeholders' involvement in remuneration	9	Reference should be made to the "Remuneration report" available on the website www.astaldi.com.
Stakeholder engagement				
102-40	G4-24	List of stakeholder groups	17	

GRI Standard	GRI G4	Description	Page	Notes and omissions
102-41	G4-11	Collective bargaining agreements	36	
102-42	G4-25	Identifying and selecting stakeholders	4;17	
102-43	G4-26 G4-PR5	Approach to stakeholder engagement	19	The frequency and type of activities that are developed are closely related to the context in which the group operates. Therefore, the specific engagement activities included in the different projects are defined (with regard to type and frequency) considering the tools that regulate this aspect in the management system applied to the project (Project management plan, Community relations plan, Communications management plan, etc.), which are periodically reviewed also to implement any requirements presented by the various stakeholders.
102-44	G4-27 G4-PR5	Key topics and concerns raised	17	
Reporting practices				
102-45	G4-17	Entities included in the consolidated financial statements	5	For a list of companies included in the consolidated financial statements, reference should be made to the “2018 Annual Financial Report” available on the website www.astaldi.com For entities included in the consolidated financial statements but excluded from this statement, reference should be made to § METHODOLOGY FOR REPORTING NON-FINANCIAL INFORMATION and page 5.
102-46	G4-18	Defining report content and topic Boundaries	5	
102-47	G4-19	List of material topics	21	
102-48	G4-22	Restatements of information	-	There are no material restatements of data or information compared to the previous report.
102-49	G4-23	Changes in reporting	-	This statement is the group’s second to be externally published. In any case, the scope of reporting changes from year to year following the completion and beginning of new contracts in the segments where the group operates.
102-50	G4-28	Reporting period	4	2018 (calendar year)
102-51	G4-29	Date of most recent report	-	This is the group’s second statement to be externally published
102-52	G4-30	Reporting cycle	4	Annual.
102-53	G4-31	Contact point for questions regarding the report	-	sustainability@astaldi.com
102-54	G4-32-a	Claims of reporting in accordance with the GRI Standards	4	The group has chosen the “core” GRI option in preparing its 2018 sustainability profile.
102-55	G4-32-b	GRI content index	i	
102-56	G4-32-c G4-33	External assurance	ix	The independent auditors KPMG S.p.A. have been engaged by the board of directors to carry out the external assurance activities.

GRI 103 – Management Approach

GRI Standard	Description	Page	Notes and omissions
Economic performance			
103-1	Explanation of the material topic and its Boundary	4	
103-2	The management approach and its components	23	
103-3	Evaluation of the management approach	23	
Procurement practices			
103-1	Explanation of the material topic and its Boundary	4	
103-2	The management approach and its components	30;32	
103-3	Evaluation of the management approach	30;32	
Anti-corruption			
103-1	Explanation of the material topic and its Boundary	4	
103-2	The management approach and its components	11	
103-3	Evaluation of the management approach	11	
Energy			
103-1	Explanation of the material topic and its Boundary	4	
103-2	The management approach and its components	51	
103-3	Evaluation of the management approach	51	

GRI Standard	Description	Page	Notes and omissions
Effluents and waste			
103-1	Explanation of the material topic and its Boundary	4	
103-2	The management approach and its components	51	
103-3	Evaluation of the management approach	51	
Employment			
103-1	Explanation of the material topic and its Boundary	4	
103-2	The management approach and its components	33;42	
103-3	Evaluation of the management approach	33;42	
Health and safety			
103-1	Explanation of the material topic and its Boundary	4	
103-2	The management approach and its components	38	
103-3	Evaluation of the management approach	38	
Training and education			
103-1	Explanation of the material topic and its Boundary	4	
103-2	The management approach and its components	42	
103-3	Evaluation of the management approach	42	
Diversity and equal opportunity			
103-1	Explanation of the material topic and its Boundary	8	
103-2	The management approach and its components	33	
103-3	Evaluation of the management approach	33	
Non-discrimination			
103-1	Explanation of the material topic and its Boundary	4	
103-2	The management approach and its components	10	
103-3	Evaluation of the management approach		
Rights of indigenous peoples			
103-1	Explanation of the material topic and its Boundary	4	
103-2	The management approach and its components	17	
103-3	Evaluation of the management approach	17	
Occupational health and safety			
103-1	Explanation of the material topic and its Boundary	4	
103-2	The management approach and its components	17	
103-3	Evaluation of the management approach	17	

TOPIC-SPECIFIC STANDARDS – GRI 200 ECONOMIC

GRI Standard	GRI G4	Description	Page	Notes and omissions
Economic Performance				
201-2	G4-EC2	Financial implications and other risks and opportunities due to climate change	51	
201-4	G4-EC4	Financial assistance received from government	-	In 2016-2018, SIMEST received USD7.5 million from the US government for its 34.19% investment in Astaldi Construction Corporation in 2017.
Procurement Practices				
204-1	G4-EC9	Proportion of spending on local suppliers	32 - 37	
Anti-corruption				
205-1	G4-SO3	Operations assessed for risks related to corruption	11	
205-2	G4-SO4	Communication and training about anti-corruption policies and procedures	11	
205-3	G4-SO5	Confirmed incidents of corruption and actions taken	11	

TOPIC-SPECIFIC STANDARDS – GRI 300 ENVIRONMENTAL

GRI Standard	GRI G4	Description	Page	Notes and omissions
Materials				
301-1	G4-EN1	Materials used by weight or volume	55	The materials typical of the group's business are reported.
301-2	G4-EN2	Recycled input materials used	55	Due to the nature of the group's business, in assessing recycled materials within group projects, excavated materials are significant in terms of total quantities.
Energy				
302-1	G4-EN3	Energy consumption within the organization	52	The conversion methods and factors used are reported in the text or as a footnote. The amount of consumption from renewable fuel sources as a percentage of total consumption is not significant. Electricity is the only significant indirect energy consumed. Consumption trends are influenced by the group's operations. Fluctuations in data are mainly due to the variability of direct and indirect operating activities carried out in different years.
302-2	G4-EN4	Energy consumption outside of the organization	52	The conversion methods and factors used are reported in the text or as a footnote. Energy consumption outside of the organisation refers to consumption deriving from the activities of third parties working on the group's projects. Like for GRI 302-1, the amount of consumption from renewable fuel sources as a percentage of total consumption is not significant. Consumption trends are influenced by the group's operations. Fluctuations in data are mainly due to the variability of direct and indirect operating activities carried out in different years.
302-3	G4-EN5	Energy intensity	52	The ratio includes all consumption (inside and outside of the organisation). In order to obtain an energy intensity ratio that represents the business, consumption is calculated as a percentage of total operating revenue of the Astaldi Group.
Water				
303-1	G4-EN8	Water withdrawal by source	55	Water withdrawal was quantified at 57.1% of sites via direct measurements, 30.2% via estimates and the remaining 12.7% via calculation models.
Emissions				
305-1	G4-EN15	Direct (Scope 1) GHG emissions	54	
305-2	G4-EN16	Energy indirect (Scope 2) GHG emissions	54	
305-3	G4-EN17	Other indirect (Scope 3) GHG emissions	54	
305-4	G4-EN18	GHG emissions intensity	54	This ratio includes emissions from consumption both inside and outside of the organisation. Consumption is calculated as a percentage of total hours worked (direct and third-party personnel) by the entire Astaldi Group. Hours worked were used as the denominator as they best represent the impact on total revenue.
Effluents and waste				
306-3	G4-EN24	Significant spills	-	Astaldi considers significant spills to be those of at least 150 litres or considered significant based on the customer's criteria. In 2018, the group recorded a significant spill of 1.50 m^3. Specifically: - **Location**: Sant'Elena contract for the Jicaro Galan - Santa Elena road - **Volume**: 1.50 m3 - **Material**: hydraulic oil, diesel and motor oil

TOPIC-SPECIFIC STANDARDS – GRI 400 SOCIAL

GRI Standard	GRI G4	Description	Page	Notes and omissions
Employment				
401-1	G4-LA1	New employee hires and employee turnover	43	The figures refer to activities considered significant for the Astaldi Group's business, according to that set out on page 3 , which shows the figures for 2017-2018. For a better understanding of the text and the dynamics related to this aspect, considering the information provided in the notes on page 43, rates by gender and age bracket are not based on all employees but on the total incoming and outgoing employees.
Occupational Health and Safety				
403-2	G4-LA6	Types of injury and rates of injury, occupational diseases, lost days, and	39	

GRI Standard	GRI G4	Description	Page	Notes and omissions
		absenteeism, and number of work-related fatalities		
403-3	G4-LA7	Workers with high incidence or high risk of diseases related to their occupation	41	
403-4	G4-LA8	Health and safety topics covered in formal agreements with trade unions	43	
Training and Education				
404-1	G4-LA9	Average hours of training per year per employee	42	Due to the type of production activities performed, the composition of personnel within group projects is predominantly male (§ 33). Accordingly, a breakdown by gender is not significant for this disclosure. Awareness in daily health and safety management is one of the prerequisites for implementing sustainability policies and it is achieved partly by ongoing information and training activities for personnel of all levels and contracts. Health and safety training (which comprises 64.98% of total training provided) is not differentiated in any way as it is part of the combined performance data used for the integrated management system.
Diversity and Equal Opportunity				
405-1	G4-LA12	Diversity of governance bodies and employees	9;36	For more information, reference should be made to the "Report on corporate governance and ownership structure" available on the website www.astaldi.com
Non-discrimination				
406-1	G4-HR3	Incidents of discrimination and corrective actions taken	-	No incidents of discrimination were reported during the reporting period.
Rights of Indigenous Peoples				
411-1	G4-HR8	Incidents of violations involving rights of indigenous peoples	-	During the year, there were no reports of violations involving rights of indigenous peoples, in places where the group operates either directly or in partnership.
Customer Health and Safety				
416-1	G4-PR1	Assessment of the health and safety impacts of product and service categories	-	100% - All of the group's projects are designed (right from the planning stage) to ensure the health and safety of users.
416-2	G4-PR2	Incidents of non-compliance concerning the health and safety impacts of products and services	-	This indicator mostly refers to the concessions segment. There were no cases of non-compliance related to health and safety impacts of products and services during the reporting period with specific reference to regulations and voluntary codes concerning the health and safety impacts of products and services during their life cycle.

INDEPENDENT AUDITORS' REPORT

KPMG S.p.A.
Revisione e organizzazione contabile
Via Ettore Petrolini, 2
00197 ROMA RM
Telefono +39 06 80961.1
Email it-fmauditaly@kpmg.it
PEC kpmgspa@pec.kpmg.it

(Translation from the Italian original which remains the definitive version)

Independent auditors' report on the consolidated non-financial statement pursuant to article 3.10 of Legislative decree no. 254 of 30 December 2016 and article 5 of the Consob Regulation adopted with Resolution no. 20267 of 18 January 2018

To the board of directors of
Astaldi S.p.A.

Pursuant to article 3.10 of Legislative decree no. 254 of 30 December 2016 (the "decree") and article 5 of the Consob (the Italian Commission for listed companies and the stock exchange) Regulation adopted with Resolution no. 20267 of 18 January 2018, we have been engaged to perform a limited assurance engagement on the 2018 consolidated non-financial statement of the Astaldi Group (the "group") prepared in accordance with article 4 of the decree and approved by the board of directors on 16 June 2020 (the "NFS").

Responsibilities of the directors and board of statutory auditors ("Collegio Sindacale") of Astaldi S.p.A. (the "parent") for the NFS

The directors are responsible for the preparation of an NFS in accordance with articles 3 and 4 of the decree and the "Global Reporting Initiative Sustainability Reporting Standards" issued in 2016 by GRI - Global Reporting Initiative (the "GRI Standards"), which they have identified as the reporting standards.

The directors are also responsible, within the terms established by the Italian law, for such internal control as they determine is necessary to enable the preparation of an NFS that is free from material misstatement, whether due to fraud or error.

Moreover, the directors are responsible for the identification of the content of the NFS, considering the aspects indicated in article 3.1 of the decree and the group's business and characteristics, to the extent necessary to enable an understanding of the group's business, performance, results and the impacts it generates.

The directors' responsibility also includes the design of an internal model for the management and organisation of the group's activities, as well as, with reference to the aspects identified and disclosed in the NFS, the group's policies and the identification and management of the risks generated or borne.

The *Collegio Sindacale* is responsible for overseeing, within the terms established by the Italian law, compliance with the decree's provisions.

Auditors' independence and quality control

We are independent in compliance with the independence and all other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour. Our company applies International Standard on Quality Control 1 (ISQC Italia 1) and, accordingly, maintains a system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Auditors' responsibility

Our responsibility is to express a conclusion, based on the procedures performed, about the compliance of the NFS with the requirements of the decree and the GRI Standards. We carried out our work in accordance with the criteria established by "International Standard on Assurance Engagements 3000 (revised) - Assurance Engagements other than Audits or Reviews of Historical Financial Information" ("ISAE 3000 revised"), issued by the International Auditing and Assurance Standards Board applicable to limited assurance engagements. This standard requires that we plan and perform the engagement to obtain limited assurance about whether the NFS is free from material misstatement. A limited assurance engagement is less in scope than a reasonable assurance engagement carried out in accordance with ISAE 3000 revised, and consequently does not enable us to obtain assurance that we would become aware of all significant matters and events that might be identified in a reasonable assurance engagement.

The procedures we performed on the NFS are based on our professional judgement and include inquiries, primarily of the parent's personnel responsible for the preparation of the information presented in the NFS, documental analyses, recalculations and other evidence gathering procedures, as appropriate.

Specifically, we carried out the following procedures:

1. Analysing the material aspects based on the entity's business and characteristics disclosed in the NFS, in order to assess the reasonableness of the identification process adopted on the basis of the provisions of article 3 of the decree and taking into account the reporting standards applied.
2. Analysing and assessing the identification criteria for the reporting scope, in order to check their compliance with the decree.
3. Comparing the financial disclosures presented in the NFS with those included in the group's consolidated financial statements.
4. Gaining an understanding of the following:
   - the group's business management and organisational model, with reference to the management of the aspects set out in article 3 of the decree;
   - the entity's policies in connection with the aspects set out in article 3 of the decree, the achieved results and the related key performance indicators;

- the main risks generated or borne in connection with the aspects set out in article 3 of the decree.

Moreover, we checked the above against the disclosures presented in the NFS and carried out the procedures described in point 5.a).

5. Understanding the processes underlying the generation, recording and management of the significant qualitative and quantitative information disclosed in the NFS.

   Specifically, we held interviews and discussions with the parent's management personnel and personnel of Consorzio Stabile Operae e Dirpa 2 S.c.ar.l.. We also performed selected procedures on documentation to gather information on the processes and procedures used to gather, combine, process and transmit non-financial data and information to the office that prepares the NFS.

   Furthermore, with respect to significant information, considering the group's business and characteristics:
   - at parent level:
     a) we held interviews and obtained supporting documentation to check the qualitative information presented in the NFS and, specifically, the business model, the policies applied and main risks for consistency with available evidence,
     b) we carried out analytical and limited procedures to check, on a sample basis, the correct aggregation of data in the quantitative information;
   - we held meetings and videoconferences with the management of Consorzio Stabile Opera and Dirpa 2 S.c.ar.l. and the managers of the Line C of the Rome metro, Line 4 of the Milan metro, Quadrilatero Marche-Umbria road system (maxi lot 2), Brasov-Targu Mures-Cluj-Oradea Motorway, Section 2A: Ogra-Campia Turzii Lot 2, MetroLine 5 of the Bucharest metro, S-5 expressway Wrocław-Poznan (Lot 3, Korzensko-Widawa section), S-7 expressway Naprawa-Skomielna Biała and Chuquicamata mining project CC13 contracts, which we have selected on the basis of their business, contribution to the key performance indicators at consolidated level and location, to obtain documentary evidence supporting the correct application of the procedures and methods used to calculate the indicators.

Basis for qualified conclusion

The "Economic aspects" section of the NFS includes general financial information derived from the group's consolidated financial statements at 31 December 2018.

We issued a report on those consolidated financial statements today, stating that we were unable to express an opinion thereon due to the existence of significant uncertainties that may cast doubt about the parent's and group's ability to continue as a going concern.

Accordingly, we are unable to conclude on the above financial information derived from the group's 2018 consolidated financial statements.

Qualified conclusion

Based on the procedures performed, except for the possible effects of the matter described in the "Basis for qualified conclusion" section hereof, nothing has come to our attention that causes us to believe that the 2018 consolidated non-financial statement of the Astaldi Group has not been prepared, in all material respects, in accordance with the requirements of articles 3 and 4 of the decree and the GRI Standards.

Rome, 10 July

2020 KPMG S.p.A.

(signed on the original)

Marco Maffei
Director of
Audit

Astaldi S.p.A.
Via G.V. Bona 65 (registered office)
00156, Rome
www.astaldi.com