



**a2a**

SHAPING THE FUTURE TODAY

2019

## Integrated Report

Consolidated Disclosure  
of Non-Financial Information  
in accordance with Italian  
Legislative Decree n. 254/2016





# Integrated Report

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of Non-Financial Information  
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## 2019

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# Letter to stakeholders

This year's integrated report is particularly significant for A2A because it comes at the end of a process of strengthening sustainability and integration into the company strategy, which began in 2015 with the creation of the Sustainability and Territory Committee and continued with some fundamental steps: the definition of a Sustainability Policy inspired by the UN Agenda 2030 and a Sustainability Plan with measurable objectives, the introduction of a link between these targets and management incentive systems, the launch of a structured programme for listening and reporting on sustainability at territorial level, the development of the "Banco dell'Energia" (Energy Bank) and other projects created from this programme and, finally, the full integration of sustainability into the strategic planning of our Group.

It is thanks to this path that A2A was ready for 2019, the year in which sustainability has finally become a protagonist in international political agendas and the urgent need of global action on climate change has become part of the common feeling. The change towards a low-carbon and circular economy is necessary, the young people of the Z generation have reminded us, by massively joining the world climate strikes. It is now up to the institutions, businesses and finance to find solutions that combine the requirements of economic well-being and social peace with the protection of our planet and all living species. It is a very important signal that 2019 has ended with the presentation by the President of the European Commission, Ursula von der Leyen, of the Green Deal, an action plan promoting a public-private alliance to make our continent the world champion of the green economy, capable of achieving carbon neutrality in 2050.

### New capacity for the circular economy

In 2019, we continued the development of new plant capacity to be made available to our country to create a circular economy system. We have started up a new plastic treatment plant in Milan, which, like its twin in Cavaglià, uses innovative technologies that make it possible to select up to 13 different types of polymers. We obtained the authorization for a new plant for the recovery of compost and biogas from the wet organic fraction of the waste at Lacchiarella and acquired the company Electrometal, specialized in the recovery and treatment of industrial waste.

The solid collaboration with local authorities and citizens has led to excellent levels of separate collection of urban waste in all the municipalities served (average 68.4%; almost 1% more than 2018), while the percentage of urban waste sent to landfill (0.1% of urban waste collected) is now practically zero. We continue our commitment to minimize the environmental impact of collection activities, on the

one hand by introducing smart technologies, such as smart bins, and, on the other, by adopting ever greener means.

A2A's investments also focused on protecting water resources. In 2019, we started up a new water purification plant in Nuvolera and completed the executive design of the long-awaited Valtrompia water purification plant, while the challenging investment plan to reduce water losses continued, with the first comforting results (-6% linear water losses compared to 2018).

Aware that the circular economy requires first of all "networking", we have joined the international network "Circular Economy 100" promoted by the Ellen MacArthur Foundation.

### Our contribution to climate agreements

We have made our CO<sub>2</sub> reduction targets more ambitious to align with the trajectory set by the Paris Climate Agreement over the next decade. First of all, by 2030 we are committed to reducing our direct greenhouse gas emissions per kilowatt hour produced by 46% compared to 2017. Our decarbonization path is based primarily on the development of new renewable capacity of at least 1.6 GW by 2030, the optimization of gas-fired combined cycle plants and the decommissioning and conversion of conventional coal- and oil-fired power plants. A2A is also committed to zero Scope 2 emissions by 2024. Scope 1 and 2 reduction targets have been approved by Science Based Target initiative, as consistent with scientific climate evidence, and aligned with the reduction required to contain global warming contain at 2°C compared to the pre-industrial era.

In our electricity production mix, coal and fuel oil already have a very low incidence (10%), while 55% of energy comes from gas and 31% from renewable sources. In particular, production from coal this year was halved compared to 2018.

Particularly significant was the agreement signed in 2019 with the Talesun group to develop new photovoltaic projects for a total capacity of 1 Gigawatt. Equally important is the path undertaken for the complete decarbonization of Brescia's environmental energy system by 2022, which envisages an investment of 70 million euro in thermal storage and technological solutions aimed at recovering greater quantities of thermal energy from local industrial processes (waste-to-energy, steelworks). In this phase of energy transition, we have also committed ourselves to supporting the stability and security of the national transmission grid by building synchronous compensators at the Brindisi power plant.

Technologies for the cities of tomorrow

We aim to support the sustainable development of cities as places where people live and work well, without compromising the territory and its resources. This means making our expertise available to the public and private sector, to transform the building asset in terms of energy efficiency, to build sustainable mobility infrastructure, to deploy solutions based on new IoT (Internet of Things) technologies that help to better manage consumption, traffic, safety and environmental quality in general.

Much has been achieved in the last three years: 2.3 million tons of CO<sub>2</sub> per year avoided, thanks to energy efficiency projects developed for industrial customers, almost 300 thousand LED light points installed to illuminate cities, almost 200 charging columns activated, a thousand parking spaces in smart parking, more than a billion kilowatt hours per year of green energy sold to customers in the mass market. And, for 2019, we also recall our commitment to develop a 2,500 km fiber optic network in Brescia, together with Open Fiber, and the partnerships to create real smart districts in Merezate and Cascina Merlata in Milan.

To identify and implement new ideas, two years ago, we created an organizational structure with the responsibility of coordinating innovation within the Group, gathering stimuli inside and outside the company, developing partnerships with universities, research centres, companies and start-ups. A2A Horizon, the Corporate Venture Capital initiative, through which, in the next years, we intend to invest 70 million euro in start-ups operating in strategic areas for A2A, is dedicated to this world.

People who are the protagonists of change

We continue to invest in people and relationships. Almost 900 people joined our Group in 2019, about 40% of them are young people under 30. We have continued along the path to consolidate and spread a new management model shared and created from listening, based on initiative, collaboration, people development and simplification. Projects were created in some areas that are particularly close to our hearts, such as GEA, on the theme of gender balance, Young Talent, to encourage the inclusion and development of young people as a key resource for change and, finally, Nuove Energie, to implement a proactive disability management strategy in the company. The smart working experience also continued successfully, involving 18% of A2A employees and also contributing, together with projects to promote corporate car sharing and the use of public transport, to

reducing the environmental impact of home-work travel.

In terms of dialogue with the territory, 2019 saw the conclusion of the first cycle of the forumAscolto programme, which involved 6 territories in five years, with 6 workshops, 18 projects carried out based on the needs expressed by stakeholders and 20 events organized to present to local communities the territorial Reports.

The Banco dell'Energia project has consolidated itself as a social innovation initiative of excellence, capable of providing concrete answers to the problem of energy poverty. In 2019, another 16 winning projects of the second "Doniamo Energia" ("Give energy") call for proposals were launched for an additional 2 million euro in support.

Increasing attention to the school world: more than 70 thousand students and teachers have been involved in environmental education initiatives, plant visits, webinars, school-work programmes. The school year opened with the provision of a water bottle to all secondary school students in Brescia and Milan, a symbolic gesture, but at the same time a concrete one, to encourage the consumption of tap water and the reduction of plastic waste.

While it is now clear that investors also base their choices on the evaluation of ESG criteria, a sign of their appreciation of A2A's sustainability path was the extraordinary response of the markets to our first issue of a Green Bond, which last July, collected requests eight times the amount offered. We are confident that sustainable finance can still be an important resource for the development of the Group's green strategy in the future.

We conclude this excursus with a greeting and thanks to the people who are part of the A2A Group, who have once again demonstrated their commitment on a daily basis and great ability to open up and be protagonists of change, just as we cannot fail to address a thought to the stakeholders with whom we have consolidated a relationship of trust and sharing over time.

Chairman  
Giovanni Valotti



Chief Executive Officer  
Luca Valerio Camerano



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# Methodological Note

As a Public Interest Entity, in accordance with Legislative Decree 254/16 and subsequent amendments and additions, A2A publishes this document representing the Group's Consolidated Non-Financial Disclosure (NFD) for the year 2019.

The document (including its Supplement) represents the twelfth Report that outlines A2A's activities for its material sustainability issues, for the companies included in the scope of consolidation for the year ended December 31, 2019. The Report has been prepared in accordance with the **GRI Standards** of the Global Reporting Initiative (GRI) and, for some indicators, refers to the GRI G4 Electric Utilities Sector Supplement. The document also takes as a reference the Integrated Reporting Framework (IR Framework), outlined by the International Integrated Reporting Council (IIRC).

Adopting the principles of the Integrated Report requires presenting the way in which an organisation creates value over time. We therefore decided to adopt a structure for our report based on the various types of capital, which constitute the variables that determine how value is created:

- **Financial capital:** set of economic resources involved in the production processes;
- **Manufacturing capital:** real estate, infrastructure and physical means (plant, machinery, etc.) used for the production of the services offered by the company;
- **Natural capital:** all processes and environmental resources contributing towards the production of services offered by the company;
- **Human capital:** all the expertise, skills and experience of the people that work at the company;
- **Intellectual capital:** intangible resources represented by organisational knowledge and intellectual property of the Group;
- **Relational capital:** the company's ability to create relations with external stakeholders and share values in order to increase individual and collective well-being.

Through the analysis of the types of capital that influence, and are in turn influenced by, the Group's activities, A2A aims to provide a clear account of the existing, necessary integration between economic and social and environmental aspects in company decision-making processes, but also in the definition of the Group's strategy, governance and business model.

The initial chapters of the document describe the Group's **Business Model** and the **management tools applied**, through which the various "capitals" are used to create value over time. A structured process of **materiality analysis**, to which reference is made in paragraph 4.2, has made it possible to define the contents to be reported as they are relevant for both

the Group and its stakeholders. On the basis of the issues that emerged as material, the GRI standards and the related qualitative and quantitative disclosures to be presented in the NFD and its Supplement were selected. The **description of the material matters, the associated risks and the management approach**, including the **policies applied** by the company, are reported at the start of each capital, together with an overview of the input/output/outcome model of the business model, highlighting inputs and outcomes of the specific capital. This representation is mainly intended for communication purposes, insofar as the Group outputs, i.e. the public utility services and support processes, with which it supplies the communities, can only be obtained through the combination of the various capitals. Within each chapter, the **actions** and **KPIs** (Key Performance Indicators) relative to the specific capital, are therefore described.

According to the cover of the **GRI Standards** and **Specific Standard Disclosure** indicators associated with the material aspects and summarised in the **GRI Content Index**, the NFD was prepared "**In accordance with the GRI Standards: Core option**".

In order to comply with the requirements of Italian Legislative Decree no. 254/16, in 2017, the A2A Group equipped itself with an internal procedure aimed at drafting the NFD - **Procedure 201.028 "Non-Financial Declaration Reporting Flow"** - which defines the organisational structures involved, the methods used to collect, process and control the non-financial data included in this document. This procedure was updated with effect from January 1, 2019, with the inclusion of the **passage of formal approval in the Board of Directors of the materiality matrix**, preparatory to the preparation of the issues to be discussed in the Group NFD, and the presentation of the document in the Shareholders' Meeting.

The **data collection, processing and control process** was handled through the implementation of specific **software** managed by the CSR structure, which allows for the definition, for each section of the NFD, of the data owner and various approval levels, through to the company's senior management. Financial capital figures are aligned with the Consolidated Financial Statements, while manufacturing capital figures - and relational capital figures for customers and users - are derived from A2A's management control systems. The data represented in natural capital was handled by the Environment structure and collected via the EMS (Environmental Management System) software.

In this document and its Supplement, where necessary a specific note has been included, to indicate changes in the 2017 and 2018 performance data with respect to that reported in the 2018 Integrated Report.

This document, submitted to the Board of Directors of A2A S.p.A. on March 19, 2020, was then **subjected to a limited audit**, with regard to aspects relating to GRI reporting, by an external company, in accordance with the criteria laid down by the “International Standard on Assurance Engagements 3000 Revised” (ISAE 3000 Revised), which at the end of the work carried out issued the report attached to this document.

Scope

The NFD includes all full subsidiaries consolidated on a line-by-line basis into the Consolidated Financial Statements, to which, however, a concept of relevance and significance is applied. Indeed, companies can be excluded from the social and environmental performance data, with business that is not relevant or companies purchased/sold/liquidated during the year.

It should be noted that the scope of consolidation at December 31, 2019 has changed compared to the previous year mainly due to the acquisition of companies active in the market for the treatment and analysis of industrial waste, the acquisition of other investments in companies active in the field of energy efficiency, photovoltaic plants, dispatching and in the sale of natural gas and electricity consolidated on a line-by-line basis and using the equity method. For more details, please refer to the Consolidated Financial Statements as at December 31, 2019. With the exception of “Financial Capital” and the chapter entitled “The A2A Group”, for which the scope coincides with that of the Consolidated Financial Statements, the companies in liquidation are excluded from the list of consolidated companies in the remaining Capitals and also:

- Electrometal and its subsidiary Arelab, companies operating in waste treatment, of which the Group acquired 90% of the capital on December 23, 2019;
- SunCity Energy Srl, due to the fragmented nature of the information received during the data collection phase, was considered difficult to integrate with the information of other Group companies. The omission of information relating to it does not prejudice a correct and balanced understanding of the Group’s performance;
- the ACSM-AGAM Group, which, although fully consolidated in the Consolidated Financial Statements, will draw up its own NFD as an obligated party pursuant to Legislative Decree 254/16. The main KPIs of the Group’s performance will in any case be represented and aggregated on page 17. On July 1, 2018, in fact, the merger and demerger transactions

were effective between ACSM-AGAM, Aspem, AEVV, Lario Reti Holding and A2A S.p.A., which constituted the multi-utility of the North. As in the previous year, the ACSM-AGAM Group, being subject to the obligation of Legislative Decree 254/16, publishes its own Declaration of Non-Financial Information approved by the Board of Directors on March 16, 2020.

It is also noted that the plants - owned or leased - are consolidated 100% if they are included in the assets of the consolidated companies. In this sense, the data on the activity of the Acerra waste-to-energy plant, the Caivano plant and the Thermoelectric plant of Scandale, is not considered. The Group’s jointly owned material plants are consolidated proportionally. According to this principle, for environmental data, the Mincio Thermoelectric plant was 45% consolidated.

AN OSCAR NFD

A2A received the Special Award for Best Non-Financial Disclosure on November 12 as part of the fifty-fifth edition of the **Report Oscar promoted by Ferpi** (Italian Public Relations Federation).

The reason expressed by the jury of the Award states:  
“Starting from a lucid presentation of the business model, in fact, A2A has clearly expressed a strategic disclosure that highlights the link with the SDGs and has highlighted the operational components that influence the creation of value for the various capitals, with ample space for reflection on the main opportunities (not only the risks) associated with ESG issues. The Integrated Report is particularly usable and effective in terms of communication, easy and intuitive to read also thanks to the support of graphs that well summarize the dynamics under analysis”.

The Report Oscar is the recognition that Ferpi dedicates to the most virtuous companies in reporting and in the care of relations with stakeholders, with the aim of promoting and disseminating a business culture capable of linking strategy and financial performance with the social and environmental context.

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# 1

## The A2A Group and its business model

## 1.1 The Group

The A2A Group is Italy's largest multi-utility company, at the top of the production, sale and distribution of gas and electricity, district heating, environmental services and the integrated water cycle. Committed to a constant process of integration in the territories, the Group focuses on research and invests in new technologies for the smart cities of tomorrow.

Its business areas are attributable to the Business Units (BU) illustrated below.

Figure 1\_Business Units of the Group

### Generation and Trading

The activities of the Business Unit are related to the management of the generation plant portfolio of the Group. This Business Unit also includes the activity of trading on domestic and foreign markets of all energy commodities (gas, electricity, environmental certificates).

### Market

The activities of the Business Unit are aimed at the sale of electricity and natural gas to customers in the free market and protected market, the management of public lighting and traffic regulation systems. Furthermore, it deals with providing energy efficiency and electric mobility services.

### Environment

This Business Unit's activity relates to the management of the integrated waste cycle, which ranges from collection and street sweeping to the treatment, disposal and recovery of materials and energy.

### Networks & District Heating

This Business Unit's activity mainly consists of the technical and operational management of networks for the distribution of electricity, the transport and distribution of natural gas and the management of the entire integrated water cycle. It also produces and sells heat conveyed through district heating networks and offers management services for heating systems owned by third parties. Since 2019, A2A Smart City, a company that develops and manages the enabling technology infrastructure for integrated and networked digital services, has been included in the BU.

### International

The International Business Unit includes the provision of know-how and technologies for the realization of waste pre-treatment plants.

### Other Companies and Corporate

Corporate services include guidance, strategic direction, coordination and control of industrial management, as well as services to support business and operational activities.

All these Business Units, where possible, operate in coordination to offer integrated services to citizens, as evidenced by the A2A value chain, in which the main activities of the Group are represented throughout their supply chain, from the raw material to the end customer.



The Group's **values** represent the cultural identity of A2A and the rules of conduct that guide people in their daily activities. The Group's values, along with its mission, underlie its business model, which consolidates and encourages increasingly deep integration with local communities and their members due to a business plan that allows development opportunities to be identified for the business and its stakeholders.

The Group's ambition is to develop a **multi-utility model integrated into the local community**, suited to the people who live there, capable of creating and distributing progressive, long-lasting social value to all of its stakeholders.

### The A2A Group's values

**Respect for Human fundamental rights::** maintain a professional relationships with all stakeholders, geared toward the respect for the dignity and fundamental rights recognised by national and supra-national law to all mankind.

**Excellence in results:** achieve results and satisfy customers with competence, determination, recognizing excellent contributions.

**Responsibility:** commit to give their best, answering for their actions.

**Team spirit:** overcoming obstacles through cooperation, a shared vision, and a focus on the individual.

**Innovation:** tackling change and evolution through brainstorming, flexibility, and thinking outside the box.

**Sustainability:** keeping an eye on the impact of one's choices on the environment and on the community.



MISSION

We aim to be a **Group capable of providing cities with essential services** that meet the highest standards of quality and efficiency due to their **sustainability, optimal relationship with the local community and openness to change.**

Our strategy aims to develop a repositioning process for a **more modern multi-utility**, leader in the environment, smart grids and new energy models, with a more balanced and profitable position, able to **seize the opportunities that will be presented by the green economy and smart cities.**

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1.2 Size of the organization and geographical location

In the following section, regarding the size of the organization and location of the geographical areas of activity, the information includes the ACSM-AGAM Group, in order to provide complete information on the structure of the A2A Group, in line with the economic results of other corporate documents. For further details on the results of the ACSM-AGAM Group, see the Supplement to this document.

Plants and services of the A2A Group

PLANTS		
ENERGY	Thermoelectric	
	Hydroelectric	
	Photovoltaic	
WASTE	Waste-to-energy	
	Waste treatment	
	Material recovery	
	Landfill	
SERVICES		
WASTE	Waste collection	
DISTRIBUTION AND TRANSPORT	Electricity distribution	
	Gas distribution	
	Gas transport	
DISTRICT HEATING	District heating	
WATER	Integrated water service	
LIGHTING	Public lighting	
ELECTRIC MOBILITY	Recharge columns e-Moving	

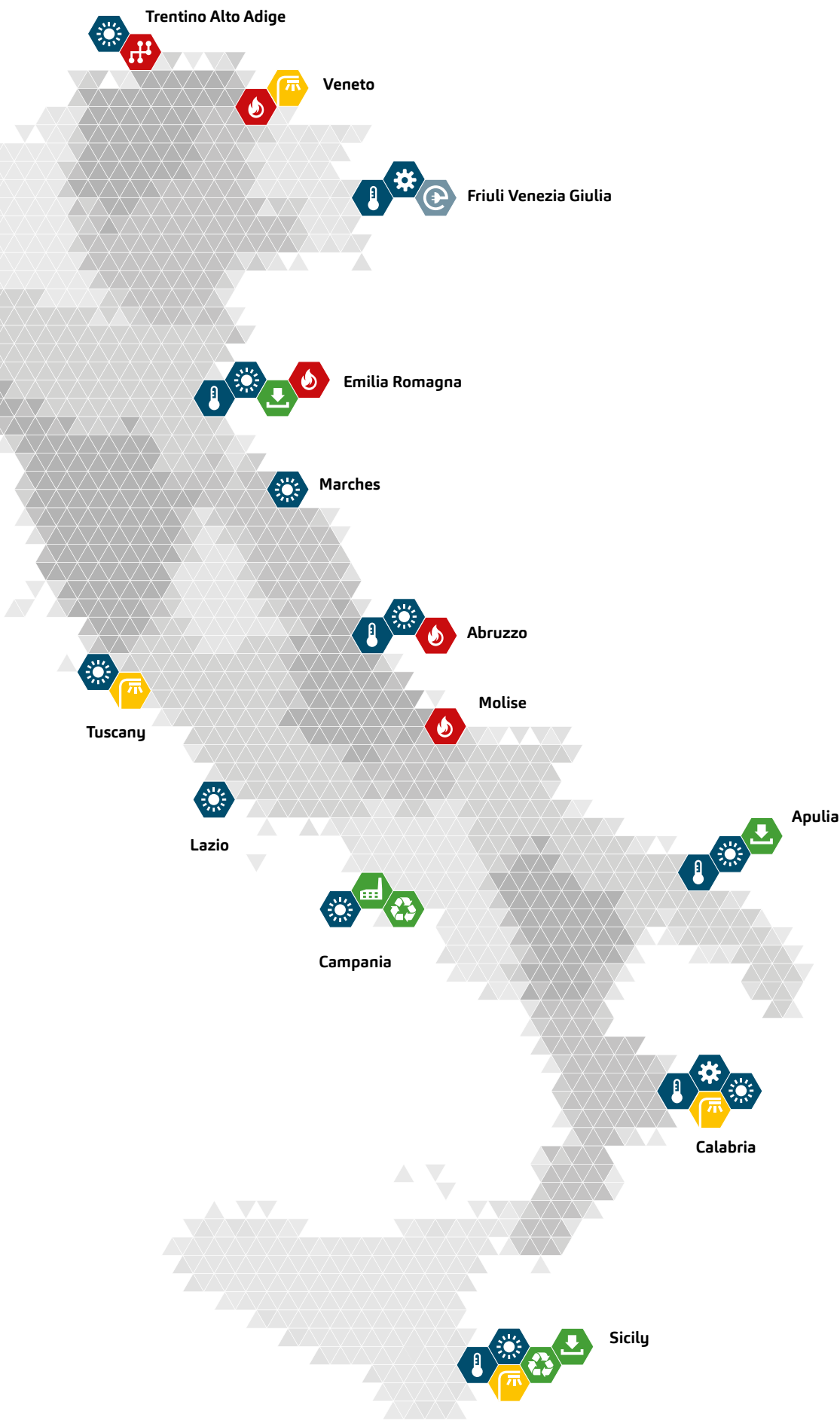


Liguria

Lombardy



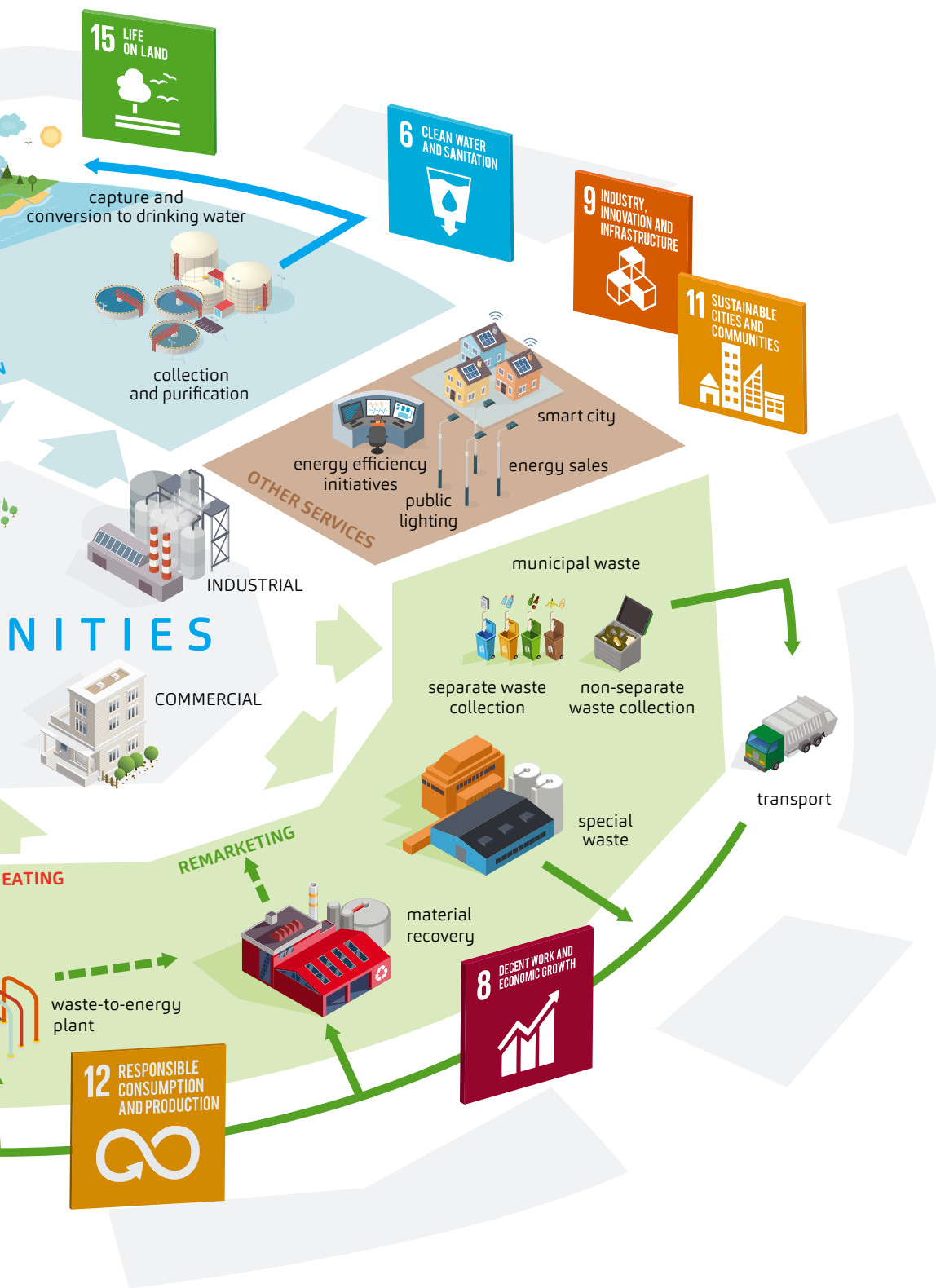
Sardinia



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1.3 A2A's value chain





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1.4 The A2A business model

The A2A Business Model seeks to create shared sustainable value for the company over time and for its reference community.

In actual fact, the services offered by the Group look to the future and are focused on improving the quality of life of local residents and businesses operating in the reference territories, by offering essential services, guaranteed by the highest quality and efficiency standards: waste collection, sale of electricity and natural gas, water treatment, distribution networks, public lighting and IoT (Internet of Things) technologies for smart cities. The solidity of A2A's presence meets with the change of sectors that evolve constantly, giving rise to a constant path of sustainable growth.

The six capitals (Financial, Manufacturing, Natural,





Human, Intellectual and Relational) are behind the Business Model, on which the organisation depends in order to guarantee its services. Aware that maintaining and preserving these capitals can be the only key for sustainable growth and a solid presence in the long-term, A2A has defined a system of values, organisational instruments, policies and operating systems that, as a whole, support the Group's various business units in sustainable management.

Part of the capitals is consumed in the generation of the services offered by A2A to the community in which it operates. This is why A2A has defined a strategy that integrates business objectives with sustainability objectives and a Sustainability Policy through to 2030, aimed at returning value to each capital, to keep their capacity unaltered, with a view to sustainable development.

Figure 2\_The A2A Group business MODEL



OUTCOME

<div>Revenues (M€)</div> <table><tr><th>2018</th><th>2019</th></tr><tr><td>6,494</td><td>7,324</td></tr></table>	2018	2019	6,494	7,324	<div>Economic added value distributed (M€)</div> <table><tr><th>2018</th><th>2019</th></tr><tr><td>1,814</td><td>1,927</td></tr></table>	2018	2019	1,814	1,927	<div>Total order (M€)</div> <table><tr><th>2018</th><th>2019</th></tr><tr><td>1,536</td><td>1,334</td></tr></table>	2018	2019	1,536	1,334	<div>Percentage ordered from Italian suppliers</div> <table><tr><th>2018</th><th>2019</th></tr><tr><td>92%</td><td>96%</td></tr></table>	2018	2019	92%	96%
2018	2019																		
6,494	7,324																		
2018	2019																		
1,814	1,927																		
2018	2019																		
1,536	1,334																		
2018	2019																		
92%	96%																		
<div>Electricity produced (GWh<sub>e</sub>)</div> <table><tr><th>2018</th><th>2019</th></tr><tr><td>19,675</td><td>20,191</td></tr></table>	2018	2019	19,675	20,191	<div>RES percentage of the total</div> <table><tr><th>2018</th><th>2019</th></tr><tr><td>31%</td><td>27%</td></tr></table>	2018	2019	31%	27%	<div></div> 	<div>Thermal energy produced (GWh<sub>t</sub>)</div> <table><tr><th>2018</th><th>2019</th></tr><tr><td>2,802</td><td>2,867</td></tr></table>	2018	2019	2,802	2,867				
2018	2019																		
19,675	20,191																		
2018	2019																		
31%	27%																		
2018	2019																		
2,802	2,867																		
<div>Water treated (Mm³)</div> <table><tr><th>2018</th><th>2019</th></tr><tr><td>52</td><td>51</td></tr></table>	2018	2019	52	51	<div>Waste collected (Kt)</div> <table><tr><th>2018</th><th>2019</th></tr><tr><td>1,671</td><td>1,708</td></tr></table>	2018	2019	1,671	1,708	<div>Waste treated (Kt)</div> <table><tr><th>2018</th><th>2019</th></tr><tr><td>3,547</td><td>3,340</td></tr></table>	2018	2019	3,547	3,340	<div>Separate Collection Index</div> <table><tr><th>2018</th><th>2019</th></tr><tr><td>68.0%</td><td>68.8%</td></tr></table>	2018	2019	68.0%	68.8%
2018	2019																		
52	51																		
2018	2019																		
1,671	1,708																		
2018	2019																		
3,547	3,340																		
2018	2019																		
68.0%	68.8%																		
<div></div> 	<div>Electricity sold to end customers (GWh<sub>e</sub>)</div> <table><tr><th>2018</th><th>2019</th></tr><tr><td>10,826</td><td>13,657</td></tr></table>	2018	2019	10,826	13,657	<div>Renewable electricity sold (GWh<sub>e</sub>)</div> <table><tr><th>2018</th><th>2019</th></tr><tr><td>2,229</td><td>2,276</td></tr></table>	2018	2019	2,229	2,276	<div>Electricity distributed (GWh<sub>e</sub>)</div> <table><tr><th>2018</th><th>2019</th></tr><tr><td>11,913</td><td>11,735</td></tr></table>	2018	2019	11,913	11,735				
2018	2019																		
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2018	2019																		
2,229	2,276																		
2018	2019																		
11,913	11,735																		
<div>Gas sold to end customers (Mm³)</div> <table><tr><th>2018</th><th>2019</th></tr><tr><td>1,925</td><td>2,454</td></tr></table>	2018	2019	1,925	2,454	<div>Gas distributed (Mm³)</div> <table><tr><th>2018</th><th>2019</th></tr><tr><td>2,745</td><td>2,963</td></tr></table>	2018	2019	2,745	2,963	<div>Heat/cold sold (GWh)</div> <table><tr><th>2018</th><th>2019</th></tr><tr><td>2,768</td><td>2,783</td></tr></table>	2018	2019	2,768	2,783	<div></div> 				
2018	2019																		
1,925	2,454																		
2018	2019																		
2,745	2,963																		
2018	2019																		
2,768	2,783																		
<div>Water distributed (Mm³)</div> <table><tr><th>2018</th><th>2019</th></tr><tr><td>72</td><td>78</td></tr></table>	2018	2019	72	78	<div></div> 	<div>Total number of employees</div> <table><tr><th>2018</th><th>2019</th></tr><tr><td>12,080</td><td>12,196</td></tr></table>	2018	2019	12,080	12,196	<div>Number of hires</div> <table><tr><th>2018</th><th>2019</th></tr><tr><td>956</td><td>965</td></tr></table>	2018	2019	956	965				
2018	2019																		
72	78																		
2018	2019																		
12,080	12,196																		
2018	2019																		
956	965																		
<div>Turnover rate</div> <table><tr><th>2018</th><th>2019</th></tr><tr><td>6.3%</td><td>6.9%</td></tr></table>	2018	2019	6.3%	6.9%	<div>Scope 1 emissions (kt CO<sub>2eq</sub>)</div> <table><tr><th>2018</th><th>2019</th></tr><tr><td>7,636</td><td>7,060</td></tr></table>	2018	2019	7,636	7,060	<div>Scope 2 emissions (kt CO<sub>2eq</sub>)</div> <table><tr><th>2018</th><th>2019</th></tr><tr><td>124</td><td>124</td></tr></table>	2018	2019	124	124	<div>Sponsorships (M€)</div> <table><tr><th>2018</th><th>2019</th></tr><tr><td>1.2</td><td>1.6</td></tr></table>	2018	2019	1.2	1.6
2018	2019																		
6.3%	6.9%																		
2018	2019																		
7,636	7,060																		
2018	2019																		
124	124																		
2018	2019																		
1.2	1.6																		

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## Governance

On May 15, 2017, the Shareholders’ Meeting appointed for three years, with the mechanism of the list vote, the Board of Directors (BoD) consisting of 12 members, as indicated in the table below:

Figure 3\_Board of Directors - Composition

POSITION	NAME	YEAR OF BIRTH	EXECUTIVE (E) - NON EXECUTIVE (NE)	INDEPENDENCE - CODE
Chairman (C)	Giovanni Valotti	1962	E	-
Deputy Chairman (DC)	Stefania Bariatti*	1956	NE	X
Deputy Chairman (DC)	Alessandra Perrazzelli**	1961	NE	X
Chief Executuve Officer (CEO)	Luca Valerio Camerano	1963	E	-
Director	Giambattista Brivio	1946	NE	X
Director	Giovanni Comboni	1957	NE	-
Director	Enrico Corali	1964	NE	X
Director	Luigi De Paoli	1949	NE	X
Director	Alessandro Fracassi	1969	NE	X
Director	Maria Chiara Franceschetti	1969	NE	X
Director	Guadiana Giusti	1962	NE	X
Director	Secondina Ravera***	1966	NE	X
Director	Norberto Rosini	1959	NE	X

Note: C: Chair - M: Member

\* Appointed by the Board of Directors on May 15, 2019 pursuant to article 2386 of the Civil Code.

\*\* Resigned from office on May 7, 2019.

\*\*\* Appointed Chair of the Remuneration and Appointments Committee by the Board of Directors on May 15, 2019, already member since May 17, 2017.

In compliance with the provisions of the Code of Corporate Governance for Listed Companies, the Board of Directors conducted its assessment for the year 2019, on the size, composition and functioning of the Board and its Committees. The results of the Board Review were presented and discussed during the session of the Board of Directors of January 30, 2020.

All the information relative to the A2A governance model is given in the **Report on Corporate Governance and Ownership Structures** published together with this document and available on the website [a2a.eu](https://www.a2a.eu).

The information given on the fees of the Board of Directors is available in the **Report on Remuneration** available on the website [a2a.eu](https://www.a2a.eu).

## 2.1 Sustainability governance

Responsibility for sustainability issues is borne by the **Sustainability and Territory Committee**, tasked with playing an evaluative, advisory and propositional role in assisting the Group’s BoD, Chairman and Chief Executive Officer in defining guidelines, orientations and initiatives relating to the promotion of a strategy and tools that integrate sustainability into business processes, so as to ensure the creation of value over time for the shareholders and all other stakeholders.

The Committee must be composed of no fewer than three directors and at least one member must have adequate experience in the field of the environment, sustainability and corporate social responsibility, to be assessed by the BoD upon appointment. The Committee reports to the BoD on the activity performed with quarterly frequency.

INDEPENDENCE CFA	CONTROL AND RISKS COMMITTEE	APPOINTMENTS AND REMUNERATION COMMITTEE	SUSTAINABILITY AND TERRITORY COMMITTEE
-	-	-	C
X	-	M	-
X	-	C	-
-	-	-	-
X	-	-	M
X	M	-	-
X	M	-	-
X	C	-	-
X	-	-	M
X	-	-	M
X	M	-	-
X	-	C	-
X	-	M	-

In 2019, the Sustainability and Territory Committee met 9 times.

- During the meetings different aspects were analysed and discussed, such as:
- updating of the Sustainability Plan, for the five-year period 19-23;
  - preparation of the 2018 Integrated Report;
  - validation of the contents included in the Territorial Sustainability Reports drawn up in 2019;
  - analysis of the results obtained in the various ethical ratings to which A2A is subject, also in line with international requests on issues such as climate change and sustainable finance;
  - assessment of the assumptions underlying the new emission reduction policy in 2030;

- organization of the first forumAscolto of Friuli Venezia Giulia;
- identification of material issues for the 2019 Integrated Report and their integration with ERM risks.

As part of the training activities for Directors, aimed at providing adequate knowledge of the sector, the company's dynamics and their evolution, a session of Induction for the Board of Directors on sustainability issues (Integrated Report, Sustainability Plan, Territorial Financial Statements) and a more specific one on issues related to "Human Resources Policy" and "Values, culture and behaviour in A2A" was also held in 2019.

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## 2.2 Corporate governance guidelines

A2A has equipped itself with various instruments aimed at supporting the company in guaranteeing an effective, efficient and transparent management, namely:

- **Code of ethics;**
- **Organization, Management and Control Model pursuant to Italian Legislative Decree no. 231/01;**
- **Anti-Corruption Policy;**
- **Group Tax Strategy;**
- **Quality, Environment and Safety Policy;**
- **Quality, Environment and Safety Management Systems;**
- **A2A Group's Sustainability Policy.**

➤ All documents mentioned above are available at [a2a.eu](http://a2a.eu)

### Code of Ethics

All of the A2A Group's activities and relations, both internal and external, are inspired by observance of the principles, values and rules of conduct set out in the **Code of Ethics**. The A2A Group's Code of Ethics is an integral part of the Model pursuant to Legislative Decree 231/01 and defines the fundamental ethical principles, rules of conduct and responsibilities that the Group recognizes, respects and assumes as a binding value and imperative that all recipients of the same are required to comply with (members of the Board of Directors, members of the control body, managers, employees, collaborators on an ongoing basis, suppliers and business partners). The document makes **explicit reference to the UN Universal Declaration of Human Rights, the ILO Fundamental Conventions and the OECD Guidelines**. The Code identifies requirements aimed at ensuring that the enterprise's activities are inspired by the following principles:

- recognition and protection of the dignity, liberty and equality of human beings;
- protection of workers and freedom of union association;
- protection of health, safety, the environment and biodiversity;
- integrity, transparency, honesty and loyalty in action.

Moreover, it is highlighted that the A2A Group observes and promotes the universal principles of the four focus areas of the **Global Compact**: Human Rights, Labour, Environment, and Anti-Corruption



During 2019, a program to raise awareness on the issue of **compliance culture** was launched, with the initial dissemination to employees of a video promoting compliance with the Group's rules and the Code of Ethics. This programme will be progressively developed with other initiatives.

### International Trade Compliance

The A2A Group is **subject to International Trade Compliance regulations** issued by the Italian Government and the European Union and applies, for contractual commitments with funding bodies, the provisions of specific laws and regulations issued by some other countries and intergovernmental organizations of an international nature. In this sense, the A2A Group has adopted a **specific procedure to regulate information flows, the methods of verifying counterparties and the standards of the clauses to be used in commercial contracts and agreements** and has provided training sessions, both in class and via webinar, to personnel working in areas subject to ITC regulations. A2A has also adopted an IT tool for the automatic daily verification, extended in 2019 also to the LGH Group, of relevant counterparties within the meaning of the ITC regulations to which it is subject or applies voluntarily.

### Organization, Management and Control Model pursuant to Italian Legislative Decree 231/01

On October 24, 2019, the A2A S.p.A. **Organization, Management and Control Model pursuant to Legislative Decree 231/01** was updated.

49 consolidated companies adopted their own Organization, Management and Control Models in accordance with Legislative Decree 231/01. The Board of Directors of each company with a Model has appointed a Supervisory Body entrusted with the task of supervising the functioning and compliance of the Model and its constant updating.

In 2019, 5,610 hours of training were provided on the subject of Legislative Decree 231/01 in e-learning and classroom mode, involving 26% of employees. At December 31, 87% of employees were trained on the Code of Ethics.

All Group stakeholders can report through appropriate channels of confidential information, any violation or suspected violation of the Code, to the Supervisory Body or Internal Audit organizational structure. Reports can be made through the communication channels established (e.g. e-mail, ordinary mail) and as per the "Management of anonymous and other reports of the A2A Group" guideline published on the Group website. Employees of the A2A Group may also report illegal conduct or violations of the 231 Model of companies of which they have become aware in the context of their employment relationship. Reports may also be anonymous and must contain precise and useful elements for understanding what has been reported. The A2A Group guarantees the protection of the identity of the reporter and the confidentiality of the information

received and, for those who violate the measures to protect the reporter and those who make unfounded reports, penalties are provided for. Whistleblowers can report to the National Labour Inspectorate any discriminatory measures suffered.

### Anti-Corruption Policy

The Group companies that have adopted a Model in accordance with Legislative Decree 231/01 are systematically monitored also with regards to risks connected with corruption. In line with the Group's Code of Ethics and the specific regulatory document "**Anti-Corruption Policy of the A2A Group**" updated in 2019 and approved by the Board of Directors of A2A S.p.A. on July 11, 2019, the Group **bans all forms of corruption**, unlawful favours, collusive conduct, requesting of advantages, conferral of material and immaterial benefits and other advantages aimed at influencing or remunerating representatives of institutions or their relatives, and Group employees. The Anti-Corruption Policy of the Group provides a systematic framework of reference in fighting corruption, and disseminates Group-wide those principles and rules to be followed to disavow bribery in any form direct or indirect, active or passive, even in terms of solicitation, as well as more generally warrants compliance contemplated by the Group's Code of Ethics, and applicable Anti-Corruption rules. The policy applies to Group personnel and to all those who work for or on behalf of Group Companies, within the scope of their activities and within the limits of their responsibilities, including the Corporate Bodies.

In 2019, we became aware of two proceedings relating to the alleged offence of corruption involving senior management of two companies of the A2A Group.

In one case, the hypothesis of corruption challenged by the Taranto Public Prosecutor's Office is linked to the issue of a permit by the Province of Taranto to extend a landfill managed by Linea Ambiente Srl. To date, no act/measure has been notified in relation to a possible liability under Legislative Decree 231/01.

In the second case, the hypothesis of corruption challenged by the Milan Public Prosecutor's Office is connected to certain tenders launched by AMSA S.p.A.. The company has not been involved in accordance with Legislative Decree 231/01. However, it is an "offended party".

### Data privacy

In order to meet the requirements of the GDPR, the A2A Group has adopted an organization and management model for personal data that protects the data subject and guarantees the correct application of the legislation on the protection of personal data.

The Group has also launched a series of adjustment actions that have included a preliminary assessment phase, with the aim of: analyzing the existing Data Privacy governance model; identifying the main areas of intervention and the relative actions to be implemented in order to comply with the regulation; defining the priorities and the adjustment plan. The action plan developed by the Parent Company includes the activities described below.

#### Organizational system:

- definition of roles and responsibilities and the introduction of the new figure of the Data Protection Officer (DPO) and the management model;
- drawing up and updating registers of processing operations and procedures regarding security measures, data management and requests for the exercise of rights by data subjects;
- adoption of an IT governance tool for the overall GDPR system.

#### Risk analysis and assessment:

- Identification of high-risk processing on the basis of the criteria defined:
  - by the "Art. 29 Group" (now EDPB) in the data protection impact assessment guidelines;
  - in annex 1 to the measure of the Guarantor for Personal Data Protection no. 467;
- carrying out DPIA (Data Protection Impact Assessment) on processing operations presenting a high risk to the rights and freedoms of data subjects, in order to demonstrate the compliance of processing and to identify the security measures necessary to reduce the level of risk;
- assessment of the severity of data breach and keeping of the relevant register.

In 2019, 18 cases of personal data breaches were detected at Group level, three of which were notified to the Data Protection Authority.

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QES Policy and Sustainability Policy

With reference to the policies adopted by the company in respect of sustainability matters, A2A has, over time, equipped itself with specific corporate policies, deciding to adopt more and more policies Group-wide aimed at ensuring the homogeneous management of governance, environmental and social aspects.

More specifically, reference is made to the:

- **Group Quality, Environment and Safety (QES) Policy**, whereby A2A undertakes to guarantee, under the scope of its activities and in compliance with the OMM, the Code of Ethics and the company values, increasing stakeholder involvement (including workers), solid compliance with legislation regarding the company, a careful focus on the environment, the protection of worker health

and safety (through identification credentials and advanced risk assessment tools), a constant eye on technological innovation and a tendency to develop its human capital;

- **Sustainability Policy**, drawn up in line with the priorities of the 2030 Agenda and the 17 Sustainability Development Goals (SDGs) defined by the UN (see page 37).

In order to implement these reference principles, A2A has also prepared various guidelines and internal procedures on sustainability aspects, also referring to and outlining the reference standards laid down by the OMMs; these documents are adopted at Group level and outlined by Group companies in relation to the specific nature of their respective businesses .

QES Management Systems

These policies are partly implemented through **certified management systems according to the major voluntary standards** recognized at international level, such as ISO 14001 for the environment, ISO 9001 for quality and OHSAS 18001 and the new ISO 45001 for health and safety at work, or within the European Community, such as EMAS Registration, which refers to Regulation EC 1221/09.

Figure 4\_Group Certifications [GRI 102-30]

TOTAL NUMBER OF CERTIFICATES ISSUED	QUALITY ISO 9001	ENVIRONMENT ISO 14001	SAFETY [OHSAS 18001]	SAFETY [ISO 45001]	ISO 50001	EMAS	REMADE IN ITALY (*)
2017	34	29	29		1	28	
2018	28	25	25		3	27	
2019	27	26	16	10	4	28	2

\* New certification on recycling products. See page 96 for details.

OPEN HSE: AN INNOVATIVE PLATFORM FOR EVERYONE

In 2019, the **"Open HSE" platform** was created, a new tool that allows all A2A Group employees to be kept up to date on the impact that HSE - Environment, Health and Safety issues have on their business and on their activities. This platform, designed for simple and immediate consultation, highlights the main HSE aspects relevant to our Group and allows exploring the issues of interest, browsing with a few clicks.

By browsing the 4 sections of "OPEN HSE", the following can be found:

- **HSE Review**: a daily collection of press contributions that share how the A2A Group is perceived in the various territories in which it operates;
- **Legislative reports**: regulatory and pre-regulatory reports on the Environment, Health and Safety that are periodically sent to the A2A Group's top management and HSE managers;
- **Sentences and appeals**: repository of the main sentences and rulings in HSE;
- **Insights**: collection of in-depth studies, sector studies, technical opinions.

2.3 Analysis and management of risks and opportunities

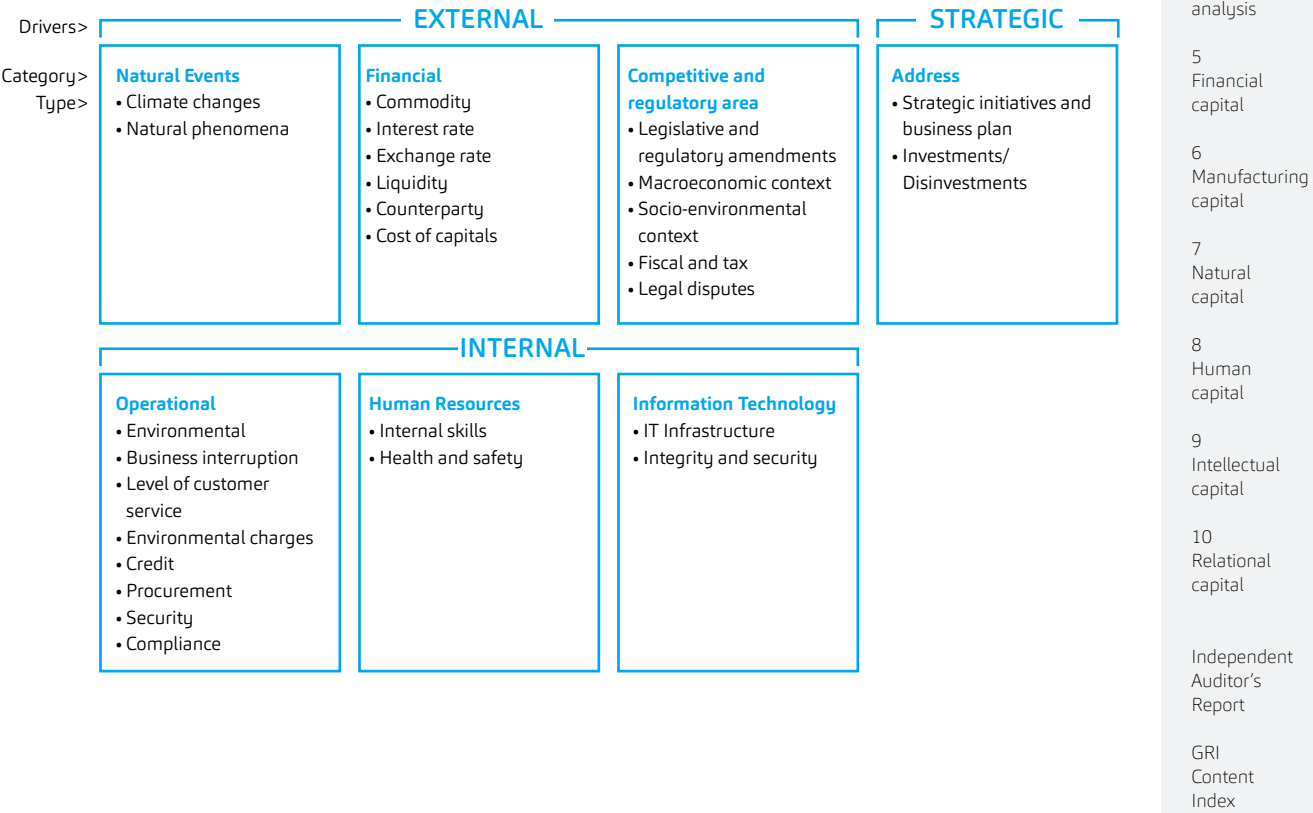
The A2A Group has set up a Risk Management function and implemented a risk measurement and detection process on the basis of the **Enterprise Risk Management (ERM) method**, developed in order to make business risk management an integral and systematic part of the business management processes. The activities are carried out in accordance with the Guidelines for the Internal Control and Risk Management System approved by the Board of Directors and adopted by Group companies.

**Every 6 months**, through the involvement of all corporate structures, the **risk measurement process** is activated, enabling the identification of the most significant critical issues, the measures to monitor them and the mitigation plans. The risk profile of the Group and its companies, resulting from the periodic assessment, are analyzed by the respective Boards of Directors and during the business review meetings. In addition, ERM risk management is integrated with the A2A Group's Quality, Environment, Health and

Safety management systems and supports the development of certifications in accordance with ISO 9001, ISO 14001 and ISO 45001.

The process takes into account all possible risks and assesses their impact on the company, as regards both the financial and reputational aspects. To this end, the main risk factors considered relate to the company's mission and relationship with the community, the nature and diversification of its business units, its growth plan, strategic objectives, competitive, legislative and regulatory environment, macroeconomic and social-environmental scenario, issues related to climate changes, and the expectations of interested parties, characterized by increasing sensitivity towards environmental, health and safety issues, and sustainability issues more generally. The ERM process and methodology are formalized in the internal regulatory document "Enterprise Risk Management Policy".

Figura 5\_ The A2A Group risk model





The Enterprise Risk Management methodology and process implemented by the Group also includes the **identification and management of opportunities**, understood as scenarios with positive uncertainty that are linked to a risk scenario and whose expected benefit exceeds the mere elimination of potential negative impacts of the risk or constitutes a possible positive (favourable) change in a parameter, compared with what was planned. To date, the **opportunities identified** mainly embrace the types "strategic and plan initiatives", "social and environmental context", "health and safety", "cost of capital", "tax and fiscal" and "climate change"; the expected benefits are both on the reputation of the Group and economic-financial, the latter has been estimated at around 30 million euro over the Business Plan period.

## SPREADING A RISK CULTURE AND RISK-BASED THINKING

The growing challenges that characterize companies require the constant presence, within the decision-making and control system of organizations, of dedicated skills and activities that allow to be fully aware of what is the risk profile of the organization. The evolution of Risk Management, towards a model that is increasingly proactive and integrated into processes, goes hand in hand with the evolution of regulations and reference standards, as well as required by agencies when assigning ratings and assessments concerning the ability of companies to create sustainable value. This is the context of the training and awareness-raising programme launched within the A2A Group companies by Enterprise Risk Management to spread the risk culture, with the aim of providing, at the various levels of the organizational structure, the methodological tools for a "risk-based approach" to be integrated into both process control and decision-making systems. The first round of meetings involving all of the Group's Business Units ended in 2019.





Management of risks related to sustainability issues

The risk management process adopted by Enterprise Risk Management seeks to create and maintain the business value. In this context, it must be underlined that sustainability issues are integrated ab origine in the ERM process; this is proven by the fact that the risk model includes, for example, environmental risks, those relating to health and safety, climate change, human resource management and customer service levels and that the risks are assessed with reference not only to the economic-financial impact but also to the reputational impact. In addition, during each periodic assessment, there are information flows with the Corporate Social Responsibility organizational structure, as well as with the Group's Environment, Health and Safety structure, also in accordance with the aforementioned Enterprise Risk Management Policy. This comparison aims to further investigate risk/opportunity issues related to sustainability objectives and allows for a synergistic management of risk management activities and the results of stakeholder engagement activities.

All of the above has highlighted a strong correlation between material sustainability issues and risks: more than 80% of material sustainability issues are linked to one or more risks identified in ERM.



Risks and opportunities related to climate change

The A2A Group has launched a project to assess the risks and opportunities associated with climate change in accordance with the guidelines developed by the Task Force on Climate Related Financial Disclosure. The aim of the work was to identify a methodology and a process - integrated with the Enterprise Risk Management process already in place within the Group - for the identification, assessment and management of these risks and opportunities, in the short/medium and long term.

An **analysis of the materiality of the risks connected with climatic changes mapped by the TCFD guidelines** has been carried out in order to identify those applicable to the A2A Group and to define, similarly to the existing ERM process, the internal stakeholders (Risk Owner and Risk Specialist) with whom to share the issues, as well as the main assumptions for assessing the impacts. For this purpose, the A2A Group's current risk profile was also considered and it was assessed, for each risk theme covered by the TCFD guidelines, whether it was already included - in whole or in part - in one or more ERM risk scenarios.

In accordance with the aforementioned ERM Policy and the same risk definition (ISO 31000), the short/medium and long term were defined in such a way that climate risks could be identified and assessed in relation to the objectives that the Group has set itself and the reference context and therefore:

- the short/medium term coincides with the five-year horizon of the Business Plan and is based on a context analysis contained in the document Energy and Macro-economic Scenario - A2A 2020-2024;
- the long term coincides with 2030, the deadline set for achieving the CO<sub>2</sub> emission reduction target approved by the A2A parent company's BoD and is based on a context analysis contained in the document Long Term Market Outlook 2019.

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Risks

The table below shows the A2A Group's risk scenarios, linked to climate changes, classified according to the TCFD's indications, and the related management methods.

Figure 6\_The A2A Group risk scenarios

RISK SCENARIOS	TCFD CLASSIFICATION		DESCRIPTION	MANAGEMENT METHOD
Emission allowances (EUAs)	Transition	Policy and Legal	Potential change in the prices of CO <sub>2</sub> quotas different from as envisaged in the medium and long-term scenarios developed by the Group	Definition of an Energy Risk Policy that regulates the possible change in the price of this and all energy commodities
Competitiveness of thermoelectric generation	Transition	Policy and Legal	Potential criticality in safeguarding the economic sustainability of thermoelectric in a context of promoting the use of renewable energy sources	Regulatory oversight of developments in the sector; diversification of generation assets and definition of a plan for the development of production from renewable sources
Competition on water use	Transition	Policy and Legal	Potential impacts on the hydroelectric sector due to increased demand for water releases (dmv, irrigation, drinking water, etc.)	Constant dialogue with all stakeholders, in order to reach shared agreements; technical supervision for the optimization of water
Hydraulicity	Physical	Chronic	Potential unfavourable changes in water availability for some of the Group's main hydroelectric auctions due to changes in precipitation patterns	Development of analysis and engineering models to support the planning of hydroelectric plants, both short and medium term
Scarcity of water for drinking water use	Physical	Chronic	Potential reputational impacts in the event of droughts that make it impossible to supply drinking water for prolonged periods of time	Mapping of leaks from aqueducts in order to define intervention priorities. Studies to interconnect aqueducts in order to create a "collaboration" between sources and distribution networks. Mapping of the municipalities most at risk in Water Stressed Area
Thermal energy demand for heating	Physical	Chronic	Potential reduction in thermal energy sales due to higher than expected winter temperatures	Business units dedicated to constantly updating demand forecasts in relation to temperature trends Adoption of climate risk hedging instruments (weather derivative) for district heating
Efficiency of electricity distribution networks	Physical	Acute	Potential reputational impacts due to interruptions in the electricity distribution service at times of peak demand or due to the possible inadequacy of the network to cope with the electrification of new activities	A ten-year plan of measures to upgrade and rationalize electricity distribution networks is underway
Extreme weather phenomena	Physical	Acute	Potential direct or indirect damage to the Group's assets due to the need to interrupt production activities following extreme weather phenomena (e.g. floods, landslides, etc.)	Definition of procedures and emergency plans Stipulation of insurance contracts with extended coverage also for damage caused by natural phenomena

Opportunities

The TCFD guidelines define climate change opportunities as activities that a company undertakes to combat and/or adapt to climate change. This includes the Group's investments, which can be made in accordance with international standards . These opportunities are part of the management of the A2A Group's Green Financial Framework, which consists of the activities implemented to support its funding strategy through the issue of Green Bonds and/or the use of KPI linked bonds.

Next steps

It is planned to periodically update the identification and assessment of risks, in line with the evolution of the reference context (e.g. EU Green Deal, Integrated National Energy and Climate Plan, documents drawn up by the Technical Expert Group on sustainable finance - TEG - of the European Union).



WEATHER DERIVATIVES FOR THE MITIGATION OF CLIMATE CHANGE RISKS

The district heating service is strongly impacted by recent climate changes, as the volumes of heat sold and, consequently, margins are affected by the rise in average temperatures, which in recent years have been affected by a growth trend and a sharp increase in volatility compared to historical average values.

In order to **mitigate the risks deriving from climate change risk** and stabilize the margin with respect to the expected values, a specific project was developed based on **hedging the risk through integrated portfolio management**, by means of compensation deriving from synergies between the assets managed and the use of specific derivative financial instruments called "*weather derivatives*" (financial contracts with underlying indexes based on climate parameters).

The initial phase of the activity involved the recovery of historical data relating to the number of customers served, the volumes of heat sold for each location and the daily temperatures. On the basis of the temperatures, the values of the corresponding "day degrees" were calculated, equal to the difference, if positive, between the conventional room temperature and the average outside temperature. Then, an analysis was carried out to identify the **correlation function between volumes sold and day degrees**, for each geographical area. Subsequently, through an **analysis of the profitability associated with sales**, it was possible to **quantify the economic value associated with the change of a single day degree** and therefore, the magnitude of the **risk associated with the impact of climate change**.

Climate risk has therefore been mitigated by means of an intercompany natural gas supply contract, centralized in the parent company A2A S.p.A., which is responsible for the procurement and management of the commodity portfolio, the price of which has also been indexed to day degrees, incorporating the analysis described above.

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In addition, an analysis was conducted of the associated risks and opportunities and safeguards in place for material issues, and the details are illustrated in the tables presented at the beginning of each chapter, apart from those linked to governance matters, which are given in the tables below.

ETHICAL CONDUCT OF BUSINESS

*Ethical conduct in the management of business (adoption of non-competitive behaviour, anti-corruption policies, compliance with laws and regulations, adhesion to the main national and international social and environmental agreements); promotion of specific mechanisms and procedures for reporting irregularities and unlawful conduct, also related to anti-corruption.*

RISK FACTORS FOR SUSTAINABILITY	OPPORTUNITY FACTORS FOR SUSTAINABILITY	MANAGEMENT APPROACH (MA)
Compliance issues, the non-fulfillment of which may result in reputational impacts or sanctions	NOT YET IDENTIFIED	Adoption of a new Code of Ethics, valid for all Group companies
Incompleteness of accounting and non-financial disclosures		Risk monitoring policy through Organizational models pursuant to Legislative Decree 231/01
Any non-compliance with regulations and/or authorizations that may result in reputational impacts or monetary sanctions or disqualifications		Adoption of the Reporting procedure for the preparation of the NFD Monitoring of the main KPI subject to regulatory compliance

ESG ELEMENTS IN CORPORATE GOVERNANCE

*Introduction and development of sustainability elements in corporate governance. Integration of sustainability objectives in incentive systems (correlation between Management remuneration - MbO; and Sustainability KPIs).*

RISK FACTORS FOR SUSTAINABILITY	OPPORTUNITY FACTORS FOR SUSTAINABILITY	MANAGEMENT APPROACH (MA)
Insufficient integration of ESG issues into corporate governance	NOT YET IDENTIFIED	Programmes to increase the awareness of the BoD with regard to sustainability issues
Insufficient analysis of environmental and social impacts in the management of new acquisitions		Adoption of a Board Committee dedicated to Sustainability Progressive integration of ESG issues into due diligence processes

RISK MANAGEMENT AND SUSTAINABILITY OPPORTUNITIES

*Adoption of a Group approach that integrates, within the company strategy, the analysis and management of risks and opportunities in relation to sustainability issues (environmental and social).*

RISK FACTORS FOR SUSTAINABILITY	OPPORTUNITY FACTORS FOR SUSTAINABILITY	MANAGEMENT APPROACH (MA)
Possible failure to identify significant risks related to sustainability issues	Group ERM methodology also aimed at identifying and managing uncertainty scenarios related to ESG issues	Integration of sustainability issues into the Group's Risk Management activities Constant updating processes between the Group's ERM, CSR and HSE functions

RESPECT FOR HUMAN RIGHTS IN THE GROUP VALUE CHAIN

Promotion and respect of human rights throughout the value chain (suppliers, employees, customers). Promotion of access to electricity, gas and water services by disadvantage categories of consumers.

RISK FACTORS FOR SUSTAINABILITY	OPPORTUNITY FACTORS FOR SUSTAINABILITY	MANAGEMENT APPROACH (MA)
Issues of ethical conduct of suppliers or sub-suppliers	NOT YET IDENTIFIED	Responsible management of the supply chain
Failure to respect human rights by employees, suppliers, customers and partners		Compliance with rules governing human rights by Group employees, by adopting the Code of Ethics
		Creation of a non-profit organization to combat poverty and social vulnerability

COVID-19 EMERGENCY

With reference to the spread of the Coronavirus (Covid-19) in Italy in early 2020, it should be noted that this document was prepared before the health emergency that emerged.

It should be noted that since 2018, the A2A Group has had a crisis plan that identifies the organizational system, the activities and procedures necessary to deal with the events that led to the declaration of crisis, with the aim of protecting human resources, containing material and immaterial damage and guaranteeing the continuity of the service offered.

A2A immediately adopted crisis management measures and identified appropriate prospective mitigation measures linked to the risk of the emergency extending over time, in full application of the requirements of the above procedures, with the **establishment and management of special crisis and continuity committees**.

The main monitoring and mitigation actions identified are described below:

- definition of the **minimum functional services** to be monitored by the plant managers and the **list of managers necessary to manage the plants and related back-up**, also with reference to contractors;
- preparation of a plan of **equipment and PPE requirements** for use in disposable mode;
- definition of **models to allow the transfer of personnel** necessary to guarantee the minimum level of service;
- **increase in the periodicity of sanitation** of common areas (weighbridges, porters, refectories) and workstations;
- adoption of **organizational and technological solutions** to ensure that certain **critical processes can be carried out remotely** (e.g. smart working) and, in the process of being defined, methods for the execution of emergency intervention;
- definition of the modalities of exchange between the central staff.

With reference to the possible economic and sustainability effects of the issue, it is believed that the Group is prepared to manage any emerging short-term risks, having identified the immediate measures to contain the possible effects in 2020.

The great uncertainty of the global macroeconomic context will certainly require further analysis in the implementation of the next Sustainability Plan 21-25 and a more in-depth analysis of the issue also in next year's NFD.

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## Sustainability strategy

### 3.1 Background information

Main national and international networks and associations on sustainable development issues of which A2A is a member



Since 2013, A2A has been a member of the United Nations Global Compact, subscribing to the 10 founding principles relating to human rights, working conditions, the environment and the fight against corruption. As part of the network, every year A2A publishes its own Communication on Progress (CoP), which coincides with this document. In 2019, A2A once again took part in the working parties launched by the Italian Global Compact network and the Italian Business & SDGs Annual Forum



The A2A Group has joined the international network "Circular Economy 100" (CE100) of the Ellen MacArthur Foundation. The CE100 network brings together businesses, institutions, governments, city administrations, universities and emerging innovators in a circuit dedicated to the sharing of knowledge and experience in the field of the circular economy, as well as encouraging possible collaborations and partnerships



Since 2017, A2A has adhered to *We Mean Business*, a global non-profit association that fights climate change. As part of this association, A2A is committed on two fronts: responsible environmental policies and improved access to and quality of water



The Climate and Clean Air Coalition (CCAC) aims to construct, share and foster the implementation of policies and practices aimed at reducing climatic pollutants over the next ten years. More specifically, the coalition supports action in the field through 11 initiatives. Since 2017, A2A has been one of the players involved in the initiatives aiming to mitigate climatic pollutants in the municipal solid waste sector



Since January 2018, A2A has been a member of the *CSR Manager Network*, the national association that brings together professionals in all types of organizations who are dedicated to the management of social, environmental and sustainability issues related to business activities



A2A is an active member of the CSR and Sustainability Working Party of Utilitalia. Within this group, A2A participated in the preparation of the Sustainability Report of the Utilities Sector



In 2016, the A2A Group AEM Foundation adhered to the Italian Alliance for Sustainable Development and has since played an active part in its activities and working parties



A2A, in partnership with Valore D, promotes change towards gender balance through the development of a new corporate culture on Gender balance issues



A2A is since this year among the European companies that have signed the *Corporate Forum for Sustainable Finance*, a document supporting the implementation of sustainable financial instruments through a network of companies promoting a low-carbon society



Agenda 2030 has now become a solid reference point for all subjects (institutions, businesses, civil society organizations, financial intermediaries and local communities) that believe in collective action to achieve a fair, peaceful and prosperous society that also protects the planet and its resources.

On a global level, the transformation started in 2000, driven by the Millennium Development Goals, is tangible: over twenty years, extreme poverty and child mortality have halved, access to electricity in the least developed countries has doubled, the economy has returned to the pre-crisis levels of 2008, generating employment again. On the other hand, the actions taken to achieve Goals 13 (Climate Change), 14 (Life under water) and 15 (Life on Earth) are clearly insufficient. It is precisely the effects of climate change that also pose a serious threat to economic and social well-being. Between 1998 and 2017, economic losses from natural disasters, largely related to climate change, reached \$3 trillion. The impact of said phenomena, together with the growing conflicts, has increased malnutrition in the last three years, which still affects 1 in 9 people in the world.

In September 2019, the SDG Summit in New York called together, four years after the adoption of Agenda 2030, the Heads of State and Government, meeting for the first time before the United Nations Assembly, for a joint reflection on the progress made. The event ended with the commitment of the States to promote an acceleration of the efforts, a "decade of action", in order to achieve the first goals foreseen by the Agenda for 2020, and then to aim decisively at those of 2030. Thanks in part to the impetus of the "Fridays for Future" movement which, with its global climate strikes, has mobilized the interest of millions of young people, the media and governments, **the centrality of the issue of climate change**, a challenge that we cannot afford to lose, without jeopardizing our very survival and affecting the effort towards the other goals of the Agenda, was widely shared, even at the SDG Summit.

In 2018, global carbon dioxide emissions reached their highest ever level. Greenhouse gases continue to rise well beyond the limits of the 2015 Paris Agreement. According to experts from the *Intergovernmental Panel on Climate Change (IPCC)*, the opportunity to limit global warming to 1.5°C by the end of the century compared to

pre-industrial levels will be rapidly fading if there is no immediate reversal. Net CO<sub>2</sub> emissions from human activities should decrease to decrease by around 45% by 2030, compared to 2010, and then to zero around 2050.

Fortunately, the perception of climate change as a source of financial risk has also generated a new commitment from central banks, financial institutions and investors to select projects that reduce greenhouse gas emissions. According to the *Global Sustainable Investment Review (GSIA)*, over the period 2016-2018, sustainable investment (SRI) reached more than \$30 trillion, up 34% from 2016, with Europe leading in terms of value of assets under management (46% of the global SRI market total).

### SDGs in Italy

According to the ASVIS Report, "Italy and the Sustainable Development Goals 2019", in our country, between 2016 and 2017, there have been improvements in 9 areas: health, gender equality, economic and employment conditions, innovation, inequalities, city conditions, sustainable models of production and consumption, quality of governance and peace, justice and solid institutions and finally, international cooperation; in 2 areas, education and fight against climate change, the situation has remained substantially unchanged. At the same time, however, there has been a deterioration in the remaining 6 areas: poverty, sustainable food and agriculture, water and health-sanitary structures, energy system, state of the seas and terrestrial ecosystems. With regard to Italian companies, considering in particular those that draw up a Non-financial Disclosure, the actual commitment is still unclear in terms of contribution to the objectives of 2030 Agenda: in 2019, in fact, only 17% declared to have a strategy linked to SDGs (Study "Seize the change" by Ernest&Young).

SOURCES:  
- United Nations Global Compact Progress Report 2019  
- Report of the Secretary - General on SDG Progress 2019  
- Italy and Sustainable Development Goals Asvis Report 2019  
- Progress of SGDs - Report 2019  
- Emission Gap Report 2019 UN

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## The European Green Deal

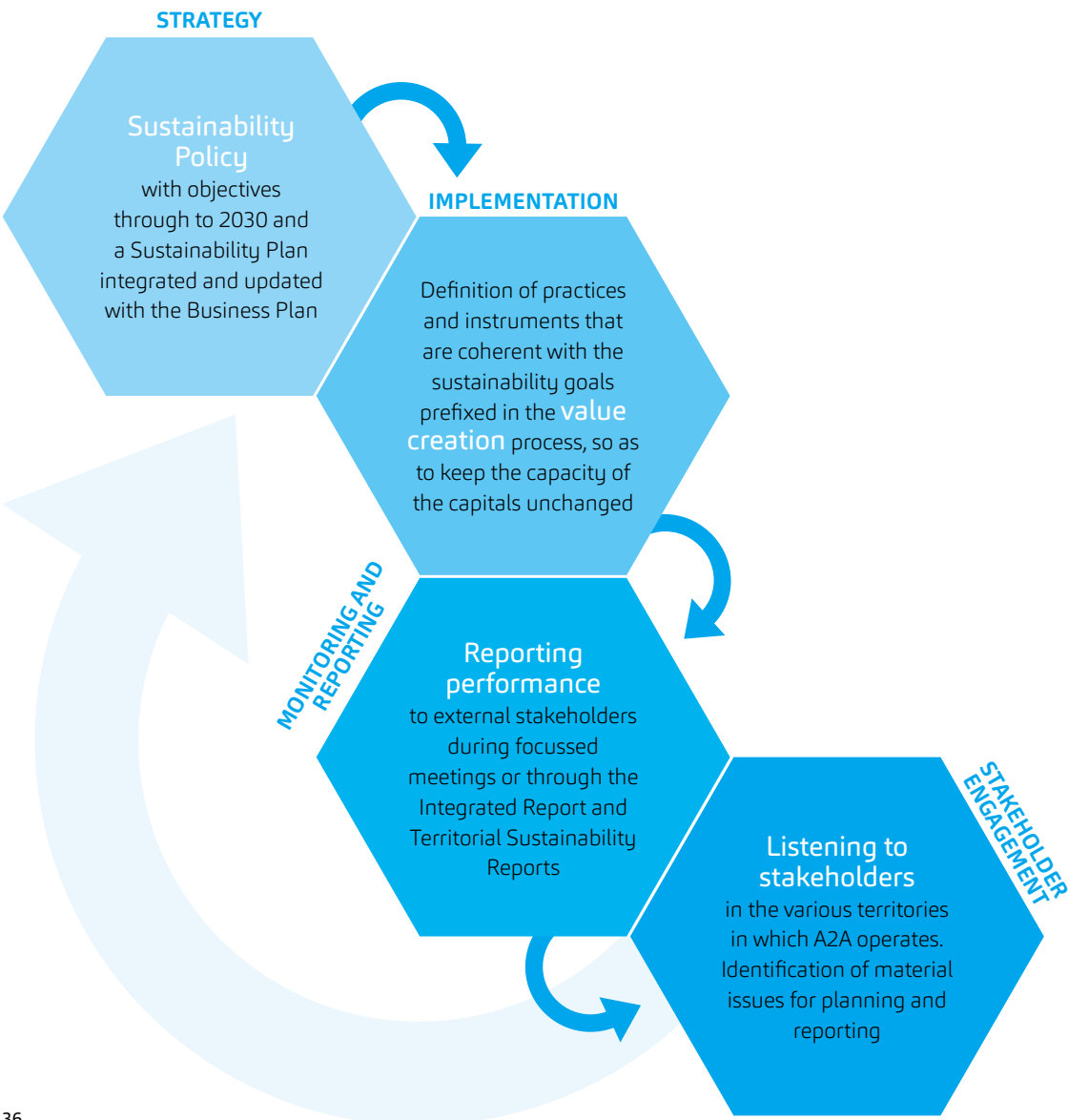
Finally, we must remember that 2019 ended with the announcement by the new President of the EU Commission, Ursula von der Leyen, of the Green Deal, a strategy to be translated into rules, instruments and actions to be implemented in the coming years, which express the clear intention of the EU to propose itself as the world leader in the green economy, committing itself to zero climate impact on the continent by 2050 and to create new jobs. This will mean decarbonizing the energy sector, renovating buildings, supporting industries that adopt circular production models, promoting sustainable mobility. The EU plan aims to mobilize investment of at least 1,000 billion euro over the next ten years, drawing on European and national structural funds, but also public and private investment, with an important role entrusted to the EIB (European Investment Bank) and the EU's commitment to help investors, through the definition of an appropriate "Taxonomy", to identify

sustainable projects using meaningful criteria. Within this framework, the *Just Transition Fund*, a 100 billion euro fund designed to "leave no one behind" in this transformation, is also envisaged, protecting regions that could have significant impacts from decarbonization, especially in terms of job losses.

## The A2A approach to sustainability

Since its inception, A2A has made sustainability one of its founding values and a business paradigm. For A2A, being sustainable means generating and distributing value in a lasting and autonomous way, being careful to reconcile the needs of those with whom it interacts every day, such as: customers, suppliers, associations and institutions. In light of these elements, A2A's approach to sustainability is both holistic and circular.

Figure 7 Approach to Sustainability



### 3.2 The Sustainability Policy and Plan

A four-year period has now passed since A2A decided to make a formal and public commitment to contribute to the achievement of the SDGs through two documents: a strategic document, the Sustainability Policy for 2030, and a more

operational one, the Sustainability Plan, which takes the five-year period as a reference, identifying actions and quantitative targets, which are monitored and updated annually, in an integrated manner with the Business Plan.

#### The Sustainability Policy

With the Sustainability Policy for 2030, A2A has set itself the aim of helping the communities in which it operates to be more sustainable, through the responsible management of its activities. The Policy, which stems from a participatory process within the company and approved by the Board of Directors in 2016, is based on an analysis of the 17 Sustainable Development Goals of 2030 Agenda, their relevance and impact on the Group's value chain. In particular, eleven SDGs were then selected on the basis of which A2A defined its priorities and commitments for 2030, also considering the evidence emerging from the materiality matrix, the forumAscolto, the Business Plan, the requests of the rating agencies and the benchmark with competitors. The commitments and actions resulting from this analysis can be traced back to four pillars (Circular Economy, Decarbonization, Smart Solution, People Innovation), which are essential challenges for A2A's business.

Figure 8\_Group Sustainability Pillars



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## CIRCULAR ECONOMY

Historically, and well before we began to talk extensively about circular economy, A2A had already adopted a business model oriented to the maximum recovery of resources in its activities: from the recovery of material and energy from waste to the recirculation of water for self-consumption of thermoelectric power plants and the recovery of energy from sludge downstream of purification processes, just to name a few examples. For A2A and its activities, in fact, circular economy means managing all resources in a sustainable manner, not just waste, paying attention as much to the reuse of resources as to the reduction in the production of waste up to the maximum exploitation and protection of each resource, starting from water.

## DECARBONISATION

The issue of the circular economy is in many ways linked to the issue of decarbonization, for example, if we consider the objective of zeroing landfilling, from which enormous quantities of greenhouse gases originate. Moreover, aware of our role and our impact on the issue of emissions, we have always been committed to putting into practice the guidelines of international agreements on climate and the National Energy Strategy: we focus on and invest in renewable sources and innovation to reduce emissions and the use of fossil fuels. We develop our electricity, gas and district heating networks to be efficient, resilient and open structures, favouring the contribution of electricity generation distributed, the recovery of waste heat from industrial processes and the use of biomethane.

## SMART SOLUTION

In order to support the development of cities as places to live and work well, respecting the territory and natural resources, A2A offers customers, institutions and communities "intelligent" services that optimize the use of resources thanks to new smart and digital technologies. Sustainable mobility, energy efficiency, sensors, advanced analytics, artificial intelligence, home automation are some of the key words that will shape the future. Innovation, developed in partnership with Universities, Research Centres and Start-ups, becomes crucial to continuously develop new services that are useful and functional to improve quality of life.

## PEOPLE INNOVATION

The attention to people, inside and outside A2A, is the leitmotif of the People Innovation pillar. In fact, we are committed to providing our employees with high standards of health and safety, training, benefits and welfare programs. In the same way, we are committed to the territories in which we operate, guaranteeing maximum transparency on our activities and performance, undertaking a great many stakeholder engagement initiatives, and implementing awareness-raising and training activities in schools.

## The 2020-2024 Sustainability Plan

The Sustainability Plan has been developed in conjunction with the Policy and is a tool that allows continuous monitoring and verification of the progress of the identified sustainability objectives, in line with the priorities and time frames of the Business Plan. The objectives are divided into the 4 pillars of the Sustainability Policy and contain specific actions and indicators, defined in agreement with all the Business Units of the Group.

In line with the continuous review of the Business Plan, a process of updating the objectives, with a time horizon of 2020-2024, was also launched for the Sustainability Plan, which led to the elimination of the objectives achieved and the updating to 2024 of those confirmed and the new ones.

The updating of the Plans was characterized by a **increasing integration** between the CSR, Planning and Control and Strategy structures, with **inter-functional** comparison that had as its ultimate objective a **unique**

**Group representation of the strategy for the creation of value over time**, previously analyzed from different points of view. The process led to the identification of the **share of ESG investments** within the 2020-2024 Business Plan, which covers **more than 75% of the cumulative value** (see also pages 63, 65).

The Supplement to this document includes the table showing all 78 KPIs of the 2020-2024 Sustainability Plan.

Below is a summary of the main KPIs included in the Group's Sustainability Plan.



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CIRCULAR ECONOMY




SDGs	ACTION	PARAMETERS MONITORED	
	<b>RECOVERY AND TREATMENT</b> Improve the recovery process of waste collected (including through their transformation into energy) and promote separate waste collection to help reduce the environmental impact of cities	Separate waste collection in the municipalities served (excluding Milan)	
		Separate waste collection in the Municipality of Milan	
		Waste treated (municipal + special) aimed at recovering material at the Group's plants	
		Municipal waste collected sent to landfill	
		Biomethane produced by FORSU plants (Organic Fraction of Urban Solid Waste)	
	<b>WATER</b> Implement actions aimed at reducing water consumption in the collection and distribution processes, so as to improve water quality and reduce water dispersion	Linear water losses	
		Inhabitants without access to the purification service	

	UNIT OF MEASUREMENT	SITUATION AT 12.31.2019		2024 OBJECTIVE
	% of total municipal waste collected	2019	74.1%	76%
		2018	74.3%	
	% of total municipal waste collected	2019	61.5%	65%
		2018	59.7%	
	thousands of tonnes	2019	980	1,500
		2018	926	
	% of total municipal waste collected		0.3%	0% NEW OBJECTIVE
			0.1%	
	millions of m³	2019	0	20 NEW OBJECTIVE
	m³ / Km / dd		27.8	21
			26.0	
		2019		
		2018		
	% of total Inhabitants Equivalent in the Municipalities served		21.7%	7%
			18%	
		2019		
		2018		

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DECARBONISATION

SDGs	ACTION	PARAMETERS MONITORED	
	<b>RENEWABLES</b> Increase (keep high) the proportion of energy produced from renewable sources	Installed photovoltaic capacity	
	<b>EMISSIONS</b> Develop actions aiming to reduce the environmental footprint, like direct and indirect emissions of greenhouse gases	Total avoided methane emissions from gas network leaks - cumulative	
		Specific CO <sub>2</sub> emission factor from electricity generation	
	<b>DISTRICT HEATING</b> Help reduce the environmental impact of the cities, paying close attention to air quality, implementing district heating and district cooling	CO <sub>2</sub> emissions avoided thanks to district heating	
	<b>ENERGY TRANSITION</b> Develop initiatives to ensure the stability and security of the energy system in the transition to climate neutrality	Projects enabling the energy transition process (storage, flexibility and CCGT repowering and synchronous compensators)	
	<b>SMART GRID</b> Improve information access infrastructures (smart grid) and the resilience of networks	Outages per LV user in high concentration environment (700A) due to long outages without notice	









	UNIT OF MEASUREMENT	SITUATION AT 12.31.2019	2024 OBJECTIVE
	MW	<div><div>2019 99</div><div>2018 94</div></div>	<div>500</div>
	tCO <sub>2eq</sub>	<div><div>2019 29,119</div><div>2018 24,078</div></div>	<div>94,000</div>
	gCO <sub>2</sub> /kWh	<div><div>335 2019</div><div>374 2018</div></div>	<div>314</div> <div>UPDATED</div>
	thousands of tonnes / year	<div><div>2019 214</div><div>2018 211</div></div>	<div>321</div>
	no. of projects	<div>2019 1</div>	<div>5</div> <div>NEW OBJECTIVE</div>
	annual average no.	<div><div>1.61 2019</div><div>1.43 2018</div></div>	<div>1.05</div>

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SMART SOLUTION

SDGs	ACTION	PARAMETERS MONITORED	
	<b>DIGITAL</b> Develop innovative channels and services (web, mobile, gamification) to increase customer loyalty	Customers registered with the online counter	
 	<b>GREEN MARKETING</b> Implement campaigns to communicate and raise customer awareness of eco-sustainable products and services	Green energy sold to the mass market segment	
 	<b>EFFICIENCY IN END USE</b> Develop energy efficiency measures for public and private real estate assets	CO <sub>2</sub> avoided thanks to industrial ESCo activity - cumulative	
 	<b>SMART CITY</b> Support the development of the smart city in the territory in which the Group operates, including through new business models that exploit the technological component (Smart Grids and big data)	LED public lighting points (total number of LED light points provided for in the agreements signed with the municipalities)	
		Charging points managed for electric vehicles (considered as columns, digital islands and car sharing)	
		Municipalities with Smart City services activated - cumulative	

	UNIT OF MEASUREMENT	SITUATION AT 12.31.2019		2024 OBJECTIVE
	no.	2019	425,985	700,000
		2018	391,626	
	GWh	2019	1,213	2,100
		2018	1,065	
	thousands of tonnes	2019	2,302	5,700
		2018	1,844	
	no.	2019	275,950	417,000
		2018	232,368	
				UPDATED
	no.	2019	198	1,500
		2018	168	
				UPDATED
	no.	2019	24	50
		2018	2	

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




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PEOPLE INNOVATION

SDGs	ACTION	PARAMETERS MONITORED	
	<b>MbO</b> Add sustainability objectives to the MbO sheets (correlation between Management remuneration and Sustainability KPIs)	Sustainability MbO weight	
 	<b>WELFARE, DIVERSITY AND EQUAL OPPORTUNITIES</b> Develop innovative welfare policies, also in connection with the promotion of gender equality, and optimise competences through a generational bridge that allows for the transfer of knowledge and experience between the junior and senior populations	Employees involved in Smart Working	
		Women in positions of responsibility	
	<b>RESPONSIBLE PROCUREMENT</b> Develop initiatives aiming to spread the culture of health and safety at work amongst contractors and other suppliers. Develop Green Procurement policies	Incidence of sustainability criteria in the vendor rating process	
 	<b>EDUCATION</b> Consolidate and, where possible, improve the environmental education and promote the awareness of risks associated with climate change in the public opinion	Stakeholder involved in Environmental Education initiatives and plant visits	
	<b>HEALTH AND SAFETY</b> Consolidate the training and prevention plan to reduce injuries and develop new initiatives for worker health and safety	Weighted injury index	

	UNIT OF MEASUREMENT	SITUATION AT 12.31.2019	2024 OBJECTIVE
	% of total	<div><div>20197%</div><div>20186%</div></div>	<div>10%</div>
	% of total white collar	<div><div>201918%</div><div>201818%</div></div>	<div>25%</div>
	% of total responsible employees	<div><div>201921%</div><div>201820%</div></div>	<div>25%</div> <div>UPDATED</div>
	% indicators of total	<div><div>20192%</div><div>20182%</div></div>	<div>12%</div>
	no. per year	<div><div>201970,755</div><div>201863,300</div></div>	<div>80,000</div> <div>NEW OBJECTIVE</div>
	frequency index x severity index	<div><div>15.32019</div><div>20.72018</div></div>	<div>14.0</div>

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## Stakeholder engagement and materiality analysis



A relationship based on listening, continuous dialogue and the active involvement of stakeholders is not only a form of responsibility of the Group towards the context in which it operates, but also a source of valuable information, insights and ideas to understand the needs of the territories and respond effectively, promoting local development and anticipating any critical issues. A2A's deep roots in the territory have allowed it to build and maintain constructive, solid and long-lasting relations with the company's various interlocutors, who have different visions, interests and opinions, but who are all extremely important in order to fully understand the needs of the communities in which A2A operates.

The stakeholder listening process, implemented with more or less structured initiatives and channels, stems in fact with the objective to generate shared and lasting value and results in a conciliation of the Group's interests with those of its interlocutors.

In order to keep track of its involvement activities, as well as to respond to the needs of the territories in the most effective and synergistic way between the

various Group companies, in 2013, A2A introduced a reporting system for stakeholder engagement activities, based on the input, by the main corporate functions, of a database that maps - every six months - the relevant stakeholders, the involvement activities implemented, the issues addressed, as well as the needs that emerged.

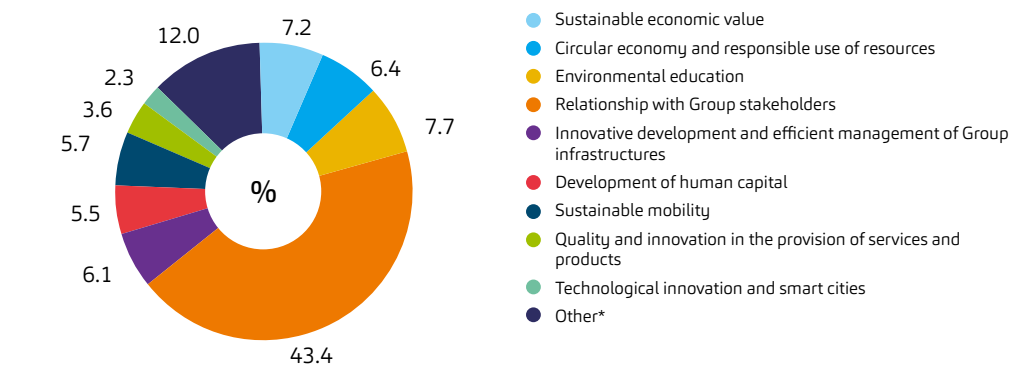
During 2019, **more than 750 initiatives involving stakeholders** were carried out, a number that was up sharply compared to 2018. The groups of stakeholders most involved were national and local institutions, local communities, citizens and employees. Stakeholders were mainly involved through meetings, conventions, press conferences and events. In 2019, as in previous years, a large part of the initiatives, more than 150, involved more than one category of stakeholders, confirming the central role that A2A plays as a catalyst in encouraging the listening and sharing of ideas, experiences and points of view, and in circulating best practices in order to improve, with the contribution of all, the services offered to the communities and the quality of life in the areas where the Group is present.

Figure 9\_Engagement in A2A: the main stakeholders involved



As a result of the various listening activities carried out by the Group, the issues that emerged are grouped into macro-categories that summarize the main aspect dealt with in each initiative. For more details on the initiatives implemented, see pages 10-18 of the Supplement to this document.

Figure 10\_Main issues considered in stakeholder engagement activities



\* Other includes: Diversity and corporate welfare, Responsibility and Safety in the provision of services and products, Ethical business conduct, Occupational health and safety, Combating climate change, Efficient use of water, Sustainability risks and opportunities, Responsible supply chain management, Distributed water quality, Biodiversity protection, Sustainability in Governance



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## THE REPUTATION OF A2A IN BRESCIA

In 2019, the Group carried out, in collaboration with IPSOS, a survey on the reputation of A2A in Brescia, aimed at gaining a better understanding not only of the perception of the people of Brescia of the services provided by the company, but also, more generally, of the climate in the city and trust in the main players in the area. The survey involved, in September, through telephone interviews, 800 citizens of legal age resident in the municipality, a sample (by age, gender and qualification) weighted according to the demographic and social reality of Brescia.

The results of the investigation were very positive. In fact, the level of satisfaction with the quality of life is increasing compared to the past (87% compared to 78% in 2014) and the percentage of those who have improved in recent years is also increasing (31% compared to 15% in 2014).

The **Group is perceived by 78% of the sample as being close to the needs of the city** and the majority of those interviewed think that in recent years, A2A has invested in the city of Brescia more than in the past, also making a considerable contribution in terms of innovation.

The services offered by A2A in the area are assessed positively by 94% of those interviewed;

among the most positive aspects are: the change in the method of waste collection introduced in 2016, which has led to a considerable increase in the percentage of separate waste collection to 73%; the improvement in the quality of the water distributed, indicating that the significant investments made by A2A to reduce the levels of hexavalent chromium have proved effective; the waste-to-energy plant, which is considered an efficient, state-of-the-art and safe system by almost 9 out of 10 interviewees.

The survey also revealed the aspects that cause the most concern among the citizens of Brescia, namely air quality and underground pollution. Among the services offered by the Group, it will certainly be necessary to invest in more effective communication of digital services and the city charging network for electric vehicles: in fact, almost 40% of people in Brescia do not know it, although from a quality point of view it is a service positively evaluated by 44% of them.

Finally, also from the point of view of its contribution to local development, A2A boasts a good reputation. The survey revealed that almost two out of three people from Brescia would recommend it to a friend's child as a good company to work for.

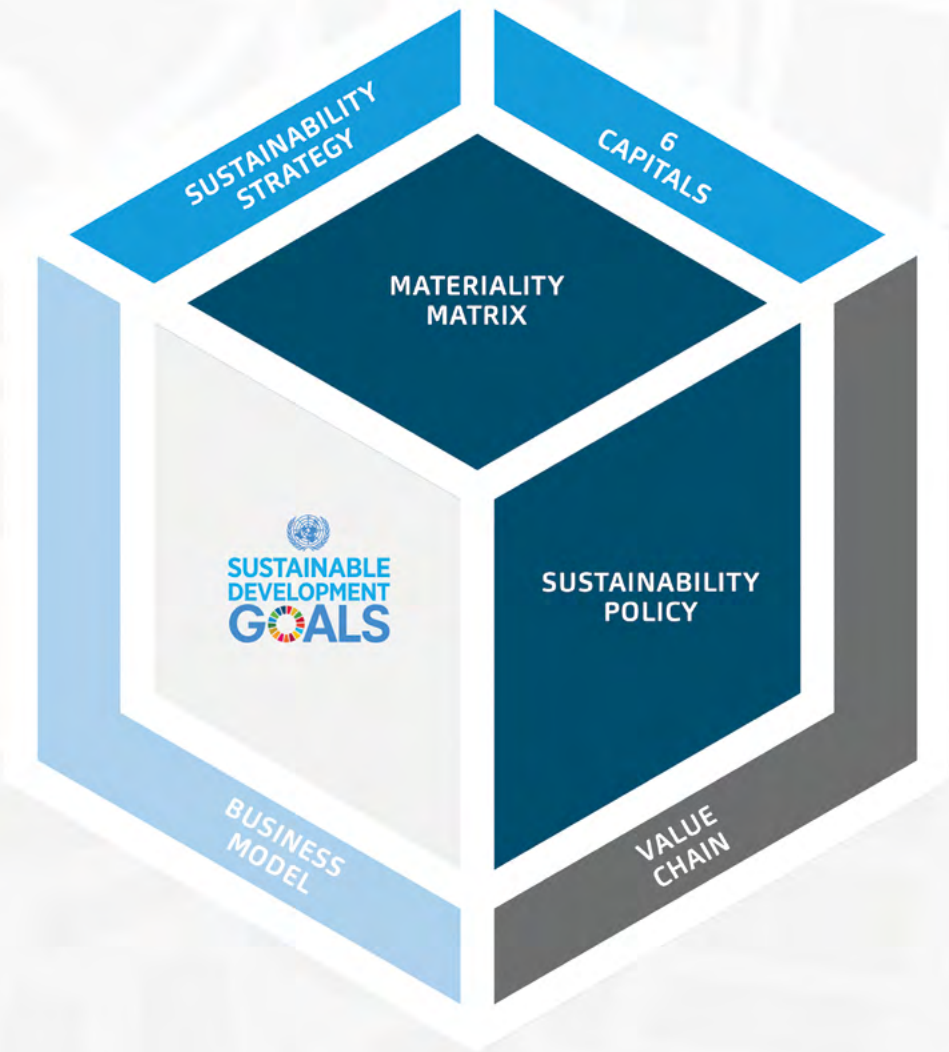
## THE NEW SECTION OF THE CORPORATE WEBSITE DEDICATED TO SUSTAINABILITY

In May 2019, a new section of the corporate website dedicated to sustainability went online, which includes the salient aspects: Integrated Report, Sustainability Plan and Policy, Sustainable Finance, Territorial projects and forumAscolto programme.

The section has been designed to maximize its usability and to give a transversal reading of the actions we carry out in the area of sustainability, but which intersect with the various activities of the Group.

In particular, a whole new look has been given to the Integrated Report, which can be outlined in different aspects:

- through the 4 pillars of our Sustainability Policy (Circular Economy, Decarbonization, Smart Solution, People Innovation);
- starting from the 11 SDGs - Sustainable Development Goals of the UN Agenda 2030), by which our Sustainability Policy is inspired;
- through material issues, i.e. the most relevant issues for stakeholders and the Company.



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## 4.1 The forumAscolto programme

For the A2A Group, it is important to provide services with the highest quality and efficiency and to meet people's expectations. For this reason, in 2015 there was the definition of a structured model of listening and dialogue with stakeholders (customers, suppliers, consumer and environmental associations, etc.) of the territories in which it operates: forumAscolto. This initiative was created with the aim of better understanding the needs and specificities of individual territories, opening the debate on the most important issues and promoting the development of ideas and projects capable of creating shared value for local communities. To date, 6 forumAscolto have been created (Brescia, Milan, Bergamo, Valtellina-Valchiavenna, Friuli Venezia Giulia, Piedmont), resulting in 18 ideas and projects that the Group has implemented in recent years.

The last two stages of the forumAscolto, in Friuli Venezia Giulia in 2017 and in Piedmont in 2018, have involved a call to action with the aim of promoting business projects in line with the needs of local communities.

In 2019, the projects related to the call **"creiAMO FVG"**, for initiatives aimed at giving a new impetus to the Region's "sustainable" tourism sector, were:

- for the province of Udine, the project "Albergo diffuso Sauris", which provided for the organization of experiential activities to be carried out in the lake basin of Sauris, through the use of canoes, kayaks and electric boats, combined with other cultural experiences and the discovery of local food products; on June 30, 2019, with an event open to the public, the activities on Lake Sauris were started and continued throughout the summer;
- for the province of Gorizia, the project "ISONZO: il fiume ed i suoi borghi – una storia su 2 ruote" (the river and its villages – a story on two wheels) which promoted tourism along the Isonzo basin through the use of bicycles, developing tourist packages with more days and making use of collaborations with local tour operators and with other local companies; the initiative was started and promoted during the North East Bike Festival of Monfalcone in May 2019.

In addition, in July, the winning projects were selected and awarded of the call **"creiAMO PIEMONTE"**, which were created based on the needs expressed by the stakeholders present at the forumAscolto Piedmont, that had identified as priorities for their territory the development of alternative energy sources and raising awareness, particularly aimed at young people, on sustainability issues. The two winning projects that will be guaranteed, in addition to financial support, a light incubation path for the development of their project idea, are:

- **"Mercato Circolare"** (Circular Market): the idea is to use different channels to raise awareness of the circular economy. For the younger ones, it is planned to revisit a well-known story according to the principles of the circular economy; for the older ones, the promotion of the use of the app Circular Market and the activation of serious games in high school. At the same time, there will also be a theatrical performance on the theme, aimed at citizens of all ages;
- **"Accademia Dello Spettacolo"**: the initiative provides for the realization of a musical (Bremen Musicians) on the subject of energy and environmental sustainability. The musical will be conveyed in the main schools, also providing teachers with script and musical bases to realize the work autonomously, in their own institutes and with their students.

Also in 2019, in order to redesign the forumAscolto tool to make it more responsive to the new business needs of the Group, an internal survey was conducted to understand the perception of the programme's usefulness and identify its future objectives. In general, a positive assessment of the programme and its contribution to strengthening A2A's position in the territories was shared. The listening activity will therefore continue over the next few years, pursuing a twofold objective: on the one hand, share A2A's activities and identify projects with shared value, and on the other, involve stakeholders in a shared planning of the Group's strategy in that area. In 2020, it is planned to set up two forumAscolto events along these lines.

The results of the forumAscolto are regularly communicated to stakeholders and the community through dedicated events, during which the **Territorial Sustainability Reports** are also presented. In 2019, the Territorial Sustainability Reports of Brescia (fifth edition), Valtellina-Valchiavenna (fourth edition), Bergamo (fourth edition), Milan (third edition), Friuli Venezia Giulia (third edition) and Piedmont (second edition) were published. These editions, similarly to the previous ones, contain a description of A2A's contribution to the achievement of the UN's sustainable development objectives specifically by territory and have been realized both in the paper version, which is more concise, and in the web version, which is more in-depth (for more information visit the website [www.forumascolto2a.eu](http://www.forumascolto2a.eu)).

In 2019, presentations of the Territorial Sustainability Reports were made in all the territories involved. However, events open to all citizens were held in Milan and Brescia (see dedicated box).



## TERRITORIAL SUSTAINABILITY REPORTS A2A MEETS CITIZENS

### Milan

On July 9, 2019, A2A presented in Milan, with the conference **“The industrial value of sustainability”**, at Sala Cinema of the City Life Center, its commitments and actions towards achieving the objectives of UN Agenda 2030, as summarized in the **Integrated Report** and in the **Milan Sustainability Report**.

The conference also provided an opportunity for experts in the field to discuss the issue of sustainable finance. The conference represented only a part of the event, which included many other initiatives that, during the whole day, involved families, children and all citizens in the spaces of the City Life park:

**Infopoint:** the first point of contact with the public to give information on A2A, but also to collect citizens’ needs and ideas through a questionnaire;

**A2A for the city:** an area set up with innovative solutions developed by A2A, such as smart benches, smart bins, interactive totems, environmental monitoring sensors, together with a fun path to test electric scooters;

**Social installation “The earth is ours”:** a huge sphere with the claim “The earth is ours” as a background for selfies;

**Street art:** live artistic creation of a group of famous street artists, led by Atomo Tinelli, who have transformed into works of art some furniture made of recycled cardboard, to support the Banco dell’Energia;

**Activities for children:** three play areas on the theme of the circular economy.

### Brescia

On October 29, 2019, as part of the conference **“The Value of Sustainability. Educate to achieve the objectives of Agenda 2030”** organized by A2A in collaboration with the University of Brescia, was the presentation of the **5th edition of the Brescia Territorial Sustainability Report**. The Conference also represented a moment of exploring the objective of the UN Agenda dedicated to **Quality Education**. During the event, **Max Laudadio**, TV presenter, also known as one of the correspondents of Striscia la Notizia, **presented A2Action**, the digital treasure hunt - a challenge reserved for the people of Brescia dedicated to sustainability, which had three green means of transport as prizes.

The digital treasure hunt was opened from November 9 to 15. Participants had to answer 10 questions as soon as possible, which were published a few hours apart on the website dedicated to the initiative. Some challenges required, according to the mechanism of the treasure hunt, to go to specific places in the city (Fonte di Mompiano, the University in Santa Chiara and Giornale di Brescia) on a certain day and at a certain time. All participants were invited to the final award ceremony on November 15. The prize for the first overall in the standings was an electric Vespa, while, among all those who answered the 10 questions correctly, the winners of two electric bikes were drawn.



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## 4.2 Materiality matrix and analysis

As usual, the process of updating the **A2A Group’s materiality matrix** is designed to identify the material issues for A2A and its stakeholders for 2019.

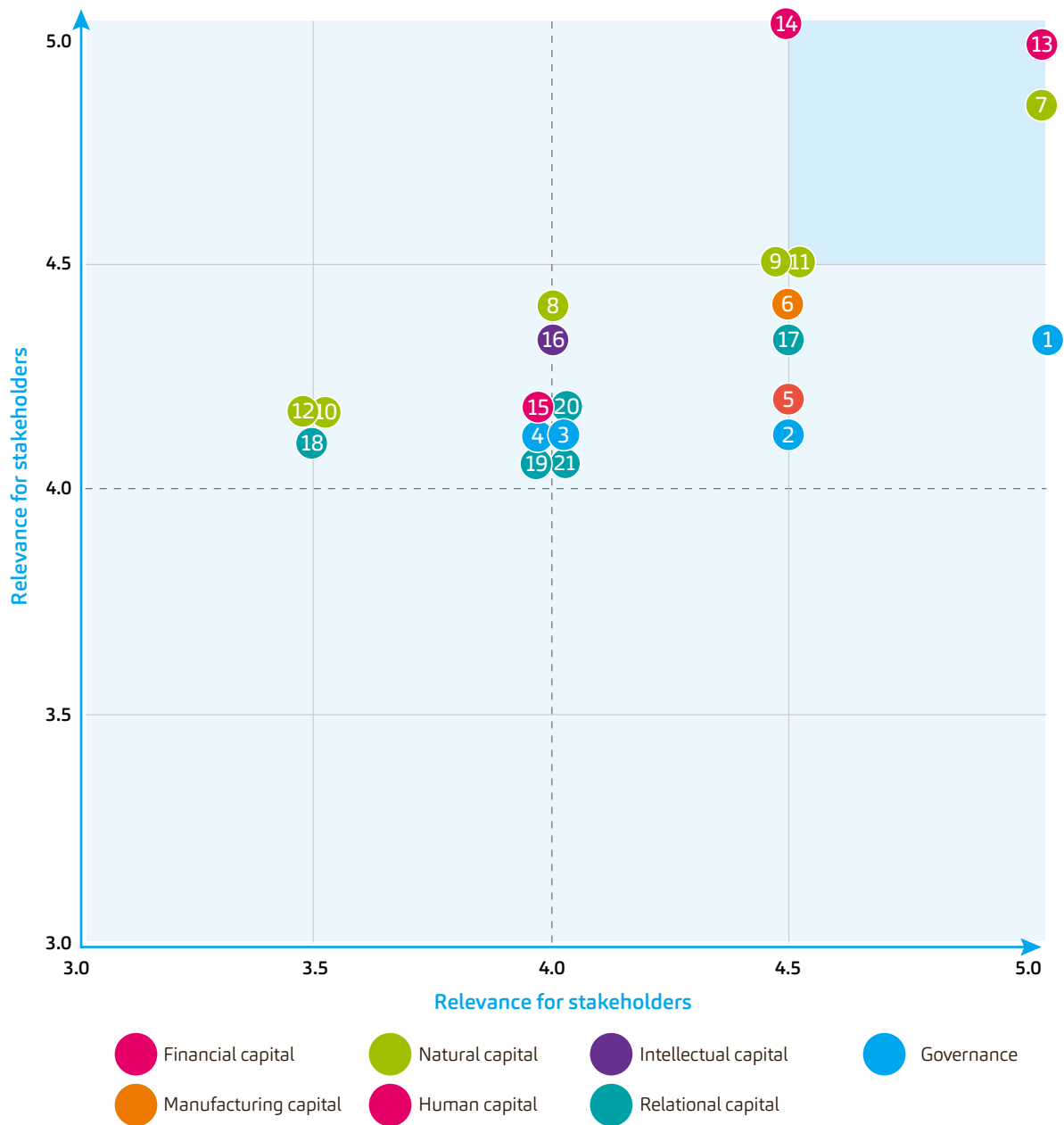
The process allows stakeholders and top management to assess, on a scale from 1 to 5 (where 1 identifies a topic as irrelevant and 5 as strategic), **21 issues** that embrace the 6 Capitals and the Group’s governance system.

To measure the **importance for stakeholders**, reference was made to the evaluations resulting from a survey conducted by the Ipsos Institute, involving

citizens, customers, suppliers, institutions, media, political movements, environmental associations, trade associations and consumer associations, and the results of an online survey involving 500 employees in positions of responsibility. To measure the **importance for A2A**, an online questionnaire was sent to the first lines of the company.

The results of the analysis were then presented to the Sustainability and Territory Committee and approved at the meeting of the A2A Board of Directors on January 20, 2020, which approved the following matrix.

Figure 11\_Materiality matrix





The new matrix is therefore characterized by a substantial confirmation of the issues identified in 2018, with slight shifts influenced - on the side of external stakeholders - by greater awareness of sustainability issues, and on the part of the Group by the intention to send a clear message about the increasingly sustainable strategy being pursued. In fact, it should be noted that in the top box for

both sides there are themes on which A2A is paying increasing attention and commitment: Development of Human capital, Quality of water distributed, Circular Economy, Combating climate change and Occupational Health and Safety. It should also be noted that the subject of Ethical business conduct is one of the three issues to which the Board of Directors of A2A has attributed the greatest importance.

CAPITAL	NO.	ISSUE
Governance	1	Ethical conduct
Governance	2	Sustainability in Governance
Governance	3	Sustainability risks and opportunities
Governance	4	Human Rights
Financial capital	5	Sustainable economic value
Manufacturing capital	6	Efficient infrastructure management
Natural capital	7	Circular economy
Natural capital	8	Efficient water use
Natural capital	9	Combating climate change
Natural capital	10	Biodiversity
Natural capital	11	Quality of distributed water
Natural capital	12	Sustainable mobility
Human capital	13	Health and safety at work
Human capital	14	Development of human capital
Human capital	15	Diversity and welfare
Intellectual capital	16	Innovation and smart cities
Relational capital	17	Responsibility and Safety in the provision of services and products
Relational capital	18	Quality and innovation in the provision of services and products
Relational capital	19	Relationship with Group stakeholders
Relational capital	20	Environmental education
Relational capital	21	Responsible management of the supply chain

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# 5 Financial capital



## INPUTS

49.2% Share capital of A2A listed on the Stock Exchange

Green Financing Framework to support and develop sustainable finance

6 Ethical Indices in which A2A is present

819 million euro of projects approved with EIB financing

## A2A SERVICES AND PROCESSES

400 million euro  
Issuance of the first Group Green Bond

1,927 million euro  
of added value distributed to Group stakeholders

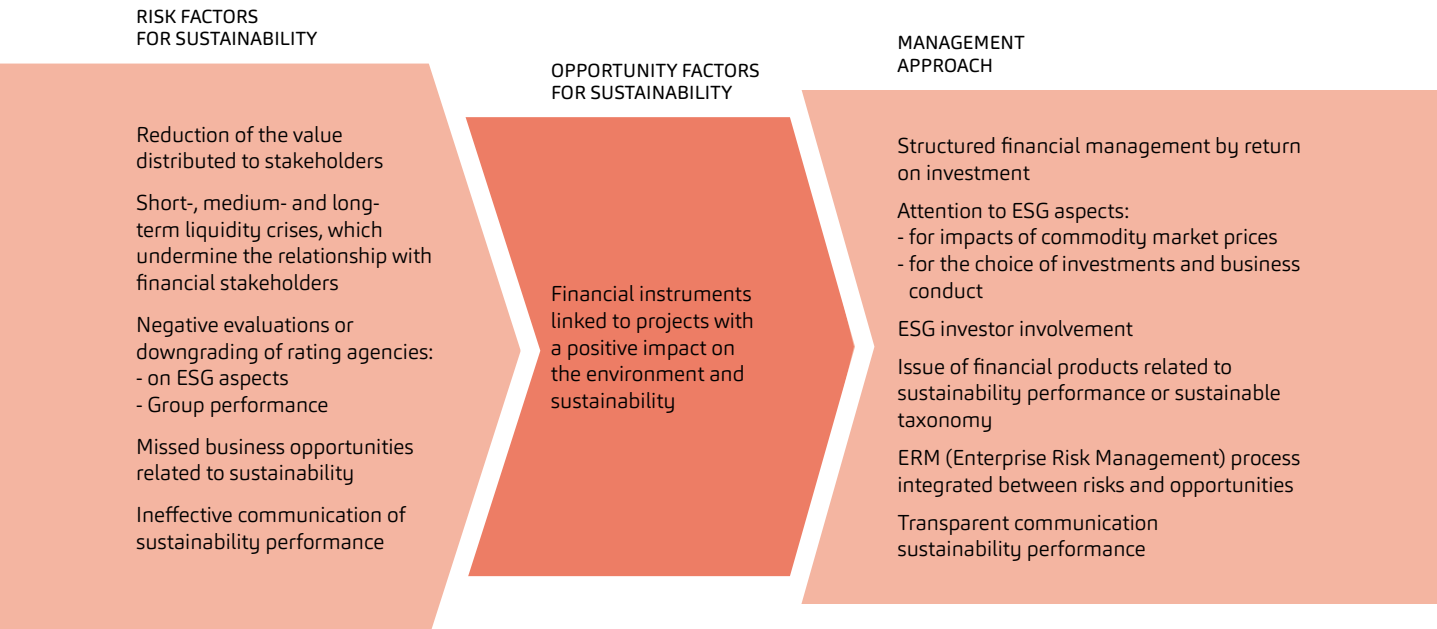
33%  
group indebtedness from sustainable financing

New definition of responsible investments according to ESG criteria

## OUTCOME

CREATION OF SUSTAINABLE ECONOMIC VALUE

Promote redistribution to Group stakeholders of the economic value generated, the enhancement of environmental and social aspects to consolidate relations with the financial community, the ability to attract new investors sensitive to sustainability.



It should be noted that at December 31, 2019, the reporting scope of the following chapter is in line with that of the Group's Consolidated Report, thus taking into account the ACSM - AGAM Group and the companies excluded for other reasons from the Integrated Report. For more details, please refer to the Consolidated Report at December 31, 2019.

5.1 Value added produced and distributed

**Value added** is the wealth that the Group generates in the year. It is the difference between revenues on the one hand and the intermediate costs and accessory and extraordinary items on the other. This parameter measures the **financial effect of the business of the A2A Group on its main stakeholders** and therefore the Group's capacity to create value for its stakeholders. To determine the formation of value added, A2A uses the methodology defined Social Accounts Group (Gruppo per il Bilancio Sociale - GBS).

In 2019, the gross global value added distributed by the Group was 1,927 million euro (+6% on 2018).

Most of this was allocated to company remuneration (673 million euro, +7% on 2018), staff compensation (521 million euro, up 6% on the previous year) and transfers to the public administration (332 million euro). Transfers to the local community have remained constant (67 million euro). Remuneration of the risk based capital has also increased (+17% on 2018).

5.2 Relations with shareholders

The parent company, A2A S.p.A., is listed on the Milan stock exchange. The A2A share is traded on the electronic stock market and belongs to the FTSE-MIB segment and falls within the "Public Services" sector. Under article 9 of the company's By-laws, no single shareholder other than the Municipalities of Brescia and

Milan may hold more than 5% of share capital. Shares held in excess of the 5% limit have no voting rights.

**A2A has about 71 thousand shareholders**, divided between institutional investors and retail investors. **Institutional investors** hold approximately 36.6% of

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## 2019 ACTIONS

- ESG investments (page 63)
- Issue of the first 400 million euro Green Bond (page 64)
- EIB financing (page 64)
- Ethical Indices (page 63)
- TCFD recommendations integration process (page 63)

### SUSTAINABILITY PLAN ACTIONS

### CIRCULAR ECONOMY Risk Management

the share capital (37.1% in 2018). 30.9% of the free float in the hands of institutional investors is held by US investors, 18.1% by British investors and 10.4% by Italian investors.

There are also French (8.2%), with registered office in Luxembourg (5.8%) and German (4.7%) institutional investors. There are ethical investors in the shareholding structure.

**Retail investors** total approximately 69 thousand and hold 10.7% of the share capital (10.3% in 2018). Almost all of the retail shareholding is resident in Italy and in particular, 58.2% in Lombardy. Investors residing in the provinces of Milan and Brescia hold 26.7% and 13.0%, respectively, of the total retail<sup>1</sup>.

Figure 13 \_A2A's shareholding structure (at December 31, 2019)

Category	Percentage (%)
Floating capital	49.2
Municipality of Brescia	25.0
Municipality of Milan	25.0
Treasury shares	0.8

Figure 12\_Share indicators

	2017	2018	2019
Dividend per share (DPS)* (euro)	0.0578	0.07	0.0775
Dividend Yield (DPS/P)**	4.1%	4.6%	4.8%
Number of shares (million)	3,133	3,133	3,133

\* Dividend proposed by the Board of Directors.

\*\* Calculated on average share price.

1. The figures have been prepared on the basis of the shareholders' register updated as of the distribution of the dividend on May 22, 2019.

## A2A in the stock market indices

A2A forms part of the following indices: FTSE MIB, STOXX Europe 600, STOXX Europe Utilities, EURO STOXX, EURO STOXX Utilities, MSCI Europe Small Cap and S&P Global Mid Small Cap.

Among the factors affecting share performance in 2019 were those arising from macro-economic and policy trends, the energy scenario and capital flows on international financial markets.

On the other hand, the company-specific factors include:

- presentation of the 2019-2023 Strategic Plan;
- growth of the dividend distributed;
- progressive improvement of the top management's indications on the 2019 results;
- line-by-line consolidation of ACSM-AGAM for the entire year;
- opportunities related to the consolidation of the local utilities sector.

## Relations with shareholders and investors

A2A is constantly committed to providing answers as precise and exhaustive as possible to the needs and specific requests of financial stakeholders. To this end, multiple communication tools and channels are used, such as: institutional documentation (e.g. Consolidated Financial Report or Half-Year Financial Report), *ad hoc* documentation (Investor Guidebook), press releases and meetings with analysts and investors in the main international financial centres (roadshows, one-to-one or group meetings, conference calls, presentations at events, seminars on specific business issues, etc.).

As for the coverage of equity analysts, at the end of 2019, A2A was followed by 9 Italian and international brokers. Moreover, the engagement has continued in a structured manner with the main proxy agencies that provide institutional investors with voting recommendations on the items of the agenda of the Shareholders' Meeting.

**Internet communication** (website and mailing) is particularly important and, in 2019, the Investors section of the website was further expanded:

- "**Investire in A2A**" page has been implemented, which lists the most significant key factors to guide investors to a more informed choice;
- new information has been added to the **Investor Guidebook**, a document that provides a complete overview of the Group;

- the set of economic-financial data of the **Investor Databook** has been renewed and includes both the historic data since 2008 (with quarterly details for the last 4 years) and a series of prospective data useful to analyst model-making;
- the subsection "**Library for the investor**" was enriched with further contents, with the publication of specific studies regarding the markets, the businesses in which the Group operates and the regulatory context.

The web also provides an effective **communication channel with retail investors**: the A2A website publishes the answers to the most frequently asked questions (FAQs). Retail investors can contact A2A by e-mail, via the form on the A2A website or by letter.

## A2A AT THE SUSTAINABILITY DAY OF THE ITALIAN STOCK EXCHANGE

For the third consecutive year, A2A has participated in the **Sustainability Day** organized by Borsa Italiana. The Investor Relations team, supported by the Corporate Social Responsibility team, met 7 investors representing 4 Italian and international ESG funds.

The formula chosen for the event was that of **listening meeting**: first of all, comments on the Group's performance and current reporting were incorporated. Subsequently, a list of the issues that contribute to the development of A2A's materiality matrix was submitted to interlocutors, asking them to select five key issues and sort them by relevance.

The final ranking was as follows:

- 1<sup>st</sup> Sustainability in governance
- 2<sup>nd</sup> Combating climate change
- 3<sup>rd</sup> Sustainable economic value and Occupational Health and Safety
- 4<sup>th</sup> Responsible management of the supply chain
- 5<sup>th</sup> Circular Economy and Efficient Water Use

The results of the survey confirmed the tendency of investors to develop an all-round vision of sustainability, geared towards all major ESG issues.

5.3 A2A in the sustainability ratings

One of the ways in which sustainability applies to finance is the practice of socially **responsible investing** (SRI - Sustainable and Responsible Investment), according to which environmental, social and/or governance considerations integrate the financial assessments carried out at the time the choice is made to buy or sell a security. SRI is implemented with the inclusion of listed companies on **ethical indices**.

The Group is currently listed in the following ethical indices:

- FTSE4Good Index
- ECPI Indices
- Ethibel Sustainability Index Excellence Europe
- EURO STOXX Sustainability Index
- Euronext Vigeo Index: Eurozone 120
- Standard Ethics Italian Index

Since 2018, A2A has decided to request a solicited rating from Standard Ethics in order to obtain an external and independent assessment of its sustainability performance, based on a structured and validated assessment procedure. Thanks to initiatives implemented following the first assessment, in specific areas of improvement identified, Standard Ethics raised A2A's rating from "EE-" to "EE".

A2A is also included in the Ethibel Excellence Investment Register and in the Ethibel Pioneer Investment Register.

In 2019, A2A confirmed the B- score on the CDP Climate Change and the CDP Water questionnaire.

In addition, A2A participates in the assessments of Vigeo-Eiris, RobecoSAM, Sustainalytics, MSCI and the "Top 100 Green Utilities" (of the Energy Intelligence Group).

5.4 Ethical Finance

"Greening the Financial System", the mission that major global financial institutions have been pursuing in recent years, with an exponentially growing trend, adhering to 2030 Agenda and above all supporting the combat against climate change, creating new financial instruments (e.g. Green Bond, Green Loan, EIB subsidised investments) that also include sustainability impacts in their logic. In 2019, demand for sustainable investments exceeded supply by \$24 trillion, and sustainable investment strategies accounted for 60% of assets managed by European investors.

**A2A** has strengthened its role in the market by becoming a member of the **Corporate Forum on Sustainable Finance** in April 2019, which brings together the major European corporations committed to supporting and developing sustainable finance as a means of combating climate change and promoting a more sustainable economy through innovative financing instruments.

In addition, the Group has decided to adopt a **Green Financing Framework** thanks to which it can issue green bonds and subscribe any type of financial instrument dedicated to specific green projects. Through the Framework, A2A communicates to investors and the community its commitment to an **increasingly complete integration between business and sustainability**, defines the guidelines that the Group has adopted for the selection of projects that can be financed, as well as the rules for the correct management of funds deriving from the stipulation of loans and the **monitoring of the positive impact on environmental and circular economy metrics**.

The document, in line with the Sustainability Plan, is divided into 3 clusters inspired by the 17 United Nations Sustainable Development Goals in which the projects eligible for funding are catalogued: **Circular Economy, Decarbonization and Smart Solutions**. Potential projects have been identified for each of these macro areas, such as new water and waste treatment plants, renewable energy investments, energy efficiency projects, including projects to improve the efficiency of waste treatment plants and Group heat generation, sustainable transport projects and network modernization to reduce leaks or waste.

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According to market practice, the Framework was submitted to a Second Party Provider - **Vigeo-Eiris** (a leading ESG rating agency) that assessed the document - through a Second Party Opinion - in line with best market practices, with globally recognized sustainable finance principles (Green Loan and Green Bond Principles drawn up by ICMA). The Framework can be updated before each issuance to be in line with corporate strategies.

In order to strengthen its commitment, identify and develop sustainable finance tools and ensure the correct management of the project selection and fund allocation process, **A2A has created an inter-functional Green Financing Committee**, chaired by Finance and consisting of Planning and Control, Corporate Social Responsibility, Strategy and Innovation. The Committee will interact with the Sustainability and Territory Committee, the Investment Committee and the heads of the Business Units involved from time to time in the various projects eligible for funding.

### THE FIRST A2A GREEN BOND

In July 2019, as part of the Green Financing Framework, A2A successfully allocated the **first Green Bond**, destined exclusively for institutional investors under the Euro Medium Term Notes Programme.

The 400 million euro issue, with a 10-year maturity, carried out after the European roadshow that touched the main markets of Milan, London, Amsterdam, Paris, Munich and Frankfurt, aroused great interest from investors throughout Europe. The market has greatly appreciated the alignment between the Green Bond framework and the clusters of the Sustainability Policy and the Sustainability Plan; in fact, the existence of clear and measurable sustainability objectives has facilitated dialogue with investors.

The Green Bond received orders for 3.2 billion euro, more than 8 times the amount offered, and obtained a spread of 105 basis points over the mid swap reference rate.

The securities were listed on the regulated market of the Luxembourg Stock Exchange and included in the platform dedicated to sustainable securities **Luxembourg Green Exchange (LGX)**. At the first anniversary of the bond, or at the complete allocation of the resources deriving from the issue, a Green Bond Report will be drawn up containing the projects financed with the relevant metrics and any portion of funds not yet allocated. According to market practice, this report will be assessed and possibly validated by an independent third party.

**In September, A2A's Green Bond was included in the Bloomberg Barclays MSCI Green Bond Index.**

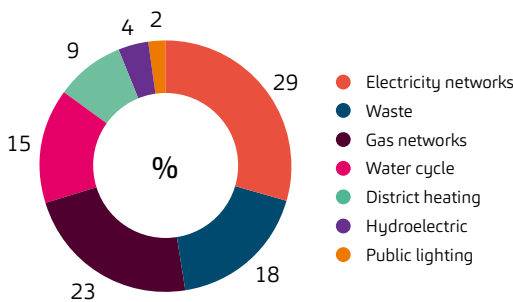
A2A has a solid and long-standing relationship with the **European Investment Bank (EIB)** to support the Group's investment programme.

The European Institute finances **specific investment projects that meet particular sustainability requirements**, applying generally more advantageous economic conditions than the most common forms of financing. The EIB's periodic appraisal and monitoring process includes requests for information, including technical and financial information, and the possibility of inspecting the sites/plants concerned by the projects financed.

In December 2019, the EIB granted A2A a credit line of 150 million euro, with an availability period of 36 months and usable in several tranches with a duration of 15 years.

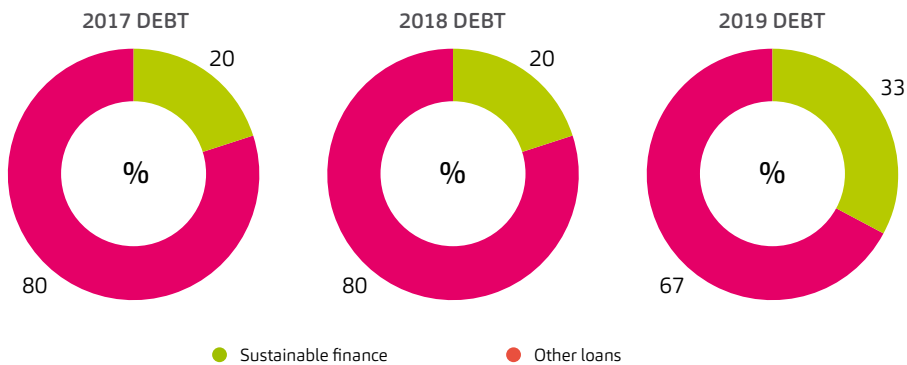
the financing is aimed **at extending and building smart networks in the municipalities of Milan, Brescia and the province to support electrification and energy transition.**

Figure 14\_ EIB loans by destination (%) at 12.31.2019



At December 31, 2019, the value of these loans amounted to **about 819 million euro of which 150 still available.**

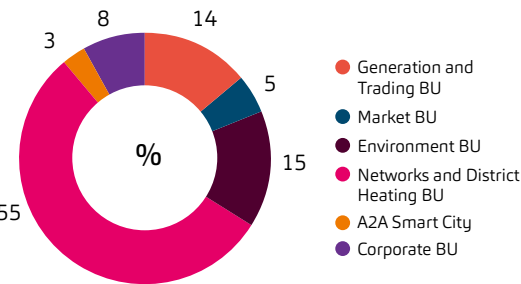
Figure 15\_2017-2019 Sources of funds: traditional vs sustainable



5.5 Capital expenditure

In 2019, the total amount of capital expenditure in the A2A Group was 627 million euro (+25% vs. 2018).

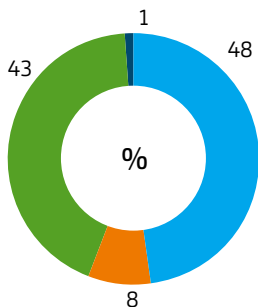
Figure 16\_Capex by Business Unit (%)



Below is a **classification of capex in 2019, based on an ESG logic**, the definition of which has been elaborated by a working table of the Green Financing Committee and the Investment Evaluation function (VIG). The taxonomy is broader than green investments, identified for bond issuance, but in line with the demands of sustainable finance.

**62% of investments fall within the very stringent sustainability criteria (ESG), which are in line with the Group's Sustainability Policy and Plan.** It should be noted that over 28% of capex not included (because attributable to fossil fuels) are, however, dedicated to ensuring the **stability and security of the energy system** in the transition phase. A revision of the VIG procedure is planned in 2020, which **also includes the estimation and monitoring of sustainability KPIs in the scope of capex analysis.**

Figure 17\_ESG Capex



CLUSTERS OF THE SUSTAINABILITY POLICY AND PLAN	Capex ESG 2019 (million euro)
DECARBONIZATION	186
SMART SOLUTION	29
CIRCULAR ECONOMY	167
PEOPLE INNOVATION	4
Total	385

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Value added produced and distributed

Relations with shareholders

A2A in the sustainability ratings

Ethical Finance

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# 6 Manufacturing capital



## INPUTS

9<sup>GW</sup>  
Electricity generation  
capacity

1.6<sup>GW</sup>  
Thermal production  
capacity

1.6<sup>million tonnes/year</sup>  
Material treatment and  
recovery capacity

15,359<sup>km</sup>  
Electricity network

11,240<sup>km</sup>  
Natural gas network

1,195<sup>km</sup>  
District heating  
network

4,019<sup>km</sup>  
Integrated water  
service network

## A2A SERVICES AND PROCESSES

Realization of the first storage  
tank at the Lamarmora power  
plant in Brescia

Start-up of the new plastic  
selection plant in Muggiano  
(Milan)

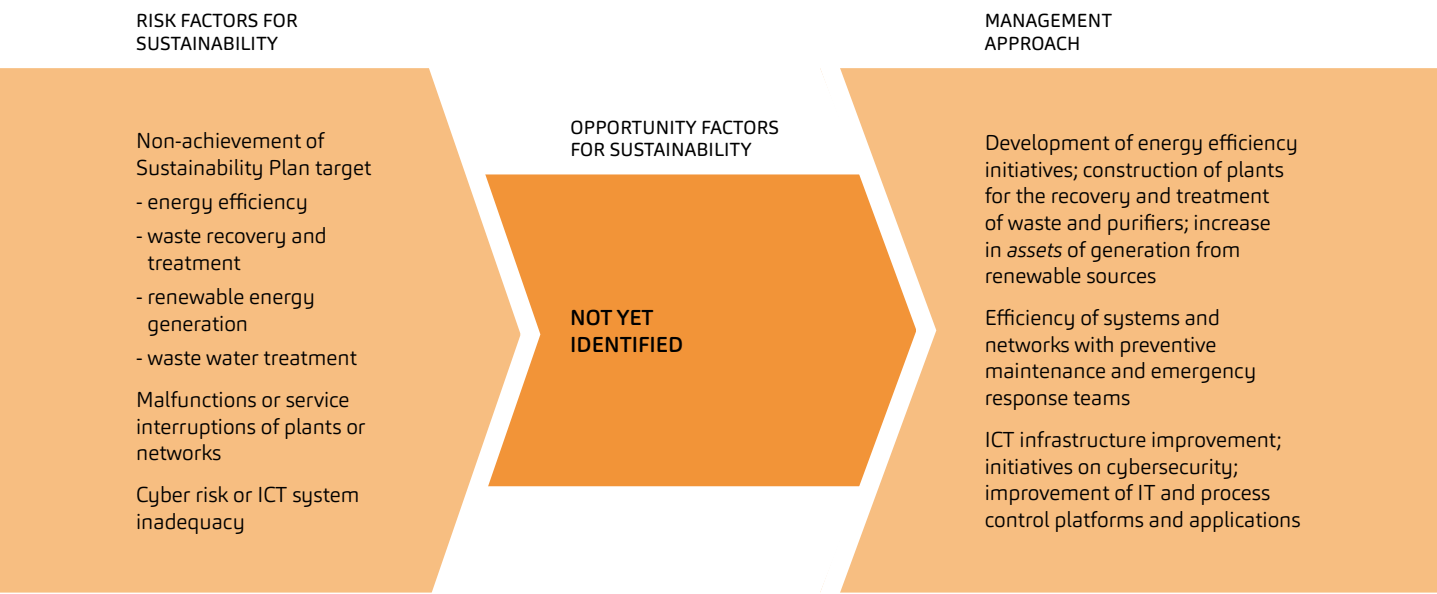
Entry into service of the new  
Nuvolera Purifier

Installation of synchronous  
compensators, to guarantee the  
continuous regulation service of the  
National Transmission Grid

## OUTCOME

EFFICIENT MANAGEMENT OF GROUP INFRASTRUCTURES

Promoting technological innovation, improved performance, continuity and reliability of service; development of waste processing plant capacity, investments in renewable energy and innovative technology, including through the acquisition of new companies strategic to the Group



6.1 The manufacturing capital in the Environment Business Unit

The plants managed by the Environment Business Unit cover all phases of the integrated waste cycle: from management of recycling facilities, ecological platforms and landfills through to energy and material recovery and processing plants.

Figure 18\_Plant types and geographic location of the Environment BU

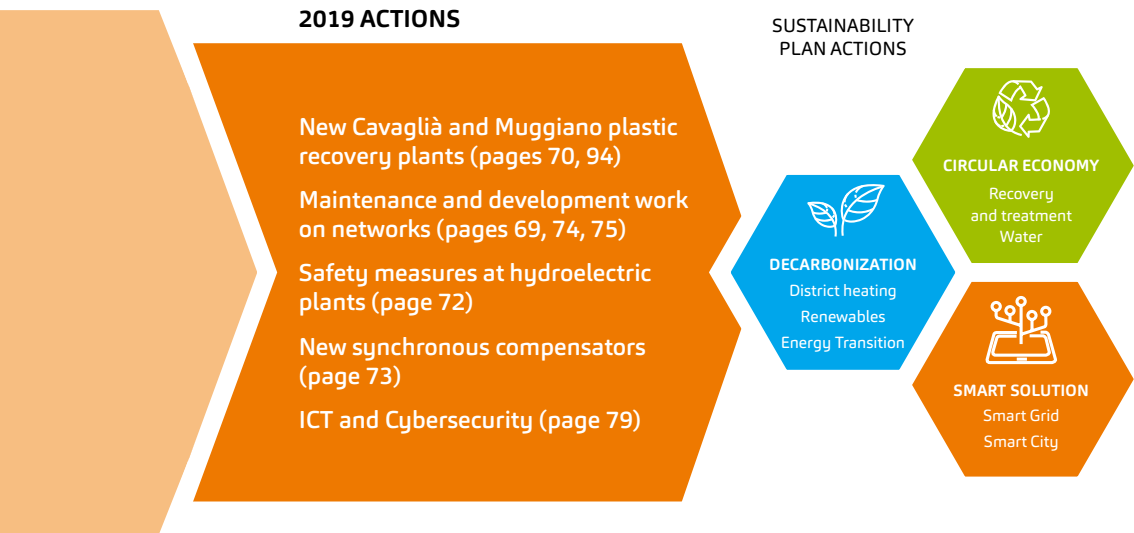
TYPE OF PLANTS	NUMBER OF PLANTS	LOCATION	CAPACITY	U.M.
Material treatment and recovery	21	Lombardy Piedmont	1,619,500	tonnes/year
ITS (Intelligent Transfer Stations)	7	Lombardy Piedmont	642,000	tonnes/year
Waste-to-energy plants	7	Lombardy	260	MW <sub>e</sub>
			627	MW <sub>t</sub>
Landfills	10	Emilia Romagna Lombardy Piedmont	8.1	Mt
Biogas production	16	Emilia Romagna Lombardy Piedmont	23	MW <sub>e</sub>

Overall waste treated in Group managed plants totalled about **4.6 million** tonnes, of which: 3.6 at the Group's plants (-5.3% compared to 2018) and approximately 1 million at the plants managed on behalf of third parties (Acerra waste-to-energy plant and Caivano plant).

Although there has been a slight but steady increase, the BU's production of thermal energy and electricity remains stable at 1,192 GWh<sub>e</sub> and 1,478 GWh<sub>t</sub> respectively.

The increase in production is naturally linked to the higher portion of waste treated in waste-to-energy plants (+1%). Instead, the portion of waste treated in bio-drying plants remains constant.

Compared to 2018, the Group has the largest presence along the supply chain, increasing the material treatment and recovery capacity of the BU, mainly thanks to the new plastic sorting plant at Muggiano (Milan) and an increase in the treatment capacity of some existing plants.



In December, A2A Ambiente, as part of its plan for the development and integration of the supply chain, completed the acquisition of 90% of **Electrometal**, a **company specializing in the treatment and recovery of industrial waste**, and **Areslab**, a **chemical analysis laboratory**, both located in Castegnato in the province of Brescia.

**Electrometal** has been active for over 20 years in the treatment of waste from different industrial processes. Its platform, equipped with two treatment lines, with a treatment capacity of about 107,000 tonnes of waste per year, allows the inertization, stabilization and recovery of hazardous and non-hazardous industrial waste, both solid and liquid. The company's field of intervention ranges from the chemical, mechanical, metallurgical and environmental

reclamation sectors. At December 31, 2019, the material recovery capacity was over 1 million tonnes per year.

A2A Ambiente's production sites will increasingly satisfy its energy needs thanks to renewable sources. On the basis of the agreements with ESCO Suncity, which joined the A2A Group in 2019, two photovoltaic systems will be built on the roofs of the buildings at two A2A Ambiente sites: the first, at the glass waste treatment plant in Asti, for 425 kW of power, and the other, for 547 kW, at the plastic selection and CCS production centre in Cavaglià. Suncity will remain the owner of the plants for ten years, at the end of which A2A Ambiente, which already uses the energy produced, will be able to renew the energy service contract or redeem the plant.

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## Innovative technologies for the recovery of plastic

A2A Ambiente's action to integrate the supply chain continues, concretely helping the country, with new plant engineering capacity, to develop a circular economy system. After the start-up of its first plastic waste treatment plant in Cavaglià in 2018, **the company built a similar centre in Muggiano (Milan), with a capacity of 45 thousand tonnes per year**, equivalent to the needs of the Municipality of Milan and the surrounding areas.

Starting from the single bags that come directly from separate collection, the plant is able to select and subdivide, thanks to the application of advanced technologies and high levels of automation, 13 different types of plastics and to separate ferrous and non-ferrous metals.

The plant consists of a system of optical screening, belts and selectors that detect the plastic, automatically separating it by colour (blue, transparent, etc.) and by polymer (polyethylene, polypropylene, PET, PVC, etc.). Once the fine waste has been removed, through screening, the process involves separating the films and bags from the bottles; then, thanks to the latest generation optical selectors placed in series, the different polymers are automatically recognized and separated. Liquid containers are also sorted by colour. A manual control at the end of the line allows reaching the desired quality. The selected material is then ready to be sent to companies specializing in the production of new plastics. Waste that cannot be recovered as material is instead sent to waste-to-energy plants for energy recovery. Sustainability also in energy choices: a part of the consumption is guaranteed by a 300 kW photovoltaic system, installed on the roofs of the industrial buildings.



### A PROJECT TO ENHANCE THE VALUE OF SEWAGE SLUDGE ON A REGIONAL SCALE

Enhancing the value of sewage sludge and identifying the most sustainable recovery methods is the objective of the project "Advanced forms of sewage sludge management in an innovative Lombard hub" presented by A2A Ambiente as lead partner, together with partners BrianzAcque, Istituto di Ricerche Farmacologiche Mario Negri, Lariana Depur, MM and TCR Tecora.

The circular economy project, created within the working tables of the "Lombard Cluster" for energy and environment, is among the winners of the "Call Hub Research and Innovation" tender, funded by the Lombardy Region, and 4th in the ranking in the sustainability sector out of 78 projects submitted.

During the 30 months of the project, partners will assess the health-environmental impact of alternative sewage sludge valorization strategies in order to identify the most beneficial one (or combination) in terms of sustainability, also considering economic and regulatory aspects.

According to the latest ARPA data available, in 2017, 800 thousand tonnes of sludge were produced in Lombardy, 500 thousand of which were from urban waste water.

A2A Ambiente will experiment in some of its plants with the optimization of energy recovery in co-combustion with other non-recyclable waste and in single-combustion, also aimed at recovering phosphorous ashes, an essential nutrient, which can then be reused in agriculture.



At Lacchiarella, the first plant producing biomethane from waste

The Business Plan of the Environment Business Unit provides for the construction and management of 4 plants for the treatment of the organic fraction of municipal solid waste (OFMSW). The plants will have a total capacity of over 280 thousand tonnes/year and will all consist of an anaerobic digestion section with biogas production and subsequent refining of biomethane and a subsequent composting section for the treatment of waste material leaving the digesters for its transformation into compost. All these plants will produce more than 20 million cubic meters of biomethane, which will be fed into the SNAM national transport network or gas distribution network and used for transport. The design of the plants includes technological solutions and state-of-the-art technical devices to maximize reliability, minimize the escape of odours and maximize the production of biomethane and are a concrete development of the circular economy.

In 2019, A2A Ambiente obtained the authorization to build the first plant of this type at Lacchiarella, in the area of the Cascina Maggiore integrated centre that has been active since the mid-1990s. The new plant can treat up to 100 thousand tonnes per year, producing about 8 million cubic meters of biomethane and 20 thousand tonnes of compost.

On the other hand, the projects for three other plants that will adopt the same technology are still in the authorization phase: two will be located in Lombardy for the total treatment of 130 thousand tonnes per year and one in Piedmont, in Cavaglià, with a treatment capacity of 60 thousand tonnes per year, capable of producing a total of 12 million cubic meters of biomethane and about 40 thousand tonnes of compost annually.

6.2 The manufacturing capital in the Generation and Trading Business Unit

The Generation and Trading Business Unit manages the Group's electricity production, through:

- hydroelectric plants using various different technologies, with a major component of storage and regulation capacity, thanks to the significant size of the reservoirs and the power of the plants;
- thermoelectric plants, mainly comprising plants based on high-performance combined cycle gas

technology (CCGT) and two coal-powered plants (of which one was decommissioned in 2012) and one that uses heavy fuel oil;

- photovoltaic plants, installed at the sites of some Group thermoelectric plants or in areas close to them, plus a series of photovoltaic plants purchased in the secondary market as of 2017.

Figure 19\_Plants of the Generation BU and geographical location

TYPE OF PLANTS	NUMBER OF PLANTS	LOCATION	CAPACITY	U.M.
Hydroelectric	5	Lombardy Friuli Venezia Giulia Calabria	2,068	MW <sub>e</sub>
Thermoelectric	9	Piedmont Lombardy Friuli Venezia Giulia Emilia Romagna Abruzzo Puglia Sicily	6,895	MW <sub>e</sub>
Photovoltaic	92	Italy	99	MW <sub>e</sub>

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In 2019, the BU **slightly increased production** (+2.4% compared with 2018), keeping the mix of sources used constant, but with greater use of natural gas from CCGT, whose production is up compared with 2018, compared with coal or fuel oil. **Production from hydroelectric plants continued to increase** (4,534 GWh), thanks to a year of high hydraulicity. Production from CCGT increased, while there was a marked reduction in production at the Monfalcone (coal) power plant. For the second consecutive year, it is important to note the **significant contribution of photovoltaic production** (+93.7% compared to 2018), linked to the Group's new strategy in the sector.

The process of change required in recent years in the energy production sector covers many areas: from the transition to low-carbon, to the adaptation to climate change and the needs of the market, to the safety and modernization of the plant fleet.

With a view to contributing to the international and Group objectives to combat climate change, account should also be taken of A2A Energiefuture's decision to submit, in December 2019, a request for authorization to Ministry for Environment, Land and Sea Protection for the construction of a high-efficiency combined cycle at both the Monfalcone (GO) thermoelectric power plant, now operating with coal, and the San Filippo del Mela (ME) power plant, currently fuelled by fuel oil. Both projects aim towards ensuring a sustainable future for production sites, significantly reducing the environmental and landscape impact and meeting the reliability and flexibility requirements of the national electricity system. In May, A2A Energiefuture also submitted a request for authorization to the Sicily Region to build an innovative plant at the San Filippo del Mela site capable of transforming the organic fraction of waste resulting from separate collection into biomethane and compost, with a total capacity of 75 thousand tonnes per year.

In December, **A2A won the full capacity offered, equal to a total of 5 GW at national level, in the second capacity market auction** called by Terna (the Italian TSO) for the 2023 delivery year. Of the 5 GW of capacity offered, 0.2 GW relates to new capacity. The Capacity Market, approved in June 2019 by the European Commission, aims to make the energy market more efficient, ensuring system security in case of peak demand. The mechanism provides for remuneration for plants that undertake to ensure availability for energy production. Both existing and new plants are eligible to participate in Terna's auctions, provided they are able to comply with certain CO<sub>2</sub> emission limits.

## Growth in the photovoltaic sector

A2A continues on its green path and reaffirms its desire for growth in the renewables sector and its role as an active operator in energy transition.

A2A Rinnovabili, the Group company that controls all the companies holding photovoltaic plants acquired on the secondary market, signed an agreement in 2019 with the Talesun group that provides for the **acquisition of a pipeline for the development of green field photovoltaic projects for a total capacity of around 1 GW**.

The agreement provides for the construction of **plants without incentives** and allows A2A to accelerate the decarbonization and renewal of generation capacity. The transaction - which follows the acquisitions of photovoltaic plants previously made in Trentino Alto Adige, Piedmont, Lombardy, Emilia Romagna, Tuscany, Lazio, Abruzzo, Marche, Apulia, Campania, Calabria, Sicily and Sardinia for an installed capacity of about 100 MW - will enable the Group to position itself among the leading operators in the sector in Italy.

A further step forward in the development of photovoltaic will also be taken in the first few months of 2020, when **A2A will start construction in the province of Foggia of the Group's first large market parity plant and one of the first in Italy**.

With a total power of about 10 MW, the plant will be oriented to the experimentation of new technologies and utility scale storage systems to support the network.

In addition, A2A Rinnovabili was awarded the tender for the construction in 2020 of a **10.5 MW photovoltaic system for the industrial buildings of the Rho Fiera exhibition area**.

## The safety of hydroelectric plants in extreme situations

The constant change of climate in an area at risk of hydrogeology, such as our country, has as its main principle the raising of safety levels for plants most exposed to this risk.

Activities continued in 2019 to guarantee the **safety of dams and plants in extreme hydraulic situations** (floods, flooding events, earthquakes, etc.), through the precise application of procedures defined in accordance with the directives and requirements of the regulations and the Bodies in charge (Ministries, Prefectures, Regions, Civil Protection).

This year, in particular, we proceeded with the design and implementation of works on dams and related ancillary works, focused on the issue of seismic safety. In particular, a project relating to the Ambiesta Dam has been drawn up and approved by the MIT Dams General Directorate: the first phase of an overall dam upgrading plan. Among the works carried out in 2019, the one on the crowning bridge of the Lumiei Dam.

With the Politecnico di Milano, an experiment was carried out to test **satellite detection devices for micro-displacements** of weirs following exceptional events (intense earthquakes).

In addition, the flow regulation methods have been analyzed and improved in order to guarantee the Ecological Flow - MVF (Minimum Vital Flow) in the various sites.

During 2019, the methods for inspections and analysis of the condition of hydraulic tunnels, diversion works and forced pipelines were further improved and implemented to protect the safety of the territory.

### Flexibility and innovation in CCGT plants

A2A's ability to meet the needs of the electricity market for combined cycle plants has been greatly improved thanks to the flexibility plan implemented on the basis of the **Co-Development Program Framework Agreement** stipulated between the A2A Group and the General Electric Group. In the first half of 2019, work on the two 800 MW turbogas of the group at the Cassano power plant was completed with the **installation of hardware and software packages**, similar to those installed at the Chivasso and Sermide plants. The works make it possible to significantly reduce the technical minimum and the start-up time of the combined cycles, **improve the performance and production management of the plant, while reducing NO<sub>x</sub> stack emissions**. During 2018, the flexibility of the Ponti sul Mincio plant was also completed.

Innovation in the A2A Group's combined cycle plants is also aimed at safety. In May 2019, for the first time the inside of the boiler of group 3 of the Sermide power plant was inspected with the aid of an **aerial drone**, avoiding exposing personnel to the risk of carrying out this activity in a "confined place" in accordance with the "Testo Unico sulla Sicurezza sul Lavoro" (Legislative Decree 81/08). The high quality video and photo material produced by the drone, made available on a digital platform, will make it possible to digitize the inspection process and monitor the state of preservation of the components over time.

Following the excellent results of the test, it is **planned to extend the use of aerial drones to all the A2A Group's thermoelectric plants during 2020**.

### NEW SYNCHRONOUS COMPENSATORS IN THE BRINDISI THERMOELECTRIC POWER PLANT

In February 2019, A2A Energie Future won the tender launched by Terna for the supply, starting from 2020, of the **continuous and automatic voltage regulation service**, through absorption/reactive power input, **for the National Transmission Grid (NTG)** in the Brindisi area. This service is particularly important due to the increasing weight of renewable sources, which are not programmable and subject to discontinuity in power output.

To guarantee the service, A2A Energie Future will intervene on groups 3 and 4, whose alternators can operate as synchronous compensators, i.e. as machines connected to the electricity grid that produce or absorb reactive power in order to stabilize the mains voltage. The operation of alternators in power factor correction mode does not require active energy production, so the alternators will be decoupled from their steam turbines. The boilers will remain in storage, therefore without combustion and emissions to the chimney. The conversion project is reversible and provides, in summary, for the decoupling of the alternator from the turbine, the installation of alternator starting equipment, a new system for the management and control of the synchronous compensation system and the modification of the cooling system. The new devices will start providing service to the National Transmission Grid from March 2020. This operation opens up new prospects for the Brindisi Thermoelectric Power Plant, which in 2012, was declared out of service for the production of electricity in the grid for economic reasons. The main machinery has been stored and fuels and process chemicals have been removed.

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6.3 The manufacturing capital in the Networks & District Heating Business Unit

The Networks & District Heating Business Unit is responsible for developing and maintaining the electricity, gas, heat and water cycle distribution infrastructure as well as for managing plants used to produce thermal energy and electricity. The maintenance and evolution of these infrastructures are amongst the key factor necessary to achieve the national and European energy policy goals.

The **electricity distribution network** has an extension of 15,359 km in high, medium and low voltage, 87% of which is underground (+3% compared to 2018, with about 386 km underground in 2019). The network is also supported by 31 primary stations and substations and more than 9,410 secondary stations.

The **length of the gas distribution infrastructure** is 11,240 km, in medium and high pressure, with 191 primary stations (REMI) and 2,256 secondary stations.

Figure 20\_Plants of the Networks & District Heating BU for the distribution of electricity and gas

TYPE OF PLANTS	EXTENSION
Electricity networks	15,359 km
	of which 13,362 underground
Gas networks	11,240 km

The electricity distribution activity is managed by Unareti and LD Reti in Lombardy, in the provinces of Milan, Brescia and Cremona. The gas distribution activity is managed by Unareti, LD Reti and ASVT with the most important share of the managed networks located in Lombardy, in the provinces of Milan, Brescia, Bergamo, Cremona, Lodi and Pavia, and also, with smaller network sections, in Veneto, Trentino, Emilia Romagna, Campania, Abruzzo and Molise.

In 2019, electricity distributed amounted to 11,573 GWh (-1.5% compared to 2018), while gas distribution amounted to 2,356 m³, also slightly down (-2.8% compared to 2018).

Through the subsidiary Retragas S.r.l., the Group also manages the **regional transmission of natural gas** in Lombardy, Trentino Alto Adige and Piedmont, with more than 400 km network and moving more than 350 million cubic metres of natural gas each year.

On January 31, 2020, A2A and Italgas finalized the agreement announced in October 2019 for the reciprocal sale of assets in gas distribution and district heating: as a result, approximately 140 km of the network located in certain municipalities in the province of Alessandria are no longer in the perimeter of A2A's gas distribution activities, while A2A Calore & Servizi has acquired all the district heating activities managed in the municipality of Cologno Monzese.

With reference to the **gas meter replacement plan**, now launched in 2015 - which had as its objective the commissioning of 85% of smart meters by December 31, 2020 - the Group, through its subsidiaries Unareti and LD Reti, has already replaced about 1 million smart meters, already exceeding the target set by the Authority in 2019. The programme, also included in the objectives of the Sustainability Plan, provides for the replacement of 98% of active meters by 2024.

Launch of 2G smart meters

In 2019, Unareti launched its **2G smart metering system Commissioning Plan** (PMS2). As required by the **specific regulation** defined by ARERA, the plan included a **public consultation** and was presented to stakeholders at a dedicated meeting held in November 2019 at the Casa dell'Energia e dell'Ambiente in Milan.

The plan to replace **1.3 million electricity meters** in the municipalities served by Unareti will start in 2020, with an investment of about **173 million euro** over **15 years** (2020-2034), plus about **100 million euro** in operating costs.

The 2G smart meters will be equipped with **new and improved data acquisition and transmission functions** and **network monitoring**, which will allow: **sales companies** to formulate customized offers based on customer consumption, improve billing processes and speed up transfers; **distributors** to promptly identify anomalies on the network; **end customers** themselves, through the UD (user device), easier monitoring of consumption by acquiring greater awareness.

The start of the massive installation of the 2G smart meters is scheduled to take place in the city of Brescia in mid-2020 with the completion of the massive replacement phase at the end of 2021. In Milan, the first meters will be replaced in 2022, with activities scheduled to end in 2024.

MILAN'S POWER GRID PREPARES FOR 2030

The Milan electricity grid (4,000 km in medium voltage and 3,200 km in low voltage) is an asset with performance and management complexity unique in Italy, recording:

- a **load density of 8.45 MW/km², 42 times higher than the national average** and 5 times higher than in Rome;
- a **peak load of 1,640 MW**, equal to **3% of the national peak**;
- annual **distributed volumes** of about **7 TWh**, equal to **about 2.5% of national consumption**.

Already under great pressure, the Milanese electricity network will see an increase in power demand over the next decade of around 36%, due to the concomitant effect of ATM public transport electrification projects, the development of underground lines, the growth of e-mobility and urban development, which also includes the transition of energy consumption from gas/diesel to electricity for heating and cooking.

Unareti will deal with the change with an ambitious plan to **ensure the efficiency and resilience of the Milanese electricity network over time, reduce CO<sub>2</sub> emissions, improve service quality and reduce network losses**.

Interventions will focus on asset planning, ensuring:

- renewal and development of the medium voltage grid;
- construction of 8 new primary stations;
- renovations and reconfiguration of the grid to make it more resilient to extraordinary weather events.

Through the further development of remote control systems, Unareti will also aim to reduce the time needed to identify and repair faults, while with preventive maintenance interventions targeted at critical assets, it will work to reduce the frequency of faults.

The **plan provides for the replacement of 100 km per year of medium voltage grid and 20 km per year of low voltage grid**, with the utmost attention to coordinate excavations to reduce the impact for citizens. The medium voltage grid will be redesigned with a new "sleeper" mesh, which will have a greater number of lines, but shorter and less loaded, from the current total length of 4,000 km to 2,400 km.

Integrated Water Service

The A2A Group, through its subsidiaries A2A Ciclo Idrico and ASVT, manages services related to the integrated water cycle in almost the entire province of Brescia. In all, in 2019 the Group distributed 54 million cubic metres of water. In the municipalities overseen for the sewage and purification service too, approximately 51 million cubic metres of waste water were treated.

Figure 21\_Plants of the Networks and District Heating BU for integrated water service

TYPE OF PLANTS	EXTENSION
Aqueduct network	4,019 km
Sewers network	2,569 km
Purifiers	57
Treatment capacity	51 Mm³

In 2019, actions continued to achieve the objectives of the Sustainability Plan that reflect an integrated logic, aimed at improving the entire service in terms of quality of water distributed, reduction of network losses and extension of the number of citizens served.

In order to reduce the actual losses, **about 36 km of the network were replaced** in 2019. A new "No Dig" technology for the repair of leaks without excavations (see page 126) has been successfully tested for the repair of pipes, which has allowed repairs to be carried out for a total volume of over 90 thousand m³/year.

Moreover, during the year, the search for hidden losses continued, with the systematic analysis of about 1,000 km of the grid (over 1/4 of the entire managed grid) and the work on over 70 losses not otherwise identifiable.

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As regards the detection of unaccounted for volumes (apparent losses), the installation of meters on fire-fighting utilities continued (over 600 in 2019), with an expected reduction in unaccounted for consumption of about 120 thousand cubic metres.

In 2019, about **22 thousand smart meters** were installed by A2A Ciclo Idrico and ASVT, for an overall total of about 47 thousand compared to a 2020-2024 plan that envisages a total target of about 170 thousand smart meters equipped with a transmission module for periodic remote communication of metered data.

In 2019, the **new Nuvolera purifier** came into operation, serving about 25 thousand equivalent inhabitants and connected to the sewer network of five surrounding municipalities. The start-up of the new purifier will allow a decisive improvement in the quality characteristics of the Naviglio Grande Bresciano, the receiving watercourse of the new purified waste water that until now has received a slurry that has only undergone physical pre-treatment. In addition, the work, which required an investment of around 3.5 million euro, makes it possible to overcome European infringement procedure no. 2014/2059.

The year 2019 also saw the partial collection of the sewerage network of the Municipality of Concesio to the network of Brescia, served by the Purifier of Verzano, with access to the purification service of about 4,500 new equivalent inhabitants. At an advanced stage, with completion of the works expected in August 2020, is also the construction of a new **purifier** in the Municipality of San Paolo in Brescia, capable of serving 6,000 equivalent inhabitants.

In January 2019, work began on the construction of the sewerage and water supply system for the Calvisano agglomeration, which by the end of the year, had reached 50% progress. At the same time, work began on the waterworks for 2 of the 3 wells of the civic aqueduct. The total planned Capex amount to approximately 72 million euro and are expected to last until 2023.

## ENERGY EFFICIENCY OF INTEGRATED WATER SERVICE PLANTS

Activities continue for the renewal and energy efficiency of the plants, both those related to the water service and those related to the purifiers. For aqueducts, particular attention has been paid to repumping with the installation of more efficient units and the renovation of the electrical power and control panels.

As far as purifiers are concerned, a consumption optimization project is underway that will lead to the inverterization of the motors serving the biological sector of about twenty plants. Five interventions have already been completed in 2019.

## Cogeneration plants and district heating networks

Through its subsidiaries A2A Calore & Servizi and Linea Green, the Group develops and manages the plants and **district heating network**<sup>1</sup> in Milan, Sesto San Giovanni (Mi), Novate (Mi), Cassano d'Adda (Mi), Brescia, Bovezzo (Bs), Concesio (Bs), Bergamo, Crema (Cr), Cremona, Lodi and Rho (Mi), for a length of 1,200 km, with a service capacity of over 467 thousand equivalent apartments and a volume of 112 million cubic metres served.

For the year 2019, the distributed thermal and cooling energy stood at a value in line with the previous year of 2,564 GWh.

On January 31, 2020, thanks to the agreement with Italgas (see page 74), the district heating system of the Municipality of Cologno Monzese (Mi), consisting of an 8 km distribution network and 52 heat exchange substations with heat consumption equal to approximately 26 GWh, was incorporated into the A2A perimeter.

1. Network consisting of a double pipe for the distribution of heat, in the form of hot or superheated water, located capillarly in the urban area.



Figure 22\_Plants of the Networks and District Heating BU for district heating service

TYPE OF PLANTS	NUMBER OF PLANTS	INSTALLED CAPACITY	U.M.
Cogeneration plants	11	132.6	MWe
		705.7	MWt
Thermal plants	21	651.6	MWt
Heat exchange	6	224.0	MWt
Heat pump	2	33.0	MWt

During 2019, the Group continued its plan for the development of district heating networks, which envisages **sustainable growth in the dissemination of the service** based on optimizing the use of traditional sources through highly efficient technologies, the recovery and valorization of heat from the combustion of non-recyclable waste or industrial processes, and the exploitation of the thermal potential of renewable sources.

Decarbonization plan for Brescia's environmental energy system: launch of the first thermal storage

Brescia's district heating network was the first to be laid and is still the largest in Italy. Over time, the network has developed to reach today a length of over 670 km of double pipe with a total of about 21 thousand buildings connected. The district heating system is powered by four major sources of thermal energy: the Brescia waste-to-energy plant, the Lamarmora power plant, the North plant and the waste heat recovery plant of the Ori Martin steelworks. It is estimated that the network is able to meet 70% of the city's demand for heat and hot water while avoiding the emission of over 400 thousand tonnes of CO<sub>2</sub> into the atmosphere. The focus is on the continuous updating of technologies: overall, A2A has invested 140 million euro over the last ten years in the continuous updating of the Brescia energy system's plants, with significant benefits in terms of reducing emissions: -71% nitrogen oxides, -87% dust, -91% sulphur oxides (2017 data compared to 2005). It is no coincidence that a European Community study has defined the district heating system in Brescia as a reference model in Europe for efficiency and environmental sustainability.

In 2019, the **decarbonization process** began, which will lead, through a demanding investment plan of **70 million euro**, to gradually replace the heat currently produced by the Lamarmora power plant from fossil fuels (coal and gas) with greener sources and to improve overall environmental performance. The plan, which will be developed over a four-year period, will **save 15 thousand toe** (tonnes of oil equivalent) **per year**, and further reduce emissions of pollutants compared to the current set-up: -50% for nitrogen oxides, -40% for dust and -90% for sulphur oxides. In 2019, the plan reached a first important milestone: the construction of a **new thermal storage tank at the Lamarmora power plant**. The storage tank has a volume of **5,200 m<sup>3</sup>**, a diameter of 20 metres and a height of 20 metres. It can contain water up to 97°C at atmospheric pressure. This type of device will play a key role in the decarbonization plan. In fact, since the heat demand of **users is much lower at night**, the system is usually forced to disperse waste heat during the night and to cover the peaks of daytime demand with all available heat sources, including large gas boilers. The thermal accumulations therefore allow to optimize this dynamic by working like big batteries. A2A Calore&Servizi has also planned to build two other 2,200 m<sup>3</sup> storage tanks at the North plant by 2020.

Another fundamental stage in the decarbonization plan will be the implementation by A2A Ambiente of **flue gas cleaning condensation at the waste-to-energy plant**, a technology that will also make it possible to recover heat from the flue gas treatment system of the Brescia plant, making about 150 GWh/year of additional heat available to the district heating network (about 50% of the need to "switch off" fossil fuels), without increasing the quantities of waste treated and at the same time reducing emissions.

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Figure 23 \_Extension of the district heating

	2017				2018			
	USERS* (NO.)	VOLUMES SERVED (MM³)	NETWORK DEVELOPMENT** (DOUBLE PIPE) KM	APARTMENT EQUIVALENTS	USERS* (NO.)	VOLUMES SERVED (MM³)	NETWORK DEVELOPMENT** (DOUBLE PIPE) KM	APARTMENT EQUIVALENTS
Province of Bergamo	614	6.8	74.7	28,100	647	7.0	74.8	29,100
Province of Brescia	20,487	42.2	671.0	175,800	20,584	42.3	670.7	176,200
Province of Milan***	3,389	49.7	330.9	202,300	3,495	52.6	339.4	219,021
Province of Cremona	721	6.4	76.5	26,700	741	6.6	76.9	27,500
Province of Lodi	206	2.9	26	12,100	214	2.9	26.6	12,200
Province of Varese	147	2.7	16.0	11,150	-	-	-	-
TOTAL	25,564	110.7	1,195	456,150	25,681	111.4	1,188.4	464,021

\* May not coincide with a single housing unit.  
\*\* The network is intended as the sum of heat transmission, distribution and supply pipes.  
\*\*\* In 2017, the Province of Milan also included the district heating service of Linea Reti e Impianti, at Rho Nord and Rho Sud.

An additional 60 GWh of low environmental impact heat can be obtained by connecting to the grid **new sources of heat recovered from industrial processes** (e.g. steelworks) active in the area.

Among the interventions concerning the Lamarmora power plant, there is also the construction by 2020 of a 250 kW plant for the supply of district heating pumps and the installation (which has already taken place) of a new high-efficiency filtering system to further reduce emissions of nitrogen oxides, which were already well below the legal limits.

### TEMPO, AN INTERNATIONAL PROJECT FOR GREENER AND GREENER DISTRICT HEATING

**Tempo** is an international project funded by the European fund Horizon 2020, which sees, among the 11 participants, A2A Calore & Servizi. The aim of the project is to find a way to **reduce the temperature of water distributed through district heating networks, from the current 120° to 80°C**. This would result in economic savings and environmental benefits for end customers, with equal comfort. It would also be easier to integrate renewable or low-temperature waste heat sources into the system.

The project started in 2017 and, for the first two years, the technicians of the member companies, including the international network Euroheat&Power, the Swedish company Noda and the Belgian company Vito, focused on the development of software, able to collect and process a huge amount of data from the district heating service, with the aim of transforming a rigid system into a flexible one.

The digital development phase is followed by the part of on-site application, for which 3 sites have been selected, including Brescia, due to its decades of experience in managing district heating.

In particular, a housing complex in the Fornaci district has been selected, where about 100 metres of new pre-insulated and underground piping will be installed, a container will be placed, fully equipped for the purposes of the research project, and, finally, the low temperature subsystem will be put into service. In practice, the station will be used to mix the hot water at 120°C coming from the supply pipes of the district heating network with the water at 60°C contained in the return circuit pipes. The water thus obtained at a temperature of about 80°C will be distributed to the users connected to the island with the new station. The analysis of the results of the experimentation should lead to answers both from a technological and economic point of view, also verifying the possibility of applying new business models to district heating. In November 2019, the periodic meeting of the Tempo project and the **DHC+ Meeting** (Technology Platform of **EuroHeat & Power** for research and innovation in district heating and cooling) was held in Brescia, at the waste-to-energy plant. The meeting was attended by about 70 people, not only directly involved in the Tempo project, but also members of **AIRU, Euroheat & Power, DHC+ and other European representatives**.

2019			
USERS* (NO.)	VOLUMES SERVED (MM3)	NETWORK DEVELOPMENT** (DOUBLE PIPE) KM	APARTMENT EQUIVALENTS
672	7.2	75	30,000
21,313	42.5	672	177,100
3,585	52.8	343	220,083
749	6.6	77	27,600
227	3.1	27	12,700
-	-	-	-
26,546	112.2	1,195	467,483

6.4 Cybersecurity

In order to implement the security processes and infrastructures within the Group, an organisational unit has been created dedicated to **cybersecurity**.

The activities carried out mainly consist of:

- define IT security **policies, processes and standards** to be applied within the Group;
- enable the secure design of services, applications and infrastructures through the **Security by Design** process, by means of which security measures are provided commensurate with IT risk;
- identify **potential security weaknesses** that, if exploited, would allow to obtain access to A2A Group information, and assess the associated IT risks, identifying and implementing appropriate mitigation actions (Vulnerability Assessment and Penetration Test on critical infrastructures and applications);
- analysing the access privileges associated with the systems/applications of the A2A Group to ensure that these methods are still based on a specific need, thus ensuring that tasks are carried out on the basis of the **principle of minimum privilege**, and in compliance with company policies and processes;
- designing and implementing the infrastructures for the protection of corporate **information security**, like anti-malware systems on workstations and networks;

- carry out **ongoing monitoring** activities of the security of the A2A Group through the Security Operation Center unit, i.e. through proactive analysis of information security systems and technologies (IPS, Firewall, Server, etc.), with the aim of promptly identifying and managing attempts at intrusion, attack or abuse of systems from the Internet and the Intranet.

Starting from 2017, a security monitoring and IT incident management service has been set up, which in 2020 will evolve into a highly specialized structure with the best skills and which will oversee all areas of Security Operations: Security Monitoring, Incident Handling, Security Platform Management and finally Active Defence (Security Assessment, Read teaming, Threat hunting).

It should be noted that 135 incidents of high and critical severity were monitored in 2019, none of which was such as to compromise the company's business. Of these, there are 2 cases of Data Breach managed in a timely manner and with an estimated impact that is not serious for customers. These occurrences, in the cases provided for by law, have been communicated to the relevant authorities and have not given rise to sanctions at the moment.

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# 7

## Natural capital



### INPUTS

111,122<sub>TJ</sub>  
Fuels including waste

294,406<sub>t</sub>  
Chemical products and materials

8.6<sub>Mm<sup>3</sup></sub>  
Water consumption

363<sub>GWh</sub>  
Energy consumption

### A2A SERVICES AND PROCESSES

#### EMISSIONS CO<sub>2</sub>

6.9<sub>Mt</sub>  
Scope 1

0.1<sub>Mt</sub>  
Scope 2

1.6<sub>Mt</sub>  
Scope 3

3.5<sub>Mt</sub>  
Avoided CO<sub>2</sub> emissions

8.1<sub>Mm<sup>3</sup></sub>  
Water discharges

353 thousand tonnes  
Secondary raw material produced

### OUTCOME

CIRCULAR ECONOMY

Valorization of waste as a resource, from collection to disposal, favouring, where possible, the recovery of materials, the minimization of waste sent to landfills, also thanks to waste-to-energy; development of separate waste collection, efficient management of landfills, sludge and waste water, also through the adoption of biogas production technologies.

RISK FACTORS FOR SUSTAINABILITY

- Failure to reach target:
  - waste recovery and treatment
  - separate collection
- Failure to take into account impacts of circular economy activities
- Missed business opportunities related to circular economy
- Failure to implement new institutional and EU requirements regarding the circular economy
- Incorrect transposition of the EU directives of the "circular economy package"

OPPORTUNITY FACTORS FOR SUSTAINABILITY

- Regulatory framework favourable to circular economy development**
- Changing consumer behaviour when buying goods and services**

MANAGEMENT APPROACH

- Full integration between Sustainability Plan and Business Plan
- Adoption of best waste management and treatment technologies
- Growth strategy planning in circular economy
- Listening and dialogue with local and institutional stakeholders

EFFICIENT WATER USE

Reducing water leaks along the distribution network and adopting policies and best practices that facilitate the careful and sustainable consumption of water resources.

RISK FACTORS FOR SUSTAINABILITY

- Non-achievement of the goals of the Sustainability Plan
- Possible interruptions to the integrated water service
- Little attention to optimizing water consumption
- Lack of investment and innovation on the issue
- Use restrictions in hydroelectric, due to competition for other uses

OPPORTUNITY FACTORS FOR SUSTAINABILITY

- NOT YET IDENTIFIED**

MANAGEMENT APPROACH

- Full integration between Sustainability Plan and Business Plan
- Technological innovation for network leak detection
- Development of initiatives aimed at optimizing procurement and efficient management of the water resource
- Awareness raising initiatives on responsible water consumption

QUALITY OF DISTRIBUTED WATER

Efficient management and consumption of water resources with specific reference to the biological, chemical and physical quality of the water distributed in the various municipalities served by the Group.

RISK FACTORS FOR SUSTAINABILITY

- Non-respect of the quality levels of water distributed and discharged, established by law
- Failure to implement new needs of the communities served

OPPORTUNITY FACTORS FOR SUSTAINABILITY

- NOT YET IDENTIFIED**

MANAGEMENT APPROACH

- Continuous monitoring of the quality of water withdrawn, distributed, treated and discharged
- Use of state-of-the-art water treatment technologies

<div>2019 ACTIONS</div> <div>Start-up of the Muggiano plastic treatment plant (pages 70, 94)</div> <div>Acquisition of Electrometal (page 69)</div> <div>Adhesion to EC100 (page 128)</div> <div>Sewage sludge valorization (page 70)</div> <div>Premiums for separate collection and waste reduction (page 157)</div> <div>Distribution of water bottles in schools (page 173)</div>	<div>SUSTAINABILITY PLAN ACTIONS</div> <div></div> <div>CIRCULAR ECONOMY</div> <div>Recovery and treatment</div> <div>Reduction policies</div>	<div>Letter to stakeholders</div> <div>Methodological Note</div> <div>1 The A2A Group and its business model</div> <div>2 Governance</div> <div>3 Sustainability strategy</div> <div>4 Stakeholder engagement and materiality analysis</div> <div>5 Financial capital</div> <div>6 Manufacturing capital</div> <div>7 <b>Natural capital</b></div> <div>Group environmental management</div> <div>Natural capital in the Environment Business Unit</div> <div>Natural capital in the Generation and Trading Business Unit</div> <div>Natural capital in the Networks and District Heating Business Unit</div> <div>8 Human capital</div> <div>9 Intellectual capital</div> <div>10 Relational capital</div> <div>Independent Auditor's Report</div> <div>GRI Content Index</div>
<div>2019 ACTIONS</div> <div>Network loss reduction programmes (page 76)</div> <div>Acquasicura Project (page 155)</div> <div>Agreement in water stressed areas (page 91)</div>	<div>SUSTAINABILITY PLAN ACTIONS</div> <div></div> <div>CIRCULAR ECONOMY</div> <div>Water</div>	
<div>2019 ACTIONS</div> <div>New purification plants (page 70)</div> <div>Environmental training courses (page 87)</div>	<div>SUSTAINABILITY PLAN ACTIONS</div> <div></div> <div>CIRCULAR ECONOMY</div> <div>Water</div>	

FIGHTING CLIMATE CHANGE

Promotion of strategies to reduce atmospheric emissions and develop renewable energies; development of energy efficiency initiatives in the Group plants and sites and in final uses, such as: district heating, LED lighting and commercial offers linked to the sale of renewable energy and value added services.

RISK FACTORS FOR SUSTAINABILITY

- Failure to reach Group targets
- Lack of attention to decarbonization and energy efficiency issues
- Failure to reach the targets defined by PNIEC or EU
- Possible occurrence of extreme natural phenomena that may cause impacts on production activities or services

OPPORTUNITY FACTORS FOR SUSTAINABILITY

NOT YET IDENTIFIED

MANAGEMENT APPROACH

- Full integration between Sustainability Plan and Business Plan
- Offering innovative energy services and those with a reduced impact on climate
- Renewable energy investment plans
- Emissions strategy in line with COP21

SUSTAINABLE MOBILITY

Increasing the efficiency of transport and logistics in everyday operations, with specific reference to limiting the noise and emissions in residential areas during waste collection operations; development of infrastructures to promote new electric and sustainable mobility.

RISK FACTORS FOR SUSTAINABILITY

- Noise emissions
- Fuel consumption and emissions of the vehicle fleet
- Reaching targets on sustainable mobility

OPPORTUNITY FACTORS FOR SUSTAINABILITY

NOT YET IDENTIFIED

MANAGEMENT APPROACH

- Preventive maintenance of vehicles and containment of air and noise emissions from company vehicles
- Replacement of vehicles with less environmental impact
- Installation and operation of charging systems for electric vehicles
- Full integration between Sustainability Plan and Business Plan

SAFEGUARDING BIODIVERSITY

Safeguarding the landscape heritage and the territories in which the Group's plants or sites are present, also thanks to analyses and monitoring with a view to minimizing the impacts on biodiversity and the most important habitats.

RISK FACTORS FOR SUSTAINABILITY

- Possible gaps in the controls on the environmental impacts of the plants, activities or services offered by the Group
- Compliance with “Ecological Outflows” regulations
- Landfill leachate management

OPPORTUNITY FACTORS FOR SUSTAINABILITY

NOT YET IDENTIFIED

MANAGEMENT APPROACH

- Monitoring procedures and systems to minimize possible impacts on biodiversity
- Containment plans and programmes dedicated to emergencies
- Collaboration with entities, institutions and associations to protect the territory



<div>2019 ACTIONS</div> <div>New Emission Reduction Policy 2030 (page 90) Electricity grid resilience plan (page 75) New photovoltaic capacity (pages 72, 148-149) Safety of hydroelectric plants (page 72)</div>	<div>SUSTAINABILITY PLAN ACTIONS</div> <div> DECARBONISATION District heating Emissions Renewables</div>	<div>Letter to stakeholders</div> <div>Methodological Note</div> <div>1 The A2A Group and its business model</div> <div>2 Governance</div> <div>3 Sustainability strategy</div> <div>4 Stakeholder engagement and materiality analysis</div> <div>5 Financial capital</div> <div>6 Manufacturing capital</div> <div>7 <b>Natural capital</b> <i>Group environmental management</i> <i>Natural capital in the Environment Business Unit</i> <i>Natural capital in the Generation and Trading Business Unit</i> <i>Natural capital in the Networks and District Heating Business Unit</i></div> <div>8 Human capital</div> <div>9 Intellectual capital</div> <div>10 Relational capital</div> <div>Independent Auditor's Report</div> <div>GRI Content Index</div>
<div>2019 ACTIONS</div> <div>New vehicles with low environmental impact for Environment BU and Networks &amp; District Heating BU (page 94) New Group electric car charging HUB (pages 149-150) E-Moving (pages 149-150) Corporate carpooling (page 119)</div>	<div>SUSTAINABILITY PLAN ACTIONS</div> <div> DECARBONISATION Sustainable mobility</div>	
<div>2019 ACTIONS</div> <div>Environmental risk assessment methodology (p. 87) Mapping of Group plants and networks to assess impacts on biodiversity (page 92)</div>	<div>SUSTAINABILITY PLAN ACTIONS</div> <div> CIRCULAR ECONOMY Biodiversity</div>	

## 7.1 Group environmental management

All of the Group's business sectors share the need for **environmental governance** that is respectful and dedicated to protecting the environment, from the necessary legislative compliance to the adoption of voluntary management tools - ISO 14001 and EMAS certifications - to better meet the needs expressed by the current social/environmental context.

This governance is based on the awareness that the withdrawal of resources from the environment - water, gas, fuel - by the various businesses of the Group must be minimized and compensated and enhanced by the return of useful services to local communities.

In this context, in 2019, A2A continued with its integrated approach to environmental governance, which was made explicit and confirmed both in the **Quality, Environment and Safety Policy** and in the Sustainability Policy and Plan (see page 24), pursuing the objectives and strategies identified:

- environmental protection through the systematic identification of the potential risks, the prevention of potential negative effects and the adoption of measures to limit pollution phenomena, including through the use of the best techniques available;
- limitation of atmospheric emissions helping, with the decarbonization and energy efficiency process launched, achieve the national and European Community greenhouse gas emissions reductions objectives, thereby combating climate change;
- sustainable use of resources, optimizing their use and reducing waste;
- design of services and waste management aimed at contributing to the full realization of a circular economy by encouraging the recycling of materials and products;
- protection of biodiversity and ecosystems.

Under the scope of environmental management, **26 Group companies** are UNI EN ISO 14001 certified and **28 sites are EMAS registered** and **4 sites are ISO 50001 certified** (energy efficiency).

A2A recognizes that the development and dissemination of an environmental culture, and more generally of an HSE (Health, Safety, Environment) culture, of the organization is a fundamental prerequisite for the Company's governance attentive to sustainability and for the creation of value for the community.

With a view to fostering the development of the HSE culture within Group companies, numerous initiatives were launched in 2019, and those launched in previous years continued:

- development and application of the new environmental risk assessment methodology, as support for a more precise and complete knowledge of the risks and opportunities for the environment related to the activities managed by the Group's businesses;
- raising awareness of HSE delegates regarding HSE risk management and the knowledge of the tools available to exercise them effectively;
- training of employees, beyond regulatory updating, to acquire the skills necessary to carry out activities with increasing attention to environmental protection;
- sharing and disseminating information on HSE issues and the impact they have on the Group's businesses and the local contexts in which they operate, to raise everyone's awareness regarding the importance of their contribution to the sustainability of the Group's activities;
- dialogue with other operators at national level, to share good examples of HSE risk management, learn from those who are ahead and contribute to the general increase in the level of HSE governance;
- monitoring, in order to have information and tools to know the current level of HSE culture, to recognize its evolution and to be able to evaluate the effectiveness of the interventions implemented to increase it.

In 2019, the application of the new environmental risk assessment methodology continued and its implementation in the Arial application, developed to support the management of operational activities. In particular, the pilot application phase, conducted on a number of companies and plants representing the various types of business, was completed.

In this phase, the necessary elements have been collected both for the fine calibration of the instrument and for the possible revision of the IT application. Towards the end of the year, planning for the next phase of extension to all Group companies also began.

## ENVIRONMENTAL RISK ASSESSMENT METHODOLOGY

The new environmental risk assessment methodology is one of the voluntary tools that the Group is adopting to promote an increasingly greater integration of Environment, Health and Safety issues in business management.

The methodology is based on a dynamic analytical approach, integrated with the corporate areas that directly manage operational activities and with the corporate functions that deal with sustainability, risk management and compliance 231. It allows to know, identify and manage more effectively the activities that can generate significant interactions with the environment, also taking into account the actual environmental performance in the management of the activities. The methodology provides the necessary input to identify the needs and priorities for managing any resulting risks to the environment.

In terms of raising awareness on HSE issues, workshops dedicated to HSE delegates were started some years ago, with the aim of helping and training them to effectively interpret their role in managing HSE risks and opportunities. In fact, the managers who, within the Group Companies, have the economic and management tools for the organization and performance of activities, starting from the top management of the Companies themselves, are involved.

The sessions held in 2019, which involved 144 people over 6 days, were dedicated to the topic of delegating functions and, in particular, to the tools available to the delegator and the delegate to be able to exercise them effectively for the purposes of HSE risk management.

Environmental training activities continued in 2019, including the updating of the catalogue of **environmental training courses**.

The training programme covered numerous topics, both in specific areas, such as the remediation of contaminated sites, and in more general areas, such as the authorization aspects of plants and activities.

In addition to illustrating current environmental legislation and the Group's guidelines for the management of specific issues, the objective of the training is to contribute to creating awareness of environmental issues, even beyond compliance with regulations, by fostering the development of a culture of environmental sustainability, based on the daily management of the various businesses.

The activation of HSE culture development initiatives within the Group, summarized in this paragraph, requires the definition of criteria to know the current level of culture of the organization (state of the art) and indicators to monitor its evolution, so as to assess the effectiveness of the initiatives activated.

To enable the definition of state of the art, a **pilot survey on HSE culture** was launched in 2019 in collaboration with the Sant'Anna High School in Pisa.

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## HSE CULTURE

As part of the **HSE Laboratory**, an initiative of the Sant'Anna High School in Pisa was promoted, in which several important Italian companies participate, including A2A, with the aim of developing knowledge of innovative approaches and tools for HSE challenges, providing support in identifying efficient management tools capable of impacting HSE performance and creating a permanent forum for discussion. The current project aims to propose and calibrate instruments to measure HSE culture.

What is HSE culture?

*"HSE culture represents the core values of an organization with regard to the importance of HSE issues and the underlying beliefs and assumptions that guide behaviour and decision-making" (Ragione, 1998). "HSE culture not only shapes the externally visible elements of an organization, but also 'unspoken' things or reflected only in symbolic actions" Griffin&Neal, 2017*

As part of the project, a sample survey was launched in December, involving the staff of the Generation and Trading BU, the Valtellina and Cassano plants and the Engineering structure. On the basis of the results, available by the first quarter of 2020, the extension of the project to other entities of the BU and the rest of the Group will be assessed.

The dissemination of the culture of environmental sustainability also involves initiatives to promote the adoption of solutions of **sustainable mobility in commuting**. Among others, the Corporate Car Pooling Project – PASSO IO, the participation in the European Sustainable Mobility Week, the competition "Come to work without a car", the conventions for Car Sharing and public transport (see also pages 118-119, 132).

## BIKE CHALLENGE 2019 AND ADHESION TO OTHER INITIATIVES

In 2019, as for some years now, the A2A Group joined the Bike Challenge, the only challenge in Italy for bike-friendly companies, now in its fifth edition. The aim of the competition is to encourage "Bike to work" among workers, while at the same time raising awareness among companies to adopt policies and services in favour of those who choose to go to work by bike.

Thanks to the 127 people of the Group who participated, covering more than 200,000 km by bike during the challenge period, 10 kg of CO<sub>2</sub> were saved. A2A came just a step away from the podium, taking fourth place in the ranking of companies with over 2,000 employees.

During the year, the A2A Group also took part in other initiatives to promote the use of bikes, promoted by the Municipality of Brescia:

- "At work by bike" on the occasion of World Bike Day on June 3, 2019;
- "Come to work without a car" from September 16 to 22, on the occasion of European Sustainable Mobility Week.



Climate change and the management of atmospheric emissions

The majority of the Group's climate-changing emissions are CO<sub>2</sub> emissions from combustion processes. These decreased by 7%, compared to 2018, thanks to lower use of fossil fuels. At the same time, the production of energy from renewable sources increased, thus reducing the Group's **emission factor**, equal to **347 g/kWh (-9% compared to 2018)**, calculated as emissions from all combustion processes compared to the sum of electricity and thermal energy produced.

Overall, emissions of **Scope 1**<sup>1</sup> amounted to approximately **6.9 million tonnes**. The contribution of methane that escaped capture in landfills also decreased (-13% compared to 2018), while the value of natural gas emissions from distribution networks increased by 5% due to a greater number of accidental dispersions. Emissions from the vehicle fleet were substantially unchanged (2% increase).

The remaining contribution to Scope 1 emissions is represented by emissions related to accidental leakage of fluorinated gases from electrical switches and cooling equipment which, resulting from equipment failures, have a variable trend over time.

There were no substantial changes in **indirect emissions (Scope 2)**, due to the purchase of energy, the absolute value of which, about **108 thousand tonnes**, decreased 2% compared to 2018.

In 2019, **Scope 3 emissions** are reported to be **1.6 million tonnes**. This value includes both emissions from plants managed for third parties (boilers for heating buildings, the waste-to-energy plant in Acerra and STIR in Caivano), which are just over 700 thousand tonnes, and also the greenhouse gas emissions produced during refining and extraction of the fuels used by the Group (equal to approximately 853 thousand tonnes of CO<sub>2</sub>, which decreased thanks to lower use of coal).

Figure 24\_Greenhouse gas emissions declaration<sup>1</sup> - tonnes of CO<sub>2</sub>eq

	2017	2018	2019
Total greenhouse gas emissions - Scope 1	8,057,008	7,491,395	<b>6,948,463</b>
Indirect greenhouse gas emissions - Scope 2	122,286	109,807	<b>108,103</b>
Other indirect greenhouse gas emissions - Scope 3	1,780,755	1,677,882	<b>1,616,284</b>

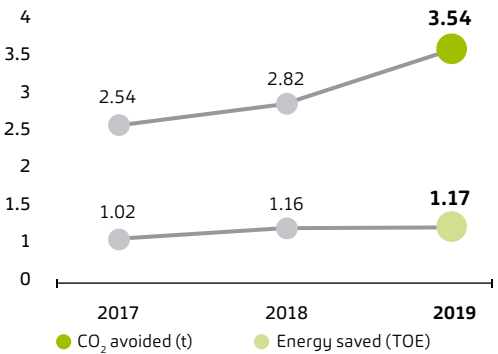
Thanks to the use of the best technologies available, such as the combined production of electricity and thermal energy and the creation of integrated energy and environment systems, the Group can guarantee savings in CO<sub>2</sub> emissions with respect to the same energy production with the average of the national plants. This emission saving is calculated using a methodology applicable to all the Group's energy plants and processes. This method is updated once a year on the basis of the national thermoelectric emission factors and parameters published by Terna and ISPRA.  
**In 2019, avoided CO<sub>2</sub> emissions amounted to 3.5 million tonnes, 25% more than the value calculated for 2018.**

Together with the methodology for calculating avoided CO<sub>2</sub> emissions, a calculation model has also been developed for energy savings, i.e. for measuring the tonnes of oil equivalent saved

thanks to the production of the Group's plants. In 2019, energy savings exceeded **1 million toe**.

25 Group plants are subject to the Emissions Trading Scheme with a portion of emissions authorised of 69,599 tonnes of CO<sub>2</sub>eq<sup>1</sup>.

Figure 25\_Avoided emissions of CO<sub>2</sub> and energy savings in energy processes



1. CO<sub>2</sub> emissions from combustion processes, vehicle use, methane dispersed from landfills, natural gas leaks from distribution networks, fluorinated and ozone gases leakage.

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## A2A'S CO<sub>2</sub> EMISSION REDUCTION OBJECTIVES APPROVED BY SCIENCE BASED TARGET INITIATIVE (SBTi)

In 2019, A2A revised its **CO<sub>2</sub> reduction target to 2030** as part of its Sustainability Policy, supported also by the Group's new strategy which envisages significant development in the field of renewables, the optimization of gas-fired combined cycle plants and the reconversion of conventional coal-fired and fuel oil-fired plants.

The activity for the preparation of the target coordinated by CSR, saw the participation of the functions of Finance, Planning and Control, Strategy, M&A, Bidding and Dispatching, Portfolio Management & Trading and the BUs directly involved. The focal and most challenging point was the **creation of a long-term Group scenario**, which could take into account various aspects, such as: the security of the Italian electricity system, national and international long-term energy strategies, the starting generation mix, and finally the verification of the alignment of the emission trend to COP21.

The new target, approved by the Board of Directors of A2A on September 26, 2019, provides by 2030, for a **46% reduction in direct greenhouse gas emissions per kWh produced compared to 2017** (emission factor at 2030 equal to 230 gCO<sub>2</sub>/kWh<sub>p</sub>).

Finally, the new target was submitted to the **Science-Based Target initiative (SBTi)** - an initiative that stems from the collaboration between the Carbon Disclosure Project (CDP), the United Nations Global Compact (UNGC), the World Resources Institute (WRI) and the World Wide Fund for Nature (WWF) - to **verify its alignment with the indications of the Paris Agreement (COP21)**. The Science Based Target initiative was created to guide companies in setting ambitious climate change mitigation targets to ensure that their strategy is in line with scientific objectives.

The commitments also include a 100% reduction in Scope2 emissions by 2024, and a 20% reduction in Scope3 by 2030 (more specifically in the "Use of sold products" and "Purchased goods" categories).

The increase in **new renewable installed capacity**, which is the fundamental lever for containing the emission factor, is provided for in the Business Plan (500 MW by 2024 and 1.6 GW by 2030).

Below is the status of the emission factor, based on the scope required by SBTi.

Figure 26\_SBT Target Emission Factor

	2017	2018	2019	2030 OBJECTIVE
gCO <sub>2</sub> /kWh	425	384	345	230

On March 2, 2020, **SBTi declared** A2A's direct and indirect CO<sub>2</sub> emission reduction **targets** (Scope 1-2) **aligned with the reductions required to limit the increase of global warming to 2°C**.

In addition, A2A's objective of reducing indirect emissions, linked to its value chain (Scope 3), is also in line with SBTi criteria and in line with international best practice. To date, the **Group is the only multi-utility at Italian level** recognized target alignment by SBTi.

For the Group this is a great achievement, significant in the sustainability path undertaken in 2016 with the definition of the Sustainability Policy and Plan.

## The water resource

The Group manages the collection and distribution of drinking water in Brescia and its province and collects and returns to the environment significant quantities of water from surface water bodies for the production of energy.

In addition to these, there are other uses such as: street cleaning, washing of sweeping earth and the means used for services to the citizens, the regeneration of water treatment plants, the cooling of combustion ashes. Water is also the fluid with which district heating and cooling services are provided to users.

Specifically, the Group makes the greatest possible use of water, through the recovery of rainwater for irrigation of green areas, the filling of fire tanks and the recycling of washing water.

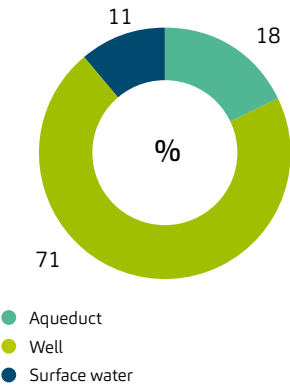
The other methods for making responsible use of the water resource adopted on a plant level and in management of activities, include:

- procurement by means of withdrawal from dedicated wells for the plants;
- reduced consumption of drinking water and, as far as possible, limited to sanitary uses;

- use of reduced water consumption washing technologies;
- return to the body of water of the derived waters for cooling or hydroelectric production without introduction of pollutants;
- development of a plan to reduce leakage from aqueducts.

**In 2019, the Group as a whole used 8.6 million m³ water, 71% of which came from wells.**

Figure 27\_ Water resources used (thousands of m³)



The use of water is an issue that has developed growing sensitivity on the part of the international community. Several ethical indices require reporting on water use with particular reference to **areas subject to “water stress”**, understood as territories where water availability for humans and ecosystems reaches a critical level. The new GRI 303 standard (mandatory from 2021) also focuses on water resource management in so-called “stressed” areas. In 2019, the Group therefore adopted a criterion to identify those areas where it operates with the greatest water stress. The Supplement to the document contains tables reporting the Group's performance in areas subject to water stress.

The World Research Institute **Aqueduct Tool** has been selected as the source for the identification of such areas on Italian territory. With regard to the production sector, it was decided to consider as “high risk” geographical areas regions such as Abruzzo, Sicily and Calabria. With reference to the water service, the territories of the Mountain Communities in the Province of Brescia have been identified as subject to such stress.

In Abruzzo, where the Gissi Thermoelectric Power Plant is located, water consumption is very limited. In fact, the use of consortium or well water is for industrial process consumption (e.g. steam production) and to comply with environmental adaptation plans.

However, it should be noted that the classification of water stress area conferred to the Region of Sicily depends on the availability of fresh water; therefore, the salt water withdrawals made by the San Filippo del Mela power plant are not a critical aspect.

Withdrawals for hydroelectric production in the Calabria Region, on the other hand, are an element for the attention of local communities (see box for more details).

### AN AGREEMENT IN WATER STRESSED AREAS

A2A is working on an agreement to remodel its irrigation capacity in Calabria, where it currently holds water derivation concessions for hydroelectric use in the Arvo and Ampollino basins of the Sila Massif.

In more recent years, Ionio Crotonese reclamation consortium, which represents the interests of the agricultural sector of the Crotonese territory, has made requests for an increase in the quantities released due to the changed agricultural practices, but also because the agricultural sector is penalized by the ongoing climate change and the progressive aging of the irrigation network with consequent losses. In addition, there is known phenomena of unauthorized water withdrawal, particularly in the area of the Sila plateau, which is also detrimental to downstream farmers.

In the face of these increased needs, which are added to the increase in releases to guarantee the Ecological Outflow, determined by recent legislation, the Region has agreed with A2A year after year on additional releases of water with respect to those provided for in the Convention, given the continuing need for irrigation in the agricultural sector.

A2A has made itself available to set up a discussion table with the Region in order to update and supplement the Convention on the basis of reciprocal commitments such as to best meet the irrigation needs of the agricultural sector in compliance with acquired rights.

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The distribution of drinking water in areas subject to water stress is not a potential competitive factor with local communities or ecosystems, but a critical factor in the provision of the service. At management level, therefore, the integrated water cycle companies maximize their commitment to service quality and to reducing network water losses. **To have an idea of the volume managed in areas subject to water stress, we report the value of water withdrawn in the Mountain Communities, equal to 19,692 thousand m<sup>3</sup>.**

Attention to biodiversity and the landscape

The A2A Group operates in harmony with regional, natural and cultural features, and is aware of the extraordinary wealth of biodiversity present. Some Group plants are located in or near sites characterised by high natural value, parks or protected areas: for example in the Parco Regionale Adda Nord, in the Parco regionale del Mincio, in the Parco Nazionale dello Stelvio and in the Parco Nazionale della Sila. **These parks record the presence of more than 40 species included on the Red List of the International Union for the conservation of Nature (IUCN).**

In order to minimise the environmental impacts, the A2A Group takes specific action to protect and safeguard the environment, also carrying out interventions to improve the territory and assessing the impact on the landscape context. In line with the National Sustainable Development Strategy, made official in 2017, A2A sets itself the aim of optimising the natural component, carrying out interventions that foster the knowledge and, therefore, the conservation of the local natural heritage.

With these assumptions in mind, **in 2018, A2A launched a project to safeguard biodiversity** as part of the Sustainability Plan. In 2019, in collaboration with the Group's various Business Units, **mapping of the Group's plants and networks** was carried out to identify the potential interference they generate with respect to the protected areas located in their vicinity. To this end, geo-referenced mapping has been carried out, using the GIS system, with which the areas of potential interference have been graphically

intercepted, correlating the location of plants and networks with respect to protected areas located near or adjacent to the sites, such as, for example, Natura 2000 Network, IBA areas (Important Bird and Biodiversity Area, i.e. areas considered important habitats for the conservation of wild bird populations), nature reserves, natural monuments (individual elements or areas characterized by a particular naturalistic or scientific value that makes them subject to protection), etc. Knowledge of potential interferences is a starting point to operate not only in compliance with current legislation but also with the aim of ensuring constant attention to the environment and protecting biodiversity.

In detail, the methodology adopted to identify possible interferences was based on an overlapping criterion between the areas of influence of the sites and networks managed by the Group, understood as areas in which a given plant/network/service could have effects on ecosystems, and the system of protected areas.

The areas of influence have been established of variable amplitude according to the type of activity carried out on the site, considering the technical-administrative characteristics of the plants and networks, including subjecting them to Environmental Impact Assessment or Ecological Impact Assessment and the type of environmental interactions generated (emissions into the atmosphere, noise, water abstraction, etc.) Using the method described above, **a total of 120 sites and activities** managed by the Group were **analyzed, identifying which have direct interference, i.e., are located within protected areas, and which have indirect interference, i.e., whose area of influence intersects a protected area.**

The analysis carried out shows that 46 sites have potential interference with the system of protected areas; said interference not only takes into account criteria of adjacency or overlap, but also wider areas of possible influence.

Of these 46 sites, 5 are located within protected areas and 3 are networks that have stretches in protected areas. The following table shows the main data referring to the latter sites:

Figure 28\_Group sites and activities with interference on protected areas

ELEMENT TYPE	NUMBER OF DIRECTLY INTERFERING SITES/ NETWORKS	ACTIVITIES PERFORMED	REGION	INTERFERING AREA SURFACE*/ INTERFERING NETWORK STRETCH LENGTH	TYPE OF PROTECTED AREAS
Production sites	1	biogas combustion**	Campania	0.37 km <sup>2</sup>	Natura 2000 Network National network (EUAP)
Production sites	4	hydroelectric production	Calabria Friuli Venezia Giulia Lombardy	1,005 km <sup>2</sup>	Natura 2000 Network IBA National network (EUAP)
Networks	3	distribution of gas and electricity	Abruzzo Lombardy	289 km	Natura 2000 Network IBA National network (EUAP)

\* Note: for hydroelectric systems, the interfering surface is the intersection of the surface of the protected area and the surface of the catchment area underlying the river rod where the plants are located, it is not their actual surface (much more limited).  
\*\* The plant identified was sold in November 2019.

7.2 Natural capital in the Environment Business Unit

Preserving Natural capital means first and foremost reducing the use of raw materials and natural resources. When this objective is combined with business, a virtuous circle is created that makes it possible to provide an essential service for the community, such as municipal sanitation, preserving both natural resources provided by Ecosystem Services, such as cellulose of vegetable origin, and those, limited and therefore more valuable, extracted from man: oil and minerals that give rise to plastics and fertilizers. This is what the Environment Business Unit achieves, which collects, separates and recovers the differentiated fractions consisting of paper, glass, plastic and wetted materials giving rise to the so-called secondary raw materials such as paper, glass and compost (already ready for new use) and the so-called plasmix, a highly selected plastic ready for use in special plants that convert it into the raw material ready to be moulded.

Separate collection of municipal waste in 2019 showed a further **increase, especially in the municipality of Milan, where it rose from 59.7% in 2018 to 61.5%, reaching an average Group value of 68.4%** (+0.8% separate collection compared to the previous year). The already very high values of separate waste collection achieved in the smaller capitals are basically stable.

We also note the excellent results achieved by Aprica in two Ligurian municipalities, which entrusted the management of the municipal sanitation service to the Brescia-based company in February 2019. The Rapallo and Zoagli separate collection index rose from 47% and 28% in 2018 to an average index of 58.5% for the two locations for 2019 (partial figure).

Figure 29\_Separate waste collection\*

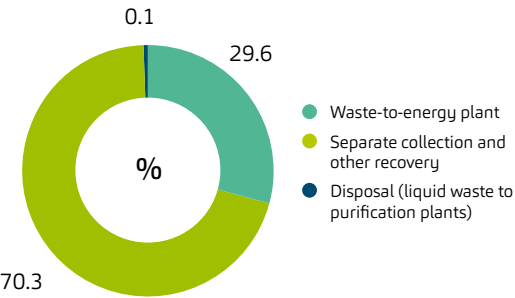
	2017		2018		2019	
	QUANTITY COLLECTED (t)	INDEX %	QUANTITY COLLECTED (t)	INDEX %	QUANTITY COLLECTED (t)	INDEX %
Bergamo	44,689	71.2%	45,536	71.4%	44,401	71.3%
Brescia	77,043	67.7%	83,869	73.0%	82,369	72.2%
Como	28,523	72.1%	29,168	71.8%	29,639	70.3%
Cremona	27,109	73.4%	28,886	75.0%	28,887	75.0%
Lodi	13,857	73.0%	14,472	74.1%	15,054	75.4%
Milan	361,868	53.8%	415,230	59.7%	431,518	61.5%
Varese	26,590	66.2%	n.a.	n.a.	n.a.	n.a.
Province of BG	5,789	70.8%	5,949	70.6%	5,640	72.6%
Province BS	188,945	72.8%	175,434	77.8%	170,297	77.7%
Province CO	n.a.	n.a.	n.a.	n.a.	10,371	79.8%
Province CR	52,787	73.6%	58,667	80.2%	61,856	80.3%
Province LO	29,210	69.7%	26,193	76.3%	25,012	78.4%
Province MN	27,182	88.0%	33,700	87.8%	33,879	87.8%
Province of MI	83,523	60.5%	106,160	66.2%	97,275	67.4%
Province of VA	25,079	74.7%	n.a.	n.a.	n.a.	n.a.
Province GE (Rapallo and Zoagli)	n.a.	n.a.	n.a.	n.a.	9,922	58.5%
Total/average	992,195	63.2%	1,023,265	67.6%	1,046,118	68.4%

\* The data refers to only the municipalities where A2A is the sole party assigned the service and for the entire year; a further 36,182 t of separated fractions was collected in the other municipalities. The quantity collected and differentiated collection rate have been calculated on the basis of the indications of the Res. by the Reg. Council (Lombardy) April 21, 2017, no. X/6511

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In 2019, only 0.1% of the waste collected in the performance of urban sanitation services was not recovered as material or energy and not even this small percentage was sent to landfill because, since it is water that separates itself from materials from street sweeping activities, it was treated in purification plants.

Figure 30\_Final destination of municipal waste collected



The recovery plants and platforms received a total of approximately **1,075,000 tonnes** of waste, **2%** more than in 2018. They treat the fractions from separate collection and industrial waste, most of which can be similar to municipal waste. In these plants, secondary raw materials ready for new use of almost **353 thousand tonnes** and fractions further recoverable in other plants including about **52 thousand tonnes** of plasmix were obtained in the new plastic recovery plants in Cavaglià and Muggiano.

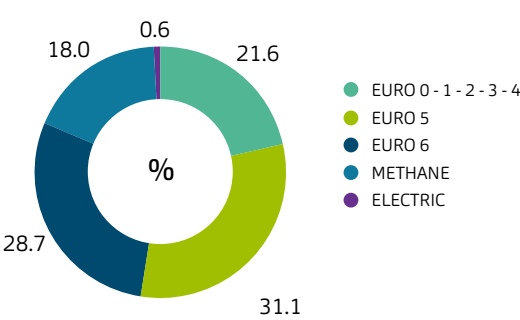
Moreover, considering that the only alternative to the waste-to-energy of this fraction would have been to send it to landfills with the formation of methane and CO<sub>2</sub> (biogas), the calculated amount of carbon dioxide avoided (**1,547,039 tonnes**) is also considerable.

Electricity produced from waste in 2019 was 7% of the total electricity produced by the Group, while thermal energy from waste accounted for 58% of total thermal energy produced and allocated to the district heating networks. The energy yields of waste-to-energy waste are broadly stable, with an **average of 759 kWh of electricity** and **823 kWh of thermal energy** per tonne of waste treated.

## The energy resources: transport fuels, fuels and electricity

In 2019, the gradual replacement of less performing waste collection and street sweeping vehicles with vehicles that meet modern emission standards continued. The share of green collection vehicles (EURO 6, methane and electric) grew from 42% in 2018 to over 47%.

Figure 31\_Composition of the waste collection vehicle fleet



The modernization of the vehicle fleet therefore led to higher consumption of natural gas per vehicle in 2019 (145 TJ, +31% compared to 2018), corresponding to 23% of total fuel (643 TJ).

Finally, the energy contribution due to waste entering the waste-to-energy plants is significant and substantially unchanged (21,035 TJ), while there has been a decrease in biogas (428 TJ, -12% compared to 2018), also due to the natural decay of the resource following the disappearance of the degradation processes of landfills after operational management.

## Water, chemical products and materials

There are no changes in the quantities of water supplied, amounting to about 3.6 million m<sup>3</sup>, mainly from wells (about 3.1 million m<sup>3</sup>), required for waste-to-energy plants and municipal sanitation.

As always, among **chemical products and materials**, the greatest consumption is recorded for inert materials (sand, clay, cement) and solid neutralizers (sodium bicarbonate, lime, etc.) for a total of about 251 thousand tonnes out of a total of over 266 thousand. There was a decrease in the consumption of ammonia solution (5,002 t, about 1,200 t less than 2018), thanks to a more regular operation of waste-to-energy plants, where it is used for nitrogen oxide abatement.

Atmospheric emissions

The emissions into the atmosphere of the Environment BU are basically those coming from the processes of waste-to-energy and biomass combustion.

The emission concentrations of waste-to-energy plants are monitored by means of continuous monitoring systems (EMS type) or discontinuous monitoring systems (periodic sampling and analysis).

The average daily emissions are continuously updated and can be found on A2A sites, while the absolute quantities of pollutants are reported in the tables in the Supplement to the Report. The picture of macro-pollutant trends is substantially unchanged within the limits of the measurement uncertainties applied.

Micropollutant emissions from waste-to-energy plants such as dioxins, polychlorinated biphenyls (PCBs) and polychlorinated benzofurans are extremely low thanks to combustion technologies and abatement systems. **In 2019, a total of approximately 0.032 grams of dioxins and 0.007 grams of dioxin-like PCBs were emitted from all plants.**

Discharges into surface water bodies

The full operation of the Gerenzano groundwater treatment plant, which had been at a standstill during 2018, had a significant impact on the amount of water discharged into surface water bodies (SWB) by the Environment BU in 2019. A total of about 1.3 million m<sup>3</sup> were treated and discharged in SWB, with an increase of 45% over the previous year, without significant changes in pollutant loads (BOD and COD).

Waste produced

Considered separately and summarized in the waste produced, is all that derives indirectly from the waste treatment processes of the Environment BU, including ashes from waste-to-energy waste, products deriving from flue gas treatment and pollutant abatement processes, leachate (landfills, waste storage tanks) and maintenance waste (oils, battery rags, etc.).

The total production of this special waste in 2019 was 605,951 tonnes, of which 115,267 tonnes were hazardous. Overall, there was a decrease of more than 5% compared to the previous year.

The percentage of recovery is slightly different from 2018 (55% compared to 52%) due to the significant presence of leachate which, as is known, must necessarily be sent to purification plants, which are normally classified as disposal plants.



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REMADE IN ITALY

The Group has made the circular economy a pillar of its strategy, developing concrete actions for the sustainable management of all resources, with particular attention to their reuse.

In this sense, A2A is the main supporting member of the non-profit association ReMade in Italy. ReMade in Italy members are companies that use recycled material and produce green products in all sectors. The association has the first certification scheme accredited in Italy for the verification of the content of material recovered in a product, certification made available to companies to promote products on the Italian and foreign markets. Specifically, A2A has certification for sand, gravel and chippings, street sweeping waste and other non-hazardous waste.

COLLABORATIONS WITH FOREIGN COUNTRIES

In 2019, A2A implemented a series of initiatives in collaboration with the Municipality of Milan to bring its knowledge and skills in environmental hygiene to foreign markets. Through **A2Abroad S.p.A**, the Group has brought abroad its **technological know-how** gained, proposing itself as a partner capable of developing design solutions not only for institutional customers but also for business customers. Below, by way of example, are some initiatives implemented with the support of the subsidiary AMSA:

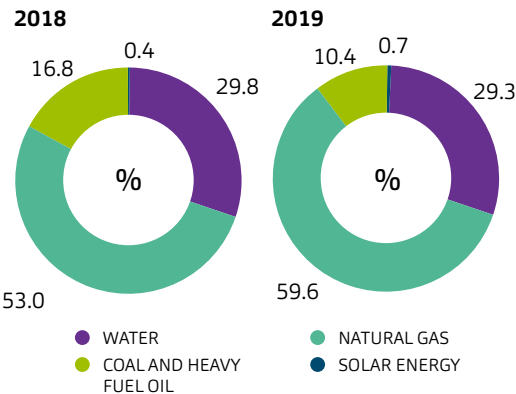
- in collaboration with the ACRA Foundation, regulations and good practices have been defined to improve the management and disposal of waste produced at the Niamey (Niger) markets. The outcome of the initiative was presented at the Milan urban food policy pact sub-regional forum held in Niamey in 2019;
- in collaboration with the ACAP association, the Group supported the preparatory activities for the waste management plan in Zvernec (Albania), through the supervision of the management document and a cost analysis, as well as subsequent monitoring phases.

7.3 Natural capital in the Generation and Trading Business Unit

The A2A Group's path towards decarbonization passes through the development of production capacity from renewable sources, the optimization of combined cycle gas plants and the reduction of production from coal and heavy fuel oil.

The contribution of the Generation and Trading BU for 2019 is shown in the chart below, which shows the distribution of electricity fed into the grid according to the different sources.

Figure 32\_Sources used for the production of electricity



Comparing the percentages of 2019 with those of 2018 in the production mix, it can be seen that the contribution of the hydroelectric sector is unchanged, while the percentages of natural gas have increased, thanks to the flexibility of combined cycles, and photovoltaic generation, thanks to the further acquisition of production capacity.

Details of the quantities of fuels used by the BU are presented in the table below:

Figure 33\_Use of fuels in the Generation and Trading BU (TJ)

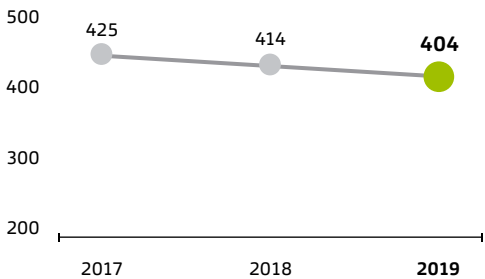
	2017	2018	2019
Natural gas	56,472	56,336	64,339
Coal	20,999	19,577	9,604
Petroleum derivatives (heavy fuel oil, diesel)	16,415	9,342	9,787

The variations are obviously in line with those of the distribution of electricity fed into the grid.

Water resource

The water in the Generation and Trading Business Unit is the main source of renewable electricity; in 2019, about 3 million m<sup>3</sup> of water were used in hydroelectric power plants. The methods of collecting and using these waters are regulated by the competent authorities; in particular, the Minimum Vital Outflow (MVO) flows are defined, i.e. the quantities of water that must be guaranteed in the natural riverbeds, aimed at protecting the river habitats in the watercourses.

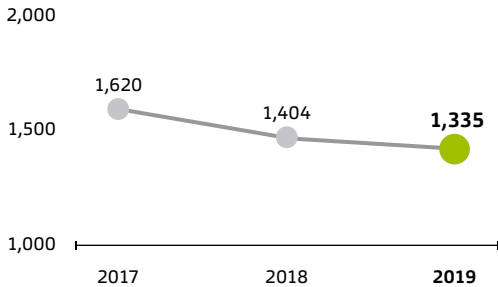
Figure 34\_Releases for MVF/ecological outflow (thousands of m<sup>3</sup>)



The overall volume of water released for the Minimum Vital Outflow still shows a slight decrease compared to 2018 (-2%), due to the sale of some plants in the province of Como in July 2018, but still remains a significant fraction of the derived water (13%).

In addition to hydroelectric use, the water resource is necessary for cooling and condensing the steam of thermoelectric plants. Also in this case, the resource is returned to the water body with the same qualitative characteristics, apart from a slight increase in temperature.

Figure 35\_Derived water for cooling thermoelectric plants\* (thousands of m<sup>3</sup>)



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The decrease of 2019 (-5%) in the water used to cool thermoelectric power plants, although apparently in contrast with the general increase in thermoelectric production, follows the production trend of power plants that use open-cycle water for cooling, i.e., all except the Gissi Thermoelectric Power Plant, which is equipped with a cooling system consisting of air-cooled condensers and unit heaters. The share of production of the Gissi Power Plant compared to the others of the BU was in fact higher in 2019 than in 2018.

Additional water withdrawals are mainly used for process purposes. Over the years, **systems have been developed for the recovery and reuse of water**, in order to reduce as much as possible the withdrawal of this resource; **in 2019, about 1.4 million m³ were recovered, equal to 40% of the water withdrawn**. In 2019, the maintenance and repair of pipeline leaks made it possible to reduce the already rather limited amount of water withdrawn from the aqueduct.

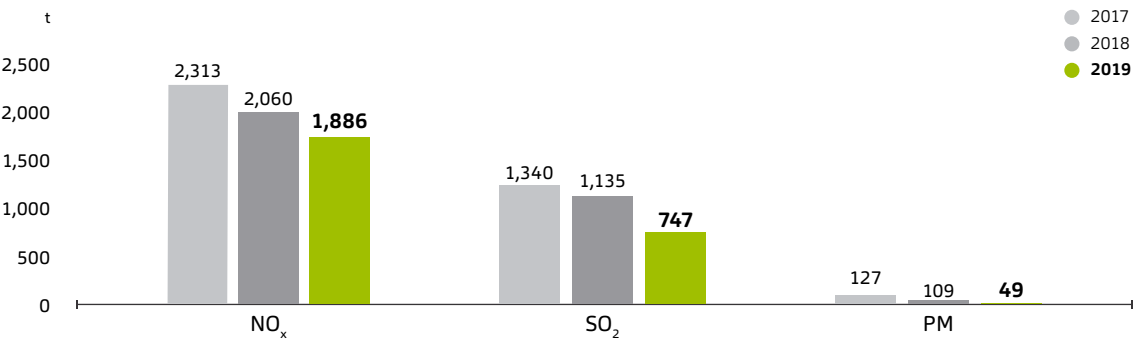
The chemical products used

The main chemical products used to produce electricity are used to eliminate pollutants and condition process water; the quantity used depends on production levels. In 2019, 91% of all products and materials used were neutralizing substances (lime, calcium carbonate, etc.), the absolute quantity of which decreased (-38% compared to 2018), due to the lower production of the Monfalcone plant fuelled by coal. Ammonia in solution is the second chemical product used in terms of quantity (4% of the total); it is used for nitrogen oxide abatement and is used in greater quantities in coal and Heavy Fuel Oil (HFO) plants; therefore, the quantity used in 2019 decreased by 23% compared to 2018, consistently with the mix of fuels used.

Atmospheric emissions

Emissions of nitrogen oxides, sulphur dioxide and dust are monitored through continuous measurement systems and smoke concentration values of pollutants are kept well below the authorized limits.

Figure 36\_Emissions produced by the Generation and Trading BU



**SO<sub>2</sub> and PM emissions are linked to the use of coal and heavy fuel oil and the trend (reduction of 34% for SO<sub>2</sub> and 55% for PM) is largely due to production trends.** NO<sub>x</sub> emissions decreased less markedly in 2019 than other macro-pollutants because they were also generated by the combustion of natural gas.

The increase in the quantities discharged in 2019 depends on a different monitoring mode.

The values of BOD and COD are reported, which represent the load of organic substances in the water released, although with annual fluctuations, remain at low values of little significance.

Emissions into the water

Waste water discharged from the Generation BU plants includes process water and rainwater collected from the internal yards of the thermoelectric power plants. They are always sent to the internal purification plants before being reused in the production cycle or discharged with quality characteristics well within the authorized limits.

Figure 37\_Emissions into the water (t)

	2017	2018	2019
BOD	23	20	6
COD	59	45	18



By-products and waste

The main waste generated from electricity production consists of light ash from fumes treatment, heavy ash and slag, residues from the desulphurization process of fumes and sludge from water treatment. Most of this waste is recovered.

The gypsum from flue gas desulphurization and the coal combustion ashes, produced at the

Monfalcone thermoelectric power plant, meet the requirements to be classified as by-products and are therefore managed as such.

In 2019, the quantity of waste produced was 31,207 tonnes, a decrease of 39% compared to 2018, mainly due to less coal used and the least amount of desulphurization gypsum produced at the San Filippo del Mela power plant.  
**The recovery percentage is 70%.**

7.4 Natural capital in the Networks & District Heating Business Unit

The main services managed by the Networks & District Heating Business Unit are networked services throughout the country, such as the distribution of electricity, gas, heat, drinking water and the collection and treatment of waste water. Moreover, since 2019, following the inclusion of A2A Smart City, the BU has been developing and managing technological infrastructures, digital services and innovative solutions in the Internet of Things. Consistent with the services provided, the main resources used by this business unit are: electricity, natural gas, water, heat generation fuels, automotive fuels and chemicals.

Fuel

As can be seen from the table below, the most commonly used fuels in the Networks & District Heating BU are natural gas and coal.

**Natural gas consumption decreased by 14% in 2019 compared with 2018**, in continuity with the 2017 trend, mainly due to lower volumes of heat production as a result of higher winter temperatures and an increase in the purchase of heat produced by other entities, including the Environment BU.

The consumption of coal, on the other hand, as well as that of petroleum products, has remained substantially unchanged.

On the other hand, the recovery of biogas produced from sewage sludge at the Verziano plant has increased thanks to the co-generator installed in 2018.

Figure 38\_Fuels used in the Networks & District Heating BU (TJ)

SOURCE	2017	2018	2019
Natural gas	4,215	3,830	3,297
Coal	1,828	1,781	1,805
Petroleum derivatives (heavy fuel oil, diesel)	0.3	0.1	0.1
Biogas (from the Group's treatment facilities)	7	6	12

The consumption of natural gas, gasoline and diesel used for motor vehicles is in line with the previous year's quantities.

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Water resource

In the Networks & District Heating BU, water is a central resource, used both for the provision of the Integrated Water Service, both as carrier for the provision of district heating and cooling services, and as process liquid in the electricity distribution service.

Concerning the Integrated Water Service, the water withdrawn in 2019 is in line with the quantities withdrawn in 2018. On the other hand, there was a slight increase in the amount of water supplied **(+0.9% compared with 2018)**, for a total of almost 54 million m<sup>3</sup>.

Network leaks, including unaccounted water, still represent a significant volume of almost 37 million m<sup>3</sup>. However, the decrease in linear water losses from 27 to 26 m<sup>3</sup>/km/dd (-6% compared to 2018) shows an improvement in network management in line with the Plan objectives.

**In order to guarantee the quality of the water distributed, almost 5,200 controls were run per million m<sup>3</sup> of water supplied, corresponding to 13,300 samples taken and 279,800 parameters analyzed.**

Consumption by other businesses in 2019 amounted to about 1.3 million m<sup>3</sup>, up slightly from 2018 (+8%). The increase in withdrawals is, however, entirely attributable to well withdrawals, while consumption from the aqueduct decreased slightly.

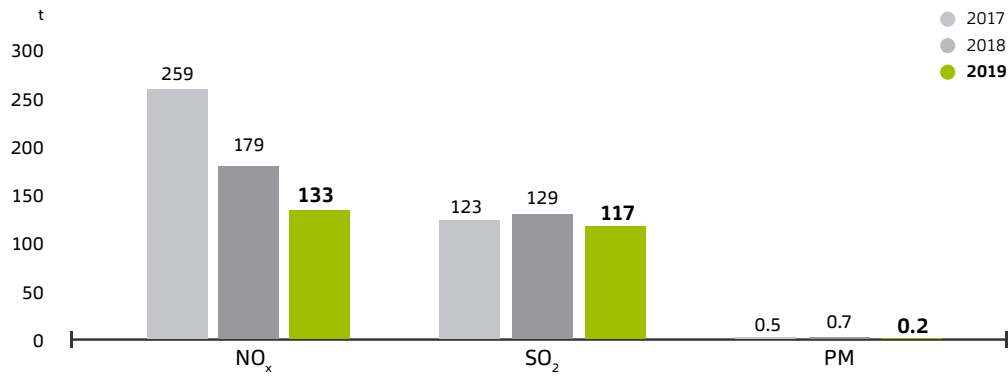
Atmospheric emissions

The atmospheric emissions of the BU are mainly due to the production of thermal energy and electricity.

In 2019, the decrease in NO<sub>x</sub> continued **(-26% compared to 2018)**, this year due to the generally lower operation of heat generation plants.

There was also a **significant reduction in PM emissions (-73% compared to 2018)** due to the efficient filtration processes of the Lamarmora power plant. Finally, there was a reduction in SO<sub>2</sub> emissions due to both the lower sulphur content of the coal used at the Lamarmora power plant and the greater efficiency of the desulphurization system.

Figure 39\_Emissions produced by the Networks & District Heating BU (t)



Methane leaks due to leaks in the gas distribution network increased (+5% compared to 2018) mainly due to a higher number of breakages on ductile cast iron and steel sections. In order to reduce these leaks, Unareti will continue with the plan to replace the most leaking sections of the network and with the use of new technologies for leakage prediction (see also page 127).

Discharged water and emissions to water

The discharge of industrial waste water into the surface water body in 2019 amounted to a total of approximately 216 thousand m³, a **decrease compared to the previous year (-14%)** mainly due to lower volumes of rainwater. The organic load brought to the environment (about 1.1 t BOD) remained very low. During the year of calculation, 11 thousand m³ of water was recovered within the production cycles. A significant contribution to the pursuit of this result was the filling process of the new storage

tank of the Lamarmora power plant during the testing phases and the recovery of water within the production process at the end of the activities. The pollutant loads entering the purifiers have changed compared to previous years, with particular reference to the nitrogen parameter, which increased by 32%. However, fluctuations in the load did not affect the purification performance, which maintained a medium-high standard, as can be seen from the table below.

Figure 40\_Purification performance

	2017	2018	2019
COD	95%	94%	92%
BOD	99%	98%	97%
Nitrogen	71%	65%	68%
Phosphor	83%	79%	77%

Waste produced

The Networks & District Heating BU produced a total of 37,531 tonnes of special waste in 2019, a decrease of about 4% compared to 2018 (-1,769 tonnes). The decrease is mainly due to lower waste production (coal ash, solid waste from the desulphurization process and sludge) at the Lamarmora Cogeneration Plant.

**The recovery rate of waste produced in 2019 was about 88%, in line with 2018 (~91%),** also given the constant nature of the types of waste produced (sewage sludge, ash, scrap and equipment).

Of the total waste generated, only 333 tonnes is hazardous waste (about 1% of the total, as in 2018).



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# 8 Human capital



## INPUTS

11,294

Employees (96.5% of whom  
with permanent contracts)

### WELFARE AND DIVERSITY

- GEA project  
- "Nuove Energie" Project

Change management initiatives:

- "Young Talent" Programme  
- "Digital DNA" Initiative

96,000

Hours of training and initiatives  
activated on health and safety

## A2A SERVICES AND PROCESSES

### ACCIDENTS

0.61 Severity  
index

877 Hires  
of which 40% under 30

WHP Award - Workplace  
Health Promotion

24.95 Frequency  
index

17.8 Training hours  
per capita

6.99% Turnover  
rate

## OUTCOME

PROTECTION OF HEALTH AND SAFETY AT WORK

Promotion of practices and systems for the management of health and safety at work, the monitoring of incidents and prevention measures, also through dedicated training, for both employees and contractors.

RISK FACTORS FOR SUSTAINABILITY

- Non-achievement of the goals set in the Sustainability Plan
- Health and safety risks for employees and third-party workers
- Complaints for occupational illnesses of Group employees
- Non-compliance with applicable regulations

OPPORTUNITY FACTORS FOR SUSTAINABILITY

**Latest generation technologies that make operational activities safer and more efficient**

MANAGEMENT APPROACH

- Continuous monitoring by the HSE Structure
- Specific Health & Safety training
- Ad hoc* programmes and procedures, in line with current regulations
- Controls on contractors' sites
- Integration of the MbO system with health and safety indicators

DEVELOPMENT OF HUMAN CAPITAL

Promotion of professional development and attraction and retention of talents; creation of development and training opportunities aiming to strengthen technical, managerial and organizational skills of employees; activation of systematic systems for listening to employees, promoting dialogue and collaboration initiatives.

RISK FACTORS FOR SUSTAINABILITY

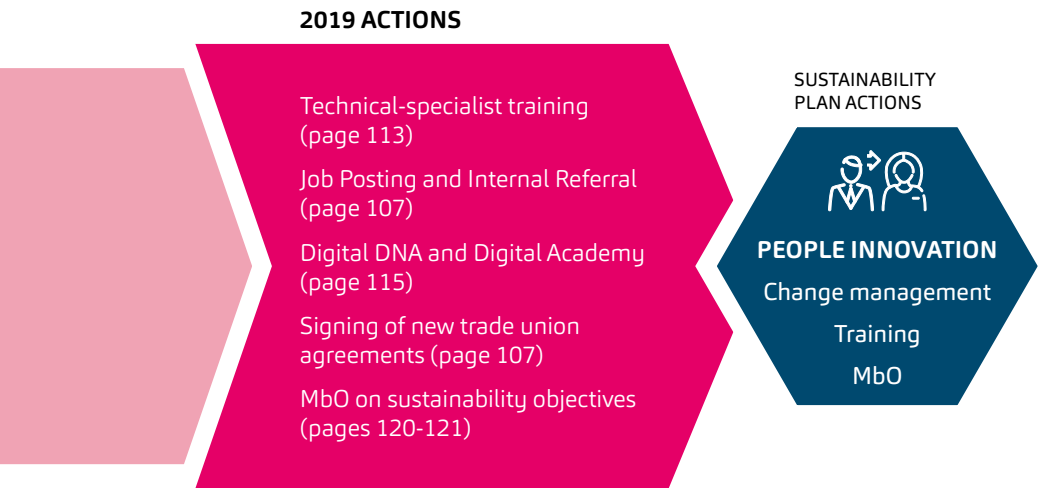
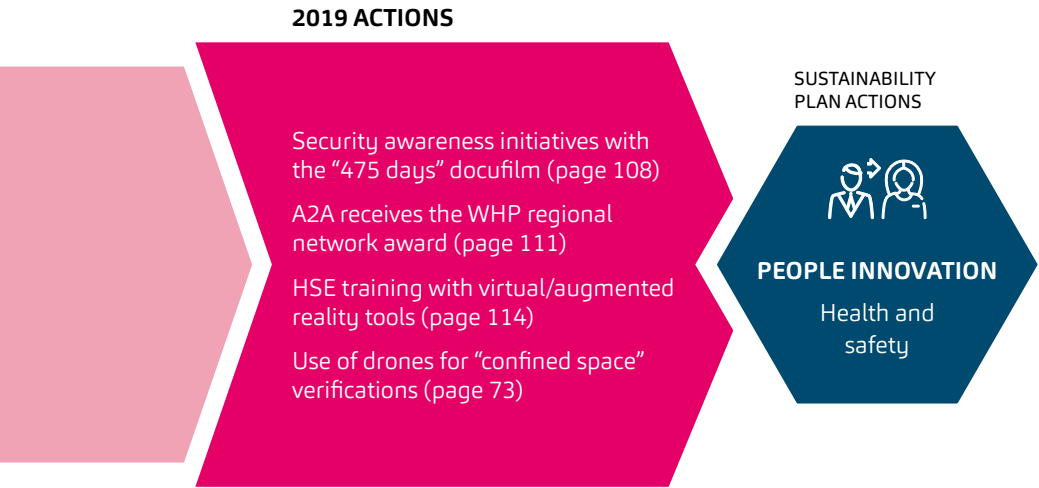
- Potential outgoing strategic figures related to:
  - key competences
  - generational handover
- Non-compliance with employment law
- Lack of integration between human resources management systems and sustainability (e.g. performance assessment)

OPPORTUNITY FACTORS FOR SUSTAINABILITY

**NOT YET IDENTIFIED**

MANAGEMENT APPROACH

- Mapping of roles and profiles, identifying the resources of greatest value and definition of retention plans
- Job rotations, training and initiation plans of resources with competence not present in the company
- Compensation systems in line with the market
- Continuous monitoring of changes in labour laws and regulations



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DIVERSITY AND COMPANY WELFARE

Development of working conditions and practices able to ensure equal opportunities to all employees, including through a generational bridge that enables the transfer of knowledge and experience between junior and senior populations; promoting the well-being of employees through welfare policies aiming to guarantee a good working environment and a conciliation of private and professional life.

RISK FACTORS FOR SUSTAINABILITY

- Possible discrimination
- Poor work-life balance
- Little attention to employee well-being
- High employee turnover
- Non-transposition of employees' needs

OPPORTUNITY FACTORS FOR SUSTAINABILITY

- Legislative and regulatory framework for better corporate welfare
- Enhancement of workers with disabilities/occupational illness

MANAGEMENT APPROACH

- Actions that favour diversity, a conciliation of private and working life and well-being
- Projects to raise awareness about diversity in the company
- Programmes to enhance the value of workers with disabilities/occupational illness

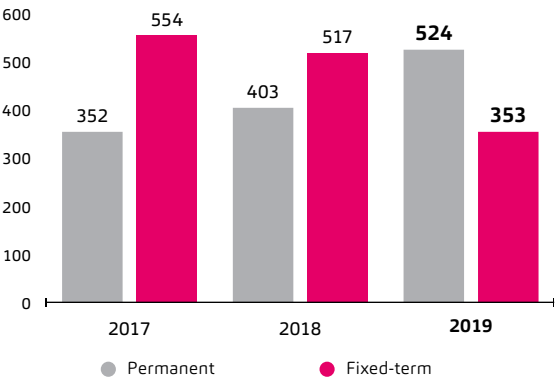
8.1 Responsible management of human capital

The A2A Group acknowledges that its human resources are a focal, distinctive point of all the business strategy and has defined a development plan on this basis, aiming to optimise their quality and skills, on the basis of a selection, training and management process and remuneration systems.

At December 31, 2019, the total workforce of the A2A Group numbered 11,294 people. Compared to 2018, the number of employees increased by 1%. In 2019, 877 new employees were hired and 790 left. Compared to the previous year, recruitment fell by 5%, but terminations also fell by 7%.

Work stability remains a Group prerogative. 96% of Group employees are hired on permanent contracts; just 4% are on fixed-term contracts.

Figure 41\_Hiring by type of contract



The staff recruitment process is supported by **Talent Attraction and Employer Branding** activities, aimed at constantly consolidating the image and appeal of A2A on the employment market. In 2019, a survey of 10,000 job seekers was commissioned to evaluate A2A's work to date and build a new Employee Value Proposition. As regards the activities carried out with the University, **in 2019, a total of 44 events were organized, including 14 Career Days and 30 initiatives** comprising round tables, testimonials and guidance activities.

Thanks also to the collaboration of universities, schools and research entities, in 2019, 39 internships and 37 apprenticeships were activated.

To increase the opportunities for development and internal mobility, during the year 64 searches were performed using the job posting tool (-2% on 2018), of which 41% were successful, as well as 15 searches still in progress as at December 31, 2019.

## 2019 ACTIONS

Smart working (page 117)

New "Welfare A2A" programme  
(page 117)

Nuove Energie Project (page 118)

Communities inA2A (page 116)

## SUSTAINABILITY PLAN ACTIONS



## PEOPLE INNOVATION

## Training

## Internal engagement

## Welfare diversity and equal opportunities

DO YOU KNOW SOMEONE THAT IS PERFECT FOR THAT POSITION? INTRODUCE THEM TO US NOW!

In July 2019, in support of resource selection activities, the “**Internal Referral**” project was launched, with the aim of enabling employees to participate actively in the search for valuable resources with skills, energy and motivation, ready to join the A2A team.

The start-up phase of this project involved the Young Talent community (150 people), who were asked to report – in a transparent way and through a traced system – profiles in line with the various existing recruitment, thanks also to digital and smart tools.

As for Smart Working, also for Internal Referral, A2A was the first multi-utility in Italy to experiment this new way of recruiting and selecting personnel.

## Trade union agreements

Relations of all A2A Group employees are regulated by National Collective Bargaining Agreements ("CCNL").

In 2019 too, multiple trade union agreements were stipulated, divided into those of a transversal nature to Group companies and other specific ones of some realities. The following are the main ones:

- **Agreement New supplementary health care for the Energy Area:** creation of the new supplementary health care system for the approximately 5,000 workers in the energy area, through the definition of a trade union agreement and a path for the implementation of the new system of assistance and activation of the employee communication plan. This process was successfully completed with the launch of the new System on January 1<sup>st</sup>, 2020.
- **A2A and LGH Corporate integration path:** signing of an agreement relating to the

Corporate integration plan of the two companies and change in the generation mix.

- **Incorporation and simultaneous harmonization of Linea Più S.p.A. into A2A Energia S.p.A.:** signed an agreement relating to the corporate merger by incorporation, defining at the same time the procedures for the harmonization of treatment;
- **Smart Working agreement LGH Group:** on March 21<sup>st</sup>, 2019, the trade union agreement was signed which consolidated the use of Smart Working within the LGH Group;
- **Industrial Relations Protocol:** a trade union agreement at national level aimed at strengthening the Industrial Relations governance system, while defining effective and streamlined rules and practices for dialogue, enhancing and broadening the dialogue between the parties within a framework of systematic relations and structured dialogue.

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## 8.2 Health and safety at work

99% of employees work according to the Health and Safety at Work Management System OHSAS 18001. All companies of the A2A Group organize, during the year, regular meetings with the Employer, Appointed Physician, the Prevention and Protection Service Manager and the Workers' Safety Representative in representation of all workers, during which the following matters are discussed:

- risk assessment document;
- trend of injuries, occupational diseases and health surveillance;
- criteria for the choice, technical characteristics and effectiveness of the personal protection equipment;
- information and training programmes of managers, safety officers and workers for safety and the protection of their health;
- codes of conduct and good practices to prevent risks of injuries and occupational diseases;
- objectives for the improvement of health and safety at work.

### SAFETY STEMS FROM THOUGHT: CHOOSE A HAPPY ENDING, REPORT!

In 2019, the path started last year on HSE issues continued.  
What is new for 2019? The focus in 2019 was on raising awareness of reports to make a real contribution to preventing accidents and injuries at work. Each employee was able to participate in the prevention process, bringing dangerous situations or behaviour to light and thus contributing to risk reduction.

For this campaign, 3 animated videos were created, focusing on the importance of reporting dangerous situations and behaviours and a video of colleagues' testimonies on the subject.



2019 was also a very busy year in terms of security awareness initiatives. This in order to continue and consolidate the path of cultural change, started in 2017 and aimed at influencing workers' behaviour, not only to generate greater awareness and responsibility, but also to create real safety leaders. In particular, a workshop dedicated to HSE

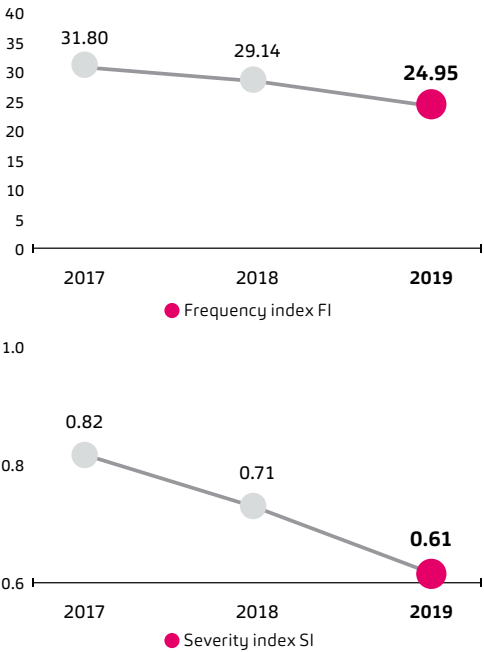
delegates (144 people) was held to support them in an increasingly targeted manner in the exercise of their role, in terms of HSE risk management. In addition, as part of the LiHS (Leadership in Health and Safety) Programme, launched in 2017, the coaching activities for the third and final phase of the programme in the Generation BU and Environment BU plants were completed; while for companies operating in the field of urban collection and hygiene, the cascading of the second phase was completed using a film dedicated to the theme ("Think about life!").

The same film will also be used, in 2020, in the third phase of the programme, aimed at promoting the adoption of "fundamental behaviour", safe for oneself and one's colleagues. Finally, in 2019, a docufilm entitled "475 days" was created, which deals with a serious accident that occurred to a colleague of Unareti in June 2017; the film was presented to all the staff of the Networks and District Heating BU and will be adopted in initiatives dedicated to the other BUs of the Group.

In 2019, the results of the accident indices showed a marked improvement compared to the previous year, with a decrease in the accident frequency and severity indices of 14% for both.

More than 89% of accidents occur in companies that carry out environmental hygiene activities.

Figure 42\_Accident indices



Contractor workers

In 2019, 25 injuries were recorded to workers of contractors, with a prognosis of more than three days to recover, for a total of 278 working days lost. This translates into a frequency index of 5.56 and a severity index of 0.06. The increase in the number of injuries (3 more than last year) was accompanied by a reduction of more than 14.3% in their severity. The constant attention paid to the promotion of safety amongst external contractors working at the Group plants was seen in 2019 also through the provision of more than 6,176 hours of specific training to approximately 3,702 people.

SAFETY MONDAY

In October 2019, “Safety Monday” was established, a new monthly event dedicated to safety and the promotion of good habits through unconventional communication systems and languages that also act on the emotional sphere, a fundamental element for changing unsafe behaviour.

- The 3 Safety Mondays of 2019 were dedicated to:
- 1. the use of seat belts;
  - 2. the perception of risk;
  - 3. the distraction behind the wheel.

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## A2A INCREASINGLY ACTIVE IN THE HSE WORLD

A2A is increasingly active in the HSE world, participating in major initiatives dedicated to the Utilities sector and not only. In 2019, it took part in the **"Smartbench"** project for the development of a unique platform that integrates smart applications for occupational safety management in complex industrial environments. The Group has contributed to the project by hosting representatives of the Department of Technological Innovation of INAIL, the Universities of Salento, Bologna, Messina, Tor Vergata and the Biomedical Campus of Rome at the technical facilities of the Brindisi power plant. A2A has made the necessary documentation available to develop a system of smart labels to support the compulsory periodic verification of equipment subject to statutory checks, to monitor the ageing of equipment under pressure and for smart sensors that can be worn by workers to operate safely in environments where the presence of hazardous substances is suspected.

## Worker health surveillance

The Group constantly monitors, through health monitoring, the health of workers in relation to the specific risk for the various tasks present at the workplace.

The health surveillance service is offered mainly in the approximately 65 medical units distributed throughout national territory, and with authorised external facilities. In 2019, more than 8,696 medical examinations of fitness for the job and 2,813 drug tests were carried out, in addition to 19 thousand checks in accordance with health protocols. In addition, 130 specialist visits were carried out, mainly to determine the need for the assignment of personalized personal protective equipment (PPE). The competent doctors also carried out 134 inspections at the workplace and 20 procedures for occupational diseases were opened.



In 2019, the A2A Group took part in initiatives seeking to promote health in the workplace, continuing to adhere to the WHP (Work Health Promotion) programme promoted by the Lombardy Region, through:

- **influenza vaccination campaign** for employees;
- **cancer prevention**: the initiative has provided a cloud-based platform with multimedia information material on the possibilities of cancer prevention, early detection and overcoming fear through information and awareness;

- **lifestyle-related prevention**: the initiative consisted of self-administration of a questionnaire on eating habits and physical activity, re-evaluation by nursing staff and an invitation to carry out a minimal advice session (on a voluntary basis of course) with the aim of promoting and motivating improvement.

### A2A RECEIVES THE WHP REGIONAL NETWORK AWARD FOR ITS COMMITMENT TO PROMOTING HEALTH AMONG ITS EMPLOYEES

The A2A Group has been awarded a prize as an organization that promotes workers' health in an excellent way by the **WHP – Workplace Health Promotion – regional network** thanks to various initiatives. These include: corporate catering focused on proper nutrition, advice during regular medical check-ups for the adoption of healthy lifestyles, smartworking, flu vaccination campaigns and sustainable mobility through carpooling.

For many years, the World Health Organization has identified workplaces, where people spend an important part of their time, as a key factor in mitigating the impact of population ageing and curbing the onset of chronic diseases such as diabetes or coronary heart disease.

A2A has been successfully participating for some time in the network of companies that promote health and well-being in the workplace, collaborating with the WHP regional network. The company strives every day to promote health determinants on the one hand and to reduce risk factors for chronic and degenerative diseases (poor diet, sedentariness, smoking, harmful alcohol consumption) on the other.

In terms of health, last year a pilot project was launched on the Networks and District Heating BU in Milan to promote healthy lifestyles, through an interview on diet and physical activity during medical examinations to identify any critical aspects (e.g. excessive consumption of salt or sugary drinks, lack of physical activity, etc.), followed by a "motivational" interview (short counselling) with paramedical staff, aimed at raising awareness and adhering to a path of improvement through diet and exercise.

In 2020, this experimentation will also be extended to people working in the staff functions of the Generation and Trading BU.

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### 8.3 Employees development

A2A has always paid careful attention to the development of human resources, as it acknowledges that people are right at the heart of the processes necessary to achieve the business objectives and create shared value. In this sense, in recent years, an articulated assessment system (performance management) has been implemented, based on the A2A management model and based on 4 drivers (developing people, taking initiative, simplifying, collaborating), which has become the basis for defining development paths. The cornerstone of the new **"people strategy"** is the dissemination of a more entrepreneurial managerial culture, with the aim of attracting, developing and keeping human capital.

The **performance management** process involves managers, middle managers and employees across the Group.

#### ABC project

The **ABC managerial development project**, which **started in 2016** to involve all employees on three key issues – listening, need, change –, ended in 2019 with the third phase, which saw the end of the **management training course**.

All A2A managers have completed the last two modules of the path: "Simplifying and Collaborating" and "Taking Initiative". At the end of this "training phase" – in collaboration with Reputation Institute – a survey was carried out for about 1,200 managers to evaluate the effectiveness of the ABC training course. The result of this survey will be the basis for defining the next actions dedicated to them and for the evolution of the managerial model towards skills that are more and more in line with the company strategy.

#### On-Boarding

The path dedicated to newly hired graduates has been enriched. In particular, two distinct paths have been developed, **Induction A2A**:

- the first one specific for **"new recruits under 30"**, to acquire awareness of their skills and to build a self-development plan in collaboration with their manager to better develop their characteristics, skills and potential;
- the second one specific for **"new hires over 30"**, who will develop skills useful to interpret and support cultural change in the company.

In 2019, the process was innovated in order to reduce the timeframe, stimulate continuous improvement and development of the key skills of A2A's management model, as well as fostering dialogue between manager and employee.

The two phases of the process start with the self-proposal of the objectives (for executives, managers and middle managers), and during the final assessment, with the self-assessment by the collaborator, to encourage greater proactivity and awareness. Sustainability, which is a fundamental value for A2A, is the subject of assessment within its competencies. Moreover, continuing on from the action taken in 2016, A2A pursued and strengthened its commitment in this sense, carrying out also in 2019 numerous change management and personal development initiatives.

#### Talent Management

Once again this year, in December, the young people chosen by management as testimonials of energy and potential (150 under 35) met at the Young Talent A2A event. The day was an opportunity to listen to some stories of initiative, experimentation and search for change and to look to the future. During the year, 12 webinars were held with Group managers to increase knowledge and encourage active participation in the future of A2A. In addition, the working groups launched in 2019 continued, which enabled young people to develop new skills proactively and to exchange ideas with each other and with Group management. To define future engagement actions, 4 focus groups were set up to intercept the needs of young talents and define with them the priorities in a co-construction logic.



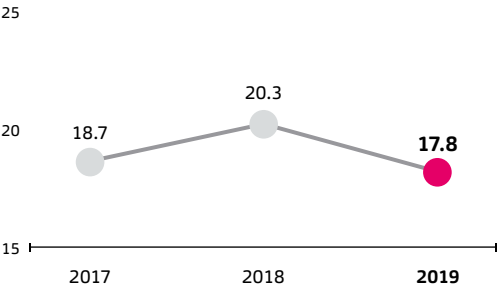


Training programmes

Through **training**, the A2A Group aims to stimulate and expand upon its employees' professional skills. In 2019, **more than 201 thousand hours of training were delivered**, for an average of **17.8 hours per person**. The slight decrease in the figure is mainly attributable to the conclusion of the ABC path. Overall, 81% of Group employees received training during the year.

Differently to previous years, the investment made in training (approximately 1.8 million euro), includes the costs incurred by other Group companies. In 2019, 37% of training costs were covered by interprofessional funds.

Figure 43\_Average training hours per person



Some of the main training courses launched in 2019 were:

- **Training course in the role of assistant to the municipal sanitation collection service** aimed at promoting good communication and management practices among the coordination figures of the municipal sanitation service of Aprica. Participants were able to reflect on the characteristics of their role, responsibilities and criticalities, reinforcing some of the crucial skills such as: communication, control and attention to the quality of the service provided to all stakeholders. High appreciation and active participation also in terms of operational proposals;
- **Training course on sales and public speaking techniques**; A2A Calore & Servizi requested the design of a training course aimed at key accounts of the district heating commercial function. The aim was to acquire superior sales techniques and share a common and winning

style in order to compete successfully in a particularly complex market. The 4-day course (7 participants) was enriched by a module on public speaking techniques (18 participants), extended to other professional figures;

- **Seminar on Biodiversity**; based on input from the Corporate Environment Function, as part of a project to map the Group's sites and activities in relation to the biodiversity of the territories, a seminar was held in Brescia by a naturalist researcher from the CNR, attended by 55 representatives of various company areas. A smaller group then explored the subject further with laboratory work.
- **Technical-specialist training for the structure of Maintenance Services for Waste-to-energy Plants**; following the merging of the maintenance activities of Waste-to-energy Plants in a single direction, technical-specialist courses have been organized for personnel from various realities, with the aim of strengthening and homogenizing specific skills/knowledge, but also facilitating the relationship and the sense of belonging. About one hundred people were involved in the cycle of 5 courses, which ended in January 2020.
- **Professionalizing technical training**; some "in-house" courses were organized, designed directly with internal subjects, involving 520 people, for a total of 3,333 hours. Among the topics addressed: project management, public speaking, business writing for the legal area, weather derivatives (see page 29), global service and taxation.
- **Training on Enterprise Risk Management** as part of the project to disseminate risk culture in the company, in November, about 30 colleagues from the Market BU participated in a day of training on "Enterprise Risk Management and integration with ISO standards". Similar interventions had already involved the Environment BU, the Thermoelectric Plants, the Hydroelectric Plants and the companies of the Networks and District Heating BU. The objective of the training programme is to disseminate the culture of risk in management and to underline the importance of a risk-based approach (Risk-Based Thinking) as a tool for protection and value creation in modern organizations, which operate in increasingly complex and rapidly changing contexts.

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## Training is done in 5.0

In recent years, A2A has changed the way it carries out training, introducing new tools and new approaches, also thanks to the technological and digital innovations available today. Some 900 people have already experienced and appreciated the new ways directly, which will be increasingly popular in tomorrow's training plans.

### Virtual Reality

Virtual reality has proven to be an effective tool in particular for security training.

Around 80 workers at A2A Calore & Servizi experienced it during the **high risk workers' refresher course**.

Thanks to the viewers, the participants were able to immerse themselves 360° in the reproduced reality, with the feeling of being "inside" the work space and living a real experience. In this way, it was easier and more fun to identify sensitive points, critical points and potential dangers, such as slippery materials or danger of falling heavy objects, present inside the work spaces.

A similar training experience was given to 120 maintenance staff of the Generation and Trading BU.

Based on the assigned work schedule, interacting through the viewers with the virtual work environment, they had to:

- choose the most suitable personnel and equipment/ PPE to carry out the work;
- perform the required work;
- manage any inconveniences/emergencies.

The simulated behaviour was then analyzed in plenary with all the participants in order to bring out, by analyzing the critical points, the virtuous behaviour to carry out.

### Lego Serious Play

Approximately 100 people have tried the use of LEGO bricks as part of team building activities, for example:

- represent with bricks your role with strengths and weaknesses or a possible solution to a problem;
- represent a situation, your function or the relationship between your function and other functions.

### Safety and Environmental Crime

To train the Prevention and Protection Service Managers (RSPP) and Workers' Representatives for Safety and Environment (RLSA) on safety and environmental issues, use was made of the Safety and Environmental Crime, a board game on safety issues that involves participants in the search for solutions to eliminate "bad" habits and identify corrective actions to facilitate a path of continuous improvement.

### Alcovista glasses

Participants in the high-risk workers and safe driving refresher course tried Alcovista glasses that simulate the perception of reality of a person with a blood alcohol level of 1.3 g/l.

Under these conditions, they have become aware of how difficult it is to carry out daily and work activities.

### Virtual Behaviour Simulator

The virtual behaviour simulator was used to train over 700 Group Officers during a security refresher course.

The simulator, which can be used on PCs, tablets and smartphones, allows practising learning how to manage real situations of confrontation and disagreement on issues related to safety in everyday work activities (for example: convincing colleagues to use personal protective equipment).

This way, soft skills are trained (active listening, problem solving, persuasion, empathy, ability to relate, objectivity) in real situations.

Thanks to the simulator it is also possible to receive immediate feedback and not have time and space constraints in the exercise.



Digital DNA and Digital Academy A2A

With a view to identifying and developing digital skills and aptitude for innovation within the A2A Group, the Digital DNA A2A initiative was set up in 2019, which represents a concrete way of contributing to and supporting digital change in A2A through an online survey. The test was divided into 4 different sections lasting 15-20 minutes each and included 4 areas of expertise: Digital Soft Skills, ICT Skills, Job Related Skills and Innovation Skills. At the end of the test everyone receives 2 profiles: one "digital", which reveals digital attitudes, and the other on the "style of thinking", which highlights the ways in which everyone approaches innovation. The test was sent to all the Group's managers, middle managers and employees and a pilot was carried out involving the workers of the Networks and District Heating BU, who have a company

e-mail, to subsequently evaluate the extension to all the Group's workers. "Digital DNA" is just the first step in A2A's new digital transformation path. On the basis of the evidence that emerged and according to the different profiles, a first action of awareness, training and involvement was defined: the DIGITAL ACADEMY A2A, launched in December 2019. It is a dynamic training programme that includes different types of content, such as short videos, infographics, news, case studies and webinars and covers 3 topics: Cybersecurity, Customer Experience & Customer Centricity, and Data Driven Analysis & Decision Making – Artificial Intelligence. There are three training paths and they are defined according to the level of digital skills and innovation of the user.

TEAM-BUILDING AS A TOOL FOR INTEGRATION BETWEEN GROUP COMPANIES

In 2019, a number of team building activities were organized, dedicated to some Corporate functions, the International BU and all the companies of the Market BU, which involved about 400 participants for a total of 4,920 hours of training. The initiatives had as their objectives:

- strengthen the sense of belonging to the team and the Group (following the various corporate integrations and organizational changes);
- increase the value of collaboration and dialogue in achieving a common goal.

Different approaches and methodologies have been adopted: visits to the facilities (Valtellina and Friuli), outdoor and indoor recreational and sports activities (*Lego Serious Play, Rube Goldberg Machine, Escape room, Art-door, Volleyball, Cooking, Go-Kart, Orienteering bike*).

WEBINAR: A SUSTAINABLE APPROACH TO TRAINING AND SHORTEN DISTANCES

During 2019, the use of the webinar for the delivery of various types of courses has grown very significantly. This tool has proved to be very effective, as it allows reaching a large number of participants located in different and distant locations at the same time, avoiding any movement. The feedback collected after the sessions delivered in this way has been positive and encourages us to continue in this direction.

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## 8.4 Internal communication and listening

In 2019, the communication campaigns of the most important Group projects continued, through news, magazine articles, videos in shared spaces, leaflets, dedicated blogs, questionnaires, live meetings and webinars.

### Communities INA2A

In 2019, several communities were created on the Intranet channel ina2a. Virtual spaces to share personal, professional experiences, knowledge, skills, interests, hobbies and so on. The communities active today are:

#### Community HSE

A professional community of 180 people who work in the Group's HSE world and who use this space to discuss the main regulatory developments, best practices, activities and ways to carry them out.

#### Community young talent

Learning community composed of 150 people (under 35 years of age), who discuss, share and use this environment to work together on transversal projects of cultural change promoted by the company.

#### Community runners

Community of interest, open to everyone (to date 100 people are part of it) who use this environment to fuel their passion for running and organize exchange events on the topic.

#### Community services to suppliers

Professional practice community consisting of 50 people who use this channel to communicate more effectively and quickly among different locations. The community also responds to the need for a rapid system of questions & answers on work issues and sharing best practices.

#### Community facility

Professional practice community of 160 users. The community allows sharing experiences and best practices, network and have a quick question & answer system.

#### Community sustainability

Launched a sustainability pilot with about 80 colleagues. The community responds to the need to have an in-depth channel on the subject, to exchange experiences and best practices, involve employees on various sustainability issues and disseminate dedicated initiatives.

In 2019, about 30 colleagues from across the BUs were also involved in a Digital Workplace co-design project on 3 macro areas: home pages, notifications and BU pages. The cross-functional working group was created from the need to redesign the user experience of the Intranet.

### GEA – GENDER EQUALITY A2A

The initiative is part of the strategic plan TEC (Transformation, Excellence, Community) where GEA is part of the "C" of Community: a project that focuses on cultural change, promoting diversity. In the A2A "planet", the male and female vision contribute to shaping the company. GEA – Gender Equality A2A is the Group's new initiative, which began on March 8<sup>th</sup>, 2019, and aims to encourage and support gender balance in the company. How? Through concrete actions and awareness raising during the main phases of the employee's corporate life. The actions carried out:

- the first one concerns the ability to attract the best female talent through Employer Branding actions in schools and universities. Some high school students participated in an "Inspirational Talk", a meeting within the month of STEM in the City, an initiative promoted by the Municipality of Milan to disseminate the technical-scientific culture and reduce the gender gap in STEM careers and professions;
- the second one is related to the phase of integration in the company: an update on the Group's selection procedure in order to make all those involved in the process aware of the need to ensure fair gender composition, where possible.

### AD INCONTRA

Also in 2019, AD incontra continued, the initiative whereby the Chief Executive Officer meets with and gets to know the employees, investigating projects in progress and sharing Group themes and strategies with them.

In 2019, the CEO met with the employees of Asti (Glass plant), the Southern Receiver, the Orobica plant and the Silla 2 Waste-to-energy Plant.

8.5 Welfare and diversity

The Group believes in optimising diversity by identifying and overcoming all stereotypes linked to gender, age, disability, ethnic origin, religious beliefs and sexual orientation. A2A ensures working rights for people with disabilities, as required by current legislation. 440 persons with disabilities were employed by the Group in 2019, of whom 23% women.

Also as regards the work-life balance, the Group meets the needs of employees, in 2019 granting **387 part-time** solutions (3% of all employees), of whom 71% are women. A total of **557 parental leaves** have been agreed, 5% more than 2018. 92% of the people granted parental leave in 2019 returned to work in the same year.

The offer in terms of company welfare comprises numerous services offered to employees:

Figure 44\_Social policies of A2A

2019	
Work-life balance services	<b>Mobility services:</b> again in 2019, beneficial tariffs were applied for the purchase by employees of subscriptions with public local transport services; 973 subscriptions were taken out. <b>Company daycare</b> at the Lamarmora office in Brescia: in 2019, 6 children of employees were registered.
Health and well-being services	<b>Social-psychological assistance services:</b> present in 14 sites of the A2A Group. In 2019, the service involved 3,187 employees.

In 2019, work at A2A became smarter and smarter. Smart Working in A2A, which began in 2016 with a pilot project involving around 250 employees, has now become a way of working involving 956 employees.

In 2019, 18,700 days were worked in a smart way and, for each smart worker, about 30 hours and more than 1,000 km of travel per year were saved, with an overall reduction of 34 tons of CO<sub>2</sub> emissions into the atmosphere.

In 2019, after a successful pilot phase, LGH Group also extended this possibility to other employees who met the participation requirements and 2 new Group companies.

The LGH Group's figures in a nutshell:

- 78 smart workers;
- 4 companies involved.

Finally, A2A has also confirmed the **"A2A Welfare"** programme for 2019, which, taking advantage of the opportunities provided by the legislation, makes it possible to introduce new facilities for the development of company welfare.

A real value that increases the purchasing power of individuals and allows them to choose services and benefits ranging from reimbursement of expenses for the education of children to babysitting, from gym subscriptions to health and home care for elderly relatives. From 2019, it is also possible to take advantage of a study

and work orientation service (for employees' children) and access the network for the purchase of health care services (check-ups). To achieve this objective, A2A, in agreement with the trade union representation, has introduced the possibility of converting all or part of the Result bonus into Welfare Credit. A2A, in continuity with last year, offers an additional share of Welfare Credit. If employees choose to convert their bonus, they have an additional Welfare Credit available, equal to 15% of that converted and spent.

The Welfare programme will be managed through a dedicated portal that includes five main areas: Family, Health, Saving, Time for you, Well-being.

The major changes for 2019:

Family

- Reimbursement of expenses incurred for the purchase of season passes for urban and intercity transport;
- Guidance services for study and work for employees' children;
- Gift card and voucher.

Health

- Network for the purchase of health services at facilitated conditions.

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## A2A LAUNCHES THE CONVENTION WITH E-VAI: THE ONLY CAR SHARING ELECTRICAL IN LOMBARDY

A2A has promoted a new initiative to favour and encourage sustainable mobility. It has signed an agreement with E-VAI, a company of Ferrovie Nord Milano created in 2011, precisely to propose to the citizens of Lombardy "greener" transport solutions. What is E-VAI? E-Vai is the only regional electric car sharing system integrated with the Lombardy railway system. The service is active in 55 municipalities in Lombardy with more than 100 E-VAI points for the collection of cars.

## NUOVE ENERGIE PROJECT

In Italy, in the last 3 years, the issue of **Disability Management** has become a fundamental element in companies' human resources management strategies. This is closely linked to the change in the underlying logic of the Italian social protection system over the last ten years, where there has been a shift from paternalistic state assistance towards greater accountability of the recipients of the measures. A2A has decided to respond to this challenge through the "**Nuove Energie**" project, launched at the end of 2019, which aims to define a proactive strategy to **minimize the impact of disability and make the most of the different skills of the colleagues involved**.

In a very early stage, the project will involve 70 people, who will be asked to explain, on a voluntary basis, the difficulties or problems they encounter every day outside and inside the company. Based on the responses of individuals, the company – adopting a tailor-made approach – will develop *ad hoc* initiatives, aimed specifically at responding to the needs that have emerged.

## COMPANIES CHALLENGE 2019: A2A AMONG THE PROTAGONISTS

On Saturday, September 28<sup>th</sup>, 2019, the second edition of the Companies Challenge was held, a sports tournament between companies organized by CSAIn - Centri Sportivi Aziendali e Industriali, a sports and social promotion body recognized by CONI (Italian National Olympic Committee), the Ministry of Labour and Social Policies and the Ministry of the Interior.

The aim of the event is to promote the culture of sport, fun and collaboration between colleagues through a series of competitions in some sports: volleyball, five-a-side football, 3x3 basketball, running, bowling and darts.

A2A was among the protagonists of the 2019 edition, which saw the participation of over 10 companies, including Edison, McDonald's, State Police and SEA Aeroporti. The A2A/Craem team, made up of more than 30 people, distinguished itself in all disciplines, ranking second in the general classification and obtaining the first place in the 3x400 meters relay.



PASSOIO – A2A'S CAR POOLING

"Passolo", the car pooling that A2A has developed in partnership with *BePooler*, has arrived at all of our Group's corporate offices. This project, dedicated to sustainable mobility, was launched on an experimental basis in 2018 at some company offices (Olgettina (Mi), Via Lamarmora (Bs) and Via Suardi (Bg)) and is now dedicated to all Group employees. Carpooling is a method of travel that involves the use of a single car by a group of people travelling the same route. Thanks to the *BePooler app* it is possible to:

- be both "Rider" (passenger) and "Driver" (driver);
- have visibility of colleagues and employees of other companies who have planned similar home/work routes;
- share the private car for home/work travel with colleagues of the A2A Group and with employees of other companies.

Many advantages for the individual and the environment:

- environmental sustainability;
- lower travel costs;
- socializing opportunities.

At the same time, a multi-channel information campaign was organized. Among these:

- dedicated infopoints in the main company offices in Milan, Brescia and Bergamo. Six events, during which people were able to acquire further knowledge of the project and how to join;
- news about Ina2a.



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8.6 Remuneration

A2A provides new graduates with the minimum remuneration established by the level of classification of the Collective Contract of reference; for qualified figures with experience, remuneration is disbursed that is in line with the market standards and internal remuneration practices, which guarantees both an adequate level of external competitiveness and internal fairness. In defining the type of contract and salary, A2A complies scrupulously with Italian legislation, which excludes any distinction of gender in remuneration. As in previous years, the differences in average remuneration within the different qualifications are minor.

Figure 45\_Average salary of men/women by category in Italy

CATEGORY	2017	2018	2019
	MEN/WOMEN	MEN/WOMEN	MEN/WOMEN
Managers	103.7%	102.7%	103.4%
Middle managers	96.0%	95.7%	95.4%
White-collar workers	89.4%	90.4%	91.3%
Blue-collar workers	95.3%	95.8%	96.4%

The Group’s remuneration policy is mainly conceived to acknowledge and optimize the commitment, constant achievement of results, competences and behaviour of employees in line with the Group’s Managerial Model and to guarantee the correct remuneration positioning of people in connection with their duties.

For all employees, remuneration is structured into fixed and variable monetary components and provides for a package of benefits in support of income or similar such additions (medical and social security insurance, projects and initiatives for employees and their families, promotions and benefits of various types). The variable monetary component is based on systems of a direct connection between company performance and individual performance (MbO) or on discretionary mechanisms for the recognition of working performance and conduct in terms of “one-off” bonuses.

In 2019, a study was launched to evaluate proposals for attraction and retention tools for specific population clusters and to define the related *ad hoc* remuneration plans differentiated, by way of example, by timing, bonus values, performance conditions and result indicators.

Continuing along the path of enhancing the value of its Human capital and transparency towards the corporate population, also in 2019, the entire Remuneration Policy process was carried out with the support of a dedicated corporate software (*SmartPeopleA2A*) that allowed direct involvement of all managers and greater sharing of remuneration decisions. At the end of the process, all communications relating to payroll operations are available directly on the *SmartPeopleA2A* system, allowing managers and employees to consult digitally.

In order to increase the closeness of employees to the Group's objectives and to push each worker towards achieving the company's results, a review of the criteria for inclusion of the population in the **MbO system** was conducted with the aim of further expanding the number of beneficiaries. In 2019, the number of people involved reached around **100% of managers, 33% of middle managers and 2% of employees.**

In line with the objectives of the A2A Group Business Plan, also extraordinary incentive plans continued for the sale of energy efficiency services and incentives aimed at the achievement of the objectives of optimizing Smart City technologies.

The variable remuneration system is also supplemented by a collective incentive tool (**results bonus**), which is based on Group productivity and profitability goals, aimed at guaranteeing the involvement of all staff, including those not assigned MbOs, in company performance. In line with current legislation and following an agreement with the workers' representatives, from 2018 all employees were given the opportunity to convert part of the performance bonus into services through a special welfare platform. The results achieved were positive in line with those of the sector.

Finally, in order to facilitate the implementation of the Sustainability Plan initiatives defined by the A2A Group, a structured model of **sustainability objectives that envisaged the inclusion of at least one sustainability objective into all 2019 management MbOs** was confirmed into the **management incentive systems.**



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# 9 Intellectual capital



## INPUTS

Partnership with  
companies and universities

Innova2a  
Programme

Entry into the Circular Economy  
100 (CE100) of the *Ellen  
MacArthur* Foundation

Process digitization  
initiatives

«A2A Horizon» venture  
capital initiative to invest  
in start-ups

## A2A SERVICES AND PROCESSES

**Shark Tank**

**24** Projects started  
10 of which have passed the pilot phase

Corporate Car Sharing

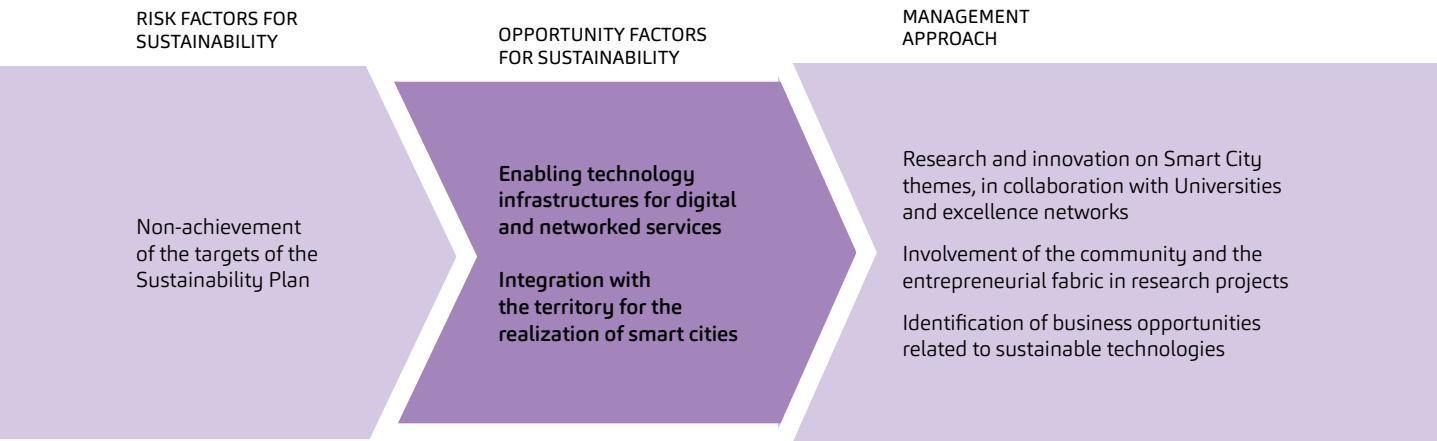
**2** Smart Districts realized  
in Merezate and Cascina Merlata

Greenvalve project for  
energy recovery

## OUTCOME

TECHNOLOGICAL INNOVATION AND SMART CITIES

Optimize Group competences and know-how through research and development activities that stimulate a continuous evolution of services and infrastructures, contributing towards the development and creation of the Smart City of the future, which integrates all energy, environment, water, heat, networks and optic fibre services in a single centre.



9.1 A2A for Smart Cities

Improving people's quality of life by offering smart and digital services for the city of the future, this is the A2A Group's objective. The Group, through its subsidiary **A2A Smart City**, applies innovative **IoT (Internet of Things)** digital technologies to the management of services dedicated to the territory (such as security, energy saving, environmental sustainability, mobility, etc.), creating technological infrastructures with the aim of creating new models of cities and territory.

Figure 46\_ The services offered by A2A Smart City



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A2A Horizon (Corporate Venture Capital) (page 133)

SUSTAINABILITY PLAN ACTIONS

PEOPLE INNOVATION  
Innovation and R&D

SMART SOLUTION  
Smart Grid  
Smart City

Smart Districts in Milan

During 2019, A2A Smart City participated in two important Smart District projects in the city of Milan: **Merezate** and **Cascina Merlata**. In both projects, A2A Smart City 's focus was to implement interventions aimed at minimizing energy and property management costs and to make Smart Living services (e.g. connectivity and surveillance) enabled by digital technologies available to residents. The Cascina Merlata project, mainly residential, is characterized by an innovative metropolitan habitat, designed according to advanced principles of environmental sustainability, which covers an area of about 900 thousand square meters and is also served by a shopping center and a large urban park with an area of about 250 thousand square meters. In this context, A2A Smart City was responsible for the construction of the communication infrastructure and the installation of 86 cameras, 22 Wi-Fi access points and 10 sos columns.

Milano Merezate, located north-east of Segrate, will be inhabited by about 2,000 people and will cover an area of 306 thousand square meters, of which 45 thousand will be green. In this context, A2A Smart City has implemented the fibre optic network, the **Wi-Fi network and the** radio frequency **IoT** network, with the aim of giving value to the area in question, enabling residents to enjoy a series of useful and innovative services, such as intelligent heating management, monitoring and management of electricity consumption, intelligent irrigation, smartwaste bins, control of air quality, access and noise levels. In addition to the data network infrastructure, A2A Smart City has installed 18 cameras, 3 Wi-Fi access points, 10 IoT sensors for environmental and water consumption measurements, 615 smarttemperature control sensors, 615 demand-side management devices (monitoring and regulation of electricity consumption), 120 smart plugs (control of electrical loads).

Open Fiber in Brescia

More than 16 million total investment and more than 70 thousand real estate units reached, thanks to the use of 550 km of A2A infrastructure (mostly already existing in the city) and more than 2,500 km of laid fiber, these are the numbers of the fiber project in Brescia.

The city of Brescia - thanks to Open Fiber, A2A Smart City and the municipal administration - has become even more connected thanks to the FTTH project (acronym for "**Fiber To The Home**"), which allows surfing the *web* at a connection speed of up to 1 Gigabit per second, ensuring maximum performance. A project that is part of the path that sees the Municipality of Brescia and **A2A Smart City** strongly committed to innovation and digital development of the city.

Digital Islands of Bergamo

A2A Smart City, in collaboration with the Bergamo Administration, has designed smart and digital oases in the city's districts that accompany the implementation of the city's public Wi-Fi .

**A total of 7 digital islands have been built, located in different places in the city.** In particular, smart benches have been installed mainly in the southern belt districts. These are very special seats, with a power outlet for charging electronic devices - from smartphones to tablets - and also with a smart working station.

The "**Panka Tesla**", this is the name of the smart benches, are able to detect the presence of the citizen and activate a series of light games. They are powered through a column also equipped with 8 USB ports for charging devices, two of which

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with **Qualcomm Quick Charge 3.0** technology for faster charging. Some are also equipped with "Tecatech", a special alarmed case for automated external defibrillator (AED). In addition, A2A Smart City has completed the digital oases with information totems, on the displays of which it will be possible to stay up to date regarding the news about the city, and with bins equipped with sensors capable of transmitting the filling status to Aprica. The latter is a useful initiative to reduce CO<sub>2</sub> emissions and save more than 300 km of travel for the removal of bags from bins. When the project was completed, the number of Wi-Fi hotspots in Bergamo rose from 123 to 222, while the total number of smart bins is about 150.

## Smart Parking in Mantua

Greater transparency in the use of car parks and rotation for spaces dedicated to the **disabled, electric cars** and commercial vehicles with loading/unloading activities, low tariffs, reduced traffic and lower emissions in the city center are some of the advantages of the project carried out in Mantua by A2A Smart City in collaboration with the Municipality and other public and private partners.

A2A Smart City has played the role of network and software provider of the system, providing its IoT LoRa network for the installation and acquisition of the data detected by the parking sensors. The A2A Smart City

network guarantees the appropriate coverage levels so that the sensors work with the best consumption performance, with coverage up to 10 km.

The big data coming from the sensors are then analyzed, processed and placed on a platform to provide information to the public on the state of the parking lots, taking into account variables such as traffic flow, city events and weather conditions.

## Smart Land: A2A Smart City and Agriculture 4.0

Optimizing production processes, reducing production costs and increasing the sustainability of the Italian agricultural model through innovation is the objective of the project in which the A2A Group is taking part, through its subsidiary A2A Smart City.

In particular, A2A Smart City, bringing its experience in the field of **proximal sensors** and in the development of IoT networks, will support companies in the **precision farming** sector in the adoption and implementation of innovative technological solutions applied, for example, to irrigation management and pathogen monitoring. The data collected through the sensors, processed and made available to farms in a timely manner, will allow more effective decisions to be made on how and when to carry out the activities.

## 9.2 Smart Grid

The Smart Grid concept refers to an **evolution of traditional distribution networks** based on the adoption of innovative technologies that involve network sensorization, the development of optimized control and regulation algorithms, real-time communication between network and control room with the possibility of performing remote manoeuvres even in automatic mode.

In the different areas (electrical, gas, heat and water) these technologies take different and specific directions and create *ad hoc* solutions.

### Balilla Project

In 2019, the feasibility study for the **Balilla Project** aimed at recovering low temperature renewable heat to be integrated into the Milan district heating system was successfully completed. In fact, the initiative involves the use of heat pumps to **recover thermal energy** from wells regulating the city's aquifer. In the project area, located in the south of Milan (in Via Balilla), up to 5 usable wells are available with a potential energy saving of 36 toe/year, equivalent to 63 tonnes of CO<sub>2</sub>/year avoided. The project is scheduled for commissioning in 2021.

### Noise logger

With regard to Smart Grids in the **water** sector, in 2019, the project to detect leaks through noise loggers was launched. The noise logger technology allows the identification and geographical location of **network leaks** through sensors that record the noise of flowing water. The recorded noise is then "interpreted" by a software platform that is able to identify anomalous noise due to network leaks. The project involved the installation of 39 sensors on 10 km of the Brescia network for 2 months. The test carried out so far has given excellent results also in comparison with other innovative leak detection technologies already tested: the devices installed have detected a total of 12 leaks, 75% of which were effective, with an average detection time of 8.5 days.



## Gas leak prediction

In 2019, Unareti concluded a project aimed at verifying the effectiveness of Machine Learning techniques applied to the forecasting of **dispersions on the natural gas network**. As part of the project, a statistical model was developed that elaborates the cartographic consistencies of the distribution network, the operating parameters of the network and the values of exogenous factors, such as meteorological, morphological and urban conditions, returning a scoring of dispersion risk in a predefined time window to guide the inspections.

The aim has been to **improve the effectiveness of systematic leak detection** increasing the number of leaks identified and reducing the time taken to identify and repair leaks.

The results of the project show that the increase in effectiveness can be up to 20%, with benefits for the safety of users, the efficiency of maintenance operations and the **containment of greenhouse gas emissions**.

## 9.3 Research and development for the circular economy

### Greenvalve: energy recovery and efficient management of the aqueduct

Thanks to the agreement between A2A Ciclo Idrico, Politecnico di Milano and Interapp-Valcom, in 2019, the first industrial prototype of **Greenvalve** was tested on the Brescia aqueduct, an **intelligent valve** that allows energy to be recovered from grid regulation processes.

The Greenvalve, patented and developed by the Department of Civil and Environmental Engineering of the Politecnico di Milano, can be applied instead of the common control valves and is equipped with a small turbine that allows to transform into electricity the mechanical energy of water that would otherwise have to be dissipated to preserve the integrity and safety of the network. The electricity produced, which is

greater than that required to operate the valve, can therefore be used to supply other users with **renewable energy**.

The project, created as part of the initiatives of A2A's Innovation function, aims to detect on-site the performance of an advanced energy harvesting system capable of pressure **regulation**, **flow** measurement and energy **storage** for self-powering. To monitor and manage the hydraulic conditions of the network in real time, an app has been developed that allows monitoring the valve from a smartphone, creating the conditions for intelligent management of the aqueduct. With the experimentation over, the possibility of continuing the test with prototype 2.0 is being considered.

## Micro-Turbines Gas Systems

In 2019, Unareti and A2A's Innovation team also successfully completed another project in the area of the circular economy. The project involved the testing of a **micro-turbine** that exploits the flow of gas within the distribution network for the production of electricity. The test, carried out on a section of network located in the southern area of Milan, confirmed the ability of the micro-turbine to power the plants of a final reduction unit without drawing from the power grid.

The solution developed therefore allows gas networks to **self-produce** part of their energy needs by recovering mechanical energy otherwise dispersed. Micro-turbines therefore offer clear benefits in terms of **reducing energy costs** and **environmental impacts** related to the operation of gas networks, and are particularly suitable for network sections located in remote areas that are difficult to reach by electricity infrastructure.

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## Ellen MacArthur and A2A: a partnership for the circular economy

The A2A Group has joined the international *network "Circular Economy 100"* (CE100) of the **Ellen MacArthur** Foundation. The *Ellen MacArthur* Foundation was founded in 2010 with the aim of accelerating **the transition to a circular economy**. As a global thought leader since its creation, the foundation has been able to put the issue of the circular economy on the agenda of many decision makers, governments and businesses. The **CE100 network** brings together businesses, institutions, governments, city administrations, universities and emerging innovators in a circuit dedicated to the sharing of knowledge and experience in the field of the **circular**

**economy**, as well as encouraging possible collaborations and partnerships. The entry into the EC 100 represents recognition of the commitment and results achieved and the concrete contribution that the Group is able to offer to the territories in which it operates. A2A puts the principle of the circular economy into practice in all its activities and contributes to the development of **smart and sustainable cities**. Participation in the EC 100 also represents a further opportunity for A2A to innovate on waste recycling issues, as well as on renewable energy production, sustainable water cycle management and the smart city of the future.

## 9.4 Knowledge spillover

The search for innovative and technologically advanced solutions affects all areas of the Group's activities and is aimed at improving both the products/services offered to end customers and the **working methods** of all the resources employed by the various Business Units.

### DNA-Design Network Analysis

Maximizing the organic exchange of information, to do business in an increasingly effective and sustainable way, is the goal of the **DESIGN NETWORK ANALYSIS** project. The Organizational Network Analysis is a method of analysis and representation of relational data, which has examined A2A's formal and informal relationships, generating insight into the organization, processes and communication, starting from the analysis of data on the interactions between the Group's people. The analysis identified the nodes to encourage **change management and innovation** actions, for example by planning interventions to redesign workspaces, optimizing interactions between colleagues.

### Site Gamification

As part of the internal process innovation activities in the plants, A2A Ciclo Idrico has implemented a programme based on "game" logic, called **"Gamification on site"**. *Gamification* is considered one of the most effective enablers to improve business processes, able to involve and motivate teams to achieve certain goals, accustoming them to the use of digital technologies.

The objective of the programme launched by A2A Ciclo Idrico was to encourage the spread of **virtuous behaviour** among employees while at the same time

making work more involving and enjoyable. All this through optional participation and without providing for additional activities in addition to the tasks for which they are responsible and basically with the same work tools.

Specifically, the app **"gamification on site"**, allowed to monitor the daily activities carried out by the departments, for the occasions organized in team, elaborating and communicating periodically rankings based on predefined scores for certain virtuous behaviour (e.g. attach system photos at the completion of an intervention) and assigning through the app badges to individual operators to reach certain targets of activities (e.g. Badge Reporter assigned upon achievement of a certain number of attached photos).

The results of the first "tournament" carried out showed a positive impact of the *gamification* logic on the target behaviour: comparing the "scores" of the teams involved before and after the introduction of *gamification* showed an increase of about 50% of the Work Orders managed and a reduction of the gap between first and last in the ranking from 60% to 14%.

The winners of the tournament were then rewarded with a voucher.

# Optimization of internal processes in Networks and District Heating BU

## Scheduling Project

As part of the **process and information systems renewal** programme undertaken by Unareti to cope with market evolution scenarios, the design and subsequent implementation of the new **scheduling** model was launched in 2018. The term scheduling refers to the process of managing a set of operational requests (Work Orders), from the acquisition of the requests, to the definition of a time order for their execution, up to the assignment to the operational staff.

With the aim of increasing the level of operational efficiency of the process, the project aims to **standardize** and **optimize** the resource scheduling model, which currently presents high fragmentation in the logic and operating modes among the various units of Unareti. During 2019, the company launched the second project phase, aimed at developing all the initiatives necessary to **implement the new operational model** according to a **pilot approach**.

- The project has set 3 objectives:
- **simplify and standardize** the way work is organized by defining the scheduling process and distinguishing the different operational roles;
  - leverage the expertise of resources in assigning tasks in order to **optimize** agendas;
  - **improve overall efficiency** by increasing the capacity to realize investments.

Throughout the whole initiative, about 600 people were involved, including technicians and workers, of which about 130 were involved in the Brescia pilot project.

## Idea Challenge

During 2019 the first **Idea Challenge** dedicated to the Networks and District Heating BU took place, a contest aimed at the more than two thousand colleagues of the BU, called to propose ideas for the application of image recognition technologies within their activities.

**Image recognition** is one of the most interesting trends in the field of artificial intelligence and allows recognizing places, objects and people also thanks to simple apps on devices such as smartphones and tablets.

The challenge idea was very well received: more than 130 people joined the initiative, who created 40 teams independently and proposed 61 ideas, with more than 2,600 views on the dedicated platform.

A jury composed of managers of the Networks and District Heating BU, coordinated by the Innovation function, then voted on the best idea. A team made up of people from Unareti and A2A Calore & Servizi won the first prize for the idea "Digital Twin of the Secondary Electric Stations" and will receive a budget to test the proposed idea independently at their unit.

Five other ideas were also awarded, ranging from monitoring road construction sites to identifying near-misses at district heating plants, and a special prize went to the two teams that submitted the most ideas.



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Relysense

Unareti and A2A's Innovation team have successfully completed the development of a power grid section **classification** tool aimed at **prioritizing** diagnostic activities. The analysis tool uses an Expert-Driven model that greatly facilitates the analysis of the characteristics of a network section, such as map layout and reliability and dependency parameters between joints, and allows sorting the network sections according to the probability of failure.

The availability of this information will therefore make it possible to **optimize** maintenance activities by preventing breakdowns and reducing the number and costs of service interruptions.

Neural heating networks

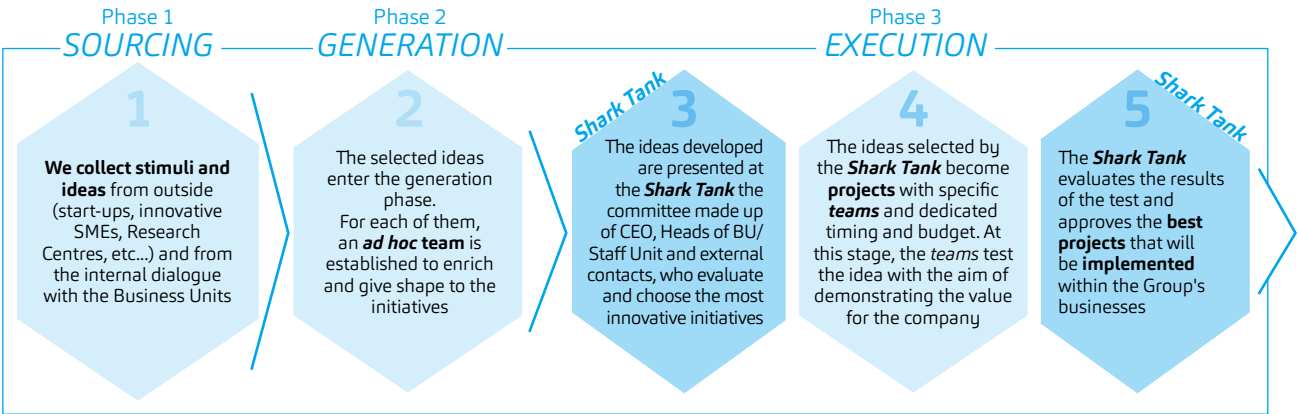
A2A Calore & Servizi and the A2A Innovation team have started testing a heat demand forecasting tool on the district heating network based on **Artificial Intelligence** techniques. The instrument, being tested on the TLR network in Brescia, jointly processes data relevant to heat demand, such as weather and calendar data, and forecasts heat demand with hourly details for the following 3 days.

The availability of this information would therefore make it possible to optimize the **dispatching** of heat production plants, activating the generation capacity actually needed to cover demand, with benefits for the quality and cost of the service.

InnovA2A

**Innova2a** is a programme that was developed in 2018 and aims to promote a virtuous and systematic process of generation and management of innovation, able to anticipate but also respond in a structured and effective way to the challenges posed by the market.

Figure 47\_The Innova2a format



In 2019, 24 projects were presented and selected by *Shark Tank* , 10 of which have already successfully passed the pilot phase.

Some projects that have successfully passed the testing phase:

AI for Sale

Implementation of a Customer Intelligence solution for the **optimization of marketing activities**, through the use of Artificial Intelligence algorithms to identify the best product able to meet the specific needs of individual micro-clusters of customers. More specifically, A2A Energia has obtained a scoring model of propensity to purchase products from customers in the Free Market, which will enable it to optimize the efficiency and effectiveness of its marketing campaigns.

Advanced Fleet Tracking

Solution to **optimize the management of the company fleet** on a single central platform available to the fleet manager. The initiative was tested through a pilot project involving about 30 cars on which smart boxes were installed to collect the main data from the vehicles and transmit them to the central platform where the data becomes useful information for the fleet manager. Following the positive outcome of the project, evaluation activities were started to extend the solution to the entire car fleet.



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## Digitalization of processes

The value of a business depends not only on its capacity to innovate in the quality of services offered, but also on its capacity to generate and spread internally **better management and organization processes**.

### Paperless

In 2019, the A2A Group embarked on a path of reducing the use of paper in the company. The initiative is structured in two macro phases. The first focused on mapping the Group's archives in the city of Milan and building a more effective and sustainable model of archive management. The project has made it possible to survey over 13 linear km of paper with the ambition to recycle about 300 tonnes over the next two years and with the possibility of extending the approach to other sites. Considering the amount of paper stored, the need to embark on a path to become paperless was highlighted, so as to significantly reduce the number of prints. The second phase therefore provided for an assessment, which began in November 2019, with the aim of investigating the underlying reasons for the need for printing; this path will continue in the first months of 2020, involving the majority of Business Units and Departments. After the analysis phase, the intervention strategy will be based on two main levers: **digitization of processes** with higher paper production and **construction** of a relative **path of change in the entire company population** that can make the path started sustainable.

### Corporate car sharing

This year saw the launch of **Corporate car sharing**, which reconciles attention to employee welfare and emission reduction targets with the introduction of 57 new vehicles.

In addition to business use, the Group's cars can now be booked and used by employees during their free time (outside working hours) at reduced rates. With a view to **simplifying the company**, A2A has also made the procedure for booking the cars via a special app.

In addition to the benefits for the workers and for the company, the project also has significant environmental value thanks to the introduction of **methane** engines (about 30 cars) to replace petrol/diesel powered vehicles. In the first month of start-up, 287 drivers were enabled, who covered about 14,000 km with 36 journeys, more than 50% of which were methane powered cars.





Global Service

One of the main objectives of the Global Service project is to improve the quality standards of Facility services (aspect, operation and maintenance of buildings) provided and the **simplification** and **alignment** of processes, with a focus on all possible savings. Among the communication methods adopted within the professional family, there is an online community (within the group Intranet portal) dedicated to all Group Facility Managers, in order to make communication faster and more effective.



A2A INVESTS IN START-UPS

"**A2A Horizon**" is A2A's Corporate Venture Capital (CVC) initiative which aims to encourage the Group's innovation through investments in **start-ups** with high potential. The programme was created with the participation of a number of partners including 360 Capital, a venture capital fund, but also the Politecnico di Milano, with the Poli360 fund, which relies on the University's research, the Technology Transfer Office and the Polihub incubator. A2A Horizon envisages investments of up to **70 million euro** for start-ups that operate in strategic business areas for the Group and aims to identify innovative technologies and business models to strengthen the core business, support its evolution and generate value for the Group and the territories in which it operates. Circular economy and sharing economy, **artificial intelligence** applied to the world of energy, blockchain, control systems for power grids or remote management of plants, smart applications for micromobility or home automation are some of the investment areas of the A2A Horizon programme.

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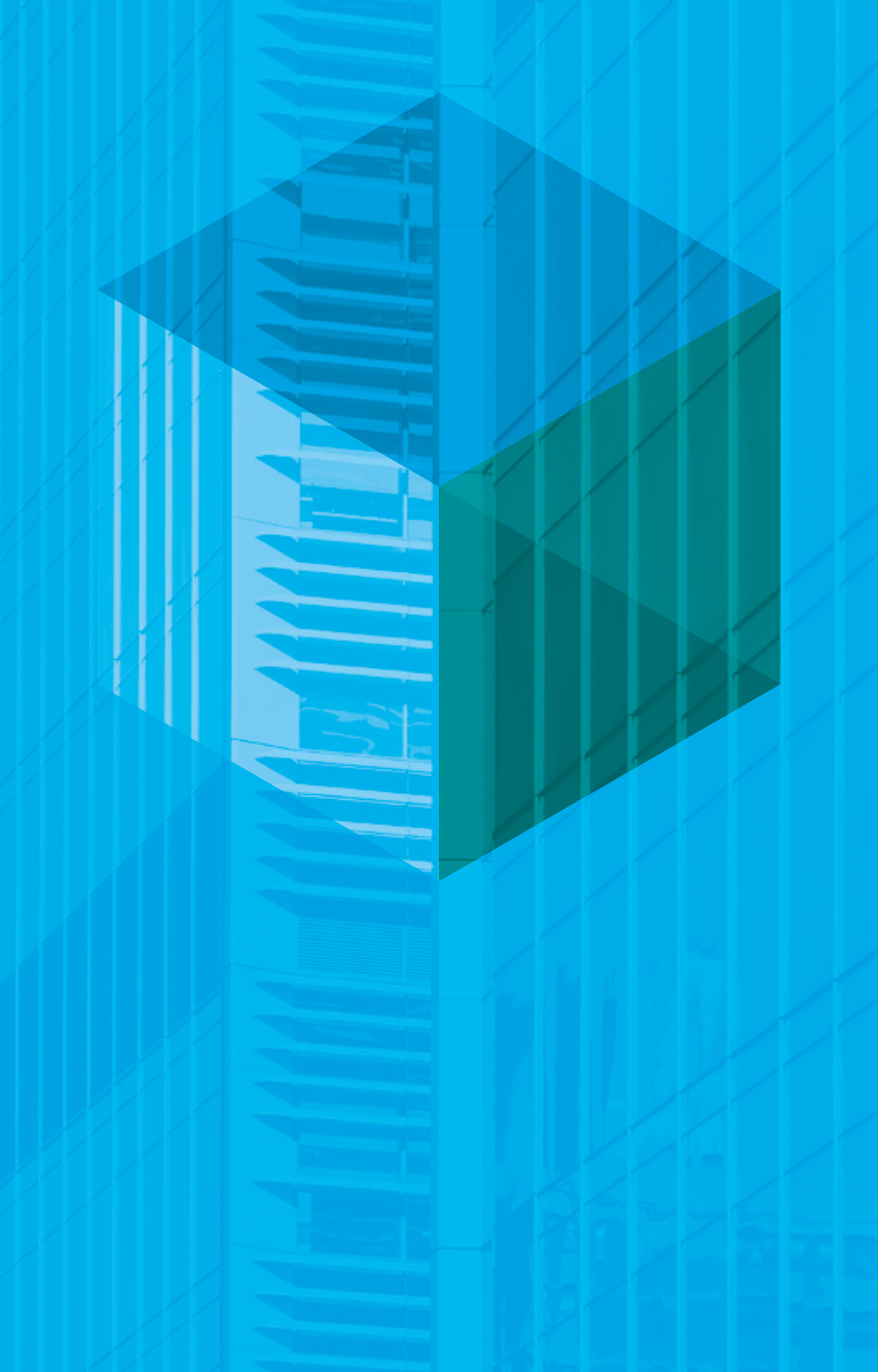
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# 10 Relational capital



*Customers*

## INPUTS

Innovative contact  
channels

Acquisition of  
Sun City Energy

Memoranda of understanding  
with municipalities for  
electric mobility

Energy efficiency: photovoltaic  
operating rental, asbestos  
removal and packages with  
financing for condominiums

Award of 10 tenders  
for public lighting  
management

The Service Charter has been  
drawn up for environmental  
hygiene in Bergamo

## A2A SERVICES AND PROCESSES

93%

Satisfied customers of "Spazio A2A"

7.8 public  
satisfaction  
of AMSA's services

15,000 adhesions  
to the new A2A Ciclo Idrico  
Bollett@mail service

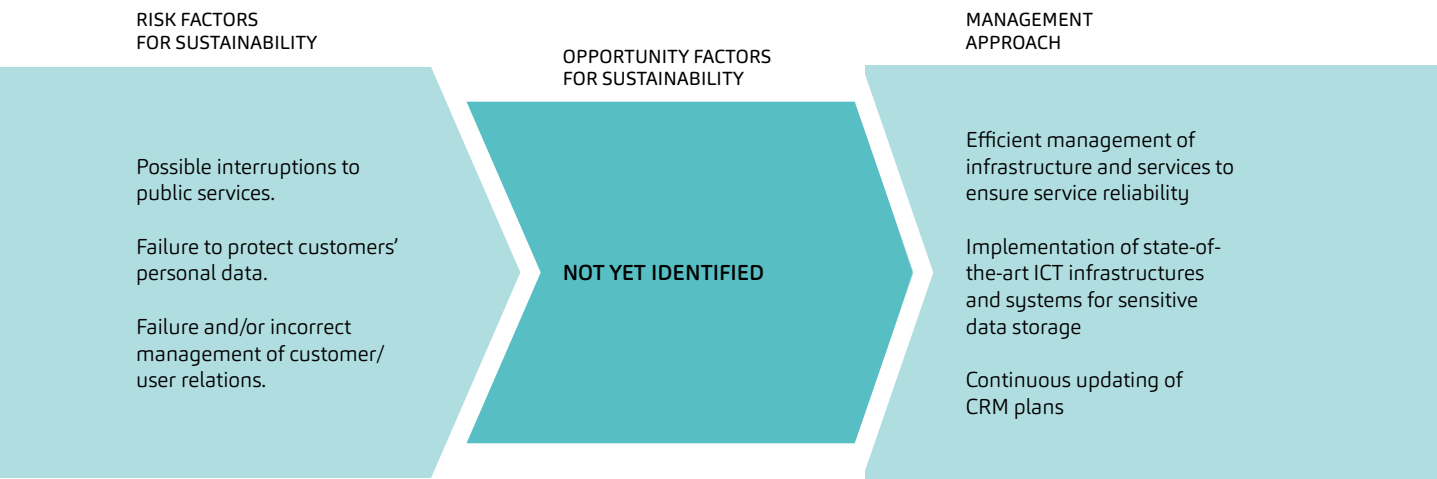
63% of Milan's  
LED traffic light lamps

10 million km  
zero-emission routes  
thanks to e-moving

## OUTCOME

RESPONSIBILITY AND SAFETY IN THE PROVISION OF SERVICES AND PRODUCTS


Ensure safety and reliability in the provision of services and development of emergency management plans aimed at preventing and/or mitigating potential external factors that could compromise the continuity of services.



QUALITY AND INNOVATION IN THE PROVISION OF SERVICES AND PRODUCTS

Promotion of high quality services and the ability to meet customer expectations through good communication and marketing practices (including data protection) and new digital services.



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<b>2019 ACTIONS</b>	<b>SUSTAINABILITY PLAN ACTIONS</b>	
Clearer bills for customers of di A2A Calore&Servizi, A2A Ciclo Idrico and A2A Smart City (page 153)		
Compliance with technical and commercial quality levels of services (page 158)	<b>SMART SOLUTION</b>	
Installation of smart meters (pages 74-76)	Smart Grid	
<b>2019 ACTIONS</b>	<b>SUSTAINABILITY PLAN ACTIONS</b>	
Customer satisfaction surveys and customer experience (pages 147,158,159)		
Innovative contact channels and services (page 143)	<b>SMART SOLUTION</b>	
Toll-free number for fraud prevention (page 145)	Quality Digital	

10.1.1 Relations with customers of the Market BU

The **Market Business Unit**, to which A2A Energia S.p.A., A2A Energy Solutions S.r.l. and A2A Illuminazione Pubblica S.r.l. belong, with all its subsidiaries and investee companies, was set up with the aim of playing a leading role in interpreting the energy needs of households, businesses and cities through the implementation of effective, innovative and sustainable solutions, ensuring the highest standards of quality in sales and customer service. The Market BU operates nationwide with a portfolio of offerings for all customer segments ranging from electricity and natural gas supplies, to products and solutions for energy efficiency, e-mobility and public lighting. The data in the following section have been calculated at 12/31/2019.

ELECTRICITY AND GAS SALES SERVICE

In particular, A2A Energia aims to strengthen its role as a reference company in the target areas by expanding its offer portfolio to domestic customers, condominiums, businesses and public administration, proposing new products and services (VAS, Value-Added Services) related to the sale of natural gas and electricity, enhancing the fairness and transparency of commercial relationships and service excellence.

2019 saw A2A Energia involved and committed to corporate transactions aimed at consolidating its position and that of the A2A Group in the sale of electricity and gas. In particular, **the merger by incorporation of Linea Più, a company belonging to the LGH Group, into A2A Energia, which now manages almost 2.5 million supplies, became effective on May 1, 2019**; in view of the focus and proximity to the local areas, which are the cornerstones of the LGH-A2A industrial partnership, all the operating offices of the merged company were kept, leaving the Linea Più brand in use together with the A2A Energia trademark.

In October 2019, A2A Energia acquired 45% of ASM Energia S.p.A, a gas and electricity sales company operating in the Lomellina area, with a portfolio of over 40 thousand customers, of which around 30 thousand gas, located in the municipalities of Vigevano, Mortara and neighbouring areas.

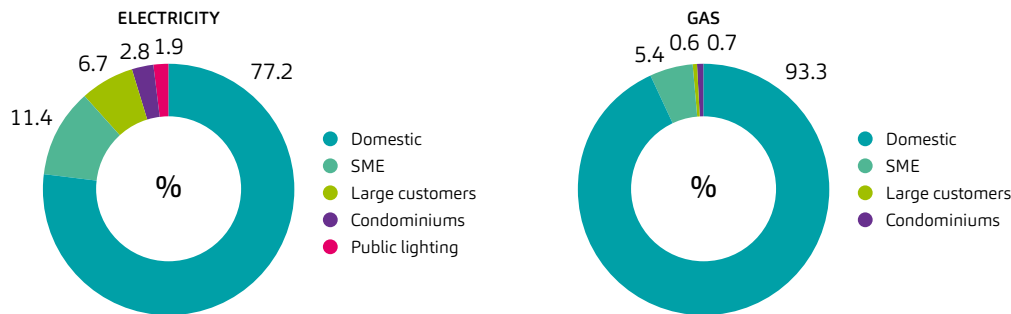
Finally, in the second half of 2019, A2A Energia was awarded a number of important tenders of national importance; in particular, the company was awarded 5 lots in the Consip Energia Elettrica edition 17 tender, for a total volume of around 2.5 TWh/year. The lots concern the regions Trentino Alto Adige and Friuli Venezia Giulia, Emilia Romagna, Tuscany, Umbria and Marche, Abruzzo and Molise. For two lots (Trentino Alto Adige and Friuli Venezia Giulia; Umbria and Marche), this is a renewal of the previous year, while for the other three lots it is a new acquisition. The award of the five Consip lots follows a number of other public tenders recently assigned to A2A Energia, including the three lots provided for in the CET - Consorzio Energia Toscana tender for the supply to the Region's Public Administrations, for a volume of over 700 GWh in 2020, bringing the total volumes awarded through the tender to around 4.3 TWh/year.

**In 2019, the company sold 1,987 million cubic meters of natural gas and 13,278 GWh of electricity.**

In line with the previous year, there was an increase of 56% in the large electricity customers segment, resulting in a significant increase in total electricity sold (+25% compared to 2018).

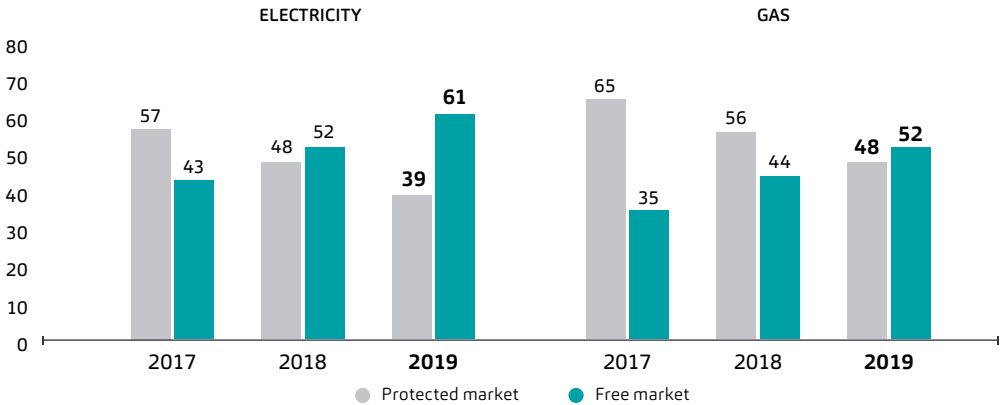
**The number of total customers for the electricity sales service increased by 8%, while for the gas sector, the trend did not change.**

Figure 48\_Number of customers analysed by type



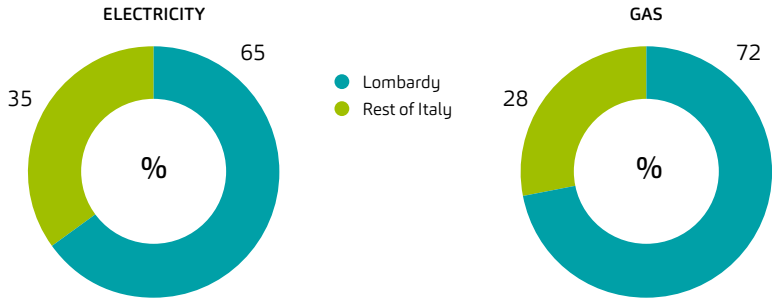
For both commodities, there was a significant increase in the number of customers opting for Free Market services (+28% for electricity and +19% for gas) and a constant decrease in the number of contracts active in the Protected Market (-13% for electricity and -14% for gas), with initial termination July 1, 2020, and postponed to January 1, 2022 (DL 162/2019).

Figure 49\_Number of electricity supply contracts by type of market (%)



A2A Energia promotes its services and products throughout Italy continuing its policy of growth even outside the historic territories: in line with previous years, in 2019, there was a significant increase in the share of electricity and gas sold in the rest of Italy, respectively 36% for electricity, with an increase of 11 percentage points over 2018, and 28%, with an increase of 16 percentage points over last year. The following is a breakdown of volumes at Group level.

Figure 50\_Geographic breakdown of sales volumes



Communication campaigns

In 2019, A2A Energia was involved in the continuation of the national awareness campaign with the testimonial Claudio Bisio and his now well-known claim: “Ascolta un amico”; a message that, underlining the concept of friendship, reaffirms the relationship of trust that binds A2A to citizens, the closeness to people and attention to customer needs.



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A2A Energia has launched for the first time two offers dedicated to the world of the Serie A: they are the **Inter Passion and Milan Passion offers** created from the original double partnership with Inter and Milan, as Official Energy Partners.

The offers include a fixed energy price for 24 months and the supply of 100% renewable energy. In addition, for those who want to join, there is a 10% discount, for 2 years, on the energy component and the raw material gas, a 10% discount at the official store of your team and the chance to win tickets to attend the matches of your favourite team and enjoy an exclusive experience.

To promote the initiative, the commercial "Different passions, one energy", on air since November on national TV and radio and filmed by major newspapers. This is the claim of the campaign, where A2A Energia acts as a trait d'union between the two teams, historically opposed and enemies, to fuel them with energy.

However, "passion" will not only have the colours of Inter and Milan. At the same time, limited to the territory of Brescia and province, the **Passions Campaign** will be on air as Official Energy Partner of Brescia Calcio (exclusively broadcast on local media).



## PARTNERSHIPS AND CONVENTIONS

As part of its promotional activities, A2A Energia signed partnerships and agreements with various parties in 2019:

- **Agreement between Banca del Territorio Lombardo and A2A Energia:** the agreement offers a fixed price for electricity and raw material gas components to customers and registered members of the bank at extremely advantageous and exclusive conditions, both in economic and service terms. The agreement is a unique opportunity that immediately gives many benefits: electricity produced 100% from renewable sources, fixed price of the components electricity and raw material gas for 2 years, choice of single or two hourly or two hourly electricity price according to consumption habits, 1 month of electricity and 1 month of gas free for BTL customers or 2 months electricity and 2 months of gas free for BTL members. Activating the offer on the free market is simple, there are no activation costs and meter interventions. BTL customers and members can join at any branch.
- **Partnership with Cityscoot:** the initiative, which started in August 2019, provided that customers who went to a SpazioA2A store would receive a free postcard with a code to use the Cityscoot scooter rental service for free for the first 40 minutes. Since the end of October, the promotion has been included in the Energy Link benefits programme to give registered customers the same 40 minutes of free scooter rental. The promotion will be extended until 05/31/20.



New products and services for more responsible and sustainable energy consumption

The retail energy market is increasingly oriented towards providing offers that best meet the needs of customers, offering products and services related to the sale of electricity and gas.

In line with the market, A2A Energia promotes responsible use of energy through the promotion of highly energy-efficient products and solutions. Among the main proposals of 2019:

- **PERFETTA2a**: is the first Free Market electricity and gas offer of A2A Energia with a price locked for 3 years 100% green energy that customers can customize by choosing from 5 packages available, the 3 they prefer:
  1. Loyalty: provides a bonus recognized in the bill at the end of each year spent as a Customer of A2A Energia, even in case of renewal;
  2. Punctuality: provides an annual bonus recognized in the bill if payment deadlines are respected;
  3. Assistance: includes a service premium assistance with a dedicated toll-free number and free insurance policy for domestic breakdowns;
  4. Environment: a package with which customers remotely adopt a tree from the A2A Energia forest (a project carried out in collaboration with Treedom);
  5. Solidarity: a package with which A2A Energia donates 19 euro to Banco dell'Energia Onlus to help people in need.

➤ For more information:  
<https://casa.a2aenergia.eu/perfetta>

- **Caldia2a**, the offer that includes the sale of highly energy-efficient boilers for domestic customers in the Free Market and customers in the Small Business segment. The commercial proposal includes not only the installation of the boiler but also a package of services designed to meet the various needs of customers. During the year, 189 boilers were sold.

➤ For more information:  
<http://caldia.a2aenergia.eu/>

- **Clima2a**, the proposal of smart air conditioners, in partnership with Samsung and Innova, which provides a "turnkey" solution from installation to financing of the product. During the year, 490 sales were finalized for a total of 838 installed splits, including the same offer proposed by LineaPiù.

➤ For more information:  
<http://clima2a.a2aenergia.eu/>

- **Solare A2A** and **Più Fotovoltaico**, offers that provide for the installation at home of a photovoltaic system, ensuring to the customer not only the after-sales service, but also the complete management of administrative procedures with respect to all relevant bodies.

➤ For more information:  
<https://casa.a2aenergia.eu/solarea2a> e <http://www.linea-piu.it/offerte/fotovoltaico/piu'-fotovoltaico>

- **Casa Sicura**, is a package of services of assistance and maintenance of the boiler or the breakdowns of household appliances, offered to customers of A2A Energia of the Free Market with the possibility of payment in installments in the bill; in 2019, 1,415 offers were activated.

➤ For more information:  
<https://casa.a2aenergia.eu/casasicura>

- **Energy Check Up**. A2A Energia has launched an offer that provides for the signing of supply contracts on the Free Market, relating to the Electricity and Gas Guaranteed Price Offer, combined with free use of an innovative and digital energy check-up service provided by the Greenovation start-up, with the aim of increasing customers' awareness of energy efficiency.

➤ For more information:  
[https://casa.a2aenergia.eu/green?&\\_ga=2.162734783.2083623340.1579081891-848608730.1574096488#intro](https://casa.a2aenergia.eu/green?&_ga=2.162734783.2083623340.1579081891-848608730.1574096488#intro)

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Green Energy Certified from renewable sources

Confirming the commitment of A2A Energia to increasingly sustainable energy consumption, the entire portfolio of offers for the residential segment now consists of 100% certified green energy from 2018. During the year, Group companies sold **2,276 GWh of green energy**,

a slight increase of 2% over the previous year. The offers of A2A Energia that promote green energy are identified by its “ENERGIA A2A Rinnovabile 100%®” registered trademark, which ensures respect for the environment.

Figure 51\_Green energy sold and breakdown by market segment

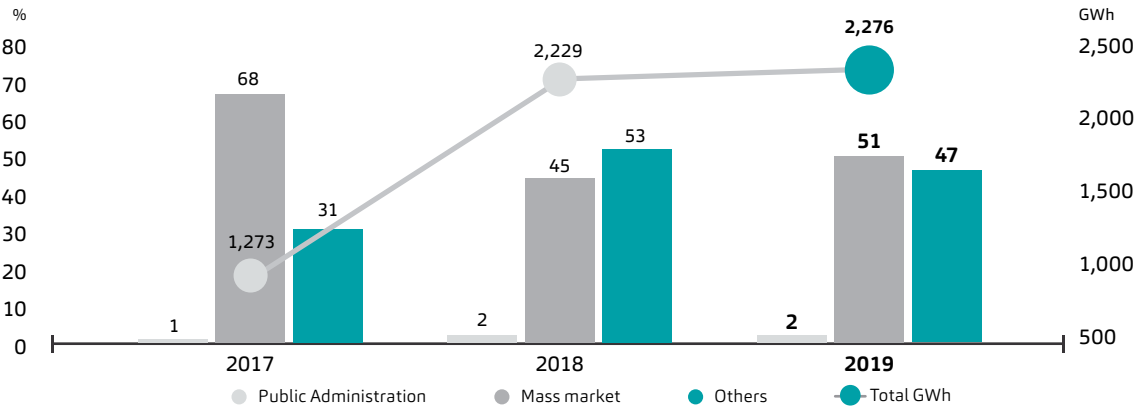
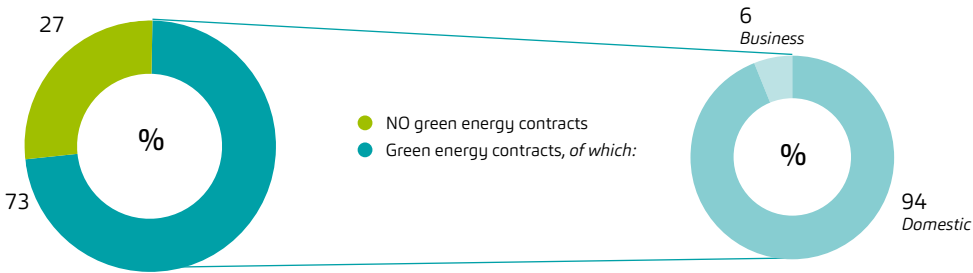


Figure 52\_Distribution of mass market green energy by segment - A2A Energia



Loyalty programme

**EnergyLink** is the advantageous programme of A2A Energia thanks to which customers can take advantage of exclusive discounts or awards such as electricity and gas supply vouchers or vouchers to be used in their free time, and the possibility of making donations. The objective of the programme is to build Customer loyalty based on engagement dynamics aimed primarily at promoting virtuous and sustainable behaviour through a completely "digital" interaction. During the year, the number of customers enrolled in the programme has more than doubled from about 40 thousand in 2018 to over 98 thousand in 2019.

➤ For more information:  
<https://www.a2aenergia.eu/pfedelta/index.html>

Innovative contact channels and services

A2A Energia meets the needs of its customers by offering a complete and multi-channel listening service, through physical counters, new SpazioA2A stores, call centers, social channels (facebook page) and the call-back service available on the website. A2A Energia's contact channels offer Customers innovative and digital services.

As of October 1, 2019, a **new A2A Energia website page** is online, offering an overview of all the **green services** offered by the Company.

➤ For more information:  
<https://casa.a2aenergia.eu/green>

In order to fully understand customers' needs, A2A Energia has implemented an initiative to involve customers in the **co-design of the new App**. The co-design process followed several phases: an initial benchmarking analysis with the main competitors;

followed by interviews with customers of different operators that allowed to identify 4 different user profiles; a workshop, aimed at sharing ideas and guiding participants (including customers) in the prototyping of the application, also through *gamification* activities.

The needs expressed by the 4 prototypes have been summarized in a single output, in order to define the requirements necessary to meet the needs of all the identified profiles and thus to be able to start the future development phase.

In 2019, A2A Energia's **call centre** received a total of around 1.3 million calls; the **sales counters** welcomed over 240,000 visitors with an average waiting time of 12'54" minutes for those of A2A Energia and 10'30" minutes for the Linea Più counters.

The "**SpazioA2A**" project, launched in 2018 with the aim of informing consumers about the changes taking place in the energy markets and promoting the subscription of A2A Energia's Free Market offers through the opening of 5 temporary stores and the establishment of a network of over 100 sales consultants operating in SpazioA2A stores, in shopping centres, hypermarkets and at the main events in the area. Initially launched in the territories of Milan and Brescia, from July 2019, the activity was also extended to the territory of Bergamo with the establishment of a new team of consultants and continuous presence in the main shopping centers of the province. On the occasion of the 18th edition of the "CMMC Awards 2019" competition, promoted by the CMMC Club - Customer Management Multimedia Competence, **A2A Energia was awarded in the "Customer Experience" category** for the introduction of Virtual Assistant stations in SpazioA2A stores. These stations make it possible to connect customers in **SpazioA2A temporary stores** with A2A Energia counter consultants via video call to receive assistance on Free Market contracts. The stations also allow sharing or scanning documents remotely, ensuring through a digital channel the same experience and the same level of assistance as traditional physical counters.

In addition, as part of the Public Notice "Neighbourhood Events", promoted by the Municipality of Milan to animate some of the less central areas of the city, A2A Energia presented the "**A2A in the suburbs**" project, designed to provide widespread and complete coverage

of the most decentralized areas of the city of Milan. A project that combines, through a single communication strategy, a service of assistance to the citizen at the fixed units (in relation to Free Electricity and Gas Market contracts, consulting activities on energy efficiency, sustainable mobility and regulatory changes expected in the electricity and gas markets) and a unit of 25 suburb squares with free shows and entertainment at weekends, with events and workshops dedicated to children on energy efficiency, electric mobility and environmental sustainability. During the 25 events held in 2019, A2A Energia's consultants provided almost 10,000 citizens with advice and suggestions for more efficient use of energy and to save on their energy bills.

With regard to **billing instruments**, A2A Energia issued around 11.9 million bills in 2019. The Linea Più brand **Bollett@mail** and **Bolletta Express** service has **536 thousand adhesions** (23.7% more than the previous year). In continuity with the past years, the significant decrease in the number of pages contained in bills, thanks to the 2.0 bill format, and the adhesion to the digital bill service have allowed to save about 233 trees.

A2A Energia also promotes **Bolletta Free**, the **interactive service** available in the Customer Area that allows **interacting with your bill from any device** (PC, tablet and smartphone).

Always active is the use of **certified e-mail for business customers**, which allows continuity to the digitalization project for payment reminders; this has optimized the time and efficiency of contact with customers. The use of the service allows eliminating the costs related to the production/printing/mailing of similar reminders in paper form; this benefit has been transferred to the Customer with the elimination of reminder costs normally provided.

The use of the **Registered mail with digital storage**, launched in 2017, was also consolidated. The product enables addressees to download recorded deliveries over the internet. A quick, sustainable manner by which to make communication to customers more effective, giving them the chance to choose how to collect correspondence.

Customers can choose the method of payment that best suits their needs: SEPA bank account, which is the most widely used method (over 58% of total payments) followed by pre-stamped postal bills, bank transfers, Sisal and Lottomatica payment

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agencies, commercial counters and credit cards. In July 2019, A2A Energia continued its efforts to make the process of reimbursing customers with non-domiciled contracts more efficient by **launching Plick as an alternative instrument to draw cheques and traditional bank transfers**.

Thanks to the joint effort between the sales Company, UniCredit and fintech PayDo, for the first time an instant payment instrument, originally used only by end consumers, has been transformed into a B2C reimbursement method.

With Plick, even customers who do not provide A2A Energia directly with their bank details for the management of payments and reimbursements, can collect the credit on their current account without having to go to the bank and without time constraints, as long as they are connected to the Internet. The service is valid for current accounts opened throughout SEPA.

The use of the service does not require downloading an App: after requesting from Customer Area to be reimbursed through Plick, the Customer receives a notification to the e-mail address or certified mobile phone number and, following the instructions, completes the process by entering IBAN, fiscal data and security code.

At the end of 2019, a pilot project was also launched to assess customers' acceptance of additional alternative reimbursement instruments to cheques, such as the conversion of credit into vouchers.

In line with the trend that now sees 83% of the Italian multi-channel population (internet users 43.9 million), A2A Energia customers confirm their propensity to use the web with almost **5 million visits for 2019**, with an increase in registrations in the Customer Area, with the request for the Bolletta@mail and Bolletta Express service, which are always in positive evolution compared to the previous year.

Figure 53\_Number of electricity and gas contracts with the Bollett@mail and Bolletta Express service

	2017	2018	2019
A2A Energia	325,580	367,018	<b>458,659</b>
Linea Più	47,231	66,315	<b>76,122</b>
Lumenergia	-	-	<b>1,362</b>
<b>Total</b>	<b>372,811</b>	<b>433,333</b>	<b>536,143</b>

In 2019, A2A Energia launched the innovative **Cambio CasA2A** service, which makes it possible to manage the relocation of electricity and gas users throughout Italy with ease, entrusting A2A Energia with all the necessary formalities for the closure and transfer of the contracts with the suppliers involved. The service is free of charge until February 2020 and will allow those who wish to take advantage of it to join the A2A Guaranteed Price offer in the Free Market. To use the service just go to the page of [cambiocasa.a2aenergia.eu](https://cambiocasa.a2aenergia.eu), fill in the online form and upload the required documents. A2A Energia will take care of the rest and the procedure will be followed by the Customer in a clear and transparent manner.

Toll-free number for fraud prevention

A2A is particularly committed to ensuring customers with a service based on maximum transparency and fairness and over time, also in collaboration with the Consumer Associations, it has adopted various tools by which to simplify the information supplied to customers and regulate conduct clearly: service of **joint settlement**, establishment of the **Observatory on unfair commercial practices** with the application of the **Code of Commercial Conduct**, activation of the **toll-free “anti-fraud” number** and signing of the **Self-regulation protocol**. These actions have always gone hand-in-hand with constant training of sales staff and service staff in direct contact with customers.

In the area of consumer protection, **the toll free “anti-fraud” number received 2,137 calls**, of which 378 related to unfair commercial practices by known operators and 657 by unknown companies. The remaining ones were related to requests for information of various kinds.

No reports of unfair commercial practices were recorded by A2A Energia through these contact channels.



Service accessibility

The sales companies of the Group have always been close to the less well-off citizens in order to improve and maintain access to the service of supplying electricity through various solutions.

A2A disburses the **social bonus**, as per provisions of the ARERA, allowing family units in particular financial difficulties or in which one of the members suffers from severe physical difficulties, to save on the energy bill. The **physical bonus** is only recognized on supplies of electricity and the amount varies according to the meter power and consumption bracket established by the ASL (local health authority).

Figure 54\_ A2A customers who have used the social bonus

	2017	2018	2019
Gas bonus	21,412	24,577	26,292
Electricity bonus	20,851	24,394	29,519
of which physical bonuses	1,129	1,961	1,494

A2A Energia also continued to support the Energy Bank project (see page 169), channelling communication to its customers and suppliers, who can support the initiative through recurring donations through their bills. The attention to the most vulnerable groups is always high with the bill service printed in "black and Braille" overprint; information leaflets in 7 languages (Italian, English, French, Spanish, Arabic, Chinese, Romanian) for foreign customers. Finally, public counters with facilitated and priority access for disabled customers, pregnant women and the elderly are available.

➤ For more information, see the Info Point section of the website [www.a2aenergia.eu](http://www.a2aenergia.eu)

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Customer satisfaction

A2A Energia constantly monitors its customers' satisfaction with the quality of the services offered, in order to become increasingly aware of the perception of its activities and identify the areas of intervention, in a logic of continuous improvement of its work.

Cerved survey

Like every year, A2A Energia has participated in the Multiclient Customer Satisfaction Survey "Cerved ON Energy and gas Monitor", which allows a clear comparison of A2A Energia's Customer Satisfaction Index (CSI) with that of its main competitors. The results of the 2018 survey were made available during 2019: A2A Energia holds leadership in the gas market, where it confirms first place for companies, and has gained the highest position among private individuals; it is also on the podium in the target business energy market.

Free market customer survey

As in previous years, a quantitative survey was carried out also in 2019 with the aim of determining the level of **satisfaction of customers in the A2A Energia Free Market and the Linea Più brand**. The survey, in collaboration with the CFI Group institute, involved a sample of residential and small business customers, gathering a total of 5,295 telephone and web-based interviews (mixed CATI/CAWI system).

The survey confirmed high levels of customer satisfaction for A2A Energia, with a satisfaction index of 76.2 (scale from 0 to 100), a figure in line with that of last year. With reference to the Linea Più brand activities, the level of satisfaction was 76.7, up by about 4 points compared to the previous year. In general, for both companies the perceptions are very positive in the residential segment.

Call center survey

In 2019, ARERA published the results for 2018 related to customer satisfaction with the operation of A2A Energia's call center, which is the best among those recorded in recent years: it remains 5.8 percentage points higher than the national average. In particular for the two most important quality aspects (clarity and ability to solve the problem quickly) the overall "weight" of which is over 70%, A2A Energia is the Best Performer among all the companies involved in the survey. Customer satisfaction with the operation of the Linea Più call center was also 1.7 percentage points higher than the national average. The table shows, for each quality factor, the percentages of satisfied customers, i.e. the respondents who considered the service equal to or better than initial expectations. The company data is compared with the total data. The table shows the impact / importance of each factor on overall satisfaction.

Figure 55\_Customer satisfaction on call centre operations

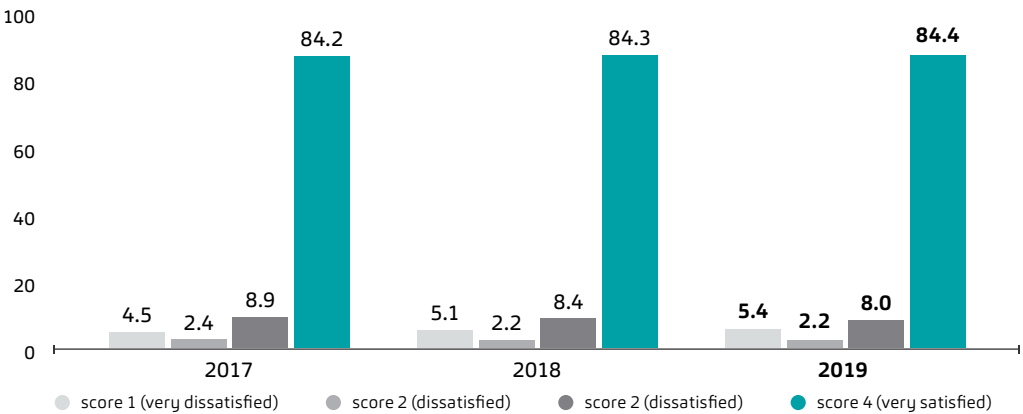
CUSTOMER SATISFACTION ON CALL CENTRE OPERATIONS	1 <sup>ST</sup> HALF 2017	2 <sup>ND</sup> HALF 2017	2018*
A2A Energia	95.7%	95.2%	98.1%
Linea Più	93.2%	90.5%	94.0%
National average	93.2%	91.7%	92.3%

\* Since 2018, the survey has been conducted on an annual basis. The 2019 figure will be communicated in the second half of the year. The result before 2019 is not yet available.

After call satisfaction survey

The “after call” survey records the level of satisfaction of customers that use the call centre services immediately after completing a telephone call with operators. Also for 2019, survey results were again very positive for A2A Energia: 92.4% of customers are satisfied or very satisfied.

Figure 56\_Customer satisfaction after a call to the call centre (percentage on assessments recorded)



Satisfaction and quality of branches

In 2019 too, a survey was run to analyse the level of satisfaction with the service at the branches of Bergamo, Brescia and Milan. Approximately 99% of users rated it positively. The level of satisfaction, which was excellent in the previous year, shows a further increase of 0.4%.

Figure 57\_Customer satisfaction on the services provided at the counter

	2017	2018	2019
Positive	96.8%	98.3%	98.7%
Negative	3.2%	1.7%	1.3%

Customer experience satisfaction survey

A survey was carried out in 2019 to understand **the effectiveness of contact channels for signing new contracts or purchasing new services**, both for potential and existing customers. In particular, for **potential customers** the website, call me back service and teleselling service were considered; for **current customers** the call centre channels and SpazioA2A were considered.

The results of the survey show a positive customer satisfaction index. For potential customers the most positive aspects are the operator's evaluation in the call me back service and, in general, all items describing the teleselling service.

With reference to customers, call centre operators receive the highest score thanks to their ability to suggest offers, clarity, courtesy and competence in addressing needs; SpazioA2A are rated positively overall especially for staff, with room for improvement in terms of space comfort and pleasant environments.

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## ENERGY EFFICIENCY

A2A Energy Solutions is the company of the Market BU which proposes itself as an ESCo and technological partner of the companies, supporting them with **energy diagnostics** and **audits**, design and implementation of interventions through **Energy Performance Contract**, operational rental, implementation of tools to encourage **the rational use of energy and Energy Management activities**.

A total of 27 contracts were signed in 2019 and will come into operation in 2020, making a significant contribution to CO<sub>2</sub> reduction:

- **18 operational rental projects for the installation of photovoltaic systems for a total of 2.7 MW of installed power**; through operational rental it is possible to have a photovoltaic system, without directly bearing the cost of the purchase, but paying a periodic fee. The rental contract has an approximate duration of 10 years and, at the end of the contract, the customer has the right to acquire the plant at no additional cost. For companies, this solution has several advantages, including: savings on bills, relief from tax charges and responsibility for managing insurance coverage costs, maintenance and administrative requirements;
- **9 asbestos removal projects with the installation of incentive photovoltaic systems for a total of 6.4 MW of installed power**. On August 9, the new Ministerial Decree on incentives for renewable energy sources was published (MD "FER1"), which introduces new incentive mechanisms for **newly built photovoltaic system and on-shore wind systems**, hydroelectric and purification gas plants. The construction of plants in MD "FER1" is proposed to customers as a replacement for roofs of buildings and rural buildings on which the complete removal of asbestos can be carried out, as it allows, in addition to the removal of hazardous materials, the possibility of exploiting the energy produced for self-consumption.

## ENERGY EFFICIENCY INTERVENTION IN THE PLASTIC SECTOR

In 2019, an intervention to make the production process more efficient was carried out at a company active in the production of polypropylene granulates obtained through the regeneration of plastics, special non-hazardous waste and by-products from industrial processes.

In the pre-intervention condition, the production process was carried out in 2 separate plants 3 km away where the second plant received the product coming out of a particularly energy-intensive "thickening" process (hot mechanical processing of shredded waste), and was finalized with an extrusion process (creation of plastic plates/sheets).

The efficiency improvement involved a complete transformation of the entire production process, grouping it into a single plant and eliminating the thickening phase. The new process includes a cold preparation phase and the optimization of the final activity through the installation of "forcers".

The results obtained after the first year of operation of the new plant in terms of improving the environmental impact are as follows:

- elimination of the transport of semi-finished products by truck, saving about 60 kg of CO<sub>2</sub> per day;
- 60% reduction in water consumption thanks to process optimization;
- electricity savings of 1.5 GWh and obtaining 971 Energy Efficiency Certificates.

In April 2019, **A2A Energy Solutions acquired SunCity Energy Srl**, a company focused on the business of aggregating and dispatching energy from 100% Italian renewable sources, with the aim of enriching its offer in the energy from distributed renewable sources (DERs) and energy efficiency services sector, and launched a progressive plan to enter the capital of the SunCity Group. The operation will enrich A2A's offer to Italian SMEs.

**A2A Energy Solutions has also signed two memoranda of understanding with the municipalities of Milan and Bergamo aimed at promoting and raising awareness of energy efficiency issues.** These protocols stem from the awareness that the Italian real estate heritage is mostly dated and not very efficient from the energy point of view. Therefore, the objective is to promote the implementation of energy efficiency and redevelopment of homes in the city, intervening on the construction of buildings to ensure better thermal insulation.

In support of these initiatives, **A2A Energy Solutions has also signed an agreement with Intesa Sanpaolo aimed at promoting energy efficiency measures in buildings.** Thanks to this agreement, in fact, *A2A Energy Solutions* provides condominiums with solutions such as the redevelopment of the centralized thermal system, the installation of a photovoltaic or solar thermal system, rather than the realization of a "thermal coat", or the relamping of lighting. Once the ideal energy efficiency solution has been chosen, the condominium will be able to apply to Intesa Sanpaolo for financing (for a maximum duration of 10 years and up to a maximum of 80% of the investment) which will have dedicated conditions, a 50% reduction in the costs of the preliminary investigation and the guarantee of certain and contained times for the conclusion of preliminary formalities.

E-moving

For *A2A Energy Solutions*, the development and promotion of electric mobility plays a primary role. Since 2018, in fact, e-mobility is no longer an experimental activity, but has attention and a rigorous structure from an economic and industrial point of view, necessary requirements for its organic growth.

Although the company has concentrated mainly in Lombardy with its activities, the growth path undertaken has offered the possibility of installing charging columns even outside the regional perimeter. In 2019, in fact, an agreement was signed with the Municipality of **Monfalcone** that provided for the installation of **4 Quick Charge columns**, with power per single socket up to 22 kW, on the city territory. The installation of the columns was completed at the end of December, while the service was inaugurated and started in early 2020.

In 2019, the first columns provided for in the agreements stipulated with the municipalities of Bergamo, Cremona and Rovato (Bs) were inaugurated.

In **Bergamo**, 32 columns have been installed and activated. Each column has two stalls reserved for charging vehicles and the service is offered with promotional logic to all types of electric vehicles and motorcycles for the first year. To make the system immediately usable, the Municipality of Bergamo has activated the home delivery of the E-moving card to all owners of electric vehicles in the Municipality's mobility service database. In **Cremona**, 8 Quick Charge and 2 Fast Charge columns have been installed, with power up to 50 kW, provided for by the agreement with the Municipality. Also in Rovato, the first 2 Quick Charge columns provided for in the agreement with the Municipality were inaugurated in 2019. The third column, of the Fast Charge type, planned at the exit of the A4 motorway tollgate, will be inaugurated during 2020.

With reference to the **Brescia area**, where 19 charging stations were already present, *A2A Energy Solutions* has carried out the technological renewal of the entire E-moving electric vehicle charging network in the city, through the complete replacement of the columns with new generation ones, and the extension of the network with 4 new columns, one of which is a Fast Charge. An additional Quick Charge column has been installed at the new Green Energy Point A2A in via Malta.

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In addition to the new columns on public land, there is an important new feature that concerns the main car parks managed by the Brescia Mobilità Group. In fact, inside the 6 main car parks in the structure, a special area has been activated for electric recharging with wallbox, a recharging infrastructure installed on the wall, which allows the simultaneous recharging of two electric vehicles (both cars and vans) thanks to two Type 2 sockets up to 22 kW.

A total of 30 columns with 60 charging points are therefore present in Brescia.

In **Milan**, in 2019, a **second E-Hub** was inaugurated for recharging the electric vehicles of the Unareti Group company fleet, with 12 columns, 3 wallboxes for a total of 30 recharging points. An additional 24 charging points have also been installed for Unareti's exclusive use at the Brescia car park.

All the columns of the E-moving circuit are powered by **electricity produced from renewable sources**, certified by the "100% Green A2A" trademark.

The new columns of Monfalcone, Bergamo, Cremona and Rovato are added (in addition to the charging points for quadricycles and electric carsharing in Milan) to those installed in **Milan, Brescia and Valtellina**, for a total of 198 columns of which 24 fast charge. In 2019, the service **provided 145,000 recharges** for a total of 1.5 GWh (5.6 TJ), corresponding to 10.3 million km travelled with zero emissions, **saving over 1,000 tonnes of CO<sub>2</sub>**.

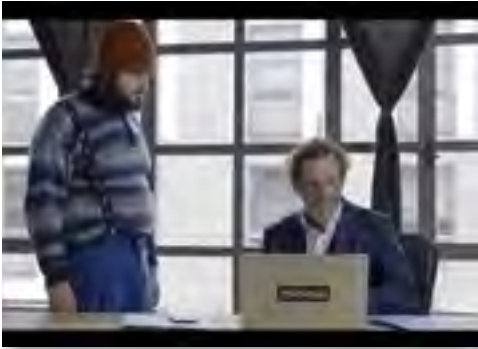
As part of its activities dedicated to electric mobility, A2A was a partner of the National Conference on Electric Mobility 2019 (E\_mob) and technical sponsor of the 1000 Green Miles 2019.

The **National Conference on Electric Mobility 2019** was held over three days: the first, more institutional, dedicated to best practices; the second, more technical, dedicated to in-depth analysis of the sector; the third, more popular, designed for the general public with the gathering of electric vehicles and test drives for all. The conference is organized by **E\_mob**, a group of institutions, companies and associations active in promoting electric mobility as a tool to make the transport sector more sustainable.

The first edition of the **"1000 Miglia Green 2019"**, the regularity race for electric and hybrid cars in 1000 Miglia style, but in ecological version, started in Brescia and arrived in Milan in September 2019 in three stages. A2A, as technical sponsor, made available, thanks to Unareti, the E-Hub in via Ponte Nuovo in Milan, which allowed the recharging of the over 40 cars in the race.

## A2A ENERGY SOLUTIONS COMMUNICATION CAMPAIGN

In the year of the celebrations for the 500th anniversary of Leonardo da Vinci's death, A2A Energy Solutions also wanted to pay tribute to the genius of the Italian Renaissance, dedicating an ironic communication campaign to him, created by the staff of the well-known social page **"Il Milanese Imbruttito"**. Two videos have been made to remember the technologies that make the city more beautiful today, improving the quality of life of citizens, from electric mobility to LED street lighting. In the videos, the protagonist, "Il Milanese Imbruttito", the prototype of the clever and efficient Milanese, tells of having chosen the innovative and sustainable solutions of *A2A Energy Solutions*, saving his budget, while his naive antagonist, the "Giargiana", still uses ineffective and unsustainable solutions. However, the "imbruttito" story continues and the Milanese Imbruttito tells of a Leonardo Da Vinci who has awakened in the heart of the new Milan, what technological wonders are transforming the face of the city.



PUBLIC LIGHTING

The entry into force of European directives requiring a rationalization of energy use, the application of Minimum Environmental Criteria (CAM) in tenders, as well as the definition of mandatory savings clauses in energy service contracts activated by the PA, are orienting Italian public administrations to increasingly use services that comply with specific environmental sustainability requirements. An example of the application of this trend is the management of public lighting in municipal areas.

A2A Illuminazione Pubblica is the Group company that manages public, artistic, traffic light and votive lamps lighting systems. For some years the company, which focuses on the spread of high-performance LED technology, has been participating in several tenders for the management of public lighting systems in municipalities, expanding geographically compared to the original Lombardy territory.

In 2019, **A2A Illuminazione Pubblica was awarded tenders** in the Lombardy municipalities of Bovisio Masciago, Casalmaggiore, Robbiate, Zibido San Giacomo and Cologno Monzese, in the Piedmont municipalities of Castelletto sopra Ticino and Pieve Vergonte, and in the municipalities of Fiorenzuola (Emilia Romagna), Bisignano (Calabria) and Treviso (Veneto).

The tenders, involve the **installation of nearly 36 thousand LED lighting points**, also managed remotely by remote control, pole improvement works, the construction of new power lines and the upgrading of existing electrical panels. In addition to energy savings, the LED transformation will allow a reduction of thousands of tons of CO<sub>2</sub> into the atmosphere, and further environmental benefits related to lower production of WEEE.

In Milan, the company, in agreement with the municipal administration, intends to implement a plan of interventions on the traffic light system network that will improve its energy efficiency and continuity of operation. The efficiency plan foresees the **conversion to LED of the 8,394 traffic lights** still incandescent. To date, 63.5% of the 23 thousand traffic lights installed in Milan are already LED.

In the field of artistic lighting, A2A Illuminazione Pubblica has renewed, in recent years, the lighting systems of **many significant architectural sites in Lombardy**, from the Duomo of Milan to the Palazzo della Loggia in Brescia. In 2019, the walls of the upper city in Bergamo, the Belvedere of Palazzo Lombardia and the Guastalla gardens in Milan were involved in such interventions.

PALAZZO LOMBARDIA LIGHTING

The new light on the 39th floor of Palazzo Lombardia, the seat of the Region, is enhanced by light scenes visible from a great distance, which enhance the building and emphasize the urban context: the **Belvedere** confirms and strengthens the symbolic value of the Palazzo. The A2A Illuminazione Pubblica project, in collaboration with technical partners Signify and Algorab, underlines the importance of lighting as an architectural element and its role in the transformation of the urban skyline . For the new lighting, innovative technologies have been adopted thanks to which the Belvedere of Palazzo Lombardia can be dressed in chromatic combinations, using 143 RGB LED lighting fixtures and the DMX control system.



LIGHTING VENETIAN WALLS

A2A and the Municipality of Bergamo have approved a plan for the complete replacement of the lighting system for the ramparts of the Venetian Walls, an imposing architectural construction of inestimable artistic value, which became a **UNESCO World Heritage** Site in July 2017. This is an one million euro project, which will start at the beginning of 2020, and is part of the public lighting renovation project launched by the Municipality about two years ago. To date, in fact, 15 thousand lamps have already been replaced in Bergamo Bassa; and the aim is not only to enhance the beauty of the city, but also to save energy and respect the environment. The new lighting system allows a saving of 50 thousand euro per year, but above all it avoids the emission of about 1,600 tons of CO<sub>2</sub> per year.



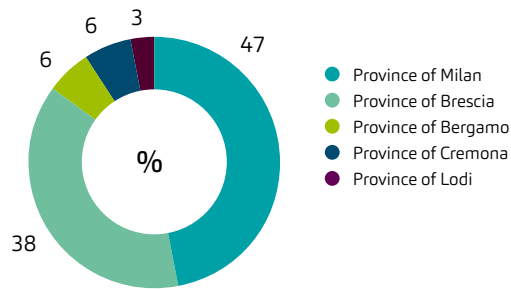
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10.1.2 Relations with customers of the district heating service

The Group operates in the production, distribution and sale of heat in the cities of Milan, Sesto San Giovanni (Mi), Novate (Mi), Cassano d’Adda (Mi), Brescia, Bovezzo (Bs), Concesio (Bs) and Bergamo, through the company A2A Calore & Servizi and in the cities of Lodi, Cremona, Crema (Cr) and Rho (Mi) by means of the company Linea Green. Since January 31, 2020, A2A Calore & Servizi has also been operating in the municipality of Cologno Monzese (Mi).

This service is currently delivered to over 26,500 users (individual residential units in the case of independent heating or whole buildings in the case of centralised heating), for a total served volume of approximately 112 million cubic meters.

Figure 58\_Geographical distribution of the volume served by district heating (%)



In order to encourage the development of the district heating service, A2A Calore & Servizi continued in 2019 with the promotion of the two hourly tariff started in 2018 with the proposal "**Casa calda anche di notte**". Thanks to the two hourly price formula, condominium heating systems can also be operated at night. This makes it possible to maintain a constant and higher night-time temperature in apartments, without shutting down the systems, thus avoiding peak demand and morning consumption. For the individual customer, the application of the two hourly rate translates into greater night-time comfort and reduced energy costs, while, at system level, the two hourly rate can bring environmental benefits by reducing the use of fossil fuels to cover the morning peak.

The launch campaign was accompanied by a widespread communication, aimed at raising awareness among customers for an optimal and conscious use of their heating systems. Intensive training was also carried out to support operators in the sector by directing them to the good use of efficient techniques and methods for better management of plants powered by district heating.

Another service managed by the Group companies relates to the rationalisation of energy management of properties through interventions to improve efficiency, such as the conversion to methane of thermal power stations powered by liquid fuels, heat management in condominiums and energy management for large property complexes and public administrations. In 2019, through the specialised companies, the Group carried out **37 plant conversions** for a total of 11,015 kW in installed power, respectively 6,685 kW by A2A Calore & Servizi and 4,330 kW Linea Green.





Quality of services provided and attention to customers

Also for district heating, the Group has equipped itself with a **Quality Charter** establishing the principles and criteria for the management of the service, so as to guarantee customer satisfaction.

➤ The Service Charter can also be consulted *online*: [https://s3-eu-west-1.amazonaws.com/a2a-be/a2a/gbb-uploads/DBL1f1-carta\\_qualita\\_acs.pdf](https://s3-eu-west-1.amazonaws.com/a2a-be/a2a/gbb-uploads/DBL1f1-carta_qualita_acs.pdf)

A2A Calore & Servizi has designed, promoted and organized a format of courses on district heating with the aim of training and informing customers/ citizens and operators in the sector about its good use, more efficient plant maintenance and new technologies, with a precise objective: to make this technology even more sustainable, oriented towards safeguarding the environment and quality of life.

The courses have been designed for 4 types of target: heating system maintenance technicians, condominium administrators, end customers, architects and engineers.

In 2019, four meetings were organized: two addressed exclusively to maintenance technicians associated with the Board of Industrial Experts of Bergamo, one held in collaboration with the Energy Counter of the Municipality of Milan for building administrators and maintenance technicians, and the last one, created from an equally qualifying synergy that sees the realization of a training event (with issue of credits) dedicated to engineers on the theme of design , in collaboration with the Association of Engineers of the Province of Milan, ASSIMPREDILANCE of Milan-Lodi-Monza and Brianza and Fondazione Politecnico di Milano.

CLEARER BILLS FOR CUSTOMERS

In 2019, a new graphic layout was prepared for the bills of A2A Calore & Servizi, A2A Smart City and A2A Ciclo Idrico, in line with the work carried out in recent years on the bills of A2A Energia.

- Among the main innovations introduced:
- more evidence, on the first page, of the most important information (deadlines, amounts to be paid, contract data), so as to ensure better comprehensibility and clarity of bills, leaving also a space dedicated to contact details for information, reports and complaints;
  - improvement of the detailed information on the following pages, such as the composition of the expenditure with the specific readings and related reference

periods, other amounts, taxes and all the identifying elements of the supply (contractual power, types of use and price, possible facilitations).

To further facilitate the relationship with the customer, the new bills also contain space for any additional information that may be of interest to the customer and that indicated by the Regulatory Authority for Energy Networks and Environment (ARERA).

The new bills, also available in digital format, have already been made operational for the companies A2A Calore & Servizi and A2A Smart City, while for A2A Ciclo Idrico it will proceed by spring 2020.

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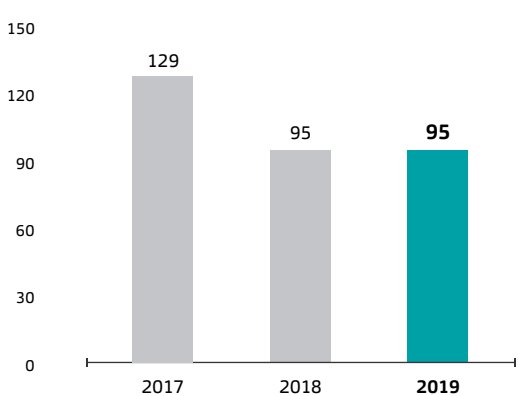
10.1.3 Relations with customers of the integrated water service

Through the companies A2A Ciclo Idrico and ASVT, the A2A Group manages the services of the integrated water cycle in the territories of the province of Brescia.

In 2019, there were 217,545 users connected to the aqueduct service, 657,628 inhabitants connected to the sewerage system and 581,251 those served by the purification service.

The drinking water distribution service was not interrupted in 2019, except for some segments that were disconnected to allow for the repair of accidental failures.

Figure 59\_Municipalities served integrated water service



Quality of services provided and attention to customers

The Integrated Water Service is regulated by the ARERA, which monitors certain parameters, including those relating to the obligations of the emergency telephone service and the time of arrival at the place of call for alerts relating to dangerous situations, setting general standards of contractual quality (Figure 60).

Figure 60\_General indicators of the emergency service

2019	STANDARD	A2A CICLO IDRICO		ASVT	
		CASES THAT COMPLY WITH THE STANDARD	ACTUAL AVERAGE TIME	CASES THAT COMPLY WITH THE STANDARD	ACTUAL AVERAGE TIME
Response time to emergency call	≤ 120 seconds	92.5%	50.8 seconds	92.6%	48 seconds
Arrival time at the place of emergency call	3 hours	95.2%	1.73 hours	99.9%	0.7 hours

The emergency telephone service for reporting inefficiencies, irregularities or interruption in supply is free of charge from fixed and mobile networks and active 24 hours a day, every day of the year. The service provides, if necessary, instructions on the conduct and general measures to be taken immediately to protect their own and others' safety, pending the arrival at the scene of the emergency team.

The Group provides various channels, as well as informative materials, to communicate with citizens. In 2019, the A2A Ciclo Idrico **call centre** service processed 119,803 calls (+25 thousand compared to 2018), maintaining excellent service quality levels with an average wait time of 152 seconds, also due to the increase in the number of calls.

In 2019, the A2A Ciclo Idrico branches served 44,829 customers (an increase of 14.2% on 2018), who were served in an average of 15 minutes.

In addition, in December, **the new A2A Ciclo Idrico web portal was online**, which made it possible to unify the online services already present on the site, presenting

them with a new graphic design, and to integrate all commercial activities (requesting quotes, new contracts, checking bills and payment status, etc.). The portal represents a first step towards a complete revision of user contact channels.

Among the digitization activities of the services offered to customers, we also note the campaign to **raise awareness of the adoption of the Bollett@mail** carried out by A2A Ciclo Idrico and ASVT during 2019. The objective of the campaign, which led to the activation of about 15,000 digital bills, was to encourage the spread of a service that makes it easier and safer for end customers to receive, retrieve and store their bills and which has a positive environmental impact linked to the reduction of printed paper consumption.

From mid 2018, a **social water bonus or water bonus** has been established, a measure aimed at reducing the expenditure for the aqueduct service of a family in conditions of economic and social hardship, through the provision of a one-off compensatory component for the supply of water. 5,849 requests were received via the portal to adhere to the bonus in 2019.



In addition to the aspects related to quality and access to the service, the companies have always been committed, with a view to maximum transparency, to show how all the water supplied by the aqueducts of A2A Water Cycle and ASVT complies with the limits set by law. For this reason, **the values of the main indicators of water quality** distributed at the various monitoring points or water houses are **available online**.

➤ For more information on water quality and data related to concentrations of the parameters characteristic of the water distributed, refer to the supplement to this Report or visit the Water Quality section of the A2A Ciclo Idrico and ASVT websites:  
<https://qualitaacqua.a2acicloidrico.eu/QualitaH2oWeb/>  
e <https://qualitaacqua.asvt-spa.it/QualitaH2oWeb/>

Also in 2019, the **Acquisicura Project** continued, developed to favour the adoption of the steps necessary to monitor any water losses downstream of the delivery point and reduce the risks of economic damages. The promotion envisages a contribution for the expenses incurred for moving the water meter to the edge between private property and public property and a contribution for the purchase of a manometer.

An insurance policy can be stipulated (reserved to domestic users) against water leaks, at beneficial conditions.

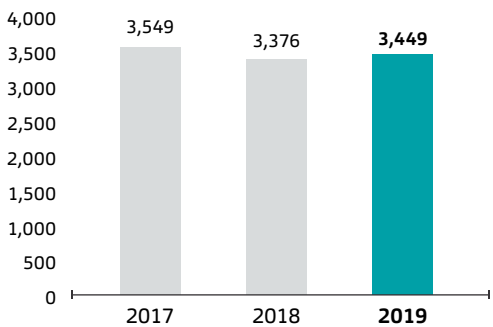
In 2019, 1,725 requests were submitted for relief due to water loss downstream of the delivery point, of which 1,378 have already been dispatched, for a total of reimbursements to users of approximately 2.3 million euro. Moreover, requests for new subscriptions of the insurance policy numbered 870 and overall, 253 users benefited from reimbursement.

Finally, as part of the construction of the new network dedicated to the sewerage and aqueduct in the Municipality of Calvisano (Bs) and in the areas of Mezzane, Malpaga and Viadana, A2A Ciclo Idrico has carried out a series of information activities for citizens, including: the sending of a letter to all citizens about the planned activities and the forms to request the connection to the sewer and aqueduct; the opening of a temporary counter for users; the positioning of an information stand during a municipal festival.

10.1.4 Relations with customers of the municipal sanitation service

Through the companies Amsa, Aprica, Linea Gestioni and La Bi.Co due, the Group manages the municipal sanitation services of 218 municipalities, for a total of more than 3.4 million citizens served, in the provinces of Milan, Brescia, Bergamo, Como, Lodi, Lecco, Monza and Brianza, Mantua, Cremona and Genoa.

Figure 61\_ Total number of users of the municipal hygiene services (thousands)



Starting from February 2019, **Aprica started, for the first time, its collection and environmental hygiene activities outside the borders of Lombardy**, in the Ligurian municipalities of Rapallo and Zoagli, serving a total population of about 33,000 inhabitants. In Zoagli, the service is carried out with the door-to-door system in some districts in the hilly area, while in the rest of the territory, collection is carried out with road bins; bins for organic and non-differentiated waste have a door with electronic card opening. In Rapallo, a mixed service is currently being experimented in the area of San Massimo: door-to-door for plastic/metals, paper/cardboard and non-differentiated, and collection with bins for glass and organic. The bin for organic waste has a door with electronic card opening. In the rest of the territory, collection is carried out with free access road bins.

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## Initiatives for the promotion of separate collection

In order to obtain high levels of separate waste collection, in addition to an adequate service, it is necessary to support and encourage correct behaviour on the part of citizens also through initiatives and information campaigns that are able to reach the population.

Amsa, in Milan, has activated numerous campaigns of this type. Among them, the **"Small things only" campaign with Max Laudadio**, aimed at reducing the phenomenon of improper use of street bins for household waste.

Moreover, in 2019, the project **"Differentiated waste at the top"** was completed, started in 2017 in the Silla department and progressively extended to the whole city. The initiative has introduced some changes in waste collection methods: the reduction from biweekly to weekly collection of non-differentiated waste and the joint collection of paper and cardboard. Various communication tools are used: from public meetings at city halls, to communications to condominium administrators, to the home distribution of about 30 thousand leaflets and calendars, to information on the website. The project has contributed to the increase in the percentage of separate collection in the city of Milan, which is 61.5% of collection.

Considering the high increase in packaging linked to the sharp development of e-commerce (especially

paper and cardboard), Amsa has decided to carry out, in the days leading up to the Christmas holidays, a **communication** campaign specifically **dedicated to the correct disposal of paper and cardboard**. A short video was made for the campaign which, in an entertaining way, provides practical tips on how to dispose of packaging. The campaign has been planned on the Telesia circuit (underground) and through web and social networks. For the first time Amsa, for this occasion, has experimented a collaboration with Amazon through banners that have been conveyed directly through the channels of the e-commerce giant.

A campaign is also being planned to improve separate waste collection in the Darsena area, upon request from the Municipality of Milan.

In 2019, the Municipal Administration promoted an extensive communication campaign dedicated to the environment, called **"#MilanCambiaAria"**, to communicate the city's innovative choices regarding sustainability and the quality of public services to citizens and tourists. In this context, Amsa has collaborated with the realization of the **campaign "I choose separate collection"**, which aimed to make all citizens aware of the adoption of conscious lifestyles in everyday life, through actions, such as the choice of separate waste. Various tools were used: digital screens, newsletters, totems, posters, postcards and posters on the metro, web banners and social activities.

### UN SACCO ETNICO

The UN SACCO ETNICO Project is an innovative project to involve ethnic catering in Milan through cultural mediation, carried out in partnership with EStA', Urban Genoma and ethnic catering. We chose an initial sample of 100 establishments and then carried out the detailed activity involving 20 restaurants divided between the Paolo Sarpi area and Porta Venezia/Centrale.

The project has been set up as a communication campaign in Arabic or Chinese language - directly in contact with the owner/restaurant, with the aim of explaining and removing any doubts regarding proper separate waste collection and division of waste. In order to better understand the real issues,

product analyses were carried out on the waste produced by the selected restaurants. The results showed positive data on food waste (e.g. only 12% of still edible food thrown away as waste), but also room for improvement (e.g. almost total absence of compostable bags for the collection of organic waste).

The project ended with the sharing of a plan to improve separate collection specific to each business and the issue of participation certificates and window stickers. In October 2019, the publication "Un sacco et(n)ico - Separate collection and multicultural restaurants in two districts of Milan" was published.

In order to increase the level of separate collection also in public offices, **Aprica and Amsa are activating some projects within the municipalities of Bergamo and Milan.** The Municipality of Bergamo asked Aprica to find an effective and cost-efficient solution to replace separate waste collection containers in the municipal offices. Following several inspections that made it possible to evaluate the size, types and number of containers required, as well as the optimal locations, four types of containers were suggested (non-differentiated, glass and metals, paper and plastic) in polypropylene honeycomb of different colours for each type of waste. By February 2020, 2,000 containers (500 for each type) will be delivered to the Municipality. Amsa has developed a similar project, currently in the preliminary study phase, for the Municipality of Milan.

AWARDS FOR SEPARATE COLLECTION AND WASTE REDUCTION

In March 2019, as part of the ninth edition of the European Waste Reduction Week (SERR), the city of Bergamo was awarded for the implementation of two waste reduction projects: the collection of used vegetable oils produced by households (and their proper disposal) and the use of Ecovan, a means of transport through which citizens can dispose of hazardous household waste, such as expired medicines, mineral and vegetable oils, batteries, car batteries, neon tubes, fluorescent lamps, tires, etc.

In May 2019, the tour of the superhero Captain Steel, the initiative promoted by RICREA (National Consortium for the Recycling and Recovery of Steel Packaging), arrived in Como and involved adults and children in Piazza Volta with activities, workshops and fun quizzes. For its commitment to the separate collection of steel packaging, the RICREA Consortium has awarded to Aprica and the city of Como a special recognition.

**In Liguria, where Aprica has begun to carry out the collection service, an important communication campaign** has been carried out to **inform citizens about the new methods of the service and to disseminate the culture of respect and defence of the environment.** In particular, public meetings were organized, during which Aprica technicians explained the additions of the service and answered citizens' doubts. The operating means and the stickers for the road bins were customized with graphics referring to the current communication campaign. When the service was launched, citizens were provided with a kit for separate waste collection, consisting of a personal electronic card, bags for waste separation at home and a guide to separate collection indicating the times and days of collection of the separate waste fractions and all the services carried out in the area. New services have been launched such as the collection of waste oils, batteries and medicines with dedicated containers as well as the monitoring and awareness-raising activities of citizens through some environmental stewards.



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Quality of services provided and attention to customers

Amsa and Aprica maintain a direct relationship with the citizen and customer through different channels.

As regards the call centre service, despite the high number of calls (over 470 thousand in total), customer satisfaction levels are very high.

Figure 62\_Quality of the call centre service

	AMSA	APRICA
Accessibility of the lines and the service (time when line is free vs operator presence time)	100%	100%
Average waiting time on the telephone (seconds)	39	64
Percentage of successful calls	98%	93%

In addition, Amsa and Aprica provide an outbound call (recall) service for users who have not been able to get in immediate contact with telephone operators. By selecting the appropriate key, customers can leave their phone number and be contacted within a few hours. The service is used and much appreciated and has enabled companies to contact about 10,000 and 3,700 users respectively throughout 2019.

Particular importance should also be given to the **PULLamo** (for Amsa and Aprica) and **rifiutiAMO** (for Linea Gestioni) apps which allow, in any place and at any time, to:

- report situations of environmental degradation (full bins, abandoned syringes, illegal dumps);
- know the correct way to dispose of waste, thanks to a complete and fast search engine;
- be updated on collection and street sweeping days thanks to the complete integrated calendar;
- request assistance with the collection of bulky waste;
- take advantage of geo-location to find the nearest ecological platform and other services on the territory.

The services offered by Amsa, Aprica, Linea Gestioni (LGH Group) are regulated by a specific **Service Charter**, which describes the terms, methods and quality of services offered to citizens in the municipalities served.

Bergamo Quality Charter for Services

Aprica updated the **Quality Charter for Services** of municipal sanitation in Bergamo, a two-year document that summarizes the methods of managing services and the quality standards defined with the Bergamo municipal administration, which Aprica undertakes to respect through the correct performance of its activities.

The document was printed in October 2019 in 10,000 copies and delivered during the annual distribution of the bag kit.

➤ The Service Charters can be consulted on the various companies' websites.

Customer satisfaction survey on AMSA services

As every year, also in 2019, a Customer Satisfaction survey was carried out on the services that Amsa offers to citizens, managed directly by the Municipality of Milan, according to the provisions of the current service contract.

The survey was conducted with the aim of verifying the satisfaction levels of residents of the city with regards to the services supplied and to identify the relevant strengths and any areas for intervention. The questionnaire has been administered by telephone to 4,255 citizens residing in Milan.

In general, the overall assessment by citizens in 2019 scored 7.8, just above the 2018 score (7.7). The table in the Supplement to this document shows the evaluations obtained on the different items.

Every year the satisfaction of the commercial operators of Milan is also investigated. In this case, 200 interviews were conducted with representatives of different sectors of activity (hotel services, bars, restaurants, retail/wholesale and industry/production activities). The overall satisfaction with the services offered by Amsa was 7.4 (average rating). Satisfaction with the contact channels is particularly high: site and toll free number have a level of satisfaction of 7.7 and 7.6 respectively.

Amsa surveyed the satisfaction level of citizens also in 13 surrounding municipalities (Bresso, Buccinasco, Cesate, Cormano, Corsico, Novate Milanese, Paderno Dugnano, Pero, San Donato, Segrate, Settimo Milanese, Trezzano sul Naviglio, Pioltello). The 1,760 interviews carried out showed a very high level of overall citizen satisfaction, ranging between 7.8 and 8.4, in line with previous years. The most satisfied municipalities are Buccinasco, Pero, San Donato and Settimo Milanese.

Customer satisfaction survey on Aprica services

Aprica conducts a customer satisfaction survey in the municipalities where it is present with the aim of monitoring the level of satisfaction of citizens with the services offered. In 2019, surveys were conducted in the municipalities of Brescia, Gardone Valrompia and Como, through 1,500, 250 and 800 CATI (Computer Aided Telephone Interviewing) interviews respectively.

Figure 63\_Index of satisfaction for municipal sanitation services in Aprica (scale 1-10)

	BRESCIA	GARDONE VALTROMPIA	COMO
Total	7.88	7.89	7.30
Waste collection	8.02	8.38	8.02
Road and pavement cleaning	7.37	7.13	5.89
Home collection of cumbersome waste	8.76	8.76	8.11
Ecological platform	8.70	8.69	8.64
Road bins	7.43	7.34	6.51
Toll Free Number	7.79	7.92	8.19
Website	7.85	-	7.59
Office	8.38	7.96	8.27

10.1.5 Fairness and transparency in customer relations

**In 2019, the Group did not receive any sanctions for situations of non-conformity with laws or regulations relating to the supply and related services, for marketing, sponsorship and communication activities.**

The Authority initiated sanctioning and prescriptive proceedings against A2A Energia S.p.A. aimed at ascertaining violations in relation to the invoicing of energy consumption, in relation to the application of specific fees to end customers for the receipt of invoices in paper format. On December 14, 2018, the company submitted a proposal for commitments, integrated in July 2019. The proposal provides for: (i) the return to customers of the additional fees charged; (ii) the elimination of the IT constraint that activates the Bollett@mail service only in the presence of bank direct debit, and recognition to all customers active on the Free Market who decide to activate this service of a one-off bonus of 6 euro, and (iii) the recognition to customers subject to the application of the mailing fees of an additional one-off bonus of 12.00 euro. By Resolution 389/2019/S/com, ARERA approved the company's proposal for commitments, making it binding and thus closing the related penalty proceedings.

In addition, on December 20, 2019, the AGCM closed the proceedings initiated on December 12, 2018 to ascertain an alleged cartel restrictive of competition by Linea Ambiente Srl, LGH SpA, A2A SpA, CORE SpA, Herambiente SpA, Hera SpA, Rea Dalmine SpA and Sogliano Ambiente SpA, without finding the infringements described in the opening order, which assumed that the companies under investigation had set up a coordination activity aimed at refraining from participating in the tender procedures launched by AMA, with the consequent award of the same services following private negotiations at more onerous economic conditions (for AMA and citizens), to an RTI consisting of some of the parties involved (Herambiente, Sogliano Ambiente, Linea Ambiente, REA Dalmine). The Authority considered that the exchanges of information in relation to the tenders of AMA S.p.A. as from 2016 do not reveal any anti-competitive content, intended as a willingness to abstain from tenders jointly.

Lastly, it should be noted that the A512 proceedings initiated by the AGCM in May 2017, on reports of certain competitors, for alleged abuse of a dominant position by A2A Energia in the market for the sale of electricity, were closed without the payment of penalties.

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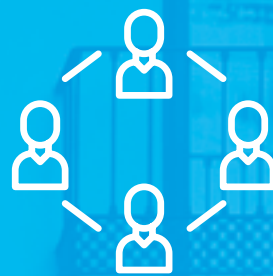




# 10

## Relational capital

### *Community*



#### INPUTS

Launch of the call "CreiAMO Piemonte" following the forumAscolto

Active collaborations and research projects in partnership with companies and universities

Banco dell'Energia energy bank for the support of disadvantaged groups

Environmental education initiatives and Scuola2A Project

#### A2A SERVICES AND PROCESSES

6 Territorial sustainability reports

4.4 million euro  
of contributions to the community

126 Scholarships  
for employees' children

6,000 people  
supported by the projects of  
the first "Doniamo Energia"  
call for proposals

OVER  
70,000 students  
involved in environmental  
education and plant visits

#### OUTCOME



## RELATIONSHIP WITH GROUP STAKEHOLDERS

Development of business activities in complete respect of stakeholders, also thanks to transparent communication and full collaboration; participation in round tables with entities and institutions able to influence national and international strategies; promotion of projects for the creation of shared value in the territory and local communities (e.g. urban regeneration activities); identification of needs and necessities of stakeholders and project activities that can effectively meet their needs (e.g. social needs).



## ACTIVE LOCAL AND ENVIRONMENTAL EDUCATION

Sensitisation of the local community to a responsible use of resources, energy and the importance of reusing materials so as to minimize waste; promotion of environmental education initiatives, of active citizenship and knowledge of Group activities, including through the organization of tours to plants.



### 10.2.1 Relations with entities and institutions

The role and nature of the A2A business require constant dialogue and a comparison of notes with the national institutions, regional authorities and local entities. Relations with bodies and institutions are managed in compliance with A2A's Code of Ethics.


In 2019, the main topics covered concerned:

- the presentation of the main dossiers of interest to the Group to the new national and local institutional representatives;
- regulations on the renewal of hydroelectric concessions in Italy;
- regulations on the exceeding of the greater protection on the electricity and gas market;
- the proposed legislation on the water cycle;
- the discipline of end of waste;
- the capacity market;
- the monitoring of the measures foreseen in the National Energy Strategy and the PNIEC, National Energy and Climate Plan;
- the dialogue with the local communities and institutional levels of the Regions of Sicily, Apulia and Friuli Venezia Giulia to support the projects for the conversion of the A2A plants in S. Filippo del Mela (Me), Brindisi and Monfalcone (Go);
- the start of partnerships on innovative sectors (electric mobility and smart city);
- the new Valtrompia Purifier;
- the decarbonization of the Lamarmora plant in Brescia;
- the renovation or expansion of the infrastructure park (installation of new Smart Meter and electric charging columns);
- the fiber optic cabling of the cities of Brescia and Bergamo;
- the digital islands in Bergamo;
- the observers of the Municipality of Brescia;
- the investigation of customer satisfaction of the city of Brescia with respect to the services provided by A2A.

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forumAscolto and territorial budgets (pages 54-55)  
Banco dell'energia Onlus (page 169)  
Participation in PNIEC and EoW discussion tables (pages 164-165)  
New lighting Belvedere Palazzo Lombardia (page 151)  
Open plants (page 175)

SUSTAINABILITY PLAN ACTIONS




PEOPLE INNOVATION  
Transparency and Stakeholder Engagement  
Environmental education

2019 ACTIONS

New portal schools scuole.a2a.eu (page 173)  
Missione Terra: contest schools on SDGs (page 173)  
Delivery of water bottles to schools in Milan and Brescia (page 173)  
#Ambienteascuola (page 173)

SUSTAINABILITY PLAN ACTIONS



PEOPLE INNOVATION  
Environmental education

TRADE ASSOCIATIONS

A2A adheres to more than 100 various trade associations, including:

- **AIRU** (Italian municipal heating association), which aims to promote and disseminate the application and innovation of territorial energy plants, in the sector of district heating and district cooling. From this year, Lorenzo Spadoni, CEO of A2A Calore & Servizi, is President of AIRU;
- **CEWEP** (Confederation of European Waste-to-Energy Plants), the association that brings together the operators of *Waste-to-Energy* (incineration with energy recovery) plants;
- **EUROELECTRIC**, the sector association representing the common interests of the European energy industry;
- **Confindustria** and, in particular, **Elettricità Futura**, **Assolombarda** and **Green Economy Network**, the network promoted to create opportunities for the exchange of information and commercial agreements between businesses offering products, technologies and services for environmental and energy sustainability;
- **Utilitalia**, the Federation of companies operating in the public services of water, the environment, electricity and gas. The association is currently chaired by the Chairman of A2A Giovanni Valotti.

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## 10.2.2 Relations with Universities and Research Centres

For A2A, maintaining constant dialogue with the world of universities and research allows it to have innovative and cutting-edge competences, to offer its areas of activity as spaces within which to trial innovation projects and, at the same time, to contribute, through activities of involvement and testimonials, towards a university training that is better focussed on the world of work.

In 2019, too, many relations and activities were undertaken with this category of stakeholders.

First of all, a number of agreements were renewed with universities, in particular Università degli studi di Brescia and Università Cattolica di Brescia, for research and innovation activities linked to the technical and environmental improvement of the Group's activities and businesses. In particular, activities will be focused on the issues of circular economy, energy efficiency and smart city.

The Group has joined the observatory association "Smart City" launched by the Department of Legal Studies and the IEFE - Research Centre for Energy and Environmental Economics and Policy - of Università Bocconi. The Observatory aims to become **a reference point for all stakeholders interested in the smart development of urban infrastructure and services and the social community**, assessing the socio-economic and environmental benefits related to smart applications and analyzing policies and regulatory tools that can stimulate and guide smart urban development.

A research activity was supported at the Energy Department of the **Politecnico di Milano** on the **planning of electricity distribution networks** in urban areas, with the aim of reducing the number and duration of outages as much as possible by increasing the resilience of the network. In particular, the planning will concern the positioning of the new primary stations through mathematical models and algorithms.

The results of the **study on the integrated assessment of air pollution in the Po Valley and the Brescia area by the University of Brescia, A2A and AIB - RAMET** were presented. The research, which lasted 4 years, focused on the assessment of air pollution and the analysis of the various emission sources, the identification of effective solutions and actions to reduce pollution and the assessment of the health effects of the main air pollutants. The main factor of environmental pollution in Lombardy and Brescia is domestic heating (23%), followed by vehicular traffic (18%), industrial activities (20%) and agriculture (17%). The overall impact on the average fine particulate concentration (PM10) of the three plants supplying the district heating system in Brescia was minimal (0.2%).

The **"Rendering" project** of the University of Brescia continued, in partnership with INSTM, the Multi-sector and Technological Services Centre (CSMT) and the Lombardy Region, and supported by A2A (with Acque Bresciane, Legambiente Brescia and Atelier Europeo). The project aims to optimize the energy recovery of sewage sludge and its reuse, as an alternative to other natural resources, for the production of "green" compounds, with the aim of promoting the waste-to-energy of sludge together with municipal waste and using the products derived from the treatment of this waste for the production of new eco-materials.

In 2019 the **"A2A Horizon"** project was launched, an A2A *Corporate Venture Capital* (CVC) initiative to encourage the Group's innovation through investments in start-ups with high potential, which also sees the participation of the Politecnico di Milano (see page 133).

A2A also participates in various working tables and *think tanks* at various universities. As an example, reference can be made to the Bicocca University table (CESISP - Centre for Economics and Regulation of Services, Industry and Public Sector) on the regulation of the urban waste cycle in view of the necessary boost towards the circular economy, both from a legal-regulatory and economic point of view, as well as the Observatory on Administrative Regulation of Università Cattolica del Sacro Cuore, which organizes periodic meetings on the main regulatory issues, which see the participation, in addition to the university world, of the institutions most sensitive to the topics dealt with (Ministries, Authorities, Technical Bodies) and the various stakeholders. The topics dealt with concerned the definition of the National Integrated Energy-Climate Plan (PNIEC), the start of regulation in the waste sector and the circular economy, as well as the new configurations of the energy system. Also of interest is the Start-up Intelligence Observatory of the Politecnico di Milano, a network aimed at innovation managers that offers an annual calendar of activities aimed at ample dissemination of the culture of open innovation and entrepreneurship. Main activities include research, start-up scouting, awareness raising and training.

Lastly, in addition to research projects, A2A also collaborates with universities to improve their internal services. In particular, in 2019, an activity was carried out to **raise awareness among students on the issue of separate waste collection**. In fact, also at the Brescia locations of Università Cattolica del Sacro Cuore (after the intervention already carried out in Milan) was the **communication campaign "Differenziata? 30 e lode"** aiming to inform students and teaching staff of the rules for the correct separation of waste, to as to optimize the fraction of the separate waste collection that can be recycled. This activity was also supported by a reorganisation of containers in the common areas and food areas.

10.2.3 A2A and the regulation stakeholders

The Group operates in contexts in which regulation by independent administrative authorities plays a fundamental role in promoting competition and protecting consumers and users. In addition to these more traditional objectives, there is an increasing need to direct the services provided in the energy and environmental sectors towards targets consistent with the decarbonization path, making regulation an integral and enabling part of the sustainability path of these sectors.

A2A adopts a regulatory risk monitoring and management policy in order to adapt its industrial strategies to the opportunities and constraints of the national and Community framework on public services and competition. The monitoring consists of an oversight system, structured into several levels, which involves first and foremost collaborative and loyal dialogue with the institutions including: Regulation Authority for Energy, Networks and Environment (ARERA), the Antitrust Authority (AGCM and with local sector technicians (Energy Services Manager, Energy Markets Manager, Terna, Local government bodies of the water service, other technical standardization entities) and the active participation in trade associations and working groups established by these entities. The issues of euro-unitary derivation are also monitored, through participation in the relevant Community Associations (including Eurelectric), so as to know "in advance" what will be transposed into Italian law.

In 2019, visits were organized to the Group's production sites: in Asti, at the A2A Ambiente glass treatment plant by ARERA and in Brescia to the district heating system by a delegation from the GSE. Unareti also hosted - upon ARERA request - some members of the Energy Agency of the Republic of Serbia interested in exploring the electricity and gas distribution activities managed by the company and their close relationship with regulation.

In 2019, was the definition of the **new regulatory framework for the energy system based on the complete integration of renewable sources and the implementation of innovative production and consumption configurations**. On this issue, the Group followed proactively,

through observations and by participating in the parliamentary hearing, the definition of the National Integrated Energy-Climate Plan (PNIEC), to be sent definitively to the EU in January 2020 and containing the decarbonization trajectory of the country and the 2030 targets for renewable sources, energy efficiency and climate-changing emissions. **The Group has continuously expressed its position, in favour of decarbonization objectives** that are ambitious and consistent with the EU Clean Energy Package, at national and EU Associations, as well as at conferences and meetings on these issues (in particular, at university and industry think tanks) and in the approach of new EU taxonomy on sustainable finance. Consistent with the objectives and priorities identified in these areas, the Group has structured greater control over activities that can lead to positive environmental externalities in the sectors of transport and construction, electric mobility and sustainable biofuels (such as biomethane), and efficient district heating. In addition, in light of the difficulties affecting the White Certificate mechanism in terms of achieving the annual targets for reducing consumption due to the shortage of certificates, internal and external investigations have been carried out in order to define proposals for action capable of securing and strengthening a mechanism that is still considered best practice at European level.

**An active role was also played in the transition to the new energy paradigm, enhancing the value of the Group's assets and promoting technological innovation projects.** The discussion and collaboration with the institutions focused - particularly during public consultations and technical assessments - on identifying the regulatory mechanisms best suited to managing the system's new requirements, for example: review of the electricity market design, tariff mechanisms capable of supporting investments for upgrading and digitization of distribution networks, participation in Terna's pilot projects on synchronous compensators and virtual production/consumption units. This also includes the illustration of projects for the conversion of existing assets (for example, at the Monfalcone, San Filippo del Mela and Brindisi power plants) aimed at decarbonization of the generation park and offering useful services to the national electricity grid.

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**A2A then adhered to the circular economy objectives and contributed to the identification of a framework of virtuous rules for businesses and citizens.** The Group's commitment in this sector has been particularly reflected in the contributions made, individually or within the association, to the issues relating to the resolution of the regulatory stalemate end-of-waste, the new regulation of ARERA on the integrated waste cycle, the discussion on the implementation of the new European Package on the circular economy. In addition, during public meetings and in university and sector think tanks in which A2A participates, an attempt was made to make all those involved aware of the importance of sharing with the institutional world and the public an understanding of the benefits deriving from **adequate equipment essential for the achievement of circularity objectives and for the creation of economic opportunities.**

**Finally, initiatives have been implemented to help disseminate the regulatory culture internally and externally, as a driver for innovation and transparency of services.** Monitoring and control tools (such as the Regulatory Review prepared every six months or the Regulatory Agenda drawn up when the Business Plan is defined) have been implemented internally and are constantly updated in order to

consider the potential impact of regulation on Group companies and to ensure constant dialogue with the Business Units. The sharing of the regulatory approach is also through the organization of internal in-depth analysis (Regulatory Breakfasts) on issues of particular strategic relevance for the sectors in which the Group operates, thus allowing internal stakeholders to focus (also thanks to the involvement of external experts) on the evolution of the framework of rules and technological scenarios, in particular on those that are disruptive with respect to as is. A2A's role in this dimension as an "agent" of the culture of regulation has also been promoted externally, especially in the local communities with which the Group interacts. For example, in the integrated water service, where it seems particularly relevant to make users aware of the role of ARERA regulation, **information activities continued on the need for industrial management of the service to achieve environmental objectives**, as well as on the need to cease the reading and billing service of about 28,000 "water distributors" placed in the individual property units in some condominiums in the Municipality of Brescia, through meetings with consumer associations, property owners, condominium administrators and other stakeholders, also as part of ARERA's launch of a special survey on the subject, which will be concluded in March 2020.

## A2A BEST ITALIAN MULTI-UTILITIES ACCORDING TO THE TOP UTILITY AWARD

In February, as part of the presentation of the seventh edition of the Top Utility Analysis report, A2A was **awarded the Top Utility 2019 prize** as the best company in the utilities sector.

As usual, the report analyzed economics, activities and services provided by Italy's 100 largest public and private utilities operating in the gas, electricity, water and waste sectors.

The award was based on the excellent results achieved by the Group in all the areas surveyed and in particular, its ability to communicate effectively, its attention to sustainability and the efficiency of its operations.

10.2.4 A2A and relations with territorial committees and associations

Relations and dialogue with the reference territory underlie the very identity of the Group and have a major impact on the degree of acceptance of the business activities. This dialogue is also based on constant relations with consumer and environmental associations, national and local, and with the numerous territorial committees.

In continuity with previous years, in 2019, the dialogue with consumer and environmental associations was constant and there were numerous meetings of consumer, environmental and social interest, which allowed the company to consolidate its presence in the areas in which it operates. This close interaction makes it possible to inform the territorial committees about the Group's activities and, at the same time, to actively respond to their requests, so as to make the service offered even more effective, efficient and specific.

A2A meets with consumer associations

During the **annual meeting reserved for Lombardy consumer associations**, the various Group companies presented their current activities, specifically:

- A2A Calore & Servizi illustrated the evolution of district heating, now in its fourth generation;
- A2A Energia shared the new commercial offers for customers, as well as the scenarios connected with the transition from the protected market to the free market;
- Unareti presented the commissioning plan for the 2G smart metering system;

- Amsa showed the results of the customer satisfaction survey and illustrated the new services for the collection of used edible oils and the recovery of waste from electrical and electronic equipment (WEEE).

Finally, the report was presented on ADR (Alternative Dispute Resolution), the direct channel between companies and consumers for the out-of-court settlement of disputes regarding the services provided.

Advocacy actions on the territories

In order to maintain constant dialogue with the population in the main areas in which A2A is present with plants or services, specific meetings are regularly organized, reserved for representatives of consumer and environmental associations and committees, for the presentation and in-depth study of initiatives and projects concerning all Group companies.

As part of the innovation projects linked to the decarbonization objectives for the San Filippo del Mela and Monfalcone power plants, numerous meetings were organized with the aim of illustrating the conversion projects by A2A's technicians and to gather suggestions and concrete initiatives to be taken in the area from stakeholders.

Moreover, with the territorial consumer associations and local administrations, round tables are underway for the drafting of the quality charters of the environmental services in the municipalities managed by Amsa and Aprica.

In 2019, the coordination of activities related to the out-of-court dispute resolution protocol (ADR) for joint settlements and the management of the conciliation secretariat for the ARERA Conciliation Service managed by Acquirente Unico also continued.

Finally, during 2019, there were numerous participations in specific meetings, conventions and think tanks on consumerist, social (focus on energy poverty linked to the Banco dell'energia social responsibility project), environmental and electric mobility issues.

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### ADR - Out-of-court dispute resolution

With reference to **conciliation** requests, in 2019 was the continuation of activities started with the **Memorandum of Understanding signed in 2016 between A2A and the national consumer associations for the promotion of joint multiservice conciliation, aimed at ensuring an amicable settlement of any disputes (ADR)** that may arise between consumers and A2A in respect of the supply and distribution of gas, electricity, water and district heating.

According to that introduced by the Integrated Conciliation Act (TICO) approved by ARERA, as from January 2017, electricity and gas customers, domestic and otherwise, must obligatorily apply for conciliation (ADR) to settle any disputes not settled through complaints made to operators before referring to the ordinary judge. The attempt at **obligatory conciliation can be exercised through the bodies provided for by the TICO, including the body ADR A2A - Consumer Associations**, Chambers of Commerce and other ARERA recognized bodies.

In the event of failure, an attempt at conciliation is an essential condition in order to be able to proceed with a lawsuit, whilst the minutes of the agreement constitutes executive deed between the parties.

The obligation to seek conciliation will also be introduced progressively to other regulated sectors.

With regard to **joint conciliations**, in 2019, the claims received increased by 18% compared to the previous year. In total, the conciliation secretariat of the **ADR A2A-Consumer Associations Body** received 52 requests on behalf of gas, electricity and water customers, of which: 47 concerning A2A Energia, 2 A2A Ciclo Idrico, 2 Azienda Servizi Valtrompia and 1 concerning Unareti, mainly related to consumption metering and billing. With regard to the **ARERA Conciliation Service managed by Acquirente Unico**, requests increased by 36% for a total of 125 requests received, of which: 101 concerning A2A Energia, 9 A2A Ciclo Idrico, 2 Azienda Servizi Valtrompia and 13 concerning Unareti.

Unareti also received **141 summonses** compulsory as technical aide, essential to the correct, effective processing of the disputes for conciliations started by customers of other sales companies.

Finally, in 2019, as in previous years, in coordination with other ADR bodies, online training courses were organized for energy and water conciliators coordinated by Consumers' Forum.

### Electric mobility

In collaboration with A2A Energy Solutions, an activity involving the manufacturers of electric cars and motorcycles was launched with the aim of consolidating A2A's position as the first enabling platform for the development of electric mobility in Lombardy, both from a technical-commercial and administrative point of view. In this regard, a table has already been organized behind closed doors ("**Milan: The Future is Electric. The tomorrow of cities**"), which saw the participation of the Municipality of Milan, industrial stakeholders and experts in the sector to discuss the prospects for the development of electric mobility.





## BANCO DELL'ENERGIA ONLUS

In 2019 was the continuation and near completion of the 15 projects that won the first edition of the “Doniamo Energia” tender promoted in collaboration with the Cariplo Foundation, with the aim of assisting families in vulnerable social and economic positions throughout Lombardy. The tender, for which **Banco dell'energia raised one million euro, doubled by the Cariplo Foundation**, allowed the selected bodies to work to intercept fragile people at an early stage and facilitate their reactivation, supporting them in paying for urgent expenses (such as the bills of any energy operator), but also trying to provide broader responses that take into account the issues related to work and social ties. In 2018, a total of **6,000 people** were identified who were able to count on personalized paths and initiatives to overcome the situation of temporary difficulties, strengthen relevant relationships within their own community and when possible, take action to “return” to the benefit of the community.

At the same time, the 16 projects of the entities awarded the second edition of the call for proposals were launched, again for a total of two million euro, with the same aims as the previous edition. An initiative worthy of particular interest concerns one of the winning projects of the second edition of the call for proposals, “**KW<sup>cuore</sup> multiplier of energy**”, led by the San Vincenzo De' Paoli Foundation and which included, with the collaboration of A2A experts, a series of training sessions for volunteers on the subject of energy saving.

On the strength of these positive experiences, Banco dell'energia and Cariplo Foundation have opened a new working table for the evaluation of a third edition of the Call for Proposals, with the aim of focusing even more on the issue of energy poverty and the most suitable tools to combat it.

Fundraising is always active and aimed at all citizens, companies, A2A Energia customers and employees of Group companies. The latter, in particular, gave a very positive response to the numerous fundraising campaigns proposed during the year, giving a sign of sensitivity and sharing the great social value of the initiative. It is possible to donate through various payment channels (postal bill, bank transfer or credit card), but also through the bill for A2A Energia customers (in this case, there is also a contribution from A2A that will double the donations made by domestic customers).

Banco dell'energia has also been called to be **part of the scientific committee of the ASSIST project (Support Network for Household Energy Saving)**, an initiative promoted by the European Commission and coordinated by Italy (AISFOR, RSE and Acquirente Unico) to support vulnerable consumers in the efficient management of domestic energy consumption and more generally to contribute to the combat against energy poverty. Approved under the European programme for Innovation and Research Horizon 2020, ASSIST is a three-year project, started in 2017, and is involving six countries (Belgium, Finland, Italy, Poland, Spain and the United Kingdom) in analysis, training and experimentation activities to combat energy poverty. During the meetings of the committee, also at the European Commission, Banco dell'energia has proven to be best practice in the European panorama. In fact, with the exception of a cooperative of French companies, which is promoting a fundraising project (1 cent per kWh consumed) among its 75,000 customers, Banco dell'energia has emerged as the only concrete experience of intercepting needs and responding to them, both in terms of the extent of the intervention and its ability to network different players and expertise to converge towards a common goal.

➤ For more information [www.bancodellenergia.it](http://www.bancodellenergia.it)

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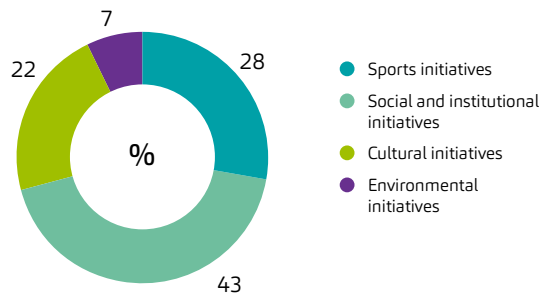
### 10.2.5 Responsible investments in the community

The Group has always offered its support to multiple social activities and initiatives, which have allowed it to collaborate closely with the reference community.

In 2019, the Group's **total investments** in the community came to approximately 4.4 million euro including contributions made in sponsorships, donations and support of the Group Foundations (AEM Foundation and ASM Foundation), and are in line with the previous year.

**Sponsorships** of sports, social, environmental and cultural activities in favour of the territory come to about 887 thousand euro.

Figure 64\_Breakdown of sponsorships by area of activity



The main sponsorships include:

- the **National Conference on Energy Efficiency 2019**, the **Energy Festival** and the **Water Festival**, three of the major national events dedicated to energy and environmental issues, with a focus on climate policies and sustainability issues;
- the lighting of the **Belvedere di Palazzo Lombardia**, the **Stramilano**, the **Milano Arte Musica concert season**, the environmental initiatives **Puliamo il Mondo** and **Spazzatura Kilometrica**;
- the **International Piano Festival** of Brescia and Bergamo;
- the name of the Palazzetto di Brescia as "**Palaleonessaa2a**", the **International Festival of Lights on the Castle of Brescia**, as well as the preparation for the **Christmas lighting**;
- the **Magna Graecia Film Festival** in Calabria;
- the contribution to the **Sports season of New Basket Brindisi**;
- the cycle race **Carnia Classic Fuji/Zoncolan** in Friuli Venezia Giulia;
- the **Sondrio Festival** and the **Energy2Run - Tour of the lakes of Cancano** in Valtellina;
- the **Ecoforum Sicilia Munnizza Free** by Legambiente, the **International Chorus Festival "InCanto Mediterraneo"** in Milazzo and the **Guaranteed Mobility Project**, aimed at transporting disadvantaged people in Sicily.

#### FOUNDATIONS OF THE A2A GROUP

The **AEM Foundation** has always been committed to supporting scientific research, training and the development of innovative knowledge and skills in the field of energy and environmental sustainability throughout Lombardy and in particular in the areas of Milan and Valtellina. The **ASM Foundation** is based in the territories of Brescia and Bergamo, supporting the activities dedicated to social aspects, the promotion of art and culture, as well as support for training and environmental protection.

➤ For more information visit the websites  
<https://www.fondazioneaem.it/> e  
<https://www.fondasm.it/>



## REDEVELOPMENT OF THE CHIMNEY STACK OF THE PLANT IN MINCIO

As a result of the expansion of the Mincio thermoelectric power plant, it was planned to eliminate some structures considered obsolete for the production cycle. However, for the chimney stack, instead of the demolition, redevelopment has been planned as an element able to integrate in a referential way in the territory, as "Northern Gate of the Mincio and Mantuan Park".

Therefore, at the end of 2017, a competition of ideas was launched, with the aim of collecting technical/figurative proposals from the territory on the theme of redevelopment. Numerous project proposals were received and in 2018, the judging committee, composed of representatives of MiBACT, the Lombardy Region, the Province of Mantua, the Municipality of Ponti sul Mincio, the Mincio Park and A2A technicians, formalized the project ideas awarded or worthy of special mention for technological innovation, originality or artistic value.



During 2019, the final project was reworked on the basis of the results of the competition and the technical, economic and safety evaluations that were fundamental for the continuation of the project, also in relation to the expected public use of the work, which also includes a museum part. To date, the revised project, sent to MiBACT and the local superintendence is pending the positive opinion to start the executive phase of the design.

Moreover, during 2019, the first activities to carry out the internal drainage of the chimney were started and the tender for the works was concluded; however, the executive activity remains bound to a period that does not interfere with the nesting of the peregrine falcon that for several years has been breeding again in a cove at the top of the chimney.

The objective is to reach the end of 2020 with the calls for tender completed and thus the possibility to start the executive actions of the redevelopment between the end of 2020 and the beginning of 2021.

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In addition to sponsorships, there are other initiatives aimed at contributing to the sustainable development of the territories in which the Group operates. These include activities related to the allocation of scholarships to students.

Also this year, A2A, in collaboration with the **Intercultura Foundation**, has made available **25 scholarships** for 4-week summer programmes abroad, giving the winners the opportunity to stay and attend language courses in Europe, America or Asia. Among the destinations of the year: China, India, Japan, Argentina and Canada.

In addition, in collaboration with **Istituto Iseo**, **2 scholarships** have been made available for the "*Summer school 2019*", which offers students the opportunity to meet Nobel Prize winners in Economics and internationally renowned teachers.

In addition, A2A and LGH are committed to supporting their **employees** by providing **scholarships for their children**. In 2019, A2A awarded scholarships to the 106 most deserving students, children of employees from Bergamo and Brescia, for the school results obtained (25 students from the lower middle school, 58 from the upper middle school and 23 for graduation were awarded).

For the second year in a row, LGH has also promoted a study award for the particularly deserving children of employees: "LGH e Lode!". For the year 2019, an important new aspect has been introduced: in addition to young people in high school or university studies, an award has also been provided for secondary school students. Scholarships were awarded to 20 students, more than double those awarded last year.

Also this year, the **Group's Civil Protection Volunteers Association** gave its contribution to the community. In fact, 2019 was a year mainly dedicated to training projects for young people. The Active European Citizenship initiatives, at the end of the route, also included a visit to the European Community headquarters in Strasbourg. However, there was no lack of emergency and rescue operations: in June, during a significant flooding event in Dervio (Lc), on Lake Como, volunteers were called to help the population. Finally, in November, the Association, adhering to the new law of the Third Sector, renewed its statute becoming an ODV, Voluntary Organization.





12.2.6 Education and training

For years A2A, in collaboration with local institutions, has been developing environmental education projects and initiatives aimed at raising awareness and involving the younger generations on environmental and sustainability issues.

Among the new features for 2019, [scuole.a2a.eu](#), the new portal aimed at teachers, which recounts all the free initiatives dedicated by A2A to schools, reaching all the areas where the Group operates in a more effective and widespread manner. On the portal, the teacher can select the initiatives of interest, choosing them according to the theme and the school degree of reference. Additional advantages are available by registering: book free guided tours to about 50 facilities, educational-museum venues and other routes, participate in exclusive live streaming webinars in the [edutv.a2a.eu](#) section with the possibility to interact with the speaker through chat, register your classes in a national merit contest, receive a dedicated newsletter. On the school portal, there are also tools that accompany the teacher in class teaching: in addition to free downloadable publications, short videos and other digital formats suitable for different age groups and usable with interactive whiteboards.

During 2019, **over 700 teachers signed up** with the portal.

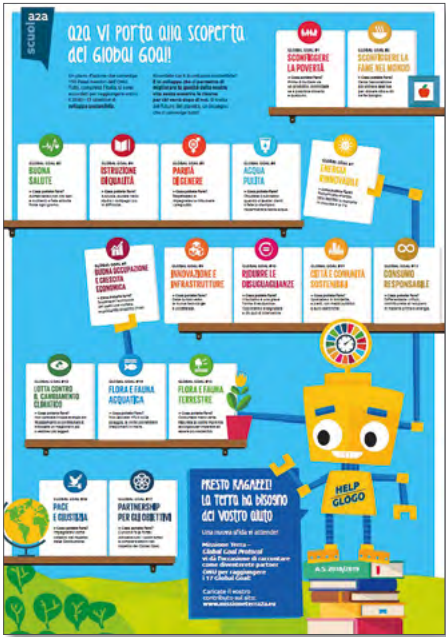
Missione Terra: Global Goal Protocol

In the year 2019, the educational test aimed at schools in the country at all levels was dedicated to the 17 sustainable development goals of the United Nations Agenda 2030. The classes involved were asked to choose one of the 17 sustainability goals of the UN agenda and to produce a paper in line with the selected topic and the school grade: free format for kindergartens, storyboard of a comic strip for primary schools, commercial for secondary schools and video *reportage* for secondary schools. It involved the participation of 127 Italian schools, producing 390 works, with 12 winners, divided in the four school grades and awarded with vouchers for the purchase of teaching materials. The project was carried out under the patronage of ASviS - Italian Alliance for Sustainable Development and UN Global Compact.

Delivery of water bottles to schools in Milan and Brescia

In line with the goals of the UN Agenda 2030, in particular, objectives 6 (Clean water) and 12 (Responsible consumption), A2A and the Municipalities of Milan and Brescia wanted to start the school year 2019-20 by giving middle school students a water bottle to promote the reduction of plastic waste and the consumption of tap water: sustainable, economical and safe. **A2A delivered around 50,000 aluminium water bottles** to all **first-grade secondary school**children in the **cities of Milan and Brescia**.

A similar initiative was also carried out with the **University of Brescia** and, thanks to the contribution of A2A Ciclo Idrico, **8,500 water bottles** were provided to **freshmen**.



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Other environmental education activities

The table below shows the Group's main **environmental education projects** , which involved schools in 2019, at both national and local level, with the participation of nearly **32 thousand students and teachers**.

Figure 65\_Environmental education activities

INITIATIVE	DESCRIPTION	AREA OF REFERENCE	SHAREHOLDINGS
"La nostra energia per l'ambiente"	Our energy for the environment is the historic television quiz in collaboration with Teletutto that has involved students from primary and first-grade secondary schools in Brescia. Preparatory training meetings for the quiz in the classroom were held with experts from Aprica.	Brescia	<b>300</b> students
Ambiente Parco Paths	The collaboration with Ambiente Parco in Brescia continues, thanks to which students from Lombardy were able to take advantage of the entrance to the two educational paths: <ul style="list-style-type: none"><li>• Natur. Water: the water cycle and its importance as a resource for life;</li><li>• The 4R game: path on the circular economy and combat against waste.</li></ul> The courses are free for 8,000 students thanks to the contribution of A2A Ciclo Idrico and A2A Ambiente.	Brescia	<b>12,493</b> students
Educational exhibition "The Game of 4R"	Also for the 2018-19 school year was the continuation of the path created from the collaboration between Amsa and A2A with the Municipality of Milan on the subject of waste and the circular economy, aimed at the city's primary and first-grade secondary schools.	Milan	Over <b>2,000</b> students
Educational paths at Casa dell'Energia e dell'Ambiente	The two educational paths " <b>Waste from scrap to resource</b> " and " <b>Knowing energy</b> " dedicated to energy and environment for primary and first-grade secondary schools have been renewed. In line with the Group's sustainability policy, the Group's sustainability goals 7 (Clean and accessible energy) and 13 (Combating climate change) have been enriched with ideas and reflections. Continuation of the initiative " <b>CIAK: L'AMBIENTE</b> " in collaboration with <b>MIC - Museo Interattivo del Cinema</b> , a film festival on environmental sustainability, dedicated to primary and secondary schools of first and second grade.	Milan	Over <b>7,000</b> students
Action2Air	The Action2Air project offered the students of two second-grade secondary school institutes of Bergamo, the "Caterina Caniana" Graphic and Fashion Institute and the "Pio e Giacomo Manzu" State Art High School, the opportunity to actively engage in the "Bergamo Breathes" campaign promoted by the Municipality, through a training and artistic path proposed by A2A, with interventions in the classroom, a visit to the waste-to-energy plant in Bergamo and an ecodesign workshop aimed at designing a "mangiasmog" (smog eating) mural (with photocatalytic paintings) created in May at the primary school De Amicis - Valli.	Bergamo	About <b>100</b> students
Recycle with art	Aprica has dedicated an educational path to schools in Como to bring the attention of children and young people to the reduction of waste and the importance of a circular economy system. Aprica has also provided about a hundred containers for recycling at school. In addition to creative workshops and recycling manuals, games and educational paths, a contest was held to create recycling containers for the class with recycled materials.	Como	<b>51</b> participating classes <b>15</b> schools <b>134</b> creations <b>180</b> hours of training sessions
Classroom lessons	In some areas where the Group provides environmental management services, a number of environmental education projects have been carried out by the relevant companies (Aprica and LGH Group).	Brescia, Cremona, Crema, Como, Lodi, Rovato, Rapallo, Zoagli, Mantua	Over <b>12,000</b> participants
SCUOLA ZOO video strategy	In order to raise awareness among second-grade secondary school students, A2A has developed, with the group of Scuolazoo (the web portal that is very well known and appreciated by this target) a series of videos made with a tone of voice close to Generation Z (from 14 to 18), on issues and problems related to the preservation of our planet through campaigns on Instagram and YouTube social media.	Web	<b>Instagram</b> Sallo Post and waste short video Views <b>443,153</b> Likes <b>63,126</b> <b>YouTube</b> Sallo Video and waste short video Views <b>23,724</b> Likes <b>1,028</b> <b>Total Campaign</b> (including <b>3</b> Instagram stories) <b>Audience reached</b> <b>1,900,047</b>
Team building Scuola2a	Among the initiatives promoted by Scuola2a, on 12 September there will also be a team building day dedicated to all the people who have been working for A2A for years on the school project and who contribute to the success of this programme. The aim was to provide participants - through edutainment activities - with effective communication tools to be adopted towards an ever-changing audience such as the younger generations.	Brescia	About <b>60</b> participants

## #AMBIENTEASCUOLA

#Ambienteascuola is an awareness-raising campaign by **Amsa and A2A, in collaboration with the Municipality of Milan**, aimed at Milanese schools on the **issues of separate waste collection** and more generally on the development of **environmental awareness**, to contribute to the achievement of some of the 17 Sustainable Development Goals (SDGs) defined by the United Nations.

The pilot project, which initially involved 11 schools, was subsequently extended to all first-grade secondary schools in the city.

The project involved:

- information and training meetings for teaching and non-teaching staff;
- distribution to all classes involved of ecological islands (containers) for separate collection provided by Amsa;
- creative contest "Cestini in cerca d'autore" (Bins in search of artists) which asked the children to personalize waste collection containers using their imagination;
- creation of videos to support teaching on these topics published on the portal [scuole.a2a.eu](https://scuole.a2a.eu) (EDU TV section), including "La raccolta differenziata" (Separate collection) (6 short videos for each material), "Noi e il clima" (We and the climate), "aMiamo LA NOstra città" (We love our city), "Un mondo di energia" (A world of energy).

Numerous classes participated in the contest, presenting a total of 292 personalized bins. The three winning classes were awarded at the event on May 28 in Sala Alessi at Palazzo Marino.

## Plant tours

Throughout the year, the Scuola2a project offers **guided tours of the A2A Group's more than 50 plants and sites**: waste-to-energy plants, hydroelectric, thermoelectric and cogeneration plants, water sources, purifiers, landfills and in Milan the Casa dell'Energia e dell'Ambiente, a permanent communication center dedicated to energy. The guided tours take place all year round, with increasing interest from schools and not only. **In 2019, participation grew further (+16%)**, with 39,000 visitors, of whom 31,374 were students.

**Casa dell'Energia e dell'Ambiente** in Milan remains the most visited site, with 7,000 entries recorded. This structure, the operational premises of the **AEM Foundation**, is a museum open to students and citizens, where it is possible to learn about and explore the issues relating to the world of energy and sustainability.

In addition to the visits planned as part of the Scuola2a project, in 2019, several environmental awareness and education initiatives were carried out that opened the doors of the facilities to all citizens. Among these:

- on the occasion of World Water Day, A2A opened the doors of the **Mompiano Source and Verziano Purifier in Brescia** to all citizens, with great success of visitors; in fact, the former was visited by more than 1,200 people, while the latter by almost 400; moreover, the Mompiano Source, a step of the digital treasure hunt carried out in Brescia (see page 55) opened its doors to the public also on Sunday, November 10, welcoming **160 visitors**;
- in May, the **Integrated Center of Corteolona** organized a day of "Open Plants", for knowledge and meeting with all citizens. The initiative allowed about a hundred visitors to access areas that are usually not open to the public,

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to know all the processes and activities on the site, and to receive all the information related to the waste cycle from qualified guides, who operate daily at the Integrated Center;

- on the occasion of the customary Fish Festival held in Somplago in July, the doors of the **Somplago Hydroelectric Power Plant** were opened, which registered **over 1,300 visitors** in a single day;
- on October 4<sup>th</sup>, at the **Lamarmora plant in Brescia**, a beautiful and participatory open-door initiative was held for citizens and students on the issues of sustainable innovation and the environmental future of the city, in which, in addition to the possibility for citizens and schools to visit the plant, the decarbonization project and the 70 million euro investment plan were also presented. Moreover, about two hundred and fifty high school students from Brescia were able to express their creativity

on the theme "Brescia al futuro" (Brescia in the future): guided by professional eco-designers, they collaborated on the realization of a mural destined to remain in the courtyard of the plant to commemorate the day. Finally, the Brescia Leonessa Basketball team was also present, to confirm that sport also allows us to look with confidence toward the future of the city; in total there were **about 300 visitors** during the day;

- on the occasion of the fifth edition of Open Factory, the most important opening of industrial and manufacturing culture, the A2A Group opened the **Monfalcone thermoelectric plant** to the public on Sunday, November 24<sup>th</sup>, visited by **around 170 people**.

In addition to the open days, numerous visits to the facilities were organized for specific guests and Italian and foreign delegations.

## 10.2.7 External communication

In 2019, the **Press Office** produced a total of 356 media communications. 89% of the communications were given out as Press releases and notes with the remaining 11% taking the form of letters. In 2018, there were 380 opportunities to meet with journalists, amongst interviews and one-to-one dialogues, press conferences and press visits.

The A2A Group is present on the following **social channels**: *Facebook, LinkedIn and Twitter*. Communication through the 9 active social profiles, with a fan base of over 215,000 users, up 36% compared to 2018, allows more direct contact with citizens and customers, informing them about central issues for the Group such as, for example, the circular economy, the smart city and energy saving. In addition, it is possible to initiate social media caring flows to promptly intercept the needs and reports to be transmitted to customer care channels: a total of approximately 4,500 requests received from users have been resolved. Finally, the activity allows to know and collect the main topics discussed on the web, taking cues to design new services and products.

In addition, in 2019, the **a2a.eu corporate website** underwent major structural and content update with the aim of providing a concrete and tangible account of the "Citta2a" eco-system: the Group's daily commitment to the excellence of its services for the sustainable growth of the areas in which it operates and to improve people's quality of life. The intervention touched on several points: first of all, the presentation of the services, with a view to describing in detail not only the Group's activities, but also its offer and all the digital touch points for commercial contact, assistance and utilities; a new section dedicated to the governance of innovation within the Group was also created, also thanks to the creation of a specific programme aimed at fostering a virtuous and systemic process of innovation generation and management; a review of the "Sustainability" section of the website has also been carried out in order to explore, thanks to a fully navigable integrated framework, the Sustainability Policy, the UN Sustainable Development Goals and the Group's activities (see page 53); lastly, a new area dedicated to the Group's editorial content, navigable by service area, has been created in order to increase awareness of the Group's initiatives and explore market issues.

## SOME INITIATIVES OF THE A2A GROUP FOR THE COMMUNITY

### Extraordinary reopening of Sala delle Asse on the occasion of "Leonardo mai visto" (Leonardo never seen)

A2A has always been attentive to the themes of culture and art and contributes to supporting initiatives that enhance the area and its historical and cultural heritage. In addition to supporting the restoration of Sala delle Asse of the Castello Sforzesco in Milan, the Group wanted to be present at "Leonardo mai visto" inside "Milano Leonardo 500". From May 16, 2019 until April 19, 2020, the Sala delle Asse exceptionally reopened to the public to celebrate the 500th anniversary of the death of Leonardo da Vinci, thus revealing the decoration designed by the artist with a pergola of 18 mulberry trees and details of landscapes that appear on the walls of the room.

### Collaboration with prisons

LaboRAEE is a company controlled by Amsa that operates an electronic waste treatment plant (WEEE) inside the Bollate prison, employing mainly detained personnel. The project is the result of collaboration with the Lombardy Region and the Lombardy Penitentiary Administration and is aimed at facilitating the dismantling and valorization of the components removed from electronic waste, with an important contribution in terms of circular economy deriving from the recovery of WEEE. This project represents an example of inclusion and an opportunity for professional development for prisoners, encouraging their re-entry as active citizens into civic life through the acquisition of professional skills that support their occupational integration. A2A has also contributed to the project "Looking beyond the prison: strengthening civil society in social inclusion and in the protection and promotion of prisoners and ex-convicts in Cameroon", in collaboration with "Associazione Centro orientamento Educativo (COE)" and co-financed by the Italian Agency for Cooperation to the Development of training exchanges. The project promotes the strengthening activities of cooperative capacity and other players involved in the pilot experiences of prison economics in Cameroon, and A2A has contributed by promoting A2Abroad/LaboRAEE's commitment experiences in prisons in the Milan area, bringing its best practices as successful examples of development of the prison economy and social enterprise in the educational and resocializing function of prisons.

### Compost Distribution

The organic compost produced by A2A Ambiente's plants has been distributed free of charge in Milan on several occasions at the Parco delle Cave, where a horticultural activity (initially spontaneous and unregulated) has also begun and has now taken on a social and aggregative value. A2A Ambiente, in collaboration with AMSA, has joined the initiative by supporting the gardens and supplying the organic compost produced in its composting plants. The compost was also distributed during Milano Green Week, the event promoted by the City of Milan dedicated to the environment. A total of two tonnes of compost were distributed in bags that could be picked up at 7 points in the city.

### Dog droppings

Amsa proposed to the City of Milan the installation of 100 new bins dedicated to the collection of dog droppings placed exclusively on public streets in areas far from the dog areas. This is in order to provide dog owners with additional points of disposal for the droppings of their pets, thus improving the cleanliness of the streets. To date, the areas in which to place the bins have been identified and the graphics for their customization have been created.

### Dona valore

As part of the activities to improve the service for the collection of used clothing offered to the citizens of Milan, a communication campaign was carried out by Amsa with the aim of increasing the separate collection of used clothing.

### Raduno Alpini

On the occasion of the 100-year anniversary, the Alpini have held their meeting in Milan and Amsa, in order to obtain a good level of separate collection in the event, provided all the equipment to properly carry out separate collection in all areas involved in the event and also made a commemorative flag that was placed on all Amsa vehicles during the days of the event.

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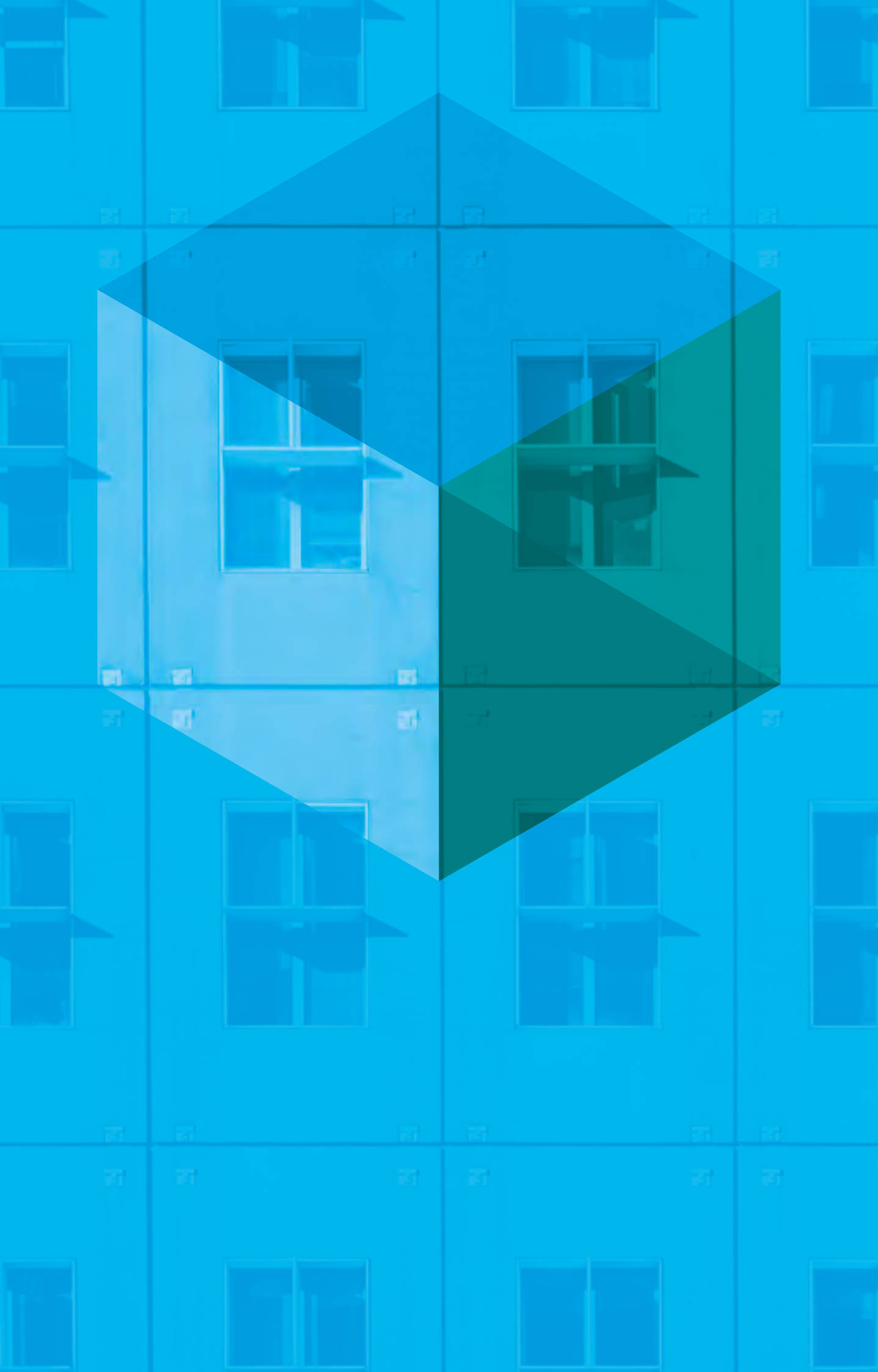
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# 10

## Relational capital *Suppliers*



### INPUTS

New supplier qualification  
questionnaire, with particular attention  
to sustainability requirements

New vendor rating and  
consequence management  
process

1.6 billion euro  
used for the  
purchase of fuels

1.2 billion euro  
orders to suppliers

2,453 inspection visits  
to sites

### A2A SERVICES AND PROCESSES

96% orders to Italian suppliers

98% compliance of checks  
carried out on sites  
and +46% site inspections carried out

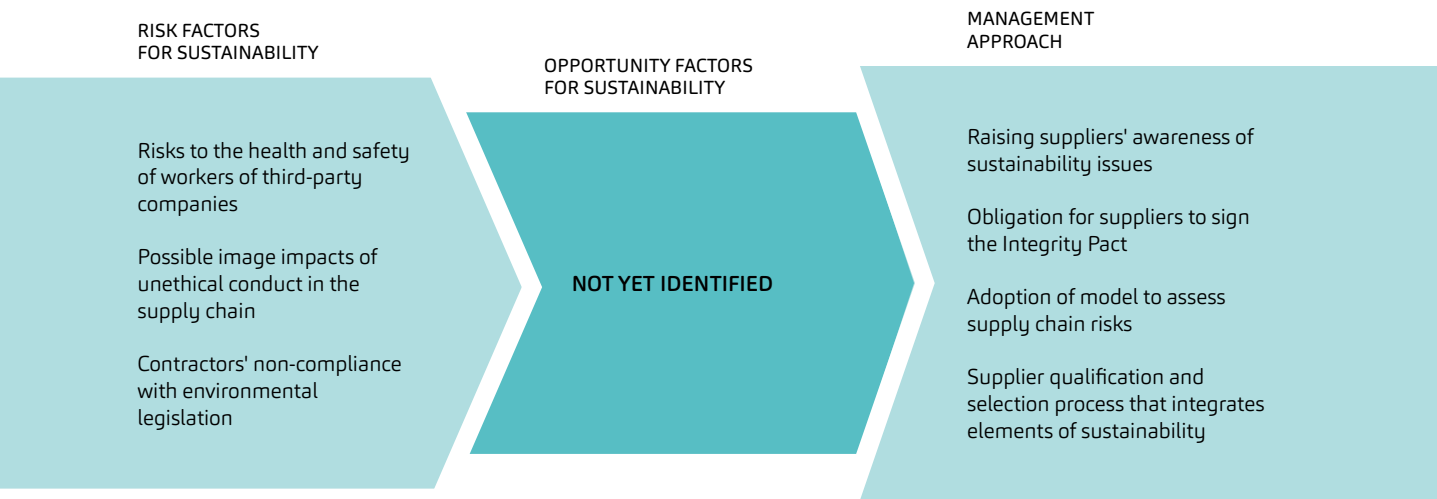
83% of orders to suppliers with  
at least 1 certification

37 suppliers have used the  
FAST2INNOVATION process

### OUTCOME

RESPONSIBLE MANAGEMENT OF THE SUPPLY CHAIN

Adoption of supplier, collaborator and commercial partner selection policies applying fair and transparent processes that integrate sustainability criteria; promotion of social responsibility practices amongst suppliers, stimulating the improvement to reliability and safety in provision of services.



10.3 Relations with suppliers

In 2019, **11,271 orders** were issued by Group companies for supplies, services or works, for a total amount of about **1.2 billion euro**, of which **96.1%** for **Italian suppliers**.

Figure 66\_Order value by business unit

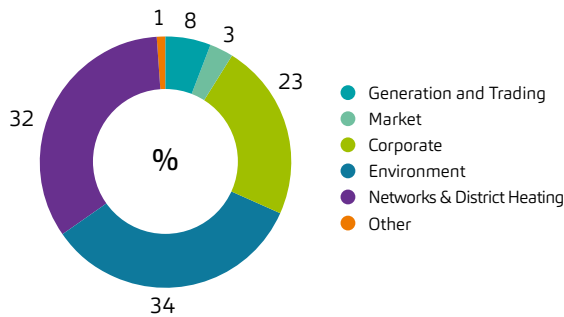
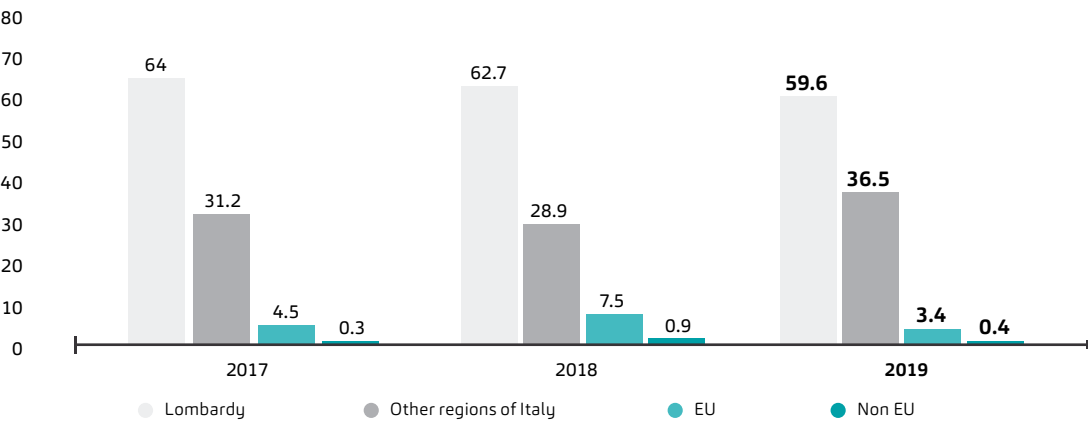


Figure 67\_Geographic breakdown of orders [GRI 204-1]



In addition to the amount spent on supplies, works and services, approximately 1.6 billion euro were spent on the purchase of fuels used in Group plants or conveyed as carrier to end customers, of which 94% for natural gas. Coal purchases were made 11% from Colombia, 84% from Russia and 5% from Kazakhstan.



### 10.3.1 Sustainable management of the value chain

The Group operates on the territory with the support of suppliers that apply high standards in terms of staff health and safety and environmental protection. To this end, A2A has adopted a specific system by which to assess the suitability of companies, so as to ensure the technical, reputational and economic-financial capacity in line with the legal requirements and the provisions of the Group Code of Ethics (in respect of the Organizational Model pursuant to Italian Legislative Decree no. 231/2001).

In the selection and validation of suppliers A2A is open to all companies interested in participating in tenders called by the Group, ensuring the maintenance of a Vendor List organized by product category. Each qualified supplier is given a global score, calculated as a weighted average of:

- **Vendor Rating Provisional**, calculated on the basis of information collected during qualification (accident indices, certifications obtained, financial rating, etc.);
- **Vendor Rating Final**, obtained from the evaluation of performance in the execution of the contract.

The qualification obtained is valid for 36 months; however, if the global score assigned to a supplier reveals criticalities, A2A reserves the right to take steps such as suspending qualification or starting an audit.

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## NEW SUPPLIER QUALIFICATION QUESTIONNAIRES

In 2019, a project to review and adapt the questionnaires that are submitted to the supplier for the qualification request was started, in order to obtain technical standards and suitability filters with respect to the real capabilities of the supplier, in line with the procurement market.

From the analysis of best practices in the sector, new areas were identified to be included, effectively expanding the requirements to become part of the A2A supplier pool, with particular attention to **sustainability requirements**. Starting from the Group's commitments, defined in the Policy to 2030, the Vendor Management and Corporate Social Responsibility functions have identified a series of new queries on ESG issues that will allow better awareness of supply chain risks over time.

The new questionnaires, which will be available on the Supplier Portal in the first months of 2020, will expose to suppliers some **mandatory questions** regarding **governance policies and processes** (from the presence of an emissions reduction strategy to the existence of systems and processes or certifications), but also the reporting of social and environmental performance such as: carbon footprint, water consumption, waste production and accident indices.

In 2019, 2,767 suppliers had at least one quality, environment and safety certification, 1,092 of which were activated with at least one order.

The value of orders issued by the A2A Group to suppliers with at least one certificate amounts to approximately 80% of the total value of our orders.

During the qualification processes for registration or renewal, 1,453 suppliers were evaluated on social issues and 1,452 on environmental issues.

Figure 68\_Qualified A2A Group suppliers by certification held

	2017	2018	2019
ISO9001	1,981	2,103	1,721
ISO14001	566	633	593
OHSAS18001	610	611	507
SA8000	62	51	142
Respondents to the TenP (Global Compact) questionnaire	71	166	188
<b>Total suppliers with at least one certification</b>	<b>2,215</b>	<b>2,306</b>	<b>2,767</b>
of which activated with order	na	1,144	1,092

In addition to the social-environmental, economic-financial and technical assessments, assessments relating to reputational risks have been added, with each supplier assigned an **Integrity Risk Rating**, the positive value of which determines its continued inclusion in the Register. Companies wishing to be accredited on A2A's Supplier Portal are required to sign the **Integrity Agreement**; failure to do so makes it impossible for the supplier to request registration.

Declarations made during the qualification process can be verified at the suppliers' premises. **Audits at the suppliers' premises** may also be required if serious non-conformities emerge during the execution of contracts, in order to identify the causes of the lack of performance and **identify improvement actions**.

FAST2INNOVATION: A NEW PURCHASING PROCESS FOR INNOVATION

Digital distribution and the resulting digital transformation are significantly changing current business models. Innovation is evolving much faster than in the past and requires streamlined tools and processes. Large companies are increasingly interfacing with small, highly innovative companies, but still not very structured within them. Thus, the qualification criteria typically adopted and the payment terms applied would tend to exclude many of these potential suppliers, creating a kind of 'barrier to entry'.

In order not to miss the opportunities deriving from these interactions, in 2019, a new *ad hoc* qualification process was launched, called "fast track", which allows managing in a "lean" way the purchase of products or services offered by:

- research centers and universities
- start-up
- "specialized" suppliers for pilot projects

In 2019, 37 suppliers used this process successfully. The initiative will be further implemented in 2020.

VENDOR RATING & CONSEQUENCE MANAGEMENT

In 2019, the pilot phase for updating the Vendor Rating methodology started in 2019, the activity that makes it possible to issue a **summary judgement on suppliers' performance**, based on the assessments made by the Operating Managers and buyers. The former express their opinion on the quality of the service provided, while buyers evaluate the commercial and economic aspects. The Operating Manager therefore becomes a key figure for the evaluation of suppliers, contributing decisively to the determination of the Vendor Rating.

One of the most important new additions concerns the possibility to fill in **evaluation forms customized according to the subject of the contract**, with directly access from a Group portal.

The Vendor Rating consequently involves the implementation of a series of **consequence management** activities. In fact, a low evaluation may result in the supplier being included on

a watchlist with more frequent performance monitoring and, in the most serious cases, inclusion on the blacklist or suspension of the qualification. On the other hand, the positive results of the evaluation process could lead to a **better ranking in the awarding of tenders**, facilitated qualification renewal processes or **monetary incentives**. The consequence management process is also characterized by the **accompaniment of suppliers in a process of continuous growth**, thanks to improvement plans and audits to identify and explore critical areas.

The pilot involves the companies A2A Ciclo Idrico, A2A Energia and A2A Gencogas in a first phase. At the end of the test, the extension to operating managers of all Group companies will be evaluated. The Sustainability Plan provides for an **increase in the weight of ESG criteria within the vendor rating**. It is precisely the update launched in 2019 that will make it possible to reach a weight of 12% of the total evaluation in the coming years.

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10.3.2 Site management

Attention to safety in the workplace, not only in its own activities, but throughout the supply chain, is increasingly an issue of fundamental importance for the Group. For this reason, A2A, and in particular, the Networks and District Heating BU, began in 2016 to carry out rigorous checks on compliance with the tender specifications and on compliance with the provisions on occupational health and safety (Legislative Decree 81/2008) and environment (Legislative Decree 152/2006). In 2019, the Group carried out inspections on 74 contractors and 27 subcontractors doubling the percentage of sites inspected, from 6% in 2018 to 23% of the total sites opened in 2019.

The inspection visits were carried out on a sample of roadworks sites selected in order to ensure an adequate number of inspections for both higher and lower value sites. The inspections were carried out with the help of specific check lists, the results of which are subsequently shared with the company structures concerned. The check list consists of three fault levels (RED = blocking, ORANGE = severe and YELLOW = relevant). In the event of red anomalies, the site managers are immediately alerted to take appropriate countermeasures involving the contractors as soon as possible. In the event of red anomalies, the most important critical issues are the safety aspects that can be traced back to a correct delimitation, luminous signage and signs on sites. However, as a result of the tightening of controls, these anomalies have already been significantly reduced compared with the previous year.

Figure 69\_Qualified A2A Group suppliers by certification held

	2017	2018	2019
Number of inspections carried out	727	1,682	2,453
Number of inspections carried out	15,572	25,612	72,416
of which compliant	90%	90%	98%
Companies concerned	Unareti, A2A Ciclo Idrico, A2A Calore & Servizi, A2A Illuminazione Pubblica	Unareti, A2A Ciclo Idrico, A2A Calore & Servizi	Unareti, A2A Ciclo Idrico, A2A Calore & Servizi
Areas concerned	Province: Milan, Bergamo and Brescia	Province: Milan, Bergamo and Brescia	Province: Milan, Bergamo and Brescia
Corrective actions planned	Completion of training activities planned in 2016. Introduction of the tablet for line controls. Constant information on the results of inspections to all parties concerned.	Constant information on the results of inspections to all parties concerned.	Constant information on the results of inspections to all parties concerned.
no. of corrective actions taken	36*	83	238
Results expected	Minimise anomalies with a consequent improvement to safety, reduction in environmental impacts, improvement in quality of works and guarantee of complete compliance with current standards.	Minimise anomalies with a consequent improvement to safety, reduction in environmental impacts, improvement in quality of works and guarantee of complete compliance with current standards.	Minimise anomalies with a consequent improvement to safety, reduction in environmental impacts, improvement in quality of works and guarantee of complete compliance with current standards.

\* The systematic and tracked reporting activity was introduced in May 2017.

APP STA - MANAGEMENT 2.0 OF SITE INSPECTION VISITS

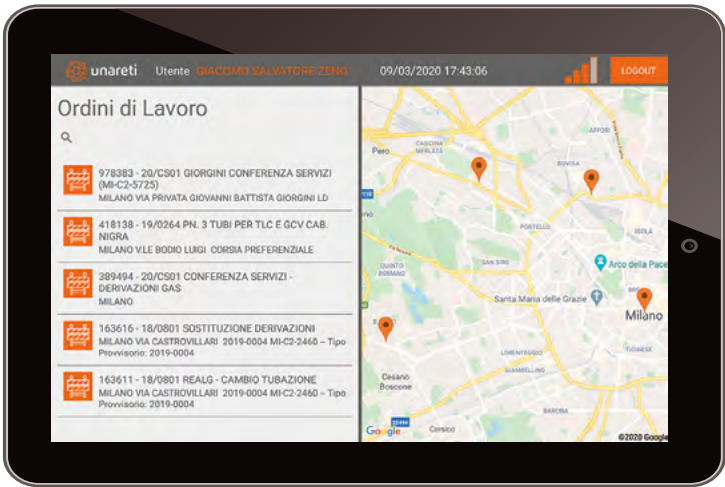
In the course of 2019, the STA digital app to support site inspection visit staff.

The new app allows providing on tablet to operators in charge the lists of sites to be inspected, suitably geolocalized.

In addition, always using a tablet, operators can access the information and documents associated with the site from the site directly and can also directly report the results of the inspections, by filling in the appropriate forms and including the photos taken.

At the completion of the inspection, the STA application proposes a section divided into chapters and subsections on the issues subject to verification. For each section, it is possible to express a "positive, negative or not applicable" opinion, and for negative opinions, the anomaly found must be classified according to severity (red, orange or yellow)

The site reports can thus be digitally signed by the inspectors and are then acquired in the Group systems for any subsequent verifications.



In the first year of application, approximately 1,900 inspections were managed through STA (75% of the total 2019), but these are expected to increase with the completion of the roll out of the app at the beginning of 2020. For Unareti, the tool is already operational in all areas of: Milan, Brescia, Bergamo, Po Area, Abruzzo.

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# Independent auditors’ report on the consolidated disclosure of non-financial information in accordance with Article 3, par. 10, of Legislative Decree 254/2016 and with Article 5 of CONSOB Regulation adopted with Resolution n. 20267 of January 18, 2018

(Translation from the original Italian text)

To the Board of Directors of  
A2A S.p.A.

We have been appointed to perform a limited assurance engagement pursuant to Article 3, paragraph 10, of Legislative Decree 30 December 2016, n. 254 (hereinafter "Decree") and article 5 of CONSOB Regulation adopted with Resolution 20267/2018, on the consolidated disclosure of non-financial information of A2A S.p.A. and its subsidiaries (hereinafter "A2A Group" or "Group") for the year ended on December 31, 2019 in accordance with article 4 of the Decree approved by the Board of Directors on March 19, 2020 (hereinafter "DNF").

## Responsibilities of Directors and Board of Statutory Auditors for the DNF

The Directors are responsible for the preparation of the DNF in accordance with the requirements of articles 3 and 4 of the Decree and the "Global Reporting Initiative Sustainability Reporting Standards" defined by GRI – Global Reporting Initiative (hereinafter "GRI Standards"), identified by them as a reporting standard.

The Directors are also responsible, within the terms provided by law, for that part of internal control that they consider necessary in order to allow the preparation of the DNF that is free from material misstatements caused by fraud or not intentional behaviors or events.

The Directors are also responsible for identifying the contents of the DNF within the matters mentioned in article 3, par. 1, of the Decree, considering the business and the characteristics of the Group and to the extent deemed necessary to ensure the understanding of the Group’s business, its performance, its results and its impact.

The Directors are also responsible for defining the Group's management and organization business model, as well as with reference to the matters identified and reported in the DNF, for the policies applied by the Group and for identifying and managing the risks generated or incurred by the Group.

The Board of Statutory Auditors is responsible, within the terms provided by the law, for overseeing the compliance with the requirements of the Decree.

## Auditors’ independence and quality control

We are independent in accordance with the ethics and independence principles of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, based on fundamental principles of integrity, objectivity, professional competence and diligence, confidentiality and professional behavior. Our audit firm applies the International Standard on Quality Control 1 (ISQC Italia 1) and, as a result, maintains a quality control system that includes documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable laws and regulations.

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Auditors’ responsibility

It is our responsibility to express, on the basis of the procedures performed, a conclusion about the compliance of the DNF with the requirements of the Decree and of the GRI Standards. Our work has been performed in accordance with the principle of "International Standard on Assurance Engagements ISAE 3000 (Revised) - Assurance Engagements Other than Audits or Reviews of Historical Financial Information" (hereinafter "ISAE 3000 Revised"), issued by the International Auditing and Assurance Standards Board (IAASB) for limited assurance engagements. This principle requires the planning and execution of work in order to obtain a limited assurance that the DNF is free from material misstatements. Therefore, the extent of work performed in our examination was lower than that required for a full examination according to the ISAE 3000 Revised ("reasonable assurance engagement") and, hence, it does not provide assurance that we have become aware of all significant matters and events that would be identified during a reasonable assurance engagement.

The procedures performed on the DNF were based on our professional judgment and included inquiries, primarily with company’s personnel responsible for the preparation of the information included in the DNF, documents analysis, recalculations and other procedures in order to obtain evidences considered appropriate.

In particular, we have performed the following procedures:

- 1. analysis of the relevant matters in relation to the activities and characteristics of the Group reported in the DNF, in order to assess the reasonableness of the selection process applied in accordance with the provisions of article 3 of the Decree and considering the reporting standard applied;
- 2. analysis and evaluation of the criteria for identifying the consolidation area, in order to evaluate its compliance with the provisions of the Decree;
- 3. comparison of the economic and financial data and information included in the DNF with those included in the A2A Group’s consolidated financial statements;
- 4. understanding of the following aspects:
  - Group’s management and organization business model, with reference to the management of the matters indicated in the article 3 of the Decree;
  - policies adopted by the Group related to the matters indicated in the article 3 of the Decree, results achieved and related key performance indicators;
  - main risks, generated or suffered related to the matters indicated in the article 3 of the Decree.

With regard to these aspects, we obtained the documentation supporting the information contained in the DNF and performed the procedures described in item 5. a) below

- 5. understanding of the processes that lead to the generation, detection and management of significant qualitative and quantitative information included in the DNF.  
In particular, we have conducted interviews and discussions with the management of A2A S.p.A. and with the personnel of Linea Group Holding S.p.A., A2A Gencogas S.p.A., A2A Ambiente S.p.A., A2A Calore e Servizi S.r.l. and Acsm-Agam S.p.A., and we have performed limited documentary evidence procedures, in order to collect information about the processes and procedures that support the collection, aggregation, processing and transmission of non-financial data and information to the management responsible for the preparation of the DNF.



Furthermore, for significant information, considering the Group activities and characteristics:

- at Group level
  - a) with reference to the qualitative information included in the DNF, and in particular to the business model, policies implemented and main risks, we carried out inquiries and acquired supporting documentation to verify its consistency with the available evidence;
  - b) with reference to quantitative information, we have performed both analytical procedures and limited assurance procedures to ascertain on a sample basis the correct aggregation of data.
- for A2A Gencogas S.p.A. (Sermide thermoelectric power plant), A2A Ambiente S.p.A. (Silla 2 waste-to-energy plant) and A2A Calore e Servizi S.r.l. (Milano-Canavese plant), that we have selected based on their activities, relevance to the consolidated performance indicators and location, we have carried out site visits during which we have had discussions with management and have obtained evidence about the appropriate application of the procedures and the calculation methods used to determine the indicators.

Conclusions

Based on the procedures performed, nothing has come to our attention that causes us to believe that the DNF of the A2A Group for the year ended on December 31, 2019 has not been prepared, in all material aspects, in accordance with the requirements of articles 3 and 4 of the Decree and the GRI Standards.

Milan, April 3, 2020

EY S.p.A.  
Signed by: Paolo Zocchi, Auditor

This report has been translated into the English language solely for the convenience of international readers.

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\* Consolidated Financial Statements 2019 - Annex 3. List of companies included in the Consolidated Financial Statements.

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\* Consolidated Financial Statements 2018 - paragraph 3. Notes - Other Information - 9) Update of the main legal and fiscal disputes pending.  
\*\* Report on Operations 2018 - paragraph 3. Evolution of the regulation and impacts on the Business Units of the A2A Group.

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2019

## Supplement to the Integrated Report

Consolidated Disclosure  
of Non-Financial Information  
in accordance with Italian  
Legislative Decree n. 254/2016



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# 2020-2024 Sustainability Plan



## CIRCULAR ECONOMY

ACTION	KPIS	
<b>RECOVERY AND TREATMENT</b> Improve the recovery process of waste collected (including through their transformation into energy) and promote separate waste collection to help reduce the environmental impact of cities	Urban waste at landfill	
	Percentage separate waste collection in the municipalities served (apart from Milan)	
	Percentage separate waste collection in the city of Milan	
	Waste treated (municipal + special) aimed at recovering material at the Group's plants	
	Waste treated aimed at energy recovery at the plants managed by the Group	
	CSS produced by Group's plants	
	Biomethane produced by FORSU plants (Organic Fraction of Urban Solid Waste)	
<b>REDUCTION POLICIES</b> Reduce the production of waste through a prevention, reduction and reuse policy	Territories where waste prevention and reduction actions are active	
	Investments allocated to the development of technologies and services linked to the circular economy cumulative	
<b>RISK MANAGEMENT</b> Verify that the system used to identify, manage and prevent business risks adequately covers sustainability risks (and, in particular, social-environmental risks), also in organizational terms	Specific Risk Intelligence system for ESG risks	
<b>WATER</b> Implement actions aimed at reducing water consumption in capture and distribution processes, reducing water dispersion and improving the quality of water returned to the environment	Linear water losses - average	
	Percentage of equivalent inhabitants without access to the purification service	
	Percentage of new generation water service meters installed - cumulative value	
	Intelligent sensors installed for water service - cumulative value	
<b>BIODIVERSITY</b> Adhere to projects aiming to protect the soil and protected species, monitoring and protecting biodiversity in the territories of competence	Ranked plants in terms of potential impact on biodiversity	

UNIT OF MEASUREMENT		2017	2018	2019	2024 OBJECTIVE
	% of total municipal waste collected	1%	0.3%	0.1%	0%
	% of total municipal waste collected	70.2%	74.4%	74.1%	76%
	% of total municipal waste collected	53.8%	59.7%	61.5%	65%
	thousands of tonnes	888	926	980	1,500
	thousands of tonnes	2,355	2,471	2,457	2,700
	thousands of tonnes	132	129	130	528
	millions of m³	-	-	NEW	20
	% of total inhabitants served	-	81%	82%	> 80% / year
	millions of euro	49	42	33	725
	progress	launched	ongoing	ongoing	Finalize at 2022
	m³/km/dd	27.6	27.8	26.0	21.0
	% of total AE at 12/31/2016 in the municipalities served	-	21.7%	18.0%	7%
	% of total meters	-	REVISED	22%	76%
	no.	-	27	62	170
	% of plants under analysis	-	-	NEW	100% (at 2020)

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ACTION	KPIS
<b>DISTRICT HEATING</b> Help reduce the environmental impact of the cities, paying close attention to air quality, implementing district heating and district cooling	Volumes served by district heating and district cooling (Mm <sup>3</sup> )
	NO <sub>x</sub> avoided thanks to the extension of district heating
	CO <sub>2</sub> emissions avoided thanks to the extension of district heating
	Realization of the decarbonization project of the Brescia district heating system (105,000 tonnes of CO <sub>2</sub> savings)
<b>SUSTAINABLE MOBILITY</b> Develop sustainable mobility solutions (low-emission waste collection vehicles and vehicle fleet, replacement of obsolete vehicles with new ones)	Percentage replacement of Networks and District Heating BU vehicles with low environmental impact (methane gas and electric powered) - cumulative value
	Number of low environmental impact waste collection vehicles (Euro 6 vehicles, methane gas, electric) - cumulative value
<b>EMISSIONS</b> Develop actions aiming to reduce the environmental footprint, like direct and indirect emissions of greenhouse gases	CO <sub>2</sub> emission factor from electricity generation
	<i>Δ compared to 2017</i>
	Emissions factor for electricity production plants
	<i>Δ compared to 2017</i>
	Group SO <sub>2</sub> emissions
	Total methane emissions avoided from distribution networks - cumulative values with respect to 2015 (tCO <sub>2eq</sub> )
	Purchase of 100% renewable energy for Group consumption
<b>RENEWABLES</b> Increase the proportion of energy produced from renewable sources	Installed photovoltaic capacity
	Percentage of thermal energy produced from renewable sources and process recovery with respect to total thermal energy collected into the district heating network (Networks and District Heating BU)
	Thermal energy recovered from third-party production processes (Networks and District Heating BU)
<b>ENERGY TRANSITION</b> Initiatives enabling the process of transition to a low-carbon economy, which allow to keep the system secure	Initiatives such as storage, CCGT flexibility and repowering and synchronous compensators
<b>SMART NETWORKS</b> Develop solutions to offer a better information access infrastructure (Smart Grid) and improve the network resilience	Users with smart gas meters active (G4-G6) - Networks and District Heating BU perimeter
	Percentage of users with 2G electricity smart meter (Unareti)
	Annual average number of outages per LV user in high concentration environment (700A) due to long outages without notice
	Investments in Smart Grids - cumulative value 20-24

UNIT OF MEASUREMENT		2017	2018	2019	2024 OBJECTIVE
	millions of m³	107.8	110.2	112.2	125
	tonnes / year	138	139	194	265
	tonnes / year	181,136	211,197	213,701	321,000
	progress	-	-	-	Start by 2022
	% of total vehicles of the Networks and District Heating BU	-	REVISED	41%	61%
	% of total waste collection vehicles	27%	38%	54%	72%
	thousands of tonnes	6,299	5,701	5,211	5,111
		-	-9%	-17%	-19%
	gCO <sub>2</sub> /kWh	419	374	335	314
		-	-11%	-20%	-25%
	tonnes	1,480	1,300	917	558
	tonnes in CO <sub>2eq</sub>	17,145	24,078	29,119	94,000
	% of total consumption	-	-	NEW	100%
	MW	-	94	99	500
	% of total	51%	51%	54%	55%
	GWh	45	43	45	81
	no.	-	NEW	1	5
	% of total	-	REVISED	86%	98%
	% of total	-	-	NEW	96%
	no.	1.36	1.43	1.61	1.05
	millions of euro	22	40	44	193

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ACTION	KPIS
<b>QUALITY</b> Maintain high quality standards of the services supplied by keeping high customer satisfaction levels	CSI Total (Cerved)
	CSI Call Center A2A Energia (first half of the year)
<b>DIGITAL</b> Develop innovative channels and services (web, mobile, gamification) to increase customer loyalty	Customers registered with the online service
	Active supplies bollett@mail
	E-mail bills related to the Integrated Water Cycle
	Interventions on Group sites for evolved interactivity - cumulative value
<b>INNOVATION AND R&amp;D</b> Develop investments in Research and Development, increasing the number of partnerships with international research centres and universities. Develop new technologies, patents for technological innovation.	Open innovation projects launched through Shark Tank, consistent with the objectives of the Sustainability Plan
	Investments in start-ups through Corporate Venture Capital A2A Horizon initiative
<b>GREEN MARKETING</b> Implement customer sensitisation and communication campaigns	Green energy sold to the mass market segment
<b>EFFICIENCY IN END USE</b> Develop energy efficiency interventions on the public and private real estate assets	CO <sub>2</sub> avoided thanks to measures to promote energy efficiency in end use: offer LED kit - cumulative value
	CO <sub>2</sub> avoided thanks to measures to promote energy efficiency in end use: industrial ESCO activities - cumulative value
	CO <sub>2</sub> avoided from boiler conversion projects and PV installations (condominium/tertiary) - cumulative value
<b>SMART CITIES</b> Support the development of the smart city in the territory in which the Group operates, including through new business models that exploit the technological component (smart grids and big data)	New LED lighting points installed (totals provided for in the agreements signed with the municipalities)
	Installed LED traffic lights
	Charging points managed for electric vehicles
	Smart City services activated - cumulative value
	Municipalities with Smart City services activated - cumulative value
	Parking spaces installed in smart parking - cumulative value
	Businesses served with new smart land services - cumulative value
	Smart environmental bins - cumulative value
	Vehicles monitored by GPS
<b>DISADVANTAGED GROUPS</b> Promote beneficial tariffs or other solutions for users in difficulty (e.g. Banco dell'Energia)	Funds collected by Banco dell'Energia
<b>ICT - CYBERSECURITY</b> Infrastructure development and improvement projects of IT platforms and application. Adoption of defence mechanisms and protection against logical, viral attacks	Achievement of ISO27001 certification
	Operators of Networks and Distrcit Heating BU equipped with digital tools for mobile work (WFM)

UNIT OF MEASUREMENT		2017	2018	2019	2024 OBJECTIVE
	Customer satisfaction index	Domestic gas 90.1 (national average 89.4) Domestic electricity 91.2 (national average 89.7)	Domestic gas 93.3 (national average 92.0) Domestic electricity 91.7 (national average 91.1)	n.a.	> national average and never < 90%
	Customer satisfaction index	95.7 (national average 93.2)	98.1 (national average 92.3)	n.a.	> sector national average
	no.	356,155	391,626	425,985	700,000
	no.	372,811	433,333	536,143	900,000
	% of total	-	NEW	7%	20%
	no.	6	6	11	16
	no.	-	-	NEW	75
	no.	-	-	NEW	10
	GWh	909	1,065	1,213	2,100
	tonnes	REVISED	2,802	4,051	9,200
	tonnes	696,963	1,844,329	2,302,124	5,700,000
	tonnes	-	NEW	906	35,000
	no.	REVISED	232,368	275,950	417,000
	no.	12,069	12,069	14,618	23,000
	no.	130	168	198	1,500
	no.	-	7	40	250
	no.	-	2	24	50
	no.	-	711	2,580	4,000
	no.	1	2	10	20
	no.	300	6,663	12,880	18,000
	% of total	-	81%	97%	100%
	millions of euro/ year	-	1	1	1 (to 2020)
	progress	-	-	NEW	Achievement
	% of total target population	-	51.5%	85%	100% (at 2020)

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PEOPLE INNOVATION

ACTION	KPIS
<b>RESPONSIBLE PROCUREMENT</b> Develop initiatives aiming to spread the culture of health and safety at work amongst contractors and other suppliers. Develop Green Procurement policies	Incidence of sustainability criteria in the vendor rating process Value of orders assigned to certified suppliers Qualified suppliers activated with order with sustainability requirements Inspection visits to sites
<b>HEALTH AND SAFETY</b> Consolidate the training and prevention plan to reduce injuries and develop new initiatives for worker health and safety	Weighted injury index
<b>MbO</b> Add sustainability objectives to the MbO sheets (correlation between Management remuneration and Sustainability KPIs)	Sustainability MbO weight Executives with Sustainability MbO
<b>TRAINING</b> Implement training routes aimed at optimising and requalifying competences and professional development (including on matters such as sustainability, anti-corruption and human rights)	Employees involved in training on the Code of Ethics Average level of approval of training
<b>CHANGE MANAGEMENT</b> Develop change management projects to improve the organisational culture	Employees involved in at least one change management project Young Talent employees involved in engagement and retention initiatives
<b>INTERNAL ENGAGEMENT</b> Develop a systematic listening system to employees, promoting dialogue and collaboration	Employees involved in listening surveys
<b>WELFARE, DIVERSITY AND EQUAL OPPORTUNITIES</b> Develop innovative welfare policies, also in connection with the promotion of gender equality, and optimise competences through a generational bridge that allows for the transfer of knowledge and experience between the junior and senior populations	Women in positions of responsibility Employees involved in welfare initiatives Involvement of disabled employees in the plan to enhance their skills Definition for all roles, of levels, expected technical skills by level and related correlation to people Employees involved in Smart Working
<b>TRANSPARENCY AND STAKEHOLDER ENGAGEMENT</b> Develop integrated reporting and an adequate information system for planning and control. Develop external stakeholder engagement activities, strengthening the relationship with the territory	Territories with Territorial Sustainability Reports prepared Workshops realized - forumAscolto - second cumulative cycle period 20-24
<b>EDUCATION</b> Consolidate and, where possible, improve the environmental education and promote the awareness of risks associated with climate change in the public opinion	Stakeholders involved in Environmental Education initiatives and plant visits



UNIT OF MEASUREMENT	2017	2018	2019	2024 OBJECTIVE
% indicators of total	-	2%	2%	12%
% of total	80%	80%	83%	>80%
% of total	42%	54%	58%	>50%
number of visits/year minimum	727	1,682	2,453	2,500
frequency index x severity index	26.1	20.7	15.3	14.0
% of total	5%	6%	7%	10%
% of total	85%	94%	95%	100% (at 2022)
% of total	61%	77%	87%	100% (at 2022)
Scale 1-7	6	6	6	> than 5
% of total clerical	100%	100%	100%	100%/year (employees)
% of total	-	100%	100%	100%/year
% of total clerical	100%	100%	100%	100%/year
% of total responsible employees	REVISED	20%	21%	25%
% of total	38%	90%	100%	100% (at 2020)
% disabled employees Group	-	-	NEW	50%
% of total mapped	-	-	NEW	100% (at 2021)
% of total clerical	5%	18%	18%	25%
no.	6	7	8	8 (to 2020)
no.	-	-	NEW	6
no.	REVISED	63,300	70,755	80,000

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# Stakeholder engagement and materiality analysis

Figure 1\_Stakeholder engagement initiatives activated in 2019

STAKEHOLDERS INVOLVED	MODE OF COMMUNICATION AND INVOLVEMENT	ISSUES ADDRESSED DURING ENGAGEMENT ACTIVITIES, IDENTIFIED BY BU
Consumer Associations	<ul style="list-style-type: none"><li>• Meetings (physical, call and Web)</li><li>• Conventions/press conferences/events</li><li>• Work groups/committees</li></ul>	<b>Environment BU</b> <ul style="list-style-type: none"><li>• New waste-to-energy plant</li><li>• Meetings on project to use energy from the Acerra waste-to-energy plant for pumping groundwater</li><li>• In-depth study requested by Codacons on municipal sanitation services managed by Amsa</li><li>• Possible synergies between A2A's school project and the associations' projects</li></ul>
		<b>Networks and District Heating BU</b> <ul style="list-style-type: none"><li>• Termination of billing of divisional meters by A2A Ciclo Idrico in the Municipality of Brescia and collection of any proposals to alleviate the transition phase</li><li>• Periodic meeting with the Joint Control Body of the ADR A2A Body</li><li>• Presentation of the agreement on information activities relating to the two hourly tariff for district heating</li></ul>
		<b>Generation and Trading BU</b> <ul style="list-style-type: none"><li>• Reconversion of the Monfalcone plant</li></ul>
		<b>Market BU</b> <ul style="list-style-type: none"><li>• 2.0 electric meters project presentation</li></ul>
		<b>Corporate BU</b> <ul style="list-style-type: none"><li>• Possible synergies of the Group with the activities of the associations</li><li>• Banco dell'energia (Energy bank)</li><li>• Possible contributions for displaced persons in Via Palmieri (Milan)</li><li>• Presentation of the A2A Group's activities</li><li>• Projects at the Acerra waste-to-energy plant</li><li>• Sustainability round table within Expo Consumers</li><li>• Meetings with consumer associations for the extension of joint conciliations to all sectors managed</li><li>• Coordination of training courses for joint conciliators</li></ul>
Environmental Associations	<ul style="list-style-type: none"><li>• Meetings (physical, telephone and Web)</li><li>• Conventions/press conferences/events</li><li>• Plant tours</li></ul>	<b>Environment BU</b> <ul style="list-style-type: none"><li>• Reconversion of the San Filippo del Mela plant</li><li>• Cavaglià plant presentation</li><li>• Round table intervention on plastics</li><li>• New waste-to-energy plant</li><li>• Capacity market strategies</li><li>• Plant tours</li><li>• Participation in conferences and initiatives organized by the associations (energy efficiency, Sicilia Munnizza Free 2019, Green new Deal conference, Forum Rifiuti Legambiente, Ecoforum rifiuti Lombardia)</li></ul>
		<b>Networks and District Heating BU</b> <ul style="list-style-type: none"><li>• Lamarmora decarbonization plant</li><li>• Plant visits</li><li>• District heating and energy efficiency of buildings</li></ul>
		<b>Generation and Trading BU</b> <ul style="list-style-type: none"><li>• Reconversion of the Monfalcone plant</li><li>• Reconversion of the Brindisi plant</li><li>• Decarbonization</li><li>• Capacity market system</li></ul>
		<b>Market BU</b> <ul style="list-style-type: none"><li>• Possible synergies on the development of agrivoltaics in the Lombardy Region</li></ul>
		<b>Corporate BU</b> <ul style="list-style-type: none"><li>• Meetings with new association summits</li></ul>

STAKEHOLDERS INVOLVED	MODE OF COMMUNICATION AND INVOLVEMENT	ISSUES ADDRESSED DURING ENGAGEMENT ACTIVITIES, IDENTIFIED BY BU
Trade/ professional associations	<ul style="list-style-type: none"><li>• Meetings (physical, call and Web)</li><li>• Conventions/press conferences/events</li><li>• Work groups/ Committees</li><li>• Plant tours</li></ul>	<b>Environment BU</b> <ul style="list-style-type: none"><li>• Circular economy and air quality</li><li>• Plant visits</li></ul>
		<b>Networks and District Heating BU</b> <ul style="list-style-type: none"><li>• Termination of billing of divisional meters by A2A Ciclo Idrico in the Municipality of Brescia and collection of any proposals to alleviate the transition phase</li><li>• Development and operation of district heating in Bergamo and Milan</li><li>• Organization of the T-LAB course on the management of district heating plants and the technical design of plants carried out with ANCE, Ordine degli Ingegneri della Lombardia (Order of Engineers of Lombardy), Politecnico di Milano and with the help of the Energy Counter of the Municipality of Milan</li><li>• Plant visits</li></ul>
		<b>SMART CITIES</b> <ul style="list-style-type: none"><li>• Development of Open Fiber/A2A Smart Cityworks</li><li>• Booklet Smart City Presentation</li></ul>
		<b>Market BU</b> <ul style="list-style-type: none"><li>• Electric mobility</li></ul>
		<b>Corporate BU</b> <ul style="list-style-type: none"><li>• Development of circular economy projects</li><li>• Divisional meters</li><li>• Meetings to support initiatives</li><li>• Plant visits</li></ul>
Civic and spontaneous committees	<ul style="list-style-type: none"><li>• Meetings (physical, telephone and Web)</li></ul>	<b>Environment BU</b> <ul style="list-style-type: none"><li>• Presentation of the FORSU plant of Bedizzole</li><li>• Clarifications on Silla2 waste-to-energy emissions</li><li>• Presentation of the new Bergamo waste-to-energy plant manager</li><li>• Brescia decarbonization plan</li></ul>
		<b>Market BU</b> <ul style="list-style-type: none"><li>• Meeting for agreements on issues of complex debt situations</li></ul>
		<b>Generation and Trading BU</b> <ul style="list-style-type: none"><li>• Meeting on hydroelectric issues</li></ul>
		<b>Corporate BU</b> <ul style="list-style-type: none"><li>• Meeting with the Committee for the rationalization of power lines</li></ul>
Customers	<ul style="list-style-type: none"><li>• Conventions/press conferences/events</li><li>• Work groups/ committee</li><li>• Studies/Surveys</li><li>• Plant visits</li></ul>	<b>Networks and District Heating BU</b> <ul style="list-style-type: none"><li>• Enjoyable and informative events dedicated to customers on innovative district heating services</li><li>• Customer satisfaction of LGH district heating customers</li></ul>
		<b>Market BU</b> <ul style="list-style-type: none"><li>• Events promoting activities with large customers</li><li>• Meetings with various associations for sponsorships</li><li>• Plant visits</li><li>• Customer satisfaction measurement compared with other market operators (Cerved Energy and Gas Monitor)</li><li>• "Ascolta un amico" communication campaign survey</li><li>• Internal survey on the online contract subscription web format</li><li>• Annual customer satisfaction survey of A2A Energia and Linea Più Free Market customers conducted by CFI Group</li><li>• Large Customers event satisfaction survey</li><li>• Direct Channels event satisfaction survey</li></ul>
Suppliers	<ul style="list-style-type: none"><li>• Meetings (physical, call and Web)</li><li>• Conventions/press conferences/events</li><li>• Plant visits</li></ul>	<b>Environment BU</b> <ul style="list-style-type: none"><li>• Promotion of the circular economy</li></ul>
		<b>Market BU</b> <ul style="list-style-type: none"><li>• Training initiatives for the A2A Energia sales network</li><li>• Round table intervention on electric mobility</li></ul>
		<b>Corporate BU</b> <ul style="list-style-type: none"><li>• Round table on energy transition</li><li>• Participation in the round table on smart cities</li><li>• Meetings on coal phase out</li></ul>

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STAKEHOLDERS INVOLVED	MODE OF COMMUNICATION AND INVOLVEMENT	ISSUES ADDRESSED DURING ENGAGEMENT ACTIVITIES, IDENTIFIED BY BU
Regulators	<ul style="list-style-type: none"><li>• Meetings (physical, telephone and Web)</li><li>• Conventions/press conferences/events</li><li>• Work groups/ Committees</li><li>• Plant visits</li></ul>	<b>Environment BU</b> <ul style="list-style-type: none"><li>• First guidelines for the regulation of municipal sanitation services</li><li>• Plant visits</li></ul>
		<b>Networks and District Heating BU</b> <ul style="list-style-type: none"><li>• Awareness raising on district heating issues</li><li>• Technical meetings and discussions in Arera for PMS2, resilience, riser columns and gas metering</li><li>• UNI CEI 11352 certification of Linea Green as ESCO and extension of ISO 9001/ISO 14001/BS OHSAS 18001 certification to new business units</li><li>• Presentation of the commissioning plan for the 2G smart metering system (PMS2)</li></ul>
		<b>Generation and Trading BU</b> <ul style="list-style-type: none"><li>• Reform of the electricity market and launch of pilot projects for the provision of dispatching services for the system</li><li>• External positioning on the issue of capacity market definition</li></ul>
		<b>Market BU</b> <ul style="list-style-type: none"><li>• Sustainable mobility</li></ul>
		<b>Corporate BU</b> <ul style="list-style-type: none"><li>• Meeting with Utilitalia on ADR body</li></ul>
Shareholders/ Investors	<ul style="list-style-type: none"><li>• Meetings (physical, telephone and Web)</li><li>• Work groups/ Committees</li></ul>	<b>Corporate BU</b> <ul style="list-style-type: none"><li>• Updates on strategic options</li><li>• Presentation of fiscal year 2018 Results and 2019-2023 Strategic Plan</li><li>• Presentation of first quarter 2019 Results</li><li>• Presentation of first half 2019 Results</li><li>• Presentation of third quarter 2019 Results</li><li>• Presentation of Sustainability in A2A - Stakeholder engagement on ESG issues</li></ul>
Institutions	<ul style="list-style-type: none"><li>• Meetings (physical, telephone and Web)</li><li>• Conventions/press conferences/events</li><li>• Work groups/ committees</li><li>• Studies/Surveys</li><li>• Plant visits</li></ul>	<b>Environment BU</b> <ul style="list-style-type: none"><li>• New waste-to-energy plant</li><li>• Meetings on waste-to-energy plants in Acerra, Silla2 and TU Brescia</li><li>• Meetings Corteolona plant</li><li>• Promotion of the circular economy</li><li>• TU Brescia Observatory</li><li>• Air Observatory</li><li>• Water Observatory</li><li>• Presentation of a study by the University of Brescia on air quality in the Po Valley (health part)</li><li>• Presentation of the ISPRA study on energy and waste, the need to adapt plants in the disposal sector and the contribution of waste-to-energy to the objectives of circularity</li><li>• Waste management in Apulia</li><li>• Waste management in Lombardy</li><li>• Waste collection in Milan</li><li>• Industrial waste management in the Robassomero plant</li><li>• Regional hearings Lombardy (Environment and Civil Protection Commission and special Anti-Mafia, Anti-corruption, transparency and legality)</li><li>• Hearing in the Third Special Commission Terra dei Fuochi (Campania)</li><li>• Lombardy regional hearings on the waste management cycle</li><li>• Plant visits</li><li>• Circular School, advocacy initiative on institutions (Lombard and national) on circular economy issues</li><li>• LaboRAEE: WEEE recovery and prison employment project, supported by Amsa</li><li>• Preparation of a new draft charter of the quality of Amsa's environmental services</li><li>• Institutional meetings with new municipalities for the environmental hygiene service</li></ul>

STAKEHOLDERS INVOLVED	MODE OF COMMUNICATION AND INVOLVEMENT	ISSUES ADDRESSED DURING ENGAGEMENT ACTIVITIES, IDENTIFIED BY BU
Institutions	<ul style="list-style-type: none"><li>• Meetings (physical, telephone and Web)</li><li>• Conventions, press conferences, events</li><li>• Work groups/committees</li><li>• Studies/Surveys</li><li>• Plant visits</li></ul>	<b>Networks and District Heating BU</b> <ul style="list-style-type: none"><li>• Awareness raising activities regarding the so-called public water reform through comparisons and sharing of technical-economic data</li><li>• Presentation of Unareti station decoration in Brescia</li><li>• Meetings with institutions on water cycle issues in Brescia and province</li><li>• Meeting with the municipality of Cologno Monzese for information on the change of district heating network operator A2A/ITALGAS</li><li>• New infrastructure works in Milan and province</li><li>• Joint Commission to present the Merezzate project and the community engagement process as part of the REDO Milan intervention</li><li>• Presentation of the massive meter replacement plan for Brescia and Milan</li><li>• UNARETI auditions: Milan gas tender blackout and cancellation</li><li>• Meetings on water issues</li></ul> <b>SMART CITIES</b> <ul style="list-style-type: none"><li>• Meetings with several municipalities throughout the country for possible smart city projects</li><li>• Meetings on smart city issues</li></ul>
		<b>Generation and Trading BU</b> <ul style="list-style-type: none"><li>• Reconversion of the Monfalcone plant</li><li>• Reconversion of the San Filippo del Mela plant</li><li>• Hydroelectric concessions</li><li>• Reconversion Brindisi plant</li><li>• Technical Table Phase Out Coal MISE</li><li>• Hearing of the region and municipality of Monfalcone on the reconversion of the plant</li></ul>
		<b>Market BU</b> <ul style="list-style-type: none"><li>• Electric mobility</li><li>• Presentation of the electric vehicle charging network of Bergamo</li><li>• Presentation of the e-moving project in the municipalities of Concesio, Padenghe sul Garda, Montichiari, Cellatica, Gussago</li></ul>
		<b>Corporate BU</b> <p>Meetings with the representatives of the institutions in the territories in which the Group operates to listen to needs, report on activities and evaluate future projects:</p> <ul style="list-style-type: none"><li>• Participation in Giuffrè Villani social workshop on strategies and involvement of A2A for a transversal project involving the Milan suburbs</li><li>• Meetings on energy issues</li><li>• Meetings on local development (Valtellina, FVG and Calabria)</li><li>• Anti-Mafia hearing municipality of Milan</li><li>• Hearing on climate change municipality of Milan</li><li>• Territorial table infrastructure and health care</li><li>• Regional table for the use of water resources in agriculture</li><li>• Meetings to support initiatives</li><li>• Presentation of the report of the Acqua Bene Comune Observatory</li><li>• Presentation of IPSOS research on the perception of A2A and its services/plants in Brescia</li><li>• Aprica customer satisfaction presentation to administrations</li><li>• Presentation of new plant managers</li><li>• Meetings by Circular School initiative</li><li>• Presentation on the ERDF Operational Programme 2014 - 2020</li><li>• Board Questions</li><li>• Group and A2A Plan presentation</li><li>• Distribution of aluminium bottles to first-grade secondary schools aimed at raising awareness among children about the reduction of plastic waste production and the use of tap water</li></ul>

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Local community/ citizens	<ul style="list-style-type: none"><li>• Meetings (physical, call and Web)</li><li>• Conventions, press conferences, events</li><li>• Work groups/ committees</li><li>• Studies/Surveys</li><li>• Plant visits</li></ul>	<b>Environment BU</b> <ul style="list-style-type: none"><li>• Qualitative survey to test the draft of the new guide to the separate collection of Amsa to be distributed to all citizens</li><li>• Customer satisfaction to assess the satisfaction of the environmental hygiene services offered by Amsa in the Municipality of Milan and in the surrounding municipalities and by Aprica in the municipalities of Gardone, Como and Brescia</li><li>• New separate collection service in the municipalities of Rapallo, Bedizzole, Urago D'Oglio, Cavriana</li><li>• Didactic workshop exhibition "The game of 4R - Reduction, Reuse, Recycling, Recovery"</li><li>• Presentation of the results achieved in separate waste collection by Linea Gestioni and possible future scenarios</li><li>• Illustration of the main regulatory changes in the definition of the environmental hygiene tax/tariff in light of the recent assignment of environmental responsibilities to ARERA</li><li>• Promotion of composting in the municipality of Gottolengo</li><li>• Meetings and lessons on proper separate waste collection with asylum seekers hosted at reception facilities in Milan</li><li>• Meetings with condominium tutors to improve separate collection in Milan</li><li>• Meetings with citizens at the Mobile Office</li><li>• Meetings with officials and citizens residing in ALER and MM houses on the issue of separate collection to raise awareness among the resident population on situations of degradation and social integration</li><li>• Participation in Giuffrè Villani social workshop on strategies and involvement of A2A for a transversal project involving the Milanese suburbs</li></ul>
		<b>Networks and District Heating BU</b> <ul style="list-style-type: none"><li>• NaturAcqua route set up at Ambiente Parco - Science Center subsidized by A2A and Fondazione ASM</li><li>• City meeting for the presentation of the European project "TEMPO" on district heating and collection of adhesions for experimentation in homes</li><li>• Opening to citizens of the source of Mompiano and the purifier of Verziano on the occasion of the World Water Open Day Lamarmora, with guided tours and workshops for citizens and second-grade secondary schools in the presence of institutions, Basket Leonessa and inauguration of the graffiti with photocatalytic paints</li></ul>
		<b>Generation and Trading BU</b> <ul style="list-style-type: none"><li>• Opening to the public of the Monfalcone plant, as part of Open Factory</li><li>• Open plants: Somplago hydroelectric plant</li></ul>
		<b>Market BU</b> <ul style="list-style-type: none"><li>• A2A project in the suburbs: AEN garrison of 25 suburban squares with free shows and entertainment on weekends</li></ul>
		<b>Corporate BU</b> <ul style="list-style-type: none"><li>• A2A reputation survey in Brescia</li><li>• Interventions in university courses and masters</li><li>• Career day, simulated interviews and assessments in universities</li><li>• Hackathon ICT</li><li>• Meetings to support initiatives</li><li>• Interventions at round tables and conferences</li></ul>
		<b>Networks and District Heating BU</b> <ul style="list-style-type: none"><li>• Illustration of divisional meter regulations</li></ul>
		<b>Market BU</b> <ul style="list-style-type: none"><li>• Presentation of A2A Energia - BTL agreement to local newspapers and broadcasters</li></ul>
Media	<ul style="list-style-type: none"><li>• Meetings (physical, telephone and Web)</li><li>• Conventions/press conferences/events</li></ul>	

STAKEHOLDERS INVOLVED	MODE OF COMMUNICATION AND INVOLVEMENT	ISSUES ADDRESSED DURING ENGAGEMENT ACTIVITIES, IDENTIFIED BY BU
Schools	<ul style="list-style-type: none"><li>• Meetings (physical, telephone and Web)</li><li>• Conventions/press conferences/events</li><li>• Plant visits</li></ul>	<b>Environment BU</b> <ul style="list-style-type: none"><li>• Environmental education and sustainability interventions in the cities of Bergamo, Brescia, Mantua, Rapallo and Zoagli</li><li>• Presentation of educational projects</li><li>• Plant visits</li></ul>
		<b>Networks and District Heating BU</b> <ul style="list-style-type: none"><li>• Presentation of the project work of the 10 students of the LGH Alternanza Scuola Lavoro project</li><li>• <i>Action 2 Air</i> aimed at second-grade secondary schools</li></ul>
		<b>Corporate BU</b> <ul style="list-style-type: none"><li>• Distribution of aluminium bottles to first grade secondary schools aimed at raising awareness among children about the reduction of plastic waste production and the use of tap water</li><li>• Participation in STEM - Science Technology Engineering Mathematics in the municipality of Milan</li><li>• Didactic workshop exhibition "The game of 4R - Reduction, Reuse, Recycling, Recovery"</li><li>• AmbienteaScuola Campaign - Educational meetings with groups composed of school headmasters, teachers, ATA staff, student representatives on separate collection; creative contest "Cestini in cerca d'autore" (Bins in search of artists) and creation of new educational video content published on the public platform edutv.a2a.eu</li><li>• Educational meetings and workshops on the circular economy and reuse, less waste production for schools from childcare to first-grade secondary schools; creative contests "Ricicla con arte" (Recycle with art) and "Missione plastica zero" (Zero plastic mission) in Como</li><li>• Educational meetings and workshops on "plastic free", circular economy and reuse for primary and first-grade secondary schools in Bergamo</li><li>• Educational workshops aimed at primary and secondary schools in some areas affected by energy production plants (Carnia, Monfalcone, Chivasso, Valchiavenna and Valtellina, Cassano d'Adda) on the topic of QUALITY EDUCATION aimed at promoting the national merit contest - Missione Terra - Global Goal Protocol;</li><li>• Workshops for children on sustainability as part of the event "The industrial value of sustainability" in Milan</li><li>• Participation in the E-Mob event in Milan with training session on sustainable development issues</li><li>• Webinar for teachers on EDU TV on different topics: artificial intelligence, sustainability and 2030 Agenda, gas networks, bills</li><li>• A2A Alternanza Scuola-Lavoro Project, with interventions on sustainability</li><li>• Inspirational Talks of A2A managers in second-grade secondary schools</li><li>• Interventions in schools on technical issues</li><li>• Teacher workshops for presentation of educational projects aimed at schools</li><li>• Meetings with pupils participating in the "Our energy for the environment" broadcast, contest management and award ceremony</li><li>• Plant visits</li></ul>

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Employees	<ul style="list-style-type: none"><li>• Meetings (physical, telephone and Web)</li><li>• Conventions/press conferences/events</li><li>• Work groups/committees</li><li>• Focus Group</li><li>• Studies/Surveys</li><li>• Plant visits</li></ul>	<b>Environment BU</b> <ul style="list-style-type: none"><li>• Illustration of the main regulatory issues in the waste and circular economy sectors, in light of the recent assignment of environmental responsibilities to ARERA</li><li>• Biofor acquisition and integration in Linea Ambiente</li><li>• Solidarity agreement Linea Ambiente Grottaglie</li></ul> <b>Networks and District Heating BU</b> <ul style="list-style-type: none"><li>• Evolution of the BU, sharing business strategies, system and network development projects, security, ideas and suggestions to implement innovation strategies</li><li>• LD Reti remote control reorganization and reallocation of resources</li></ul> <b>Generation and Trading BU</b> <ul style="list-style-type: none"><li>• Analysis of the role of PPA (Power Purchase Agreements) for the development of renewable capacity and organization of an internal Regulatory Breakfast with the different business functions involved</li></ul> <b>Market BU</b> <ul style="list-style-type: none"><li>• Contact Center events Milan and Brescia</li></ul> <b>Corporate BU</b> <ul style="list-style-type: none"><li>• Young Talent: thematic webinars, surveys and meetings on development paths, annual meeting at East End Studios, focus group for the definition of new engagement levers for this target, internal referral project</li><li>• Online discussion community (Young Talent, Runner, supplier services, sustainability and operational excellence services)</li><li>• Survey Digital DNA</li><li>• Induction A2A for new recruits under 35 years of age who are professional graduates of the Group</li><li>• Online survey and engagement campaign to support measurement of the degree of evolution of the Group's managerial culture in various areas: A2A's reputation, alignment with the ABC Management Model, the effectiveness of internal communication tools, A2A's sustainability policy and our Group's Environment, Health and Safety policy</li><li>• Team building CODIR</li><li>• WE HR 2019: periodic discussion meeting between A2A's HR department employees</li><li>• Awareness-raising of employer lines with an in-depth examination of the issue of delegation of responsibilities for environmental and occupational safety aspects</li><li>• LiHS Programme</li><li>• Welfare Day</li><li>• Smart working survey</li><li>• LGH e Lode (LGH cum laude) prize</li><li>• GEA Project: 3 meetings and the first inspirational talks in second-grade secondary schools</li><li>• Internal survey to define the working methods of the company clerical population</li><li>• 4 events AD Incontra</li><li>• Tech Camp "Robotizziamoci" dedicated to the children of employees to bring our young people closer to scientific and technological subjects</li><li>• Satisfaction survey regarding Press Centre, Protocol, Concierge and Security, Company Fleets, Facility services</li><li>• Workshop for the collection of feedback and proposals related to the re-design of the user experience of the Intranet ina2a</li><li>• A2A Corporate Car Sharing (presentation event and infopoint)</li><li>• Working groups for the analysis of informal relationships within the Group</li><li>• Information meetings with Cremona area employees for the changeover from paper to electronic tickets</li><li>• Meetings with employees to illustrate the procedures for secondment/dismissal to employees involved in the integration with A2A</li></ul>
Unions	<ul style="list-style-type: none"><li>• Meetings (physical, telephone and Web)</li></ul>	<b>Corporate BU (whole Group)</b> <ul style="list-style-type: none"><li>• Trade union agreement for the consolidation of the use of Smart Working in LGH and extension to LD Reti and Linea Ambiente</li><li>• Trade union agreement on video surveillance and geolocation</li><li>• Creation of the new supplementary health care system for the approximately 5,000 workers in the energy area, active as of January 1, 2020</li><li>• A2A and LGH Corporate integration path: signing of an agreement relating to the Corporate integration plan of the two companies and change in the generation mix</li></ul>

STAKEHOLDERS INVOLVED	MODE OF COMMUNICATION AND INVOLVEMENT	ISSUES ADDRESSED DURING ENGAGEMENT ACTIVITIES, IDENTIFIED BY BU
Multi-stakeholders	<ul style="list-style-type: none"><li>• Meetings (physical, telephone and Web)</li><li>• Conventions/press conferences/events</li><li>• Work groups/committees</li><li>• Focus Group</li><li>• Studies/Surveys</li><li>• Plant visits</li></ul>	<b>Environment BU</b> <ul style="list-style-type: none"><li>• Meetings on the subject of waste regulation aimed at defining scientific contributions from the CESISP Study Centre - Bicocca University</li><li>• Stand at Ecomondo</li><li>• Presentation of critical issues related to "End-of-waste" from the point of view of the recovery industry</li><li>• Meeting with the representatives of Seriate's large-scale retailers and restaurateurs to share with them actions for the reduction of waste and the fight against food waste</li><li>• Vegetable oil project at supermarkets in Milan</li><li>• WEEE project in Milan</li><li>• Project "Un sacco etnico" with ethnic restaurants in Milan</li><li>• Awareness-raising on air quality issues and the impact of the Brescia TU</li><li>• Presentation of the study by the University of Brescia on air quality in the Po Valley and the main causes of air pollution</li><li>• Presentation of Aprica customer satisfaction for services in the municipality of Bergamo</li><li>• Interventions at round tables and conferences</li><li>• Plant visits</li></ul>
		<b>Networks and District Heating BU</b> <ul style="list-style-type: none"><li>• Participation and interventions at district heating conferences</li><li>• Enjoyable and informative events organized on district heating</li><li>• Presentation to the territory of the industrial agreement for heat recovery and development in the Bergamo area</li><li>• Meeting on the 2G electricity meters project</li><li>• Meetings on divisional meters</li><li>• Promotion and organization by Linea Green of the conference Energy Efficiency in the Agro-food Sector</li><li>• Inauguration of a new cycle path on the top of the embankment of the Mella river, which was a prodromal step in the construction of the new Valtrompia purifier</li><li>• Presentation of the relamping project of 3 schools of the city of Brescia</li><li>• Press conference of decoration electrical stations in Brescia</li><li>• Presentation of the Unareti electricity meter replacement project on Brescia and province</li><li>• Plant visits</li></ul>
		<b>SMART CITIES</b> <ul style="list-style-type: none"><li>• Press conference to present the fiber optic cabling plan within the Open Fiber project</li><li>• Inauguration of digital islands Bergamo</li><li>• Press conference inauguration underpass Villaggio Violino</li><li>• Meeting A2A Smart City - MM for possible synergies on ALER houses</li></ul>
		<b>Generation and Trading BU</b> <ul style="list-style-type: none"><li>• Table of analysis and discussion on the issues of self-consumption, energy communities, and innovative energy configurations introduced by the Clean Energy Package</li><li>• Meetings on the reconversion of the San Filippo del Mela power plant and presentation of the FORSU project</li><li>• Hydroelectric concessions</li><li>• Reconversion of the Monfalcone plant</li></ul>
		<b>Market BU</b> <ul style="list-style-type: none"><li>• Meeting with the Municipality of Milan and car sharing companies for the development of mobility projects</li><li>• Round table intervention on the energy market</li><li>• Round table intervention on electric mobility in Cremona</li><li>• Meetings with companies for possible synergies on electric mobility</li><li>• Participation in the Permanent Table on overcoming price protections in the sale of electricity and natural gas organized by i-Com</li><li>• Workshop with the Municipality of Milan on electric mobility</li><li>• Coordination of activities on courses for ADR joint conciliators</li><li>• Participation in E-Mob</li><li>• Press conference for the presentation of the new LED lighting of the city walls of Bergamo Alta</li><li>• Presentation of the memorandum of understanding between the Municipality of Bergamo and A2A Energy Solutions for the efficiency of buildings</li></ul>

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Multi-stakeholders	<ul style="list-style-type: none"><li>• Meetings (physical, telephone and Web)</li><li>• Conventions/press conferences/events</li><li>• Work groups/committees</li><li>• Focus Group</li><li>• Studies/Surveys</li><li>• Plant visits</li></ul>	<b>Corporate BU</b>
		<ul style="list-style-type: none"><li>• A2A and LGH materiality analysis</li><li>• Analysis and discussion table on PNIEC - National Integrated Energy and Climate Plan</li><li>• Meetings with member municipalities for the illustration of the interventions within the Multi-utility of the North project</li><li>• Federconsumatori national conference and dedicated meetings on possible synergies with the Group</li><li>• Presentation of Banco dell'energia (Energy Bank) at the conference on energy poverty</li><li>• Plant visits</li><li>• A2A Action: digital treasure hunt in Brescia and prize-giving event</li><li>• Presentation of graffiti made by students at the end of the <i>Action2Air</i> project</li><li>• Presentation of the Territorial Sustainability Report of Bergamo, Brescia, FVG (Conference), Valtellina, Piedmont (CreiAMO Piemonte), Milan</li><li>• Conference laying the foundation stone new multi-purpose building Lamarmora headquarters (smart space)</li><li>• Meeting to support events of local associations</li><li>• A2A civil protection association voluntary meetings and conventions</li><li>• Hearings of the Lombardy Region's Anti-Mafia commission on illegal waste storage and trafficking</li><li>• Hearings in the Verification and Control Commission Participating Entities</li><li>• Presentation Research grant with the University of Udine</li><li>• Regional table for the use of water resources in agriculture</li><li>• Table to overcome price protection</li><li>• Initial meetings</li><li>• Meetings on regarding Valtellina Parks and Silani Lakes</li></ul>

Figure 2\_Material aspects and scope of application

MATERIAL THEMES FOR A2A	GRI CORRESPONDENT ASPECTS	SCOPE/ INTERNAL BOUNDARY	SCOPE/ EXTERNAL BOUNDARY
Ethical conduct of business	<ul style="list-style-type: none"><li>• Anti-corruption (GR 205)</li><li>• Anti-competitive behaviour (GRI 206)</li><li>• Environmental compliance (GRI 307)</li><li>• Socioeconomic compliance (GRI 419)</li></ul>	Group	-
Sustainability elements in corporate governance	<ul style="list-style-type: none"><li>• Non discrimination (GRI 406)</li></ul>	Group	-
Risk management and sustainability opportunities	<ul style="list-style-type: none"><li>• Socioeconomic compliance (GRI 419)</li><li>• Anti-corruption (GRI 205)</li><li>• Research and development (EU Supplement)</li></ul>	Group	Community/ Customers/ Suppliers*
Respect and promotion of human rights in the Group value chain	Freedom of association and collective bargaining (GRI 407) Human rights assessment (GRI 412)	Group	Suppliers*
Creation of sustainable economic value	Economic performance (GRI 201) Indirect economic impacts (GRI 203)	Group	Shareholders/ Institutions
Innovative development and efficient management of Group infrastructures	Energy (GRI 302) Efficient management (EU Supplement)	Group	-
Circular economy and responsible use of resources	Materials (GRI 301) Effluents and waste (GRI 306)	Environment BU Networks and District Heating BU Generation and Trading BU	Community
Efficient water use	Water and effluents (GRI 303) Effluents and waste (GRI 306)	Group	Suppliers*
Fight against climate change and containment of atmospheric emissions	Energy (GRI 302) Emissions (GRI 305)	Group	Suppliers*/ Customers
Protection of biodiversity	Environmental compliance (GRI 307) Biodiversity (GRI 304)	Group	Community
Quality of distributed water	Environmental compliance (GRI 307)	Networks and District Heating BU	Community/ Customers
Sustainable mobility	Energy (GRI 302) Emissions (GRI 305) Efficient management (EU Supplement)	Group	Community/ Customers
Protection of health and safety at work	Occupational health and safety (GRI 403)	Group	Contractors
Development of human capital	Employment (GRI 401) Training and education (GRI 404)	Group	-
Diversity and company welfare	Diversity and equal opportunities (GRI 405)	Group	-
Technological innovation and smart cities	Research and development (EU Supplement) Demand side management (EU Supplement)	Group	Institutions
Responsibility and Safety in the provision of services and products	Consumer health and safety (GRI 416) Marketing and labeling (GRI 417) Consumer privacy (GRI 418)	Market BU Networks and District Heating BU	Institutions/ Communities/ Customers
Quality and innovation in the provision of services and products	Consumer privacy (GRI 418) Service accessibility (EU Supplement) Demand side management (EU Supplement)	Market BU Networks and District Heating BU	Institutions/ Communities/ Customers
Relationship with Group stakeholders	Local community (GRI 413) Public policy (GRI 415)	Group	-
Active local and environmental education	Local community (GRI 413)	Group	-
Responsible management of the supply chain	Procurement practices (GRI 204) Supplier environmental assessment (GRI 308) Supplier social assessment (GRI 414)	Group	Suppliers*

\* Limited scope: reporting relates solely to direct suppliers and not to level-two suppliers.

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# Financial capital

Figure 3\_Statement for calculating the global added value - millions of euro [GRI 201 - 1\_4]

	2017	2018	2019
<b>+A) Production value</b>	<b>5,796</b>	<b>6,494</b>	<b>7,324</b>
Revenue from sales and services (- revenue adjustments)	5,590	6,270	7,121
Change in inventory of products in progress, semi-finished products and finished products	0	0	0
Change in contract work in progress	0	1	1
Other revenue and income	206	223	202
Government grants	0	0	0
<b>- B) Intermediate production costs</b>	<b>4,000</b>	<b>4,740</b>	<b>5,397</b>
Raw materials and consumables consumption	296	344	431
Energy and fuel consumption	2,554	3,038	3,607
Costs for services	849	985	1,150
Other operating expenses	106	93	74
Accruals to bad debt provision - current receivables	35	25	15
Provisions for risks	10	-5	21
Other write-downs of fixed assets	34	160	9
Other operating expenses	135	136	124
Material own work capitalised	-19	-36	-34
GROSS CORE VALUE ADDED	1,796	1,754	1,927
<b>- C) Financial balance</b>	<b>4</b>	<b>4</b>	<b>2</b>
Financial income	19	16	16
Financial expenses other than interest on loans	-20	-16	-18
Unrealised gains and losses on equity investments in associates	5	4	4
<b>-D) Auxiliary and extraordinary components</b>	<b>-145</b>	<b>56</b>	<b>-2</b>
+/- auxiliary balance	-145	42	-6
+/- extraordinary balance	0	14	4
GROSS GLOBAL VALUE ADDED	1,655	1,814	1,927
- Depreciation and amortisation	410	463	502
NET GLOBAL VALUE ADDED	1,245	1,351	1,425

Figure 4\_Statement for distributing the gross global added value - millions of euro [GRI 201-1\_4]

	2017	2018	2019
<b>REMUNERATION OF PERSONNEL</b>	<b>475</b>	<b>492</b>	<b>521</b>
Wages and salaries	420	428	<b>448</b>
Employees' leaving entitlement (TFR)	29	31	<b>31</b>
Other costs	26	33	<b>42</b>
<b>REMUNERATION OF EQUITY CAPITAL</b>	<b>159</b>	<b>190</b>	<b>222</b>
Profits distributed	153	180	<b>218</b>
Net Income attributable to minority Interests	6	10	<b>4</b>
<b>REMUNERATION OF DEBT CAPITAL</b>	<b>138</b>	<b>116</b>	<b>112</b>
<b>TRANSFERS TO THE GOVERNMENT</b>	<b>268</b>	<b>322</b>	<b>332</b>
Direct taxes for the Treasury	106	148	<b>152</b>
Other taxes and duties for the Treasury	2	1	<b>1</b>
Social security charges	160	173	<b>179</b>
<b>TRANSFERS TO THE LOCAL COMMUNITY</b>	<b>65</b>	<b>67</b>	<b>67</b>
Direct taxes for local authorities	26	30	<b>30</b>
Local taxes and duties	33	33	<b>32</b>
Sponsorships	1	1	<b>2</b>
Contributions to AEM and ASM foundations, aid, donations and charity	5	3	<b>3</b>
<b>COMPANY REMUNERATION</b>	<b>550</b>	<b>627</b>	<b>673</b>
Reserves	140	164	<b>502</b>
Amortization	410	463	<b>171</b>
<b>GROSS GLOBAL VALUE ADDED</b>	<b>1,655</b>	<b>1,814</b>	<b>1,927</b>

Figure 5\_Gross operating margin by business unit - millions of euro

	2017	2018	2019
Generation and Trading	356	370	<b>301</b>
Market	216	206	<b>229</b>
Environment	261	268	<b>271</b>
Networks and District Heating	391	410	<b>461</b>
Smart City	7	11	<b>11</b>
Corporate	-30	-34	<b>-36</b>
International	-2	0	<b>-3</b>
<b>Total</b>	<b>1,199</b>	<b>1,231</b>	<b>1,234</b>

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Figure 6\_Balance Sheet - millions of euro

	2017	2018	2019
Net fixed assets	5,780	6,131	6,470
Working capital	235	302	335
Assets/liabilities held for sale	224	112	-
Net capital employed	6,239	6,545	6,805
Shareholders' equity	3,013	3,523	3,651
- Attributable to the Group	2,878	3,135	3,289
- Attributable to minorities	135	388	362
Net debt	3,226	3,022	3,154
Total sources	6,239	6,545	6,805
Gross debt	3,961	3,692	3,620

Figure 7\_Main balance sheet indicators

	2017	2018	2019
Turnover by permanent worker (millions of euro)	0.51	0.54	0.6
EBITDA per permanent worker (millions of euro)	0.11	0.1	0.1
Average number of permanent workers	11,280	12,136	12,198

Figure 8\_CAPEX (capital expenses) - millions of euro

	2017	2018	2019
Generation and Trading	64	57	88
Market	11	21	32
Environment	107	105	96
Networks and District Heating	229	275	347
Smart City	10	11	16
International	4	0	0
Corporate	29	31	48
<b>Total</b>	<b>454</b>	<b>500</b>	<b>627</b>

Figure 9\_Share performance

	2017	2018	2019
Average capitalisation (millions of euro)	4,455	4,763	5,011
Capitalisation at December 31 (millions of euro)	4,831	4,926	5,238
Average volumes	9,729,351	9,807,945	9,593,175
Average share price* (euro per share)	1.422	1.520	1.599
Maximum share price* (euro per share)	1.635	1.687	1.805
Minimum share price* (euro per share)	1.232	1.392	1.434

\* Euro per share (source: Bloomberg)



# Manufacturing capital

## Energy production

Figure 10\_Average availability factor for all plants [G4 - EU30]

A2A	2017	2018	2019
Traditional coal-powered	81%	80%	91.4%
Traditional heavy fuel oil	75%	80%	79.8%
Combined cycle natural gas	82%	87%	86.8%
Run-of-the river hydroelectric	86%	86%	86.3%
Basin hydroelectric	89%	85%	89.8%
Storage hydroelectric	85%	87%	71.4%

LGH	2017	2018	2019
Run-of-the river hydroelectric	90%	90%	85%

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Figure 11\_Net electricity produced divided up according to plant type and source – GWh [G4 - EU2]

		2017	2018	2019
Generation Business Unit	Thermoelectric plants*	11,442	10,671	10,910
	Hydroelectric plants	3,464	4,464	4,534
	Photovoltaic plants (including energy consumed)	12	63	122
Networks and District Heating Business Unit	Cogeneration plants	277	285	286
Environment Business Unit	Waste-to-energy plants (including biogas) and natural gas boilers**	1,141	1,183	1,192
Total***		16,336	16,666	17,044

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\* Does not include the production of the Scandale Plant, in line with the data of the natural capital and Sustainability Plan.  
\*\* The 2017 figure has been updated by separating the production of the Acerra waste-to-energy plant, equal to 631 GWh.  
\*\*\* For the reasons set out above, total production in 2017 has changed

Figure 12\_Net thermal energy produced divided up according to plant type and source – GWh

		2017	2018	2019
Environment Business Unit	Waste-to-energy plants (including biogas) and natural gas boilers	1,362	1,403	1,478
Networks and District Heating Business Unit	Cogeneration plants, natural gas thermal, heat pumps, biogas, solar panels	1,324	1,213	1,140
Generation Business Unit	Heat recovery	40	33	36
Total		2,726	2,649	2,654

## Electricity distribution

Figure 13\_Extension of electricity distribution service [G4 - EU4]

	2017	2018	2019
Km of electricity network	14,919	15,014	<b>15,359</b>
<i>of which underground cable</i>	12,745	12,976	<b>13,362</b>

Figure 14\_Extension of the gas distribution service

	2017	2018	2019
Km of natural gas network	11,183	11,193	<b>11,240</b>

Figure 15\_Electricity, thermal energy and gas released to the network

	2017	2018	2019
Electricity distributed (GWh)	11,590	11,747	<b>11,573</b>
Distributed heating and cooling energy (GWh)	3,133	3,130	<b>3,079</b>
Distributed natural gas (Mm³)	2,480	2,425	<b>2,356</b>
Transported natural gas (Mm³)	370	372	<b>350</b>

Figure 16\_Public lighting\*

	2017	2018	2019
Light points (no.)	213,817	232,368	<b>275,950</b>

\*New Indicator that refers to the total light points with tenders already signed, unlike the previous years where only "pro-quota" light points were considered.

## Integrated water cycle

Figure 17\_Procurement and distribution

	2017	2018	2019
Wells (no.)	276	190	190
Springs (no.)	331	275	255
Drinking water plants (no.)	94	122	123
Total network length (km)	5,305	4,010	4,019
Water delivered to the user and accounted for (Mm³)	69	54	54
Water extracted (Mm³)	124	94	93
Network losses and water not booked (Mm³)	44	41	37

Figure 18\_Collection and purification

	2017	2018	2019
Sewers - network length (km)	2,551	2,567	2,569
Waste water treated (Mm³)	49	52	51
Purifiers (no.)	73	61	57

## Waste management

Figure 19\_Waste collected

	2017	2018	2019
Tonnes	1,605,000	1,584,955	1,618,000

Figure 20\_Waste processed by type of plant\* - kt

	2017	2018	2019
Waste-to-energy plants	1,676	1,790	1,806
Landfills	481	455	182
Bio-drying plants and production of RDF	541	545	539
Recovery of materials and processing	938	997	1,024
Total	3,636	3,787	3,551

\* All incoming waste to the Group's plants is considered. The 2019 portion of waste disposal, net of intermediation (489 kt) and elisions (-758 kt) is 3,282 kt. Waste treated in plants managed on behalf of third parties (Acerra waste-to-energy plant and Caivano CSS plant) is not included.

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Figure 21\_Intermediated waste

	2017	2018	2019
Tonnes	133,082	216,374	220,368

## District heating and heat

Figure 22\_Thermal energy sold (GWh)

	2017	2018	2019
Heating / cooling energy	2,682	2,620	2,564

## Smart City

Figure23\_Smart City Services - Smart Land

	2017	2018	2019
Number of municipalities served	-	2	24
Number of services offered	-	7	40
Video cameras (no.)	1,999	2,013	2,174
SOS bollards (no.)	250	250	250
Monitoring stations (no.)	51	51	51
Digital islands (no.)	29	29	29
Wi-fi antennas (no.)	1,140	1,198	1,198
Remote natural gas reading concentrators (no.)	540	555	1,210
Environmental sensors installed (no.)	100	118	148
Smart bins installed	300	6,663	12,880
Smart land sensors	-	62	125
Smart parking sensors	-	711	2,580
ZTL gates	-	9	9
Variable message panels + park	-	15	15
<b>Museum sites</b>			
Sites	27	31	31
Video cameras	1,023	1,463	1,463
Break-in sensors	3,299	5,025	5,025
Fire sensors	2,622	3,373	3,373
IoT sensors (laser, protection, flooding)	-	216	216
Evac speakers	-	33	33
<b>A2A offices:</b>			
Offices	159	159	159
Break-in sensors	1,908	2,754	2,754
Video cameras	1,376	1,862	1,862
Presence/access readers	789	841	841

# Natural capital

Figure 24\_Percentages of electricity generated by type of source [G4-EU2]

	2017	2018	2019
Renewable sources (hydraulic, renewable fraction of waste*, biogas, solar)	25%	31%	<b>31%</b>
Coal	13%	12%	<b>6%</b>
Natural gas	51%	49%	<b>55%</b>
Oil products	8%	4%	<b>4%</b>
Non-renewable fraction of waste	3%	4%	<b>4%</b>

\*For non-hazardous waste, a renewable fraction of 51% was assumed (ref. Decree of the Ministry of Economic Development of December 18, 2008). Consequently, the non-renewable fraction was assumed to be 49%.

Figure 25\_Energy Performance [GRI 302-3; G4 - EU11]

	2017	2018	2019
Average yield of thermoelectric plants	44%	45%	<b>47%</b>
Yield of high-performance natural gas combined cycles	51%	51%	<b>51%</b>
Yield of multi-fuel plants	33%	32%	<b>31%</b>
Average yield of fossil fuel cogeneration plants	77%	77%	<b>80%</b>
Average electricity produced from 1 t waste (kWh/t)	778	754	<b>759</b>
Average thermal energy produced from 1 t waste (kWh/t)	816	780	<b>823</b>

Figure 26\_Global impact indicators

	2017	2018	2019
Total emissions of gases harmful to the ozone layer (KgR11 <sub>eq</sub> )	0.1	1.0	<b>0.4</b>
Total acidifying emissions (tSO <sub>2eq</sub> )	3,910	3,409	<b>2,927</b>

Figure 27\_Indicators of impact due to the purchase and use of fuels

	2017	2018	2019
Carbon footprint (tCO <sub>2eq</sub> /year)	1,031,979	933,332	<b>853,467</b>
Water footprint (thousands of m³ water)	28,583	20,597	<b>20,383</b>

Figure 28\_Environmental sanctions [GRI 307-1]

	2017*	2018**	2019
Number	8	18	<b>25</b>
Value (euro)	30,516	66,314	<b>83,962</b>

\* The most significant sanctions relate to the biodrying plants of Villafalletto and the plant complex of Corteolona (13,000 euro each). All sanctions relate to infractions of authorisation measures or administrative imprecisions that did not result in any damages or concrete temporary or permanent danger to the environment.

\*\* All sanctions relate to breaches of authorisation requirements or administrative inaccuracies.

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Water stressed areas

Withdrawals in water stressed areas

Figure 29\_Water withdrawal [GRI 303-3\_5]

		2017	2018	2019
Water withdrawn for process consumption (thousands of m³)	From aqueducts	38	30	37
	From wells	279	254	246
	From third parties - fresh water	37	24	47
	From surface water body - salt/sea water	715	591	707
	Total	1,069	899	1,037
Derived and returned water (thousands of m³)	From surface water body - fresh water for hydroelectric production	357,085	462,580	493,067
	from surface water body - salt/sea water*	440,082	255,358	272,471
	Total	797,166	717,938	765,538
Water withdrawn for distribution to water service users (thousands of m³)		n.a.	n.a.	19,692

\* Salt/sea water is defined as marine or salt water with a concentration of dissolved solids (measured as sodium chloride) >1,000 mg/L.

Effluents in water-stressed areas

Figure 30\_Effluents, returned water and distributed drinking water A2A Group [GRI 303-4]

		2017	2018	2019
Industrial waste water discharged (thousands of m³)	Discharged into sewers	-	-	0
	Discharged into surface water body (fresh water)	-	-	0
	Discharged into coastal waters/salt water channels*	668	673	736
	Total	668	673	736
Water recovered (thousands of m³)	Recovered in the production cycle	675	680	827
	% of total water withdrawn	63%	78%	80%
Water returned (thousands of m³)	Derived water - fresh water	357,085	462,580	493,067
	Derived water - salt/sea water*	440,082	255,358	272,471
	Total	797,167	717,938	765,538
Public water supplied to water service users (thousands of m³)		n.a.	n.a.	9,179

\* Salt/sea water is defined as marine or salt water with a concentration of dissolved solids (measured as sodium chloride) >1,000 mg/L.

The areas with the greatest water stress are the Calabria Region, the Sicily Region, the areas of the Mountain Communities in the Province of Brescia

Natural capital in the Environment BU

Resources and materials used

Figure 31\_Resources used - Environment Business Unit [GRI 301-1; GRI 302-1\_2;]

	2017	2018	2019
<b>Fuel (TJ)</b>			
Natural gas	656	694	<b>724</b>
Oil (heavy fuel oil and diesel)	67	71	<b>66</b>
Waste, biomass and CSS	19,317	21,095	<b>21,035</b>
Biogas (from landfills and treatment facilities)	631	484	<b>428</b>
<b>Automotive fuels (TJ)</b>			
Petrol	9	7	<b>6</b>
Diesel	552	504	<b>492</b>
Methane	98	111	<b>145</b>
<b>Electricity (GWh)</b>	<b>53</b>	<b>54</b>	<b>58</b>
<b>Chemical products and materials (t)</b>			
Mineral acids	1,305	1,565	<b>1,642</b>
Water additives/conditioners	263	260	<b>360</b>
Ammonia (solution)	5,722	6,196	<b>5,002</b>
Lime and solid neutralisers	32,124	33,152	<b>32,176</b>
Active carbon	1,293	1,422	<b>1,566</b>
Cement, sand an inert materials	216,722	188,808	<b>219,165</b>
Sodium chloride	1,704	283	<b>280</b>
Technical gases (nitrogen, CO2, hydrogen, oxygen)	1,118	1,370	<b>939</b>
Sodium hydroxide (solution)	1,917	2,260	<b>2,316</b>
Methanol, solvents and other products	1,923	2,461	<b>516</b>
Oils and lubricants	140.72	100	<b>126</b>
Urea (solution)	2,032	1,704	<b>2,138</b>
<b>Total chemical products</b>	<b>266,265</b>	<b>239,583</b>	<b>266,172</b>

Withdrawals

Figure 32\_Water withdrawal [GRI 303-3]

		2017	2018	2019
Water withdrawn for process consumption (thousands of m³)	Aqueduct	734	511	<b>511</b>
	Well	3,004	3,160	<b>3,134</b>
	<b>Total</b>	<b>3,738</b>	<b>3,671</b>	<b>3,643</b>

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Water discharges

Figure 33\_Effluents, returned water and distributed drinking water [GRI 303-4]

		2017	2018	2019
Wastewater industrial discharged (thousands of m³)	In the sewer	491	503	535
	In surface water body (fresh water)	1,115	919	1,333
	Total	1,606	1,421	1,868
Recovered waters (thousands of m³)	Recovered in the production cycle	387	401	384
	% of total water withdrawn	11%	11%	11%
Returned (cooling) water (thousands of m³)	In surface water body (fresh water)	703	713	764
Pollutant discharges into surface water (t)	BOD	27	20	20
	COD	69	47	49

Waste

Figure 34\_Special waste produced [GRI 306-2\_4]

	2017	2018	2019
Special non-hazardous (t)	515,353	529,422	490,684
Special hazardous (t)	104,612	111,751	115,267
Total special (t)	619,965	641,173	605,951
Sent for recovery (% of total)	52%	52%	55.3%

Emissions

Figure 35\_ Total emissions – Environment BU [GRI 305-1\_2\_6\_7]

	2017	2018	2019
CO <sub>2</sub> from combustion processes (t)	1,147,430	1,209,825	1,163,222
Biogenic emissions	1,083,853	1,087,985	1,183,778
CO <sub>2</sub> from motor vehicles (t)	46,430	43,434	44,646
CO <sub>2</sub> indirect from energy acquisition (t)	17,558	17,148	17,370
Fluorinated gases (t CO <sub>2eq</sub> )	448	524	303
NO <sub>x</sub> (t)	893	883	851
SO <sub>2</sub> (t)	17	36	53
Powders (t)	5.7	6.2	7
Methane (CH <sub>4</sub> ) - biogas losses released in landfills (t CO <sub>2eq</sub> )	94,452	90,188	78,701
Polycyclic aromatic hydrocarbons (kg)	0.37	0.07	0.08
Mercury (kg)	14	15	11
Other metals (Sb + As + Pb + Cr + Cu + Mn + Ni + V + Sn+Cd+Tl) (kg)	321	215	270
Dioxins (grams - toxic equivalency)	0.033	0.039	0.032
Dioxin-like PCBs (polychlorinated biphenyls) (grams - toxic equivalency)	0.0038	0.0079	0.0070

Figure 36\_ Percentage of energy produced by the valorisation of waste in relation to total production [G4-EU2]

	2017	2018	2019
Thermal energy from waste-to-energy and biogas process	52%	55%	58%
Electricity from waste-to-energy and biogas process	7%	7%	7%

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Natural capital in the Generation and Trading BU

Resources and materials used

Figure 37\_Resources used - Generation and Trading BU [GRI 301-1; GRI 302-1\_2]

	2017	2018	2019
<b>Fuel (TJ)</b>			
Natural gas	56,472	56,336	64,339
Coal	20,999	19,577	9,604
Oil (heavy fuel oil and diesel)	16,415	9,342	9,787
<b>Automotive fuels (TJ)</b>			
Petrol	1.12	2.09	2.03
Diesel	3.99	5.44	4.31
Methane	0.02	0.00	0.01
<b>Electricity (GWh)</b>	<b>154</b>	<b>162</b>	<b>177</b>
<b>Chemical products and materials (t)</b>			
Mineral acids	280.27	251	204
Water additives/conditioners	98	130	133
Ammonia (solution)	998	1,067	557
Lime and solid neutralisers	27,088	23,615	14,676
Active carbon	0	2.7	0
Cement, sand an inert materials	0	0.5	0
Sodium chloride	6	9.25	0
Technical gases (nitrogen, CO <sub>2</sub> , hydrogen, oxygen)	66	87	67
Sodium hydroxide (solution)	243	192	180
Methanol, solvents and other products	29	39	23
Oils and lubricants	82	86	95
<b>Total chemical products</b>	<b>28,890</b>	<b>25,479</b>	<b>15,935</b>

Withdrawals

Figure 38\_Water withdrawal [GRI 303-3]

		2017	2018	2019
Water withdrawn for process consumption (thousands of m³)	From aqueducts	108	104	99
	From wells	3,531	3,144	2,347
	From surface water body - fresh water	270	210	218
	From third parties - fresh water	37	24	47
	From surface water body - salt/ sea water*	715	591	707
	Total	4,661	4,073	3,418
Derived water for hydroelectric use (thousands of m³)	From surface water body - fresh water for hydroelectric production	2,436,679	3,158,093	3,082,634
Derived and returned cooling water (thousands of m³)	From surface water body - fresh water for cooling	876,452	871,287	910,481
	From surface water body - salt/ sea water* for cooling	743,428	532,300	424,753
	Total	1,619,880	1,403,587	1,335,234

\* Salt/sea water is defined as marine or salt water with a concentration of dissolved solids (measured as sodium chloride) >1,000 mg/l.

Effluents

Figure 39\_Effluents, returned water and distributed drinking water A2A Group [GRI 303-4]

		2017	2018	2019
Industrial wastewater discharged (thousands of m³)	In the sewer	207	281	207
	In surface water body (fresh water)	1,924	1,919	3,990
	In coastal waters/salt water channels*	1,555	1,532	1,412
	Total discharged water	2,131	2,200	5,609
Recovered waters (thousands of m³)	Recovered in the production cycle	1,084	1,258	1,374
	% of total water withdrawn	33%	31%	40%
Returned water (of hydroelectric derivation) (thousands of m³)		2,436,679	3,158,118	3,082,634
Returned (cooling) water (thousands of m³)	In surface water body (fresh water)	1,619,880	1,403,857	910,481
	In coastal waters/salt water channels*	743,428	532,300	424,753
	Total	1,619,880	1,403,857	1,335,234
Pollutant discharges into surface water (t) (thousands of m³)	BOD	22.9	20.3	6.1
	COD	58.8	45	18

\* Salt/sea water is defined as marine or salt water with a concentration of dissolved solids (measured as sodium chloride) >1,000 mg/l.

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Waste

Figure 40\_Special waste produced - Generation and Trading BU [GRI 306-2\_4]

	2017	2018	2019
Special non-hazardous (t)	42,322	47,842	27,802
Special hazardous (t)	3,064	3,113	3,405
Total special (t)	45,386	50,955	31,207
Sent for recovery (% of total)	91%	92.4%	79.6%

Emissions

Figure 41\_Total emissions - Generation and Trading BU [GRI 305-1\_2\_6\_7]

	2017	2018	2019
CO <sub>2</sub> from combustion processes (t)	6,299,134	5,700,406	5,228,056
CO <sub>2</sub> from motor vehicles (t)	376	553	467
CO <sub>2</sub> indirect from energy acquisition (t)	51,261	51,045	52,736
Fluorinated gases (t CO <sub>2eq</sub> )	1,576	1,193	1,440
NO <sub>x</sub> (t)	2,313	2,060	1,886
SO <sub>2</sub> (t)	1,340	1,135	747
Powders (t)	127	109	49
Polycyclic aromatic hydrocarbons (kg)	0.02	0.16	0.01
Mercury (kg)	4	2	2
Other metals (Sb + As + Pb + Cr + Cu + Mn + Ni + V + Sn+Cd+Tl) (kg)	293	215	48
Dioxins (grams - toxic equivalency)	0.003	0.006	0.002

Natural capital in the Networks and District Heating BU

Resources and materials used

Figure 42\_Resources used – Networks and District Heating BU [GRI 301-1; GRI 302-1\_2]

	2017	2018	2019
<b>Fuel (TJ)</b>			
Natural gas	4,215	3,830	<b>3,297</b>
Coal	1,828	1,781	<b>1,805</b>
Oil (Heavy fuels oil and diesel, diesel)	0.3	0.1	<b>0.1</b>
Biogas (from group purification plants)	7	6	<b>12</b>
<b>Automotive fuels (TJ)</b>			
Petrol	12	10	<b>10</b>
Diesel	18	18	<b>18</b>
Methane	7	9	<b>9</b>
<b>Electricity (GWh)</b>	145	118	<b>114</b>
<b>Heat energy (GWh - purchased from external sources)</b>	446	456	<b>464</b>
<b>Chemical products and materials (t)</b>			
Mineral acids	547	674	<b>628</b>
Water additives/conditioners	8,457	8,141	<b>8,235</b>
Lime and solid neutralisers	1,812	1,910	<b>1,225</b>
Active carbon	53	94	<b>72</b>
Sodium chloride	23.65	10.8	<b>21</b>
Technical gases (nitrogen, CO <sub>2</sub> , hydrogen, oxygen)	174	140	<b>141</b>
Sodium hydroxide (solution)	159	198	<b>196</b>
Methanol, solvents and other products	678	740	<b>998</b>
Odorants	52	57	<b>58</b>
Oils and lubricants	43	48	<b>57</b>
Urea (solution)	520	528	<b>668</b>
<b>Total chemical products</b>	<b>12,519</b>	<b>12,541</b>	<b>12,299</b>

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Withdrawals

Figure 43\_Water withdrawal [GRI 303-3]

		2017	2018	2019
Water withdrawn for process consumption (thousands of m³)	From aqueducts	806	728	721
	From wells	373	511	623
	Total	1,179	1,239	1,344
Derived and returned water (thousands of m³)	From surface water body - fresh water	15	22	3
	From aquifer	1,391	1,559	1,716
	Total	1,406	1,581	1,719
Water withdrawn for distribution to water service users (millions of m³)		124	94	93

Effluents

Figure 44\_Effluents, returned water and distributed drinking water A2A Group [GRI 303-4]

		2017	2018	2019
Industrial wastewater discharged (thousands of m³)	In the sewer	418	355	370
	In surface water body (fresh water)	143	251	216
	Total discharged water	561	606	586
Recovered waters (thousands of m³)	Recovered in the production cycle	2.3	3.1	11
	% of total water withdrawn	0.1%	0.1%	0.8%
Returned (cooling) water (thousands of m³)	In surface water body (fresh water)	15	22	3
	In the aquifer	1,391	1,559	1,716
	Total	1,406	1,581	1,719
Public water supplied to water service users (millions of m³)		69	54	54
Pollutant discharges into surface water (t)	BOD	0.4	1.2	1.1
	COD	1.7	3.2	5.3



Waste

Figure 45\_Special waste produced - Networks and District Heating BU [GRI 306-2\_4]

	2017	2018	2019
Special non-hazardous (t)	38,662	38,979	37,198
Special hazardous (t)	299,3877	321	333
Total special (t)	38,961	39,299	37,531
Sent for recovery (% of total)	92%	91%	88%

Emissions

Figure 46\_Total emissions - Networks and District Heating BU [GRI 305-1\_2\_6\_7]

	2017	2018	2019
CO <sub>2</sub> from combustion processes (t)	419,238	392,712	377,631
CO <sub>2</sub> from motor vehicles (t)	2,608	2,541	2,575
CO <sub>2</sub> indirect from energy acquisition (t)	48,100	37,237	33,970
Fluorinated gases (t CO <sub>2eq</sub> )	292	960	776
Methane (CH <sub>4</sub> ) - losses from natural gas distribution networks (t CO <sub>2eq</sub> )	38,824	43,154	45,204
NO <sub>x</sub> (t)	259	179	133
SO <sub>2</sub> (t)	123	129	117
Powders (t)	0.5	0.7	0.2

Figure 47\_Electricity losses in the grid\*

	2017	2018	2019
GWh	335	299	301

\* The 2017 and 2018 figures are updated for previous calculation errors.

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## Natural capital in the Corporate BU

### Resources used

Figure 48\_Resources used – Corporate Business Unit [GRI 301-1; GRI 302-1\_2]

	2017	2018	2019
<b>Water (thousand m³)</b>	169	168	<b>177</b>
<b>Electricity (GWh)</b>	16	14	<b>14</b>
<b>Fuel (TJ)</b>			
Methane	29	25	<b>26</b>
<b>Fuels (TJ)</b>			
Petrol	4.2	2.9	<b>3.6</b>
Diesel	56	48	<b>48</b>
Methane	3.2	3.2	<b>1</b>

### Waste

Figure 49\_Special waste produced – Corporate BU [GRI 306-2\_4]

	2017	2018	2019
Special non-hazardous (t)	111	169	<b>135</b>
Special hazardous (t)	93	93	<b>18</b>
Total special (t)	204	262	<b>153</b>
Sent for recovery (% of total)	90%	98.5%	<b>99.8%</b>

### Emissions

Figure 50\_Total emissions – Corporate BU [GRI 305-1\_2\_6\_7]

	2017	2018	2019
CO <sub>2</sub> from combustion processes (t)	1,613	1,425	<b>1,450</b>
CO <sub>2</sub> from motor vehicles (t)	4,601	3,927	<b>3,827</b>
CO <sub>2</sub> indirect from energy acquisition (t)	5,368	4,377	<b>4,027</b>
Fluorinated gases (t CO <sub>2eq</sub> )	276	552	<b>165</b>

# Human capital

## Composition of personnel

Figure 51\_Personnel by category and type of contract [GRI 102-8; 405-1]

	2017			2018			2019		
	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL
Managers	147	27	174	146	29	175	147	27	174
Supervisors	458	135	593	485	145	630	507	156	663
White-collar workers	3,185	1,416	4,601	3,213	1,421	4,634	3,266	1,464	4,730
Blue-collar workers	5,241	205	5,446	4,992	202	5,194	5,104	199	5,303
<b>Permanent workers</b>	<b>9,031</b>	<b>1,783</b>	<b>10,814</b>	<b>8,836</b>	<b>1,797</b>	<b>10,633</b>	<b>9,024</b>	<b>1,846</b>	<b>10,870</b>
<i>of which, on-the-job training and first job contracts</i>	11	-	11	-	-	-	-	-	-
<b>Fixed-term workers of which:</b>	<b>551</b>	<b>51</b>	<b>602</b>	<b>518</b>	<b>45</b>	<b>563</b>	<b>402</b>	<b>22</b>	<b>424</b>
Managers	1	-	1	1	1	2	1	1	2
Supervisors	2	-	2	2	-	2	1	-	1
White-collar workers	40	39	79	32	32	64	16	15	31
Blue-collar workers	507	11	518	483	12	495	384	6	390
<b>TOTAL</b>	<b>9,582</b>	<b>1,834</b>	<b>11,416</b>	<b>9,354</b>	<b>1,842</b>	<b>11,196</b>	<b>9,426</b>	<b>1,868</b>	<b>11,294</b>
<i>of which workers with part-time contracts</i>	38	286	324	75	275	350	112	275	387
<i>of which workers with full-time contracts</i>	9,544	1,548	11,092	9,279	1,567	10,846	9,314	1,593	10,907
<b>Workers with non-standard contracts* (temporary/ interns/collaborators)</b>	<b>84</b>	<b>44</b>	<b>128</b>	<b>118</b>	<b>40</b>	<b>158</b>	<b>156</b>	<b>66</b>	<b>222</b>

\* Workers under non-standard contracts do not include consultants.

Figure 52\_Personnel by type of contract applied [GRI 102-41]

	2017	2018	2019
Executive contracts	174	177	176
Electrical contracts	3,387	3,473	3,511
Single natural gas and water contracts	1,781	1,567	1,579
Commercial contracts	389	453	490
Municipal sanitation contracts	4,756	4,556	4,673
FISE contracts	661	735	804
Chemical contracts	178	178	0
Haulage contract*	4	4	58
Other contracts	86	53	3
<b>Total</b>	<b>11,416</b>	<b>11,196</b>	<b>11,294</b>

\* Given the increase in this type of contract, details are added to the table.

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Figure 53\_Personnel by workplace [GRI 102-8]

	2017			2018			2019		
	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL
Abruzzo	51	5	56	50	5	55	49	5	54
Calabria	78	1	79	77	1	78	78	1	79
Campania	192	16	208	193	17	210	197	18	215
Emilia Romagna	46	6	52	54	10	64	47	7	54
Friuli Venezia Giulia	151	5	156	149	5	154	143	4	147
Lazio	2	1	3	3	2	5	3	2	5
Liguria							57	4	61
Lombardy	8,757	1,769	10,526	8,508	1,770	10,278	8,531	1,795	10,326
Marches	7	4	11	8	4	12	7	4	11
Piedmont	88	21	109	100	22	122	107	22	129
Puglia	48	2	50	47	2	49	43	1	44
Sicily	160	4	164	160	4	164	156	5	161
Veneto	-	-	-	4	-	4	4	-	4
International	2	-	2	1	-	1	4	-	4
<b>TOTAL</b>	<b>9,582</b>	<b>1,834</b>	<b>11,416</b>	<b>9,354</b>	<b>1,842</b>	<b>11,196</b>	<b>9,426</b>	<b>1,868</b>	<b>11,294</b>

Figure 54\_Number of hires and turnover rate, by age, gender and geographical area [GRI 401-1]

	2017			2018			2019		
	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL
<b>Permanent workers</b>									
Up to age 30	108	26	134	130	26	156	169	40	209
From 31 to 40	90	16	106	114	26	140	124	30	154
From 41 to 50	84	4	88	61	12	73	83	10	93
Over 50	24	0	24	31	3	34	62	6	68
<b>Fixed-term workers</b>									
Up to age 30	221	24	245	188	22	210	131	14	145
From 31 to 40	157	6	163	141	12	153	102	1	103
From 41 to 50	108	1	109	97	5	102	82	0	82
Over 50	35	2	37	47	5	52	23	0	23
<b>Total</b>	<b>827</b>	<b>79</b>	<b>906</b>	<b>809</b>	<b>111</b>	<b>920</b>	<b>776</b>	<b>101</b>	<b>877</b>
<b>Percentage of new employees out of total workforce</b>	<b>8.63%</b>	<b>4.31%</b>	<b>7.94%</b>	<b>8.44%</b>	<b>6.05%</b>	<b>8.22%</b>	<b>8.23%</b>	<b>5.41%</b>	<b>7.77%</b>

Figure 55\_Workers leaving, by gender [GRI 401-1]

	2017			2018			2019		
	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL
Retirement	168	10	178	251	9	260	267	21	288
Voluntary resignation	118	27	145	149	27	176	198	30	228
Decease	14	0	14	10	1	11	14	0	14
Dismissal	35	3	38	53	2	55	68	17	85
Other (e.g., end of fixed-term contract)	292	9	301	318	25	343	161	14	175
Total	627	49	676	781	64	845	708	82	790
Turnover rate*	6.54%	2.67%	5.92%	8.15%	3.49%	7.55%	7.51%	4.39%	6.99%

\* The turnover rate was calculated according to the following formula: (departures) / (employees) at December 31.

Figure 56\_Workers leaving, by age bracket [GRI 401-1]

	2017					2018					2019				
	UP TO 30	31-40	41-50	OVER 50	TOTAL	UP TO 30	31-40	41-50	OVER 50	TOTAL	UP TO 30	31-40	41-50	OVER 50	TOTAL
Retirement	-	-	-	178	178	-	-	-	260	260	0	0	0	288	288
Voluntary resignation	27	43	32	43	145	41	41	37	57	176	52	68	39	69	228
Decease	1	1	5	7	14	-	1	4	6	11	0	1	3	10	14
Dismissal	8	9	12	9	38	8	12	20	15	55	10	16	29	30	85
Other (e.g., end of fixed-term contract)	116	92	63	30	301	143	92	60	48	343	68	57	32	18	175
Total	152	145	112	267	676	192	146	121	386	845	130	142	103	415	790
Turnover rate	15.80%	6.50%	3.14%	5.69%	5.92%	19.96%	6.50%	3.40%	8.23%	7.55%	12.99%	6.34%	3.13%	8.71%	6.99%

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Welfare and diversity

Figure 57\_Personnel by age bracket and gender\* [GRI 405-1]

	2017								TOTAL
	MANAGERS		SUPERVISORS		WHITE-COLLAR WORKERS		BLUE-COLLAR WORKERS		
	M	W	M	W	M	W	M	W	
Up to age 30	-	-	1	-	231	167	553	10	962
From 31 to 40	5	1	76	29	502	388	1,152	47	2,200
From 41 to 50	47	15	145	47	891	462	1,853	104	3,564
Over 50	96	11	238	59	1,600	441	2,190	55	4,690
Total	148	27	460	135	3,224	1,458	5,748	216	11,416

\* It is represented that the age is calculated at the time of the employee's recruitment/termination and not at 12/31.

	2019								TOTAL
	MANAGERS		SUPERVISORS		WHITE-COLLAR WORKERS		BLUE-COLLAR WORKERS		
	M	W	M	W	M	W	M	W	
Up to age 30	-	-	1	2	271	154	569	4	1,001
From 31 to 40	7	-	89	26	600	407	1,068	41	2,238
From 41 to 50	49	16	162	65	775	434	1,697	93	3,291
Over 50	92	12	256	63	1,636	484	2,154	67	4,764
Total	148	28	508	156	3,282	1,479	5,488	205	11,294

Figure 58\_Personnel by protected categories [GRI 405-1]

	2017			2018			2019		
	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL
PRO.CAT. (ART.18 PARA.2 LAW 68/99)	36	18	54	36	18	54	36	15	51
People with disabilities	348	104	452	326	97	423	302	87	389
Total	384	122	506	362	115	477	338	102	440

Figure 59\_Personnel by position and company seniority [G4-EU15]

	2017						2018					
	MANAGERS	SUPERVISORS	WHITE-COLLAR WORKERS	BLUE-COLLAR WORKERS	TOTAL	%	MANAGERS	SUPERVISORS	WHITE-COLLAR WORKERS	BLUE-COLLAR WORKERS	TOTAL	%
Up to age 10	60	192	1,383	2,548	4,183	36.6%	61	199	1,387	2,348	3,995	35.7%
From 11 to 20	59	141	845	1,433	2,478	21.7%	62	168	862	1,607	2,699	24.1%
From 21 to 30	41	156	1,531	1,522	3,250	28.5%	39	139	1,351	1,212	2,741	24.5%
Over 30	15	106	920	464	1,505	13.2%	15	126	1,097	523	1,761	15.7%
Total	175	595	4,679	5,967	11,416	100.0%	177	632	4,697	5,690	11,196	100.0%

Figure 60\_Personnel by educational qualification

	2017				2018				2019			
	MEN	WOMEN	TOTAL	%	MEN	WOMEN	TOTAL	%	MEN	WOMEN	TOTAL	%
Undergraduate degree	927	533	1,460	12.8%	1,022	570	1,592	14.22%	1,143	619	1,762	15.6%
Secondary school diploma	3,548	917	4,465	39.1%	3,672	921	4,593	41.02%	3,711	924	4,635	41.0%
Vocational degree	796	93	889	7.8%	661	73	734	6.56%	635	66	701	6.2%
Compulsory schooling	4,311	291	4,602	40.3%	3,999	278	4,277	38.20%	3,937	259	4,196	37.2%
Total	9,582	1,834	11,416	100%	9,354	1,842	11,196	100%	9,426	1,868	11,294	100%

2018								
MANAGERS		SUPERVISORS		WHITE-COLLAR WORKERS		BLUE-COLLAR WORKERS		TOTAL
M	W	M	W	M	W	M	W	
-	-	-	-	235	147	541	6	929
5	-	83	27	562	404	1,103	48	2,232
45	17	154	55	819	445	1,736	100	3,371
97	13	250	63	1,629	457	2,095	60	4,664
147	30	487	145	3,245	1,453	5,475	214	11,196

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2019						
	MANAGERS	SUPERVISORS	WHITE-COLLAR WORKERS	BLUE-COLLAR WORKERS	TOTAL	%
	61	213	1,481	2,323	4,078	36.1%
	65	193	934	1,705	2,897	25.7%
	38	120	1,200	1,085	2,443	21.6%
	12	138	1,146	580	1,876	16.6%
	176	664	4,761	5,693	11,294	100.0%

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Personnel training and development

Figure 61\_ Training delivered by role [GRI 404-1]

	2017		2018		2019	
	NUMBER OF HOURS	AVERAGE ANNUAL HOURS OF TRAINING PER EMPLOYEE	NUMBER OF HOURS	AVERAGE ANNUAL HOURS OF TRAINING PER EMPLOYEE	NUMBER OF HOURS	AVERAGE ANNUAL HOURS OF TRAINING PER EMPLOYEE
Managers	6,691	38.2	9,313	52.6	5,583	31.7
Supervisors	22,542	37.9	35,099	55.5	29,307	44.1
White-collar workers	96,744	20.7	116,255	24.7	101,068	21.2
Blue-collar workers	86,979	14.7	66,996	11.8	65,331	11.5
Total	212,956	18.7	227,663	20.3	201,289	17.8

Figure 62\_ Training delivered by gender [GRI 404-1]

	2017		2018		2019	
	NUMBER OF HOURS	AVERAGE HOURS PER EMPLOYEE	NUMBER OF HOURS	AVERAGE HOURS PER EMPLOYEE	NUMBER OF HOURS	AVERAGE HOURS PER EMPLOYEE
Men	185,338	19.3	186,109	19.9	170,427	18.1
Women	27,617	15.1	41,554	22.6	30,862	16.5
Total	212,956	18.7	227,663	20.3	201,289	17.8

Figure 63\_ Health and safety training

	2017	2018	2019
Training hours	112,023	102,776	96,067

Figure 64\_ Cost of training

	2017	2018	2019
€	3,013,190	2,520,072	1,800,839
% of training costs covered by inter-professional funds	29%	29%	37%

Figure 65\_ Employees trained in the year (percentage of total)

	2017	2018	2019
%	92%	85%	81%

Figure 66\_ Attendance of training courses (total number)

	2017	2018	2019
no.	55,830	57,209	54,465

Figure 67\_Percentage of employees who regularly receive performance assessments [GRI 404-3]

	2017	2018	2019
%	47%	49%	49%

Figure 68\_Third-party employees that have undergone relevant health and safety training

	NO. EMPLOYEES INVOLVED	TRAINING HOURS PROVIDED
2017	2,353	4,506
2018	1,291	3,876
2019	3,702	6,176

Health and safety at work

Figure 69\_Data on injuries\* [GRI 403-2]

	2017	2018	2019
Number of accidents (excluding commuting)	577	521	461
Men	526	485	436
Women	51	36	25
Number of days of absence	14,861	12,710	11,238
Average duration	25.76	24.21	24.38
Frequency index FI	31.80	29.14	24.95
Severity index SI	0.82	0.71	0.61
Incidence index II	10.0	8.0	7.4
Commuting accidents	113	90	86

\* When calculating indices, only professional accidents, that result in at least one day of absence, not including the day of the event, are considered. Medications and precautionary absences and unrecognised accidents are therefore excluded. Professional accidents also include those that occur in transit, with or without a vehicle. The table counts all injuries involving employees.

FI = frequency index (no. accidents x 1,000,000 : hours worked)

SI = severity index (no. days absence x 1,000: hours worked)

II = incidence index (no. accidents x 1,000: headcount) – it is calculated on the number of commuting accidents.

Commuting accidents: accidents suffered by workers while commuting from home to work and vice-versa (but not while in service).

Figure 70\_Incident indices of contractors and subcontractors for construction and maintenance works [GRI 403-2\_G4-EU17]

	NO. OF HOURS WORKED BY CONTRACTORS	NUMBER DECEASED	NUMBER OF INCIDENTS	DAYS LOST	FREQUENCY INDEX	SEVERITY INDEX
2017	2,350,008	0	15	354	6.38	0.15
2018	2,264,294	0	22	169	9.72	0.07
2019	4,492,370	0	25	278	5.56	0.06

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Figure 71\_Health data by BU

	GENERATION AND TRADING BU			MARKET BU			ENVIRONMENT BU			NETWORKS AND DISTRICT HEATING BU			CORPORATE			TOTAL		
	2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	2019
Visits as per 81/08	825	746	<b>672</b>	171	260	<b>337</b>	6,112	5,880	<b>5,790</b>	1,259	1,226	<b>1,361</b>	420	513	<b>536</b>	8,787	8,625	<b>8,696</b>
Tox visits	-	166	<b>114</b>	-	60	<b>27</b>	-	2,120	<b>2,292</b>	-	285	<b>368</b>	-	-	<b>12</b>	-	2,631	<b>2,813</b>
Assessments	1,715	1,833	<b>1,797</b>	174	277	<b>406</b>	8,789	11,045	<b>13,686</b>	2,633	2,533	<b>2,885</b>	461	494	<b>632</b>	13,772	16,182	<b>19,406</b>
Influenza Vaccination	-	35	<b>13</b>	-	39	<b>71</b>	-	223	<b>274</b>	-	198	<b>304</b>	-	129	<b>227</b>	-	624	<b>889</b>
Vaccinations	80	79	<b>11</b>	29	42	<b>18</b>	943	851	<b>1497</b>	509	314	<b>174</b>	114	2	<b>18</b>	1,675	1,288	<b>1,718</b>
Site inspections	17	16	<b>17</b>	8	6	<b>7</b>	29	54	<b>67</b>	35	31	<b>35</b>	11	12	<b>8</b>	100	119	<b>134</b>
Reporting occupational illness	-	5	<b>8</b>	-	0	<b>0</b>	-	4	<b>11</b>	-	0	<b>1</b>	-	0	<b>0</b>	3	9	<b>20</b>
Health provisions	-	17	<b>17</b>	-	5	<b>5</b>	-	27	<b>27</b>	-	9	<b>9</b>	-	7	<b>7</b>	41	65	<b>65</b>
Specialist visits	7	-	<b>0</b>	-	-	<b>0</b>	272	68	<b>125</b>	3	7	<b>5</b>	-	-	<b>0</b>	282	75	<b>130</b>

The breakdown of data by Business Unit was carried out as of 2018.

Figure 72\_Percentage of workers represented in formal health and safety committees [GRI 403-1]

	2017	2018	2019
Percentage of the total	100%	100%	<b>100%</b>

Absenteeism

Figure 73\_Number of working days lost by gender [GRI 403-2]

	2017		2018		2019	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
Illness	97,453	18,880	98,515	18,166	106,409	18,946
Unpaid leave/absence	6,461	1,473	6,008	698	6,414	1,028
National strikes	497	84	626	73	30	3
Accidents	14,082	1,782	12,390	1,391	11,355	1,062
Total	118,493	22,219	117,539	20,327	124,208	21,039
Total days worked by the workforce in the reporting period	2,091,868	370,106	2,424,831	457,695	2,488,184	465,105
Absentee Rate	6%	6%	5%	4%	5%	5%

\* It should be noted that the figures presented in this table refer solely to working days lost due to accidents and not to calendar days lost, which are used to calculate the severity index.

Figure 74\_Rate of days lost\* (total number of days lost for injury or illness out of total working hours by the workforce in the reporting period) [GRI 403-2]

	2017			2018			2019		
	MEN	WOMEN	GENERAL TOTAL	MEN	WOMEN	GENERAL TOTAL	MEN	WOMEN	GENERAL TOTAL
Days lost to accidents	14,802	1,782	15,864	12,390	1,391	13,781	11,355	1,062	12,417
Total workable hours of the workforce in the reporting period	15,217,692	2,633,211	17,850,903	17,613,164	3,346,340	20,959,504	18,063,290	3,386,063	21,449,353
Total hours worked by the workforce in the reporting period	13,157,472	2,120,568	15,278,040	15,279,598	2,694,030	17,973,628	15,693,976	2,801,174	18,495,150
Lost day rate	0.10%	0.07%	0.08%	0.07%	0.04%	0.07%	0.06%	0.03%	0.06%

\* Days lost means days on which work cannot be performed due to an occupational accident or occupational illness. They are not counted if there is a partial return to working activity. Occupational illness is defined as an illness caused by the working environment or professional activity (e.g., stress or regular exposure to harmful chemical substances) or resulting from an accident.

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Figure 75\_Return to work and retention rates after parental leave\*

	2017		2018		2019	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
Employees who took parental leave	229	195	325	208	338	219
<i>of whom, employees who returned to work in 2017</i>	216	165	-	-	0	0
<i>of whom, employees who returned to work in 2018</i>	13	30	302	176	0	0
<i>of whom, employees who returned to work in 2019</i>	0	0	22	19	328	183

\* Employees who did not return to work relative to 2018 have not necessarily resigned, but are continuing their leave.

Figure 76\_Registrations with trade union

	2017	2018	2019
	NUMBER	NUMBER	NUMBER
Members of Trade Unions	4,799	4,834	4,831

Figure 77\_Hours of strikes

	2017	2018	2019
Total strike hours	4,402	502	237
Strike hours per capita*	0.4	0	0

\* Per capita hours are calculated on the average headcount.

Benefits and remuneration

Figure 78\_Contributions to Recreational and Welfare Circles

	2017	2018	2019
Total (€)	5,000,668	5,097,116	5,325,796

# Relational capital

## Relations with customers

### Electricity and natural gas sales service

Figure 79\_Electricity supply contracts by type of market

	2017	2018	2019
Protected market	619,114	547,994	476,269
Free market	472,003	586,998	749,554
Total	1,091,117	1,134,992	1,225,823

Figure 80\_Electricity supply contracts by type of customer [G4 - EU3]

	2017	2018	2019
Domestic	895,041	914,937	946,223
SME	128,704	133,237	139,574
Large customers	34,292	52,563	82,158
Condominiums	33,080	34,255	34,498
Public lighting	-	-	23,370
Total	1,091,117	1,134,992	1,225,823

Figure 81\_Gas supply contracts by type of market

	2017	2018	2019
Protected market	841,282	698,406	597,714
Free market	453,141	542,554	645,009
Total	1,294,423	1,240,960	1,242,723

Figure 82\_Gas supply contracts by type of customer [G4 - EU3]

	2017	2018	2019
Domestic	1,212,980	1,161,611	1,159,003
SME	64,933	63,722	67,482
Large customers	6,748	6,582	7,663
Condominiums	9,762	9,045	8,575
Total	1,294,423	1,240,960	1,242,723

Figure 83\_Geographic breakdown of electricity sales volumes

	2017	2018	2019
Lombardy	83%	76%	65%
Rest of Italy	17%	24%	35%

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Figure 84\_Geographic breakdown of gas sales volumes

	2017	2018	2019
Lombardy	90%	88%	72%
Rest of Italy	10%	12%	28%

Figure 85\_Number of fidelity programme adhesions

	2017*	2018	2019
Adhesions	286,834	40,522	98,298
Increase (percentage)	12%	-86%	143%

\* The figure is calculated as at 03/31/2017, the date on which the programme closed in accordance with the regulation.

Figure 86\_Cerved Energy Monitor survey on the level of satisfaction of A2A Energia customers

	BUSINESS SEGMENT	2017			2018		
		CSI	MARKET STANDARD	POSITION	CSI	MARKET STANDARD	POSITION
Gas	Domestic	90.1	89.4	3 of 7	93.3	92.0	1 of 7
	VAT reg. & SME	92.4	92	1 of 6	93.8	93.4	1 of 6
Electricity	Domestic	91.1	89.7	3 of 8	91.7	91.1	5 of 9
	VAT reg. & SME	90.7	89.5	2 of 10	91.1	91.7	3 of 10

Figure 87\_Quality of the call centre

	ARERA TARGET	A2A ENERGIA			LINEA PIÙ		
		2017	2018	2019	2017	2018	2019
Percentage of successful calls	>=80%	94.2%	96.7%	93.5%	97.4%	96.1%	91.8%
Accessibility of lines and services (time when line is free vs operator presence time)	>=80%	99.3%	100.0%	99.8%	100.0%	100.0%	100.0%
Average waiting time on the telephone	<=240"	140	122	160	84	84	107



Figure 88\_Gas and electricity complaint trend

	2017	2018	2019
A2A ENERGIA - Number of complaints	3,447	3,550	4,281
LINEA PIÙ - Number of complaints	2,399	1,682	1,766
A2A ENERGIA - percentage "simple" complaints out of average number of customers*	0.17%	0.18%	0.20%
LINEA PIÙ - percentage "simple" complaints out of average number of customers*	0.82%	0.56%	0.55%

\* ARERA defines complaints as "simple" when they refer exclusively to the seller and do not require any data pertaining to the distribution company in order to prepare the answer.

Figure 89\_Electricity bill cost trends (in euro) for a typical household\*

	A2A ENERGIA			LINEA PIÙ		
	2017	2018	2019	2017	2018	2019
Sales services	245.16	274.78	253.92	264.52	302.46	253.92
Network services	206.04	204.03	231.75	206.35	204.05	231.75
Tax	21.82	21.82	21.79	21.79	21.79	21.79
VAT	47.3	50.06	50.75	49.27	52.83	50.75
Total	520.32	550.69	558.21	541.93	581.13	558.21

\* For electricity, the Authority took as an example a resident domestic use contract, with 3 kW of available power and an average annual use of 2,700 kWh.

Figure 90\_Gas bill cost trends (in euro) for a typical household\*

	A2A ENERGIA			LINEA PIÙ		
	2017	2018	2019	2017	2018	2019
Sales services	411.56	454.70	419.18	421.68	478.95	419.18
Network services	214.75	224.25	248.71	212.16	221.24	248.71
Tax	224.68	224.68	224.68	224.68	224.68	224.68
VAT	173.2	182.61	180.63	153.55	185	180.63
Total	1,024	1,086.24	1,073.20	1,012.08	1,109.87	1,073.20

\* For gas, domestic use with independent heating in the north-east and an annual use of 1,400 m³ was considered by the Authority.

Figure 91\_Affluence at branches

	2017	2018	2019
Total number of customers served	285,550	246,409	240,354
A2A Energia	200,140	170,513	168,054
Linea Più	85,410	75,896	72,300
Average office waiting time in minutes			
A2A Energia	07'30"	06'18"	12'54"
Linea Più	12'13"	09'51"	10'30"

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Figure 92\_Number of electricity and gas contracts with the Bollett@mail service

	2017	2018	2019
A2A Energia	325,580	367,018	458,659
Linea Più	47,231	66,315	76,122
Lumenergia	-	-	1,362
<b>Total</b>	<b>372,811</b>	<b>433,333</b>	<b>536,143</b>
Increase (percentage)	14.6%	30.5%	23.7%

Figure 93\_Number of visits to the commercial websites

	2017	2018	2019**
Total number of visits	4,144,495	4,153,558	5,135,493
Registered with the online counter	-	391,626	425,985
Number of self-metering*	-	-	72.3%

\* The estimated value does not include self-metering received through the APP.

\*\* From May 1, 2019, Linea Più was incorporated into A2A Energia. As a result of this transaction, the 2019 figures have been included in A2A Energia's figures.

Figure 94\_Green energy sold (GWh)

	2017	2018	2019
Government	1%	2%	2%
Mass market	68%	45%	51%
Others	31%	53%	47%
<b>Total (GWh)</b>	<b>1,273</b>	<b>2,229</b>	<b>2,276</b>

## Electricity and natural gas distribution service

Figure 95\_Extension of the electricity distribution service\* [G4 – EU3\_EU4]

	2017	2018	2019
Customers connected	1,176,799	1,183,035	1,190,375

\* Weighted average number of POD active during the year calculated on the basis of ARERA and CSEA provisions and valid for tariff purposes

Figure 96\_Extension of the gas distribution service\* [G4 – EU3\_EU4]

	2017	2018	2019
Customers connected	1,469,330	1,511,748	1,502,645

\* Weighted average number of PDR active during the year calculated on the basis of ARERA and CSEA provisions and valid for tariff purposes

Figure 97\_Technical quality of electricity [G4 – EU29\_EU28]

	MILAN											
	HIGH DENSITY AREA				MEDIUM DENSITY AREA				LOW DENSITY AREA			
	2017	2018	2019	ARERA 2019 OBJECTIVE	2017	2018	2019	ARERA 2019 OBJECTIVE	2017	2018	2019	ARERA 2019 OBJECTIVE
Average annual minutes of outage per LV user due to long outages without notice	24.83	27.61	32.81	25	13.43	24.42	34.55	40	N/A	N/A	N/A	-
Average annual number of outages per LV user due to long outages without notice	1.36	1.39	1.51	1.08	0.88	1.46	1.76	2.04	N/A	N/A	N/A	-

	BRESCIA											
	HIGH DENSITY AREA				MEDIUM DENSITY AREA				LOW DENSITY AREA			
	2017	2018	2019	ARERA 2019 OBJECTIVE	2017	2018	2019	ARERA 2019 OBJECTIVE	2017	2018	2019	ARERA 2019 OBJECTIVE
Average annual minutes of outage per LV user due to long outages without notice	4.92	7.39	8.81	25	8.03	16.97	22.48	40	26.46	31.65	29.45	60
Average annual number of outages per LV user due to long outages without notice	0.58	0.76	0.83	1.00	1.18	1.67	2.29	2.00	2.88	3.10	3.07	4

	CREMONA											
	HIGH DENSITY AREA				MEDIUM DENSITY AREA				LOW DENSITY AREA			
	2017	2018	2019	ARERA 2019 OBJECTIVE	2017	2018	2019	ARERA 2019 OBJECTIVE	2017	2018	2019	ARERA 2019 OBJECTIVE
Average annual minutes of outage per LV user due to long outages without notice	4.54	2.44	9.10	25	N/A	N/A	N/A	-	10.41	27.90	12.90	60
Average annual number of outages per LV user due to long outages without notice	0.31	0.13	0.29	1	N/A	N/A	N/A	-	0.88	0.78	1.24	4

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Figure 98\_Electricity emergency service [G4 – EU28]

	MILAN			BRESCIA		
	2017	2018	2019	2017	2018	2019
Number MV customers with more than 6 outages per year for high density areas	14	25	12	-	-	0
Number of MV customers with more than 8 outages a year for medium density areas	-	-	0	-	5	4
Number of MV customers with more than 9 outages a year for low density areas	-	-	-	12	12	3

In the event of an electricity shortfall, Terna - National Electrical Network requests that distributors implement a scheduled rotating outage plan in order to avoid a general blackout. There are five levels of severity of electricity shortfall used to determine the number of users involved and the frequency of outages. The disconnections, which will last up to 90 minutes, are notified by Terna 30 minutes in advance and can take place at any time during the specified time frames and not necessarily at their start. The scheduled outage plan prepared by Unareti, by day and time slot, is available from the company's website.

Figure 99\_Commercial quality of electricity: general indicators for the Milan Brescia Area

	ARERA LEVEL - LV	SERVICES PROVIDED ON THE INDICATED TIMETABLE (%)		
		2017	2018	2019
Minimum percentage of detailed responses to written complaints or requests for information provided within the maximum period of 30 calendar days	95%	93.93%	96.59%	95.40%

	ARERA LEVEL - MV	SERVICES PROVIDED ON THE INDICATED TIMETABLE (%)		
		2017	2018	2019
Minimum percentage of detailed responses to written complaints or requests for information provided within the maximum period of 30 calendar days	95%	98.93%	99.50%	98.86%

Figure 100\_Commercial quality of electricity: general indicators for the Cremona Area

	ARERA LEVEL - LV	SERVICES PROVIDED ON THE INDICATED TIMETABLE (%)		
		2017	2018	2019
Minimum percentage of detailed responses to written complaints or requests for information provided within the maximum period of 30 calendar days	95%	100%	100%	100%

	ARERA LEVEL - MV	SERVICES PROVIDED ON THE INDICATED TIMETABLE (%)		
		2017	2018	2019
Minimum percentage of detailed responses to written complaints or requests for information provided within the maximum period of 30 calendar days	95%	100%	-	100%

Figure 101\_Electricity commercial quality: specific indicators for the Milan-Brescia Area

	LEVEL ARERA RES. 646/15	SERVICES PROVIDED ON THE INDICATED TIMETABLE (%)			AVERAGE TIME TO EXECUTE THE SERVICE (DAYS)		
		2017	2018	2019	2017	2018	2019
Time to prepare estimate for work on the network	15 working days for LV 30 working days for MV	98.66%	98.40%	96.34%	6.61	6.89	7.83
Execution time for simple work	10 working days for LV 20 working days for MV	99.32%	98.66%	98.22%	4.71	5.43	5.46
Execution time for complex work	50 working days	99.86%	99.46%	99.03%	10.14	10.21	13.21
Activation time for LV/MV supply	5 working days	99.84%	99.68%	99.44%	0.63	0.62	0.63
Supply de-activation time	5 working days for LV 7 working days for MV	99.86%	99.59%	99.57%	0.59	0.64	0.64
Reactivation time following suspension due to non-payment	1 working day	99.90%	99.70%	99.75%	0.08	0.08	0.08
Observance of time bracket for appointments	2 hours	99.84%	99.45%	99.27%	-	-	-
Time for reinstating supply following a fault in the measurement group on working days between 8:00 a.m. and 6:00 p.m. on the LV network	3 hours	88.01%	81.87%	76.58%	02:01	02:31	02:39
Time for reinstating supply following a fault in the measurement group on non-working days and between 6:00 p.m. and 8:00 a.m. on the LV network	4 hours	97.02%	93.73%	90.43%	01:52	02:11	02:28
Time to report results of testing of LV/MV meter equipment	15 working days	92.70%	92.45%	75.35%	11.4	10.62	11.86
Time for notifying the result of the verification of voltage	20 working days	95.45%	84.62%	65.38%	15.28	20.93	21.31

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Figure 102\_Electricity commercial quality: specific indicators for the Cremona Area

	ARERA LEVEL RES. 646/15	SERVICES PROVIDED ON THE INDICATED TIMETABLE (%)			AVERAGE TIME TO EXECUTE THE SERVICE (DAYS)		
		2017	2018	2019	2017	2018	2019
Time to prepare estimate for work on the network	15 working days for LV 30 working days for MV	100% 100%	98.64% 81.82%	<b>100%</b> <b>100%</b>	3.34 8.88	4.39 20.91	<b>4.96</b> <b>18.60</b>
Execution time for simple work	10 working days for LV 20 working days for MV	98% 100%	99.45%	<b>100%</b> <b>100%</b>	2.98 3.00	2.62	<b>2.28</b> <b>0</b>
Execution time for complex work	50 working days for LV 50 working days for MV	100% 100%	100% 100%	<b>100%</b> <b>100%</b>	14.45 10.50	16.50 10.50	<b>20.64</b> <b>22.57</b>
Activation time for LV/MV supply	5 working days	100%	99.96% 100%	<b>99.6%</b> <b>100%</b>	0.58	0.31 3	<b>0.35</b> <b>2.33</b>
Supply de-activation time	5 working days for LV 7 working days for MV	100% 100%	99.98% 100%	<b>99.80%</b> <b>100%</b>	0.5 4.00	0.43 6	<b>0.56</b> <b>1</b>
Reactivation time following suspension due to non-payment	1 working day on zeroed 1 working day reduced 15%	100% 100%	99.83%	<b>99.64%</b>	0.11 0.6	0.08	<b>0.1</b>
Observance of time bracket for appointments	2 hours	100%	100%	<b>100%</b>	-	-	-
Time for reinstating supply following a fault in the measurement group on working days between 8:00 a.m. and 6:00 p.m. on the LV network	3 hours	100%	100%	<b>100%</b>	01:10	01:22	<b>01:13</b>
Time for reinstating supply following a fault in the measurement group on working days between 6:00 p.m. and 8:00 a.m. on the LV network	4 hours	100%	100%	<b>100%</b>	01:10	01:48	<b>01:27</b>
Time to report results of testing of LV/MV meter equipment	15 working days	100%	78%	<b>100%</b>	13	9.67	<b>8.38</b>
Time for notifying the result of the verification of voltage	20 working days	-	-	-	-	-	-

Figure 103\_Gas technical quality

	BASE LEVEL	BASE REFERENCE	BASE EFFECTIVE 2017						
			MILAN	BRESCIA	BERGAMO	VARESE	CREMONA	LODI	PAVIA
Annual percentage of the high and medium pressure network inspected	30%	90%	72%	78%	-	85%	100%	100%	100%
Annual percentage of the low pressure network inspected	20%	70%	56%	56%	-	97%	100%	100%	100%
Annual number of leaks located per km of network inspected	0.8	0.1	0.13	0.07	-	0.00	0.01	0.02	0.05
Annual number of leaks located in response to reports from third parties per km of network	0.8	0.1	0.20	0.07	0.03	0.08	-	0.01	0.02
Conventional number of measurements of degree of natural gas odorant per thousand end customers	0.19	0.5	0.63	1.70	4.48	1.39	1.70	1.80	1.10

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	BASE EFFECTIVE 2018						BASE EFFECTIVE 2019					
	MILAN	BRESCIA	BERGAMO	CREMONA	LODI	PAVIA	MILAN	BRESCIA	BERGAMO	CREMONA	LODI	PAVIA
	75%	100%	100%	100%	100%	100%	72%	0%	100%	100%	100%	100%
	65%	70%	100%	100%	100%	100%	56%	100%	100%	100%	100%	100%
	0.15	0.08	0.06	0.01	0.01	0.03	0.22	0.12	0.04	0.04	0.02	0.03
	0.17	0.05	0.03	0.03	0.01	0.02	0.17	0.08	0.02	0.03	0.01	0.02
	0.95	1.81	2.23	1.70	1.80	1.10	0.95	1.73	1.88	1.70	1.80	1.10



Figure 104\_ Annual number of calls to the switchboard with a time to arrival of the team at destination <= 60 min

BASE LEVEL 90% REF. LEVEL 95%	2017	2018	2019
Milan	99.00%	98.65%	98.37%
Brescia	99.81%	99.90%	100.00%
Bergamo	100.00%	100.00%	100.00%
Cremona	99.80%	99.60%	99.90%
Lodi	100.00%	100.00%	100.00%
Pavia	100.00%	100.00%	100.00%

Figure 105\_ Gas commercial quality: general indicators - services provided on the indicated timetable (%)

	LEVEL ARERA	UNARETI			LD RETI			ASVT		
		2017	2018	2019	2017	2018	2019	2017	2018	2019
Percentage of requests to perform complicated jobs which were completed within a maximum of 60 working days	90%	98.83%	97.69%	98.71%	100.00%	100.00%	98.00%	-	-	100.00%
Percentage of justified replies to written claims or information requests communicated within a maximum of 30 working days	95%	94.56%	97.37%	97.54%	100.00%	100.00%	98.00%	100.00%	100.00%	100.00%

Figure 106\_ Gas commercial quality: specific indicators: Milan, Brescia, Bergamo and Chieti Area - types of services

	LEVEL ARERA RES. 574/13	SERVICES PROVIDED ON THE INDICATED TIMETABLE (%)			AVERAGE TIME TO EXECUTE THE SERVICE (DAYS)		
		2017	2018	2019	2017	2018	2019
Estimate time (simple work)	15 working days	85.86%	93.96%	94.07%	10.58	9.37	8.46
Execution time (simple work)	10 working days	80.97%	80.41%	96.37%	8.50	8.34	6.84
Estimating time (complex works)	30 working days	96.08%	96.39%	95.70%	13.92	14.89	13.77
Supply activation time	10 working days	99.86%	99.88%	99.84%	3.31	3.10	3.18
Supply de-activation time	5 working days	99.51%	99.58%	99.66%	3.05	2.80	2.75
Reactivation time following suspension due to non-payment	2 working days	97.07%	98.14%	98.87%	1.18	1.15	1.12
Observance of time bracket for appointments	2 hours	99.83%	99.83%	99.85%	-	-	-
Time to notify results of testing of meter equipment	20 working days	96.39%	77.08%	93.18%	18.01	15.60	10.87

Figure 107\_Gas commercial quality - specific indicators ASVT - types of services

	ARERA LEVELS RES. 574/13 OF 01/01/2014	SERVICES PROVIDED ON THE INDICATED TIMETABLE (%)			AVERAGE TIME TO EXECUTE THE SERVICE (DAYS)		
		2017	2018	2019	2017	2018	2019
Estimate time (simple work)	15 working days	96.64%	100.00%	100.00%	4.96	4.45	4.66
Execution time (simple work)	10 working days	98.96%	100.00%	100.00%	1.96	1.04	0.94
Estimating time (complex works)	30 working days	100.00%	-	100.00%	3.00	-	1.00
Supply activation time	10 working days	100.00%	99.89%	99.88%	1.72	1.74	3.00
Supply de-activation time	5 working days	100.00%	100.00%	99.23%	1.70	1.88	2.20
Reactivation time following suspension due to non-payment	2 working days	100.00%	100.00%	99.61%	0.65	0.52	0.50
Observance of time bracket for appointments	2 hours	100.00%	99.74%	99.77%	-	-	-
Time to notify results of testing of meter equipment	20 working days	100.00%	80.00%	100.00%	16.20	26.20	18.50

Figure 108\_Gas commercial quality - specific indicators LD RETI - types of services

	ARERA LEVELS RES. 574/13 OF 01/01/2014	SERVICES PROVIDED ON THE INDICATED TIMETABLE (%)			AVERAGE TIME TO EXECUTE THE SERVICE (DAYS)		
		2017	2018	2019	2017	2018	2019
Estimate time (simple work)	15 working days	100.00%	99.61%	99.00%	3.95	4.43	4.13
Execution time (simple work)	10 working days	99.81%	99.50%	97.00%	3.16	3.14	3.67
Estimating time (complex works)	30 working days	100.00%	100.00%	100.00%	5.33	6.08	7.58
Supply activation time	10 working days	99.58%	99.83%	90.00%	3.05	3.19	3.03
Supply de-activation time	5 working days	96.06%	96.85%	95.00%	2.65	2.60	2.66
Reactivation time following suspension due to non-payment	2 working days	97.33%	98.10%	95.00%	1.23	1.23	1.27
Observance of time bracket for appointments	2 hours	98.89%	99.12%	99.00%	-	00:00	-
Time to notify results of testing of meter equipment	20 working days	67.35%	59.65%	83.00%	18.31	20.72	16.63

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Integrated water service

Figure 109\_Extension of integrated water service

	2017	2018	2019
Municipalities served by Integrated Water Service	129	95	95
Municipalities served by aqueduct service	120	86	86
Customers served aqueduct*	308,178	217,781	217,545
Inhabitants served aqueduct*	886,195	664,503	617,725
Inhabitants served by sewers	652,956	652,754	657,628
Inhabitants served by purification	641,194	640,967	581,251

\* The 2018 figures have been updated to correct a calculation error.

Figure 110\_Call center quality [GRI 102-43\_44]

	A2A CICLO IDRICO		
	2017	2018	2019
Service accessibility rate (free lines with respect to operator presence time)	100%	100%	100%
Number of calls to the call centre	118,231	94,205	119,803
Average telephone waiting time for calls from end customers (seconds)	78	72	152
Percentage of successful calls	64.67%	94.06%	87.86%

Figure 111\_Quality of the A2A Ciclo Idrico and ASVT service - figures in days

	A2A CICLO IDRICO			ASVT		
	2017	2018	2019	2017	2018	2019
Response time to requests for estimate for connection to the aqueduct*	5.16	10.5	9.06	2.30	2.73	3.92
Response time to requests for estimate for connection to the sewers*	3.21	9.64	9.72	1.67	0.85	2.27

\* Time charged to the operator.

District heating and heat management

Figure 112\_Transformations\*

	2017	2018	2019
Transformations (no.)	40	28	37
Capacity installed (kW)	16,918	17,400	11,015

\* These refer to replacement of methane with a condensing boiler, of methane with district heating, of diesel with methane with a condensing boiler and of diesel with district heating.

Integrated waste cycle

Figure 113\_Population served by the municipal sanitation service

	2017	2018	2019
Municipalities served	258	215	218
Population served (thousands)	3,549	3,376	3,449

Figure 114\_Customer Satisfaction of the municipal sanitation service carried out by Amsa in Milan - types of services

	2017	2018	2019
Urban waste collection	7.8	7.74	8.31
Road and pavement cleaning and washing	7.29	7.57	7.39
Emptying of large road bins	7.27	7.32	7.46
Cleaning of market areas	7.78	7.61	8.33
Cleaning of green areas	7.06	7.52	7.3
Cleaning and collection during and after events	7.57	7.61	7.98
Cumbersome waste collection	8.3	7.88	8.83
Clarity and completeness of the communication on separate collection	7.86	7.61	8.06
Toll Free Number	7.59	7.9	8.17
Website	7.57	7.68	7.22
Recycling	8.2	7.78	8.5
Snow service	-	7.56	7.64

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Figure 115\_Overall satisfaction index for Amsa municipal sanitation services in the municipalities of the province of Milan

	2017	2018	2019
Pioltello	8.1	8.1	8.2
Bresso	8	8	7.8
Buccinasco	8	8.2	8.4
Cormano	8.1	7.8	7.9
Novate Milanese	7.8	8.1	8.1
Pero	8.3	8.3	8.4
San Donato	8.3	7.9	8.4
Segrate	8	8.1	8.2
Settimo Milanese	7.9	8.1	8.4
Trezzano sul Naviglio	8	8	7.9
Cesate	8.3	8.2	8.1
Corsico	8.1	7.9	7.9
Paderno Dugnano	-	7.8	7.8

Figure 116\_Services in exchange for payment (waste disposal and other services specifically for private customers) - number of customers served

	2017	2018	2019
Amsa	9,091	9,899	5,661
Aprica	1,397	1,375	1,248
La.Bi.Co. Due	259	260	331
LGH Group	-	744	633

Figure 117\_Waste disposal service

	2017	2018	2019
Municipalities served	988	992	1,000
Companies served	3,160	3,150	6,406

Figure 118\_Call centre services

	AMSA			APRICA		
	2017	2018	2019	2017	2018	2019
Number of calls to the call centre	376,027	419,383	398,470	80,962	57,618	75,262
Accessibility of lines and services (time when line is free vs operator presence time)	100%	100%	100%	100%	100%	100%
Average waiting time on the telephone (seconds)	76	47	39	52	45	64
Percentage of successful calls	94%	97%	98%	72%	93%	93%

Figure 119\_ADR A2A-Consumer associations conciliation procedures - Issues of disputes received

	ELECTRICITY	GAS	DUAL FUEL	TOTAL REQUESTS ELE/GAS/DUAL	WATER
Invoicing	14	7	0	21	1
Market	0	2	0	2	0
Contracts	0	1	1	2	0
Late payment and suspension	0	1	0	1	0
Size	7	14	0	21	3
Connections, works and technical quality	1	0	0	1	0
General total	22	25	1	48	4

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## Relations with suppliers

Figure 120\_ Number and value of orders by supply type [GRI 204-1]

	2017		2018		2019	
	NO. ORDERS	AMOUNT (€)	NO. ORDERS	AMOUNT (€)	NO. ORDERS*	AMOUNT (€)
Supplies	7,158	304,069,078	7,058	350,425,198	2,381	299,873,271
Works	2,723	324,169,902	2,233	489,485,553	1,922	341,424,019
Services	7,127	250,124,004	7,062	484,878,866	4,318	477,542,064
<b>A2A Group orders</b>	<b>17,008</b>	<b>878,362,983</b>	<b>16,353</b>	<b>1,324,789,616</b>	<b>8,621</b>	<b>1,118,839,354</b>
LGH orders	4,541	124,628,004	3,767	150,408,338	2,650	114,846,305
<b>Total</b>	<b>21,549</b>	<b>1,002,990,987</b>	<b>20,120</b>	<b>1,475,197,954</b>	<b>11,271</b>	<b>1,233,685,659</b>

\* The figure does not include the number of Lumenergia orders.

Figure 121\_ Geographic breakdown of orders [GRI 204-1]

	2017	2018	2019
Lombardy	64.0%	62.7%	<b>59.6%</b>
Other regions of Italy	31.2%	28.9%	<b>36.5%</b>
EU	4.5%	7.5%	<b>3.4%</b>
Non EU	0.3%	0.9%	<b>0.4%</b>

Figure 122\_ Suppliers with at least one A2A Group certification

	2017	2018	2019
Total suppliers with at least one certification	<b>2,215</b>	<b>2,306</b>	<b>2,767</b>
<i>of which activated with order</i>	-	1,144	<b>1,092</b>



Figure 123\_Value of orders issued by the A2A Group to suppliers in possession of at least one certification

	2017	2018	2019
%	80%	82%	83%

Figure 124\_Validated suppliers, by type - A2A Group

	2017	2018	2019
Large business (more than 250 employees)	276	317	295
Medium business (50-250 employees)	687	729	770
Small business (10-50 employees)	1,459	1,641	1,572
Micro business (1-10 employees)	1,456	1,523	1,382
NA	567	362	210
Total	4,445	4,572	4,229

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## Dispute management

### Employees

A total of 69 labour disputes were in progress or concluded in 2019 involving employees of A2A Group companies (excluding AMSA and including the LGH group), of which 4 concerned the assessment of the illegitimacy of dismissals for just cause or dismissals for justified subjective reason, 1 concerned the assessment of the illegitimacy of a dismissal for exceeding the period of conduct and 1 concerned the assessment of the illegitimate exclusion of the plaintiff from the business unit disposed of to one of the companies of the A2A Group with the consequent right to the establishment of an employment relationship subordinate to the latter company from the date of disposal of the business unit. In addition, 14 plaintiffs applied for a finding that the sale of the business unit was unlawful, with the result that it was reinstated in the transferor company, and 6 applicants applied for a finding that they were entitled to a higher level of classification and order to pay the relevant differences in remuneration. Then there were 3 plaintiffs seeking compensation for the damage caused by the demotion of which 2 also requested a finding that the measure of secondment ordered against them was unlawful. In addition, in 2019, 3 cases were pending concerning the determination of the entitlement to compensation for damages arising from occupational illness or accident. The remaining cases concerned various requests, such as appeals against disciplinary measures and requests for payment of salary differences other than requests for a higher level of classification.

With regard to Amsa, there were a total of 85 labour disputes in progress or concluded in 2019, of which 9 concerned the assessment of the illegitimacy of dismissals for just cause or justified subjective reason, 1 concerned the assessment of the illegitimacy of dismissals for justified objective reason and 5 concerned the assessment of the illegitimacy of dismissals for exceeding the period of conduct.

In addition, 13 plaintiffs challenged the fixed-term contracts, 19 requested a determination of the right to recognition of the higher classification and an order for payment of the relevant salary differences, 10 a determination of fictitious interposition of labour and determination of the right to the establishment of an employment relationship and 7 a determination of the unlawfulness of the transfer of a business unit. The remaining cases concerned various requests, such as requests for payment of salary differences other than requests for a higher level of classification.

### Suppliers

There were 22 labour disputes in progress or concluded in 2019 initiated by workers of contracting firms that worked on contracts awarded by A2A Group companies (excluding Amsa and including the LGH Group). There were 4 proceedings for compensation for damages resulting from occupational illnesses or injuries allegedly contracted during the contract work. Moreover, 1 plaintiff claimed the ascertainment of the right to the establishment of a subordinate contract of employment with the customer company and 17 plaintiffs summonsed the contractor, their employer, to court as well as the A2A Group/LGH company as customer, so as to obtain, by virtue of the joint liability pursuant to Art. 29 of Italian Legislative Decree 276/2003 and Art. 1676 of the Italian Civil Code, their sentencing to pay the salary differences claimed or remaining salaries.

As far as Amsa is concerned, during 2019, 2 cases were promoted by 2 workers so that the contracting company and Amsa - the latter jointly and severally liable pursuant to Art. 29 Legislative Decree 276/2003 and Art. 1676 of the Italian Civil Code in as customer - were sentenced to the payment of the salary differences claimed by the same.

### Non-compliance with environmental regulations [GRI 307-1]

During 2019, 18 environmental proceedings were in progress or concluded; of these, 5 proceedings were closed, 4 are new proceedings (of which three were closed during the year) and 14 were already in progress (5 relating to LGH S.p.A. group companies); these proceedings are related to: (i) allegations of violations of provisions contained in the respective Integrated Environmental Authorizations (A.I.A.), (ii) certain alleged irregularities in waste management and (iii) alleged non-compliance with other legal or regulatory requirements.

With regard to the 5 proceedings, closed in 2019:

- the Preliminary Investigation Judge (GIP) of Milan, having acknowledged the extinction of the crime following oblation, issued a decision not to proceed in relation to proceedings for alleged violations of A.I.A. regulations;
- the GIP of Brescia ordered the filing of deeds relating to alleged violations of A.I.A. regulations;
- in relation to a hypothesis of irregularities in the management of special non-hazardous waste contested by the Ecological Operating Unit (NOE) of Alessandria, a reduced sanction was ordered and payment was made with the consequent extinction of the sanction at administrative level and filing of the proceedings;

- the Brescia NOE accused a company of 2 breaches of environmental regulations in relation to a collection centre and an operating unit; the fines were closed following compliance with the instructions given and admission to payment in administrative proceedings and related filing.

In addition, in relation to the investigation for alleged abusive waste management that had involved for liability under Legislative Decree 231/2001 also the companies A2A Ambiente and Linea Ambiente Srl, the GIP of Brescia, not recognizing any liability, ordered that the positions be removed and filed against the two companies and two former employees of Linea Ambiente Srl. The proceedings are still in progress against an employee of A2A Ambiente and an employee of Linea Ambiente.

Customers [GRI 206-1]

2019 ended with 26 open legal proceedings relating to billing disputes, due to the application of excise duties on gas supplies, incorrect detection of consumption due to malfunctioning of the meters, incorrect configuration of the available power of the electricity supply, incorrect termination of supply and, more generally, the failure and/or incorrect detection of consumption of electricity, gas and/or water service. There was also 1 ongoing case involving damages claimed due to delays in the activation of supply.

In addition, in 2016, A2A Reti Elettriche (now Unareti) was charged by the Milan Chamber of Commerce Metric Office with alleged administrative violations concerning 63 electric

meters, establishing an administrative sanction of 500 euro per meter. A fine was also ordered against A2A Energia as the “intermediary” in the supply arrangement through the distributor’s meters for 47 of these meters. All of the notices of violations and related penalties have been appealed by the two companies. As regards the sanctions charged by the Metrics Office of Milan Chamber of Commerce and as challenged, in 2017, the competent authority had not yet ruled.

Finally, a dispute continued in 2019 with a customer of Amsa, A2A Ambiente and Aprica, which is claiming contractual termination for excessive costs incurred.

In 2019, a dispute was opened against Linea Più (now AEN) for the payment to a user of the costs incurred by the latter for the restoration of gas supply.

Community [G4 - EU25]

At end 2019, there were 80 cases in which citizens requested compensation, for the most part of fairly small value, for financial damages or damages to property or things, while there were 39 cases seeking compensation for physical damages in respect of personal injuries; these include 1 relating to a fatal road accident involving a Group company (an operative vehicle cleaning a cycle path).

Finally, 5 cases of alleged infringements of property rights and 1 case of alleged damage to neighbouring crops from previous years are pending.

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## Group Profile

The Acsm-Agam Group includes 11 companies and is divided into 4 Business Units (BUs):

- **Networks BU** includes the companies that deal with:
  - water service and gas distribution for the provinces of Monza, Como and Varese;
  - only gas distribution in the provinces of Lecco and in Veneto;
  - gas and electricity distribution in the province of Sondrio.
- **Environment BU** deals with waste collection activities (in the province of Varese and Como) and waste-to-energy (Como);
- **Sales BU** to which the Group companies operating in the sale of natural gas and electricity refer;
- **Energy and Smart Technologies BU** oversees the activities of energy efficiency, electricity generation, heat management, new innovative and smart city services, public lighting and district heating.

AEVV Farmacie s.r.l., which operates three pharmacies in the city of Sondrio, should also be added to these BUs.

## Governance

The Company is listed on the Italian stock exchange in Milan and has adopted, since 2016, the Corporate Governance Code promoted by Borsa Italiana. The company's corporate governance structure is based on the traditional organizational model. Currently, all Group companies adopt their own Organization, Management and Control Models in accordance with Italian Legislative Decree 231/2001 (MOG), covering 100% of the Group's employees.

In addition to the control instruments provided for in Legislative Decree 231/2001, the Company has adopted a Code of Ethics, which also contains the main elements of its human rights policy: in 2018, there were no episodes of violation of the Code.

In 2019, there were no cases of corruption and no cases of corruption are pending.

Moreover, the company policy does not provide for the payment of contributions of any kind to parties or politicians.

In March 2019, the Group introduced the function of Risk Manager within the Chief Risk Officer organizational structure. The purpose of this function is to support the Chief Executive Officer with regard to Energy Risk Management and Enterprise Risk Management (ERM) to:  
define the Energy Risk Management strategy, ensuring its implementation and periodic monitoring, as well as the management of critical cases;  
ensure the management of activities related to the identification, evaluation and definition of corrective actions and the monitoring of corporate risks.

These activities contribute to the definition of the company's risk profile and therefore the company's strategies. In particular, the Enterprise Risk Management (ERM) programme has the dual objective to:

- institutionalize and formalize a tool to support business decisions and assess the Group's main risks and opportunities;
- contribute relevant information to the drafting of the annual Audit Plan.

During 2019, the integration of the mapping of the main non-financial risks into the Enterprise Risk Management system was started. Please refer to the Group's NFD for further details.

## Economic value generated and distributed

Figure 125\_Statement for distributing the gross global added value - millions of euro

	2018	2019
<b>Remuneration of personnel</b>	36.41	<b>55.11</b>
- Wages and salaries	34.35	<b>48.41</b>
- Employees' leaving entitlement (TFR)	1.72	<b>2.29</b>
- Other costs	0.34	<b>4.41</b>
<b>Remuneration of risk capital</b>	6.2	<b>14.70</b>
- Profits distributed	5.16	<b>14.48</b>
- Minorities	1.06	<b>0.22</b>
<b>Remuneration of borrowed capital</b>	0.92	<b>0.65</b>
<b>Transfers to the government</b>	6.96	<b>9.17</b>
- Direct taxes for the Treasury	6.6	<b>8.52</b>
- Other taxes and duties for the Treasury	0.32	<b>0.61</b>
- Social security charges	0.04	<b>0.04</b>
<b>Transfers to the local community</b>	2.65	<b>3.20</b>
- Direct taxes for local authorities	1.55	<b>1.79</b>
- Local taxes and duties	0.52	<b>0.66</b>
- Sponsorships, contributions to foundations, aid, donations, charities	0.58	<b>0.75</b>
<b>Remuneration of the company</b>	296.9	<b>301.44</b>
- Reserves	269.81	<b>262.92</b>
- Amortization, depreciation	27.09	<b>38.52</b>
<b>Gross global value added</b>	350.06	<b>384.27</b>

Figure 126\_Investments in Group infrastructure

	2018	2019
millions of euro	31.7	<b>60.9</b>

## Efficient infrastructure management

INSTALLED CAPACITY		2018	2019
Electrical	MW <sub>e</sub>	45	<b>46</b>
Thermal	MW <sub>t</sub>	245	<b>245</b>

ENERGY PRODUCTION		2018	2019
Electrical	GWh <sub>e</sub>	149	<b>126</b>
Thermal	GWh <sub>t</sub>	300	<b>257</b>

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DISTRIBUTION OF NATURAL GAS		2018	2019
Natural gas distributed	Mm <sup>3</sup>	621	611
Gas network extension	km	3,247	3,258

ELECTRICITY DISTRIBUTION		2018	2019
Electricity distributed	GWh	161	161
Electricity losses in the grid	GWh	4	4
Extension of the electricity distribution service	km	556	560
	of which underground cable (km)	427	429

THERMAL ENERGY RELEASED TO THE NETWORK		2018	2019
Thermal energy distributed	GWh	191	197

INTEGRATED WATER SERVICE		2018	2019
Wells	no.	96	98
Sources	no.	168	189
Water purification systems	no.	18	18
Total network length	km	1,659	1,694
Water delivered to the user and accounted for	Mm <sup>3</sup>	27.8	27.6
Water collected	Mm <sup>3</sup>	43	44
Network losses and water not booked	Mm <sup>3</sup>	15	16

URBAN WASTE COLLECTED	2018		2019	
	TONNES OF WASTE	% OF TOTAL	TONNES OF WASTE	% OF TOTAL
Disposal (landfill or other type D destination)	2,791.00	4%	463.48	1%
Waste-to-energy plant	14,378.00	19%	14,722.38	18%
Recovery	58,871.00	77%	67,620.24	81%
TOTAL	76,040.00	100%	82,806.1	100%

1. Source of emission coefficients for natural gas/methane, diesel and oil, petrol and waste: Ministry of the Environment and Protection of Land and Sea, National Standard Parameter Table, 2018.

2. The reporting standard used (*GRI Sustainability Reporting Standards 2018*) provides two different approaches for calculating Scope 2 emissions: "Location-based" and "market-based". The "Location-based" approach involves the use of a national average emission factor related to the specific national energy mix for power generation (source of emission factors: TERNA, International Comparisons, 2017).

3. The "market-based" approach involves the use of an emission factor defined on a contractual basis with the electricity supplier. Given the absence of specific contractual agreements between the Group companies and the electricity supplier (e.g. purchase of Guarantee of Origin certificates), the emission factor relating to the national "residual mix" (source of the *AIB European Residual Mixes 2017 (Version 1.13, 2018-07-11)*) was used for this approach.

URBAN WASTE COLLECTED	2018		2019	
	TONNES OF WASTE	% DIFFERENTIATED COLLECTION	TONNES OF WASTE	% DIFFERENTIATED COLLECTION
Varese	40,207.00	69%	40,109.92	69.9%
Province of Varese	31,265.00	81%	78,272.48	75.56%
Province of Como	4,568.00	75%	4,533.62	72.1%
TOTAL	76,040.00	75%	122,916.02	74%

Environmental responsibility

RESOURCES USED	2018	2019
Fuel (TJ)	1,986	1,663
Automotive fuels (TJ)	2,188.15	42.68
Electricity (GWh)	46	44
Water resource consumed (thousands m³)	368	342
Aqueduct	356	337
Well	12	5
Chemical products and materials used (t)	6,269	3,797

EMISSIONS		2018	2019
Scope 1	t	144,359.14	117,115.72
Scope 2	t	14,631.89	15,793.25
Scope 2	t	18,728.82	21,261.10

POLLUTING EMISSIONS			
NO <sub>x</sub>	t	82	66
SO <sub>2</sub>	t	0.6	0.3
Powders	t	0.1	0.1
CO	t	22	25
Fluoride gases	kg	13	19

INDUSTRIAL WASTEWATER		2018	2019
Volumes (m³)	Discharged into sewers	165,023	152,039
	Discharged into surface water	15,493	0
	Water extracted for hydroelectric generation	93,398	98,940

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TOTAL WASTE PRODUCED			
WASTE PRODUCED		2018	2019
Non-hazardous waste	t	17,475.44	12,971.56
Hazardous waste	t	2,232.90	1,726.66
<b>Total</b>	<b>t</b>	<b>19,708.33</b>	<b>14,698.22</b>
<i>Of which for recovery</i>		93%	93%

## Responsible management of people

Breakdown of employees and collaborators by gender at December 31, 2018

PEOPLE	2018			2019		
	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL
Employees	641	224	865	669	233	902
Permanent	627	219	846	663	233	896
Temporary Contract	14	5	19	6		6
Collaborators	39	19	58	26	12	38
<b>Total</b>	<b>680</b>	<b>243</b>	<b>923</b>	<b>695</b>	<b>245</b>	<b>940</b>
of which with part-time contract	5	46	51	5	42	47

NEW HIRES, OUTGOING, TURNOVER		2018	2019
Hires	no.	36	88
Outgoing	no.	30	51
Turnover	%	4%	6%

PERCENTAGE OF WORKERS REPRESENTED IN FORMAL HEALTH AND SAFETY COMMITTEES		2018	2019
Percentage		100%	100%

Injuries to employees by gender and days lost

NO. PEOPLE	2018			2019		
	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL
Injuries at work (no.)	25	1	26	38	4	42
Days lost due to injuries at work (no.)	1,041	52	1,093	953	132	1,085

<sup>4</sup> The average number of hours per capita was calculated on the total number of employees in the Group's workforce.



Breakdown of employees by professional category, gender and age group at December 31, 2018

NO. PEOPLE	2018					2019				
	MANAGERS	SUPER-VISORS	WHITE-COLLAR WORKERS	BLUE-COLLAR WORKERS	TOTAL	MANAGERS	SUPER-VISORS	WHITE-COLLAR WORKERS	BLUE-COLLAR WORKERS	TOTAL
Men	20	36	218	366	641	21	40	217	391	669
Women	2	14	208	1	224	2	13	217	1	233
Total	22	50	426	367	865	23	53	434	392	902
<30	-	1	35	23	59	0	0	35	32	67
30-50	7	27	252	168	454	7	33	247	180	467
>50	15	22	139	176	352	16	20	152	180	368
Total	22	50	426	367	865	23	53	434	392	902

COMPANY POPULATION IS COVERED BY COLLECTIVE BARGAINING		2018	2019
Percentage		100%	100%

Increasing digitization has led to an increased risk of cyber threats due to increased vulnerability of ICT systems and infrastructures. For this reason, during 2019, the Group promoted training courses on Cybersecurity.

During 2019, the Group provided training courses for 97 people (for a total of 194) on 231 Organization and Management Models and Code of Ethics.

Hours of training broken down by gender at December 31, 2019

	EMPLOYEES TRAINED	SHAREHOLDINGS	NUMBER OF HOURS	AVERAGE ANNUAL HOURS OF TRAINING PER EMPLOYEE
Men	593.00	1,766.00	8,145.00	12.17
Women	209.00	593.00	2,014.00	8.64

Hours of training broken down by professional category at December 31, 2019

	EMPLOYEES TRAINED	SHAREHOLDINGS	NUMBER OF HOURS	AVERAGE ANNUAL HOURS OF TRAINING PER EMPLOYEE
Managers	21.00	86.00	517.25	22.49
Supervisors	53.00	289.00	1,095.00	20.66
White-collar workers	401.00	1,200.00	4,405.50	10.15
Blue-collar workers	327.00	787.00	4,141.25	10.56

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## Relations with customers

NUMBER OF PDRS AND MUNICIPALITIES SERVED BY THE GAS DISTRIBUTION SERVICE		2018	2019
PDR	no.	314,066	<b>314,210</b>
Municipalities served	no.	88	<b>88</b>
NUMBER OF USERS AND MUNICIPALITIES SERVED BY THE ELECTRICITY DISTRIBUTION SERVICE		2018	2019
POD	no.	25,757	<b>25,809</b>
Municipalities served	no.	4	<b>4</b>
NUMBER OF USERS AND MUNICIPALITIES SERVED BY THE MUNICIPAL SANITATION SERVICE		2018	2019
Users	no.	154,858	<b>185,140</b>
Municipalities served	no.	19	<b>30</b>
MUNICIPALITIES AND CUSTOMERS SERVED BY THE WATER SERVICE		2018	2019
Municipalities served by aqueduct service	no.	37	<b>37</b>
Customers served aqueduct	no.	83,178	<b>83,613</b>
Inhabitants served by aqueduct	no.	312,958	<b>312,958</b>
USERS CONNECTED TO THE DISTRICT HEATING SERVICE		2018	2019
Users	no.	623	<b>629</b>
CONTRACTS BY TYPE OF GAS SALES SERVICE PROVISION		2018	2019
Protected market	no.	165,184	<b>142,503</b>
Free market	no.	101,094	<b>111,711</b>
<b>Total</b>		<b>266,278</b>	<b>254,214</b>
CONTRACTS BY TYPE OF ELECTRICITY SALES SERVICE PROVISION		2018	2019
Protected market	no.	18,196	<b>16,229</b>
Free market	no.	42,791	<b>55,137</b>
<b>Total</b>		<b>60,987</b>	<b>71,366</b>

## Supply Chain

The Group adopts a register of suppliers (divided into product categories) whose qualification criteria do not constitute barriers to entry. Each selection procedure must be carried out in accordance with the widest possible conditions of competition. There are no evaluations of suppliers, who intend to qualify, on environmental or social issues. Almost all orders are from Italian suppliers, of which about 69% are based in Lombardy. In addition, 1,001 suppliers were activated with at least one order as at December 31, 2019, all in the Group's register of suppliers.

### Number of Group orders by type

ORDERS	2018		2019	
	NO.	€	NO.	€
Supplies	863	19,258,619	1,031	25,965,199
Works	164	17,553,382	181	24,473,247
Services	1,078	23,930,446	1,366	49,987,597
Sponsorships	96	270,049	56	291,455
Other	12	272,923	36	456,866
TOTAL	2,213	61,285,419	2,671	101,174,364

## Disputes

With regard to possible cases of non-compliance with environmental laws and regulations, the following is to be noted: Following the AIA inspection visit note no. 0201566 of 12/19/2019 at the ACSM-AGAM plant in via Scalabrini 123, Como, by ARPA Lombardia, the hypotheses in contravention of environmental protection regulations were found (Integrated environmental authorization no. 16278 of 11/12/2018 - failure to comply with the post-combustion temperature of at least 850°C to service the waste-to-energy process as prescribed by the authorization on 05/07/2018, with the penalty provided for by Legislative Decree 152/06, as amended Art. 29 *quattordices* paragraph 3 point b with a fine ranging from 5,000 to 26,000 euro;)

Having regard to Articles 318-*bis* and following of Legislative Decree 152/06 and considering that the checks carried out show that the conduct ascertained is currently exhausted and that there are no further effects to be removed as there are no dangerous situations or potentially dangerous activities to be stopped, the Judicial Police Officer on duty at ARPA does not see any useful prescription to be given. It therefore provides for the direct admission to the payment, at the administrative office, of the sum of 6,500 euro, corresponding to a quarter of the maximum fine established for the contravention committed. It should be noted that Acsm Agam Ambiente made the payment of 6,500.00 euro on January 24, 2020 and sent the relative receipt to ARPA Lombardia Settore APC UO Emissioni on January 27, 2020.

There are no cases of non-compliance or sanctions with respect to laws or regulations concerning social and economic matters.

No disputes have arisen with Group customers (with the exception of those relating to debt collection in which the company is a plaintiff), either for non-compliance linked to impacts on consumer health and safety or for supply services and related marketing activities.

In 2019, the companies of the ACSM-AGAM Group were not affected by disputes concerning anti-competitive, anti-trust and monopolistic practices.

With respect to the management of privacy, in 2019, the Group did not record evidence of theft of information on customer data, or complaints from private individuals or institutions regarding possible violations.

2020-2024  
Sustainability  
Plan

Stakeholder  
engagement  
and materiality  
analysis

Financial  
capital

Manufacturing  
capital

Natural  
capital

Human  
capital

Relational  
capital

The Acsm Agam  
Group



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