2021

Integrated Report

Consolidated Disclosure
of Non-Financial Information
in accordance with
Italian Legislative Decree
no. 254/2016

Integrated Report 2021

Consolidated
Non-Financial Disclosure
pursuant to Legislative Decree 254/2016

This Report may be viewed on the website
a2a.eu

Contents

Letter to stakeholders

The letter to stakeholders gives us, each year, the opportunity to take stock not only of our Group's performance, but also to reiterate some of the key elements of our relationship of trust with all of you. We illustrate the objectives we have achieved and the new ones we are setting to support the growth of the territories and communities we serve, having as our compass the sustainable economic value to be shared with all of you and with our shareholders.

Presenting the 2021 Integrated Report in such a complex moment that involves so much the companies of our sector, makes it even more essential to show a vision attentive to the context that surrounds us: environment, people, production realities. This vision must be long-term, with a clear purpose and a defined strategy around which the entire company operates cohesively: Chairman and Chief Executive Officer, the Board of Directors, the Management Team and all of its employees. All equally engaged and responsibly active.

It is undeniable that the waves to which the pandemic had accustomed us, at a time when we seemed to be returning to normality, new but normal, have been replaced in a few weeks by the violence of a conflict that exacerbates the sense of insecurity - social, climatic, economic and health - of the time in which we find ourselves and which we thought was almost over.

For this reason, the scope of our work must be even clearer, and our results measurable, because we want to be among those who will lead the change to protect the future of new generations as the fundamental elements of our identity - energy, water, environment - remain at the center of the path to promote that ecological transition that, as also discussed at the last COP in Glasgow, the world urgently requires. The dramatic issues of the days in which we write this letter seem to overshadow the impact of the Climate Change. However, instead we must not be distracted from the awareness of being a Life Company, the answer of sense that our reality has been able to give itself when we found ourselves, in the middle of the pandemic, in a world that we had never seen before and in which business as usual was no longer an option. And today we continue to make our contribution to the transition with a Plan in which we strongly believe and for which we will continue to work every day.

On January 27, 2022, we approved the update of the 2021-2030 Business Plan, adding a new element to A2A's decarbonization pathway: the commitment to reduce direct and indirect emissions to zero (both Scope 1 and Scope 2) generated by the Group by 2040, in advance of the objectives set by COP26. Circular Economy and Energy Transition are confirmed as the two pillars of the Plan with 18 billion of investments planned in 10 years (+2 billion compared to the previous Plan), integrated with additional areas: the development of biomethane, the creation of Green Hydrogen Valley, the expansion of the renewable energy portfolio and the relaunching of e-mobility.

Over the next ten years, we plan to build more than 60 biomethane production plants, at least 5 of which able to perform liquefaction to obtain bio-LNG; we also want to encourage the development of new decentralized business models for the production and use of green hydrogen, based on local ecosystems at the service of industry and heavy transport and build 24 thousand electric charging points by 2030. The strategy update maintained a strong focus above all on the acceleration towards production from renewable sources, anticipating by two years the targets for increasing green energy capacity set out in the previous Business Plan and expanding green energy production with 4.7 TWh more by 2030.

However, the transition to a Net Zero world implies the need to also integrate the social dimension into development trajectories, with the ultimate goal of leaving no one behind. In this context, the role of companies is even clearer and more relevant, since the social dimensions that the topic of Just Transition raise are inherent in the work of companies: decent work, responsible management of the supply chain, support for the welfare of the communities in which they operate.

For this reason, in updating the new Plan, we made a concrete commitment on these fronts with specific objectives: we have foreseen 7,000 new hires by 2030 and, as early as 2026, we would like to reach 50% of women among new hires. The pandemic also taught us the value of working by goals. Therefore, we plan to assign annual goals to all of our colleagues, reaching 50% by 2026 and 100% by 2030. However, our responsibility is not limited to the internal front: the commitment, by 2030, to assigning 90% of our orders to suppliers evaluated according to ESG parameters indicates the intention to make more sustainable also the induced generated by our activities.

Today, as we said at the beginning, we are even more aware that A2A's primary responsibility towards its stakeholders will be that of not failing in the relationship of trust, transparency and credibility that we wanted to strengthen in this first year as a Life Company.

One of the major accomplishments of 2021 relates to the adoption of a set of Policies,which have enabled us to draw a common line across our Group to ensure increasingly sustainable management of the business. Such as the Human Rights Policy, which aims to protect and promote the recognition and safeguarding of the dignity, freedom, equality of human beings, the protection of labor, trade union freedoms, health and safety of both the people who work within the Group and all those who work for or on behalf of A2A. The Responsible Procurement Policy, which represents the concrete commitment to the promotion and support of all the values affirmed by international institutions and conventions regarding sustainability along the supply chain. Also, the Declaration of Commitment on the topics of Diversity, Equity & Inclusion, aimed at guaranteeing a climate of mutual respect and at enhancing the uniqueness that distinguishes us; a commitment that was further concretized at the end of 2021 with the signing of the "Women Empowerment Principles", a declaration of programmatic commitment in 7 principles, defined by the UN Global Compact and the UN Women to promote women's employment and gender equity as a factor of innovation and growth for companies.

2021 was a year of important results for A2A which continued, by responsibly pursuing its activities, to create value for all its stakeholders. We invested 1,074 million euro, 46% more than last year, focusing 80% on projects in line with the UN SDGs. We exceeded 2.3 billion euro in order value, 96% of which assigned to Italian suppliers. However, 2021 was, above all, the year in which the Group decided to focus on sustainable finance: in May 2021, we adopted a new Sustainable Finance Framework which, for the first time in Italy, combines two different approaches - Green/Use of Proceeds and KPI-Linked and we have issued financial instruments thanks to which A2A's sustainable debt quota has reached 44% of total debt. We have improved our positioning in all sustainability rankings and have been included in the new MIB ESG Index launched by Euronext and Borsa Italiana.

As part of the energy transition and circular economy, 2021 saw us engaged in important agreements and acquisitions: to strengthen our presence throughout the waste chain, we acquired a stake in a company specializing in demolition and decommissioning of industrial plants. The strengthening of the business has been consolidated also with the acquisition of TecnoA, a leader in central and southern Italy in the treatment of industrial waste. Also in 2021, in the area of power generation, we acquired a portfolio of 17 photovoltaic plants with a nominal capacity of 173 MW allowing us to consolidate our position as the second largest operator in renewable sources in our country. These developments have been accompanied by major investments to increase the resilience of the electricity grid and make it more reliable even in the event of extreme weather events and to contribute to the increasing electrification of consumption.

On environmental performance, 2021 was characterized by a recovery in energy demand compared to 2020 and by a particular situation in the European electricity market, which saw prolonged shutdowns for maintenance of nuclear plants in France, with the consequent demand for more production by the Italian thermoelectric sector. This has led to an increase in the Group's direct emissions and CO_2emission factor to 330 g/kWh (up 6% from 2020 but down 5% when compared to 2019). The average rate of separate waste collection remains constant at 71% for all the territories served, as does the rate of urban waste recovered: of this only 0.5% ends up in disposal or, marginally, in landfills.

Approximately 1,400 people have joined our Group, almost half of whom are under 30, giving many young people the chance of a secure job. In 2021, we strengthened the digital transformation process by leveraging smart working that involved more than 5,000 thousand people and created a digital identity for more than 4,000 resources in operating departments. We have strengthened the activities of listening to the needs and opinions of colleagues through surveys aimed at providing guidance on specific issues such as: agile working, the services offered to employees, the engagement of people with respect to work, relationships, the company and its values. More than 3,000 people from the Group participated in the first Corporate Intrapreneurship, an initiative created with the aim of accelerating the process of emergence of ideas and projects of value in support of the Group's strategic objectives.

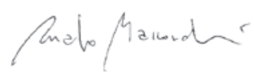
We have continued to support the communities in which we operate not only with initiatives, which in 2021, amounted to about 6 million euro, but also by involving about 44 thousand students and teachers in environmental education initiatives. Lastly, our role as a Life Company has also taken concrete form in our relations with customers: 5 TWh of green energy have been sold (an increase of 29% compared to 2020) and A2A Energia has acquired 49% of the capital of a company specializing in the provision of installation and maintenance services for energy efficiency, distributed generation and electric mobility products for the consumer segment.

The numbers we have described are the result of concrete actions and joint efforts that make sense because they are guided by a single common awareness: the identity of A2A as a Life Company. The awareness of this responsibility makes us work certain of the soundness of the direction we have given ourselves by maintaining the course of sustainability for new generations. This, today more than ever, is possible thanks to the value and extraordinary potential of all the people who, with their commitment, make A2A Life Company a concrete and responsible reality every day.

To them, to the citizens, to the customers, to our shareholders, to the institutions, from our side and on behalf of the entire Board of A2A, our most sincere thanks.

The Chairman
Marco Patuano

Chief Executive Officer
Renato Mazzoncini



Note on method

As a Public Interest Entity, in accordance with Legislative Decree 254/16, the A2A Group publishes this document representing the Group's Consolidated Non-Financial Disclosure (NFD) for the year 2021.

The document (including its Supplement) represents the fourteenth edition of the 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, 2021. 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. Therefore, the document follows the logic of capitals, i.e. the variables that determine value creation:
- **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 describes 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 4.3, 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. A **description of the material issues, associated risks/opportunities**, and **how they are managed**, including **policies implemented** by the company, are provided at the beginning of each capital.

With the aim of being more adherent to the principles of the IR Framework, the first chapter provides an example of the input/output model of the Group's businesses, while some capitals provide some windows with the Key Connectivity Indicators, which aim to emphasize the interconnectivity between the different capitals and their impacts.

In addition, in order to give a clear view of the context in which the company operated during 2021, at the beginning of each capital, a description of the national, European and international context on the subject of reference has been included.

Within each chapter, the **actions implemented by A2A 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".**

For the second year, the document is also aligned with the Recommendations of the ***Task Force on Climate-related Financial Disclosures* (TCFD) to ensure dialogue on climate-related issues with the financial community, which is increasingly demanding reporting according to this logic**. Reporting has been further enhanced with new "boxes" dedicated to climate change.

Within the TCFD Content Index, shown on page 219, are the relevant sections of the document in which the information required by the Framework is reported.

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 Sustainability Planning & Reporting 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 ARIAL software.

In this document and its Supplement, where necessary a specific note has been included, to indicate changes in the 2019 and 2020 performance data with respect to that reported in the 2020 Integrated Report.

This document, submitted to the Board of Directors of A2A S.p.A. on March 17, 2022, **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" (ISAE 3000), 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.

Consequently, 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 following companies in liquidation are excluded from the list of consolidated companies in the remaining Capitals and also:
- the AEB Group was included in the NFD KPIs for the first time, but only for 2021. 2020 performance - for comparability and completeness - remains as last year in the Supplement, in a dedicated section. The consolidation operation, which was completed in the second half of 2020, did not make it possible to integrate all of the AEB Group's indicators right away.
- the ACSM-AGAM Group, which, although fully consolidated in the Consolidated Financial Statements, draws up its own NFD (approved on March 14 by the BoD) 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 81 of the Supplement.

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.

1

The A2A Group and its business model

1

The A2A Group and its business model

1.1 The Group

The A2A Group is a Life Company, it takes care of life, its most precious capital.
Every day, it deals with the environment, water and energy which, thanks to the circular use of natural resources, are the necessary conditions for life and quality thereof. It does so with the most advanced technology, because it looks far ahead. It promotes the country's sustainable growth through a long-term strategy, with investments dedicated to the development of the circular economy and energy transition: businesses that, more than others, are crucial to preserving everyone's future.

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

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. Lastly, the BU includes the activities of the International Business Unit for the provision of know-how and technologies for the realization of waste pre-treatment plants.

Smart Infrastructures

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. It also provides telecommunication services, as well as services related to the management and development of infrastructures to support communications, the implementation and management of video surveillance and access control systems. Finally, it designs solutions and applications aimed at creating new models of cities and territories and improving the quality of life of citizens.

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 A2A Group's values

The Group's **values** represent the cultural identity of A2A and the rules of conduct that guide people in their daily activities. Thanks to an industrial project that allows identifying development opportunities for the business and for its stakeholders, values are, together with the mission the basis of the business model of the Group, which consolidate and stimulate an increasingly strong integration with the territories and the people who live there.

Respect for the fundamental rights of people: 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

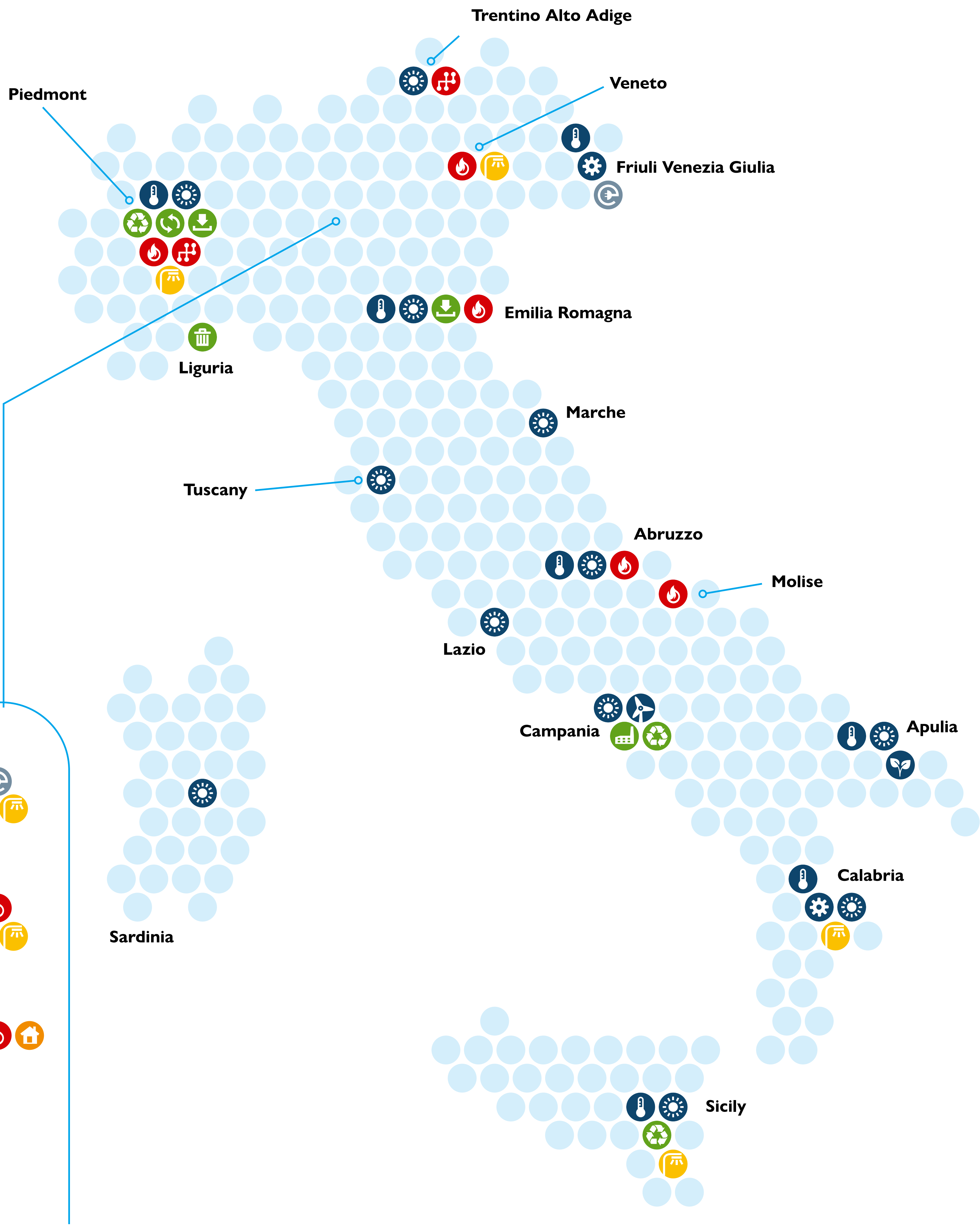
A2A aims to be a Life Company committed to generating a positive impact on the quality of people's lives and protecting the planet, for which it makes its technology and skills available. By working to constantly regenerate the potential of every natural resource, A2A wants to become a protagonist in the sustainable growth of the country by applying an economy that always creates new value, to help improve the lives of everyone. It works so that human, technological, financial and natural capital can grow together, in balance.

1.2 Geographical location

In the following sections, 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.

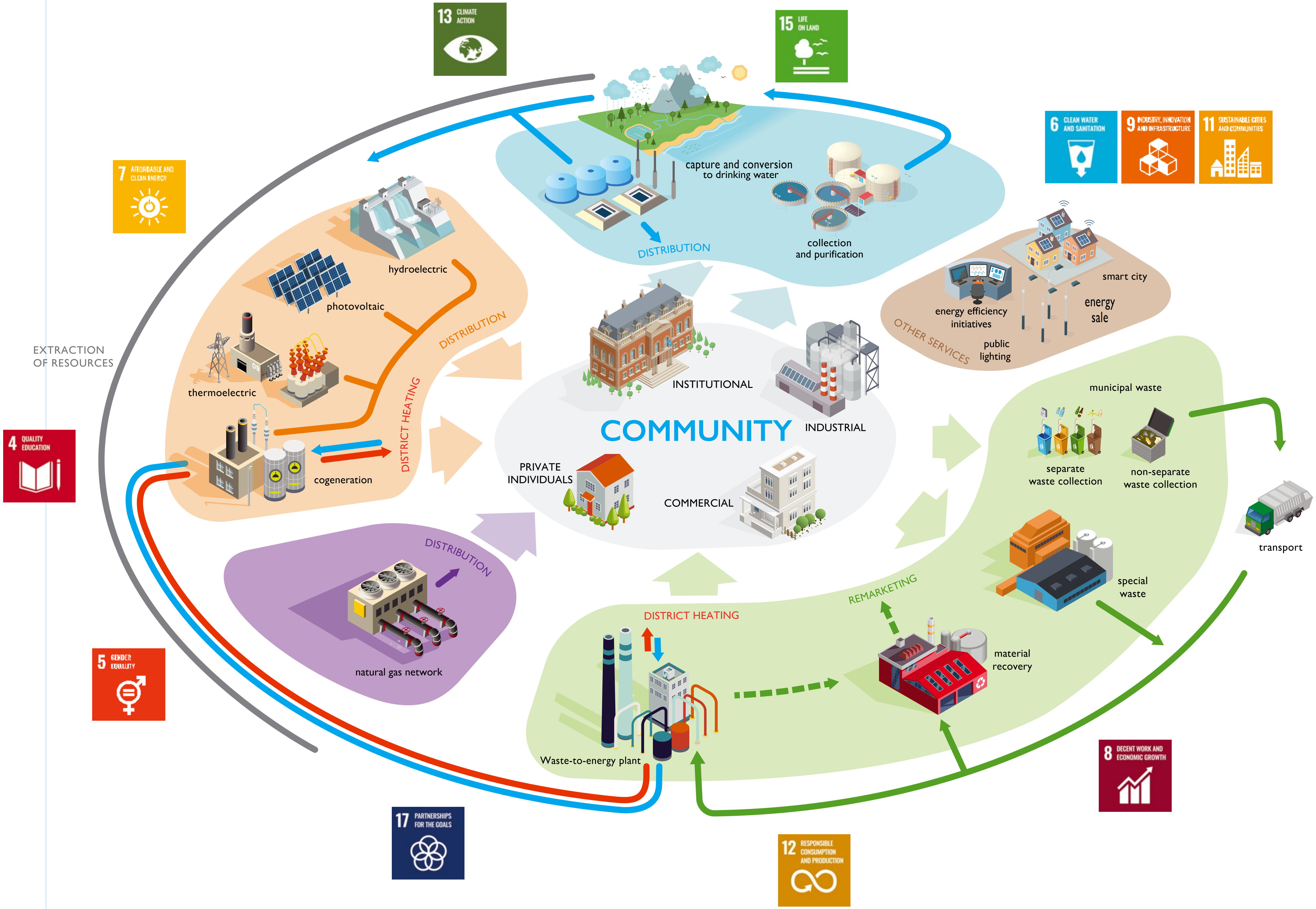
Plants and services of the A2A Group

PLANTS		
Energy	Thermoelectric	
	Hydroelectric	
	Photovoltaic	
	Wind	
	Biomass	
Waste	Waste-to-energy plant	
	Waste treatment plant	
	Material recovery plant	
	Landfill	
SERVICES		
Waste	Waste collection	
Distribution and transport	Electricity distribution	
	Gas distribution	
	Gas transport	
District heating	District heating	
Water	Integrated water service	
Public	Public lighting	
Electric mobility	Recharge stations e-Moving	



Lombardia

1.3 A2A's value chain

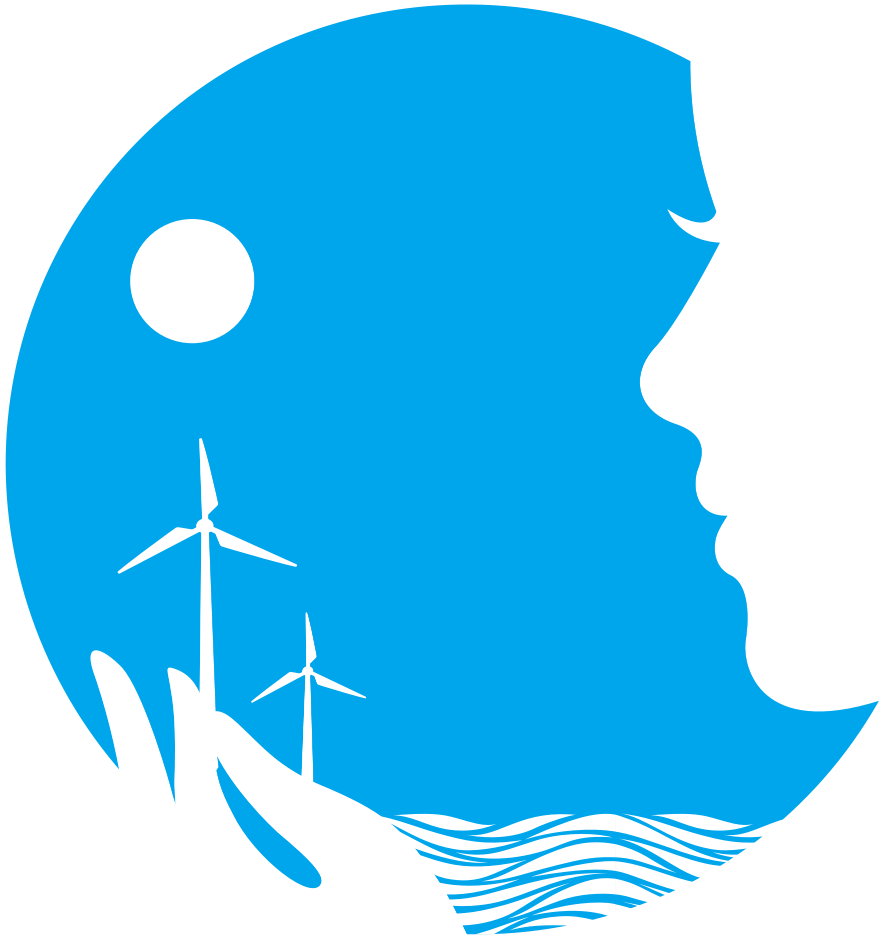


1.4 Business model and organization size

The A2A business model seeks to create shared sustainable value for the company over time and for its reference community.
As Life Company, the Group is oriented to 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, charging infrastructure for electric mobility 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 objective of the model is to make a concrete contribution to the achievement of 11 of the 17 *Sustainable Development Goals* of the UN 2030 Agenda, enhancing the six capitals (Financial, Manufacturing, Natural, Human, Intellectual, Relational) on which the organization depends to ensure its services. Indeed, 90% of investments by 2030 will be in line with the SDGs. A long-term strategy dedicated to the development of the circular economy and the energy transition: the two pillars on which the Group's entire Strategic Plan is based.

The Group Business model follows the logic of the input-outcome model depicted on page 22: the inputs (i.e. economic resources, employee expertise, strategic agreements and natural resources) are the resources that enable the Group to carry out its activities in compliance with the Strategic Plan and the UN Agenda and to generate value and change (outcome) over time. The inputs and outcomes represented are illustrative of the resources deployed and the results achieved by the Group in 2021.



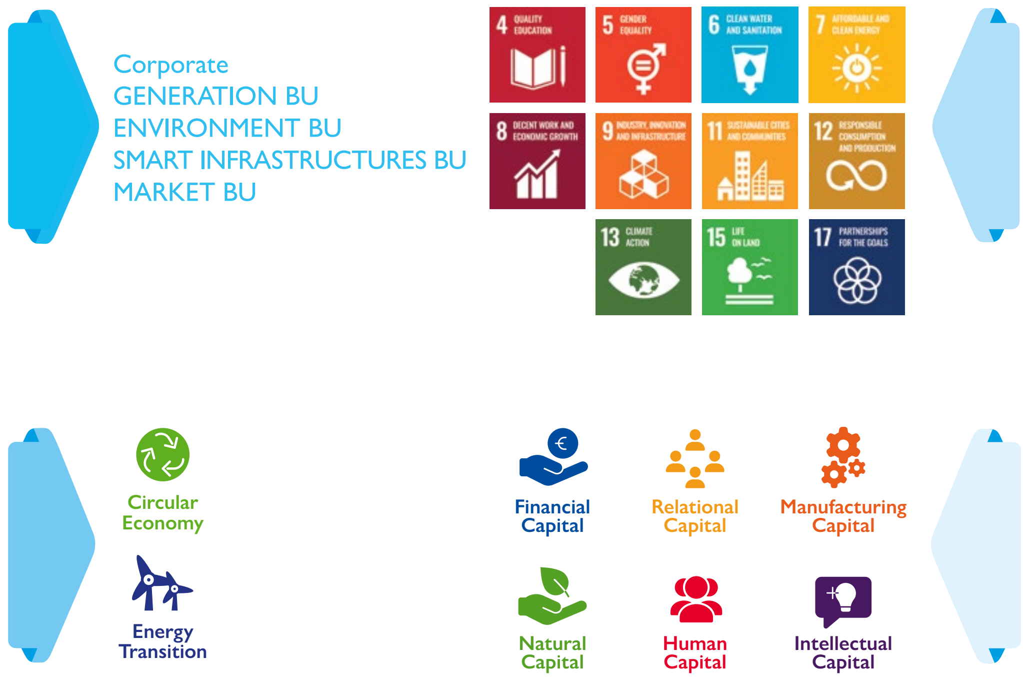


Figure 1 Organization size

	2020	2021
REVENUES (M€)	6,848*	11,549
ECONOMIC VALUE DISTRIBUTED (M€)	6,139	10,732
TOTAL ORDERS (M€)	1,914	2,320
PERCENTAGE ORDERED ON ITALIAN SUPPLIERS (%)	97%	96%
ELECTRICITY PRODUCED (GWh_e)	15,919	18,241
ELECTRICITY PRODUCED FROM RENEWABLE SOURCES % of total	33%	30%
THERMAL ENERGY PRODUCED (GWh_t)	3,041	3,275
ELECTRICITY DISTRIBUTED (GWh_e)	10,781	11,424
GAS DISTRIBUTED (Mm^3)	3,237	3,442
ELECTRICITY SOLD TO END CUSTOMERS (GWh_e)	15,412	18,401
GREEN ENERGY SOLD (TWh)	3.9	5.0
GAS SOLD TO FINAL CUSTOMERS (Mm^3)	2,569	2,711
HEAT/COLD SOLD (GWh_t)	2,816	2,939
WATER TREATED (Mm^3)	52	51
WATER DISTRIBUTED (Mm^3)	83	84
WASTE COLLECTED (Kt)	1,795	1,891
WASTE TREATED (Kt)	3,251	3,423
SEPARATE COLLECTION INDEX (%)	71%	71%
SCOPE 1 EMISSIONS (kt CO_{2eq})	6,039	7,298
SCOPE 2 EMISSIONS *Market based* (kt CO_{2eq})	29	21
EMISSIONS AVOIDED (Mt CO_{2eq})	4.0	3.7
TOTAL NUMBER OF EMPLOYEES	12,978	13,267
NUMBER OF HIRES	1,077	1,368
TURNOVER RATE (%)	8%	8%
FREQUENCY INDEX OF INJURIES	18.2	20.2
SEVERITY INDEX OF INJURIES	0.6	0.5
SPONSORSHIPS (M€)	0.8	1.7
CONTRIBUTIONS TO COMMUNITIES (M€)	8.1	5.8

* Updated figure in line with the Consolidated Financial Statements.

INPUTS

1,074 million euro in investments in 2021

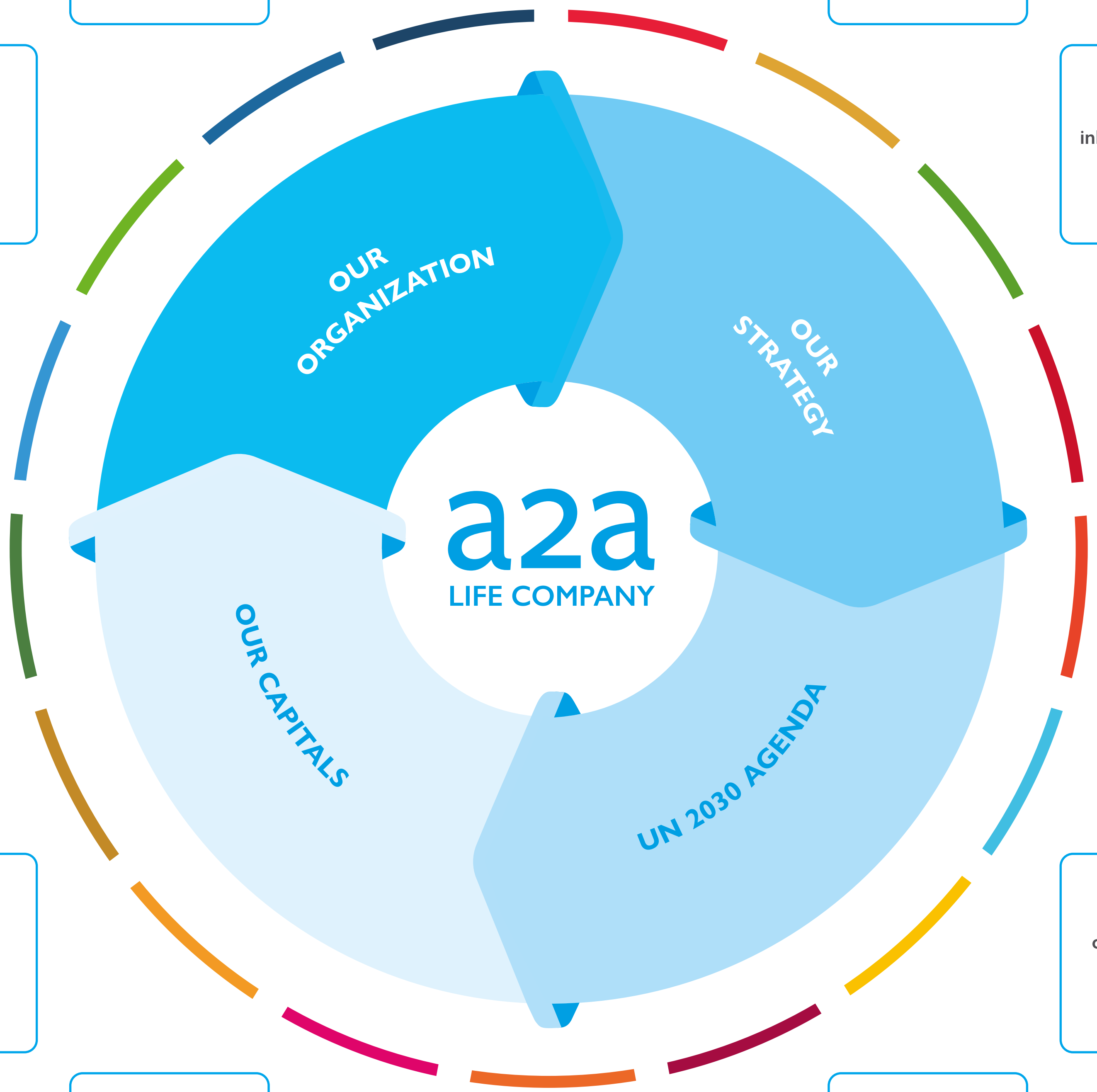
New Valtrompia Purifier

Over **1.7** million tons of urban waste collected

225 thousand training hours

Hydrogen MoU

47 energy efficiency initiatives promoted by A2A Energy Solutions



OUTCOME

10,732 million euro - economic value distributed

85 thousand equivalent inhabitants served by the new Valtrompia purifier

99.7% waste goes to recovery of energy or matter

Upskilling and reskilling of Human Capital

Plan for the development of electrolyzers with power planned 20 MW

110 thousand tons of CO_2 saved by energy efficiency initiatives

2 Governance

2
Governance

On May 13, 2020, 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:

POSITION	NAME	YEAR OF BIRTH	EXECUTIVE (E) - NON EXECUTIVE (NE)	INDEPENDENCE – CODE	INDEPENDENCE – CFA	CONTROL AND RISKS COMMITTEE	APPOINTMENTS AND REMUNERATION COMMITTEE	ESG AND TERRITORY RELATIONS COMMITTEE
Chairman (C)	Marco Emilio Angelo Patuano	1964	E	_	_	_	_	C
Deputy Chairman (DC)	Giovanni Comboni	1957	NE	_	X	_	M	_
Chief Executive Officer / General Manager (*)	Renato Mazzoncini	1968	E	_	_	_	_	_
Director	Stefania Bariatti	1956	NE	X	X	_	M	_
Director	Vincenzo Cariello	1965	NE	X	X	_	_	M
Director	Federico Maurizio d'Andrea	1959	NE	_	_	M	_	_
Director	Luigi De Paoli	1949	NE	X	X	C	_	_
Director	Guadiana Giusti	1962	NE	X	X	M	_	_
Director	Fabio Lavini	1954	NE	_	X	_	_	M
Director	Christine Perrotti	1971	NE	X	X	M	_	_
Director	Secondina Giulia Ravera	1966	NE	X	X	_	C	_
Director	Maria Grazia Speranza	1957	NE	X	X	_	_	M

Note: C: Chair - M: Member
(*) Mr. Mazzoncini was appointed Chief Executive Officer and General Manager by the Board of Directors at its meeting on May 14, 2020.

In the Board of Directors, the female component, today 41% of the members, is well above the Italian and sector average, thus aligning itself with the regulations of the New *Corporate Governance* Code. The average age is 60.3.

In compliance with the provisions of the Code of Corporate Governance, the Board of Directors conducted its assessment, 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 February 23, 2021.

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 www.a2a.eu.

2.1 Sustainability governance

During 2021, the Committee for *governance* of sustainability issues changed its name to the ESG and Territory Relations Committee, maintaining the same composition as the previous Sustainability and Territory Committee. Committee rules were approved by the Board of Directors on May 13, 2021.
The Committee maintains the task to assist, with information, advice and proposals, the Board of Directors and to the extent applicable, the Chair and Chief Executive Officer of the Group, in defining guidelines, orientations and initiatives regarding sustainability, the creation of long-term value for the territories and Corporate Governance. In addition, the Committee is informed on a monthly basis regarding Stakeholder Engagement initiatives. For further information please refer to the Regulations published on the website.
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 Chair of the Board of Statutory Auditors or another Statutory Auditor designated by the Chair of the Board of Statutory Auditors attends the Committee's meetings.
During the 2021 financial year, the ESG and Territory Relations Committee met 7 times and carried out its proposal and advisory activities regarding, among other things:
(i) the promotion of a strategy that integrates sustainability into business processes;
(ii) the drafting, implementation and monitoring of the 2021 - 2030 Sustainability Plan;
(iii) the drafting of the 2020 Integrated Report for the purposes of non-*financial disclosure* (pursuant to Directive 2013/34/EU and Legislative Decree 254/16), and Sustainability Reports on a territorial basis, including preparatory activities for the preparation of the 2021 Integrated Report;

(iv) verification of the matrix of material issues for the 2021 Integrated Report;
(v) the dissemination of the culture of sustainability amongst employees, and, more general, stakeholders;
(vi) the implementation and promotion of structured means of comparison with the territories in which the A2A Group operates, also through the implementation of initiatives of involvement of all stakeholders (forumAscolto programme);
(vii) the development of the Group's new *stakeholder management process*;
(viii) the analysis of the evidence from the *assessments* of ethical rating agencies;
(ix) the analysis of regulatory developments on ESG issues at European and Italian level, such as the new EU Regulation 2020/852.

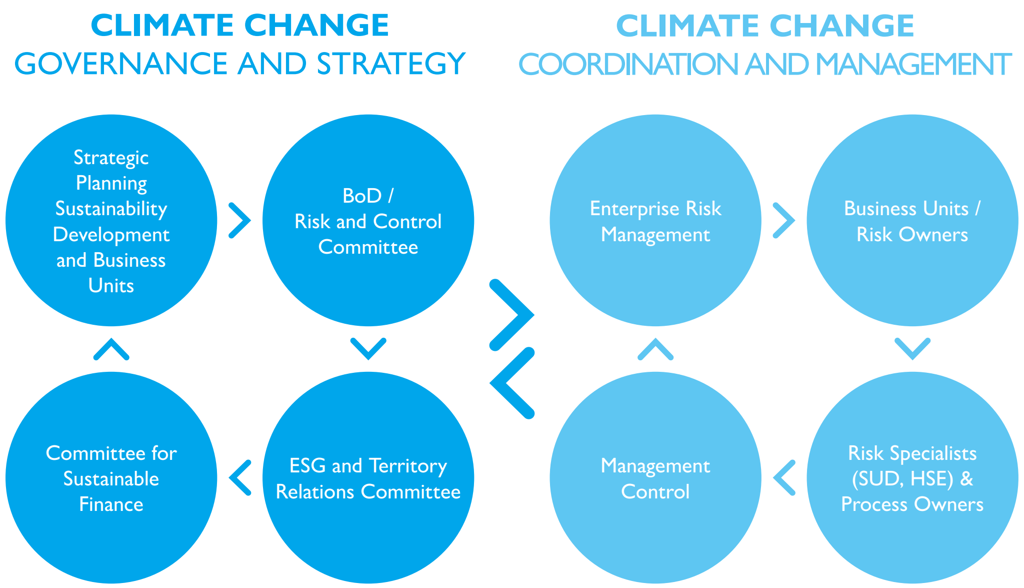
Moreover, the Committee is entrusted with certain tasks relating to *corporate governance* and relations with the Group's Foundations.

Under the scope of director training, aimed at providing suitable knowledge of the sector, company dynamics and their evolution, in 2021, an induction session was held for the BoD on sustainability finance.

2.1.1 Roles and responsibilities for climate change mitigation

The governance process for climate change-related issues described consists of a strategic and *governance* level and a more operational level of coordination and management. Information flows between the committees, and the corporate functions Enterprise Risk Management, Sustainability Development, HSE and the Business Units ensure alignment and synergy between the two levels of the process (as defined by the Internal Control and Risk Management Guidelines).

Figure 2 Process and key players for governing risks and opportunities related to climate change in the A2A Group



DISSEMINATE THE MONITORING OF SUSTAINABILITY ISSUES

In order to truly integrate sustainability into their activities and strategies, all *business lines* must be aware of their role and contribution.
In this sense, in 2021, *Focal Points* have been formally identified and disseminated throughout the organization to ensure stronger monitoring of sustainability issues in the *Business* and in the *Staff* Departments of the Group. These figures, together with the *Sustainability Development structure*, have the task of integrating sustainability into business processes, enhancing new projects related to these issues and promoting communication and exchange of information for activities related to sustainability.

Governance and Strategy

A2A's commitment to maintaining and strengthening its governance system in support of the Group's strategy to combat climate change is implemented with the continuous and constant collaboration between the various Board Committees. In addition to the role played by the ESG and Territory Relations Committee, some of the key processes for monitoring Climate Change within the Group are described below.

The **Control and Risk Committee** in accordance with the Guidelines of the Internal Control and Risk Management System and with the *Enterprise Risk Management Policy*, is **informed about climate risks on a six-monthly basis** by the Organizational Structure (O.S.) *Group Risk Management*at the same time as the presentations of the results of the *Risk Assessment*. Once again this year, the process of approving the Group's materiality matrix saw the involvement of the Committee, together with the ESG and Territory Relations Committee, with the aim of verifying that all the issues were covered by the analyses and assessments contained in the risk sheets of *Enterprise Risk Management*.

As part of the activities to combat climate change, the **Green Finance Committee** has established itself as a strategic and indispensable player both within and outside the Group. The interaction between this Committee, the ESG and Territory Relations Committee, the Investment Committee and the heads of the *Business Units* involved in the various projects, **ensures that all investments are fully aligned with the Group's commitment to promote a low-carbon business model and that the best opportunities in the sustainable finance market are exploited** (see page 89).

This constant alignment also took the form of continuous sharing between the Chief Executive Officer, the strategic planning functions, the Business Units and the Sustainability Development function, during the definition of the 21-30 Strategic Plan, in order to regularly monitor all the implications in terms of the sustainability of the objectives over the term of the Plan. A central role is played by the **CEO, who promotes sustainability within the Group, and more specifically the fight against climate change, identifying it as one of the drivers behind the Strategic Plan** (see page 46).

Periodic meetings are also scheduled throughout the year to monitor the progress of the targets and their status.

Sustainability indicators are an integral and qualified part of the 21-30 Strategic Plan, and the process for defining and monitoring them, as well as for drafting the integrated document, involves all the business controllers of the Group's *BUs*. In this regard, several annual meetings are scheduled, where topics related to *climate change* are discussed and there is coordination of all related activities, such as periodic meetings of the Quality, Health and Environment Committee (both at company and *Business Unit*level) or during the steering committee.

All Group employees have a significant responsibility to achieve the objectives of the Strategic Plan. This is also reflected in the Remuneration Policy: in fact, more than 34% of the Group's executives have been assigned specific targets (measurable and consistent with the objectives of the Plan) within their remuneration scheme that are related to the combat against climate change.

Coordination and management

The methodology and process for assessing climate risks are integrated into the *Enterprise Risk Management* process in place within the Group. For the in-depth analysis of topical risks, the internal interlocutors were identified (*Risk Owner, Process Owner, Risk Specialist and Controller*) with whom to share the issues as well as the main *assumptions* for the economic and financial assessment of the impacts. Group Management has a decisive role in the process of identifying and assessing risks and defining mitigation strategies (see "Analysis and management of risks and opportunities"). The climate risk assessment is updated semi-annually during the periodic assessments provided for by the *Enterprise Risk Management Policy* and examined by the Control and Risk Committee. The process is coordinated by the organizational structure of *Enterprise Risk Management*and, with reference to climate-related risks, the Sustainability Development structure is also involved. In particular, a series of meetings were held during the year aimed at examining in depth the risks involved in evaluating economic impacts for the purposes of TCFD reporting.

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 231/01;**
- **Anti-Corruption Policy;**
- **Human Rights Policy;**
- **Stakeholder Engagement Policy;**
- **Responsible Procurement Policy;**
- **Group Tax Strategy;**
- **Quality, Environment and Safety Policy;**
- **Quality, Environment and Safety Management Systems.**

↗ All documents mentioned above are available at **www.a2a.eu**.

Code of Ethics

All of the 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 and executives, 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, the OECD Guidelines and the principles of the Global Compact**, to which the Group adheres. 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.

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

On June 25, 2021, **the Organization, Management and Control Model of A2A S.p.A. pursuant to Legislative Decree no. 231/01 was updated**. 43 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 2021, **3,372 hours of training were provided on the subject of Legislative Decree 231/01**, involving 20% of employees. At December 31, 82% of employees had been trained on the Code of Ethics and the A2A Group's documents relating to ethical/behavioural principles.

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.

During 2021, in order to facilitate the receipt of reports, including anonymous ones, the A2A Group **has implemented a specific IT platform called "A2A Reporting" (Whistleblowing)**, which constitutes an alternative channel to those already existing and is accessible from the company's intranet and all the Group websites.

The communication channels set up for sending reports are described in the **"Guidelines for Reports of the A2A Group, including in anonymous form *(Whistleblowing)*"** published on the *website* of A2A and updated on October 4, 2021. Employees 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. The Group guarantees the protection of the identity of the whistleblower and the confidentiality of the information received and, for those who violate the measures to protect the whistleblower and those who make unfounded reports, penalties are provided for. Whistleblowers can report to the National Labour Inspectorate any discriminatory measures suffered.

During 2021, as part of the **programme to raise awareness of the culture of compliance**a training course was provided dedicated to Whistleblowing.

Anti-Corruption Policy

The Group companies that have adopted a Model in accordance with Legislative Decree no. 231/01 are systematically monitored also with regards to risks connected with corruption. In line with as outlined in the Group Code of Ethics and the specific regulatory document **"Anti-Corruption Policy of the A2A Group", 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 provides a systematic reference framework in the fight against corruption and **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.

With reference to the proceedings relating to the corruption hypothesis involving the company Linea Ambiente S.r.l. and which became known in 2019, the trial against the director of the company at the time of the facts relating to the issue, by the Province of Taranto, for the authorization for the expansion of the landfill managed by the Company itself, is still underway before the Court of Taranto, as well as that against the Company for the corruption offenses referred to in art. 25, paragraph 2 of Legislative Decree 231/01, at the preliminary hearing stage.

With regard to the proceedings concerning a corruption hypothesis contested by the Milan Public Prosecutor's Office, in relation to some tenders called by AMSA S.p.A. and of which we became aware in 2019, this is still pending before the Court of Milan and AMSA, as the offended party, is a "civil party".

In 2021, we became aware of two proceedings relating to the alleged offence of corruption involving senior management of companies of the A2A Group. One proceeding concerns a hypothesis of corruption for facts dating back to the period 2015-2017 in relation to some tenders by Gelsia Ambiente S.r.l. and preliminary investigations are underway by the Public Prosecutor's Office of Monza. Gelsia Ambiente, the offended party, instructed its own trusted lawyer to proceed with the constitution of "civil claimant". The other proceeding concerns the merger between A2A and AEB and an alleged over-valuation of the *assets* contributed by A2A. Preliminary investigations are currently underway.

Human Rights Policy

The A2A Group's commitment as a *Life Company* has led to the adoption by the Board of Directors of A2A S.p.A. of an instrument to **protect and promote the recognition and safeguarding of the dignity, freedom and equality of human beings, the protection of work, trade union freedoms, health and safety**.

The "Human Rights Policy" has been adopted, in addition and complementary to the Code of Ethics, in order to reaffirm the commitment of all the companies belonging to the Group to the promotion and support of all the values and principles affirmed by the Institutions and International Conventions on the subject of human rights, to which the A2A Group adheres.

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 members of Corporate Bodies and the Supervisory Board pursuant to Legislative Decree 231/2001.

As part of the *Enterprise Risk Management* process, the A2A Group periodically monitors the risk relating to any failure to comply with the principles of ethical and social responsibility envisaged by the SA8000 standard as well as any involvement in investigations and/or criminal proceedings for non-compliance or misconduct on the part of management and/or employees. With reference to the supply chain, the A2A Group periodically monitors risk relating to the lack of ethical requirements of contracted suppliers also by means of a reputational analysis tool.

To date, no episodes of human rights violations have been recorded; the A2A Group intends to initiate assessment activities as part of which any remedial action may be identified.

Please note that in 2021, were also published the new ***Sustainable Procurement Policy*** (see page 203) and the ***Stakeholder Engagement Policy*** (see page 70).

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 additional training sessions, via **webinar**, to personnel working in areas subject to ITC regulations. The Group uses a special IT tool for the **automatic daily verification of relevant counterparties** under the ITC regulations to which it is subject or applies voluntarily.

Tax Compliance

In addition, in order to guarantee a correct tax management process, the Group is implementing and including in the context of the Internal Control and Risk Management System (SCIGR), **the tax risk management and control model (Tax Control Framework - TCF)**, in line with OECD guidelines and the domestic regulations that implement them. The *Tax Control Framework* was implemented in 2017 in A2A Energia S.p.A., in 2018 in A2A S.p.A. and in UNARETI S.p.A., in 2020 in A2A Ciclo Idrico S.p.A. and in 2021 in A2A Ambiente S.p.A. In 2019 **, A2A and UNARETI have been admitted to the Collaborative Compliance Scheme with the Revenue Agency**.

This regime, based on a **relationship of collaboration and transparency between the taxpayer and the Financial Administration**, provides for constant and preventive dialogue and favourable and rewarding measures for taxpayers who adhere to it.

The implementation of the *Tax Control Framework* required the **adoption of the Group Tax Strategy**, document approved by the Group's BoD, the purpose of which is to set out the principles and guidelines for the uniform management of taxation in order to guarantee the correct and timely settlement of taxes and tax obligations.

It should be noted that the Group operates mainly in Italy in terms of: number of employees, revenues and taxes. No controlled entity resides in blacklist countries or tax havens.

Data privacy

As part of their activities and/or services, the companies of the Group may become aware of and manage personal data, i.e. information relating to identified or identifiable individuals.

Therefore, the Group believes that it is of fundamental importance to protect such data in compliance with the provisions of current legislation (e.g. the *Privacy* (EU) 679/2016 and Legislative Decree no. 196/2003).

To this end, the Group has defined, in addition to a procedural system to regulate the main privacy themes, a **Model of organization and management of personal data** aimed at identifying the subjects actively involved in the management of *privacy* within the company, including the relative responsibilities, as well as to provide indications for the purposes of managing personal data in compliance with the principles established by the regulations within specific company processes and activities.

In addition, the information relating to each processing is provided to individuals to whom the personal data refers, through delivery of appropriate privacy policies (the main ones are also published on the websites).

Training and awareness-raising communications are provided for personnel specifically authorized to process personal data.

With reference to third parties (e.g. suppliers) who process personal data on behalf of the companies of the Group, it is foreseen that specific agreements will be signed appointing them as data processors, containing the obligations and instructions that the third parties undertake to comply with, and the possibility for the data controller companies to carry out verification activities on the correct operation of the suppliers from the point of view of *privacy*.

The protection of personal data also occurs through the precise mapping of processing within special registers and the assessment of the risks associated with them and the resulting security measures necessary to prevent unauthorized access, loss and unwanted modification of personal data.

In the event of any data violations (*data breach*), an internal communication flow will be promptly activated in accordance with a specific company procedure to collect essential information and analyze the importance of the violation. In 2021, 20 cases of personal data breaches were detected, the severity of which was assessed as low, which is why no notification was made to the Data Protection Authority.

At any time, persons to whom the personal data refers may request information regarding the processing of their data; for example, they may request access to, amendment or deletion of such information or may object to specific processing.

Such requests may be addressed to the *Data Protection Officer (DPO)* appointed by the companies of the A2A Group at the address dpo.privacy@a2a.eu.

HSE organizational model

The Group has defined an organization model for Environment, Health and Safety, in order to:

- identify HSE roles and responsibilities in positions close to the sources of risk, to ensure their effective management, attributing the necessary powers to the figures who operationally manage the activities;
- identify, at the various levels, figures and company structures responsible for guidance, coordination and control tasks and others to support the business in the pursuit of strategies and corporate objectives;
- guarantee systematic and documented verification of compliance with the applicable regulations and with the requirements and standards adopted;
- ensure the traceability of activities and documents relating to environmental, health and safety processes.

The model is described in a Group Guideline that provides guidelines for its implementation in individual companies:

- regulation of business processes relevant to HSE issues, at all levels of the organization;
- definition and implementation of conceptual and IT tools for their management.

In the regulation of processes, particular attention is paid to the definition of methodologies for the identification, assessment and management of risks, to support businesses in guaranteeing and maximizing the sustainability of their activities. The adoption of these methods by the activities managed directly by the Group is the subject of a specific objective within the 2030 Sustainability Plan.

The governance of HSE issues is also extended to activities that are not directly managed by individual companies and involves parties who, for various reasons, collaborate with Group companies. For example, appropriate HSE risk identification and management tools are also applied to suppliers.

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.

During 2021 a new **Environment, Health, Safety and Quality Policy** was defined, in which A2A reinforces its commitment in the various areas, and in particular in the health and safety of all the people who work in any capacity in the Group, including suppliers and contractors; it places itself as a protagonist in the achievement of community environmental objectives and undertakes to adopt organizational models and management systems that allow not only compliance with the reference requirements, but also performance in line with the best techniques.

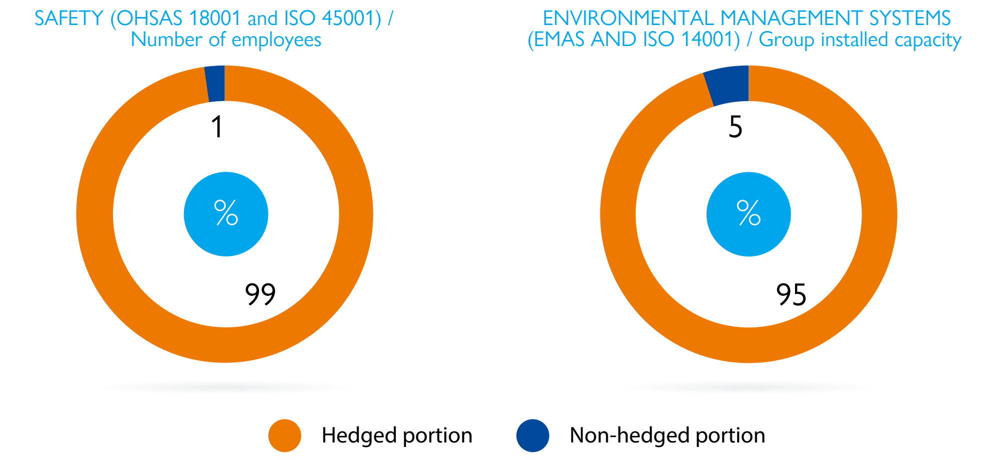
In order to implement these reference principles, A2A has also prepared various guidelines and internal procedures on sustainability aspects, also referring to and outlining the reference standards laid down by the MOG (Organization, Management and Control Model); these documents are adopted at Group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

Figure 3 Group certificates

TOTAL NUMBER OF CERTIFICATES ISSUED	QUALITY ISO 9001	ENVIRONMENT ISO 14001	SAFETY OHSAS 18001	SAFETY ISO 45001	ENERGY EFFICIENCY ISO 50001	EMAS	REMADE IN ITALY	SA8000
2019	27	26	16	10	4	28	2	-
2020	28	27	2	24	4	28	3	-
2021	33	30	0	29	6	27	4	1

The implementation of these policies is also operated through the adoption of certified management systems according to the major voluntary standards recognised at the international level, such as ISO 14001 for the environment, ISO 9001 for Quality and ISO 45001 for Health and Safety at work, or within the European Community, such as EMAS Registration, which refers to Regulation (EC) no. 1221/09. During 2021 one company of the Group, **Aprica, obtained the certification related to the *Social Accountability* in compliance with the SA8000 international standard**. With reference to the coverage of environmental management systems on total installed capacity, the decrease compared to last year is mainly due to the acquisition of new photovoltaic plants, which do not have significant HSE impacts.

Figure 4 Certificate coverage



2.3 Analysis and management of risks and opportunities

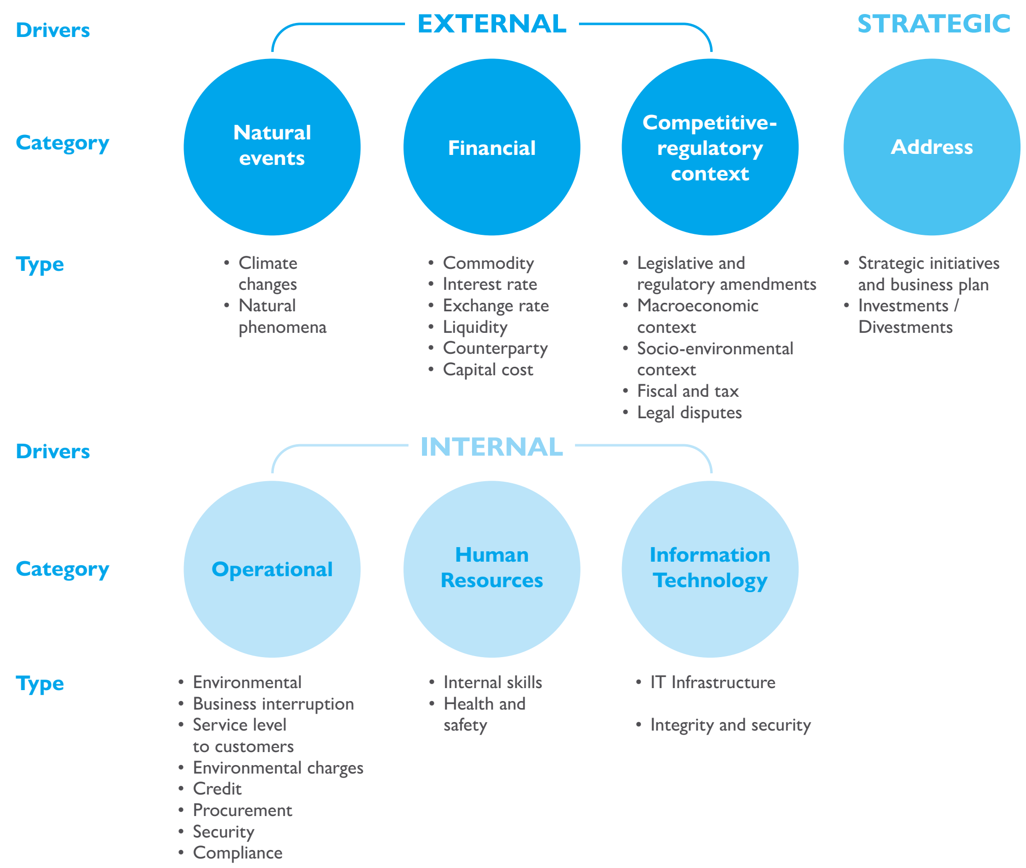
The Group has set up a Risk Management function that uses a risk measurement and detection process on the basis of the ***Enterprise Risk Management (ERM) method*, developed in order to make business risk management an integral and systematic part of the business management processes**. Such activities 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. The ERM process and methodology are formalized in the internal regulatory document *"Enterprise Risk Management Policy"*.

Through the involvement of all corporate structures, **the risk measurement process is regularly 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, identified in the periodic (every 6 months) assessment process, are analyzed by the respective Boards of Directors of the companies. In addition, ERM risk management is integrated with the A2A Group's Quality, Environment, Health and Safety management systems and supports the development and maintenance of the respective certifications in accordance with ISO 9001, ISO 14001 and ISO 45001, as well as the SA8000 standard on social responsibility and ISO 39001 on road safety management.

The ERM 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

Figure 5 The A2A Group risk model



parties, characterized by increasing sensitivity towards environmental, health and safety issues, and sustainability issues more generally. In fact, during each periodic assessment, there are information flows with the organizational structure *Sustainability Development* as well as with the Group's Environment, Health and Safety structure. 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: in fact, **all material sustainability issues are linked to one or more risks identified in ERM**.

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 cover the following types: "strategic and plan initiatives", "climate change", "socio-environmental context", "health and safety", "*commodity*", cost of capital" and "fiscal and taxation"; the expected benefits are both for the Group's reputation and economic and financial.

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 capital, apart from those linked to governance matters, which are given in the table below.

Group Ethics and Integrity

Ethical conduct in the pursuit of Group 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); adoption of mechanisms and procedures for reporting irregularities and lawful conduct; respect for human rights along the entire value chain (suppliers, employees and customers).

RISK FACTORS

- Incompleteness of accounting and non-financial disclosures
- Non-compliance with regulations and/or authorizations that may result in negative image impacts or monetary sanctions or disqualifications
- Issues of ethical conduct of suppliers or sub-suppliers
- Failure to respect human rights by employees, suppliers, customers and partners

OPPORTUNITY FACTORS

- Adherence to the *Cooperative Compliance* regime in the tax field
- Development of SA8000 certification for certain Group companies

MANAGEMENT APPROACH (MA)

MITIGATE

Adoption of the Code of Ethics, valid for all Group companies, the QAS Policy and the related system of internal procedures

Risk monitoring policy through organizational models pursuant to Legislative Decree 231/01.

Adoption of the Reporting procedure for the preparation of the NFD.

Monitoring of the main KPI subject to regulatory compliance.

Adoption of the TCF- Tax Control Framework

Responsible supply chain management with reputational investigation activities and obligations for the supplier to sign the Integrity Pact

Respect for Human Rights by Group employees, by adopting the Code of Ethics

SEIZE

WHAT WE DID

2021 ACTIONS

- Training on the Code of Ethics (page 30)
- Training on Model 231/01 (page 30)
- Adoption of Human Rights Policy (page 30)
- Reporting guidelines, including anonymous reports, for the Group (whistleblowing) (page 31)
- New Responsible Procurement policy (page 203)

WHAT WE ARE DOING

SUSTAINABILITY PLAN ACTIONS

GOVERNANCE

- Sustainability governance
- Responsible procurement
- Compliance/business ethics

Sustainability in Governance

Adoption of a holistic approach that, starting from the assessment of risks and opportunities on sustainability issues, allows sustainable and responsible management of the Group; monitoring of the regulatory evolution related to ESG issues, in order to promptly respond to the requests of the legislator and mitigate risks and seize opportunities arising from the changes; integration of sustainability objectives in the MbOs (correlation between management remuneration and Sustainability KPIs).

RISK FACTORS

- Insufficient integration of ESG issues into corporate governance.
- Resistance to change in processes and systems in implementation of ESG policy integration in governance
- Possible insufficient analysis of environmental and social impacts in the management of new acquisitions
- Failure to identify significant risks related to sustainability issues

OPPORTUNITY FACTORS

- Training, internal communication, and projects to enhance ESG policy integration at all levels of the organization
- Group ERM methodology also aimed at identifying and managing uncertainty scenarios related to ESG issues

MANAGEMENT APPROACH (MA)

MITIGATE

Board induction programmes on sustainability issues.

Board Committee dedicated to Sustainability.

Board Committee for risk control, including climate, environmental, social and compliancerisks.

Strengthening of the risk model by identifying a driver dedicated to ESG issues.

Progressive integration of ESG issues into due diligence processes.

Adoption of the Guidelines of the Internal Control and Risk Management System

Adoption of the Enterprise Risk Management Policy procedure

Integration of sustainability issues in Enterprise Risk Management (ERM) activities.

Constant updating processes between the Group's ERM, Sustainability and HSE functions

SEIZE

WHAT WE DID

2021 ACTIONS

- Induction at CoDir (page 28)
- Monthly communications on sustainability-related activities to the ESG and Territory Committee (page 29)
- New Stakeholder engagement Policy (page 70)
- New Responsible Procurement Policy (page 203)
- Half-yearly information to the Control and Risk Committee on climate risks (page 34)

WHAT WE ARE DOING

SUSTAINABILITY PLAN ACTIONS

GOVERNANCE

- Sustainability in planning and investment processes
- Risk management

PEOPLE INNOVATION

- Trasparency and stakeholder engagement

3

The A2A sustainable strategy

3
The A2A sustainable strategy

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.

The A2A Group is part of 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 Sustainability Makers, 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

Since 2019, A2A has been 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.

3.1 Background information and scenarios

Reference energy scenarios

The phenomenon of global warming is now unequivocal, as confirmed by the latest report "*Climate Change 2021: The Physical Science Basis*[1]" of the *Intergovernmental Panel on Climate Change* - IPCC[2]: *global warming* and the increases observed in greenhouse gas concentrations since about 1750, are mainly attributable to the **anthropogenic greenhouse effect**, i.e. triggered by human activities. The IPCC highlights that the often irreversible changes occurring globally require **necessary, immediate and significant large-scale emission reductions**. Indeed, it is expected that global temperature will continue to increase at least until mid-century, and the probability of exceeding 2°C is real, unless deep reductions occur **in the coming decades**.

In response to these challenges, the *International Energy Agency (IEA)* in *World Energy Outlook (WEO) 2021*[3], highlights how in 2020, despite the lingering consequences of the pandemic, globally, there was solid growth in photovoltaic and wind power installations: annual renewable capacity additions increased by 45% (nearly 280 GW), the highest year-on-year increase since 1999[4], as well as an increase in the sale of electric vehicles. In addition, the *Global Energy Review 2021*[5] confirms that demand for renewable energy grew by 3% in 2020 and is set to increase in all key sectors (energy, heating, industry and transport): estimates suggest that 2021 could set a new *record* by reaching 30% (vs 27% in 2019). Despite the positive signs of a continuation of the *trends* of electrification of consumption and development of renewable generation technologies, the **acceleration is still insufficient to achieve trajectories compatible with the containment of global temperature increases to 1.5 °C compared to the pre-industrial era**.

Within WEO 2021, the IEA presents **four different scenarios** that illustrate future trends in the energy sector, based on a large-scale simulation model designed to replicate the operation of energy markets. The new ***Announced Pledges Scenario (APS)***, presented in WEO 2021, takes into account new declarations by more than fifty countries and the European Union to achieve net zero emissions targets. With full implementation of these initiatives according to the *timeline*, the trajectory of global emissions will see insufficient contraction to achieve neutrality by 2050, leading to an estimated temperature increase of +2.1°C above pre-industrial levels by 2100. In this scenario, it is estimated that the reduction of energy-related emissions will be 40% by 2050, with the largest reduction in the electricity sector, thanks to a significant increase in low-emission energy sources that will account for the majority of additional capacity until 2030, with annual additions of photovoltaic and wind around 500 GW.

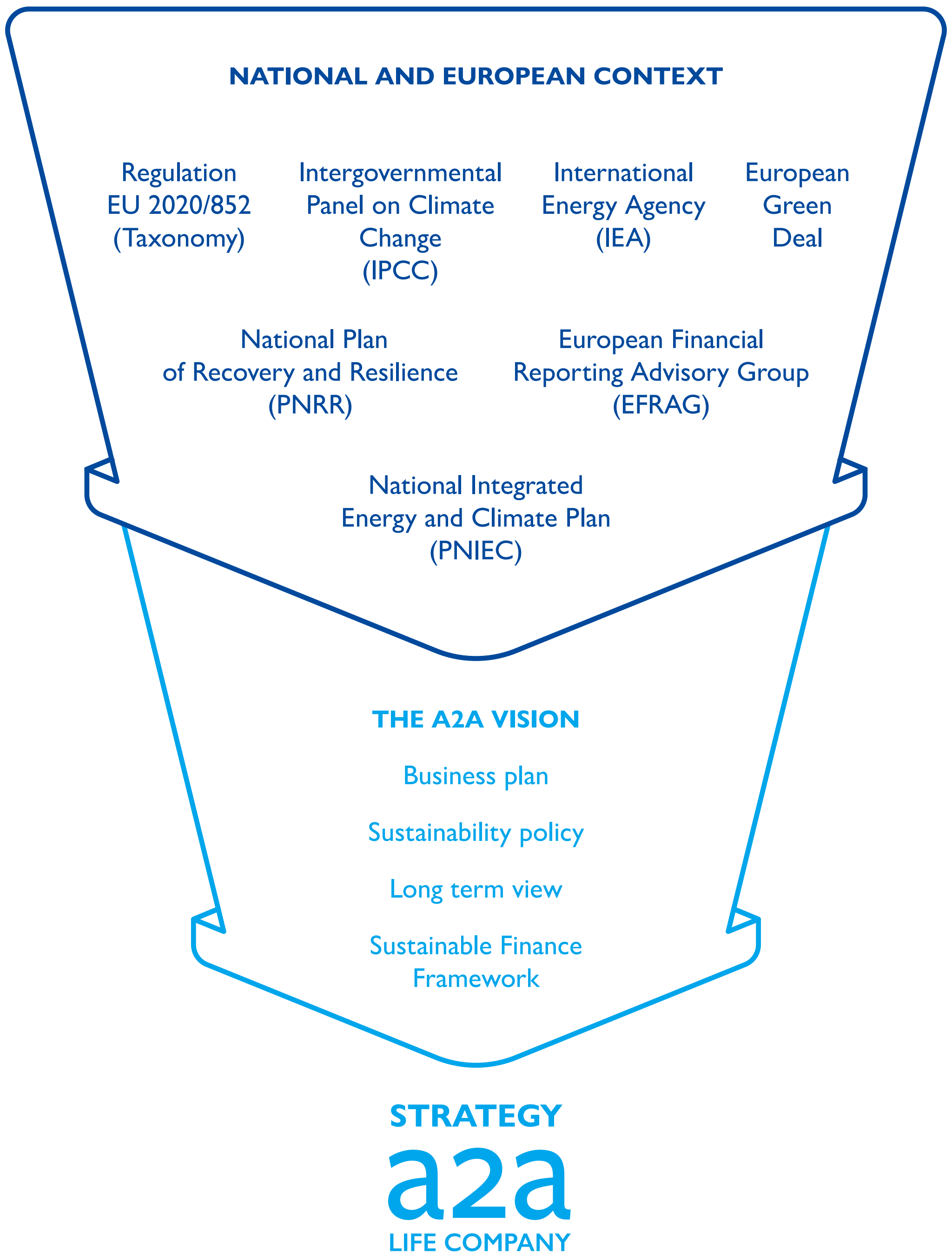
However, analysis of the measures currently in place and being implemented reveals a different picture, illustrated in the ***Stated Policies Scenario-STEPS***, which highlights the necessary and significant efforts that will need to be pursued by governments globally. The accelerating pace of change in the energy sector, sufficient to achieve a gradual decline in emissions, at the same time sees global demand for electricity double by 2050 compounded by continued growth in industry emissions from emerging economies and developing countries, leading to global average temperatures reaching +2.6°C above pre-industrial levels by 2100.

In WEO 2021, the IEA also presents the ***Net Zero Emissions by 2050 (NZE)*** scenario, in which it sets out a rigorous and extremely challenging - but achievable - roadmap to maintain a CO_2 emissions trajectory compatible with a net-zero budget by 2050. In this very ambitious framework, the temperature increase to 2100 compared to the pre-industrial era consolidates under +1.5 °C.

1 *2021, IPCC, Climate Change 2021: The Physical Science Basis*, https://www.ipcc.ch/report/ar6/wg1/
2 Intergovernmental Panel on Climate Change - IPCC is the scientific forum formed in 1988 by two United Nations bodies, the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP) for the purpose of studying global warming.
3 *IEA, World Energy Outlook 2021*, https://www.iea.org/reports/world-energy-outlook-2021
4 *Renewable Energy Market Update 2021, Outlook for 2021 and 2022*, https://www.iea.org/reports/renewable-energy-market-update-2021
5 *Global energy review 2021, Assessing the effects of economic recoveries on global energy demand and CO_2 emissions in 2021*, https://iea.blob.core.windows.net/assets/d0031107-401d-4a2f-a48b-9eed19457335/GlobalEnergyReview2021.pdf

The document also includes the **Development Scenario (SDS)** which - in line with the NZE scenario - reaches the *Sustainable Development Goals* proposed by the United Nations and brings the planetary energy system to a situation of net-zero emissions by 2070. In this scenario, many nations and geographic regions reach net zero emissions early. This scenario is consistent with a limitation of the temperature increase to about 1.65°C, with an associated 50% probability.

Figure 6 A2A's strategy as a result of the national and international context



Concerning to climate risks and opportunities, it is important to understand the physical climate scenario made up of the recorded and expected trends of climate variables and the so-called "transition" scenario, characterized by the set of policies, regulations, consumer guidelines, etc., which are representative of the expected transition towards a low-carbon economy.

Expected Physical Climate Scenario

The rise in global average temperature is already causing important effects, including an **increase in extreme weather events** (heat waves, droughts, heavy rains), rising sea levels, increased forest fires, and declining crop productivity. The climate changes already observed in recent decades may be further exacerbated by expected changes in climate, leading to risks of varying magnitude depending on what can be done to limit global warming. In order to describe the potentially expected future climate, projections are made through the use of climate models - which are based on the assumption that future climate conditions depend on the evolution of climate-altering gas concentrations in the atmosphere which, in turn, depend on the implementation or otherwise of mitigation and reduction policies on a global scale.

The Group's attention has been focused on those **climatic parameters, both average and extreme**, that have a close correlation with its *businesses*. In addition, the results of simulations conducted for different scenarios of GHG concentrations and emission levels, the so-called *Representative Concentration Pathways (RCP)*[6], were considered:

- "Aggressive Mitigation" (RCP2.6), characterized by peak emissions in 2020, steadily decreasing until reaching "zero emissions" by 2100;
- "Stabilization" (RCP4.5), characterized by peak emissions in 2040, decreasing over the years, reaching levels below current levels by 2070; atmospheric concentrations stabilize by 2100 at about twice pre-industrial levels;
- "*Business as usual*" or "No mitigation" (RCP8.5), characterized by growth in emissions at current rates that will lead to atmospheric CO_2 concentrations triple or quadruple pre-industrial levels (280 ppm) by 2100.

The main atmospheric variables and the influence on them by climate change are studied in terms of both average and extreme values.

Analyzing the long-term projections for **average indicators**, all scenarios predict **an increase in temperature** and a **decrease in precipitation** over the whole Italian territory, with a greater seasonal variation. Within this framework, through appropriate planning, companies are potentially able to define actions to mitigate the consequences due to such effects, carefully assessing the risks and impacts involved.

The heightened **unpredictability of extreme weather events**, however, **adds** a factor of **uncertainty** to the effectiveness of expected mitigation measures. Climate extremes, in fact, are considered indicators of potentially dangerous processes, such as heat waves, floods, landslides, droughts, and fires, due to the occurrence of intense weather events. The projections for the **heat wave** indicator show a marked increase on an annual scale (up to 18 days on average) for the summer season for both scenarios RCP4.5 and RCP8.5 over most of the Italian territory. An increase in **heavy rainfall** can lead to important effects on the ground such as, for example, an aggravation of hydrogeological risk. The simulations performed show for both scenarios (RCP8.5; RCP4.5) a general upward trend in maximum daily precipitation. Finally, the **maximum number of consecutive days without rain** highlights the correlation of climate change impacts on agriculture and other productive sectors (e.g. hydropower production), and forces a continuous effort of resilience and adaptation of the drinking water distribution service in order to ensure a constant supply even during periods of water scarcity. Finally, this indicator is also significant of the trend of hazardous events, such as fires.

6 The number associated with each RCP refers to the Radiative Forcing (RF) expressed in units of watts per square meter (W/m^2) and indicates the magnitude of anthropogenic climate change by 2100 relative to the pre-industrial period.

3.2 COP26 and the European and national strategies

In the wake of COP21 in Paris (agreement to keep the average global temperature below 2°), are the negotiations of **COP26**, which took place in November 2021 in *Glasgow* and concluded with the definition of the ***Glasgow Climate Pact*** the reference program for global policies to protect the planet and ecosystems in the coming years. Participants identified new goals, aware of the need to accelerate decarbonization in parallel with increased support for developing countries. For the first time at a COP, coal and fossil fuels were explicitly referenced, outlining that commitments should converge on progressively reducing coal power and moving away from subsidies to inefficient fossil fuels.

The main objectives and commitments that will have to guide the **common approach to climate and environmental protection** aim to promote actions to reduce global warming (e.g. *Nationally Determined Contributions - NDCs*[7], Paris *Rulebook* for the implementation of the Paris Agreement and rules for new carbon markets) with common but differentiated responsibilities among the different States. Another relevant objective concerns the **prevention of the consequences of climate change** in order to contain (or reduce) the damage, increasing the capacity to respond to climate risks and focusing on supporting those who have already been affected by climate change. In this regard the ***Santiago Network*** has the role of catalyst for technical assistance to avoid, minimize and address loss and damage in developing countries ***(Just Transition)***, as well as providing support intended both in terms of finance and technology transfer and *capacity-building* for adaptation and mitigation.

COP26 was the most attended by the *business* world, marking a shift from *top-down* reliance on governments to *bottom-up* action by encouraging the growth of initiatives in this regard. One example is the launch of the ***Glasgow Financial Alliance for Net Zero***, an alliance of 450 banks, pension funds, and insurance companies that will invest over 130 trillion dollars of private capital in activities related to achieving net zero emissions.

Despite all the efforts undertaken, an analysis conducted by the ***International Energy Agency - IEA***, following COP26, shows that current climate commitments will not be sufficient to contain the rise in temperatures below 2°C by 2050: even if all the emission reduction targets set were met in time, global warming would remain at 1.8°C by the end of the century.

The European and national strategies

The European Union is at the forefront of firmly supporting the transition to a clean, efficient and sustainable economy, and acting as a leader through its considerable efforts and highly ambitious legislation, in which multiple sectors and players are involved.

In this regard, in 2019, the European Union approved the **Green Deal**, the EU strategy to achieve carbon neutrality by 2050. A target to reduce CO_2 emissions by at least 55% by 2030 compared to 1990 was approved in December 2020.

This context includes the approval of the ***EU Strategy on Energy System Integration*** which includes measures to progressively build a new energy system that flexibly integrates different energy vectors based on **circularity and energy efficiency**, the increasing use of **electricity from renewable sources** and the **promotion of** renewable **fuels with low emissions**. At the same time, the ***Hydrogen Strategy*** was defined, which places green hydrogen as the foundation for the decarbonization of the *hard-to-abate* sectors, forecasting an increase in the energy *mix* of 14% to 2050, with a target of installed capacity from electrolysers of around 40 GW by 2030.

During 2021, Europe's *Green Deal* was enriched with a new package, the "***Fit for 55***," which updates climate, energy, and transport regulations to strengthen the emissions reduction *target*. Included within are 8 specific references to the revision of the **Renewable Energy Directive** and the **Energy Efficiency Directive**, which increase the share of renewable energy to 40% and the percentage of energy efficiency for final and primary energy consumption to between 36% and 39% respectively by 2030. In addition to decarbonization policies, another key pillar for fostering a full green transition is the circular economy, which aims for a systemic transformation in the way we produce and consume. In fact, if 55% of climate-changing emissions are attributable to the energy sector, the **remaining 45% is associated with the production of products**[8].

At the national level in 2021, the **National Recovery and Resilience Plan - PNRR** was presented, which is developed around three strategic axes - **digitalization and innovation, ecological transition and social inclusion** - with planned resources of 191.5 billion euro.
The main lines of investment will focus on **accelerating energy efficiency and electrification of consumption**. Achieving decarbonization goals sees the **electric distribution grid** as an enabler and essential to the transition, requiring it to be **fully resilient** to climate change, as well as **digital** and **flexible** to enable and accommodate increased generation from renewable sources.
A relevant role is also reserved to **hydrogen**: Italy, in fact, is aligned with the European strategy for hydrogen and intends to pursue this opportunity through the development of *flagship* projects for the use of hydrogen in *hard-to-abate* industrial sectors, the creation of ***"hydrogen valleys"*** and enabling its use in heavy transport and in some railway lines.

The PNRR is part of a broader framework provided by the **National Integrated Energy and Climate Plan - PNIEC** and the **Long-Term Strategy for the Reduction of Greenhouse Gas Emissions**, both of which are being updated and strengthened, reflecting the level of national ambition. While the PNIEC presents a vision to 2030, **Italy's Long-Term Strategy for the Reduction of Greenhouse Gas Emissions**, published in January 2021, extends the goal of achieving carbon neutrality to 2050, through the reduction of energy consumption by 40% from current levels.

Figure 7 Distribution of PNRR resources by objectives

7 NDCs are the national-level mitigation actions, to be submitted every five years, with increasing ambition, specifying gases and sectors covered.

8 *The Ellen MacArthur Foundation, Completing the Picture - How the circular economy tackles climate change, 2021.*

3.3 The 2021-2030 Strategic Plan

Long Term Market Outlook

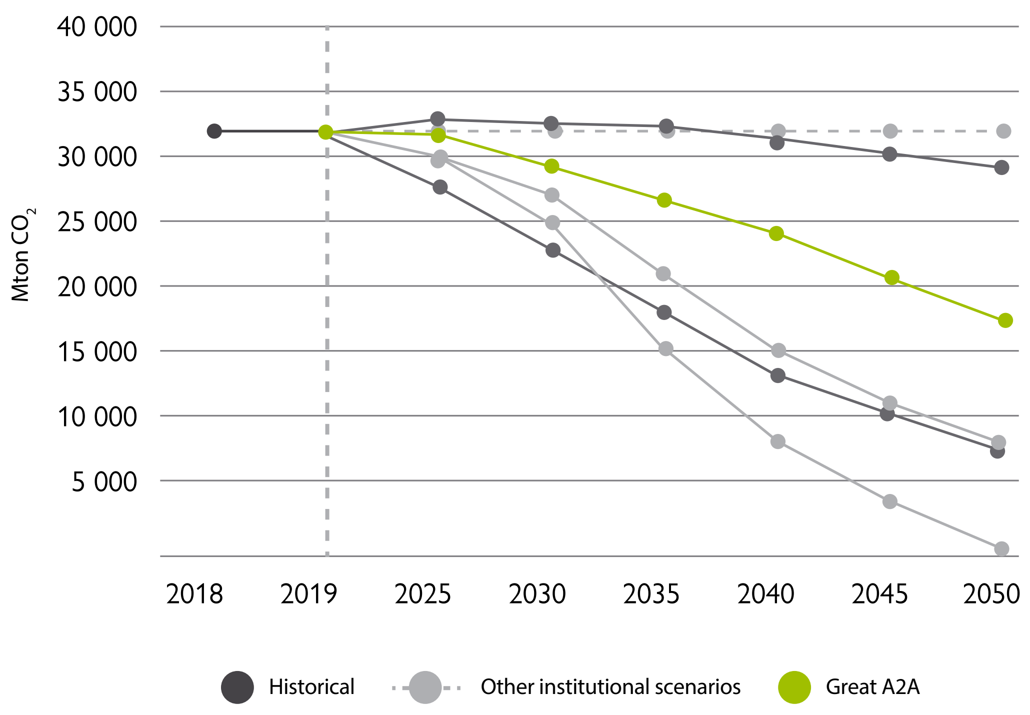
The scenario implemented by A2A called *"GREAT - Global Realization Transition"* takes into account a very pronounced demographic growth by 2050, in line with the United Nations medium-variant fertility scenario, with a world population of over 9.7 billion inhabitants on the planet and an increase of over 10% in the rate of global urbanization. The gradual realization of the criticality of the climate issue and global interventions will allow total energy demand to decline over the long term, with primary energy demand per capita declining by about 24% over the period 2019 - 2050. The electric carrier will continue to be the preferred carrier for developing economies, with a substantial growth rate in demand for electricity.

This scenario, which sees the European Union reaching its stated *net-zero* emissions target by 2050, **shows a flex for the global CO_2** emissions figure after 2030. The trend follows with an increase in temperatures to 2100 of about +2 °C over the pre-industrial era.

The European Union, as a driving force of the global energy transition, sees a combination of significant penetration of renewable sources in its *energy mix* (85% *share* of renewables to 2050) and strong energy efficiency and consumption containment (CAAGR to 2050 of primary energy demand of about -1.4%).

However, the *GREAT* scenario falls somewhere between the "*business as usual*" scenarios and the scenarios that call for a radical change to achieve the zero emissions goal. Comparing the emissions trajectory for the various scenarios shows that the *GREAT* scenario does not include the achievement of global carbon neutrality, but only a substantial reduction in emissions. Residual emissions for ***hard-to-abate* sectors** (such as, for example, the road transport, aviation, chemical, construction materials manufacturing, and shipping sectors) will be **offset through CO_2** removal processes. It should be noted that at European level, to achieve the objectives set, an important and aggressive *policy* intervention will be necessary, aimed at **energy efficiency** of the existing building stock, also binding new constructions. For example, **Italy**, in order to contribute to the European objectives, should double the **annual rate of building renovation** in 2030 (from 0.6 to 1.2%) and increase to 2% in 2050.

Figure 8 GREAT A2A scenario compared with global scenarios



The scenario of residential, tertiary and services **final consumption** at 2050 for Italy foresees a *mix* composed of **52% by electricity, 11% by heat, 33% by renewables and biofuels and 4% by hydrogen**. Regarding the latter energy source, demand is expected to increase with a CAGR of 7.8% to 2050. From 2025 onwards, the introduction of electrolyzers for the production of green hydrogen is foreseen; the target declared by the Italian Government of 5GWh by 2030 will be reached with a 5-year delay; however, a production of green hydrogen of about 2 million tonnes by 2050 is estimated.

Regarding the scenarios on **gas consumption** in Italy, **a strong reduction in demand is expected from 2030**, as a consequence of the introduction of hydrogen and electrification of consumption; by 2050, gas demand will be reduced by 73% compared to the average of the years 2015-2019. Scenarios for the development of biomethane production in Italy predict 1 Gcm of biomethane production post-2025, and thanks to new *greenfield* plants and initial reconversions, this will rise to around 4 Gmc in 2030.

By 2050, the Italian **energy** demand scenario foresees a production of 513.8 TWh, 41% of which will be driven by civil consumption and 27% by industrial consumption. **Electricity supply**, on the other hand, includes the *phase-out* of coal- and oil-fired thermoelectric plants, offset by an increase in new capacity of next-generation CCGT plants to be installed between 2022 and 2028. In summary, by 2050, **80% of installed renewable capacity will be renewable**, 11% thermoelectric and 9% chemical storage.

The A2A Business Plan

On January 27, 2022, A2A approved the update of its **2021-2030 Business Plan**, which laid the foundations for achieving **zero** direct and indirect (both Scope ***1*** and ***Scope*** **2**) **emissions** generated by the Group by 2040 and strengthened the *businesses* that can contribute to the country's ecological transition. **Circular Economy and Energy Transition** are confirmed as the two pillars of the Plan that encapsulate the Group's concrete actions, to which all *Business Units* (Energy, Waste and *Smart Infrastructures*) contribute. To achieve the objectives of the Plan, A2A has included in the new update of the Plan 4 aspects: **the development of biomethane, the creation of *Green Hydrogen Valley*, the expansion of the portfolio of renewables and the relaunching of the ambition of *e-mobility*.**
Thanks to the increase in the development of renewable energies, carbon *capture* solutions and *phase-down* of *carbon intensive businesses*, the Group will be able to achieve the decarbonization targets set. This virtuous path envisages the improvement of the Group's emission factor to 2030 with respect to the target approved by the *Science Based Targets initiative*[9], resulting in a 49% reduction in A2A's specific emissions compared to 2017.

Circular Economy

The Group has further strengthened its commitment to activities aimed at closing the waste cycle, recovering waste heat for the benefit of district heating and the integrated water cycle, with investments up 18%. With 7 billion euro at its disposal, the Group plans strategic actions aimed at building new material recovery plants for a total of 2.2 million tonnes by 2030. In the wake of the objectives of reducing its carbon footprint, A2A wants to make available *green* solutions for the **mobility** sector such as green hydrogen and bio-LNG, developing more than 60 biomethane plants of which at least 5 with liquefaction to obtain bio-LNG, while for the production of green hydrogen it will be possible to exploit continuously produced energy sources such as that of waste-to-energy plants.

In the **water cycle**, the Group's objective is to contribute to overcoming EU infringements by reducing linear water losses by 23% (m3/km/day) and developing new purification capacity. In district heating, the use of energy recovered from thermal waste or from renewable sources will be doubled over the plan.

Energy Transition

The ongoing climate crisis and challenging global goals related to decarbonization and emissions reductions call for an acceleration of the energy transition. A2A is responding to this urgency, increasing investments by 15% with an EBITDA *target* of 1.7 billion euro by 2030, anticipating the growth of the portfolio of *green* plants with the installation of 20% of new renewable capacity by 2023 (compared to 8% in the previous Plan), thanks to a balanced *pipeline* between wind and solar.

The Group also confirms its commitment to the **electrification of consumption**, spreading a culture in support of responsible consumption. To ensure the **flexibility of the national electricity system**, A2A will develop a *mix of* solutions including a new gas combined cycle *blending*-enabled with hydrogen, a new *gas peaker* (already authorized), electrochemical *storage* and 4 CCGT upgrades (already authorized) contributing to the increase of 1.7 GW in new flexibility to 2030.

In the ***E-mobility*** segment, A2A quadruples the *target* for the installation of charging points for electric vehicles, through the installation of 24 thousand electric charging points by 2030.

The social dimension of the new Strategic Plan: a path towards Just Transition

The *Just* Transition to a *Net Zero* World implies the need to integrate social dimensions, such as employment, decent work and community protection, into the implementation of climate actions, with the ultimate goal of leaving no one behind.

During COP26, more than 30 nations (US, UK, all 27 EU member states, Norway, Canada, and New Zealand) signed the *Just Transition Declaration*, whereby signatories pledge to advocate for this transition to be fair and just to all. The European Commission, precisely in this logic, has defined a tool, the *Just Transition Mechanism*, which is expected to mobilize at least 55 billion euro in the period 2021-2027 and aimed at mitigating the socio-economic impact of transition, focusing on the regions, industries and workers who will face the most pressing challenges.

In this context, the role of companies is extremely powerful and relevant, since the social dimensions that the topic of *Just Transition* raises are inherent in the work of companies: decent work, responsible management of the supply chain, support for the welfare of the communities in which they operate.

9 216 gCO_2/kWh in the current Plan vs 230 gCO_2/kWh certified SBTi

The update of the Strategic Plan shows how A2A has strongly integrated into its *business* strategy not only the commitment to the decarbonization of its activities and *net zero*, but also the social dimension, aligning itself to the *Just Transition* dimensions expressed in the *Just Transition Declaration*.

People represent for A2A a fundamental resource for an effective grounding of the Strategic Plan. For this reason, the Group has projected about 7,000 new hires by 2030, 50% of whom are women. The issues of enhancing diversity and inclusion are also central to the Plan update: by 2030, A2A aims to increase the presence of women in roles of responsibility*(management* and board members of Group companies), as well as including all employees with disabilities in enhancement projects. A2A is also committed to promoting health, through initiatives aimed at the entire corporate population, and to increasing the knowledge and awareness of employees on sustainability issues.

With reference to the support of communities and the promotion of dialogue between governments, companies and all those involved in the transition to the *green economy*, A2A has set out to increase the number of areas involved in *multi-stakeholder engagement* initiatives *and to* develop impact assessment analyses of the Group's activities in the areas affected by the projects included in the Strategic Plan. Moreover, the Group, as part of the activities envisaged in the Plan, also plans environmental compensation works and activities with a strong social character, precisely to protect the territories in which it operates.

Finally, in recent years, A2A has been increasingly focusing on the sustainability of the *supply chain*, also through training and supplier involvement initiatives on issues linked to environmental and social aspects. In particular, by 2030, the Group has set itself the ambitious goal of assigning 90% of its order to suppliers assessed with integrated ESG *scoring* and of increasing the weight of sustainability criteria in *vendor rating* processes to 30%.

3.4 The Sustainability Plan

Fully in line with the revision of the Business Plan, a process has also been launched for the Sustainability Plan, seeking to update the goals with the challenging ten-year time frame of 2021-2030. Thanks to the strengthened conviction that the integration of sustainability in planning is one of the strategic elements for the creation of long-term value, the updating of the Strategic Plan saw cross-functional collaboration between the Sustainability Planning and Control and Strategy departments for the definition of macro trends and objectives up to 2030. In addition to the sustainability objectives already included in the Strategic Plan, the Sustainability Plan was subsequently implemented as an *addendum* to define all the other objectives to be included in the "enabling levers": Digital, People and Governance.

The Supplement to this document includes the table showing all 113 KPIs of the 2021-2030 Sustainability Plan.

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

CIRCULAR ECONOMY

SDG	ACTION	KPIs	2021	2023	2026	2030
6, 12	**WATER** Implement actions to reduce water consumption in capture and distribution processes, reduce water dispersion and improve the quality of water returned to the environment	Linear water leaks (m3/km/days) (average)	23.1	21.8	19.9	18.7
		Total population served (Treatment) (millions)	0.6	0.7	1.0	1.8
12, 13	**WASTE RECOVERY AND TREATMENT** Improve the recovery process of waste collected (including through their transformation into energy) and promote separate waste collection	Municipal waste differentiated collection rate (%)	71%	72%	75%	77%
		Waste sent for material recovery (Mt)	0.9	1.3	1.7	2.2
		Collected municipal waste sent to landfill (% of total)	0%	0%	0%	0%
12, 13, 17	**REDUCTION POLICIES WASTE PRODUCTION** Reduce waste production through a prevention, reduction and reuse policy	Partnerships launched for circular economy initiatives (number)	10	18	26	31
7, 9, 13	**DISTRICT HEATING** Help reduce the environmental impact of the cities, paying close attention to air quality, implementing district heating and district cooling	Energy from heat recovery/renewables (TWh)	1.5	1.7	2.4	2.9
		CO_2 avoided thanks to TLR (kt/y)	-323	-332	-477	-595

[1] KPI included in the A2A Sustainable Finance Framework: 1.4Mt by 2024, 1.7Mt by 2026.

ENERGY TRANSITION

SDG	ACTION	KPIs		2021	2023	2026	2030
7 AFFORDABLE AND CLEAN ENERGY 13 CLIMATE ACTION	RENEWABLES Increase the proportion of energy produced from renewable sources	Total installed RES capacity (GW)[2]		2.2	2.8	3.7	5.9
		Share of RES in total net production		30%	37%	38%	63%
11 SUSTAINABLE CITIES AND COMMUNITIES 13 CLIMATE ACTION	EMISSIONS* Develop actions aiming to reduce the environmental footprint, like direct and indirect emissions of greenhouse gases	Scope 1 emissions (gCO_2eq/kWh) - perimeter in line with target approved by the SBTi[2]		332	322	283	216
		CO_2 avoided by promoting electric mobility (kt cumulated 21-30)		-	-19	-129	-582
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 11 SUSTAINABLE CITIES AND COMMUNITIES	*SMART GRIDS* Develop solutions to offer a better information access infrastructure (Smart Grid) and improve the network resilience and to contribute to the growing electrification of consumption	User interruptions in LV - SAIFI (#/year/POD)		1.61	1.36	1.04	0.97
7 AFFORDABLE AND CLEAN ENERGY 11 SUSTAINABLE CITIES AND COMMUNITIES	GREEN ENERGY – END-USE ENERGY EFFICIENCY Contribute to the reduction of emissions of end customers through the sale of green energy and the development of energy efficiency measures for public and private real estate assets	Green energy sold to the market (TWh)		5.0	7.2	11.2	17.4
		Loyal customers with energy efficiency services of total		1.9%	4.5%	11%	20.3%

1 KPI included in the A2A Sustainable Finance Framework: 3.0 GW by 2024. K.

DIGITAL

SDG	ACTION	KPIs	2021	2023	2026	2030
9, 11	**QUALITY** Maintain high quality standards of the services supplied by keeping high customer satisfaction levels	Number of supplies bollett@mail Market BU (millions)	1.3	2.3	3.6	4.9
		Digital contacts of total customers	14%	21%	29%	41%
9, 17	**INNOVATION AND R&D** Develop investments in research and development, increasing the number of partnerships with international research centres and universities. Develop new technologies, patents for technological innovation.	Initiatives of *crowd sourcing* of ideas and solutions (e.g *scouting, innovation brokers*, etc.) to address sustainability goals	8	12	15	15
9	**ICT - *CYBER* & O.T. *SECURITY*** *Projects of infrastructural improvement and improvement of IT/OT/IoT/IIoT platforms and applications.* Adoption of defence mechanisms and protection against logical, viral attacks	Achievement *Cyber Resilience* ISO 22301certification	BY 2022			

GOVERNANCE

SDG	ACTION	KPIs	2021	2023	2026	2030
8, 13	**SUSTAINABILITY IN PLANNING AND INVESTMENT PROCESSES** Inclusion of ESG logic in investment planning and evaluations	Sustainable debt of total (%)	44%	50%	70%	80%
8, 13	***ESG RATING*** Participation in *assessments* to evaluate *the* Group's *ESG performance* , and implementation of activities to continuously improve the *rating*	Improve in at least 2 ethical indexes per year	5	>2	>2	>2
8	***BUSINESS ETHIC*** Proactively promote a culture of compliance and respect for the main national and international guidelines on ethical issues among the Group's*stakeholders*	ISO37001 Certification (Anti-corruption)	BY 2024			
		Employees involved in training on the Code of Ethics and other ethical-conduct documents	82%	>80%	>80%	>80%
8, 5	***RISK MANAGEMENT*** To verify that the system used to identify, manage and prevent business risks adequately covers sustainability risks (and, in particular, social-environmental risks), also in organisational terms	Identify ERM risks on all material issues Identification and assessment of risks related to the *Green Deal*	100%	>80%	>80%	>80%

PEOPLE INNOVATION

SDG	ACTION	KPIs	2021	2023	2026	2030
8	**HEALTH AND SAFETY** Consolidate the training and prevention plan to reduce injuries and develop new initiatives for worker health and safety	Accident Frequency Index (FI) with gate on Severity Index (SI) calculated taking into account only the first prognoses	20.0	17.67	14.99	12.60
		Number of accesses to health promotion initiatives	5,100	7,300	10,600	15,000
8, 13	**MbO AND *PERFORMANCE MANAGEMENT*** Add sustainability objectives to the MbO sheets (correlation between Management remuneration and Sustainability KPIs)	Employees with formally assigned objectives (% of total employees)	12%	15%	50%	100%
5, 17	**WELFARE, DIVERSITY AND EQUAL OPPORTUNITIES** 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 managers*	24%	25%	28%	35%
		Disabled employees involved in specific support/inclusion projects (% of total employees belonging to protected categories)	10%	35%	80%	100%
4, 17	**TRAINING** 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 sustainability and SDGs (% of the total)	60%	80%	100%	100%
8, 13	**RESPONSIBLE PROCUREMENT** 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	17%	20%	25%	30%
17	**TRANSPARENCY AND STAKEHOLDER ENGAGEMENT** Develop integrated reporting and an adequate information system for planning and control Develop external stakeholder engagement activities, strengthening the relationship with the territory	Territories involved in *multi stakeholder engagement* initiatives / year	7	5	8	10
13, 4, 17	**EDUCATION** 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 (*)	44,000	26,000	30,000	35,000

(*) Excluding school visits to the plants.

3.5 Risk management and climate-related opportunities

The A2A Group has a system in place for identifying, assessing and managing climate change risks and opportunities that is integrated into the Group's Enterprise Risk Management process.

Climate risks and opportunities are identified on the basis of three time horizons: short-term, corresponding to the current and next year; medium-term, corresponding to 5 years; and long-term, corresponding to 10 or more years, until 2030. The choice of these horizons was based on the analysis of the climatic, economic, energy and regulatory reference context. Moreover, in accordance with the ERM Policy and the same risk definition (ISO 31000), **the short/medium and long term were defined in such a way that climate risks can be identified and assessed in relation to the objectives of the Business Plan and the key stability objectives set by the Group**. The risks identified for the A2A Group are the result of a materiality analysis carried out considering the risk categories outlined by the recommendations of the **Task Force on Climate-related Financial Disclosures (TCFD)**, the businesses operated and the services offered by the Group, as well as the risks already included in the Group's risk profile.

Climate risks and opportunities for the A2A Group

The following table describes the climate risks and opportunities for the A2A Group, identified in accordance with both the Task Force on Climate Related financial Disclosure (TCFD) recommendations and the Group's Risk Assessment methodology and process. For each climate issue, the line of *business* affected, the classification according to the "TCFD" categories, the time horizon over which the risk or opportunity may occur are indicated. In addition, the impacts to the Group and the management strategy are described.

Figure 9 Task Force on Climate Related financial Disclosure[10]

Table note: time horizon

B short term; M medium term; L long term

Risk/ opportunity Code	TCFD classification	Risk/ opportunity Theme	*Assumptions of evaluation of the risk/opportunity*	Impact[28] and probability[29]	Management approach
CC1	***Physical*** *Chronic* B M L	**Change in the precipitation regime** Risks and opportunities related to changes in the availability of water resources at the Group's main hydroelectric plants.	Reduction/increase in production for each of the Group's hydroelectric poles compared to Business Plan forecasts - due to an unfavourable/ favourable change in average rainfall - valued using Business Plan energy scenario price values. Identification and development of statistical predictive assessment models about the possible variability of volumes. A possible favourable variation is considered only for hydroelectric poles located in Northern Italy.	Impact Lower/higher volumes and margins of hydroelectric production. Economic and financial risk: Medium. Economic and financial opportunity: Medium. Probability Possible	Improved precipitation and outflow forecasts. Analysis and modelling for short and medium term planning of hydroelectric plants. Presence of hydroelectric plants with different characteristics in terms of exploitation of water resources that are well distributed throughout the Italian territory. The **Business Plan** includes investments to optimize the use of the derived water resource for hydroelectric purposes (e.g., pumping). These CapEx for RES generation qualify as climate change mitigation under the EU Taxonomy. **Capex: about 20 M€**

10 The planned risk management investments shown in the table in Figure 10 have the effect of mitigating the economic-financial and/or reputational risk for the A2A Group. These investments fall wholly or partly within the EU taxonomy of Green investments for climate change mitigation or adaptation. The statement shows all investments, explaining whether they also fall within the EU taxonomy.

Risk/ opportunity Code	TCFD classification	Risk/ opportunity Theme	*Assumptions of evaluation of the risk/opportunity*	Impact[11] and probability[12]	Management approach
CC2	***Transition*** *Policy and Legal* M L	**Competition on water use** Risks of increasing the share of water that hydroelectric plants will be required to release to make it available for irrigation and drinking water uses. Risks of proliferation of third-party initiatives for the exploitation of the water resource over which A2A has rights.	Reduction/increase in production for each of the Group's hydroelectric poles compared to Plan forecasts - as a result of any change in agreements/ conventions - valued using the price values of the Business Plan energy scenario.	Impact Lower volumes and margins of hydroelectric production. Economic and financial risk: Medium. Probability Possible	Dialogue with *stakeholders* to reach agreements and stipulate conventions to protect A2A's interests, while respecting the needs of the local areas. The **Business Plan** includes investments to turbine the water before it is released for other uses. These are investments in RES and therefore fall under climate change mitigation under the EU Taxonomy for *Green* Investments (Regulation 2020/852). These are investments in RES and therefore fall under climate change mitigation under the EU Taxonomy for Green Investments (Regulation 2020/852). **Capex: about 20 M€**
CC3	***Transition*** *Policy and Legal* B M L	**Emission allowances EUAs** Risks/ opportunities related to changes in the price of emission allowances other than those assumed in the Business Plan	Sensitivity analyses are carried out which estimate the change in the A2A Group's EBITDA as a result of a unit price variance of the EUA (+/-1 €/t). Sensitivities are made with different assumptions about the correlation between the EUA price and the single national electricity price (PUN). The price trends corresponding to the minimum and maximum values forecast by *info-providers* in the 2022-2030 time horizon are considered, comparing them with the price forecasts of the Business Plan energy scenario.	Impact Lower/higher margins of thermoelectric production. Economic and financial risk: High. Economic and financial opportunity: High. Probability Somewhat probable	Monitoring of changes in the price of energy *commodities* in accordance with the *Energy Risk Policy*. The decarbonization process makes it possible to mitigate the Group's exposure to this risk over the long term.

11 For economic-financial risks and opportunities, the impact scales refer to impacts on EBITDA (downside for risks and upside for opportunities)
- Low: less than 5 M€/y
- Medium: between 5 M€/y and 20 M€/y
- High: more than 20 M€/y

12 Probability: <10% Somewhat probable; =>10%; =<50% Possible; > 50% Likely.

Risk/ opportunity Code	TCFD classification	Risk/ opportunity Theme	*Assumptions of evaluation of the risk/opportunity*	Impact[13] and probability[14]	Management approach
CC4	***Physical*** *Chronic* ***Transition*** *Market* B M L	Thermal energy demand for heating Risk of unfavourable trends in customer demand for thermal energy, resulting from: - the occurrence of higher than expected winter temperatures - the deployment of energy efficiency systems - the deployment of heat pumps.	For at-risk amounts, we consider the lower thermal energy sales that could occur as a result of abnormal winter and fall temperature trends and/or milder than those projected in the Business Plan scenario. Degrees Day (DD) forecast values are estimated based on statisticalevaluations performed on historical data, leading to intercept possible trends.	Impact Lower/higher margins of thermoelectric production Economic and financial risk Medium Probability Likely	Studies on: - policies to support investments in TLR networks - heating technology alternatives; - *Stakeholder* dialogue for environmental objectives The Buisness Plan includes - development of district heating networks; - projects for the recovery of "heat waste" and revamping of existing plants, to optimize energy costs and maintain competitiveness. Investments of around 600 M€[15] for risk mitigation and *business* development (of which 24 M€ for climate change mitigation within the scope of the EU Taxonomy.
CC5	***Transition*** *Policy and Legal* *Market* M L	Energy efficiency systems Opportunity to increase demand for energy efficiency solutions by Public Administration and *business* and/or *retail*customers.	The opportunity is estimated as a forecast of Plan EBITDA related to planned investments in the development of the energy efficiency *business*.	Impact Possibility of margins from the development of energy efficiency service offerings such as equipment replacement and/or building upgrades. Economic and financial opportunity High "High" impact and margins already included in Strategic Plan forecasts. Probability Likely	Studies on the applicability of funding calls and how to access incentive systems; District heating services that create synergies with new work on public or private buildings. Management of a consolidated territorial database for the location of interventions and the study of synergies. The Business Plan envisages the development of energy efficiency services in the civil, industrial, tertiary and PA sectors. The investments qualify as climate change mitigation under the EU Taxonomy. **Capex: about 530 M€**

13 For economic-financial risks and opportunities, the impact scales refer to impacts on EBITDA (downside for risks and upside for opportunities):
• Low: below 5 M€/y • Medium: between 5 M€/y and 20 M€/y • High: above 20 M€/y
14 Probability: <10% Somewhat probable; =>10%; =<50% Possible; > 50% Likely.
15 Partly subject to obtaining financing through the Recovery Fund

Risk/ opportunity Code	TCFD classification	Risk/ opportunity Theme	*Assumptions of evaluation of the risk/opportunity*	Impact[16] and probability[17]	Management approach
CC6	***Physical*** *Acute* B M L ***Transition*** *Technology* M L	Resilience of electricity distribution networks Risk of interruptions of electricity distribution service caused by: - peaks in demand for summer air conditioning - flooding caused by heavy rains - increased energy demand resulting from the electrification of services. Opportunities to make remunerated investments and participate in programmes defined by ARERA aimed at increasing the resilience and flexibility of distribution networks.	For the risk, the reputational impact is considered prevalent The opportunity is estimated as a forecast of Plan EBITDA related to planned investments to maintain and develop the electricity grid.	Impact Reputational impacts in case of prolonged service interruptions. Penalties for failure to meet minimum service continuity levels. Economic and financial risk Medium Possibility of adhering to a new bonus mechanism granted by ARERA to encourage the implementation of specific interventions to increase the resilience of the electricity grid. Economic and financial opportunity High Risk probability Possible Opportunity probability Likely	Creation of a working group for "Milan heat wave preparedness" to coordinate initiatives for the prevention and reduction of power failures Collaboration with RSE SpA to study the aging of joints and their resistance to stresses such as heat, cold and load. Business plan with maintenance and development of the electricity grid to allow for the progressive electrification of energy services. These investments, as they enable the implementation of the energy transition, are configured as climate change mitigation within the EU Taxonomy. **Capex: about 1,600 M€** The update of the Resilience Plan 2022-24 for a value of about 13 M€, which is an integral part of the above mentioned 10-year plan, is aimed at reducing the risks arising from climate change, configuring itself as an activity of adaptation to climate change within the EU Taxonomy.

16 For economic and financial risks and opportunities, the impact scales refer to impacts on EBITDA (downside for risks and upside for opportunities)
• Low: less than 5 M€/y
• Medium: between 5 M€/y and 20 M€/y
• High: more than 20 M€/y
17 Probability: <10% Somewhat probable; =>10%; =<50% Possible; > 50% Likely.

Risk/ opportunity Code	TCFD classification	Risk/ opportunity Theme	*Assumptions of evaluation of the risk/opportunity*	Impact[16] and probability[17]	Management approach
CC7	***Physical*** *Chronic* M L	Scarcity of water for drinking water use Risk of failure to continuously supply drinking water in the event of prolonged periods of drought. Opportunities to make remunerated adaptation investments.	For the risk, the reputational impact is considered prevalent The opportunity is estimated as a forecast of Plan EBITDA related to planned water scarcity hazard adaptation investments.	Impact Reputational impact in case of interruptions of water supply service for prolonged periods and/or on significant portions of territory. Economic and financial risk: Medium Remuneration of risk management investments with predetermined rate within ARERA regulated *business*. Margins already included in Business Plan forecasts. Economic and financial opportunity: Low Risk probability Possible Opportunity probability Likely	Mapping of leaks from aqueducts in order to identify the most critical parts Studies to use – in conditions of scarcity/emergency – freshwater reserves (lakes) to supplement upstream sources Participation in the *Water Stressed Areas* Project. The **Business Plan** includes investments to: - reduce leakage from the water network - implement capture from new sources of supply - interconnect aqueducts. These investments, since they reduce the risks arising from possible drought phenomena, are configured as **climate change adaptation** activities within the EU Taxonomy. **Capex: about 165 M€**

Risk/ opportunity Code	TCFD classification	Risk/ opportunity Theme	*Assumptions of evaluation of the risk/opportunity*	Impact[16] and probability[17]	Management approach
CC8	***Physical*** *Acute* B M L	Extreme weather phenomena Risks to Group assets and business continuity as a result of risks arising from acute physical weather hazards (e.g. floods, landslides, water bombs, tornadoes, etc.).	The risk has been estimated starting from the damage scenarios described in the assessment reports drawn up by the insurance broker, the vulnerabilities of the plants and the direct and indirect damages provided for by the insurance contract.	Impact Direct damage to Group assets. Indirect damage due to the need to interrupt production activities. Economic and reputational impacts linked to non-optimal management of such events. Economic and financial risk: Low Probability Possible	Insurance contracts with extended coverage also for damage from natural phenomena. Improvement plans in terms of *loss prevention*, shared with the insurance broker. Emergency plans to promptly and optimally manage acute weather phenomena. Design and realization of the plants carried out taking into account the characteristics of the territory and the local climatology.
CC9	***Market* (financial markets)** M L	*Sustainable Finance Framework* **Opportunity for the Group to support with sustainable finance instruments its strategy of funding "green" investments outlined in the Business and Sustainability Plan.**	The reputational impact is considered prevalent.	Impact Advantages on economic conditions in the subscription of financing instruments, in connection with the achievement of sustainability objectives. Reputational benefit, particularly in relation to institutional investors, investment funds, shareholders, etc. Economic and financial opportunity: High Probability Likely	Establishment of the *Sustainable Finance* Committee Definition of an investment classification system in accordance with international standards and the relevant Taxonomy. Issuance of "*Green Bonds*"[18] or "*KPI-linked Bonds*".

16 For economic and financial risks and opportunities, the impact scales refer to impacts on EBITDA (downside for risks and upside for opportunities)
- Low: less than 5 M€/y
- Medium: between 5 M€/y and 20 M€/y
- High: more than 20 M€/y

17 Probability: <10% Somewhat probable; =>10%; =<50% Possible; > 50% Likely.

18 *Green Bonds* have the same financial characteristics as a classic bond. The distinctive aspect is the use of the proceeds from the bond issue in the context of so-called "Environmental Projects", which must be described in detail in the legal documentation of the bond (*Green Bond Framework*).

Risk/ opportunity Code	TCFD classification	Risk/ opportunity Theme	*Assumptions of evaluation of the risk/opportunity*	Impact[19] and probability[20]	Management approach
CC10	***Physical*** *Chronic* M L	Plant cooling Risk of plant operation limitations due to difficulty in adequately cooling the thermoelectric cycle in the event of rising summer temperatures of waterways/canals/ sea, heat waves, and periods of drought.	The risk was estimated based on historical events and the need for more in-depth forecasting as well as adaptive options.	Impact Lower volumes and margins of thermoelectric production. Economic and financial risk Low Risk probability Somewhat probable	Adoption of weather forecasts when bidding on plant availability in the market. Continuous temperature monitoring systems for cooling water withdrawn and discharged. All-risk insurance coverage that also covers direct and indirect damage caused by natural phenomena.

19 For economic and financial risks and opportunities, the impact scales refer to impacts on EBITDA (downside for risks and upside for opportunities)
- Low: less than 5 M€/y
- Medium: between 5 M€/y and 20 M€/y
- High: more than 20 M€/y

20 Probability: <10% Somewhat probable; =>10%; =<50% Possible; > 50% Likely.

How risks and opportunities were assessed

In order to carry out the economic-financial assessment of climate risks, the *Enterprise Risk Management* structure and the *Risk Owner* share the impact estimation model, also relying on the *Risk Specialists*, where appropriate. Once the model is shared, quantification is done with the support of management control that provides the necessary *budget* and business plan values **(see also *Governance*** and Climate Risk Management diagram in chapter 2).

IN-DEPTH ANALYSIS: RISK OF SCARCITY OF WATER FOR DRINKING WATER USE

The Group companies that operate in the integrated water service are exposed to the risk of interruptions to the drinking water distribution service, caused by the **potential scarcity of water** following any prolonged periods of drought. The consequences of this risk for the Group are represented by possible reputational impacts in relation to a possible lowering of the level of public satisfaction, as well as economic impacts for possible penalties in case of non-compliance with the service quality indicators established by the Authority.

Ongoing actions to mitigate risk

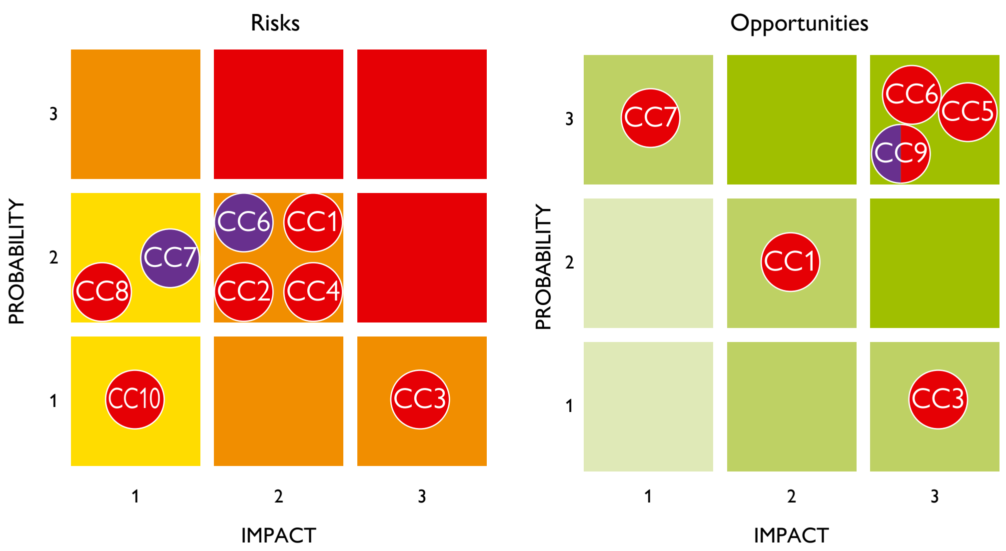
The risk **mitigation strategy** adopted by the Company includes, firstly, the **reduction of water** losses from the network, with the aim of optimizing the use of the water withdrawn and reducing waste. The Business Plan provides for investments of approximately **140 million euro in maintenance and renewal works on pipelines, intakes and meters**. In addition, the Group has in progress **works to interconnect aqueducts** in order to be able to guarantee the distribution of water in the municipalities currently supplied by sources more exposed to drought thanks to the "collaboration" between the networks. Business Plan investments total approximately 6 million euro. Finally, activities and investments are underway to realize the **capture of water from new supply sources** amounting to around 18 million euro. The above-described investments reduce risks from climate change and qualify as adaptation activities under the EU taxonomy for *Green* investments (Regulation 2020/852). The economic benefit of making the above investments can also be seen as a climate opportunity under the TCFD scheme.

Summary of climate risks and opportunities and quantification of impacts on economic and financial results

The reference scenarios illustrated above are taken into account in the analyses carried out by the ERM function to identify risks and opportunities connected with climate change, helping to provide *management* with *insights* to ensure the resilience of the A2A *business* model.

In the following figure, the risks and opportunities described in the previous tables are briefly represented on the *impact - probability heatmap*.

Figure 10 Heatmap impact - probability risks and opportunities



CC1 Change in the precipitation regime R/O
CC2 Competition on water use R
CC3 Emission allowances R/O
CC4 Thermal energy demand for heating R
CC5 Energy efficiency systems O*
CC6 Efficiency of electricity distribution networks R/O
CC7 Scarcity of water for drinking water use R
CC8 Extreme weather events R
CC9 *Green Financing Framework* O
CC10 Plant cooling R

LEGEND

PROBABILITY
1 = Remote (less than 10%)
2 = Possible (between 10% and 50%)
3 = Likely (greater than 50%)

IMPACT
1 = Low
2 = Medium
3 = High

TYPE OF OUTLET
● Economic and financial Impact
● Reputational impact

For economic and financial risks and opportunities, the impact scales refer to impacts on EBITDA, downside for risks and upside for opportunities.
(low impact: less than 5 M€/a; medium impact: between 5 M€/a and 20 M€/a; high impact: greater than 20 M€/a).

* the margins of the CC5, CC6 and CC7 opportunity are already included in the Business Plan forecasts.

In order to **include these considerations in an increasingly structured way in the assessment of the financial impacts of climate change**, the ERM function carried out an additional in-depth study to quantify the impacts of climate risks and opportunities on the Group's economic and financial results. **These effects are measured in terms of the change in the Group's overall EBITDA forecast in the Business Plan**.

With reference to the above table, it is estimated that **physical weather uncertainties** will affect the Group's overall EBITDA as forecast in the Business Plan by between -1.3% and +0.3%. The changes compared to last year are mainly due to the current energy scenario which is seeing an increase in energy *commodity* prices and affecting the risk/opportunity issues related to hydroelectric production margins (CC1 and CC2) and emission permits (CC3).

Figure 11: Impact of physical effects on the Group's EBITDA according to the Plan

For transition risks and opportunities, the impact on the Group's total EBITDA projected in the Business Plan is estimated at between -1% and +1.1%.

Figure 12 Impact of Transition on the Group's EBITDA according to the Plan

SENSITIVITY ANALYSIS

To estimate the ***range*** of possible **economic-financial impact** related to the trend in CO_2 prices, sensitivity analyses were carried out of the A2A Group's EBITDA to changes in the price of EUA emission permits. The base price was taken as that of the Business Plan scenario and possible deviations from this forecast were considered, assuming as minimum and maximum price values the corresponding minimum and maximum available values envisaged by the *info-provider*. These analyses were conducted under four different scenarios of correlation between the EUA price and the electricity price (PUN). In particular, a 100% correlation means that the CO_2 price is fully passed on in the price of electricity, while no correlation means that the price of energy is completely independent of the price of CO_2, which can be achieved with a high degree of penetration of production from renewable sources and implementation of the energy transition. The estimate reported on this Report was made assuming a gradual decrease in the dependence of the price of energy on the price of the EUA over the horizon of the Business Plan.

4

Stakeholder engagement and materiality analysis

4

Stakeholder engagement and materiality analysis

4.1 Stakeholder engagement initiatives

The issue of listening to stakeholders, which the Group has been pursuing for a number of years, represents an extremely important aspect for companies such as A2A to monitor. On one hand, the effectiveness of their involvement by companies is increasingly recognized, for the purpose of creating shared value that translates into reconciling the interests of the Group with those of its stakeholders. At the European level, in fact, a directive on Sustainable Governance is being defined, which aims to align the interests of companies, their shareholders, their managers, with those of stakeholders and society, creating the *"ESG duty of care towards stakeholder"* for company directors. On the other hand, in a context characterized by increasing attention to the issue of climate change and the impacts it may generate on the planet and communities, creating an increasingly sustainable economy from the environmental and social point of view - making the so-called *ecological transition* - has become a priority. However, this is a task that companies or institutions, no matter how committed they are to sustainability issues, cannot accomplish alone. Therefore, the contribution of communities and individuals is crucial in order to actually achieve a concrete shift towards more sustainable production and consumption styles. It is a common goal and it will only be possible to achieve it with the active contribution of everyone. However, building an effective dialogue between companies and stakeholders is, in some cases, particularly complex and delicate[1] given the levels of tension, mistrust and "dispersion" on sensitive issues such as environmental decisions. The European Green Deal Barometer, for example, identifies the lack of consensus on what is meant by sustainability, the use of top-down decision-making processes that do not include local involvement and, finally, the lack of credible policies that redistribute the negative impacts of the transition as the main barriers to achieving ecological transition[2]. Faced with this complexity, it is even more important to initiate dialogue channels with all stakeholders relevant to A2A, not only as form of responsibility of the Group towards the context in which it operates, but also as 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.

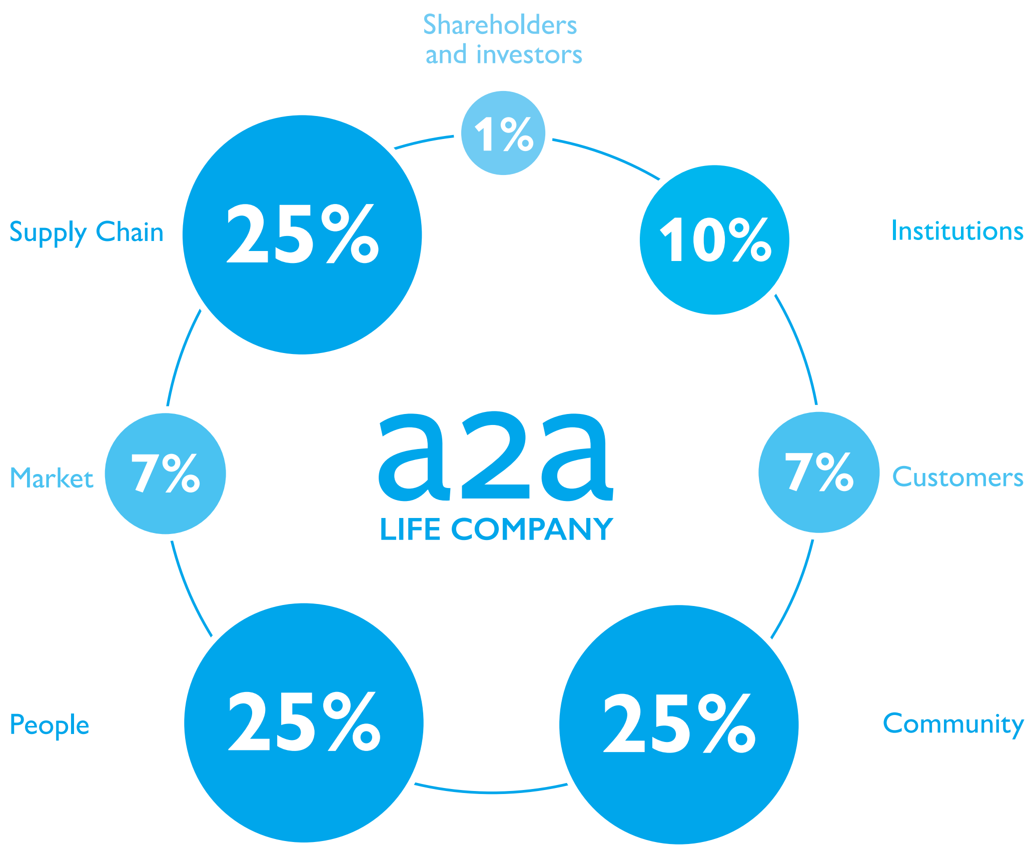
In this sense, in 2021, a new ***Policy on Stakeholder Engagement*** valid for the entire Group was formalized, aimed at defining the methods for identifying and prioritizing the various categories of stakeholders, the guiding principles, the objectives and the most effective methods for listening to and involving them.

Firstly, *stakeholder map* was updated , identifying categories and subcategories based on a comparison with all the Business Units, Group companies and staff departments that interface with the various stakeholders. Figure 13 shows the stakeholder categories identified and the distribution of engagement activities by category.

Stakeholder relevance and priority were defined based on the *familiarity, influence, and relationship status ratings* assigned by all internal stakeholders involved in engagement activities. The intersection of these aspects defined the level of participation needed for each stakeholder; the types of initiatives implemented during 2021 with the different categories were then mapped to see if they matched the necessary level of participation.

1 *The European House* - Ambrosetti, from NIMBY to PIMBY: circular economy as a driver of the ecological and sustainable transition of the country and its territories, 2021.
2 IEEP, *European Green Deal Barometer*, 2021.

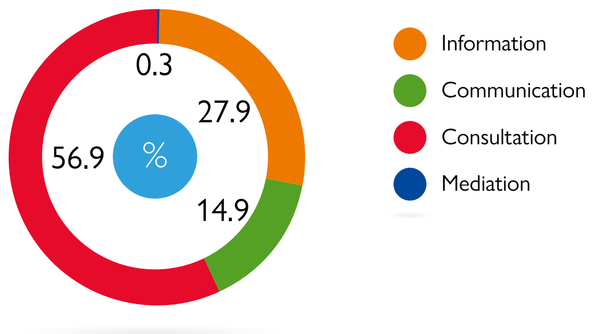
*Figure 13 Stakeholder map and distribution of engagement activities by category**



* The size of the bubbles indicates how the engagement initiatives in 2021 were distributed across the different stakeholder categories.

The results, in general, show that the level of engagement is adequate to that needed for almost all stakeholders. As evidenced by the figure below, in general, stakeholder engagement activities conducted in 2021 were primarily consultation activities (e.g. forumAscolto), followed by information (e.g. press conferences) and communication (e.g. educational projects).

Figure 14 The distribution of engagement activities in 2021 by type



Engagement activities focused primarily on some of the **material issues**: first and foremost "**Occupational Health and Safety**", followed by "**Circular Economy**" and "**Sustainable Economic Value**", "**Infrastructure for Ecological Transition**" and "**Responsibility and Quality in Service Delivery**".

Although each stakeholder type is an expression of particular interests, at a general level, 5 relevant **interests** emerged for all mapped categories:

- **sharing of information about plants and services**, especially regarding key issues such as plant safety, but also knowledge of the services offered by the Group;
- **compliance with regulations and environmental quality requirements**, a priority for institutions in particular;
- **continuity and security of the service**, recognized as a first-rate issue for customers in all the territories in which A2A operates;
- involvement in **outreach** and engagement activities, such as on green transition issues;
- **economic and territorial development of the areas in which A2A operates**, also in order to protect weaker and more fragile sections of the population.

The most relevant interests and material issues were then identified for each category and are reported on page 16 of the Supplement.

The entire new process of stakeholder analysis and mapping and engagement activities launched was operationally supported by the use of a digital platform that facilitated the systematization of all the information available in the company, allowing all the structures and companies of the Group to have a broader and more in-depth knowledge of the existing relations with the various stakeholders and the most relevant issues dealt with.

This new stakeholder management process was carried out, in this first phase, by around 40 colleagues, coordinated by the *Communication, Sustainability & Regional Affairs* Department (which is responsible for coordinating stakeholder engagement), who were trained on stakeholder engagement and the most effective ways of implementing it on the basis of the positioning of the various categories of stakeholders.

ENGAGING AND RAISING AWARENESS AMONG GENERATION Z

Sustainability is the buzzword of Generation Z, the generation that is being called upon to lead the change toward a more sustainable world. A2A wants to be able to convey its identity as a *Life Company* and to tell the story of its sustainability performance in an effective and accessible way, also for young people. In fact, it cannot be taken for granted that this generation has the tools to read and understand the language of a company's sustainability report.
We asked 8 young people from the *Giffoni Innovation Hub community* (Giorgia, Sveva, Vittoria, Andrea, Antonio, Alessandra and Vincenza Carmen, Martina) to study the 6 capitals and translate them into short sentences that used content, tone and language close to their generation, not only in formal terms but also in aspirational terms. Their views have been included in the opening pages of each chapter of this document.

4.2 The forumAscolto programme

Since 2015, A2A has continued a structured programme of listening and dialogue with the stakeholders of the territories in which it operates (**forumAscolto**), by means of workshops and events, with the aim of grasping the specific features of the individual communities, building a discussion on issues that are important for A2A and its stakeholders and contributing to the development of ideas and projects in line with the Group's objectives. In the first edition of the programme, 6 forumAscolto were held (Brescia, Milan, Bergamo, Valtellina-Valchiavenna, Friuli Venezia Giulia, Piedmont) from which 18 ideas and projects were generated that the Group has implemented in recent years; these include, by way of example, the *Banco dell'energia*, a campaign to raise awareness of food waste, an educational project on the themes of circular economy and sustainability and a mountain cycle-pedestrian route.

Between the end of 2020 and the beginning of 2021, a **forumAscolto** was realized **in Brescia**, with the aim of supporting the restart of a territory strongly affected by the Covid-19 emergency in a logic of sustainability. The listening and involvement activity was in fact contextualized within the National and Regional Strategy for Sustainable Development, in order to contribute, from several points of view, to the achievement of the goals of the UN Agenda 2030 and the opportunities offered by recent European policies in the environmental field (Green Deal, Next Generation EU, next European planning). The initiative, which **involved more than 60 local realities**, aimed to systematize the different competences present on the territory in order to identify the projects to be developed, encouraging and enhancing forms of collaboration and partnership between the company and the institutions, the academic world, the economic and social forces of the Brescia area. The discussion topics addressed in the working tables were: **Energy efficiency and renewables** (Energy efficiency of properties and Awareness raising through monitoring of the benefits of energy efficiency measures); **Sustainable mobility** (Survey on the demand for mobility and System of integration of mobility services); Organic waste supply chain (Information and awareness raising on the deficit of plants for the treatment of organic waste and Conversion of biogas into biomethane); **Partnerships with industries** (Support for companies to encourage environmental transition and Symbiosis and heat recovery in industrial processes); **Separate collection** (Qualitative improvement of separate collection and Redistribution of food surpluses); **Protection of water resources** (Information and improvement of dialogue on the water cycle and Optimization of water use in agriculture). The results of this initiative have been summarized in a specific report, available on the Group website.

The program continued with a path of listening and involvement that concerned the Sicilian territory, **the forumAscolto Sicilia**, created to make people understand the **strategic value of the project for reconversion of the power plant of San Filippo del Mela (ME) as an energy hub for the sustainable transition of the Sicily Region**. The initiative, which is held on July 13, 2021, was preceded by activities of analysis and listening to stakeholders to seize the perception and expectations of the territory towards the project. The results of this first phase have been analyzed in the study, elaborated together with *The European House* - Ambrosetti, "The requalification of the San Filippo del Mela site, as a lever for the sustainable transition of Sicily", focused on the **economic, social and environmental implications deriving from the reconversion projects planned for** the San Filippo del Mela site. During the forumAscolto, some local stakeholders also contributed to the discussion, offering their point of view to enrich the moment of comparison as much as possible, and the two projects were presented, selected as part of the ***Challenge for* Sicilia**, the initiative launched by A2A in June 2021 to identify innovative ideas capable of favouring the sustainable evolution of the territory and, potentially, finding application in the Group's activities and in the relative supply chains.

TERRITORIES OF SUSTAINABILITY

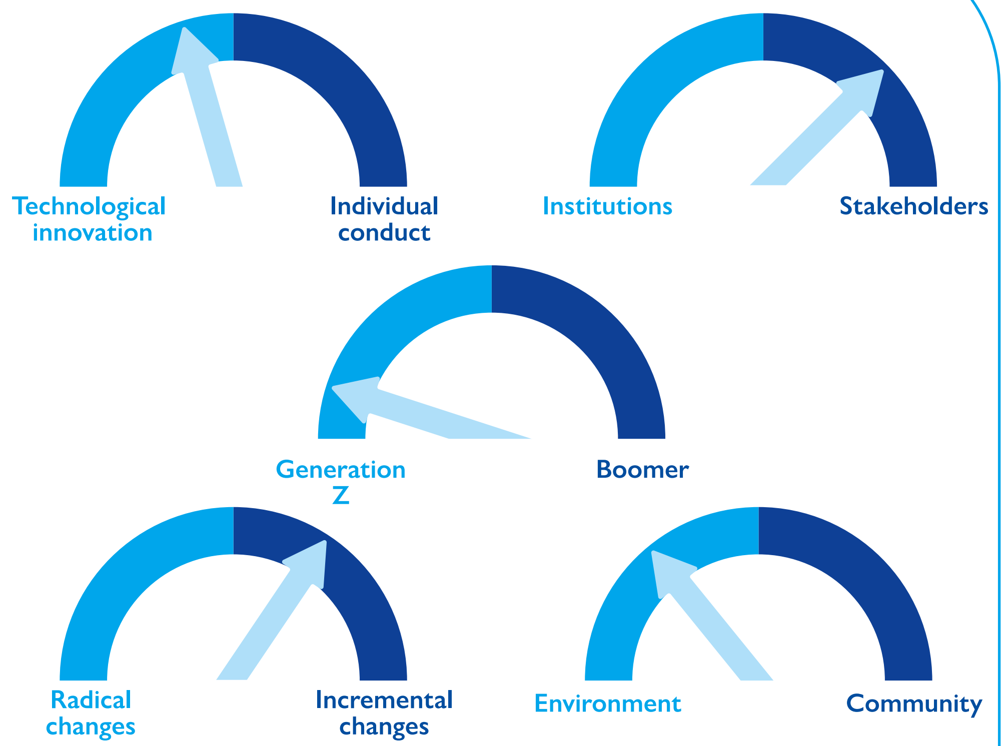
In 2021, **a new edition of the forumAscolto program was launched**, realized with the support of *The European House* Ambrosetti, created from the awareness that the ecological transition places companies, institutions and territories in front of choices, real crossroads where both paths seem to be the most correct and it is difficult to establish which one to follow. At the beginning of the journey **ten "right turning points"** were identified**,** real crossroads of the ecological transition, selected to reflect the sector, the positioning and the ambitions of the A2A Group, and, as part of the cycle of meetings **"The territories of sustainability",** the crossroads were submitted to the stakeholders of the six territories involved and to a group of under-30s from all over Italy, to understand how each area is characterized and to identify the best solutions for implementing the objectives of the A2A Strategic Plan to 2030, supporting inclusive, effective and made-to-measure change.

Figure 15 The ten right turning points of the ecological transition

TECHNOLOGICAL INNOVATION	INDIVIDUAL CONDUCT	PUBLIC	PRIVATE
GENERATION Z	BOOMER	ENVIRONMENT	COMMUNITY
INSTITUTIONS	STAKEHOLDER	PHILANTHROPY	SHARED VALUE
SMART CITIES	SMART LAND	GROWTH	DEGROWTH
RADICAL CHANGES	INCREMENTAL CHANGES	DECIDE TOGETHER	LET THE COMPETENT PEOPLE DECIDE

For each Right Turning Point, both paths seem correct, and it is difficult to make a clear decision, even given the fact that in reality combinations of the available options tend to prevail. However, the resources available to implement the ecological transition are limited, and must be leveraged quickly and effectively. Therefore, a polarization has been operated that has bound the territories to choose for every crossroads only one between the two possible alternatives, with the suggestion to think about how to spend a hypothetical "last euro" available.
Each meeting was attended by about 20 local stakeholders, selected to interpret the point of view of the area thanks to their experiences, skills, values and relationships, who discussed the crossroads considered most relevant. At the end of each meeting, the results of the discussion were presented to the top management of A2A.
At the beginning of October 2021, a concluding event was held to organise the ideas that emerged from the various meetings, both at the general level and at the individual territory level. The results of this journey were commented on by the Chair of A2A, the Minister for Equal Opportunities and the Family, and a panel of experts, starting with Jeffrey Sachs, a US economist, president of the UN Sustainable Development Solutions Network (SDSN) and director of the Center for Sustainable Development at Columbia University.
At the system level, we can highlight some traits that are common to the various areas involved in the listening process, first and foremost, the crossroads that were considered priorities by all, as shown in Figure 16.

Figure 16 The five most significant crossroads for our stakeholders and their positioning



Looking at the results of the overall assessments of these 5 crossroads, it is possible to draw a profile of the stakeholders involved in the different territories, which can be summarized in 4 key characteristics. **A2A *stakeholders*** are **futurists**. They are projected towards technological innovation (60.4%), although they are aware that the implementation of innovations will not be possible without the contribution of individual conduct, and they are very **attentive to the rights of the new generations** (92%), jeopardized by excessive consumption of resources and the costs of a public debt that will fall on their shoulders, traditionally generated by those who have held and still hold decision-making power. The territories involved tend to be **welcoming** rather than exclusive, that is, convinced that the decisions necessary to promote ecological transition must be taken involving all stakeholders (for 73.7%) and not interfacing only with institutions. **Environmentalists** also prevail: stakeholders show themselves to be focused on the protection of the environment (73.5%), its resources and biodiversity, even at the expense of the needs of society. Finally, the stakeholders involved are more **cautious** than revolutionary: to achieve sustainability goals, they lean toward incremental changes (for 70%), rather than radical changes, which risk creating rifts and conflicts in society.
These results have been set on individual territories, identifying similarities and differences in the approach to the crossroads, helping A2A to increase its awareness of the most effective ways of achieving its ambitious ten-year Strategic Plan, taking into account local specificities.

A2A has synthesized the insights gathered into 6 recommendations for the future of the country:

- #1 Support technological innovation in sectors with high environmental impact
- #2 Amplify change without leaving anyone behind
- #3 Involve a wider range of stakeholders in decisions
- #4 Promote the inclusion of new generations in decision-making processes
- #5 Make transparency a hallmark of the ecological transition
- #6 Promote debate for regulatory simplification

The results of the "Territories of Sustainability" process have been summarized in a *report* which, together with the video of the event, is available in the dedicated section of the Group's website.

4.2.1 Territorial sustainability reports

In 2021, A2A continued to publish its territorial sustainability reports, created with the aim of enabling all citizens to know and assess the Group's commitment and results in a specific area: Brescia (seventh edition), Valtellina-Valchiavenna (sixth edition, Bergamo (sixth edition), Milan (fifth edition), Friuli Venezia Giulia (fifth edition) and Piedmont (third edition). For the 2021 edition, the story of the Group's commitment to its territories unfolds along the lines of three key words: Planet (environmental sustainability), People (social sustainability), Prosperity (economic sustainability) - the areas identified by the *World Economic Forum* with the document ***"Towards Common metrics and consistent Reporting of Sustainable Value Creation"***. The reports are published in the Sustainability section of the website with the possibility to download the sustainability key performance indicators in open format for the last 3 years. Also in the territorial reports published in 2021, a specific section was dedicated to the numerous initiatives that the Group put in place to deal with the Covid-19 emergency, ensuring the continuity of services in total safety.

These documents are presented annually during specific occasions of engagement with different categories of local stakeholders. In 2021, these moments were characterized by a renewed approach. The digi/phygital meetings were structured in two distinct moments: the first of discussion and dialogue with local stakeholders (forumAscolto), as described in the previous paragraph; the second of presentation - open to the public and employees - in which A2A top management illustrated the Territorial Sustainability Report, the A2A Strategic Plan and the results of the forumAscolto.

4.3 Materiality matrix and analysis

The process of updating the **A2A Group's materiality matrix** is designed to identify the material issues for A2A and its stakeholders.

Compared to last year, the list of issues under evaluation and the associated declarations have been updated, following a logic of simplification and coherence with the Strategic Plan and sector macros. After an initial phase of analysis of the issues of relevance to the peers, the external context and the internal context, the list of identified issues was submitted to the evaluation of the Group's top management and stakeholders in order to define the materiality matrix. Specifically, **17 issues** (22 in 2020) spanning the 6 Capitals and the Group's *Governance* system were evaluated.

Major changes to the list of issues include the merging of some particularly related issues and the integration of new issues (e.g. sustainable finance and pollution prevention).

In order to measure the relevance for stakeholders, inside and outside the company, the assessments that emerged from:
- a demoscopic survey, carried out in November 2021 (for further details see the dedicated box), which involved, through online interviews, 1,434 subjects including citizens (including A2A customers), suppliers and opinion leaders;
- an online questionnaire administered to the stakeholders involved in the meetings held during the year in some of the areas in which the group operates (over 30 responses), with a focus also on the Z generation;
- an online questionnaire administered to all employees with a company PC (around 900 respondents).

In order to measure the **relevance for A2A**, a workshop was held with the company's front lines within the last Induction module on sustainability, to which were added the results of the assessment of the individual members of the Board of Directors who responded to an online survey.

THE SURVEY ON A2A AND SUSTAINABILITY

As every year, also in 2021, the Group has asked its stakeholders to provide a contribution to the definition of the new materiality matrix. The questionnaire, delivered online, in addition to including a number of questions to assess material issues, also included more general sections to investigate sentiment towards multi-utilities and to understand the awareness of citizens, customers and stakeholders on issues related to the concept of sustainability, as well as their perception of the Group and its ability to manage its activities responsibly.

The survey involved 1,434 subjects: 984 interviews with citizens resident in the provinces of Milan, Brescia, Bergamo, Sondrio, Turin, Biella and Gorizia (of which 424 A2A customers), 359 interviews with citizens resident in the rest of Italy (of which 50 A2A customers) and 91 stakeholders (60 suppliers and 31 opinion leaders).

In general, the survey shows that the population is less aware than stakeholders of sustainability issues and the role of multi-utilities in the ecological transition process.

The research shows that about half the population trusts the companies that provide electricity, gas and waste collection, while the figure rises to about 60% among A2A customers. About targeting the stakeholders, confidence levels go beyond 70%. Specifically, with respect to A2A, levels of trust are around 70% for customers and over 80% for stakeholders.

The main characteristics associated with companies of this type range from innovation, to a focus on safety, to accountability. On the other hand, they are less associated with multi-utilities issues such as attention to the environment, communities and the safeguarding of natural resources. It is believed that the role played by these companies is important not only in the energy transition towards renewable sources and the preservation of natural resources but, above all for stakeholdersalso in the promotion of a circular economic model.

Sustainability turns out to be a concept that the vast majority of people have heard about and discussed in public, but less than 50% know about in depth. On the other hand, the issue is well known among stakeholders, who identify among the characteristics that define a sustainable company the reduction of environmental impact, the enhancement of the territory in which it operates and a commitment to the fight against climate change.

The Sustainable Development Goals of the UN Agenda 2030 are known at least superficially by more than 1 in 2 respondents among the population and by nearly the entire stakeholders sample.

Lastly, the research reveals a substantially positive image of the Group in terms of sustainability issues, although a significant number of respondents have a neutral view of it. Among its customers, A2A proves to be a daily, competent and essential presence for the community in which it operates and has high levels of satisfaction (85%) and recommendability (66%).

The results of the analysis were then presented to the ESG Committee and Territory Relations Committee and to the Control and Risk Committee and for approval at the A2A Board of Directors, which approved **the 2021 materiality matrix of the Group**.

The new matrix substantially confirms the materiality of all the issues identified by stakeholders, while the assessment by A2A is more distributed. The most relevant issues for both A2A and its stakeholders are: "Circular Economy", "Climate Change", "Infrastructure for Ecological Transition", "Group Ethics and Integrity" and "Occupational Health and Safety", all of which are basic aspects in the development of the new 10-year Business Plan. Compared to last year, an increase in the relevance of the topics "Group Ethics and Integrity" and "Climate Change" by stakeholders emerges. In addition, from the point of view of A2A, particular attention has been paid to the topic of "Creating sustainable economic value", considered by the Group as an essential prerequisite and its own reason for being (purpose). It has therefore been decided to consider it "out of scope" with respect to the assessment of material topics and, for this reason, positioned outside the matrix.

Figure 17 Materiality matrix

Figure 18 Issues in the materiality matrix divided by capital assets

CAPITAL	NO.	ISSUE
Governance	1	Group Ethics and Integrity
Governance	2	Sustainability in Governance
Financial capital	3	Sustainable economic value
Financial capital	4	Sustainable finance
Manufacturing capital	5	Infrastructure for the Ecological Transition
Natural capital	6	Circular economy
Natural capital	7	Responsible management of water resources
Natural capital	8	Climate change
Natural capital	9	Biodiversity
Natural capital	10	Pollution prevention
Human capital	11	Occupational health and safety
Human capital	12	Development of human capital
Human capital	13	Diversity and inclusion
Intellectual capital	14	Innovation and digital transformation
Relational capital	15	Community Listening and Involvement
Relational capital	16	Responsibility and quality in the provision of services
Relational capital	17	Responsible management of the supply chain

5
Financial capital

5 Financial capital

REFERENCE CONTEXT

Investing to accelerate change

Interest in ESG issues and sustainable investing is growing steadily, with investors, issuers, and other *stakeholders* continually reaching out and sharing news and information to encourage an influx of capital into more sustainable assets. All major financial *players* are committed to including ESG issues in their operations.

The last few years have seen very significant growth in Asset Under Management and ESG Driven Funds, and some studies have also shown that ESG stocks show better performance and greater resilience in times of volatility.
Another strong signal comes from Borsa Italiana, which in 2021, launched the first blue-chip index for Italy dedicated to sustainability; the index methodology involves a ranking of the best 40 companies based on ESG criteria by Vigeo Eiris.

In 2021, EU Regulation 2088 came into force (*Sustainable Finance Disclosure Regulation SFDR*), which introduces additional disclosure requirements for financial operators to the market regarding the adoption of responsible investment policies; in addition, Delegated Act 8 of the Taxonomy Regulation (EU Regulation 852), which comes into force on January 1, 2022, was published and delegated acts were adopted that establish the technical criteria for determining the contribution of an activity to additional environmental objectives applicable for 2022 reporting. Specifically, Delegated Act 8 requires organizations to report the percentage of revenue, CAPEX, and OPEX that relate to Taxonomy-aligned activities.

The European Commission launched the European Green Deal in 2021, with the goal of making Europe the first climate-neutral continent by 2050: to achieve the goal, the 27 member countries have committed to reducing emissions by at least 55% by 2030 compared to 1990 levels. Doing so will create new opportunities for innovation, investment, and jobs, while also reducing emissions, creating jobs and driving growth, solving energy poverty, reducing foreign energy dependence, and improving the health and well-being of all.

The Green Transition Pillar of the PNRR (Mission 2: Green Revolution and Ecological Transition) derives directly from the European Green Deal and at the same time, the Next Gen EU regulation requires that a minimum of 37% of the investment and reform spending programmed by the PNRR itself must support climate goals. In addition, all investments and reforms must necessarily comply with the "*do not significant harm*" principle of Taxonomy.

Do we really know what it means to attribute to something the adjective "*green*"? We usually instinctively assign a positive connotation to this word, as a synonym for ecology and respect for the environment. In reality, behind the word "*green*", there is much more, there are elements that have a strong impact on the daily lives of everyone, especially young people. Just think of the concept of 3Ps: People, Planet, and Prosperity. By giving each "P" the same importance, we know that responsible investments will lead to long-term benefits by generating value for the economy and society, without impacting the environment.

GIORGIA, 19 years old, Salerno

2021 IN FACTS

TAXONOMY ACT 8 COMES INTO FORCE

BORSA ITALIANA LAUNCHED THE FIRST *BLUE-CHIP* INDEX DEDICATED TO SUSTAINABILITY

11% OF ALL ESG BONDS IN 2021 ARE ***SUSTAINABILITY LINKED BONDS***

51.3 billion euro OF ***SUSTAINABILITY-LINKED BONDS*** ISSUED IN 2021 IN EUROPE

IMPACTS FOR A2A

SDGs IMPACTED

MATERIAL ISSUES

Sustainable economic value
Sustainable finance

STRATEGIC PLAN @2030

80% Percentage of sustainable debt over total

SOURCES
GSIA: Global Sustainable Investment Review 2020, Goldman Sachs;
National Recovery and Resilience Plan (PNRR);
Marc S. Gerber, Greg Norman and Simon Toms, Skadden, Arps, Slate, Meagher & Flom LLP, ESG in 2021 So Far: An Update, 2021;
Realizing the European Green Deal.

Sustainable economic value

Group's commitment to value creation, maintenance of value created; redistribution to Group *stakeholders* of economic and social value created.

RISK FACTORS

Reduction of the value distributed to stakeholders

Short-, medium- and long-term liquidity crises, which undermine the relationship with financial stakeholders

Negative evaluations or downgrading of rating agencies:
- on ESG aspects
- Group performance

Ineffective communication of sustainability performance

OPPORTUNITY FACTORS

Sustainable finance

ESG Rating

MANAGEMENT APPROACH (MA)

MITIGATE

Structured financial management by return on investment

Attention to ESG aspects:
- for impacts of commodity market prices
- for the choice of investments

ESG investor involvement

ERM process integrated between risks and opportunities

Transparent communication of sustainability performance

SEIZE

WHAT WE DID

2021 ACTIONS

- BEI investments (page 91)
- Inclusion in the new MIB ESG Index of Borsa Italiana (page 87)
- Timely and transparent communication with *stakeholders* (page 86)
- Improved alignment with TCFD recommendations

WHAT WE ARE DOING

SUSTAINABILITY PLAN ACTIONS

GOVERNANCE

- *Risk management*
- Sustainability in planning and investment processes
- ESG *Rating*

Sustainable finance

Attention to and monitoring of the evolution of the financial market towards issues linked to environmental and social sustainability (so-called "sustainable finance") and subsequent adoption of financial instruments in line with the European strategy; development of actions and projects aimed at ensuring compliance with ESG *reporting* regulations. Progressive alignment towards European objectives with particular reference to the EU Taxonomy.

RISK FACTORS

Missed business opportunities related to sustainability.

Reputational and economic-financial impact of any failure to achieve the sustainability *targets* envisaged by the Group's *sustainable bond* issues

OPPORTUNITY FACTORS

Adoption of sustainable finance tools to support the *funding* strategy

MANAGEMENT APPROACH (MA)

MITIGATE

Establishment of the *Sustainable Finance* Committee.

ESG investor involvement

Issue of financial products related to sustainability performance

ERM process integrated between risks and opportunities

Transparent communication of sustainability performance

SEIZE

WHAT WE DID

2021 ACTIONS

- Publication of the *ESG Database* (page 87)
- Publication of the *Sustainable Finance Framework* (page 89)
- Formation of the *Sustainable Financing Committee* (page 89)
- Issuance of *Sustainability Linked* Bonds and *Green Bonds* aligned with EU Taxonomy (page 89)

WHAT WE ARE DOING

SUSTAINABILITY PLAN ACTIONS

GOVERNANCE

- *ESG Rating*
- Sustainability in planning and investment processes

5.1 Economic value distributed

In 2021, the Group revised the methodology previously used, aligning with the GRI framework guidance.

The economic value directly generated represents the wealth produced by the Group. Distributed economic value measures the economic impact of the Group's activity of creating value for its *stakeholders*.

In 2021, the Economic Value Generated was 11,582 million euro, up 68.6% from last year. Of this, 10,732 million was distributed to various *stakeholders*: suppliers of goods and providers of services (87%), employees (7%), venture capital providers (1%), government and communities (2%) and shareholders (3%). Approximately 7% of the economic value generated was retained by the Group as profits, provisions and amortization.

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 **76 thousand shareholders**, divided between institutional investors and retail investors.

Figure 19 A2A shareholding structure (at December 31, 2021)

Municipality of Milan	25.0%
Municipality of Brescia	25.0%
Market	50.0%

Institutional investors hold approximately 33.6% of the share capital (35.9% in 2020). 28.9% of the free float in the hands of institutional investors is held by US investors, 24.9% by Italian investors, 13.1% by French investors. There are also institutional investors with registered offices in Luxembourg (8.4%), German investors (5.4%) and UK investors (5.1%).
The shareholder base includes numerous investors that have signed the *Principles for Responsible Investment* (PRI).
Retail investors total over 74 thousand and together hold 13.5% of share capital (11.6% of 2020). Almost all of the retail shareholding is resident in Italy and in particular, 58.1% in Lombardy. Investors residing in the provinces of Milan and Brescia hold 26.0% and 13.3%, respectively, of the total retail[1].

Figure 20 Share indicators

	2019	2020	2021
Dividend per share (DPS) (euro)*	0.0775	0.08	0.09
Dividend Yield (DPS/P)**	4.8%	6.1%	5.4%
Number of shares (millions)	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 26, 2021.

A2A in the stock market indices

Among the factors affecting share performance in 2021 were those arising from macro-economic and policy trends, the energy scenario, the evolution of the Covid-19 pandemic and capital flows on international financial markets.

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

- presentation of the new 2021-2030 Strategic Plan
- growth of the dividend distributed;
- good quarterly results;
- strategic developments related to growth in the circular economy and energy transition.

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

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. In particular, in 2021, the Group approved the "Policy for Managing Dialogue with General Shareholders and Other Stakeholders Relevant to the Company", which is available on the Company's website.
In accordance with the Policy, multiple communication tools and channels are used:

- institutional documentation (Annual Financial Statements, Integrated Report, Half-Year Financial Report, press releases, corporate presentations and shareholders' meeting documentation);
- *ad hoc* documentation (Investor Guidebook, Investor Databook, ESG Database);
- meetings on the main international financial scenes (road shows, one-to-one meetings, group meetings, conference calls, etc.). In 2021, activity took place virtually on meeting platforms.
- the participation in various industry conferences, including the fifth edition of the ***Italian Sustainability Week*** organized by Borsa Italiana and the second edition of the ***PanEuropean ESG Conference*** organized by Kepler Cheuvreux.

In 2021, A2A expanded its ESG disclosure offering by providing investors with some *ad hoc*content. In particular, the new section "**ESG issues for investors**" has been published with the aim of offering an in-depth analysis of the sustainability issues that are most relevant and strategic for A2A. In fact, the year 2021 was marked by **the high number of information requests and questionnaires from ESG investors and analysts**. In addition, the increasing relevance of passively and quantitatively managed funds (e.g. ETF) has led to the need to monitor the accuracy of public financial *databases*, which are the preferred information channel for this category of funds.

To meet the needs of these *stakeholders*, since 2020, the Investor Relations team has been pursuing a multi-year project (Zero Gap) to reduce data provider errors and inconsistencies. In 2021, A2A released the first version of the ***ESG Database***, a document that compiles A2A's historical KPIs that are most meaningful to investors and analysts. The project involves the constant updating and expansion of KPIs according to the needs of the financial community.

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. 3 Proxy Agency published the pre-meeting report. As for the coverage of equity analysts, at the end of 2021, A2A was followed by 7 Italian and international brokers.

5.3 A2A in the sustainability ratings

Over the past few years, the volume of investments subject to assessments related to environmental, social and *governance* issues has increased more and more, and new indices and portfolios have proliferated for which inclusion is based on sustainability performance.

A2A is present in the following ethical indices:

- *MIB ESG,*
- *FTSE4Good Index,*
- *ECPI Euro ESG Equity,*
- *Ethibel Sustainability Index Excellence Europe,*
- *EURO STOXX Sustainability Index,*
- *Euronext Vigeo index: Europe 120,*
- *Standard Ethics Italian Index,*
- *Solactive Climate Change Index,*
- *Bloomberg Gender Equality Index.*

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

In 2021 A2A improved the score of the ***CDP Water Questionnaire*** obtaining B, while it confirmed the score A - in the climate change assessment, confirming itself as a leader in the fight against climate change.

In addition to its commitment to environmental issues, the Group also pays attention to issues related to the development of its people and the protection of diversity, responding for two years to *the Refinitiv Diversity and Inclusion Assessment*, and to *Bloomberg's Gender Equality Index* questionnaire. The latter included A2A in its index for the second year in a row.

Human Capital

Women promoted

29.3% women promoted in 2021

In addition, A2A participates in the *assessments*: *Vigeo-Eiris*, *S&P Global*, *Sustainalytics*, MSCI, FTSE-4Good, "*Top 100 Green Utilities*" (of the *Energy Intelligence Group*), *Gaïa Research and Corporate Knights*.

The assessment by *Standard Ethics*, an independent *rating* agency that measures the sustainability of companies, also continues annually - through an unsolicited rating - and in March 2021, raised A2A's outlook from "Stable" to "Positive". In addition, the agency also confirmed the *corporate rating* "EE" which corresponds to "*Strong*".

A2A INCLUDED IN THE NEW *MIB ESG*

In its first year of establishment, A2A was included in the new *MIB ESG Index* launched by Euronext and Borsa Italiana. The Group therefore immediately joined the index, which includes **the best 40 companies selected on the basis of sustainability, corporate social responsibility and liquidity criteria**. In line with the principles of the United Nations Global Compact, the *MIB ESG Index* of Euronext and Borsa Italiana combines the assessment of economic *performance* with ESG-related impacts. **The index is the first in Italy dedicated to "blue-chip" listed companies and aims to identify the best practices at *ESG* level**.

5.4 Sustainable finance

Over the past few **years, a very strong relationship has developed between finance and sustainability**. Not only have new financial instruments been created (e.g. Green, Social, Sustainable Bond, Green Loan, Sustainability-Linked Loan, Sustainability-Linked Bond, EIB subsidised investments), which also include sustainability impacts in their logics, but **the assets managed according to sustainable and responsible investment strategies have increased exponentially**.

In 2021, the sustainable finance market confirmed the growing trend already recorded in 2020, with the issuance of ESG bonds, which reached a record figure of over 992 billion dollars (+ 64% vs 2020)[2].

The Group continues to be a member of the ***Corporate Forum on Sustainable Finance***, of which it has been a member since 2019. It aims to support and develop sustainable finance as a means of combating climate change and promoting a more sustainable economy through innovative financing instruments. Over the past two years, the *Corporate Forum on Sustainable Finance*, whose 23 members come from 8 countries and 5 business sectors, has responded to the most important consultations held by the European Union covering the topics: EU taxonomy, EU standard for green bonds, EU climate benchmarks and ESG disclosure on benchmark indices, renewed EU strategy for sustainable finance and EU review of the Non-Financial Reporting Directive.

In May 2021, A2A adopted a new ***Sustainable Finance Framework***, which, for the **first time in Italy, combines two different approaches - *Green/Use of Proceeds and KPI-Linked* - in a single all-encompassing document for all the Group's sustainable finance** and aligned (according to the Second Party Opinion issued by Vigeo Eiris) with the *Green Bond Principles* (2018) and the *Sustainability-Linked Bond Principles* (2020) published by the *International Capital Market Association* (ICMA), and to the *Green Loan Principles* (2021) and *Sustainability-Linked Loan Principles* (2019) published by the *Loan Market Association* (LMA).

The new *framework* flanks the *Green Eligible Categories* for the *Use of Proceeds* component with a set of ***Key Performance Indicators* (KPIs) reflecting the two pillars of A2A's strategic plan**: Energy Transition and Circular Economy. The selected KPIs (Scope 1 CO_2 emission factor; installed capacity from renewable sources; treated waste aimed at material recovery) identify sustainability targets that contribute to the achievement of United Nations SDGs 7, 11, 12 and 13.

The Sustainable Finance Framework was updated in February 2022 (with the Second Party Opinion issued by Vigeo Eris), aligning with the *Green Bond Principles* (2021) and *Sustainability-Linked Bond Principles* (2020), *Green Loan Principles* (2021) and *Sustainability-Linked Loan Principles* (2021).

During **2021, sustainable finance was one of the main enabling levers of the 2021-2030 Strategic Plan**, ushering in a new era of financial transactions that highlighted A2A's holistic nature as an issuer in the capital market:

Relational Capital

Banco dell'Energia

16 projects completed in 2021

- June 2021:
  - **First share buyback programme** involving a donation to Banco dell'Energia.
- July 2021:
  - **New KPI-Linked Revolving Credit Facility** of 500 million euro with a maturity of 5 years: the line is linked to two sustainability objectives included in the Sustainable Finance Framework (installed capacity from renewable sources and treated waste aimed at material recovery) and provides for an annual donation to Banco dell'Energia.
  - ***Sustainability-Linked*** Inaugural Bond of 500 million euro with maturity 10 years: the coupon of the bond instrument is linked to the achievement of the 2025 *target* (approved by the Science Based Target Initiative in March 2020) of Scope 1 CO_2 emission factor.
- October 2021:
  - **New *Green*** Bond of 500 million euro with maturity 12 years: the proceeds of the bond instrument will be used to finance *green* projects aligned with the environmental objective of climate change mitigation of the European Taxonomy (EU Taxonomy Regulation 2020/852).

Thanks to the actions taken during the year, **A2A's share of sustainable debt has reached 44% of total debt**.

2 Source: *Moody's*, ESG *Solution*

In order to strengthen its commitment, identify and develop sustainable finance tools, ensure the correct management of the project selection and fund allocation process, as well as monitor the positive impact on environmental metrics, from 2019, A2A has created an inter-functional Green Financing Committee, chaired by Finance and consisting of Planning and Control, Sustainability Development, Strategy and Innovation. The Committee - which following the publication of the new Sustainable Finance Framework has been renamed the Sustainable Financing Committee. This Committee was set up with the aim of monitoring potential sustainable investment initiatives, underwriting any type of financial instrument dedicated to specific green projects and then guaranteeing their implementation.

A2A also 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. At December 31, 2021, the value of these loans in the Group amounted to about **758.5 million euro**.

Figure 21 ESG Debt

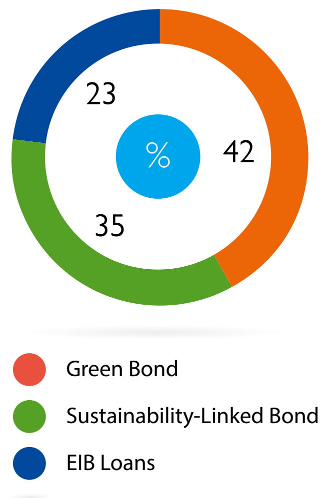


Figure 22 EIB loans by destination at 12.31.2021

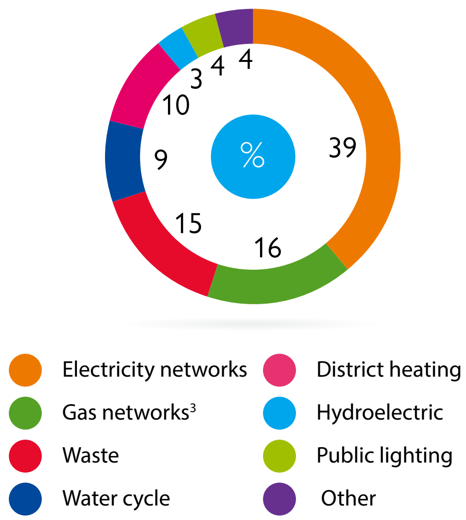
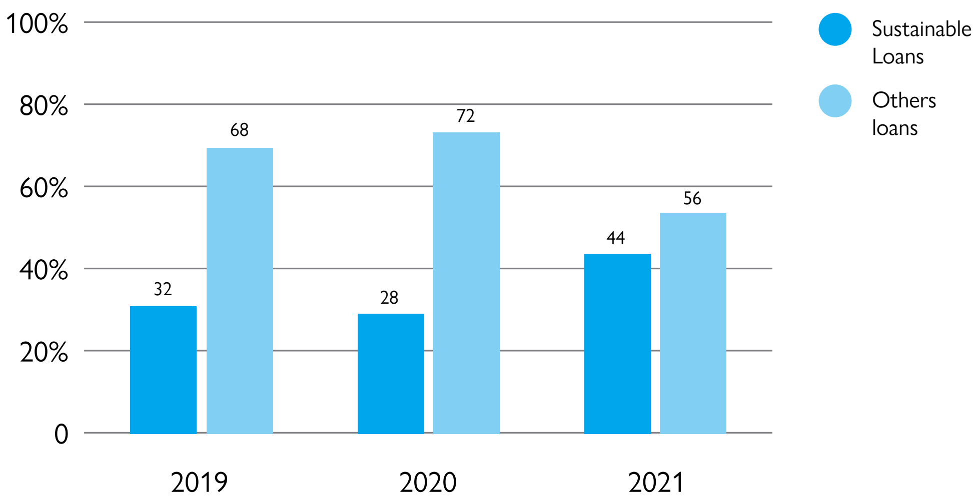


Figure 23 Traditional sources of financing and sustainable sources of financing of the Group in comparison (% of total)



5.5 Capital expenditure

In 2021, capital expenditure made in the Group's various sectors amounted to 1,074 million euro (+46% vs. 2020).

Figure 24 Capex by Business Unit

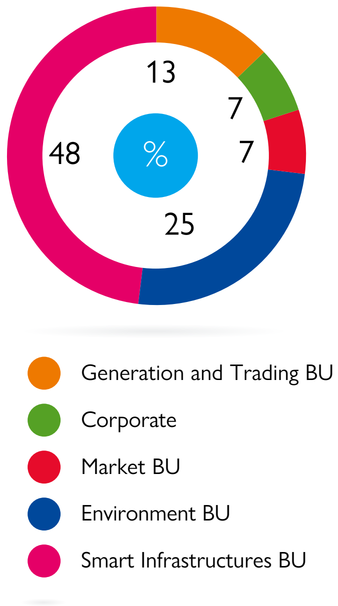
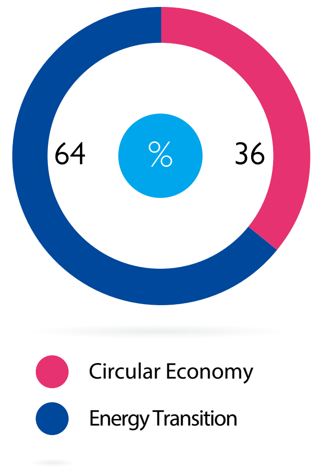


Figure 25 Investments by Plan drivers



In 2021, the Group made investments in line with the business plan presented based on the two main pillars of circular economy and energy transition. The main investments concerned the Smart Infrastructures BU, and in particular the electricity networks with the development of primary plants, connections of new users, interconnection network and replacement of meters for remote reading; significant investments in the same Business Unit also concerned the maintenance of the Gas network and the development of the Integrated Water Cycle network (both the aqueduct network and the purification and sewage networks) and the development projects of district heating and heat management. Significant investments were also made by the Enviroment BU in relation to treatment plants, primarily development investments related to the new line at the Parona waste-to-energy plant, the flue gas treatment plant at the Brescia TU and projects relating to the OFMSW plants. The Group also invested further in the renovation of thermoelectric plants and in various projects relating to the renewal of the IT infrastructure supporting all the Group's activities.

3 In November 2019, the EIB announced that it will stop financing fossil fuel projects, including gas, from the end of 2021.

Letter to stakeholders
Note on method
1 The A2A Group and its business model
2 Governance
3 The A2A sustainable strategy
4 Stakeholder engagement and materiality analysis
5 Financial capital
Value added produced and distributed
Relations with shareholders
A2A in the sustainability ratings
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5.6 European Taxonomy

Reference context: regulatory developments

In recent years, there has been increasing focus on environmental and social sustainability issues with growing legislative initiatives both at international and national level.

In order to support the achievement of sustainability goals and recognizing the importance of the financial sector, the European Union in 2018 published an **Action Plan to finance sustainable growth**, which proposes the following three *targets*:

- the re-orientation of capital flows toward sustainable investments;
- integration of sustainability into risk management;
- promoting transparency and long-term management in financial activities.

This Action Plan also includes **EU Regulation 2020/852** (**European Taxonomy), which aims to establish the criteria to determine whether an economic activity can be considered environmentally sustainable and consequently determine the degree of sustainability of an investment**. In particular, activities are considered environmentally sustainable if they **contribute to at least one of the following long-term European environmental** objectives, provided that they do not cause significant damage to other environmental objectives (DNSH) and that they are carried out in compliance with minimum safeguards:

- climate change mitigation;
- adaptation to climate change;
- sustainable use and protection of water and marine resources;
- transition to a circular economy;
- pollution prevention and control;
- protection of ecosystems and biodiversity.

In June 2021, the European Commission formally adopted the first Technical Delegated Act (hereinafter: (Climate Delegated Act) that defines the list of economic sectors and activities currently included in the Taxonomy and the related technical screening criteria for assessing **whether they contribute substantially to the achievement of environmental objectives for climate change mitigation and adaptation**. Additional Technical Delegated Acts on the remaining environmental objectives are expected to be published during 2022.

Article 8 of the Regulation, on the other hand, defines **the reporting obligations under the Taxonomy that fall on any company subject to the obligation to publish non-financial information**. Beginning January 1, 2022, in line with these regulatory requirements, impacted companies will be required to include in their non-financial disclosures information on how and to what extent their activities are associated with economic activities considered environmentally sustainable under the Regulation itself.

In particular, during the first year of application of the Regulation, in order to encourage a gradual application of the same, **non-financial companies are asked to calculate turnover, capital expenditure (CapEx) and operating expenditure (OpEx) associated with "eligible" economic activities** in accordance with the Taxonomy, i.e. activities described in the Technical Delegated Acts, but for which verification of compliance with the technical screening criteria contained in the Acts themselves is not required.

Eligible economic activities of the A2A Group

In order to ensure compliance with the requirements of the Regulation, the Group implemented a specific project aimed at identifying "eligible" activities in accordance with the European Taxonomy.

Specifically, a Working Group was formed that from May 2021 has dealt with:

- analyse the legislation in order to understand the new obligations of the Group;
- explore the content of the Climate Delegated Act in order to define the Group's preliminary framework within the economic sectors and activities included in the Taxonomy;
- prepare and share an **internal *tool*** for collecting the data and information needed to identify all "eligible" activities in which the Group operates;
- **involve in the process the representatives of the different *Business Units*** in order to obtain support in the identification of the above activities and **in the implementation of a pre-screening** with **respect to the technical and DNSH screening criteria** provided by the Regulation.

This process has led to the identification of the following "eligible" activities under the Taxonomy with reference to which the Group has achieved revenues, capital expenditure and/or operating expenditure in the year 2021:

Activities

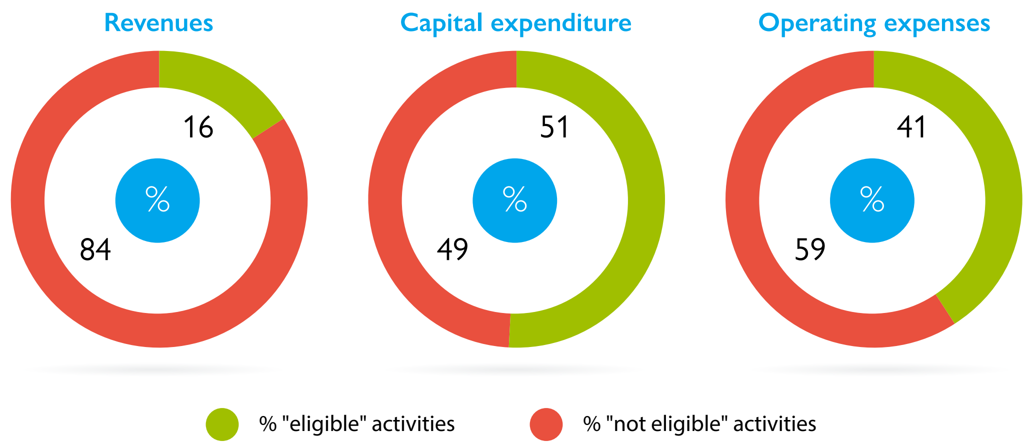
- *4.1 Electricity generation using solar photovoltaic technology*
- *4.3 Electricity generation from wind power*
- *4.5 Electricity generation from hydropower*
- *4.8 Electricity generation from bioenergy*
- *4.9 Transmission and distribution of electricity*
- *4.11 Storage of thermal energy*
- *4.13 Manufacture of biogas and biofuels for use in transport and of bioliquids*
- *4.14 Transmission and distribution networks for renewable and low-carbon gases*
- *4.15 District heating/cooling distribution*
- *4.16 Installation and operation of electric heat pumps*
- *4.20 Cogeneration of heat/cool and power from bioenergy*
- *4.24 Production of heat/cool from bioenergy*
- *4.25 Production of heat/cool using waste heat*
- *5.1 Construction, extension and operation of water collection, treatment and supply*
- *5.3 Construction, extension and operation of waste water collection and treatment*
- *5.5 Collection and transport of non-hazardous waste in source segregated fractions*
- *5.6 Anaerobic digestion of sewage sludge*
- *5.7 Anaerobic digestion of bio-waste*
- *5.8 Composting of bio-waste*
- *5.9 Material recovery from non-hazardous waste*
- *5.10 Landfill gas capture and utilisation*
- *6.5 Transport by motorbikes, passenger cars and light commercial vehicles*
- *7.1 Construction of new buildings*
- *7.2 Renovation of existing buildings*
- *7.3 Installation, maintenance and repair of energy efficiency equipment*
- *7.6 Installation, maintenance and repair of renewable energy technologies*
- *8.1 Data processing, hosting and related activities*
- *8.2 Data-driven solutions for GHG emissions reductions*
- *9.3 Professional services related to energy performance of buildings*

In the second half of the year, the Working Group also involved the Planning and Management Control function in the process, in order to calculate the data relating to the "eligible" activities identified, and the indicators required by the regulations. This involvement was also necessary in order to ensure consistency between the amounts reported as part of the disclosure provided for by the Regulation and those determined in the context of financial reporting, as required by the regulations.

Below are the three KPIs determined downstream of the results of the above activities, which are designed to **represent the extent to which the activities carried out by A2A are "eligible" under the European Taxonomy Regulation**.

It should be noted that the indicators were calculated on a consolidated basis, taking care to avoid the risk of double counting. In particular, the elimination of intercompany items was taken into account and the necessary adjustments were made in the case of revenues, investments and costs common to several "eligible" activities pursuant to the Taxonomy. The reporting scope coincides with that of the Consolidated Financial Statements, net of the ACSM-AGAM Group, which prepares its own NFD and reports its performance within the European Taxonomy.

Figure 26 The 3 KPIs of the European Taxonomy



The percentage of "eligible" activities in accordance with EU Regulation 2020/852 in relation to **revenues** includes "revenues from third parties" in the numerator and certain intercompany revenues, in cases where their inclusion was necessary to fully represent the eligible activity, associated with activities carried out by the Group and included in Annex 1 (climate change mitigation) of the Climate Delegated Act, regardless of compliance with the technical screening criteria. The denominator of the KPI is the consolidated revenues for the year 2021 as indicated in the Explanatory Note 27 "Revenues from sales and services" within the Consolidated Financial Statements, excluding the contribution to the Group of Acsm Agam revenues.

The percentage of "eligible" economic activities with respect to **capital expenditures** refers to gross additions to tangible and intangible assets considered before depreciation, amortization, and other measurement changes related to such "eligible" revenues. Moreover, with reference to investments, the Group carried out a further **analysis regarding the potential contribution to the environmental objective of adapting to climate change** (Annex 2 of the Climate Delegated Act), which showed that, starting from next year, a percentage of around 10% - of the total of the current eligible amount - would be configurable as a contribution to the objective of adapting to climate change.
The denominator of the KPI is the sum of the gross additions recorded in 2021 with respect to owned tangible assets, rights of use and intangible assets as indicated in Note 1 "Tangible assets" and Note 2 "Intangible assets" within the Consolidated Financial Statements, net of those relating to Acsm-Agam.

Finally, the share of "eligible" economic activities with respect to **operating expenses** also refers to OpEx directly attributable to activities and related to "eligible" revenues. All costs to third parties and some intercompany costs have been considered, in cases where their inclusion has been necessary to fully represent the eligible activity, excluding costs attributable to raw materials.
In the denominator, all consolidated costs were considered, excluding the contribution to the Group of Acsm-Agam costs, the costs of raw materials, the management costs of the *Corporate* BU and the staff costs of the BUs.

As anticipated, beginning January 1, 2023, it will be necessary to report the portions of revenue, capital expenditures, and operating expenses that are "aligned" with the taxonomy. Therefore, for economic activities identified as "eligible" under this reporting, it will be necessary to verify compliance with the technical screening criteria set forth in the Climate Delegated Act and the Delegated Acts to be published with respect to the additional four environmental objectives identified in Regulation 2020/852. This analysis, which will require specific technical insights, will lead to the publication of new KPIs as part of the 2022 Consolidated Non-Financial Disclosure.
The Group has already started the preparatory activities necessary to guarantee complete and accurate reporting for the year 2022 in accordance with the requirements of the regulations and is evaluating IT interventions on the management and reporting systems to automate the process of data collection and balancing.

PHYSICAL CLIMATE CHANGE ADAPTATION ACTIVITIES AND EMERGING RISKS

In 2021, a systematic assessment was launched regarding the exposure of the A2A Group's companies and *assets* to climate-related hazards as classified by the EU taxonomy and the delegated acts issued in implementation of EU Regulation 2020/852 (see figure). To this end, more than 25 *ad hoc* interviews were conducted by the Enterprise Risk Management structure.
This *assessment* has made it possible to build an initial database that includes the physical climate change adaptation measures implemented by the various companies in the Group and to have a knowledge base to identify the most relevant areas for conducting future in-depth studies on forecast climate parameters, which may be useful for optimizing adaptation and risk reduction measures.
As part of these interviews, an emerging climate risk emerged from among those included in TCFD reporting - marked CC10 - which refers to the possibility that summer temperature rises in the waterways/canals/sea used for cooling, heat waves, and periods of drought could result in the need to reduce plant load due to the inability to adequately cool the thermoelectric cycle (see pages 58-67). In-depth studies are underway.

6
Manufacturing capital

6 Manufacturing capital

REFERENCE CONTEXT

Responding to climate change

The energy transition process in the coming years will be driven primarily by climate change mitigation and technological innovation. The utilities play a strategic role in this phase, because they are able to support the strategic investments envisaged by the PNRR such as upgrading (increasing production capacity by 6GW and improving the resilience of 4 thousand kilometres of electricity grid) and digitalization of grid infrastructure.

The residual capacity of landfills will be exhausted in the next 3 years (with significant differences between the North - 4.5 years - and the South - 1.5 years), given that 17.5 million tonnes of waste are still conferred in this type of site every year. Italy has a percentage of waste going to landfill of almost 21%, far from the European target of 10% (as established by the Circular Economy Action Plan). In order to minimize the use of landfills, the solutions are material recovery or recycling and material recovery as energy. These solutions are feasible only if the gap between the current plants and the heterogeneity of waste disposal methods in the various Italian regions is filled. According to a study by The *European House Ambrosetti*, overcoming the plant *gap* would have both economic and environmental benefits: the investments would enable the activation of up to 11.8 billion euro of induced economic activity, a revenue for the State of 1.8 billion euro and a reduction in waste tax for families of over 550 milion euro. In addition, efficient waste management would avoid the emission of 3.7 million tonnes of CO_2. In order for the advantages to materialize, it is necessary to overcome the NIMBY - Not In My Backyard - syndrome and work on the reduction of plant construction times, which today suffer from the excessive length of the design and authorization phases.

Another goal is the use of green hydrogen in the energy mix (as per the European Hydrogen Strategy); the share of hydrogen is expected to increase to 13/14% by 2050, with a European installed capacity target of 40 GW. Italy aims to develop flagship projects for the use of hydrogen in hard-to-abate sectors, to create hydrogen valleys by leveraging areas with brownfield sites, to enable the use of hydrogen in heavy transport and to support research and development projects.

Italy is characterized by a strong water service divide that separates Southern Italy from Central and Northern Italy. Southern Regions register 52.3% of water losses, against a national average of 43.7%; almost one and a half million southern families suffer water supply interruptions; moreover, about 20% of the Italian territory is at risk of desertification and Italy is subject to 4 infringement procedures due to irregular wastewater treatment. To try to solve the many problems of the Italian water sector, the PNRR has identified four areas of investment and two reforms, for a total of about 15 billion euro investment, and also in this case the utilities of the territory will play a crucial role.

> Why should talking about manufacturing capital be important to the next generation? Where do we fit in between real estate and infrastructure? When I think of "manufacturing capital": I think of labour, a business and its workers who, day in and day out, use plant and machinery to produce and offer services and products. But they all seem distant to us, foreign to our daily lives. However, behind this term lies something more. Making corporate facilities and networks efficient is just one part of a cog in a machine that has a much larger mission: to keep pace with the green transition.
>
> *GIORGIA, 19 years old, Salerno*

2021 IN FACTS

20% OF THE ITALIAN TERRITORY AT RISK OF DESERTIFICATION

15 billion euro OF INVESTMENTS FOR THE WATER SECTOR FORESEEN IN THE PNRR

40 GW OF INSTALLED CAPACITY AT EUROPEAN LEVEL FOR GREEN HYDROGEN PRODUCTION

21% OF DISPOSAL OF WASTE IN LANDFILLS IN ITALY

IMPACTS FOR A2A

SDGs IMPACTED

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

11 SUSTAINABLE CITIES AND COMMUNITIES

MATERIAL ISSUE

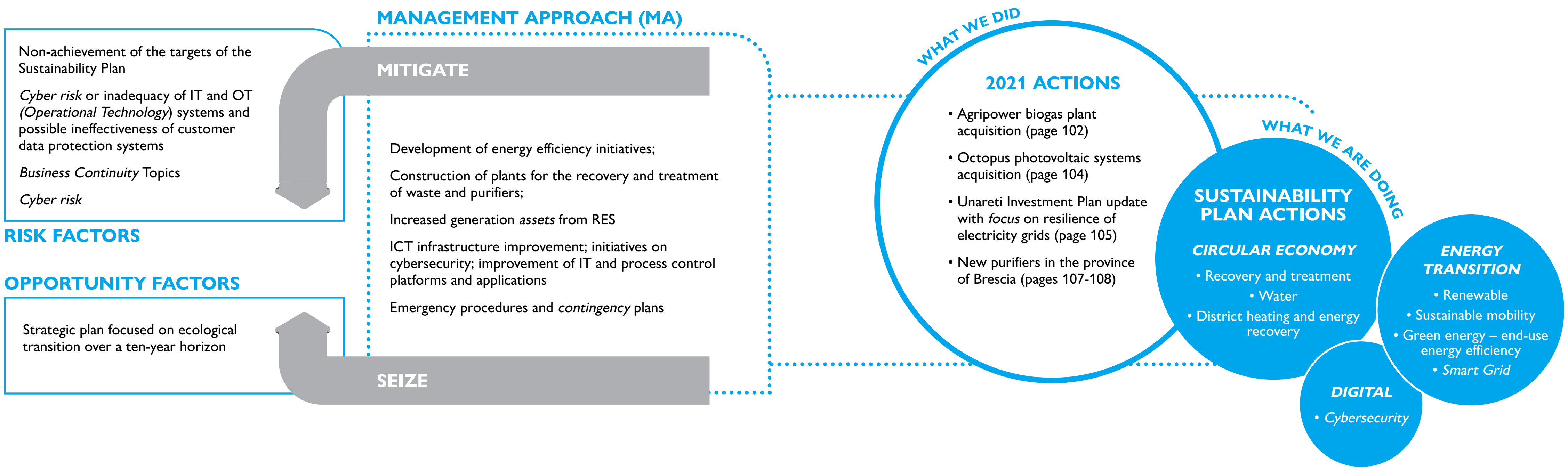
Infrastructure for the Ecological Transition

STRATEGIC PLAN @2030

5.9 GW of installed renewable capacity

Infrastructure for the Ecological Transition

Continuous maintenance of the Group's plants, use of BAT (Best Available Technology) and application of innovative tools and technologies aimed at improving plant *performance* while maintaining continuity, reliability and safety of the services offered. It includes both the optimization and efficiency of the services offered and the development of new technologies and solutions for new needs related to sustainable mobility infrastructures. Implementation of initiatives aimed at increasing the capacity of adaptation to climate change



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 and ecological platforms to energy and material recovery and processing plants.

Figure 27 Plant types and geographic location of the Environment BU

PLANT TYPE	NUMBER OF PLANTS	LOCATION	CAPACITY	u.m.
Material treatment and recovery	24	Lombardy Piedmont	1,892,000	tonnes/year
ITS	7	Lombardy Piedmont	652,000	tonnes/year
Waste-to-energy plants	7	Lombardy	260 622	MW_e MW_t
Landfills (available capacity)	11	Emilia - Romagna Lombardy Piedmont	1	Mm^3
Biogas production	20	Emilia - Romagna Lombardy Piedmont	41	MW_e
Biomass	2	Apulia - Lombardy	26 6	MW_e MW_t

In total, the waste treated in the Group's plants amounted to approximately 4.7 million tonnes, of which approximately 3.7 at the Group's plants (+2% compared to 2020) and approximately 1 million at the plants managed on behalf of third parties (Acerra waste-to-energy plant and Caivano plant). As a well-established *trend*, there was an increase in both thermal and electrical energy production, amounting to 1,409 GWhe and 1,604 GWht respectively. The more than 9.4% increase in power generation is primarily due to the recent acquisition of several biomass digestion plants.

Natural Capital

Emissions avoided

1.9 Mt emissions avoided by waste-to-energy plants in 2021

Consistent with the 10-year Strategic Plan, the Group continued to strengthen its control over the entire waste chain, also thanks to external acquisitions. Through its subsidiary A2A Ambiente, the Group signed an agreement to acquire a 30% stake in F.lli Omini SpA, a company specializing in the demolition and decommissioning of industrial plants.

The **management of the final phase of the life cycle** of industrial *assets* is, in fact, an activity inspired by the principles of circular economy and will become a priority for the support of the energy transition. The strengthening of the *business* has also been consolidated **outside the usual territories**, with the acquisition of the share capital of TecnoA, a *leading* company in central and southern Italy in the treatment of industrial waste. The plant, located in Crotone, has a treatment capacity of about 300,000 tonnes per year of industrial waste. The *assets* include: an inertization plant, a chemical-physical treatment plant for liquid waste, a thermo-destructor for hospital waste and a waste-to-energy plant dedicated to the energy recovery of industrial waste.

A2A also signed an agreement to acquire 27.7% of the share capital of Saxa Gres S.p.A., the **first *Circu-***

lar Factory **to make urban paving (GRESTONE®) using an innovative "end of waste"** process that enables materials from the waste cycle, such as the ash produced by waste-to-energy plants, to be recovered and reused to make a new product.

In 2021, the project was started to build a new treatment line at the Parona waste-to-energy plant to replace the existing one (which has reached the end of its life) for the **combustion of special non-hazardous waste**. The technology chosen is that of the latest generation grid combustion systems, which allows waste of varying sizes to be treated without the need for pre-treatment and which uses the best technology available today, in order to comply with legal limits on emissions. The maximum annual energy that can be produced by the plant is about 211 GWh_e.

The European and national context of reference tends to limit the agricultural use of sludge from wastewater treatment, due to the potential presence of micropollutants and antibiotics. Hence the need to **build a new plant for drying biological sewage sludge at the Corteolona site**. The intervention foresees a drying and pelletizing section to send to energy recovery sludge with a quality not suitable for spreading in agriculture. The project has numerous benefits:

- creation of synergies between the plant and the waste-to-energy plant on the same site, with a recovery of thermal energy that will not require further external energy inputs;
- sludge drying and its use in waste-to-energy facilities will allow for more efficient combustion of incoming non-hazardous waste;
- will allow recovery of phosphorus from sludge combustion ash that can be returned to soils.

The construction of the plant involves an investment of approximately 14 million euro, and will enter service in February 2022.

BIOENERGY: THE ACQUISITION OF *AGRIPOWER*

At the end of 2020, the Group was awarded the entire share capital of Agripower as part of an arrangement procedure, which was completed in 2021. Agripower is one of the main Italian platforms for generating electricity from biogas, through the management of plants fuelled by agricultural and agro-industrial residues. The company owns 18 plants with a total installed capacity of about 18 MW, and a treatment capacity of about 445 thousand tonnes of feedstock (corn, pig and cattle slurry, etc.), distributed in 9 regions in Northern and Central Italy and Sardinia. The company is also a key *player* in the operation and maintenance of biogas power plants, with over 60 facilities under management.

One of the biogas power plants is currently being converted to biomethane. The plant allows the treatment and use of more than 30 thousand tonnes per year between OFMSW and agro-food waste. The current expansion project will allow the production of about 5 million Sm^3/year of biomethane.

The 10-year Strategic Plan foresees a strong push towards the production of energy from biomethane: through the reconversion of existing biogas plants, through acquisitions and construction of greenfield plants that will allow to triple the number of plants of this type. In addition, the development of 5 biomethane liquefaction plants is planned. Approximately 600 million cumulative investments have been allocated to the Plan for the development of the production of this renewable gas, and it is estimated that **the increase in production will reach 200 million m^3**, thanks to approximately 4.7 million tonnes of feedstock used.

6.2 The manufacturing capital in the Generation and Trading Business Unit

The Generation and *Trading Business Unit* is responsible for managing the Group's portfolio of generation plants and for *trading* in all energy *commodities* (natural gas, electricity and environmental certificates) on domestic and foreign markets. The production of electricity (and the balancing of the grid), takes place in an increasingly diversified and sustainable way through different types of plants, whose capacities are shown in the table below.

Figure 28 Plant types and geographic location of the Generation and Trading BU

PLANT TYPE	NUMBER OF PLANTS	LOCATION	CAPACITY	u.m.
Hydroelectric units	5	Lombardy; Friuli-Venezia Giulia; Calabria	2,071	MW_e
Thermoelectric plants	9	Piedmont; Lombardy; Friuli-Venezia Giulia; Emilia Romagna; Abruzzo; Apulia; Sicily	6,896	MW_e
Photovoltaic plants	102	Italy	273	MW_e
Wind plants	1	Campania	8	MW_e
Synchronous compensators	2	Puglia	286	MVar

The production of electricity in 2021 had an increase of 15%, reaching pre-pandemic levels, mainly due to the demand for energy related to the economic recovery of the country, and a high demand for the *commodity* even from countries beyond the Alps. The mix of sources used this year has varied in favour of CCGT plants, called upon to operate by the market, being the only plants capable of guaranteeing the stability of the national electric system. It is important to note the **ever increasing contribution of photovoltaic production (+150% compared to 2020)**, linked to the Group's new strategy in the sector. As provided for in the Business Plan, the use of coal was limited, whilst the dense fuel oil plant in Sicily was called on to operate - more than planned - by the TSO Terna due to national electricity system safety requirements. Hydroelectric production was also slightly down (4,226 GWh), due to reductions in inputs in catchment areas.

CO_2 emission factor
335 gCO_2/kWh
emission factor of the Generation and *Trading BU* in 2021

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.

The decarbonization process, which A2A has already undertaken, requires coal-fired plants to be shut down in the coming years. The energy transition envisages that part of the energy previously produced by coal-fired plants will be supplied by new-generation natural gas-fired plants, which reach efficiency values higher than 60%, with an average CO_2 emission factor lower than 40% of a coal-fired plant, and which, also thanks to their flexibility and speed of response, play the role of "enabling systems" or plants necessary for the development of renewable sources, with a view to maintaining the security and stability of the electricity production system.

In 2021, ministerial authorization (Environmental Impact Assessment Decree with prescriptions) was approved for the redevelopment of the **Monfalcone power plant** in Friuli-Venezia Giulia. The project for the reconversion of the power plant to an integrated energy pole foresees the realization of a high-efficiency gas-fired combined cycle and the experimentation of mixed gas/hydrogen production. The conversion will allow a significant improvement in terms of environmental impact and performance, which will therefore increase the safety and stability *standards* of the national electricity grid. The hydrogen experimentation was created within the agreement with Snam, aimed at encouraging the use of hydrogen in energy production.

Between the end of 2020 and mid-2021, authorizations have been obtained from the competent bodies for a project to upgrade the technology of the turbogas machinery of the Combined Cycle plants of Cassano, Sermide, Chivasso and Piacenza with the aim of achieving an **overall improvement in the performance of the plants** with an increase in the electrical power of the plants and a consequent **reduction in the emission coefficient of the plants (amounting to around 2%)**. Work is expected to be completed by 2022, except for the Piacenza power plant, for which work will be completed in 2023.

During 2021, the Ministry of Infrastructure approved, for the Trepidò and Ambiesta dams, the feasibility project aimed at **improving the response to seismic stress**. Activities are underway to prepare the drawings for the subsequent design levels, in order to obtain the authorizations (including local authorizations) and proceed with the awarding of the works. Still on the subject of safety, mention should be made of the completion of an important defence work in the territory of the Stelvio National Park in the Municipality of Valdidentro (SO), the purpose of which is to mitigate the risk of landslides and fragments on A2A works and the surrounding residential areas.

In the fall of 2021, A2A implemented the **emptying operation** aimed at removing sediment from the Valgrosina reservoir and maintaining the submerged works in order to verify the proper functionality of the plant. As per practice, a monitoring plan was also put in place aimed at assessing the concentrations of suspended solids in the receptor streams, the Roasco Creek and the Adda River, and defining the effects on *habitat*.

Growth in the photovoltaic sector and the *revamping* and *repowering* of existing photovoltaic systems

A key part of the 21-30 Strategic Plan is increasing renewable energy capacity. In line with the Plan's commitment, in 2021, A2A signed a binding agreement to acquire from Octopus Renewables a portfolio of 17 photovoltaic plants with a nominal capacity of 173 MW. The *asset* is the largest portfolio of non-incentivized plants in Italy, of which 9 are located in Lazio and 8 in Sardinia. The plants will be able to guarantee an increase in installed capacity that will allow them to produce approximately 420 GWh per year of green energy, equal to the annual consumption of approximately 200,000 residential customers, thus avoiding the emission of a total of 2.5 million tonnes of CO_2 (over the entire life cycle of the plants).

Moreover, some revamping actions have been studied and evaluated for 4 photovoltaic plants installed at the power plants of Chivasso (on the ground), Sermide (on the ground), Brindisi (on the roof) and San Filippo (on the ground), with restoration of the initial power and repowering only for the first two, to which modules will be added for the strengthening of the plants, creating in fact a second plant without incentives. Activities related to Chivasso and Sermide began in late 2021 and will be completed by Q1 2022. PV revamping activities at the Brindisi and San Filippo sites are scheduled for the end of 2022.

The **Group**'s 10-year Strategic Plan calls **for more than 3.9 GW of new renewable installed capacity by 2030**.

6,3 The manufacturing capital of the Smart Infrastructures Business Unit

The Smart Infrastructures Business Unit is responsible for developing and maintaining the infrastructures that enable the provision of electricity and natural gas distribution services, heat production and distribution, management of the integrated water cycle (aqueducts, sewers and purifiers), recharging of electric vehicles through the appropriate columns, access to broadband connectivity and Smart City services (installation and monitoring of sensors, data collection and analytics development).
The maintenance and evolution of these infrastructures are amongst the key factor necessary to achieve the national and European energy policy goals.

Electricity and natural gas distribution service

The electricity distribution network has an extension of 15,829 km in high, medium and low voltage, of which 87% of the total is underground. The network is also supported by 32 primary stations and substations and 9,742 secondary stations.

In contrast, the length of gas distribution infrastructure is 13,022 km in medium and high pressure. The significant increase compared with last year's figures (around 3 thousand km more of network) is linked to the inclusion of the distribution company Retipiù in the scope of consolidation. The network has 211 primary stations (REMI) and 2,585 secondary stations (GRF).

The electricity distribution activity is managed by Unareti, LD Reti and Retipiù in Lombardy in the provinces of Milan, Brescia, Monza and Cremona. The gas distribution activity is managed by the same companies in addition to ASVT with the most important share of the networks located in Lombardy, in the provinces of Milan, Brescia, Bergamo, Cremona, Lodi, Monza and Pavia, and also, with smaller network sections, in Trentino, Emilia-Romagna. With reference to the *assets* in the regions of Veneto, Friuli-Venezia Giulia, Abruzzo, Molise and Campania, it should be noted that in December 2021, A2A and ACSM AGAM sold their gas concessions to a third-party consortium. For both companies, this is a sale of non-strategic *assets*. The perimeter of activities covered by the operation includes approximately 157 thousand users, distributed in 8 Italian Regions, belonging to 24 ATEMs, for over 2,800 km of network. The transaction is expected to close in the first half of 2022.

In 2021, electricity distributed amounted to 11,268 GWh (7.3% compared to 2020), while gas distribution amounted to 2,819 Mm^3, with a relevant increase compared to the previous year (22.6% compared to 2020). 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 410 km network and moving 426 million cubic metres of natural gas each year.

Figure 29 Plants of the Smart Infrastructures BU for the distribution of electricity and gas

PLANT TYPE	EXTENSION
Electricity networks	15,829 km *of which 13,790 underground*
Gas networks	13,022 km

With reference to the plan to replace new gas meters, launched in 2015, with the achievement of more than 90% coverage, the Group is effectively in line with the objectives set by the Authority.

With regard to the evolution of electricity distribution infrastructures, the 2021 Development Plan outlines a series of interventions aimed at supporting the electrification of consumption, encouraging the spread of electric transport and improving resilience and service quality.
The main lines of action are outlined in the Unareti 2021 Development Plan, which envisages: construction of 14 new primary stations, increase in the number and level of automation and remote control of secondary stations; renewal of medium and low voltage networks and protection systems; efficiency improvement of transformers; continuation of the installation of 2G Smart Meters, started in 2021 in Brescia; interventions aimed at preventing the effects of adverse climatic events (heat waves, floods, etc.).

In implementation of the plan's objectives, during 2021, work continued on the construction of the Rozzano and San Cristoforo primary stations and the upgrading of the connected Medium Voltage networks (around 150 km laid in 2021), both of which are in the testing phase with start-up scheduled for the first half of 2022.
Also in line with the objectives of the plan, the massive installation of 2G smart meters in the city of Brescia was completed (110,000 units installed for an investment of around 18 million euro). The activity was carried out over a period of 9 months, with the involvement of 25 operators of external companies that used means of transport with low environmental impact (hybrid, LPG, methane) throughout the activity. In addition, investments were made to increase the level of resilience to adverse climatic events (frost, wind, and falling plants) of some Medium Voltage lines in the area of the municipalities located between Lake Garda and Valle Sabbia with the aim of significantly reducing the rate of suspension of electricity and the consequent inconvenience to about 4,350 users affected. The "Rozzano" Primary Station is the first of 14 new Primary Stations planned in the Unareti 10-year plan. The project also includes the laying of new medium voltage grid cables that will run for about 100 km.

In the primary station of via Rubattino in Milan, moreover, the ***Smart Lab*** was inaugurated**, a place of experimentation, monitoring and management of the electricity network** which, through the introduction of technological innovation for the enabling of the Smart Grid, aims to **improve the *standards of* operation of the network to make it more sustainable and effective with respect to local needs**.

Intellectual Capital

Smart Grid
first 50 gas stations involved in the Smart Grid project

As regards possible future scenarios relating to the gas distribution service, the new 21-30 Plan envisages investments focused mainly on maintaining infrastructures (72% of the cumulative total) and to a lesser extent on development (28% of the cumulative total), in line with *trends* linked to decarbonization, which envisage a gradual reduction in natural gas consumption in favour of less polluting sources and the possible use of existing infrastructures for the transport of biomethane and hydrogen.

The company Retipiù, in 2021, equipped itself with an advanced mobile gas leak detection system; this has allowed an improvement in plant safety, a greater planning of the replacement of obsolete pipes and a reduction in methane emissions. The investment amounts to nearly 1.3 million euro.

DIGITAL MATERIAL MANAGEMENT (DIGIMAMA) IN THE *SMART INFRASTRUCTURES BU*

DigiMama is a materials management process innovation and digitalization programme launched in the Smart Infrastructures BU in the second half of 2020 and continued through 2021.
The programme focuses on transforming the two macro processes of materials demand forecasting and warehouse logistics management.
Regarding the first process, during 2021 Unareti carried out a project aimed at introducing the DDMRP (Demand Driven Material Resource Planning) method and the Replenishment + application into its material planning activities. The project, which will be rolled out to the rest of the BU, has reduced manual activities in the supply chain and improved the accuracy of material demand, avoiding unnecessary inventory levels and delays in completing jobs due to material shortages.
Regarding the second process, during 2021, the Smart Infrastructures BU completed the roll out to all its warehouses of a WMS (Warehouse management system) application. The new application and related tools for the acquisition of information on materials through bar codes, allows to make efficient the handling operations of materials, to optimize the use of space in the warehouses and the allocation of materials to their intent, to know the inventory of materials in real time and to decrease the probability of error compared to a paper management mode.

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 2021 the Group distributed 56 million cubic metres of water. In the municipalities overseen for the sewage and treatment service too, approximately 51 million cubic metres of wastewater were treated.

Figure 30 Plants of the Smart Infrastructures BU for integrated water service

PLANT TYPE	EXTENSION
Aqueduct network	4,042 km
Sewers network	2,621 km
Purifiers	57
Treatment capacity	52 Mm^3

Also in 2021, actions continued to achieve the objectives of the Plan that reflect an integrated logic, aimed at improving the entire service in terms of quality of water distributed, reduction of network leaks and extension of the number of citizens served by water treatment.

the Aquarius project continued, which involves the installation of sensors (noise loggers) capable of detecting water leaks based on the "noise" of the water coming out of the pipes, guaranteeing almost real-time monitoring and very rapid identification of leaks compared to traditional field detection techniques. A **further 220 sensors have been installed**, expanding the areas monitored in Brescia and adding portions of the network in other municipalities for a total of over 130 km of network monitored using this technology.

Also with a view to technological innovation, an experiment is underway to test the effectiveness of utility meters with an integrated noise detection module.

Again with a view to better planning of upgrading works on networks and plants, A2A Ciclo Idrico has developed an **innovative application (RQTI)** capable of collecting data from various company information systems relating to volumes of water withdrawn, user consumption, chemical analyses of drinking water and wastewater, faults on water and sewer networks and sludge produced by purification plants. Through the correlation of all these data, also from the geographical point of view, it is possible to identify the most critical situations and therefore to **address the adjustment of networks and plants in order to reduce them**.

Thanks to the interventions described above, and other interventions (field and satellite inspections, and districtualization activities), the Group expects to **reduce linear water losses (m^3/km/dd)** by 23% by 2030. **It is also planned to progressively install more than 1,400 sensors by 2030 to monitor the networks (water and sewage) from a quantitative and qualitative point of view.**

PURIFICATION PLANTS OPTIMIZATION

As part of the work to modernize the dewatering systems, aimed at reducing the production of biological sludge from the treatment plants, during 2021, the machines at the Brescia, Nuvolera, Borgosatollo and Bedizzole Pontenove treatment plants were started up. In 2021, dewatered sludge production from the treatment plants was 6% lower than 2020 production, a decrease of approximately 1,258 tonnes of sludge produced. In addition to the lower production of sludge to be disposed of, the initiative has resulted in less road transport and therefore an additional environmental benefit. Moreover, in 2021, the blanket installation campaign of regulation systems (inverters) to reduce the energy consumption of plants continued (22 units installed).

The year 2021 saw the completion of work on the new purification plants at Gavardo and Alfianello. The new purification plant of Gavardo - Vallio Terme, in operation since November 2021, has a nominal treatment capacity of 36,000 population equivalent and is sized to support, with adequate margins, the demographic development of the served area. The new purification plant of Alfianello has a nominal capacity of 6,000 population equivalent, treated in two twin and interchangeable lines. Construction of the plant is in the terminal stage and full commissioning of the plant is scheduled for late February 2022.

During the year, 12 non-purified terminals were therefore eliminated, for a total of approximately 2,000 population equivalent in the municipalities of San Paolo, Alfianello, Orzinuovi and Bassano Bresciano.

The works for the realization of the **Valtrompia purification plant** have also been started: the project will allow to serve about 85 thousand population equivalent in the first phase, and it is characterized by the **use of specific materials and instruments aimed at the reduction of environmental impacts since its construction**. In fact, "*Greenbase*" concrete will be used - consisting of secondary raw materials - and therefore respectful of the principles of circular economy. In addition, the purifier will adopt energy-efficient machinery, for which an application has been made to the GSE for approximately 600 energy efficiency certificates. The request for energy assessment was **the first in Italy to be accepted by MiSE, for this sector, as it is a highly innovative project**. The work is scheduled to be completed in the second half of the year 2022, for an investment of 25 million euro for the first phase of the project.

Other activities carried out concern **the extension of the collection system in the upper Valtrompia** and the **new sewer network in the municipality of Lumezzane**. The latter project has a value of 56 million euro and is in the design phase, using advanced techniques such as topographic surveys by drone, BIM tools and specific modelling *software*.

District heating plants and networks

Through its subsidiaries A2A Calore e Servizi and Linea Green, the Group develops and manages the district heating plants and network[1] in Milan, Sesto San Giovanni (Mi), Novate (Mi), Cassano d'Adda (Mi), Cologno Monzese (Mi), Brescia, Bovezzo (Bs), Concesio (Bs), Bergamo, Crema (Cr), Cremona, Lodi and Rho (Mi), and Monza (Mb) for a length of over 1,250 km, with a service capacity of 491 thousand equivalent apartments and a volume of 118 million cubic metres served. In 2021, distributed heating and cooling energy increased by about 9% to 3,418 GWht.

Figure 31 Plants of the Smart Infrastructures BU for the district heating service

PLANT TYPE	NUMBER OF PLANTS	CAPACITY	u.m.
Cogeneration plants	15	139	MW_e
		771	MW_t
Thermal plants	24	764	MW_t
Heat exchange	9	271	MW_t
Heat pumps	2	33	MW_t
Heat accumulators	16	17,790	m^3

In 2021, activities to expand the district heating network in Lombardy continued. In May, **A2A and ENI signed a twenty-year agreement** for the supply of heat that is generated by Enipower's production site in Bolgiano (San Donato Milanese) and which will be used to power the Milan district heating network. Thanks to this agreement it will be possible to supply the Milan network with **recovery co-generated heat for approximately 54 GWh per year**, which is equivalent to the average annual requirements of about 6 thousand households. From an infrastructural point of view, A2A Calore e Servizi will build a heat exchange and repumping station near the Eni plant, which will allow the transfer of heat from San Donato to Milan thanks to the district heating network already installed. The project has also been promoted by the Municipality of San Donato, which has made available the area where the pumping station will be built, which will be upgraded for the occasion. This agreement is part of the broader project called "Lomb@Heat - Lombardy Energy *Hub*", funded by the Lombardy Region under the tender "Call Hub", which aims to identify heating solutions with low environmental impact aimed at mitigating climate change and improving air quality.

In March 2021, as part of the initiative "A Milano energia nuova per le Utility" organized by A2A Calore e Servizi, with A2A Energia and Metropolitana Milanese, an experimental project for 4th generation cogeneration for homes in the Comasina district of Milan was presented. The project foresees the substitution of the old thermal power plant existing in the district with a modern cogenerator with two internal combustion engines, fed by natural gas, and a water/water heat pump for the recovery of the ground water heat. The new plant will allow to produce in a more efficient way both the heat necessary to heat the houses of the district and the electric energy necessary to feed the pumping station of the "Salemi" aqueduct and the new heat pump. With this configuration, 20% of the heat produced will come from renewable sources and about 48% from high-efficiency cogeneration.

During 2021, Gelsia also carried out a major **upgrade of the Seregno cogeneration** plant, which will allow a more balanced production to serve the grid and a higher yield of the power plant. The redevelopment involved the construction of an independent operating plant consisting of a 3.5 MW boiler and a 140 kW cogenerator; the replacement of obsolete cogeneration engines and the thermal oil boiler with a 3.3 MW engine; and the start of the project to install two 4.5 MW boilers. The total investment is approximately 3.9 million euro.

THERMAL STORAGE IN DISTRICT HEATING PLANTS

In 2021 the plan to build new thermal storage units in A2A Calore e Servizi's district heating plants continued.
Thermal storage units are reservoirs that allow storing heat at times when utility demand is low, typically at night. The stored heat is then released during peak utility demand phases, typically early in the morning, reducing the amount of total heat to be produced. This mechanism also allows for maximum use of available reclaimed or renewable heat sources, thereby further reducing district heating emissions.
At the Famagosta power plant in Milan, work is underway on the construction of two thermal storage units of 1500m³ each; completion is scheduled for 2022. At the Goltara power plant in Bergamo, on the other hand, a new storage system with a capacity of 4,000 cubic meters is under construction, with savings of over 4,200 tons of CO_2 per year. In Brescia, too, the intervention is twofold, with the construction of two storage tanks at the Nord power plant and the upgrading of an existing plant at the Lamarmora power plant. Estimated savings of approximately 1,000 toe/year for the city of Brescia.

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

Sustainable mobility: *E-mobility* is created

A2A E-mobility is the new company of the Group, created in July 2021, to oversee and seize the opportunities expected from the development of the electric mobility market. A2A E-Mobility performs in particular the function of Charging Point Operator (CPO), i.e. the subject that, in the field of electric mobility, develops, maintains and manages charging infrastructures (the "columns") with public access. The CPO then interacts with the Mobility Service Providers (MSP), i.e. the subjects that, through special digital platforms, allow the provision of charging services to end users.

A2A E-Mobility's main objective is therefore to develop recharging infrastructures, an activity that in 2021 resulted in the installation of 85 new columns, for a total of about 300, corresponding to about 900 recharging points, located mainly in Lombardy.

The energy supplied in 2021 amounted to 3.2 GWh, all coming from renewable sources certified by the "Energia A2A Rinnovabile 100%" brand, equivalent to around 21 million km travelled, with a saving of around 2,300 tonnes of CO_2 equivalent.

A2A E-Mobility has also increased the pipeline of future investments, signing contracts for the construction of more than 100 columns by 2022, and, above all, winning through the European Connecting Europe Facility (CEF) tender, a contribution equal to 15% of the value of the investments necessary for the construction of 276 fast-charging columns in the three-year period 2021-2024.

Public lighting

A2A Illuminazione Pubblica is the Group company that deals directly with the design, construction and maintenance of public lighting systems, guaranteeing, through the use of the latest technology, a reduction in energy consumption, the containment of light pollution and respect for the environment.

All new systems are made by installing lighting fixtures capable of offering performances in compliance with the regulations that prohibit the emission of light upwards to **eliminate the effects of light pollution**.

In 2021, A2A Illuminazione Pubblica took over the management of public lighting in the municipalities of Bovisio Masciago (MB), Castiglione Olona (VA) and Cassano Magnago (VA) in ATI with Varese Risorse S.p.A., of Sant'Arsenio (SA) and Melissano (LE) in ATI with Selettra S.p.A and of Carbonara al Ticino (PV) and Villanova D'Ardenghi (PV).

The work to improve the efficiency of the municipalities mentioned above began in 2021 and will end in 2022, providing for a total replacement of about 10,000 lighting fixtures that do not comply with the Regional Law for the containment of light pollution and energy saving with high-efficiency street, furnishing and decorative products equipped with LED sources.

These interventions will allow in each municipality a significant energy saving compared to current consumption, ranging from 65% to 80%.

6.4 *Cybersecurity*

Since 2017, the Group has had an organizational unit dedicated to *cybersecurity* in order to implement security processes and infrastructures internally. The activities carried out mainly consist in:

- defining IT security policies, processes and standards to be applied within the Group;
- assessing cybersecurity risk, defining and monitoring mitigation activities;
- enabling 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;
- identifying 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 and updating the access privileges associated with the Group's systems/applications to ensure that these arrangements are still based on a specific need.

With regard to the issue of ***Security Governance and Cyber Defence***, preparatory activities were carried out in 2021 in order to obtain **ISO 27001 certification** and, in particular, to define the scope of certification. In addition, the mapping of processes/applications with a high fraud risk was prepared and **two "*Segregation of Duties relevant*"** applications relating to customer services and supplier services processes were analysed. Finally, within the scope of risk analysis, risk assessment activities were carried out in an integrated manner with respect to the Enterprise Risk Management (ERM) processes, both in the IT and OT areas, following which a risk mitigation plan was defined in synergy with the Group's planned activities.

In terms of ***Security Intelligence***, the systems in use for the **counterparty verification process** have been further developed, with the **introduction of an ESG taxonomy**. In addition, cyber threat analysis performed by the Group's Security Operations Center (SOC) is present and integrated at the operational security management level.

In 2021, **the *Cyber & Physical Security*** exercise was held **at the Grosio Hydroelectric Power Plant**: the objective was to simulate an incident to "learn on the field" how to respond in a timely and effective manner to any emergency situations, related to cyber and physical threats. In addition, as part of business continuity management, the scenario of a power failure in the *bidding* room in Milan was also simulated to test the resilience of the *Energy Management* process. This exercise represented the final step of a wider training course, aimed at developing a greater awareness of cybersecurity issues.

During the year, an **MoU** was signed **between A2A and Leonardo** for field testing of solutions to **meet the specific *cybersecurity* needs of energy infrastructures**. The experimentation will concern in particular the analysis of the cyber risk of digital *assets* and services, the virtualization of application *tests* and the protection of the stations dedicated to plant control.

The "IRIS" (Intelligent Resilience Information Security Services) team has become part of the**national and international *network* of CERTs**, which guarantees greater collaboration with all the most important Italian and international realities dealing with Cyber Defence and allows to share information and good practices with them. The initiative is an excellent opportunity to "work as a system" and be increasingly effective and timely in dealing with threats related to *Cybersecurity*.

Finally, in November 2021, the second edition of the ***Master in Security Management*** was launched, realized in collaboration with the University of Tor Vergata in Rome and dedicated to all colleagues of Group Security and Cyber Defence and all those who, also in other Departments, deal transversally with *security* issues. The course provided 134 hours of training. All those who have completed the Master's programme will earn one of the following certifications (as per UNI 10459:2017): "*Security Expert*", "*Security Manager*", "*Senior Security Manager*".

It should be noted that 66 incidents of high and critical severity were detected and managed in 2021, none of which was such as to compromise the company's business or generate Data Breach. In addition, 20 cases of data breach were detected due to the incorrect implementation of application controls and managed in a timely manner, with an impact assessed as 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.

7

Natural capital

7
Natural capital

REFERENCE CONTEXT

Working with and for the environment to find better solutions

In 2021, the recovery in activities resulted in a rapid increase in energy consumption and demand. The pandemic also slowed all progress and projects supporting the energy transition and renewables, which is why fossil fuel use has increased over the past year to meet emerging demand. The main consequence is that 2021 is also considered to be the second year in history in which CO_2 emissions have increased significantly, so much so that all of the emission reductions due to the 2020 lockdowns are cancelled out.

In this context, the global and European objectives for 2030 and 2050 (e.g. Sustainable Development Goals, Paris Agreement objectives, European Climate Law as part of the EU Green Deal) are very challenging: they aim at a progressive and complete decarbonization of the system in order to achieve "climate neutrality" and to strengthen the adoption of circular economy solutions to protect nature and biodiversity. In the fall of 2021, the COP26 (Conference of Parties) held in Glasgow resulted in the Glasgow Climate Pact, which sets out the decisions made by agreement among the participating countries and further strengthened the commitments described above.

During the year, again at European level, the environmental legislative context was strongly characterized by the presentation of regulatory *frameworks* of particular relevance: the "Fit for 55 package", which contains the preparatory measures to achieve the objective of reducing (-55% compared to 1990) greenhouse gas emissions by 2030, the "Gas Package" that aims to define the future regulatory framework for the development of renewable gases and the first Delegated Act on the Taxonomy of Sustainable Activities, focused on climate objectives.

In this continuously evolving European context, at national level, is the National Recovery and Resilience Plan (PNRR) with about 60 billion euro of resources available to combat climate change. Mission 2 "Green Revolution and Ecological Transition" provides for the division of available resources among the three Components: Circular Economy and Sustainable Agriculture (5.27 billion euro), Renewable Energy, Hydrogen, Grid and Sustainable Mobility (23.78 billion euro), Energy Efficiency and Building Renovation (15.36 billion euro).

2021 was therefore the year in which work began on the future application of some of the key regulatory acts for the ecological transition. The business world will have to be ready to seize all the opportunities and to contribute concretely to the achievement of environmental objectives in the medium and long term.

> Soil, air, water, plants, animals... for many people these things are taken for granted, but for us young people these elements represent the most precious assets of the planet. On the other hand, we are those who will inhabit the earth in the coming years, we are the consumers and workers of tomorrow, those who will reap the benefits of the decisions made today. We have always been taught that it takes very little to do your part and that preserving natural capital means protecting our own health. So why should we prefer those who do not take our future well-being to heart? Even for the corporate world, the time has come to value and respect what the earth offers us.
>
> *ALESSANDRA, 26 years old, Milan*

2021 IN FACTS

SIGNIFICANT INCREASE IN CO_2 EMISSIONS IN 2021

THE PNRR ALLOCATES ABOUT 60 BILLION FOR THE FIGHT AGAINST CLIMATE CHANGE

COP 26 RESULTED IN THE *GLASGOW CLIMATE PACT*, WHICH REINFORCES COMMITMENTS TO DECARBONIZATION

PUBLICATION OF THE *FIT FOR 55*, THE GAS PACKAGE AND THE FIRST DELEGATED ACT ON THE TAXONOMY OF SUSTAINABLE ACTIVITIES

IMPACTS FOR A2A

SDGs IMPACTED

MATERIAL ISSUES

- Circular economy
- Sustainable management of water resources
- Climate change
- Biodiversity
- Pollution prevention

STRATEGIC PLAN @2030

77% municipal waste separate collection rate

Circular economy

Promotion of a model of production and consumption aimed at extending the life cycle of products and services in order to minimize waste and impacts; this means enhancing the value of waste as recyclable and reusable resources, developing separate collection activities and increasing the efficiency of the use of sludge and wastewater for the production of biogas or biomethane. It also means minimizing the use of landfill and minimizing the use of non-renewable resources used in the *business*.

MANAGEMENT APPROACH (MA)

RISK FACTORS

- Delay in the evolution of the national regulatory environment supporting the development of the circular economy sector
- Difficulties in obtaining authorizations for the construction of plants
- Failure to take into account impacts of circular economy activities
- Insufficient oversight in the implementation of new institutional and EU requirements regarding the circular economy

OPPORTUNITY FACTORS

- Integration between Sustainability Plan and Business Plan
- Regulatory framework favourable to circular economy development
- Changing consumer behaviour when buying goods and services

MITIGATE / SEIZE

- Adoption of BAT for waste treatment
- Planning of growth strategy in circular economy also through M&A operations
- Listening and dialogue with local and institutional stakeholders
- Organizational structure dedicated to business development in the environmental sector.

WHAT WE DID – 2021 ACTIONS

- Increase in the percentage of separate collection (page 120)
- Increased waste collection (page 120)
- Acquisition of TecnoA (page 101)
- Acquisition of Saxa Gres (page 101)
- New sludge drying plant in Corteolona (page 102)

WHAT WE ARE DOING – SUSTAINABILITY PLAN ACTIONS

CIRCULAR ECONOMY

- Waste recovery and treatment
- Reduction policies

Responsible management of water resources

Improvements in plant water resource management and efforts to minimize water loss. Provide efficient, quality service with an emphasis on water treatment and purification. Special attention to resource management in water stressed areas.

MANAGEMENT APPROACH (MA)

RISK FACTORS

- Little attention to optimizing water consumption
- Insufficient investment and innovation
- Use restrictions in hydroelectric, due to resource competition with other stakeholders
- Restrictions on plant operations due to drought or temperature increases in water bodies
- Accidental non-respect of the quality levels of water distributed and discharged, established by law or enactment of more restrictive rules

OPPORTUNITY FACTORS

- Investments to save and optimize the use of water resource for drinking purposes
- Use of innovative technologies for surveying geological and hydrogeological data
- Collaborations with Universities for the experimentation of innovative processes for the removal of pollutants from water discharged for drinking purposes

MITIGATE / SEIZE

- Technological innovation for network leak detection and water treatment
- Optimizing procurement and efficient management of the water resource
- Awareness raising on responsible water consumption
- Exploring climate-related risks, including in accordance with the EU taxonomy.
- Continuous monitoring of the quality of water withdrawn, distributed, treated and discharged
- Oversight of regulatory update

WHAT WE DID – 2021 ACTIONS

- Continuation of experimentation activities on Spoel (page 128)
- Introduction of Water Safety Plans (page 130)
- New Valtrompia purifier (page 108)
- Aquarius project (page 107)

WHAT WE ARE DOING – SUSTAINABILITY PLAN ACTIONS

CIRCULAR ECONOMY

- Water

Climate change

Efficiency and plant performance improvement activities aimed at reducing emissions; commitment to the development of sustainable technologies and renewable energy sources in order to contribute to the fight against climate change and promote the energy transition; promotion of energy efficiency initiatives both in the Group's plants and at our customers' premises; alignment with international targets for the reduction of climate-changing emissions (e.g. Paris Agreement).

RISK FACTORS

- Changes in physical climate parameters with potential impacts on Group performance
- Possible intensification of extreme natural phenomena
- Loss of competitiveness due to lack of awareness of energy transition
- Failure to meet the Group's climate change mitigation *targets*

OPPORTUNITY FACTORS

- Strategic Plan focused on energy transition and integrated with the Sustainability Plan
- Experimentation with technologies to capture CO_2 from flue gas.

MANAGEMENT APPROACH (MA)

MITIGATE

- New Emission Reduction Policy 2030
- Offering innovative energy services and those with a reduced impact on climate
- Renewable energy investment plans
- Climate risks brought to the attention of the Risk Control Committee on a semi-annual basis.

SEIZE

WHAT WE DID – 2021 ACTIONS

- Decarbonization target update (page 124)
- Increased production capacity from photovoltaic (page 104)
- Supporting the dissemination of electric mobility (page 110 and 177)
- Investments for the resilience of electricity grids (page 106 and 133)

WHAT WE ARE DOING – SUSTAINABILITY PLAN ACTIONS

ENERGY TRANSITION

- Emissions
- Sustainable mobility
- Energy efficiency in end use
- Renewable

CIRCULAR ECONOMY

- District heating

Biodiversity

Safeguarding the landscape heritage and flora and fauna of the territories where the Group's plants or sites are present, thanks also to constant analysis, monitoring and dialogue with stakeholders, in order to minimize the impact on biodiversity and the most significant habitats.

RISK FACTORS

- Gaps in the controls on the environmental impacts of the plants, activities or services offered by the Group
- Non-compliance with "Ecological Outflows" regulations

OPPORTUNITY FACTORS

- Not yet identified

MANAGEMENT APPROACH (MA)

MITIGATE

- Minimizing impacts on biodiversity
- Containment plans and programmes dedicated to emergencies
- Collaboration with entities, institutions and associations to protect the territory
- Definition and implementation of ecological outflows release plans in accordance with obligations.

SEIZE

WHAT WE DID – 2021 ACTIONS

- Structural investments in electricity grids to reduce environmental and landscape impacts (page 133)
- Support to projects for the protection of biodiversity in some areas of Italy (page 132-133)

WHAT WE ARE DOING – SUSTAINABILITY PLAN ACTIONS

GOVERNANCE

- Biodiversity

Pollution prevention

Taking measures to prevent or eliminate all forms of pollution, to minimize any adverse impact on human health and the environment. Controlled management of materials and substances in compliance with EU regulations. Attention to and monitoring of the environmental performance of the Group's infrastructure, facilities and vehicles. It also includes all activities related to the prevention and reduction of noise caused by the company fleet used for waste collection and cleaning of roads and industrial facilities of any kind. Activities to reduce light pollution through the dissemination of LED public lighting. Efficient management of the release of excess heat into the atmosphere.

RISK FACTORS

- Environmental damage arising from the Group's processes or activities
- Non-compliance with community regulations on sewage treatment
- Critical issues with the landfill leachate collection and treatment system
- Enactment of more restrictive environmental legislation

OPPORTUNITY FACTORS

- Installation and operation of charging systems for electric vehicles
- Full integration between Sustainability Plan and Business Plan

MANAGEMENT APPROACH (MA)

MITIGATE

- Certifications ISO 14001
- Procedures and emergency plans
- Maintenance plan
- Investment plan for the purification of civil sewage discharges
- Dialogue with trade associations
- Replacement of vehicles with more environmental impact

SEIZE

WHAT WE DID – 2021 ACTIONS

- Start-up of the new system (two catalytic denitrification plants (SCR) for NOx abatement for the Cassano d'Adda power plant (page 126)
- Promotion of electric mobility (page 110)
- LombHe@t project (page 109)
- Agreement between A2A and ENI for the recovery of waste heat from the Bolgiano plant (page 108)

WHAT WE ARE DOING – SUSTAINABILITY PLAN ACTIONS

CIRCULAR ECONOMY

- District heating

ENERGY TRANSITION

- Renewables

7.1 Circular economy

A2A's activities fit in well with the National Strategy for the Circular Economy, especially as regards the development of secondary raw materials (SRMs) arising from the correct recovery and recycling of waste. In particular, the recycling of municipal waste fractions coming from separate collection is one of the pillars of this economy, allowing a significant decrease in the use of virgin raw materials.

The separate waste collection operated by the Group on the territories has not suffered particular repercussions due to the health regulations that have imposed the non-separation of waste for homes with the presence of Covid positive citizens.

The indices have remained not far from the levels of previous years or even prevailed an increasing trend, as can be seen from the average figure on the municipalities served that goes from 69.4% in 2020 to 70.7% in 2021. Among all the urban areas, Bergamo stands out, which with the introduction of the "codified bag for undifferentiated waste" gains 3.6 percentage points, bringing the index to 76.7%.

The overall collection of separate waste increases significantly (1,202,214 tonnes, +22.4% in 2021) thanks mainly to the entry of Gelsia Ambiente (AEB Group) in the reporting scope and the extension or regulation of the service (e.g. Chiavari/Liguria, + 9,547 tonnes in 2021).

*Figure 32 Separate waste collection by the Group**

	2019		2020		2021	
	Quantity collected (t)	Index %	Quantity collected (t)	Index %	Quantity collected (t)	Index %
Bergamo	44,401	71.3%	42,583	73.1%	45.429	76.7%
Brescia	82,369	72.2%	80,117	72.4%	79,222	71.1%
Como	29,639	70.3%	25,996	70.4%	27,103	70.1%
Cremona	28,887	75.0%	25,949	73.4%	26,632	74.8%
Lodi	15,054	75.4%	14,308	76.0%	14,594	75.6%
Milan	431,518	61.5%	379,035	62.6%	391,179	62.4%
Waste collection Lombardy provinces (Bg, Bs, Co, Cr, Lo, Mb, Mi)**	97,275	67.4%	95,207	67.6%	589,104	77.8%
Waste collection Liguria	9,922	58.5%	19,403	65.2%	28,950	68.6%
Total/average	**1,046,118**	**68.4%**	**981,921**	**69.4%**	**1,202,214**	**70.7%**

* 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 separate waste collection rate have been calculated on the basis of the indications of the Res. by the Reg. Council (Lombardy) no. X/6511 of April 21, 2017.

** The increase in collection is mainly due to the inclusion of Gelsia Ambiente.

Of the total municipal waste collected **(1,701,512 tonnes** in 2021) only **0.35%** ends up in disposal or, marginally, in landfills, while **29%**, consisting of dry residue not recoverable as a material, goes to energy recovery.

The conjuncture due to Covid-19 induced some changes in the packaging market during 2020, with the recycling market for some SRMs (paper and plastic) also shrinking, partially recovering in 2021[1]. However, the A2A plants, which treat above all material coming from internal separate collection within the Group, functioned regularly and overall **381,691 tonnes** of *end-of-waste* raw material were obtained in 2021 **(+4%)** consisting of paper and cardboard, gravel and sand (obtained from street sweeping waste), quality compost and glass. It was precisely this last material **(100,571 tonnes** of selected glass produced in the Asti plant in 2021, **-2%** compared to 2020) that was the subject of an **in-depth life cycle assessment (LCA) study** in 2021 which, including all phases from door-to-door collection to furnace-ready scrap, highlighted its environmental benefits.

1 Preliminary data, source "Italia del riciclo 2021".

GLASS, PERMANENT RAW MATERIAL: LCA ANALYSIS OF THE RECOVERY PROCESS

Life Cycle Assessment (LCA) is a methodology[2] for assessing the environmental loads associated with a product, process or activity, identifying and quantifying the consumption of materials and energy and the emissions into the environment for each phase.

It is therefore a suitable tool for pursuing sustainable development initiatives, making it possible to **assess the critical points of the process and the effect of any improvements introduced**.

In the case of **glass**, although some literature data is already available, the aim was to evaluate, based on A2A's real data, the actual environmental convenience of the recovery process.

The study, conducted in collaboration with Ergo Srl, a *spin-off* of the Sant'Anna School of Pisa, was attended by Amsa and Aprica, which provided data relating to the separate collection of waste, the transport phases and, together with Linea Ambiente, the intermediate storage phase, and A2A Ambiente, lead company of the Environment BU, which operates the glass recovery plant.

These are some key points from the study findings:

- Carbon footprint: collection activities in the territory and treatment activities at the plant have an almost equal impact on carbon dioxide emissions. Intermediate storage and transport to the plant have almost negligible incidence. The emission saving compared to the equivalent virgin raw material is equal to **64%**, with about **130 kg** of **CO_2** avoided per tonne of glass.
- **Urban areas:** urban areas with high vehicle mileage have a greater impact when compared with other areas with low mileage (e.g. Milan 4 km per reference unit compared with an average of 69 km in Como);
- **Comparison with virgin raw materials:** with the same quantity of raw materials, the baked glass obtained in the Asti plant shows **a significant environmental benefit, reaching an average reduction of 70% on all the impact categories** (ranging from emissions to impacts on man and the territory) except for the water scarcity category, which shows an increase of 37%. This result will be examined in its components to identify possible actions for improvement.

Among the activities aimed at recovering materials carried out by A2A is that of the two plastic selection plants at Cavaglià and Muggiano, which obtained a total of **38,195 tonnes** of plastics separated and ready for the final recovery plants of extrusion and pelletizing. Of these, the largest share is polyethylene terephthalate (PET, from bottles and containers, **16,049 tonnes)**.

In 2021 A2A expanded its circular activities with the acquisition of Agripower, a company that, with its 17 anaerobic digestion plants fed with agricultural materials, produced in 2021 more than **62** million m^3 of biogas and **371,000 tonnes of digestate**, a by-product reused in agriculture.

The waste treatment capacity of the Environment Business Unit creates useful synergies within the Group for all those activities that inherently produce waste, helping to standardize waste characterization and homologation procedures and reducing where possible the impacts due to transport to third-party treatment or storage facilities.

The Environment BU itself produced 517,042 tonnes of non-hazardous waste in 2021, a decrease of 12% from the previous year. This is primarily combustion ash from waste-to-energy plants and leachate from landfills, including all those in post-management. Landfills with **lower leachate production due to** capping **improvements** have reduced the amount

2 Definition proposed by SETAC (Society of Environmental Toxicology and Chemistry).

of waste to be treated. In contrast, hazardous waste generated in 2021 totals 115,303 tonnes, with no appreciable change from 2020.

The energy transition that has led to the definitive **abandonment of coal in the** Lamarmora **cogeneration plant** in Brescia has led to a significant reduction in non-hazardous waste produced by the *Smart Infrastructures* BU (-23% compared to 2020) and, to a lesser extent, also in hazardous waste.
Also the increased production of energy by the Generation and Trading BU induced an increase in the production of desulphurization gypsums at the San Filippo del Mela plant, strategic for the electricity system in Sicily. Overall, the BU produced 26,864 tonnes of non-hazardous waste (+12% compared to 2020) mostly sent for recovery (92.2%).

On the other hand, a significant decrease in hazardous waste was recorded due to the completion of extraordinary cleaning operations at the same San Filippo facility, so the BU produced a total of 5,216 tonnes of hazardous waste in 2021, down 68% from the previous year.

Finally, a significant production of soil and rocks as well as construction and demolition materials was recorded due to the start of the construction phases of the **new headquarters in Piazza Trento in Milan**, resulting in an overall production of 11,530 tonnes of **non-hazardous waste** for the Market BU and the Corporate BU in **2021, entirely sent to material recovery (100%)**.

SEPARATE WASTE COLLECTION IN THE GROUP OFFICES

In 2021, the initiative aimed at optimizing separate waste collection in the Group's offices was launched. The interventions have involved 6 sites, for about 900 containers installed; in 2022 the roll-out is expected to be completed with the installation of a further 900 containers in another 25 sites of the Group. The expected *target* is to **reach 80% separate waste collection at A2A's premises and sites**.

With reference to the meter replacement activities envisaged in the electricity distribution sector (see page 106), it should be noted that **meters at the end of their life are entirely sent to recovery plants** with mechanical selection processes that **obtain raw materials that can be directly reused** (end of waste) together with other fractions that can be used for further recovery at other plants. Specifically, 1,000 kg of type 2G electric meters yields:

- Polycarbonate: 810 Kg (81%) destined for the plastic recycling market for the production of outdoor furniture;
- Iron: 97 Kg (9.7%) intended for foundry for the production of electric furnace steel;
- Copper: 85 Kg (8.5%) intended for foundry for the production of copper profiles / alloys;
- Batteries: 5 Kg (0.5%) intended for specific recovery plants;

The non-recoverable fraction is dust from extraction systems: 3 Kg (0.3%) intended for disposal.

7.2 Energy transition

The year 2021 was characterized by a particular situation in the European electricity market, which saw prolonged shutdowns of nuclear plants for maintenance in France, with the consequent demand for more production by the Italian thermoelectric sector.

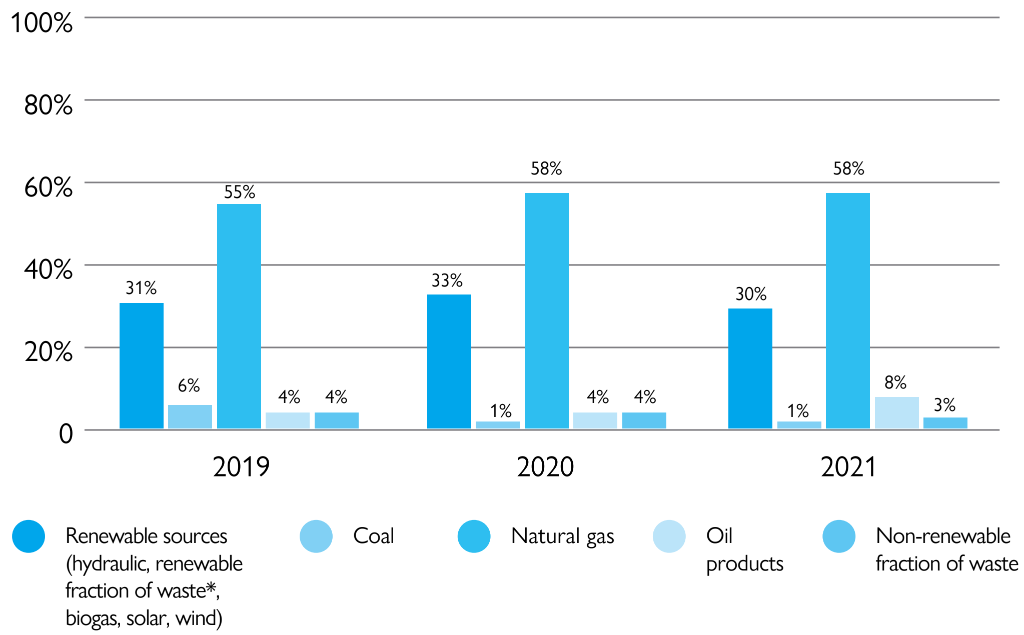
In order to guarantee the balance of the European electricity grid, the Group's combined cycles have seen their operating hours increased at particular times of the year, increasing production by 1.3 TWh compared to 2020. The energy produced with the use of oil products, i.e. heavy fuel oil (HFO), has also increased, as the San Filippo del Mela power plant, already essential for the national electricity system, has been requested in service by Terna for a higher number of hours than those planned, in order to meet the costs of the CCGT system in the Sicily area.

These increases affect the percentage composition of the energy *mix* produced, in particular penalizing the percentage of production from renewable sources, which falls from 33% in 2020 to 30% in 2021, despite having increased by 170 GWh thanks to the new biomass digestion plants acquired and the increase in photovoltaic production.

Electricity generated by natural gas-fired combined-cycle units still accounts for 58% of the Group's production; the share from HFO, on the other hand, has increased to 8% due to the reasons outlined above. Production attributable to the non-renewable fraction of waste also remained constant.
The Monfalcone power plant has been called upon to operate by Terna at various times of the year, generating an increase in production but remaining a minority share.

In December 2021, unusually cold temperatures combined with the first effects on gas prices caused by international tensions prompted the national grid operator to request the availability of some coal-fired power plants to meet the country's power generation needs. The Monfalcone power plant, which had been shut down until then and for which an authorization process had already been started for the reconversion that would allow coal to no longer be used, therefore came into operation from the 6th to the 21st of the last month of the year, providing an important contribution to the stability of the national energy system.
The exacerbation of critical issues due to the outbreak of war in Ukraine in March 2022, has made it necessary for the Government to intervene in order to try to find valid alternatives to the supply of gas from Russia, while continuing to guarantee Italy's electricity production needs. Among the various solutions identified to remedy the crisis generated by the conflict in the short term, it has also been hypothesized to resort to a temporary increase in the use of coal-fired power plants still active. The Monfalcone plant is one of the plants identified by the national grid operator that could be called upon to carry out this task.

Figure 33 Electricity produced by type of source (percentage of the total)*



* The share of electricity from biodegradable waste is calculated for each waste-to-energy plant and derives from both an analytical procedure and a lump-sum estimate with reference to the Ministerial Decree of July 6, 2012.

A2A CO_2 EMISSION REDUCTION OBJECTIVES IN LINE WITH THE SCIENCE BASED TARGETS INITIATIVE (SBTI)

On March 2, 2020, SBTi declared A2A's direct and indirect CO_2 emission reduction targets (Scope 1-2) *aligned with the reductions required to keep global warming below 2°C.*
With the update of the new Strategic Plan, A2A has further improved its CO_2 reduction *target* for 2030, keeping it however in line with the *commitment* communicated to the Science-based Targets Initiative. In fact, the Group expects to achieve an emission factor close to 216 gCO_2/kWh within the decade, thanks to increased investments in RES, estimating a 49% reduction in the CO_2 emission factor by 2030, compared to the 2017 value (base-year of the commitment to SBTi). The new Plan also lays the groundwork for achieving zero direct and indirect (both *Scope* 1 and *Scope* 2) emissions generated by the Group by 2040.

Figure 34 Emission factor Science-based Target of A2A

	2017	2018	2019	2020	2021	2030 plan objective	2030 objective SBTi
gCO_2/KWh	425	384	345	310	332	216	230

The projected increase from 2020 was even more exacerbated by the dynamics described on page 123.

Also due to the increase in overall production, the percentage of electrical and thermal energy produced through the valorization of waste and biomass and through the combustion of biogas remained unchanged compared to 2020, despite the increase in absolute value.

Figure 35 Energy produced by waste, biomass and biogas valorization on total energy produced

	2019	2020	2021
Thermal energy	58%	59%	58%
Electricity	7%	8%	8%

CO_2 emissions from combustion processes have increased in line with the increase in energy production; in particular, the Generation BU has increased absolute emissions by 30%, although the specific emission factor, i.e. related to energy production, has increased by only 12%. In fact, in addition to the renewable component, the specific emission factor is affected by the load factor of the combined cycle plants, which resulted in a higher average efficiency and thus an emission factor of 380 g/kWh similar to that of the previous year (emissions in relation to gross production).

The Environment BU increased its emissions by only 1.5%, having implemented the use of renewable sources with the consequent decrease in the specific emission factor, while the *Smart Infrastructures* BU decreased its emissions (-5%), due to the lower overall production of heat and electricity from cogeneration.

Figure 36 CO_2 emissions from combustion processes (t)

	2019	2020	2021
Generation and Trading BU	5,244,309	4,260,787	5,518,988
Smart Infrastructures BU	376,611	329,704	307,845
Environment BU	1,163,222	1,141,439	1,158,388

Emission factor		2019	2020	2021
Generation and Trading BU	kg/MWh	339	299	335
Smart Infrastructures BU	kg/MWh	296	272	268
Environment BU	kg/MWh	417	384	352

The **Group's CO_2 emission factor** stood at 330 kg/MWh, an increase of 6% over the previous year.

2021 saw an increase in both direct and indirect *(Scope 3)* emissions associated with the extraction and purchase of fuels and third-party plants operated by the Group; the increase is due to both higher fuel consumption by our plants and increased activity at the plants under management.

Figure 37 Greenhouse gas emissions declaration (t CO_2eq)

	2019	2020	2021
Direct greenhouse gas emissions - Scope 1	6,948,463	5,855,402	7,127,422
Indirect greenhouse gas emissions - Scope 2	108,073	2,537	1,694
Location based	108,073	107,439	108,098
Market based	175,234	6,948	1,694
Other indirect greenhouse gas emissions - Scope 3	1,616,284	1,464,134	1,876,497

It should be noted that direct GHG emissions *(Scope 1)*, in addition to emissions linked to the combustion processes of fuels and the non-renewable part of waste, also include

- **biogas escaping capture in landfills**, which in 2021, decreased by about 47% also due to decreasing degradation processes in landfills in post-operational management;
- **natural gas dispersed from the networks**, the value of which is affected by a more timely detection of leaks compared to 2020, due to the resumption of activities in the field. Wanting to compare the value with that of 2019, a year not penalized by the health emergency situation, the increase is justifiable by a greater number of leaks detected thanks to the use of a more accurate leak detection technology (Picarro), as well as the collection of the data also on gas transport networks;
- **emissions relating to the vehicle fleet**, which increased by around 8,000 tonnes, primarily due to the inclusion of new companies in the reporting perimeter and the extension of the areas served by urban hygiene services; the use of the various fuels is broken down similarly to 2020;
- emissions from **accidental leaks of fluorinated** greenhouse **gases** from air conditioning equipment and electrical switches, the value of which is insignificant and has a variable trend.

With regard to indirect emissions from electricity purchases, **intra-Group green energy supply was expanded** to include non-member sites in 2020. Net of the newly acquired companies, therefore, the electricity purchased by the Group has zero CO_2 emission factor.

UNARETI "GOLD STANDARD FOR THE REDUCTION OF METHANE EMISSIONS"

In 2021, UNARETI joined the initiative *Oil & Gas Methane Partnership (OGMP2.0)*, the new *framework* for reporting methane emissions introduced by the *United Nations Environment Programme (UNEP)* in 2020, and part of the broader *International Methane Emission Observatory (IMEO) initiative.*
As part of this initiative, UNARETI has been awarded the "Gold Standard" recognition as highlighted in the IMEO report "*An Eye on Methane*". In addition to methane emission reduction targets (-40% by 2025 vs. 2019), the award also recognizes the robustness of existing reporting processes and the plan to further improve them by 2024.
These are the main methane emission reduction initiatives underway at Unareti:

- replacement and maintenance programs of the *assets* developed through *business intelligence* to increase the effectiveness of interventions;
- cutting-edge technology solutions for network inspection and early detection of leaks, including the Picarro system based on the technology *Cavity Ring-Down Spectroscopy* (CRDS)
- modulation of pressures in the network, for the reduction of emissions during low load hours.

The growth of renewable sources and the efficiency of energy production have contributed to avoiding both the emission of significant quantities of carbon dioxide into the atmosphere and the consumption of equally significant portions of primary energy (expressed in tonnes of oil equivalent). Overall, in 2021, the use of waste-to-energy, production from renewable sources and efficient cogeneration made it possible to avoid the production of **3.6 million tonnes of CO_2** and save **1.2 million TOE** of primary energy.

Atmospheric emissions of macro-pollutants, always contained at the lowest possible levels thanks to combustion technologies and abatement systems, show different trends.

Nitrogen oxides, which are present in the flue gases of all types of plant and emitted in concentrations that are always below the legal limits, rose by 26%, due to the inclusion of new companies in the report and increased thermoelectric production. Over the years, the Group has implemented various projects aimed at reducing the concentrations emitted, as described in previous reports. In 2021, a further initiative has been implemented to further contain specific emissions: at the Cassano D'Adda thermoelectric power plant, two catalytic denitrification plants are being built (see box below).

In contrast, sulphur oxides decreased by 6%, due to the decommissioning of coal at the Lamarmora power plant.

The amount of total dust emitted also decreased, across all compartments.

Figure 38 Total Group emissions (t)

	2019	2020	2021
NOx	2,870	2,328	2,928
SO_2	917	529	495
Powders	56	38	31

In the coming years, the commitment to the decarbonization path already undertaken is confirmed, supported both by the increase in installed renewable capacity and by the production of *green* energy carriers, such as biomethane and hydrogen (see the description of the projects in the Manufacturing Capital).

AN INCREASINGLY *GREEN* FLEET

A2A has a vehicle fleet of more than 5,300 vehicles; of these, 2,154 are instrumental vehicles that were already the subject of tenders for their replacement in 2021. In fact, 2 thousand new vehicles have been ordered (332 owned and 1,1675 rented), of which about 60% will go to the *Smart Infrastructures BU*. The development plan calls for about 90% of new vehicles to be introduced by the end of 2022. The new fleet will allow an **important increase in the share of vehicles powered by alternative sources**: about 34% of the fleet on the road will be electric, 24% will be powered by natural gas and about 14% will be hybrid. It is estimated to **reduce CO_2** emissions by 29% and fuel consumption by 19%. At the same time, investments are planned (around 3.9 million euro) for the technical upgrade of the recharging infrastructure (1,255 recharging points to be installed at A2A sites).

THE NEW NOX ABATEMENT SYSTEM FOR THE CASSANO D'ADDA POWER PLANT

The project involves the construction of two catalytic denitrification (SCR) plants for gas turbine combustion gases. Catalytic abatement systems will be installed within the two recovery steam generators located downstream of the gas turbines themselves. The initiative is aimed at **reducing mass NOx emissions**, in relation to the greater emission contributions deriving from the upgrading of gas turbines and the new natural gas-fired alternative engine plant; these initiatives are part of the new generation capacity sold in the "Capacity market". The SCR project involves an investment of approximately 10 million euro and is scheduled to enter into operation in February 2022.

7.3 A2A commitment to sustainable water management

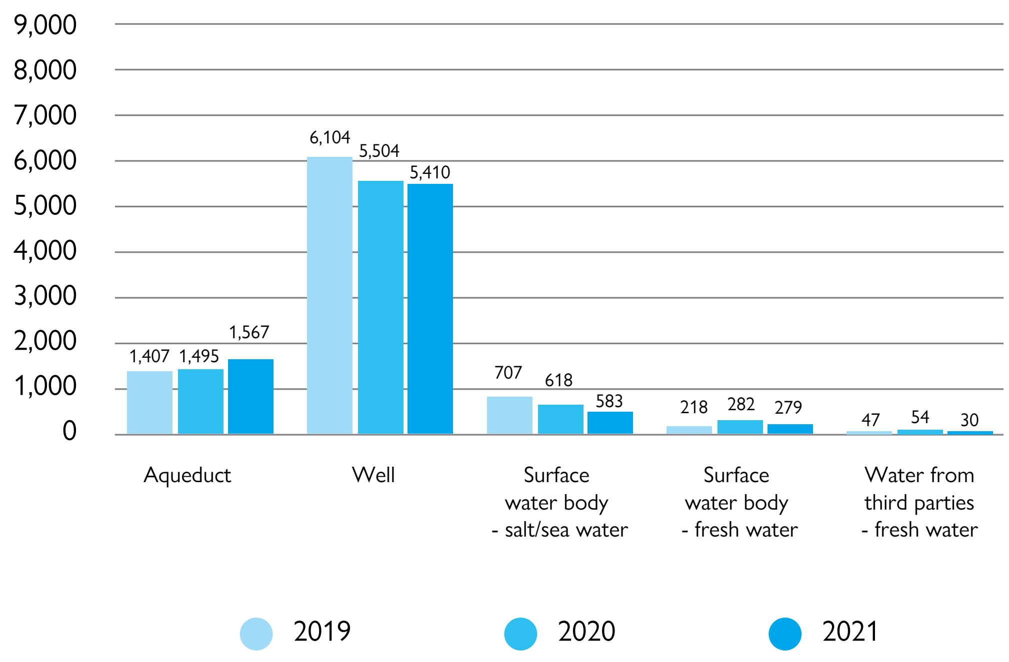
The Group is aware of the importance of sustainable management of water resources, which are increasingly subject to anthropogenic pressures that result in consumption and alterations to the qualitative characteristics of water.

In order to reduce consumption, the Group adopts practices for **the recovery of process water and rainwater**, the latter for the irrigation of green areas, the filling of fire fighting tanks and the recycling of washing water. Cooling water is returned in its entirety to the same water bodies from which it was withdrawn and with the same quality characteristics, except for a rise in temperature, in any case lower than the applicable limits.

At hydroelectric plants, water used to operate the plants and produce energy is withdrawn in a manner that ensures **compliance with the Minimum Vital Flow (DMV) - Ecological Flow**, to protect river habitats, and is **returned with the same quality characteristics**.

In 2021, the Group's water consumption was approximately 7.9 million m³.

Figure 39 Consumption of water resources by type - (thousands m³)



A sustainable management of water management of water resources also means maintaining a **greater level of control over water withdrawals in water-stressed areas, impacted**by: scarcity of fresh water available; possible complexity in water extraction and distribution to users; water quality characteristics. Taking as reference the indications of the "*Aqueduct*" *tool* of the *World Research Institute*, the plants in Sicily, Calabria, Abruzzo and, for the integrated water service, the network in the Lombardy Mountain Municipalities, located in Valsabbia (BS), were identified as "critical". It should be noted that the classification of water stress area conferred to the Region of Sicily depends on the scarce availability of fresh water; therefore, the salt water withdrawals made by the San Filippo del Mela plant do not negatively impact the availability of the resource. Finally, the classification of Valsabbia municipalities as water stress areas is justified by the fact that water resource withdrawals come from springs, for which a constant availability of water is not guaranteed.

In these areas, there was a **16% reduction in consumption from wells** in 2021, justified in part by the fact that beginning in the reporting year, groundwater withdrawal at the San Filippo del Mela power plant to supply the hydraulic barrier is no longer considered, as this is water not used for power plant processes. There was also a **45% reduction in freshwater withdrawals from third parties** and a 6% reduction in withdrawals from surface water bodies, for a total reduction in consumption of 10% from the previous year. Amounts of water derived from surface water body of salt and sea water, which are subsequently returned to the withdrawal body, increased by 85% over 2020 due to higher production recorded by the San Filippo del Mela Power Plant.

Withdrawals

In 2021, about 3 million m³ of water, withdrawn from surface water bodies, was used for hydroelectric purposes. The total volume of water released for the DMV shows a 7.5% increase over 2020, for a total of 444 million m³. The increase is justified by the fact that during the reporting year, the experimental projects were completed and the parameters set by the Lombardy Regional Authority changed, to which the plants were adapted.

SPÖEL EXPERIMENTATION

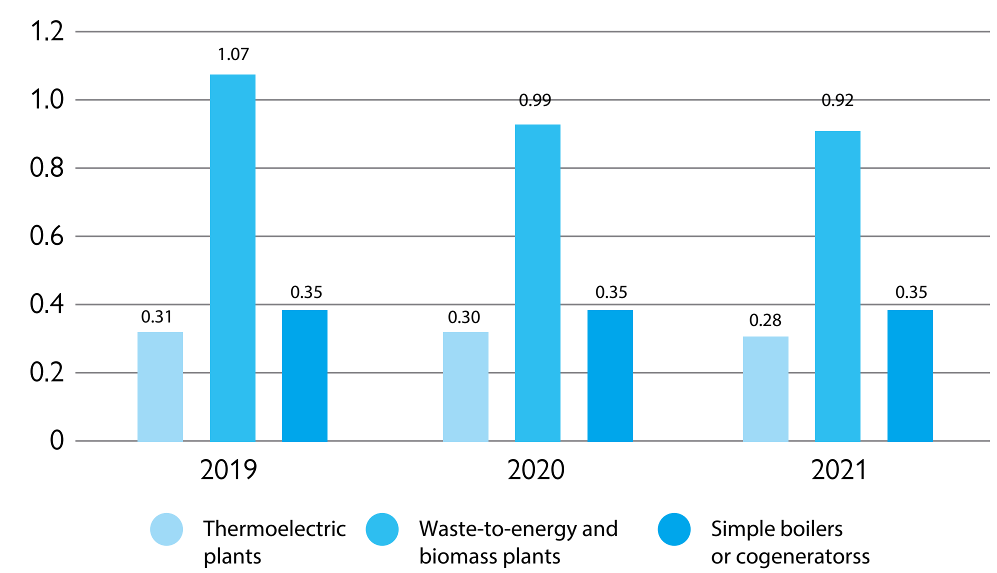
In order to improve tourist enjoyment of the area, experiments along the Spöel River, consisting of scheduled releases of water from the intake works, continued in 2021. Voluntary experimentation by A2A continued in 2021 with the release, during the summer period, of different flow rates from its intake works, for different durations, in order to improve tourist use of the area. In particular, the experimentation adopted in 2021, thanks to the results and the in-depth analysis made possible during the experiments of the past years, allowed to adopt a release modality with variable flow rates through which the constant presence of water along the whole stretch of the riverbed under examination was recorded, for a duration of more than 40 days, thus covering the period of maximum tourist presence from mid-July to the end of August.

Water consumption by the Generation and Trading BU amounted to 2.9 million m³ of water and was used for process purposes. This quantity is in line with that reported the previous year, despite a 45% reduction in fresh water withdrawn from third parties, thanks to an **optimization of the consumption of demineralized water, obtained through maintenance operations at the Gissi power plant**, which have allowed less water to be withdrawn from the consortium. In addition, over the years, **systems** have been **developed to encourage the recovery and reuse of water in production cycles**in order to reduce withdrawals of this resource as much as possible. In 2021, **approximately 760 thousand m³** of **water** were **recovered in the production cycles of the Generation BU**, a value in line with that of the previous year.

Salt and sea water derived from surface water bodies (CIS) and returned for cooling uses also increased by 87% over 2021, commensurate with the increased production recorded at the Monfalcone and San Filippo del Mela Power Plants.

For the reporting year, attention was also paid to the water consumption used per unit of energy produced at the Group's plants. The figure for thermoelectric and waste-to-energy plants declined slightly, while the figure for cogeneration was in line with previous years.

Figure 40 Water used per unit of energy produced (m³/MWh)



The consumption of water resources is also a relevant aspect for the cooling of combustion ashes at the waste-to-energy plants, in the other plants of the Environment BU and in the activities for street cleaning, washing of sweeping grounds and vehicles used for services to citizens.

In 2021, there was an increase of 5% in the amount of water procured by the Environment BU, standing at a total of 3.3 million cubic metres of water withdrawn. Of this consumption, 85% is made up of water withdrawn from wells and only 15% is made up of water from aqueducts, in order to minimize the consumption of "precious" water. The increase in withdrawals for the reporting year was due to an increase in consumption of water from the aqueduct, attributable to the inclusion of Gelsia Ambiente and Agripower in the reporting scope, and an increase in water consumption for the management of AMSA properties.

In the *Smart Infrastructures* BU the water resource is used for the cooling of the stations serving the electricity distribution network: in 2021 withdrawals decreased by 13% compared to 2020. It is also used at the heat production plants for which in the reporting year, process consumption was confirmed at 1.4 million m³, as in 2020.

Finally, in 2021, there was a 15% reduction in the amount of water derived and returned to the aquifer by the *Smart Infrastructures* BU, used by heat pumps, thanks to the management efficiency of the heat pump at the Canavese Power Plant.

Effluents

With regard to the discharge of wastewater that cannot be reused in the production cycles and that cannot be recovered, the Group guarantees careful monitoring of the volumes discharged and of the relative polluting loads, in compliance with regulatory and authorization requirements.

The Environment BU industrial wastewater discharges increased by 16% compared to 2020, totalling nearly 2.6 million m^3. This increase is due to a 17% increase in discharges into surface water bodies, justified mainly by the full operation of the Gerenzano plant, which treats groundwater and leachate, however without leading to increases in organic loads (BOD and COD) discharged into the environment.

The industrial discharges of the *Smart Infrastructures BU*, including those related to the provision of integrated water service, amount to 634 thousand m^3, a value increased by 18% compared to 2020. The organic load contributed to the environment remained very modest and amounted to approximately 0.6 tonnes of BOD (-31% compared to 2020); the value of total COD recorded a reduction of 74% compared to 2020, due to the execution of a greater number of analytical samples at the North Plant of Brescia, which provided a more representative summary of the data.

Industrial discharges from the Generation BU remained in line with the previous year's values.

Integrated Water Service:

The Group also manages the integrated water service in Brescia and its province. In order to ensure efficient management of the service, the priority objective is to maximize water distribution, containing losses and guaranteeing the quality levels of water for human consumption.

Water withdrawal for water distribution, which is done exclusively from wells and springs, was 92 million m^3 in 2021, in line with the previous year. The quantity of water supplied was in line with the previous year. The network losses, including unaccounted for water, still represent a significant volume, amounting to 34.8 million m^3. However, the program to reduce losses is progressing, achieving, in 2021, a decrease of 3.5% compared to the previous year. Overall, since 2018, the recorded loss reduction amounts to 15%.

Capitale Intellettuale

Open Innovation
20 km network inspected with *computer vision*

DEVELOPMENT OF WATER SAFETY PLANS AND IMPLEMENTATION OF *SMART* NETWORK FOR WATER MONITORING

With the introduction of the European Drinking Water Directive 2020/2184, the implementation of Water Safety Plans (WSPs) for water systems has become mandatory. The goal of WSPs is to identify and reduce the risks associated with the distribution of drinking water, both in terms of quality and quantity. In 2021, the WSP was concluded for the municipalities of Bassano Bresciano, Manerbio, Ospitaletto, Pontevico, San Gervasio Bresciano, Verolanuova and for Brescia and the four municipalities supplied to a greater extent by the capital (Botticino, Bovezzo, Cellatica and Collebeato).
With the risk assessment approach introduced by the WSPs, a need has developed for a deeper understanding of the quality of distributed drinking water not only at the intake, but throughout the distribution network. In 2021, research was initiated to **identify the optimal sensors for the implementation of a widespread monitoring network for the quality of distributed water**. Monitoring stations equipped with sensors for pH, turbidity, chlorine, conductivity, nitrate, temperature, TOC and the UV-Vis spectrum will be installed at the entrance to each district in the City of Brescia. In addition, small sensors are being sought to be installed directly into pipes, battery powered or self-powered. The planning of sensor installation in the integrated water cycle has also been included in the Group Sustainability Plan.

The Group's commitment to achieving European water resource objectives is also reflected in the operation of wastewater treatment processes. Pollutant loads entering the treatment plants increased slightly in 2021 compared to previous years. Specifically, BOD entering the plants increased by 7% over 2020 (6,441 tonnes), COD by 8% (13,742 tonnes), and phosphorus by 7%. The purification performance was in line with previous years, as shown in the table below:

Figure 41 Purification performance

	2019	2020	2021
COD	92%	90%	91.4%
BOD	97%	96%	94.3%
Nitrogen	68%	69%	71%
Phosphor	77%	74%	76.1%

MOUNTAINHYDRO AND HYDROGEOSITE PROJECTS

Climate change and its consequences on the territories require a new approach in the management of water resources. The current project in Valle Sabbia (BS) is aimed at **collecting geological and hydrogeological data** to identify the best areas where to design and build the intake work for a mutual aid aqueduct.
Once the water resource has been identified and all its technical characteristics have been mapped, it will be possible to draw up ***Water Safety Plans***, plan and design interventions in a targeted manner in terms of **optimizing new systems with a consequent reduction in both construction and operating costs**.
In detail, the ***MountainHydro*** project will be launched in the Valle Sabbia area and the ***HydroGeosITe*** project in the lowland area. These two projects will be conducted in synergy with the University of Milan, Department of Earth Sciences "Ardito Desio", that will provide the appropriate scientific support for the geological interpretation of the data collected and the execution of geophysical campaigns on the ground, both in the mountainous area and in the plain.
The process of data collection includes hydrological analysis, geological and hydrogeological modelling; the main feature that makes the projects innovative is the new way of mapping the territories with geophysical surveys by helicopter, for more than 4 thousand linear km (about 370 km^2) for the *MountainHydro* project and for more than 11 thousand linear km (about 550km^2) for the *HydroGeosITE* project. Operations will begin in 2022 and will cost more than ***1.5 million for MountainHydro and nearly 2.7 million for HydroGeosITE***. Activities are scheduled to be completed in 2024.

7.4 Protection of biodiversity

Analyses of potential interference of the A2A Group's activities with the protected areas system continued in 2021, to include plants consolidated into the Group more recently.

The system of protected areas considered concerns the sites belonging to the Natura 2000 Network, IBA (Important Bird and Biodiversity Area) areas, and areas considered important habitats for the conservation of populations of wild birds, nature reserves, natural monuments (individual elements or areas characterized by a particular natural or scientific value that makes them the subject of protection).

From the mapping phase - which is increasingly extended - it emerged that out of a total of 296 Group sites and networks analysed, 105 have potential interference with the system of protected areas, which not only takes into account criteria of adjacency or overlap, but also wider areas of possible influence. Of these 105 sites, 10 are located within protected areas and 6 are networks that have stretches in protected areas.

The following table provides information about these sites and networks.

Figure 42 Group sites and activities with interference on protected areas

Number of directly interfering sites/networks	Activities performed	Interfering area surface/ interfering network stretch length	Type of protected areas
1	Waste management	0.01 km^2	Natura 2000 network National network (EUAP)
3	energy production from biomass	0.06 km^2	Natura 2000 network IBA National network (EUAP)
6	hydroelectric production	1,144 km^2*	Natura 2000 network IBA National network (EUAP)
6	distribution of gas and electricity	619 km (of which 468 km underground)**	Natura 2000 network IBA National network (EUAP)

* The interfering area of the hydroelectric plants refers to the area of the catchment area underlying the Group's plants and dams, which falls within a protected area.
** The interfered surface, intended as the projection on the ground of the overhead lines including the buffer zone and added to the surface of the electrical substations, is equal to 1.5 km^2.

Following the mapping of the plants and networks, **a "relevance index" was developed to measure the degree of potential interference that the activities could have on the ecosystems**, due to the proximity and peculiarities of the habitats present in the protected areas. In this way, the most sensitive areas were highlighted.

Starting with these results, but moving in the direction of a broader issue of protection, **studies have been launched to identify possible actions to protect biodiversity**, in addition to those already implemented at the production sites.

No significant spills occurred in 2021.

Six sites have been identified where it is possible to carry out an intervention, chosen not because they are directly affected by the activities of the Group but because they correspond to areas subject to protection, of high ecological value and with the possibility of intervention to improve the ecosystems. Pre-feasibility analyses were performed for these areas, leading to the selection of the following interventions for a first phase:

- implementation of a project to protect birdlife in the Alto Garda Bresciano area, an activity that integrates with the interventions planned by UNARETI on power lines (see box below);
- support for the "Migrandata - Cervati" project, aimed at studying the effects of climate change on migratory birds.

PROJECT ENVIRONMENTAL IMPACT

In order to guarantee the monitoring of all the stages of the authorization process for a project and the traceability of the decisions taken, A2A has prepared internal regulatory tools that govern the process that will lead to the realization of the initiative. The entire authorization *process* is conducted in strict compliance with the requirements of applicable state or regional environmental regulations.
The potential direct and indirect environmental impacts of projects (on all environmental components, human health, landscape and cultural heritage) are assessed as part of the Environmental Impact Assessment (EIA) process. All procedures include the preparation of in-depth assessments to verify the potential impact of the project on the environment, which are appropriately made available on the websites of the competent administrations for potential comments from the interested public and are finally submitted for the judgement of environmental compatibility by the administrations themselves.
The Group's projects, depending on the type and size of the project, may be subject to EIA verification or directly to regional or state EIA. The national regulatory reference is Legislative Decree no. 152/2006 (so-called Environmental Consolidation Act), while the Regions in turn can regulate, with their own more detailed regulations, the organization and the modalities of exercise of the administrative functions attributed to them in the matter of EIA.
A2A's main ongoing proceedings concern EIAs for: projects to convert power stations from coal or HFO to CCGT, new waste-to-energy plants and new OFMSW plants.
For further information on ongoing proceedings falling within the competence of the State, it is possible to consult the website of the Ministry of Ecological Transition; for proceedings falling within the competence of the Regions, each Region has its own dedicated web platform (e.g. Lombardy Region).

Interventions on electrical networks for network resilience and bird protection

Unareti, as part of the improvement initiatives to ensure the continuity of the electricity distribution service, has identified several structural interventions of its Medium Voltage lines in the area of the municipalities located between Lake Garda and Valle Sabbia. Part of the interventions has already been implemented, with the replacement of overhead cables with underground lines (for a length of about 30 km) and "Elicord" cables (about 16 km), i.e. made up of a single cable insulated and "reinforced" in a protective sheath. The interventions are prioritized in critical mountain areas in order to make the electricity service more stable and safe, while making the infrastructure of the power grid less impactful from the point of view of landscape and environment: in fact, the "Elicord" overhead conductors will be safer for birds and, above all, the elimination of over 40 km of overhead power line and more than 180 metal supports will avoid the risks of electrocution and collision, while offering an improvement in the landscape.

Overall, between the interventions carried out and planned, about 80 km of bare power lines (corresponding to a ground surface of 0.8 km^2) are being decommissioned, replaced by 20 km of new isolated overhead lines and 78 km of underground lines.

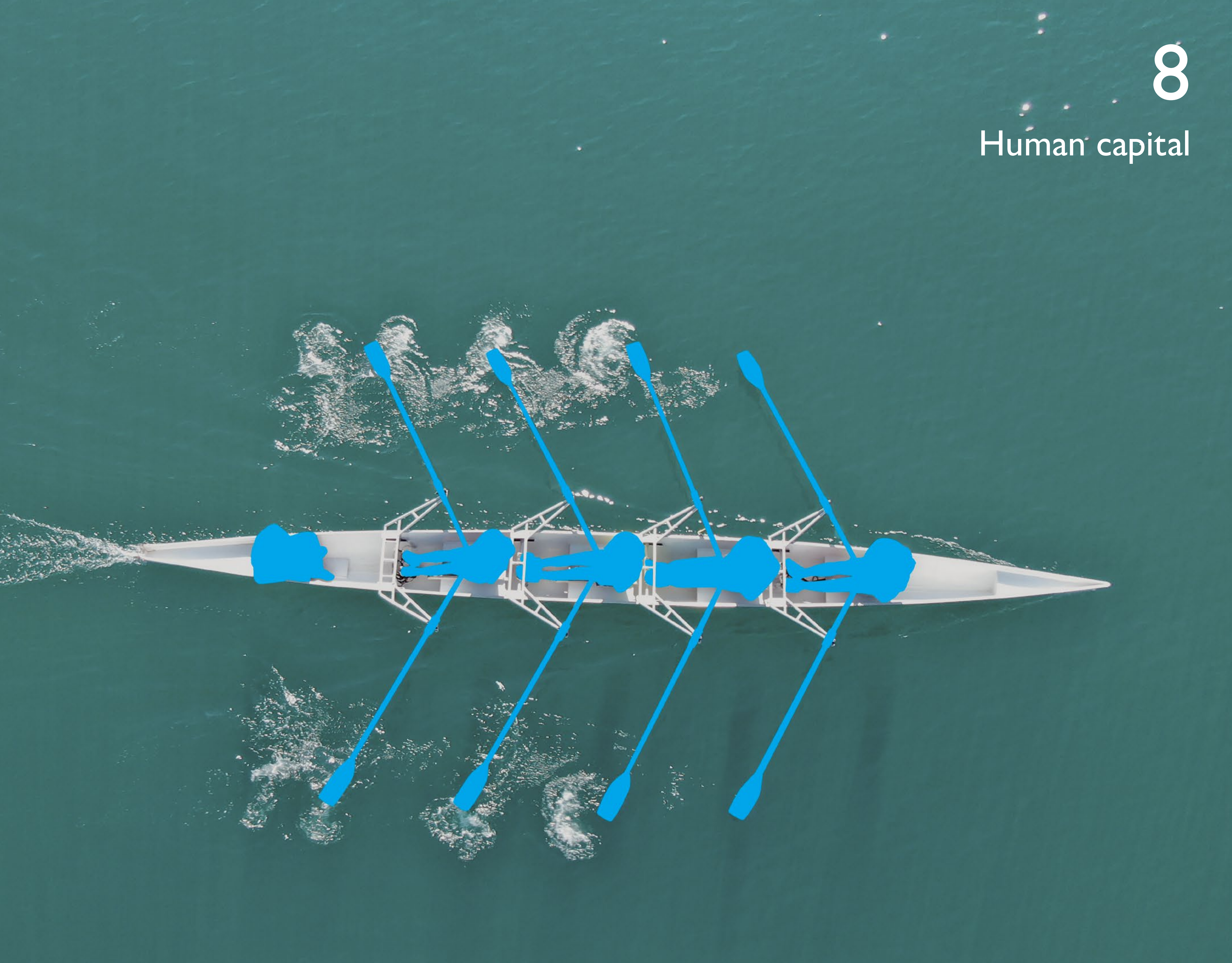
Capitale Umano

Environmental education
5,400 accesses to environmental culture initiatives in 2021

These projects, starting from 2022, will be supported by **studies aimed at mapping the presence of Eagle Owl specimens**, a species particularly at risk and of high naturalistic value, evaluating the risk of overhead power lines on the bird species most at risk and quantifying the benefit of the interventions carried out on the avifauna.

During 2021, interventions were carried out for the removal of piling, in particular in the Province of Sondrio, which allowed an important improvement of the visual impact on an area of particular tourist importance such as the Mortirolo Pass.

8
Human capital



8
Human capital

REFERENCE CONTEXT

Developing resilient skills while respecting uniqueness

In 2021, thanks to the vaccination campaign, organizations have been able to reorganize their activities according to new needs.
The main consequence of the decision to bring employees back to the office was the need to ensure adequate work spaces to respect the physical spacing of people. In turn, employees, having tried new work solutions that have helped them maintain work productivity, are asking organizations for more flexibility in hours and the ability to work remotely in order to balance work and private life.

Training has also been reorganized in light of new organizational and logistical needs, allowing workers to stay current or acquire new knowledge and *soft skills*. Recently, however, the need for "*reskilling*" has become increasingly pressing: the ageing of the population and the accelerating spread of technological advances accelerate "the obsolescence of human capital." The consequence of these phenomena is that training activities are becoming increasingly important to keep a company's population abreast of the changes taking place.

In addition, within the dissemination and growing importance of ESG issues, there is greater attention to *diversity and inclusion* issues. According to research by *Refinitiv*, the utilities sector has a higher *Average D&I Score* than other sectors (55.69) and Italy is the country with the highest *Average D&Y score* (56.65). In addition, research shows that gender diversity on the *Board* implies better financial *performance* and that a positive employee perception of their workplace influences the stock price.

In general, in 2021, and in the years to follow, organizations will need to focus increasingly on employee satisfaction, a factor that influences the organization's economic and financial *performance*. To retain their workforce, organizations will need to implement structured and ongoing employee *engagement* analytics to analyse needs and demands.

PNRR Mission 5 "Inclusion and Cohesion" provides for a total investment of 19.81 billion euro to be divided among the three Components: Policies for employment (6.66 billion euro), Social infrastructure, families, communities and the third sector (11.17 billion euro) and Special interventions for territorial cohesion (1.98 billion euro). In general, the mission aims to support women's *empowerment* and the fight against gender discrimination, increase the employment prospects of young people, rebalance the territories and support the South and inland areas.

> The more I think about it, the more I realize how unique my generation is. We are often seen as "demanding" because we want transparency in the marketplace, we are attached to loyal brands, we expect responsible behaviour, and as a result, we reward or criticize such conduct publicly. But what is wrong with considering ourselves priceless? And why should we work for a company that does not recognize the value of human capital? Our skills, abilities and experiences should be protected, cared for and nurtured every single day because, after all, they are the most valuable thing we have.
>
> *ANTONIO, 24 years old, Turin*

2021 IN FACTS

19.81 billion OF PNRR INVESTMENTS FOR SOCIAL INCLUSION AND COHESION

12% *EMPLOYMENT GAP* BETWEEN MEN AND WOMEN IN EUROPE

370 billion euro OF LOSSES DUE TO THE *GENDER EMPLOYMENT GAP* IN EUROPE

80 thousand MORE EMPLOYED IN THE FOURTH QUARTER OF 2021 IN ITALY THAN IN THE FOURTH QUARTER OF 2020

IMPACTS FOR A2A

SDGs IMPACTED

8 DECENT WORK AND ECONOMIC GROWTH

MATERIAL ISSUES

- Occupational health and safety
- Development of human capital
- Diversity and inclusion

STRATEGIC PLAN @2030

50% women among the Group's new hires (excluding blue collar workers)

SOURCES
Istat, Il mercato del lavoro, 2021;
Refinitiv, Diversity and Inclusion Indices, 2021;
National Recovery and Resilience Plan (PNRR);
Women in the labour market / Work-Life Balance, 2021

Occupational health and safety

Ensure a healthy and salutary work environment (locations and facilities) for all (employees and contractors) while promoting state-of-the-art work practices and management systems that promote accident prevention (including through training) and accident monitoring and analysis.

RISK FACTORS

Health and safety risks for employees and third-party workers

Complaints for occupational illnesses of Group employees

Actual or alleged failures to comply with health and safety regulations

OPPORTUNITY FACTORS

Experimenting with innovative technologies to perform operational activities more safely and efficiently

MANAGEMENT APPROACH (MA)

MITIGATE

Continuous monitoring by *corporate* and company/site HSE Structures

ISO 45001 Health and Safety Certifications

ISO 39001 road safety certification

Specific Health & Safety training

Controls on contractors' sites

Integration of the MbO system with health and safety indicators

Specific procedures for Covid-19 emergency management

SEIZE

WHAT WE DID

2021 ACTIONS

- *Safety Monday* (page 148)
- Flu vaccination campaign (page 150)
- *Digital Lesson Learnt* Project (page 148)

WHAT WE ARE DOING

SUSTAINABILITY PLAN ACTIONS

PEOPLE INNOVATION

- Health and safety

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 structured systems for listening to employees, thanks also to systematic dialogue and collaboration initiatives; promotion of the personal, family and working well-being of employees (work life balance), aimed at improving the reconciliation between private life and work.

RISK FACTORS

Little attention to employee expectations

Potential increase in resignations of key figures

Lack of integration between human resources management systems and sustainability (e.g. performance assessment)

Ageing of workers performing operational activities, particularly in the waste collection sector

OPPORTUNITY FACTORS

Promotion and implementation of individual *smart working* agreements for compatible business activities

MANAGEMENT APPROACH (MA)

MITIGATE

Employee surveys and listening campaigns

Application of *smart working.*

Defining *retention* plans

Employer branding projects

Job rotation and training

Compensation systems in line with the market

Digital training programmes

MbO with ESG objectives

Study of ergonomic solutions for waste collection

SEIZE

WHAT WE DID

2021 ACTIONS

- Agreement on *New Ways of Working* (page 146)
- *Digital Angel* (page 140)
- *Digital Academy Evolution* (page 142)
- iL@b Incubator (page 142)
- *Internal Referral* (page 142)
- *Induction* for new hires (page 142)
- *Anytime Feedback* (page 143)
- *Leadership for Life* (page 143)
- *Development Center* (page 144)

WHAT WE ARE DOING

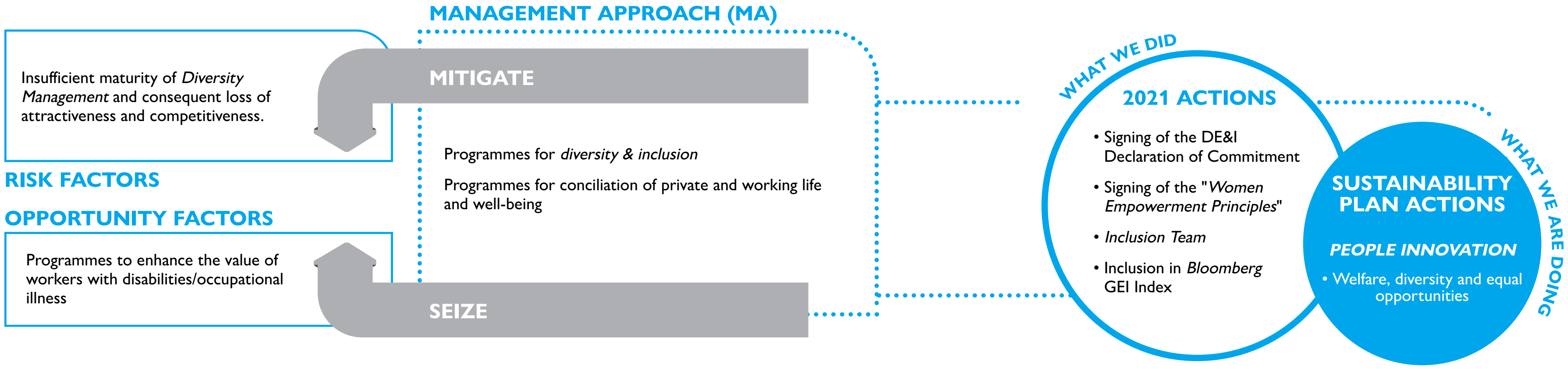
SUSTAINABILITY PLAN ACTIONS

PEOPLE INNOVATION

- *MbO*
- *Performance Management*
- Training
- Internal engagement

Diversity and inclusion

Commitment to the development of an inclusive culture and work environment, valuing the principle of equal treatment of all colleagues based on professional skills and abilities. Development and promotion of an integrated approach to human resources management, through appropriate practices and working conditions to ensure equal opportunities for all employees in all forms.



8.1 People and their value

Building on Life Company's purpose stated commitment, "*Life is our Duty*", in 2021, A2A formulated its own *people strategy* with the aim of contributing to the creation of a safe and inclusive working environment based on the involvement of its people to whom it offers a quality experience and a path of growth and continuous development.

The new Strategic Plan to 2030 reinforces the already extensive job placement programme, increasing direct hires to 7,000 over 10 years, increases hours worked in *remote working* and takes into account the development and training in *Sustainable Development Goals*.

8.2 Responsible management of human capital

Responsible management of Human Capital increases the quality of the work and life of the Group's people: for this reason, A2A has always placed them at the forefront of its corporate strategy.

At December 31, 2021, there were 12,370 people employed by the A2A Group (+8% compared to 2020), of whom 2,259 were women and 1,337 were under 30 years old. Job stability remains a prerogative of the Group: 97% of employees have an open-ended contract.

In order to ensure the safety of its workers during the pandemic period and at the same time ensure the continuation of its business, the Group has enhanced the process of **digital transformation** leveraging on *smart working* as a tool of great opportunity, involving over 4,900 people during the year.

This process also included an activity of **digital inclusion** of operations staff, **providing over 4 thousand** people (initially lacking even just a company *e-mail*) **an A2A digital identity**.

> Capitale Intellettuale
> *Digital*
> 190 digital initiatives planned in the *digital transformation plan*

To accompany this transformation as a whole, the ***Digital Academy Evolution*** has provided almost 4 thousand hours of training to facilitate the spread of digital tools, thanks also to colleagues who have become "***digital angel***". The "***Digital Angel***" initiative identified 50 colleagues who, because of their knowledge of *Office365* and their interpersonal skills, have been selected to support other employees, in an informal way, in the most effective use of digital application tools, promoting new working methods to be spread among the various *teams* of the Group.

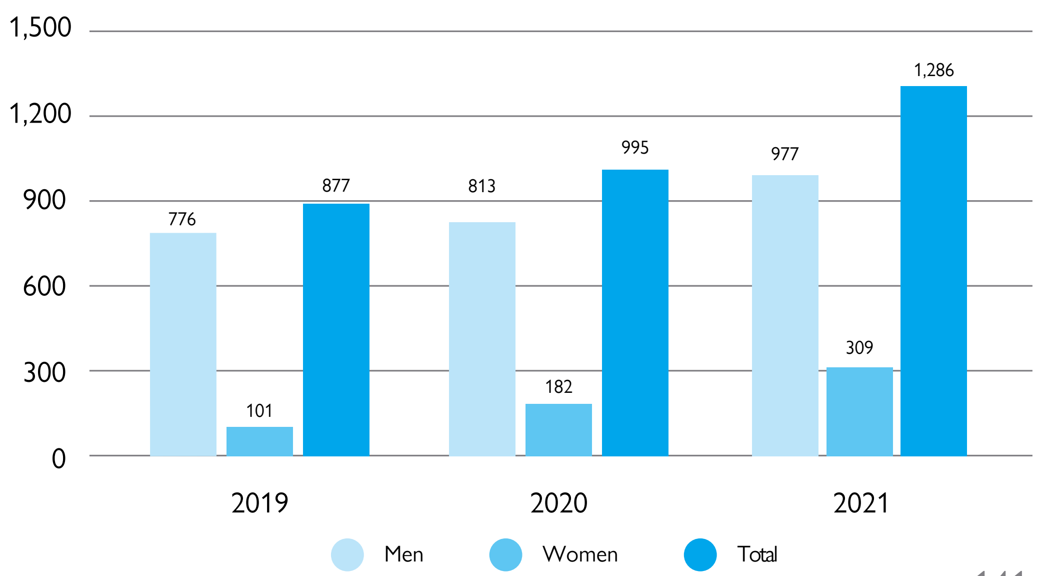
Recruitment, training and development of people

Recruitment

The component that most contributes to giving a company a competitive advantage is the ability to acquire and retain talent. The "*talent acquisition*" differs from traditional recruitment practices (*Recruiting*) for the *focus* on talents, regardless of the fact that there are vacant positions in the company that require more or less urgent recruitment. An important factor in retaining talent is ensuring that the Group's identity is translated into a positive life experience for employees. During 2021, an **internal survey was carried out** through in-depth interviews with *Executives* and managers of the *People and Transformation* area and Group employees, to identify the strongest aspects of A2A's identity to be communicated to candidates. Thanks to this path, the foundations have been created for future activities of revision of the A2A careers site and dedicated communication plans on *social media*, as well as in the activities of *Employer Branding* for Schools, Universities, *Masters courses*.

During the year, there were **1,286 new hires, of which 309 women**, compared to 1,034 terminations, an increase of +29.2% in total hires compared to the previous year. In 2021, the percentage of hires as a percentage of the total workforce is 10.40% and, considering the three-year period, the percentage of female hires as a percentage of the total workforce has steadily increased, reaching 13.7% in 2021. The *trend* is a confirmation that comes from concrete initiatives, supporting diversity and inclusion, to promote gender equality and opportunity. Among these, **was also the update of the selection policy, which specifies that, where possible, the presence of women in the pool of candidates is guaranteed.**

Figure 43 Recruitment trends, by gender (number)



Thanks also to collaborations with Universities, schools and research entities, in the year, 68 internships and 64 apprenticeships were activated. The events with the Universities in fact continued in the form of *virtual meetings*, and through numerous online events held, A2A managers met numerous students, providing them with an orientation on the Group's functions.

Starting in 2020, A2A launched an initiative called "**iL@b Incubator**" with the aim of offering young trainees and interns from the academic world the chance to come into direct contact with the dynamics of the company and the project reality managed by the structure *PMO Pooling* A2A, an internal consultancy structure. The growth path offered is very focused on work experience, also combining the activity carried out in the projects with research and dissemination on issues related to the *practice* and methodological foundations of *Project Management,* thus allowing, already for some of these resources, to find a position in the company at the end of the study cycle. Please refer to Chapter 10 for further details on the initiative.

Capitale Relazionale

iL@B
4 universities involved

As of December 2021, the process of **selection and recruitment has been digitalized** with the aim of simplifying the communication flow and making the candidate experience more efficient in the *pre-boarding*. Amsa and Aprica have successfully concluded a project to optimize the processes of *recruiting* and selection with Group's *best practices*.

In order to support and guide employees in reading the opportunities open to them in the A2A Group, a process has been undertaken of **digitalization** of the ***job posting process***. Thanks to digitalization, it is now possible to access directly to the internal management application and consult all open positions, choose the *Job Posting* of interest and, in the application phase, directly access your own *curriculum vitae* to review your experience and update your data.

After an initial pilot phase in which Young Talent colleagues participated, from 2021, A2A has extended to all employees the possibility of reporting qualified candidates for the Group. The ***Internal Referral*** has now been extended to the entire Group: each employee can pass on the *mission* and values of A2A outside and inside the Group.

During the year, 62% of the 58 open job postings were filled by internal company candidates.

Training

In 2021, more than 220,000 hours of training were delivered, i.e. 18.26 training hours per capita. Approximately 80% of employees received training during the year, up 10% from last year.

The Group, through the various upskilling and reskilling activities, encourages the updating of the skills of its human capital, inviting its workers to develop their skills and manage their professional growth.

With a view to developing skills, in 2020, a process of mapping out skills of transversal interest was launched in order to identify possible internal teachers suitable to start **training for the role "in house"**. The added value of this project is certainly the *knowledge sharing* and the provision of training interventions that can be increasingly closer to the specific business needs. To support the "*in house*" training initiative, 7 transversal training courses were created: data *decision making*, basic and intermediate *project management*, basic and intermediate excel course, knowledge of the electricity market and work organization. In 2021, 2,500 hours of training were provided for a total of 218 participants.

INDUCTION OF NEW HIRES

Induction A2A is the Group's onboarding programme dedicated to over 300 newly-hired employees. The 2021 pathway included a kick-off event, aimed at learning more about the Group and its *People Strategy,* with a focus on sustainability and inclusion issues; four webinars with the directors of the Business Units, with the aim of getting to know the main business of A2A; a web-conference on the key competencies of the future, with moments of interactive surveys in which the new hires were able to reflect on which skills they would like to train and on which they feel strongest. Newly hired under 30 graduates were also involved in a parallel course of self-empowerment structured in 10 stages, with the aim of creating a plan of development actions together with their own direct Manager.

For example, to explore the issues related to *project management,* was the development of the project ***PM Academy Program*** delivered by the internal structure *PMO Pooling;* the training programme aims to provide participants who work in the company's project contexts with all the theoretical and methodological foundations recognized by the *best practices* of the market and tested/used *on the project* in A2A by the *PMO Specialist*. In 2021, 124 hours of classes were delivered, 128 colleagues were trained, and a *Community* has been active since July 2021, with about 150 registered colleagues.

As in previous years and in line with the Group Digital Plan, part of the management training was dedicated to developing the digital skills of employees. The **A2A *Digital Academy project***, i.e. the course dedicated to raising awareness of the issues of digital transformation, has been enhanced with new content. Compared to last year, **three new issues** have been developed related to the *Digital Plan (Smart collaboration & Virtual communication, Digital Mindset and Knowledge Networking)* and **new in-depth analysis were integrated of the issues already proposed** in 2020 *(Customer Experience & Customer Centricity, Data Driven Analysis & Decision Making, Cybersecurity)*. During each meeting **there were opening *Webinar Talks*** with external experts, various **digital content** also of experiential gaming, ***Webinar Talks*** with internal and external experts in round table mode and a final experience dedicated to give voice to the participants. The initiative has been realized in collaboration with *Talent Garden*. *Digital Academy Evolution* has allowed to train more than 1,300 employees who have carried out more than 6,280 hours of training, and to involve more than 27 external and internal experts in the Group.

From March 2021, the following e-learning course is available to all Group employees "**2030 Agenda and the Sustainable Development Goals**" created by *Asvis* - Italian Alliance for Sustainable Development. Thanks to this initiative, it is possible to learn about the new global framework for sustainable development - defined by the United Nations in 2015 and covering all dimensions of human life, which is also the foundation of the Strategic Plan 21-30. The training project has currently trained more than 470 employees and provided over 1,420 hours of training.

Activities continue, with a further two editions completed in 2021, of **professional technical training *Lean Six Sigma Green Belt,*** the training and certification programme for selected colleagues on the Lean philosophy and methods to support the evolution of the Operational Excellence programmes into a "widespread system", creating "points of reference for continuous improvement" within the various companies and structures, which carry out the continuous improvement projects required by the various businesses.
Continuous improvement activities according to the "*Lean*" philosophy also involved colleagues from LGH Group companies. 5 projects have been completed using Lean methods and tools independently with internal coaching. The projects focused on the standardization of network measurement systems, the optimization of maintenance processes on gas meters, the optimization of document management in the field of waste management, the redesign of some key processes in the field of *lean integration managing assets*.

People Development and Talent Management

The "***Leadership for life***" course started in 2021 and it is dedicated to about 1,100 *managers* of the Group, which includes 9 online meetings dedicated to *leadership* and its evolution in a rapidly changing context. The course proposes some key contents for the *People Strategy* and more generally for the Business Plan: 3 meetings dedicated to sustainability, circular economy and energy transition, and 6 concerning the *leadership* in a broad sense. Even the Group's new managers have embarked on a programme designed to train them in the skills they need to manage their managerial roles, both in terms of decision-making and in terms of people development. During 2021, 177 colleagues participated in this training.
After an initial pilot project phase that ended in late 2020, which involved the *People and Transformation Department* (about 800 people), a new feature was implemented on the internal platform *Smart People*, "***Anytime Feedback***", which allows to exchange *feedback* between managers and collaborators, and between colleagues, with the aim of fostering a culture of feedback within the Group. It is possible to send both spontaneous feedback or make a request for feedback, both public and private. The project involved around 29% of the company's population, representing a key moment in the relationship between manager and employee, allowing concrete development actions to be set up.

FROM *YOUNG TALENT* TO *DEVELOPMENT CENTER*

The ***Young Talent*** programme ended in 2021, a path in the field of talent management of training, listening and engagement actions, which has involved almost **300 young people** *under* 35, graduates and with potential within the Group.

The final phase of the program included a new "***Development Center***", which had the objective of accompanying the participants in the development of their own development plan personalized on their characteristics and attitudes. The path is individual, with stages in groups, and experienced in the key moments with the guidance of the related direct manager and HR business partner of reference. In addition, 6 sessions of "*Group Coaching*" on individual development issues were organised with the support of expert coaches, and at the end there will be a follow-up with the aim of addressing some reflections and expectations regarding the skills acquired and the future development path of the participants.

The initiative allowed for a data-driven snapshot of the characteristics of the target population to be established in order to make objective decisions about their development.

Internal communication

In 2021 was the continuation of A2A's commitment to listening to and involving all employees in relation to the values of the *Life Company* and the challenges contained in the new Business Plan launched at the beginning of the year.

The path of sharing and engagement was based on different communication and information tools: a site of cascading with videos and in-depth materials on the objectives of the Plan, the distribution of leaflets for the involvement of colleagues engaged in the most operational processes and the publication of various *news* throughout the year to support the storytelling of the Group's strategic projects.

In addition, a new *format* called **A2A *Talk* was launched,** which consists in streaming from operating sites or plants, as a moment of dialogue with the Top Management and enhancement of processes and assets of the Group.

In 2021, **activities of listening to and understanding the needs and opinions of colleagues have also been strengthened** through surveys aimed at providing guidance on specific issues, such as: agile working (2,550 respondents), services offered to employees (over 2,000 respondents), people's engagement with work, relationships, the company and its values (almost 4,000 respondents).

Welfare

The Group is committed to promoting the well-being of its people and organization, both at work and in the family, developing a culture of well-being and improve the reconciliation between private and professional life.

In 2021, the activities of welfare focused on the **mapping and developing services** on the **organizational, family** and ***well-being*** aspects of people.

AMBIENTIAMOCI

With the "Ambientiamoci" project, the Group has devised a path to **encourage the continuous growth of a culture of environmental issues** among its employees, in order to increase their awareness of the possibility and importance of playing an active role for a cleaner and more sustainable world, according to a responsible and informed approach, so that attention to the environment and sustainability can become pillars of everyone's personal and professional modus operandi. Ambientiamoci is also an opportunity to explore the environmental issues related to the *business* and activities of the Group, with seminars held by experts in the various sectors. In 2021, three webinars were organized attended by nearly 1,800 colleagues.
Meteorologist and climatologist Luca Mercalli addressed the issue of climate change due to global warming, while marine biologist and CNR researcher Paolo Domenici discussed the effects of these changes, particularly the increase in sea temperature, on living organisms. Engineers Sabrina Sorlini and Giorgio Bertanza, full professors at the University of Brescia, illustrated the water cycle from supply to purification and return to water bodies. All the talks aroused considerable interest and there were many questions addressed to the speakers by the participants, as well as ideas and suggestions collected for the continuation of the initiative, which for 2022 will include new webinars on circular economy, energy and biodiversity.

Service mapping and development

In July, the Energy Area Recreation and Cultural Management Board was created, consisting of company and employee representatives. The Board is in charge of developing the recreational and cultural activities of the energy area, directing the activities of the CRAL and the "*Welfare Platform*" as well as other functions of a more specific nature, useful for the implementation of welfare programmes.

Family environment

Among the various measures aimed at supporting families, there is the **daycare and nursery school** at the headquarters in Brescia available for the children of the Group's employees and those of other affiliated companies. During 2021, there were 34 children of employees enrolled in daycare and nursery school. Moreover, in collaboration with Proges, A2A has organized a cycle of *webinars* dedicated to people who want to inform themselves and discuss aspects linked to parenting and education.

Well-being

During 2021, in collaboration with the IEO-Monzino Foundation together with *SmartFood IEO* and in partnership with the HSE structure, the path continued that, through webinars and informative materials, promoted the **dissemination of scientific knowledge in the field of nutrition** in order to combat misinformation and induce an informed food choice, promote health, prevention and greater attention to lifestyles. In collaboration with LILT Milan Monza and Brianza, a further path of scientific dissemination has been consolidated that, through webinar and information materials, has had as its objective **raising awareness among people on the importance of primary prevention** as a useful tool to fight the onset of cancer diseases, risk factors and the promotion of healthy lifestyles.

The Group has also confirmed the possibility of **converting the result bonus into a welfare credit** for 2021. The initiative allows increasing the purchasing power of employees, allowing 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. In continuation with previous years, the Group offered an additional share of 15% of the amount converted and spent. The programme is managed through a dedicated portal with five main areas: family, health, savings, free time, well-being.

Moreover, the **healthcare** system, created through a shared pathway by the A2A bilateral governing body is also available for 2021. The system was designed to provide an immediate and concrete response to Group employees and their families by offering supplementary benefits to the National Health Service. In its second year, the initiative involved about 5,200 member employees who covered about 4,000 family members.

Trade union agreements

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

In 2021 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 on the New Skills Fund:** a cross-sector agreement was signed for the environment and energy areas in order to provide access to the fund's benefits, with a view to launching training initiatives aimed at enhancing employees' skills, particularly in the areas of energy transition, sustainability, digitalization and organizational development;
- **Group Result Bonus**: Three-year agreement signed for the Energy Area, for the first time reference is made (in addition to historical indicators) to EBITDA of the *Business Unit* and raising to 100% the possibility to opt for the use of the bonus in goods and services. In the Environment Area, an agreement was signed that defined the path of discussion aimed at harmonizing the different regulations currently in force in order to reach a new agreement of the *Business Unit* valid for the three-year period 2022-2024; in this direction, this agreement has also defined a series of substantial guidelines already implemented in the bridging agreements relating to the year 2021;
- **agreement on the integration of the A2A and LGH corporations:** an agreement was signed relating to the corporate merger by incorporation of Linea Group Holding S.p.A. into A2A; at the same time examination of the timing and procedures for the takeover of A2A's shareholding of the Business companies with reference to the merger of the same into the *Smart Infrastructures* and Environment BUs;
- **agreement on *New Ways of Working* for the Energy Area of the Group:** the agreement introduces a new model of smart working for over 3,300 people developed starting from the experiences gained during the pandemic period, as well as from the continuous listening to workers: a fundamental tool for reconciling personal and professional life;
- **agreement establishing the Bilateral Body for Culture and Leisure Services:** a new structure of governance of cultural and recreational welfare services in the Energy Area, through the establishment of a joint bilateral body made up of the company and trade union organizations;
- agreement to update the economic values of the **"Harmonization" and extension of leave entitlements:** improvements are made to some of the arrangements for leave and support for parents, and the economic conditions for travel expenses are updated.

A2A invests in the development and consolidation of a constructive and responsible system of industrial relations, with the aim of achieving the energy transition while guaranteeing the employment of its workforce, thanks to consolidated relations with trade union organizations based on meeting and dialogue.

The Group has faced problems with its workforce in the past, for example with the cessation of operations at the Brindisi coal-fired power plant or the demand crisis in the years 2015-2017 of CCGTs. Measures have been agreed with the trade unions to ensure continuity of employment and safeguard workers' pay levels, making reference to various operational tools, such as outplacement support packages, retraining and early retirement plans, social shock absorbers, and many others.

In addition, A2A and the trade unions reached an agreement on the management of the current suspension of production at the Monfalcone coal-fired power plant, drawing up a series of guarantees for staff pay levels covering the period up to the start-up of the new plant.

Remuneration

A2A pays its employees salaries that are consistent with market standards and with internal remuneration practices that guarantee an adequate level of both 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.

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, in line with the Group's Professional Model.

To implement the above, beginning in 2021, compensation analyses were explored to:

- understand gender pay gap phenomena;
- compare - in more detail - the remuneration structure of employees with respect to the external market, in relation to the activity carried out.

In particular:

- under the gender pay gap, the differences between women's and men's salaries were compared, for the same level of job, with respect to the external market and, based on the results, a number of actions have been launched that will lead to a reduction in the gender pay gap over the next few years with the aim of eliminating the gap in 2026;
- in the area of employee compensation, compared with the external market, a remuneration benchmark was launched on the entire non-executive population aimed at comparing the A2A Group's remuneration with the external market with the same band complexity (position) covered and with specific references to differential markets for particular professional families or roles that have become increasingly "critical" in the labour market. Objective of this benchmark is to identify, for any specific families and/or roles, targeted remuneration practices to be adopted in the processes of compensation, recruiting and talent management as well as building ad hoc retention packages for the most exposed roles in the market.

The table below illustrates the differences in average female/male pay within the different job categories. The differences, of slight entity, are explained by phenomena of turnover and/or acquisitions of new companies within the Group.

Figure 44 Average salary of men/women by category in Italy

Category	2019 Men/women	2020 Men/women	2021 Men/women
Managers	103.4%	97.7%	104.1%
Middle Managers	95.4%	94.4%	93.0%
White-collar workers	91.3%	90.5%	90.3%
Blue-collar workers	96.4%	95.2%	95.1%

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.

The *MbO* process confirmed the importance of formalized incentive processes in increasing the closeness of employees to the Group's objectives (for example, employee participation and active involvement in *stakeholder engagement*) and incentivizing each worker towards the achievement of company results. In line with the A2A People Strategy, the progressive extension of the perimeter of people involved continued, reaching around **100% of managers, 38% of middle managers and 3% of white-collar workers** and which will continue further in the coming years.

Consistent with the challenging energy transition objectives of the A2A Business Plan, alongside the standard incentive plans, extraordinary incentive plans have also continued, increasingly focused on the sale of energy efficiency and e-mobility services and which will be further focused in 2022 on the sale of "green" energy.

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, also in 2021, 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, to strengthen the commitment to sustainability, in 2022, it was decided to increase the weight of sustainability goals across the entire front line of the General Manager, also assigning common, cross-cutting KPIs geared toward **reduction of accidents, reduction of emissions and improvement of DE&I indicators** (in terms of: increasing the % of female *managers*, increase in the presence of women on the Boards of Directors of subsidiaries and affiliates; increase in the % of women hired).

8.3 Occupational health and safety

The implementation and internal verification of **Health and Safety Management Systems covers 99% of the company population**, all activities and all workplaces of the Group. This system has been audited by certification bodies and certified as compliant with the relevant standards.

The effectiveness and improvement **of the health and safety management system** is guaranteed by the feedback of the Group's workers by proactively reporting dangerous situations or areas for improvement through the channels made available by the company and, above all, by carrying out their activities in compliance with the provisions of the company's rules and regulations.

During the emergency phase, **compulsory training** activities continued in compliance with current legislation, through the provision of courses in live mode via webinars for all employees equipped with company devices, with a constant search for **interactive teaching methods.** When allowed, face-to-face courses were reactivated in total safety through the timely application of the shared protocols required by current legislation.

Safety at work

The application **ARIAL** (Environmental and Labor Risks Application), guarantees the **monitoring** of aspects relating to safety at work and the environment. **ARIAL allows the creation of risk assessment documents** with the possibility of highlighting the initial risk level and the residual risk level following the application of the specific prevention and protection measures are evident, with a clear and traceable approval process; the system also allows the management of PPE, safety training and health surveillance, as well as the management of chemical products and controls on safety-critical equipment. The tool is also used **to record and classify unsafe conditions and accidental events reported by workers** (accidents, near misses and injuries to employees and third-party workers), a classification that is made according to a level of severity based on the potential and/or actual effects of the event.

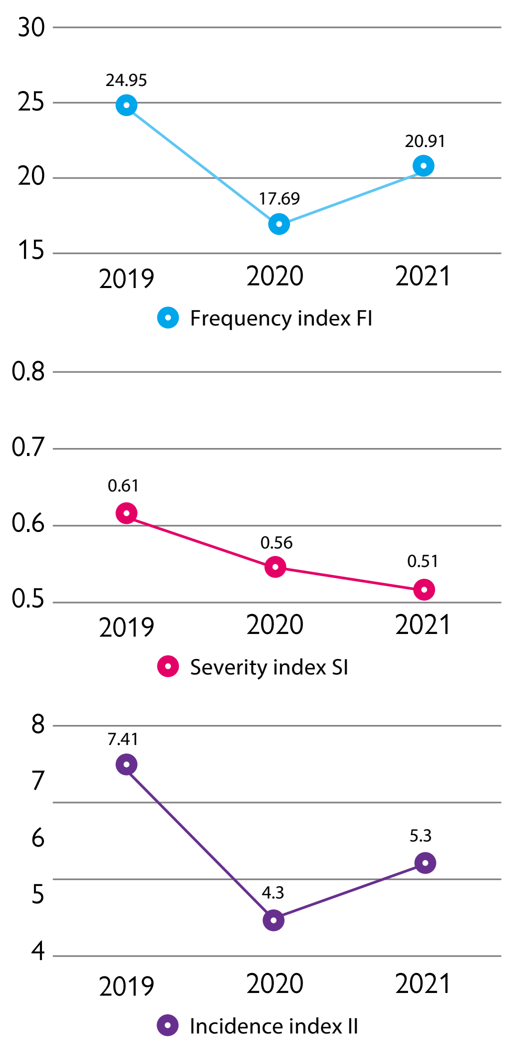
In view of the complexity and frequency of regulatory updates during the emergency period, an **archive of HSE obligations** applicable to the Group's companies has been created and made available to HSE structures and employers, where the relevant extensions and deadlines are tracked.

Safety Monday continued in 2021, an initiative that aims to promote a true culture of safety, tackling specific issues that may affect work activities in an agile manner, using unconventional communication systems and languages that also affect the emotional sphere, a fundamental element for **modifying unsafe behaviour.** Publication on the Intranet occurs every first Monday of the month for a new stage in the journey to safety.

In 2021, the "***Digital Lesson Learnt***" project was initiated. It aims to introduce digital and innovative methods in the management of the communication of the results of the analyses carried out on the main accidents that occurred in the Group, to improve the effectiveness of the activities of dissemination of the culture of Safety. Each year, a number of relevant events that cut across all the Group's activities will be identified and transferred to video, making them available to the HSE structures of all the companies for the management of **moments of discussion aimed at raising awareness of safety issues, also involving contractors**.

During the year, together with the *Supply Chain structure*, the project "***HSE from Procurement***" was initiated. The activity stems from a need identified during the process of defining the HSE Vision and, in particular, the fact that operating activities are increasingly entrusted to third-party companies, with so-called high potential risks from the accident point of view, and with a relevant impact from the environmental point of view. This presupposes the need to entrust these activities to contractors who have a sufficient degree of reliability from the point of view of the management of environmental aspects and safety at work. This makes it necessary to establish a series of specific elements throughout the procurement management process in order to properly oversee, from the HSE point of view, the entire process of entrusting to contractors.

Figure 45 Accident indices



In 2021, the frequency of injuries increased by 18.2% compared to 2020. If instead we compare the data with the **trend** in place before the onset of the Covid emergency, there was a consistent improvement of 16.6% in the frequency index and 16.4% in the severity index.

The "one year injury-free" initiative continues in 2021, as part of the "*Leadership* in Health and Safety" programme and involving more than 2,000 colleagues of the *Smart Infrastructures Business Unit* who are committed every day to adopting virtuous behaviour and carrying out their activities in compliance with the provisions of the company rules and regulations. The goal of the initiative is to achieve 365 injury-free days. The Network Engineering and Operation team of A2A Calore e Servizi has made it: one year without an accident.

During the year, the main contractors and suppliers of the business of the networks were involved in new campaigns to raise awareness of sustainability issues. The main pillars have been the organization of a **corporate event called "*Supplier Day*"** and an intense **campaign of inspections** (*Safety Walk*) at the sites. The event *"Supplier Day"* was the occasion for management to share the objectives of the new business plan 2021-2030 and the Group's ongoing commitment to health and safety. While the *Safety Walk* campaign was created with the aim of intensifying the inspections by top figures (principals or persons in charge of works) with the intent to create an action of communication and *commitment* both towards the inside and towards the suppliers.

During 2021, there were 42 injuries involving contractor workers, including one fatality that occurred when an employee of a third-party company collided with the contractor's operating machine during excavation operations. Although the A2A Group's involvement and responsibility were immediately ruled out, in accordance with company procedures, an in-depth analysis was carried out to identify the contributing factors and specific improvement measures to exclude the possibility of such events recurring. This translates into a frequency index of 9.3 and a severity index of 2.03.

Health at work

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 protocol is a set of instrumental and laboratory tests and examinations, the frequency and content of which are established by the Group's doctors with the guidance and coordination of the Health Unit and according to quality standards shared with university structures. Clinical examinations are performed primarily by outside facilities.

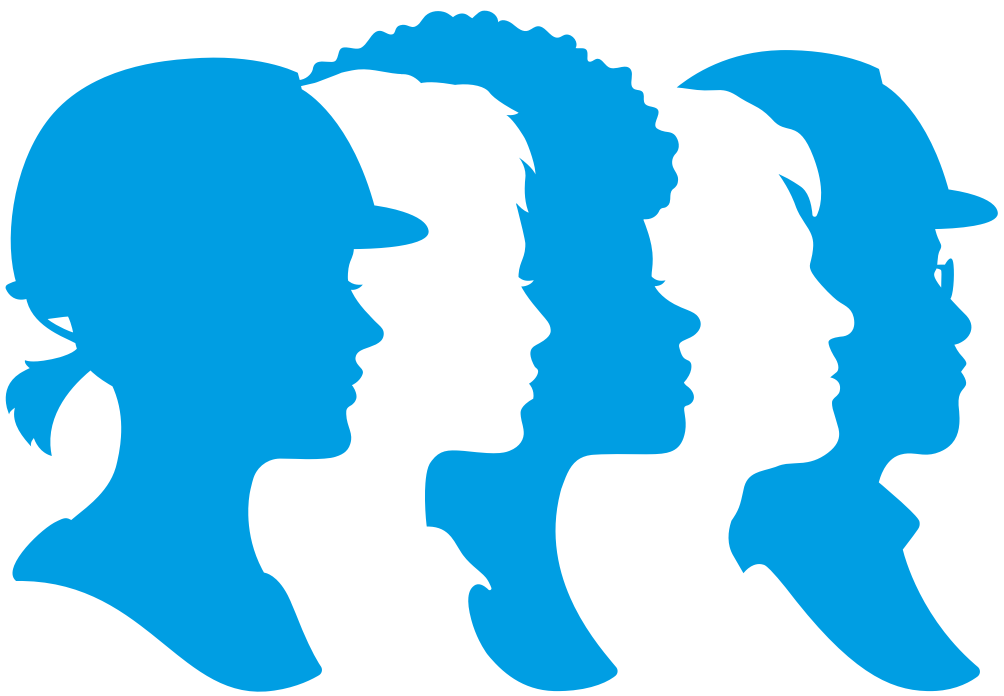
The health surveillance service is offered mainly in the approximately **65 medical units** distributed throughout national territory, and with authorised external facilities. In 2021, more than **7,703 medical examinations** of fitness for the job and **13,497 checks** were carried out in accordance with health protocols. The appointed physicians also carried out more than **134 site inspections** at the workplaces.

At December 31, 2021, there were 16 cases of occupational illnesses recorded by the Group, the main types of which included hearing loss, diseases of the osteomuscular system and asbestos-related illnesses.

Health promotion initiatives continued during **the year.** Among the various initiatives proposed in view of the spread of the Covid-19 pandemic, an initiative was conducted to encourage adherence to the vaccination campaign through the creation and dissemination of a film entitled "Nobody Excluded", which had over 800 views.

The **flu vaccination campaign** was repeated and also this year all workers who requested it were able to get vaccinated. A total of 1,608 vaccinations were administered in 2021.

Starting in the second half of the year, we made available to our workers Capsula, a health-pod (a cabin) that through some measurements allows the self-assessment and empowerment of the overall state of physical fitness, the degree of resilience to stress, the state of cellular ageing and dietary style. Over 2,000 accesses have been recorded to date.



8.4 Diversity and inclusion

The Group's approach to diversity and inclusion is based on the principles of integrity and protection of the individual within the work environment, ensured through the Code of Ethics, the Human Rights Policy and from 2021, the **DE&I Declaration of Commitment**. Through these two documents, A2A undertakes to guarantee its employees a climate of mutual respect for the dignity, honour and reputation of each individual, preventing insulting, discriminatory or defamatory attitudes and openly condemning any mobbing, harassment of any kind or unjustified attempts to hinder the professional prospects of others. Within the Group, anyone who believes to have been subjected to harassment and/or discrimination may make a report, which is promptly taken into consideration and assessed.

Inclusion Team

As evidence of the Group's commitment to promoting an increasingly inclusive working environment free from stereotypes, in 2021, A2A launched a **call to action** for the creation of a working group dedicated to D&I issues with the aim of defining the strategy, objectives and actions in the areas of Culture, Gender, Generations, Sexual Orientation and Gender Identity and Disability. The Working Group consists of more than 60 colleagues with diverse backgrounds, levels of seniority, gender, skills and corporate roles, guided for each topic by an HR and a *Sponsor* identified in the Steering Committee.

The *Inclusion Team*, after having taken part in a training course, defined an *action plan* for the different themes, to be implemented during 2022.

In addition, in 2021 awareness-raising initiatives were launched for A2A employees. In particular, two e-learning courses were provided with the aim of launching an initial moment of awareness of stereotypes/unconscious bias and on the subject of gender harassment. In October, A2A joined the initiative *"4 Weeks 4 Inclusion" (#4W4I)*, which involved more than 180 companies that decided to form a network in order to promote the culture of inclusion and the enhancement of diversity. For the occasion each employee was able to take part in 4 events from those available in the programme, including the event organized by A2A called **#rispettiAMO,** inclusion and respect are precious resources.

Gender diversity

With reference to the adoption of measures to promote equal treatment and opportunities between genders within the entire corporate organization, A2A has for years implemented structured initiatives to favour gender inclusion.

A2A's commitment took the form of the **signing at the end of 2021 of the *"Women Empowerment Principles"***, a declaration of programmatic commitment in 7 principles, defined by the *UN Global Compact* and the *UN Women*, to promote women's employment and gender equity as a factor of innovation and growth for companies and **the adhesion of the CEO to the *network of Valore D - G20 EMPOWER Advocates***, a global network of CEOs committed to the forefront of promoting diversity and female talent in business.

Figure 46 Women in business

	2021
Women promoted during the year (out of total promotions)	29.3%
Women in ICT functions	27.7%
Women in Engineering	20.2%
Women in *entry-level positions* (out of total *entry-level positions*)	46.0%
Women in managerial positions (out of total managerial positions)	23.1%
Women in junior managerial positions (out of total junior managerial positions)	24.4%
Women in top *management*	25.3%
Women in managerial positions with *cash-generating functions*	36.0%

Once again this year, the Group was included with a higher score than last year in the ***Bloomberg GEI*** index that takes into account companies that have a transparent approach to practices and policies of inclusion and gender. Specifically, GEI measures gender equality based on five pillars: female leadership and *talent pipeline*, equal pay and gender pay equity, inclusive culture, anti-harassment policies, and advocacy activities towards women.

The Group is also committed to targeting technical professions and breaking gender stereotypes for a more inclusive work environment. Since 2018, A2A has been involved in the Elis Sistema Scuola Impresa project, aimed at training young people and creating the human capital of tomorrow's country, with specific attention to girls and their access to professions in male-dominated sectors.

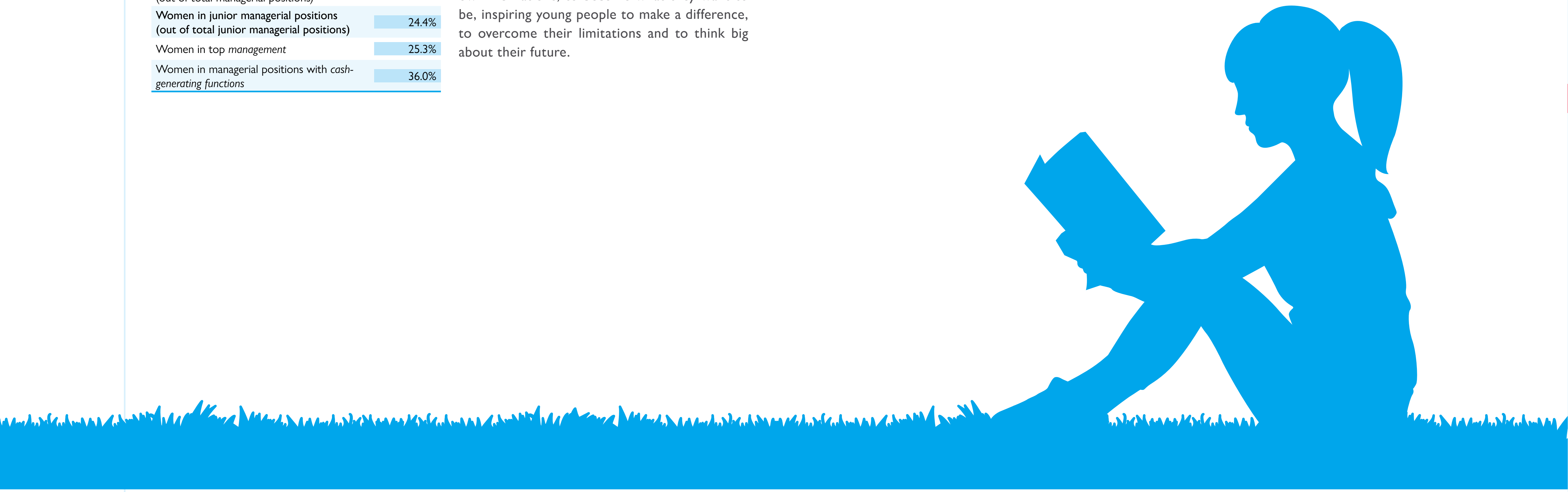
As of December 2020, there are 21 *Role Models* identified that work in the technical field. In 2021, after an initial training moment, our colleagues implemented online *Inspirational Talks* at schools, reaching approximately 788 students; meetings scheduled for the first half of 2022 are also being planned. *Role models* are people who motivate and encourage people to follow their own inclinations, to become what they want to be, inspiring young people to make a difference, to overcome their limitations and to think big about their future.

A mentoring pilot project was also launched in 2021; it is dedicated to a small group of *managers* (guaranteeing a gender balance) and provides for Mentor-Mentee interaction to support and guide the improvement of professional performance in growth and key steps in the life of the company.

To raise awareness and prevent violence against women, A2A also dedicated the month of November to various initiatives, including: a meeting entitled "Changing the culture and preventing violence against women" organized by Fondazione AEM in collaboration with SVS Donna Aiuta Donna *Onlus* and Soccorso Violenza Sessuale e Domestica (SVSeD) and an e-learning *course* to address the issue of gender harassment in addition to other awareness actions.

Disability

With the aim of enhancing the uniqueness of all the people of the Group, with the support of the *Inclusion Team,* which follows the *Disability issue*, A2A has embarked on a collaboration with **Auticon**, a company with the peculiarity of employing as IT consultants professionals with skills on the **autism spectrum** to carry out data analysis activities. Within this context and on the initiative of the *Group ICT and Digital Enablement department,* a project has been launched to analyse the value contained in the archived interactions between users and the *Service Desk*, a tool for *ticketing* in A2A, and use this information to improve the quality of the service. In addition, with the aim of extending the collaboration to other areas of the company, a training session was also organized to learn more about their reality and find further new points of collaboration. With this in mind, during 2021, the Group launched, in collaboration with AFOLMET, the implementation phase of the **New Energies Project**, already planned in 2020 but temporarily "suspended" due to the pandemic emergency. Objective of the project was to define, starting from the "mapping" of the "needs" of the most "fragile" workers, an organizational model of *disability management* aimed at facilitating the involvement of people with disabilities in business processes. During 2021, special survey questionnaires were administered to both managers and workers with disabilities, the analysis and synthesis of which a number of "areas of intervention" emerged with the consequent definition of an action plan, targeted on the person, which will be implemented during 2022.



9
Intellectual capital

9

Intellectual capital

REFERENCE CONTEXT

Innovate to manage resources intelligently and sustainably

Companies are going through a historical moment of great transformation, due to technological factors such as digitalization, the search for solutions to reduce environmental impacts, the management of increasingly resilient networks. Research and innovation are becoming increasingly important. However, the incidence of these investments on turnover remains marginal.

City living is becoming the preferred choice for millions of people for a variety of reasons such as proximity to work, availability of services and forms of entertainment and cultural stimulation. The city of the future, therefore, must be increasingly "*smart*" and citizen-friendly (think of the so-called 15-minute city): some NbS (Nature based solutions) such as, for example, green roofs and walls, green infrastructure, parks and green belts. *Smart* cities will also need to be increasingly sustainable and green, to support climate change adaptation and mitigation, air and water protection and, in general, make citizens' lives more comfortable.

Thanks to their managed services, *utilities* play a strategic role in the creation of the *"smart cities"* of the future and are supported in their activities also by the investments provided by the PNRR.

Mission 1 of the PNRR "Digitalization, innovation, competitiveness, culture and tourism" and in particular component 2 "Digitalization, innovation and competitiveness in the productive system" provides almost 24 billion euro of resources to encourage digital transition and innovation in the productive system, encouraging investment in advanced technologies, research and innovation.

The digitalization of the production system also passes through the digitalization and innovation of *business* models and management of the daily life of employees, a topic that is still very important due to the pandemic. Projects and investments in Cybersecurity, Blockchain, Cloud and Data management are becoming more and more necessary for companies, both for the internal management of activities and to provide cutting-edge services and products to their customers.

> Today, in a historical period of unprecedented uncertainty, it is not easy for new generations to enter the job market. To stand out in this highly competitive environment we are learning to shape-shift, adapt and recognize the true value of knowledge, ideas and concepts created from innovation: invaluable capital for a company that believes in developing valuable projects. Nearly at the end of our education, we young people are ready to make our contributions. But the real question is, will the working world be ready to receive?
>
> *VITTORIA, 17 years old, Parma*

2021 IN FACTS

24 billion euro OF INVESTMENTS FORESEEN BY THE PNRR IN DIGITALIZATION AND INNOVATION

29% *DATA SCIENTISTS* PRESENT IN LARGE COMPANIES

+17% STRONG INVESTMENTS BY COMPANIES IN *SOFTWARE* IN 2021

1.39 billion OF *CYBERSECURITY* SPENDING IN 2021

IMPACTS FOR A2A

SDGs IMPACTED

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
11 SUSTAINABLE CITIES AND COMMUNITIES
17 PARTNERSHIPS FOR THE GOALS

MATERIAL ISSUE

Innovation and *digital transformation*

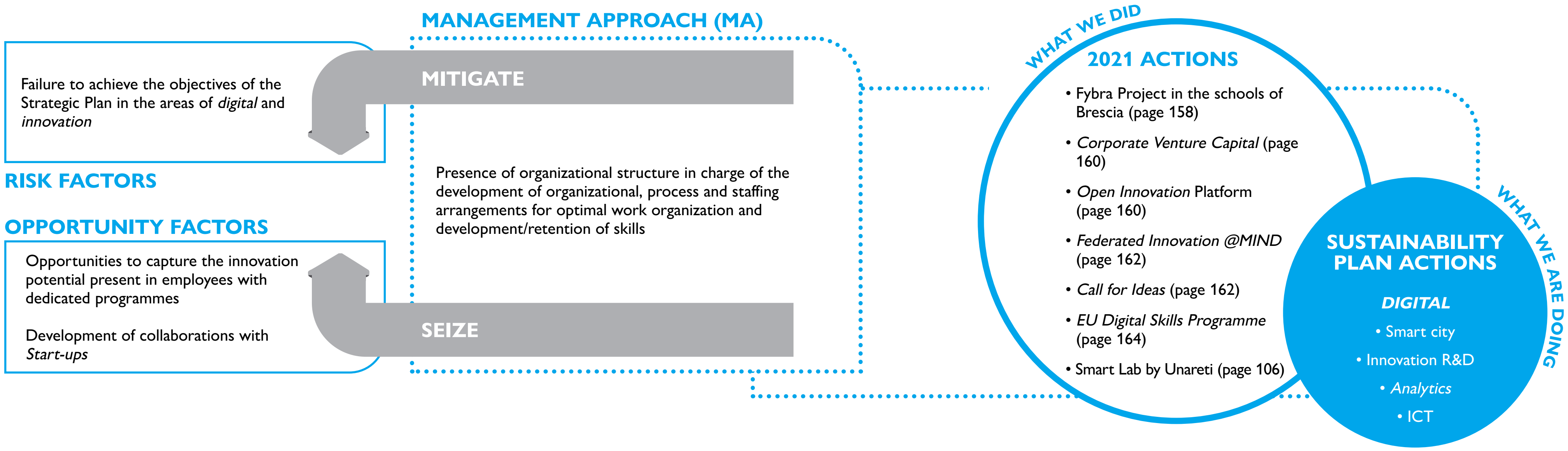
STRATEGIC PLAN @2030

288 tons of CO_2 avoided by digital initiatives

SOURCES
Top Utility, Performance of Italian utilities - VIII edition, 2020
UNEP, Smart, sustainable and resilient cities: the power of nature-based solutions - a working paper for the G20

Innovation and *digital transformation*

Promotion of research and development activities, which also make the most of internal skills and resources, aimed at updating and strengthening IT services and infrastructures; implementation and development of innovative and *smart* services for Group processes and the community.



9.1 A2A for Smart Cities

The Group develops smart solutions designed for districts and cities, making them smarter, more connected and more sustainable, improving them through the adoption of innovative technologies and informed use of data.

Smart Cities are increasingly connected

As a subsidiary of a *Life Company*, *A2A Smart City* provides innovative solutions to make the supply of primary goods such as water, gas and electricity smarter. Internet connection is now also a primary asset, which is why the Group also ensures access to the most advanced internet services not only for offices, but also for homes.

The ***FTTH*** (Fiber To The Home) fiber **optic extension project** in the Municipality of Cremona, which started at the end of 2018, has provided citizens with a network that allows them to surf the web at a connection speed of up to 1 Gigabit per second (Gbps). The Municipality of Cremona, A2A Smart City, and Open Fiber followed an operational protocol that enhanced existing infrastructure, with an 80% reduction in excavation. The intervention involved 170 km of pre-existing network, with an extension of the infrastructure of a further 45 km that has allowed to reach more than 32 thousand real estate units, thanks to an investment of over 9 million euro.

A2A has also made its experience available for the **first 5G tests in Milan**. Five installation points have been placed in Milan, where *A2A Smart City* will follow the infrastructural, testing and electrical maintenance part preparatory to the installation of the antennas.

SMART GRID PROJECT ALSO FOR GAS STATIONS

In 2021, *A2A Smart City* continued its fiber optic cabling activities in support of the Unareti *Smart Grid* project, connecting 500 new electrical stations (for a total of 3,400) and, for the first time, also 50 gas stations. The fiber connectivity allows real time monitoring of the status of the stations, and enables the possibility to remotely control, with a more powerful and robust solution, plant organs (switches or valves) to perform adjustment operations aimed at improving the quality of service and efficiency in the operation of networks.
In the near future, *A2A Smart City* and Unareti will continue their efforts to increase the number of stations connected (by fiber and other communication technologies), the amount of information that can be acquired and the remote control actions that can be carried out remotely. In addition, experiments will be undertaken to develop automatic network regulation logics based on acquired data.

Digital Transformation

A *Smart* City is a city in which a multiplicity of stakeholders use and have at their disposal different devices that collaborate with each other to make the city smarter.

Smart video analysis

During the year, A2A closed a contract to **implement an advanced video analysis system** on the 35 cameras installed in the Porta Nuova park "the Library of Trees of Milan" (BAM). The system makes it possible to ensure the privacy of citizens by blurring identities, while at the same time analysing the flow of people within the space. The tool is therefore useful for optimizing routes and enhancing areas based on actual user usage.

The dashboard of the City of Milan

A2A Smart City, in collaboration with AKQA and the Municipality of Milan, has carried out one of the key projects of the Milanese capital's **Digital Transformation Plan**. The dashboard aims to make data easily accessible to citizens by linking them to people's daily lives and their relationships, so that the distance between what is perceived and what is real can be shortened. This tool was unveiled at the opening of *Digital Week* 2021.

Remote Reading for Utilities

A2A Smart City contributes to the design of **innovative and sustainable solutions** dedicated to utilities, aimed at improving the processes of leak detection or control of consumption for their billing.

Specifically, the company has initiated projects with several water management companies to bring remote metering to their territories. Remote metering allows utilities to capture daily consumption data from users, coming to identify abnormal consumption caused by potential leaks and allowing for a more complete water balance. The skills in both water and technology within the Group enable the subsidiary *A2A Smart City* to create value also outside the territories it serves.

Manufacturing Capital

Smart Grid

530 *smart* sensors for water leaks installed in A2A Ciclo Idrico's integrated water cycle.

AIR QUALITY IN SCHOOLS AND PUBLIC SPACES

A2A has developed **technology capable of measuring environmental air parameters in schools**. A2A has brought "*Fybra*" to schools in Brescia, a technology installed in classrooms that **monitors air conditions from both a physical (temperature and humidity) and chemical point of view**. Controlling factors such as temperature and humidity is useful not only for calculating indoor comfort indices, but also for optimizing the management of energy resources. In addition, when air quality exceeds certain CO_2 levels, *Fybra* emits a red light signal warning of the need for air renewal.

As part of the actions aimed at defining the improvement of air quality in outdoor spaces, in the last months of 2021, *A2A Smart City* signed an **agreement with a leading company in the world in the field of filters for the purification of air in outdoor spaces**. This type of solution is extremely advanced, allowing to create "bubbles" of clean air in long-stay areas such as stations, shelters, subways and family playgrounds. *A2A Smart City* will deploy this solution, currently not yet present in Italy, to promote air sustainability with a proactive service of reclamation and redevelopment of the resource.

9.2 *Open Innovation*

Open Innovation means generating innovation by intercepting and assimilating ideas, knowledge flows and solutions useful for the development of the circular economy and energy transition from an ecosystem made up of realities internal and external to the Group.

In order to implement *Open Innovation*, A2A has equipped itself with a **shared platform** through which employees, start-ups, companies and the research world are contributing to create value for the territories in which A2A operates. The platform allows launching *idea* generation, campaigns or hackathons but also managing end to end the development of different innovation activities.

The Group has created a true virtuous process of innovation generation and management that has allowed building strong relationships with important entities such as incubators/accelerators, innovation hubs, universities, research centres and venture capitalists.

Corporate Venture Capital

The Corporate Venture Capital (CVC) initiative was created in 2019 with the aim to identify innovative technologies and business models to strengthen the core business, support its evolution and generate value for the Group and for the territories in which it operates. Since its establishment, A2A's CVC has always worked in the areas of **circular economy, energy transition, mobility and new technologies to create the cities of the future**. The Group's CVC programme has seen the setting up of an investment fund dedicated to A2A in partnership with ***360 Capital***, a leading European venture capital operator, and membership of the **Poli360** fund linked to the Milan Polytechnic, which leverages both the *Technology Transfer Office* and the *Polihub* incubator. To date, there are 7 start-ups in the portfolio of A2A's dedicated fund.

Fully passing last year's testing phase, many of the start-ups in the 2020 investment portfolio are now being evaluated for additional applications to take the technology to scale-up. The main developments are outlined below.

The product analyses of the Group's sorting plants are now carried out manually by plant operators at variable intervals spaced out over time. To address the possible loss of value of a portion of matter that is not intercepted within plants, the Group included the start-up **Greyparrot** in its portfolio in 2020. Thanks to the application of an automatic waste flow monitoring system within the Muggiano plastics recovery plant, the software has proven to be able to recognize with 98% accuracy the different types of material in transit, a result that led to the decision to extend the technology to more plants.

Manufacturing Capital

Plastics Recovery

18,559 tonnes of sorted plastics ready for final recovery plants

Enspired, an Austrian start-up already operating in Germany and the UK, has developed a **digital energy trading as a service (Taas) platform**, equipped with advanced artificial intelligence algorithms, whose mission is to promote energy transition by making electricity grids more flexible. The company operates in the short-term energy trading market, helping to balance energy supply and demand on the grid, optimizing the management of production and storage plants.

Swiss start-up **Hades**' "Sewer *Vision*", which has developed a computer vision-based solution for inspecting sewer networks that has been in A2A's CVC since 2020, has also officially entered the pilot phase. The experimentation, conducted during 2021, has seen the application of computer vision to the videos made during the invasive inspections of 20 km of sewer pipes of the Valtrompia collector. *Computer vision* allows to **significantly reduce the *post-processing* time of video inspections**, not only limiting possible operator errors in final *assessments*, but also creating synergies between engineering, operations and internal/external teams by facilitating the flow of information.

Beem Energy, a French start-up, sells a kit of plug & play photovoltaic panels for the self-production of electricity in the residential field that can be installed directly by the customer in less than 1 hour without the need for specialized technicians. The company aims to create a new brand of reference able to make the kit a mass market product for all those who wish to self-produce renewable energy and contribute to decarbonization.

Energy Dome, an Italian company, has patented a new battery based on the thermodynamic cycle and the use of carbon dioxide (CO_2): a highly efficient and durable solution that can optimize the storage and use of energy from renewable sources. The technology, in fact, allows to store large amounts of energy, in the order of hundreds of MWh, and aims to complement wind and photovoltaic plants or systems for the production of green hydrogen. Specifically, it allows to accumulate energy in moments of excess releasing it when the production demand intensifies more. Unlike a thermochemical system, such as lithium batteries, it uses machines capable of compressing CO_2 to 65 atmospheres in order to transform it into a liquid state and ensure that the energy expended is efficiently stored. Finally, the CO_2 is regasified, re-expanded in a turbine to return the current absorbed by the network to the network itself and re-injected into a tank, the "dome". In this way, the process of supplying electricity can take place throughout the day, overcoming the limitations of photovoltaic and wind power whose production of electricity depends on the presence of the natural source. The start-up has signed a Memorandum of Understanding with A2A for the initial implementation of the first 100 MWh CO_2 batteries in Italy.

In 2021, moreover, thanks to membership in the venture capital fund "**Eureka**[1]!" managed by **EUREKA! Venture SGR**, and the partnership with 29 universities and scientific research centres in Italy, the Group has extended its initiative to innovative start-ups and SMEs in the field of advanced materials, applications and technologies related to materials science and engineering.

Circular Materials, an Italian company based in Milan, has patented a technology for the removal of heavy and precious metals from industrial wastewater with a view to the circular economy. The plant developed by the start-up effectively recovers metals such as arsenic, cadmium, nickel, zinc, copper, mercury, gold, silver, etc. so that they are not dispersed into the environment and can once again generate value. The technology adopted also allows a drastic reduction in treatment costs compared to current technologies. The start-up is in the process of forging agreements with leading industry players in Italy and Germany.

1 The Fund also includes among its investors the European Investment Fund (EIF) and Cassa Depositi e Prestiti (CDP).

FEDERATED INNOVATION @MIND

With a view to strengthening and further developing the Group's ability to intercept valuable solutions in the field of sustainability, and increasing its own ecosystem of innovation, A2A is one of the *founders* of *Federated InnovationTM* @MIND, a public-private collaborative model created within MIND - the new innovation district that is growing in the former EXPO area. *Federated Innovation* is a unique model that currently brings together a network of 37 founders, leading companies in their respective sectors at national and international level, aimed at **generating research and innovation initiatives**, encouraging **technology transfer and** the contamination of ideas on a platform open to the collaboration of all: companies, universities, start-ups, investors and talents.
Within the *Federated Innovation*, A2A, in addition to being one of the founding companies, is also part of the *Greentech* and *Circular economy* thematic area where it will work to develop projects to support the objectives of energy transition and circular economy.

Call for Ideas

During 2021, the first *Corporate Intrapreneurship* initiative involving all Group employees was completed. The response was very large: over 3,000 participants, 540 projects and 8 finalist teams. The initiative was managed through the innovation portal and was structured in 3 phases:

- collection of ideas: with the generation of more than 500 ideas that reached the subsequent phases;
- development: enrichment of 320 ideas through a structured path in 7 steps, to elaborate the key information for the development of a concept;
- final selection.

Among the finalists there are ***EV Smart Parking***, which consists in the realization of electric charging stations for cars to be placed potentially anywhere in the city, and the group of the project **Teleriscaldamento Zero**, which has designed a fifth-generation district heating network at natural temperature based on the recovery of waste energy from the North Plant of Brescia.

The winner **Blue Energy** will have a budget of 50 thousand euro to start with the realization of a technical and economic feasibility study of a plant for the generation of renewable energy from salt gradients. This energy is obtained through the process of reverse electrodialysis that allows to produce electricity by putting in contact two aqueous solutions of different salinity and controlling the motion of the ions through special membranes.

In addition, the first place team in the call for ideas initiative was awarded as a prize the chance to participate in a technology expedition with the opportunity to discover the Israeli innovation ecosystem, interact with local start-ups and incubators in Israel, one of the most dynamic nations in terms of entrepreneurship and technology development.

9.3 *Knowledge spillover*

The search for innovative and technologically advanced solutions affects all areas of the Group and is aimed at improving both the products/services offered to end customers and the processes and working methods of all Group resources.

New tools for monitoring employee-related trends

The Group is implementing a platform to promote the aggregated, effective, innovative and agile management of the various services/tools made available to employees, acting as an enabler that impacts on the company in terms of effectiveness and efficiency, on the people of the Group by increasing *engagement*, on the organizational culture by facilitating the process of digital transformation. The "*Employee Digital Channel*" project aims to **implement a new *digital platform* to improve the employee experience**, proposing itself as a daily access point to support both the life in the company and the professional activities.

In addition, the *People Report*, **a quarterly tool for measuring and monitoring certain KPIs concerning A2A employees**, was implemented and finalized in 2021. The data collection will take place partly in an automated way in the system, partly in a manual way. In both cases, the goal is to **update a dashboard to navigate and explore topics of interest**.

Optimization of staff services and evaluation of ICT services

In 2021, a digitalization effort was undertaken to streamline the processes associated with drafting, managing, entering into and monitoring service contracts.

While, in order to assess the degree of satisfaction with the work and suggestions for future improvements, the ICT function launched a *survey* addressed to all employees. The idea stems from the belief that the path of improvement, development and digitalization of services also passes through the satisfaction and suggestions of all employees who, every day, use the IT tools that the company provides. Compared to previous years, there was 40% more participation (approximately 2,300 colleagues), and **approximately 77% were satisfied and 15% very satisfied**.

Job rotation and knowledge sharing within the Networks BU

The results obtained from the *Digital DNA survey* showed a significant number of *Smart Infrastructures Business Unit* colleagues who achieved a high level of *Digital Readiness*. These employees were given the opportunity to gain experience in another company function (6-8 months on a project in another area of the Group or in another company for 1-2 days a week) thus encouraging networking and mutual understanding within the *BU*. The project also allows to experience a kind of "job rotation" that can be an opportunity to expand knowledge of our Group and the various business processes.

9.4 Digitalization

A2A invests in digitalization and innovation to accelerate the achievement of its objectives and to make its contribution to sustainable development even more incisive.

The 2021-2030 **Business Plan** includes the **Digital Transformation Plan and the Digital Sustainability Plan**. The Digital Transformation Plan is a key enabler for achieving the strategic plan and a transformative element not only in technology but also in processes, culture and skills. This is based on 4 pillars:

- **Asset excellence:** support the *energy transition* by guiding the evolution of the asset portfolio in a data-driven manner and continue to maximize plant availability by leveraging advanced technologies;
- **Operational efficiency:** optimize operations (i.e. fleet routing, maintenance activities,..) and continue to work on automation and optimization of manual/repetitive activities;
- **Stakeholders multi-channel** experience: provide a "*seamless*" customer/citizen experience using digital tools and use digital technology to enable/accelerate Group VAS sales
- Employee centricity and full digitalization: lead the digitalization of all Group employees by bridging the "*digital divide*" and develop and grow advanced skills to support digital ambition.

Natural Capital

Emissions avoided
123 tons of CO_2 avoided thanks to the paper saved and the kilometres not made

Within the *Digital Transformation Plan*, the approximately **190 initiatives** were analysed and for each of them the **possible impact in terms of sustainability** was evaluated and analysed. Specifically, in addition to the impacts of initiatives on the *SDGs*, it was decided to quantitatively measure environmental impacts as well.

With the implementation of the Plan, a Change Management process was also initiated with colleagues from New Ways of Working. In particular, a Change Management approach has been defined consisting of 5 phases (Analyze, Explore, *Design, Build, Monitor*), whose depth will be modulated according to the peculiarities of each project.

Thanks to the transversal work of the colleagues of *Group Information Communication Technology and Digital Enablement and of New Ways of Working*, the "*Digital Inclusion*" project was also completed, which envisages **100% digital access** to **company services** for all Group employees, also involving around 4,000 operational colleagues.
Through personal devices (mobile/tablet) and using the credentials received, they can access all *Office* services *(Outlook, Teams, One Drive*).

During 2021, the dematerialization of documents involved about 1,300,000 pages, equal to 6.5 tonnes of paper, helping to "save" 156 trees, as well as avoiding CO_2 emissions for the production, transport, disposal and recycling of paper and toner.

EU DIGITAL SKILLS PROGRAMME

A2A has been selected by the **European Commission** to be one of the first 50 companies to take part in the pilot phase of the "***EU Digital Skills Programme***", an initiative that aims to help European Small and Medium Enterprises in their digitalization path, thanks to the voluntary "*tutoring*" of large companies. The programme is part of the broader ***Digital Decade Communication*** that, by 2030, plans to equip at least 80% of EU citizens with digital skills, reach 75% of European businesses with cloud computing, big data and artificial intelligence services, and more than 90% of European SMEs with at least a basic level of digital intensity. The Group was invited, as a tutor, to participate in the pilot phase of the programme, led by the ICT function that participated in the project phase and that, periodically, is involved in the working tables of the *Digital Decade Communication*.
In particular, A2A has chosen to support Solco Brescia, a consortium of cooperatives that has been collaborating with our Group for many years, in the configuration of a digital solution for Work Force Management (WFM), that is, the process of optimizing the management of employees through the Salesforce platform, capable of assembling and conveying in a single channel all the requests coming from multiple sources.

9.5 Research & Development

Clean patents

A2A is working to make the synergies between its sustainable business model and intellectual property effectively applicable.

For example, the first prototype of the MV/LV (Medium Voltage and Low Voltage) substation that is compact, underground, waterproof and equipped with a ventilation system for heat dissipation (of the *Underground Compact Sub*station project) will be tested by 2023, in **Unareti's *Smart Lab***. The design of the substation was **patented by A2A**. The solution will help overcome current operating limitations **by making the energy transmission service more efficient and sustainable**, but more importantly, the impact of operation on local communities will be limited. The compact dimensions mean that the **proposed solution occupies 70% less volume than a *standard*** MV/LV substation.

Group Data Office

A2A wants to be a data-driven Group, and works every day to achieve its goal **by leveraging data as a strategic resource for digital transformation**.

For some time now, A2A has been engaged in a process of digitalization of all the Group's assets, which from an operational point of view is also involving operations and channels that involve customers. Several projects in Advanced Analytics and Artificial Intelligence have been implemented to extract value from enterprise data. As part of the renewal of energy supply contracts, the ***Dynamic Repricing*** project aims to move from an undifferentiated renewal price for free market customers **to the identification of a differentiated price based on sensitivity to price changes and the customer's propensity to renew**, while maintaining a stable churn rate. The pilot phase is confirming **better than expected results**.

During the year, two business optimization initiatives were carried out: the first one concerning the **optimization of the thermal energy supplied by district heating plants** and the reduction of the related waste, succeeding in improving the planning and operation of the plants through an hourly *forecast of* the thermal load produced by the plants; the second one was the optimization of the ***Smartbin* positioning** points in the city of Milan by increasing the productivity of the emptying service.

Various projects were also launched in different areas: predictive maintenance on network assets, reduction of the electrical imbalance of the Silla2 waste-to-energy plant, churn prediction and prevention for customers and payment anomaly detection.

100% ELECTRIC *RETROFIT* PROJECT ON WASTE COLLECTION FLEET

The **AMSA** fleet was chosen to test under operational conditions, a **100% electric *retrofit*** system applied in its own 3.5-tonne diesel truck. The ***retrofit*** system enables the vehicles to be approved quickly and the registration certificate to be updated so that they can be put into operation immediately. The choice of retrofit, in addition to the environmental benefits due to the use of mobility with low environmental impact and the circularity due to the extension of the service life of collection vehicles, allows to significantly reduce the investment compared to the purchase of new electric vehicles and to significantly reduce *OpEx* compared to diesel vehicles, by virtue of the lower cost per kilometre travelled, lower maintenance costs and the possibility of reducing insurance costs.

Hydrogen

The Group's role as Italy's second largest electricity producer in terms of installed capacity and its established experience in the *circular economy* allow it to offer **various solutions for the production of green hydrogen.** For this reason, in 2021, the Group committed to developing the potential of this resource by launching several wide-ranging projects aimed at contributing effectively to the decarbonization of the heavy mobility sector and more generally of the hard-to-abate sectors.

During 2021, the technical and economic feasibility of **converting thermoelectric power plants from natural gas to hydrogen**, or natural gas/hydrogen blends, was examined in depth and the study of **gas distribution infrastructures** was launched in order to **make them "*hydrogen-ready*"**.

The Group committed to developing a study aimed at identifying the most suitable sites for an integration between existing renewable energy plants and hydrogen production units. The project has evolved into the **identification of a pilot plant and the development of a technical and economic feasibility study of a wide initiative of decarbonization of the Sardinian territory**, considered a very interesting testing ground for the development of renewables and hydrogen given the need to accelerate the abandonment of coal. Specifically, the initiative focused on the evaluation of different configurations of supply of green hydrogen, produced starting from a wind farm in the Oristano area with an electrolyzer of a power equal to 20 MW, with the aim of laying the foundations for the development of a network of users mainly related to the world of transport that can enable the development of a subsequent phase of the *partnership*.

Finally, FNM, A2A and Snam - as per the *Memorandum* of Understanding of 2020 - in order to give further impetus to the development of green mobility in Lombardy, have pursued the project that aims to develop the **first Italian "*Hydrogen Valley*" in Val Camonica**, which will also allow the replacement of the current diesel trains on the Brescia-Iseo-Edolo line with **new hydrogen-powered trains**. The energy will be produced through the generation of renewable electricity from the Brescia (A2A) waste-to-energy plant, with the installation of an electrolyzer with a capacity of 6 MW, potentially scalable up to 21 MW. The project schedule calls for initiation of the authorization process during 2022 and construction and commissioning in 2023-2024. The first delivery for FNM trains will be in early 2025.

The project, which is configured as **one of the first initiatives in the hydrogen field in Italy**, has recently been **awarded with a European grant of 4.5 million euro** from the *Innovation Fund Small Scale*.

10
Relational capital

10
Relational capital

10.1 Relations with customers

REFERENCE CONTEXT

Maintain a high and sustainable quality of services

The year 2021 saw a sharp increase in energy consumption from fossil fuels. The increase in consumption, together with the scarcity of energy resources, has led to a very strong increase in energy and gas prices, first at the financial level, then on the retail market and then on consumers. Gas prices in the last half of 2021 are estimated to be up 40% from a year earlier for residential consumers and about 100% for businesses. Electricity prices, on the other hand, are estimated to be nearly 50% higher for residential consumers and more than 50% higher for businesses. Companies have made every effort to protect their customers by every means available to them.

In 2021, utilities have seen an exponential increase in energy efficiency measures, thanks to Decree-Law No. 34 of May 19, 2020, also known as the Relaunch Decree, which provides two benefits for two different types of interventions: the *Super Ecobonus,* for energy efficiency work and the *Super Sismabonus* for work on seismic upgrades. Specifically, utilities are involved because energy efficiency interventions also involve the replacement of heating systems, the installation of photovoltaic systems and home automation systems.
Electric mobility grew in 2021, thanks in part to numerous incentives for scrapping and buying electric and hybrid cars. According to Motus - E (Italian association representing the stakeholders involved in the electric mobility supply chain) the registrations of PEV (Plug in Electric Vehicle) cars in Italy in 2021 recorded an increase of 128%; the increase of electric mobility must necessarily be accompanied by an expansion of the charging infrastructure. Industrial policies play a significant role: the PNRR provides 0.74 billion euro (Investment 4.3: Development of electric charging infrastructure) to build enabling infrastructure to promote the development of sustainable mobility. In order to enable the realization of these objectives, the intervention is aimed at the development of 7,500 fast charging points on motorways and 13,755 in urban centers, as well as 100 experimental charging stations with energy storage technologies.

The restrictions of the pandemic and the subsequent resumption of activities also affected the management of waste collection. In addition, the *Plastic* and *Sugar Tax*have been postponed to the Budget Law 2022 (therefore valid for 2023): in particular, the former concerns the so-called MACSI, i.e. plastic products with a single use. From 2023, 0.45 euro will have to be paid for each kilogram of plastic, in order to discourage its use for disposable items.

Most of us kids do not have any experience or familiarity with managing electric and gas contracts, yet during the health emergency, to help our parents and grandparents, we found ourselves paying bills *online* or requesting quotes. For example, apps and websites made by some companies simplify access to the services they offer and provide guidance and best practices toward energy conservation. We can say that in some way the pandemic has pushed us to consider issues that we previously felt were distant and that instead are fundamental for the common well-being towards a more sustainable future.

VINCENZA CARMEN, 18 years old, Salerno

2021 IN FACTS

71% OF THE TOP 100 *UTILITIES* OFFERS MOBILE *APPS* FOR CUSTOMERS

86% OF CITIZENS THINK THAT NEW FORMS OF MOBILITY WILL REPLACE THE PRIVATE CAR

66% AVERAGE ITALIAN SEPARATE WASTE COLLECTION

97% OF THE SERVICES PROVIDED WITHIN THE TIMEFRAME ESTABLISHED BY ARERA

IMPACTS FOR A2A

SDGs IMPACTED

MATERIAL ISSUE

Responsibility and quality in the provision of services

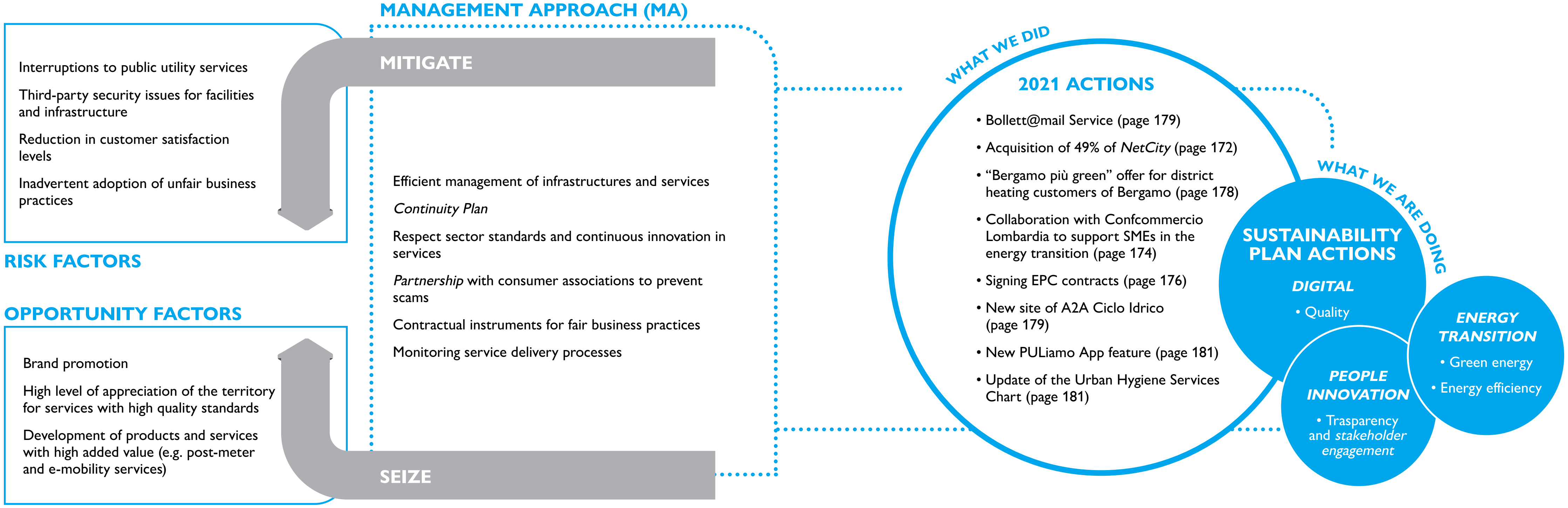
STRATEGIC PLAN @2030

41% digital contacts on total (digitalization *Customer Care*)

SOURCES
Tommaso Gavi, Plastic tax and sugar tax, new postponement in the Budget Law 2022, 2022
Deloitte, New mobility: impacts and opportunities, 2020
Top Utility, The performance of Italian utilities - 8th edition, 2020

Responsibility and quality in the provision of services

Provide quality, safe and reliable services and act flexibly and promptly in responding to customers' expectations; implement actions and systems to manage risks and emergencies to ensure continuity of service; adopt correct communication and marketing practices; commit to the proper security management of customer and employee data, with a view to protecting privacy. Development and promotion of energy efficiency and *green* mobility products and services for customers.



10.1.1 Relations with customers of the Market BU

A2A concretizes its role as a *Life Company* committing itself to providing quality products and services through ethical business conduct and a transparent and reliable relationship with its customers. *The Market Business Unit* - of which A2A Energia, A2A Energy Solutions andand Yada Energia are part - was set up with the aim of meeting the energy needs of households and businesses by offering effective, innovative and sustainable solutions, ensuring the highest standards *of qua*lity in sales and customer assistance. The Market BU operates nationwide with a portfolio of offerings for all customer segments, from electricity and natural gas supplies, to products and solutions for energy efficiency and e-mobility. The following chapter also includes the performance of retail companies of the Lumenergia Group and ASM Energia.

Electricity and gas sales service

In 2021, the Group's sales companies sold a total of 2,275 million cubic meters of gas and 18,020 GWh of electricity. The number of total deliveries increased 11% for electricity and 10% for gas. As of December 31, 2021, 1,013,943 electricity deliveries and 826,423 gas contracts were active in the deregulated market. On the other hand, the 40% share of electricity sold outside Lombardy remained stable.

Figure 48 Number of Customers, analysed by type

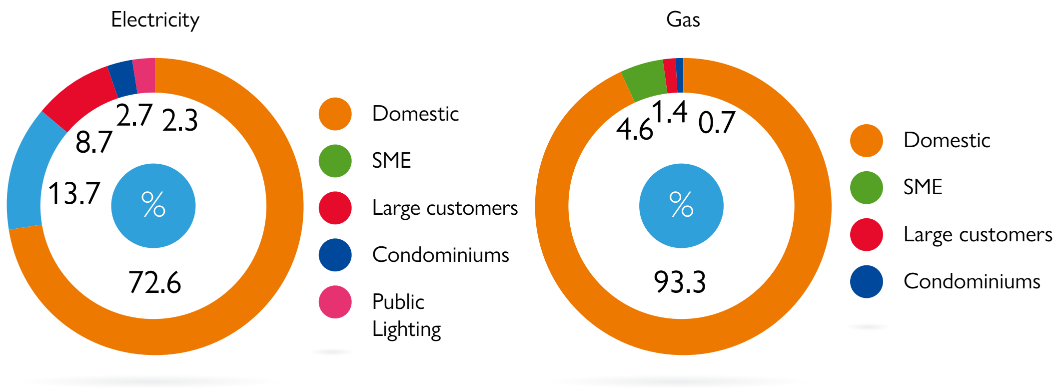
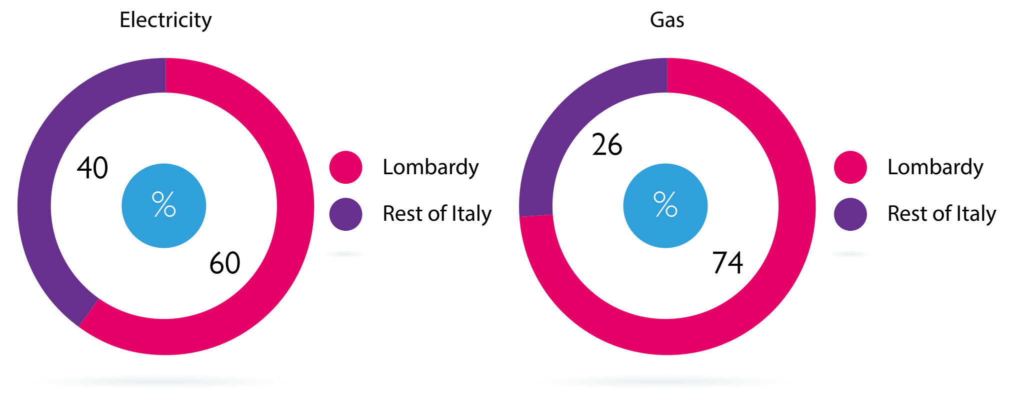


Figure 49 Geographic breakdown of sales volumes



A2A Energia is the main commercial company of the Market *Business Unit* active in the sale of electricity, natural gas and products and services for energy efficiency and electric mobility. Every day, it supplies electricity and gas to more than 2.5 million customers, from large industrial enterprises to small and medium-sized businesses, from condominiums to domestic customers.

Confirming its desire to develop and grow at a national level in the sale of electricity and gas, in all markets and all customer segments, A2A Energia was **awarded three lots of the first auctions for the Gradual Protection Service in 2021**. The latter, promoted by ARERA to guarantee, for a transitional period (July 1, 2021-June 30, 2024), the supply of electricity to small businesses that have not yet chosen a free market offer, have led A2A Energia to serve around 80,000 new supply points since July, for a reference volume of around 1.8 TWh/year. In the areas in which A2A won the auctions for the Gradual Protection Service **a communication campaign was promoted in order to increase brand awareness**. The campaign was planned from September to December 2021 on *Out of Home*, *Digital* and *Social* channels.

In a context in which the Group is active in promoting strong investments in the electric mobility segment, in July 2021, A2A Energia acquired from A2A *Energy Solutions* the business unit relating to the *Mobility Service Provider* (MSP) activities, which include the **development and the proposal of integrated solutions for electric mobility dedicated to private customers** including therefore infrastructures on private land (wallboxes and columns) and services for charging electric vehicles on public and private land. With the aim of promoting concrete actions to support the energy transition and the electrification of mobility, A2A Energia also took part in important events in the sector, such as *E-mob*, the National Conference on Electric Mobility held in Milan in October 2021, and *Key Energy* 2021, the international fair for renewable energies, storage systems and infrastructures for sustainable mobility held in Rimini in the same month.

In addition, in September 2021, A2A Energia completed the acquisition of 49% of the capital of *NetCity*, a company of *SunCity Group* specialized in the **provision of installation and maintenance services of products for energy efficiency, distributed generation and electric mobility** for the consumer segment. In line with A2A's strategy and its commitment to the development of solutions for the energy transition, the operation enables it to better oversee the procurement, installation and assistance activities for products and services dedicated to customers. This agreement will also allow for a further geographical expansion of the areas served over time for this type of products and services and reinforces the Group's role as an integrated provider of energy transition solutions, capable of always responding to the needs of its customers.

Also Lumenergia, in synergy with the Group, proposes offers to its business customers for the implementation of energy efficiency solutions, relamping, sustainable mobility or installation of photovoltaic systems.

Responsibility in customer service

In line with its vocation as a *Life Company*, A2A has further expanded its range of products and integrated services capable of making people's lives "more azure". Being a *Life Company* also means valuing customers who are committed to **reducing their impact on the planet** by choosing an increasingly sustainable style of energy consumption. The entire portfolio of offers for the residential segment has consisted of **100% certified green energy since 2018**. During the year, Group companies sold **4,976 GWh** of green energy, an **increase over 2020 of +29%**.

Figure 50 Green energy sold and breakdown by market segment (in % and in GWh)

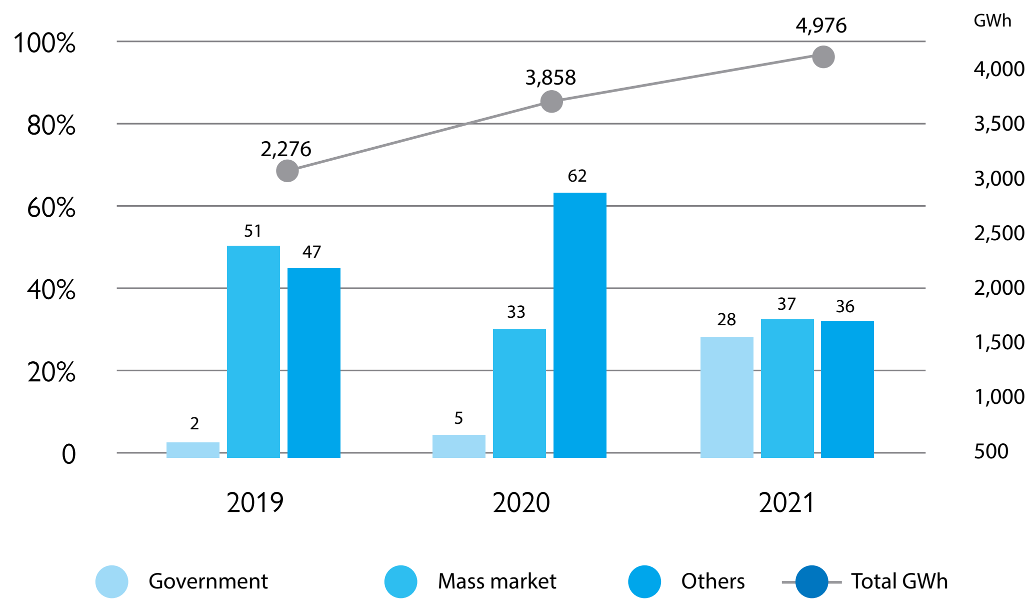
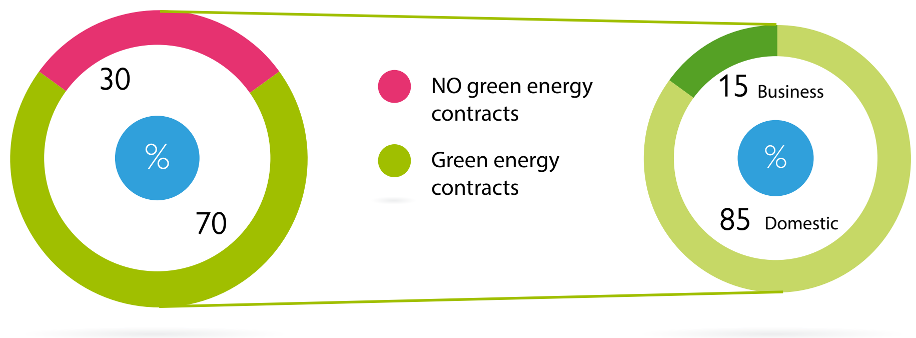


Figure 51 Distribution of mass market green energy by segment



Customers who have signed a contract for the supply of electricity produced from renewable sources of certified origin with one of the Group's commercial companies may request authorization to use the "100% *GREEN* A2A" brand.

In September 2021, A2A Energia and Confcommercio Lombardia **signed an agreement with the aim of activating actions to spread the culture of sustainability in the tertiary sector** and give rise to a strategic partnership aimed at supporting concrete projects for the energy transition. Members can sign up for dedicated offers of electricity supply from renewable sources at discounted rates of 10%. In addition, with the "zero impact" initiative, interested companies **will be able to offset the CO_2** emissions generated by their gas supplies by purchasing carbon credits resulting from energy efficiency measures.

Natural Capital
CO_2 offset
Emissions offset for 21 Mm³ of gas sold

A2A Energia has **made** available a ***self-assessment tool* to enable customers to discover their own profile and to receive tailored advice on how to improve their level of sustainability**, also in terms of competitiveness and return on investment, in order to contribute to the transition towards a model of sustainable growth. In addition to the above-mentioned tool, a specific consultancy for the Industrial, Tertiary and SME target is foreseen concerning: energy diagnosis; photovoltaic; photovoltaic with storage; electric mobility; relamping; consumption monitoring systems.

A2A Energia's free market electricity and gas offers are diversified on the basis of the needs of customers who may prefer the stability and security of a fixed price for the entire contractual period or the dynamism of a price that follows the trend of the wholesale market and varies month by month. In addition, a customer may prefer an offering that includes personal and home services such as, for example, A2A *Full* and A2A Premium offerings. Also ASM Energia, with a view to increasing the awareness of its customers, has published on its website a section with some useful advice for reducing energy consumption and waste called "Did you know that...".

PENSO GREEN (THINK *GREEN*) PROJECT OF A2A ENERGIA

The "Penso *Green*" project, aimed at **raising awareness among families with children about environmental sustainability and responsible consumption through participation in an *online* quiz**, ended in April 2021. The quiz, accompanied by a manual, aimed to spread the culture of sustainability, proposing, in a language suitable for children, virtuous examples of small gestures to be adopted every day. The prize is a free subscription to a science *edutainment app* and the chance to participate in the final drawing of a *kit* of electric scooters for the family.

Touch points

The growing competitiveness that characterizes the market, now close to a complete and final liberalization, requires a strong focus on key factors to enable the lasting success of the business, one of these concerns the **development of channels for sales and customer service, effectively integrating the physical-territorial channels with the digital ones, focusing on omni-channel** as a key lever to achieve business objectives and to meet the needs of customers;

A2A Energia offers a complete listening service through physical branches, SpazioA2A stores, call centers, social channels, WhatsApp and call-back service available on the website. In 2021, the A2A Energia call center received more than 2 million calls, while commercial counters welcomed and served nearly 150,000 visitors with an average wait time of about 5:12 minutes.

Through their branches, Gelsia and Lumenergia also served 35 thousand and 5 thousand customers respectively.

From 2021 the "Skip the queue" service is also active at the Gelsia Point counters, allowing customers to book their *ticket* for access to the counters directly from the company website.

The expansion of A2A Energia physical points throughout the territory also continued with the aim of informing consumers about the changes taking place in the energy markets and promoting the subscription of free market offers. During the year, three new SpazioA2A *temporary* stores were opened in Rome, Padua and La Spezia.

Figure 52 Call Center Call Monitoring (2021)

	Target ARERA	A2A Energia	Gelsia	ASM
Percentage of successful calls	>=80%	81.8%	97.5%	85.2%

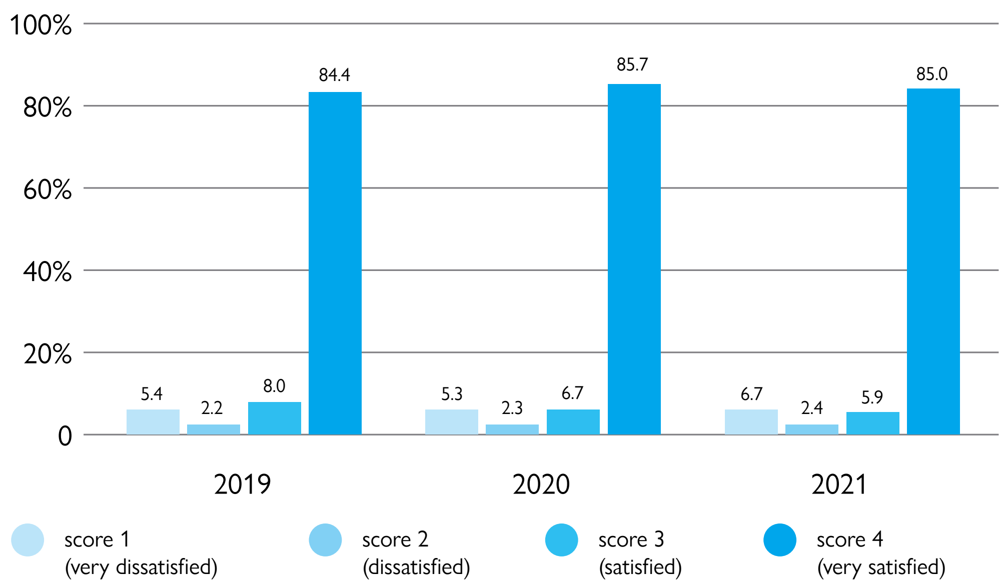
Customer satisfaction - *call centers* and counters

The Group **constantly monitors the satisfaction of its customers in order to acquire awareness of the perception of the service provided and to identify areas of intervention** with a view to continuous improvement through the many channels of contact.

In particular, in 2021, A2A Energia again took part in the Cerved survey and carried out a satisfaction analysis of free market customers and users who used the *call center*.

In the thirteenth edition of the Cerved "Energy and GasMonitor" in terms of the *Customer Satisfaction Index*, **A2A Energia climbed onto the podium for both *commodities* for domestic and *business* customers** , occupying first place for *business* gas. In the satisfaction survey of free market customers, A2A Energia obtained an overall score of 75.4, **above the excellence threshold of 75**. In addition, satisfaction with the *call center* stands at 94.6%, which is 4.5 percentage points higher than the national average. Finally, the "*after call*" survey confirms the excellent reputation of the *call center* represented below. Details of satisfaction survey results can be found in the Supplement on page 59.

Figure 53 Customer satisfaction after a call to the call centre (percentage on assessments recorded)



Accessibility of services and consumer protection

The Group has always been close to citizens to improve and maintain access to electricity by more disadvantaged populations through the development of various solutions.

The social *bonus* for economic hardship, as per ARERA provisions, is recognized for the supply of electricity and gas with an amount that varies on the basis of parameters such as ISEE or family size. In 2021, A2A recognized the gas *bonus* to 83,288 customers and the electricity bonus to 89,834 customers.

The social 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). For 2021, the electricity bonus dedicated to people with physical disabilities was issued to 1,694 customers.

Moreover, 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: from activation of the service through to joint settlement to the stipulation of the institute agreement of the Observatory on unfair commercial practices with the application (*ex lege*) of the Code of Commercial Conduct, the activation of the anti-fraud freephone number and 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.

Under the scope of consumer protection, the "anti-fraud" freephone number received 2,949 calls. Of these, 795 are related to unfair business practices by other operators and 759 by "unidentified" companies.

Of A2A Energia customers, 48% gave consent for *Marketing* activities for their own products and services, while 21% gave consent for profiling for *Marketing* purposes (considered only the consents issued since February 2018 as Level 2 consent for *Marketing* purposes is valid for 48 months from the date of issue of the consent itself).

Energy efficiency, RES and mobility

The Group acts as a *partner* to companies and condominiums to implement solutions that promote energy saving, sustainability and energy *comfort*.

A2A *Energy Solutions* (AES), together with its investee company ***Suncity*** and in collaboration with **Linea *Green***, offers itself as an ESCo and technological *partner* for companies and individuals, designing and implementing interventions through *Energy Performance Contracts (EPC)*, implementing tools to encourage the rational use of energy and *energy management* consultancy activities. Thanks to the expertise of experts in energy management, certified according to UNI 11339, each project is the result of a careful analysis of specific needs that allows to identify tailor-made solutions, ensuring significant energy savings. For **photovoltaic systems** *A2A Energy Solutions* takes care of all aspects relating to the construction and management of the plant, with the possibility of also including in the offer the removal of asbestos roofing. *A2A Energy Solutions* makes use of the main energy efficiency incentive tools, including **tax deductions for upgrading work, the thermal account and the White Certificates mechanism**.

For condominiums and the tertiary sector, AES signed 20 contracts in 2021, 17 of which will contribute significantly to the reduction of CO_2 emissions into the atmosphere. The interventions mainly concerned the cities of Milan and Bergamo and allowed to reduce the consumption of thermal energy thanks to the integrated redevelopment of existing buildings, the replacement of existing heating/cooling systems, as well as the installation of two photovoltaic systems in "operational rental" for a total of 507 kW, for an **estimated total saving of 580 tons of $CO2_2$**.
In 2021, AES managed **9 projects with PV system service contracts**, totalling 1.4 MW of installed capacity. The service contract allows customers to have a photovoltaic system, without incurring directly the cost of purchase, but paying a periodic fee for an average duration of 10 years, after which they have the right to take over the system 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.

On the other hand, there were **15 projects with installation of photovoltaic systems with incentives from AES**, for a total of 10.6 MW of installed power. The construction of plants under Ministerial Decree RES1 and the subsequent forms of incentives being studied by MiTE, is proposed to **customers to replace roofs of buildings and rural buildings containing asbestos or Eternit, since it allows, in addition to the removal of hazardous materials, to exploit the energy produced for self-consumption**, with an attractive fixed price for 20 years on the surplus energy produced.

In addition, in 2021, **AES signed 3 the EPC contracts**, with 2.2 MW of installed capacity. In Monza, at the plant of a well-known manufacturer of machines for professional lighting, a package of energy efficiency measures was carried out, including the creation of a photovoltaic system, the supply of electricity and gas, the industrial relamping of 20kW and heat management with the replacement of boilers with new high-efficiency ones.
In Brescia, at a leading company in the construction of complex products and aluminium profiles, a tri-generation plant has been installed to provide heat, cold and electricity. The intervention to the extent of 1.2 MW has allowed the customer to become more energy independent from the grid, make all processes more efficient and save on bills.

The RES plants of A2A *Energy Solutions* include: 12MW of assets under management, 4.3MW under construction, 2.2MW already authorized and 13.7MW contracted, for a total economic commitment of over 38 million euro in 2021.

During 2021 *A2A Energy Solutions*, together with its subsidiaries, produced **253 GWh** of **green energy from assets under management**, including photovoltaic and biomass plants, equivalent to 21.7 ktoe of primary energy saved and generated 49 thousand white certificates, equivalent to 19.5 ktoe of primary energy saved, equal to over **110,000 tonnes of CO_2** saved.

Electric mobility

To meet the challenges of the Business Plan, from July 2021, the Group's activities concerning electric mobility.
A2A Energia provides two solutions for recharging vehicles, at home or in the city: at home it is possible to install the "*wallbox*", a domestic recharging infrastructure, while using the *E-moving app* it is possible to recharge your vehicle at one of the more than 750 recharging points present in Milan, Brescia, Bergamo, Cremona and Valtellina.

ROM - E

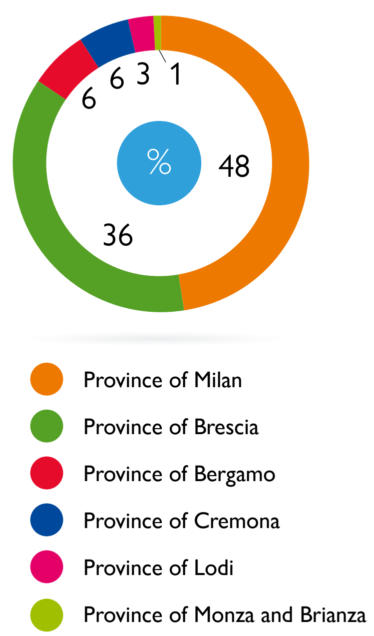
A2A took part in the first edition of *Rom - e*,the first festival linked to the ecological transition held in Rome on the first *weekend* of October. It was a widespread *Festival*, with demonstrative and educational activities, in which private companies and the public had the opportunity to meet and talk about new energy sources and smart mobility. Piazza San Silvestro was the location for A2A Energia: the area played a key role in illustrating services and projects linked to the world of sustainability, energy and sustainable mobility.

10.1.2 Relations with customers of the district heating service

The A2A Group manages the production, distribution and supply of heat, adopting the most innovative, efficient and environmentally friendly technologies and management methods. District heating is a safe, clean, effective and economical system that minimizes emissions in the vicinity of the environments in which people live and work (the heat is usually produced in plants located outside of inhabited centers) and significantly reduces the management costs borne by customers compared to traditional heating systems (e.g. periodic maintenance of boilers).

The Group manages district heating in the cities of Milan, Sesto San Giovanni (MI), Novate (MI), Cassano d'Adda (MI), Brescia, Bovezzo (BS), Concesio (BS), Bergamo, Cologno Monzese, Lodi, Cremona, Crema (Cr), Rho (Mi) and Monza (Mb).
This service is currently delivered to over 26,900 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 118 million cubic meters.

Figure 54 Geographical area distribution servita dal teleriscaldamento served by district heating



In 2021, A2A Calore e Servizi has submitted its bid for district heating service "**Bergamo più *green***" dedicated to the buildings in Bergamo with a central heating system, in the Colognola, Malpensata, San Tomaso, stadium area and via Corridoni districts. The offer is the result of the partnership defined with REA DALMINE (company owned by *Greenthesis Group*) to recover the heat coming from the waste-to-energy plant located in Dalmine. The project allows to increase by about 50% the energy available to the district heating network of Bergamo and to serve about 11 thousand more equivalent apartments, thanks to the construction of additional 22 km of network. From the environmental point of view, the project avoids the emission of about 15 thousand tons of CO_2 per year into the atmosphere.

A2A DISTRICT HEATING PROTAGONIST WITH THE R-ACES PROJECT

On October 15, 2021, the European Week of Regions and Cities 2021, the largest event dedicated to cohesion in local and regional management for good European governance, ended in Brussels. The themes of this edition, in addition to cohesion, were: *green and digital transition and Citizens Engagement*. *Partners* in the R-ACES consortium, including A2A Calore e Servizi for district heating, held a *workshop* on eco-regions: areas connected in a district heating/cooling network in which energy is shared to reduce waste. The network uses intelligent energy management systems and uses renewable and recovered energy from industrial processes to reduce greenhouse gas emissions.

During the workshop, the experiences of the Antwerp and Nyborg pilot eco-regions were presented, while the Lombardy *case study* was presented by A2A Calore e Servizi.

Quality of services provided and attention to customers

A2A Calore e Servizi operates in accordance with the standards indicated by the Regulatory Authority for Energy, Networks and Environment (ARERA) in Resolution 661/2018 on the regulation of commercial quality.

Also in 2021, the **T-Lab training courses** continued, the district heating specialization workshops dedicated to plant maintainers, condominium managers, technical operators in the sector and building constructors. The training path sees as partners also ANACI Milan and the Energy Desk of the Municipality of Milan.

In 2021, the **new commercial site for A2A Calore e Servizi**was designed. In order to simplify and support customers, a ***touchpoint* single point of contact** for all requests was activated: through the *form* it is possible to request information or an estimate, make a report, communicate self-metering or submit a complaint about district heating, district cooling and plant management services. In addition, a tool that allows to download the documents necessary for the request for energy certification and a system of e-mail alert to which to subscribe in order to stay updated on the latest news were created.

Moreover, **the bollett@mail service has also been activated for district heating**. In 2021, nearly 60,000 bills were sent in digital format, about 25% of all bills issued in the year, resulting in improved service for customers and a positive environmental impact from reduced paper consumption for printing bills.

From July 2021, a function was also activated that allows for the activation of bollett@mail also by *Call Center* / Counter operators; this has made it possible to undertake synergic actions of sponsorship of the service on all contact channels and the launch of campaigns dedicated to administrators (end of 2021) and private customers (expected during 2022).

10.1.3 Relations with customers of the integrated water service

The companies A2A Ciclo Idrico and Azienda Servizi Valtrompia (ASVT) manage the integrated water service within the A2A Group, carrying out the activities of supply, treatment, distribution, sale of water, and collection and purification of sewage in a vast area of the province of Brescia.

In 2021, 223,608 users were connected to the aqueduct service, 652,845 users were served by the sewerage network and 641,106 those served by the purification plants.

Also in 2021, A2A Ciclo Idrico guaranteed the continuity of the service by managing all the programmed and accidental interruptions within the timing envisaged by the sector regulations and promptly arranging replacement services in all cases in which the interruption lasted for more than 48 hours.

Quality of services provided and attention to customers

The Group provides various channels, as well as informative materials, to communicate with citizens.

The emergency phone service for reporting inefficiencies, irregularities or interruptions 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 to be adopted immediately to protect their own and others' safety, pending the arrival of the emergency team. In 2021, the A2A Ciclo Idrico call centre processed 166,792 thousand calls (5 thousand more than 2020), maintaining excellent service quality levels with an average wait time of 168 seconds (177 in 2020).

Users of A2A Ciclo Idrico can also benefit from the **Bollett@mail**. In 2021, approximately 17% of the bills issued were sent to users via *e-mail* thus avoiding recourse to the postal service and the printing of the document on paper.

Inaugurated in December 2020, the **booking *online* service for the counters** of A2A Ciclo Idrico remained active throughout 2021. The service offered has the dual advantage of allowing the user to schedule an appointment and to safely manage entry to the locations with the appropriate spacing.

In 2021, the **new site of A2A Ciclo Idrico was designed**. In addition to the new sections dedicated to services on the territory and support for citizens, a section dedicated to A2A's projects in the water sector has been created. A way to update citizens on investments and innovations, but also to raise awareness about the protection of water resources. In this regard, also created was the *web game* "Count the Drop" that has the task of making families think about the use of water in the home, offering advice for responsible use of water in order to limit waste. It is also possible to subscribe to the *mail alert* service of A2A to stay updated on the topics of the integrated water cycle.

Figure 55 General indicators of the emergency service

2021	*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	90.43	78.26 sec	91.5	76.00 sec
Arrival time at the place of emergency call	3 hours	98.63	01:25 (h:mm)	100	47.34 min

10.1.4 Relations with customers of the gas and electricity distribution service

Unareti is the A2A Group company that manages in an integrated way the distribution of electricity and gas. Unareti's activities take place in about 200 Italian municipalities in 7 regions, for a total of more than 20 thousand km of network.

Quality of services provided and attention to customers

Between 2020 and 2021, Unareti developed the project *Digital Customer Experience* focused on improving the digital experience of users when accessing the services offered, in particular through the *website* of the company.

In 2020, a new digital channel was activated (the so-called *webform*) that enables requests for estimates to be entered (for both gas and electricity services), received, accepted and paid for by credit card; in 2021, on the other hand, the following online forms were activated for entering complaints and requests for information and for searching for POD (for electricity) and PDR (for gas) codes.

In addition, a proactive customer support messaging system has been activated, via *e-mail* and via *SMS*in order to support them throughout the practice of quotation and execution of works with timely information on the status of processing of the practice. Finally, a tool has been made available to citizens, allowing them to check the status of the electrical network in their street in case of accidental failure or maintenance activities.

THE AEIT CONFERENCE

Unareti and AEIT's 6th *International Conference of Electrical and Electronic Technologies for Automotive* . This past November 2021, Unareti participated in the Sixth International Conference of Electrical and Electronic Technologies for Automotive. Unareti presented the project "*Distribution system and e-mobility LV network monitoring*" that focuses on the quality of the low voltage network to support one of the key elements of the energy transition: electric mobility.

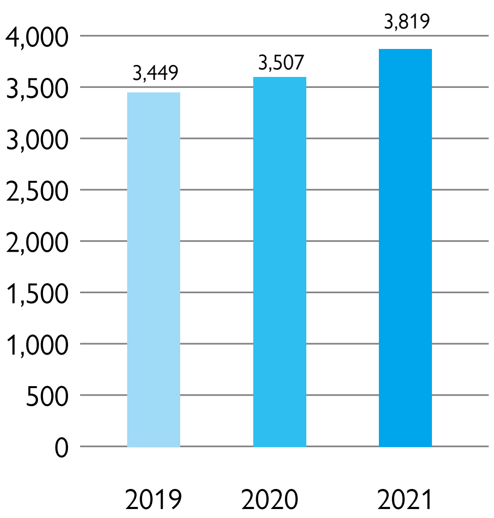
10.1.5 Relations with customers of the municipal sanitation service

Natural Capital

Separate waste collection
70.7% separate collection index

Through the companies AMSA, APRICA, Linea Gestioni and Gelsia Ambiente, the Group deals with the municipal sanitation services of 257 municipalities, for a total of more than 3.8 million citizens served, in the provinces of Milan, Brescia, Bergamo, Como, Lodi, Lecco, Monza and Brianza, Mantua, Cremona and Genoa. In 2021, the municipalities of Uboldo and Gerenzano, served by AMSA, were added.
In 2021, the waste disposal service, carried out by the companies A2A Ambiente and A2A Recycling, served around 1,300 municipalities and over 8 thousand companies, for a total of over 324 thousand tonnes of waste disposed of.

Figure 56 Total number of users of the municipal hygiene services (thousands)



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 effectively reach the population. The Group's environmental hygiene companies create new (for new areas) or periodically update separate waste collection guides. These documents contain advice and suggestions for reducing the production of waste in the home, precise indications for separating and disposing of the various fractions of waste correctly and practical information on all the accessory services (collection centres, collection of bulky waste, special collections such as green waste, hazardous waste, exhausted oils, batteries, medicines). In particular, this year the guides were updated for 6 municipalities served by AMSA and 15 municipalities served by Aprica; in addition, the 2022 collection calendars were produced and printed for 4 municipalities served by AMSA, 90 municipalities served by Aprica and 99 municipalities served by Linea Gestioni. For the Municipality of Milan, a guide to waste sorting has been created in 6 languages, to be distributed to ethnic restaurants.
It is also highlighted that a complete restyling has been carried out of the site dedicated to **Zone Services** to allow citizens to find out about services in the area and collection calendars.

WITH THE *APP* PULIAMO, TO DIFFERENTIATE WELL, IT IS ENOUGH TO VIEW THE BARCODE OF THE PURCHASED PRODUCTS

A2A's **PULIamo APP**, an application for smartphones created to help citizens know how to correctly deliver waste and keep their cities cleaner and more sustainable, was enriched in 2021 with a new feature that allows users to know - by reading the barcode using the camera on their smartphones - how to dispose of a particular product. Thanks to the new function, citizens will be able to know how to correctly separate and dispose of the packaging, even those composed of several materials, of more than 1.6 million items on the market.
The new function is already available for citizens served by Amsa and Aprica residing in the municipalities of Milan, Brescia, Bergamo, Chiavari, Rapallo and Zoagli and will soon be extended to other municipalities where the companies of the A2A Group operate.
Finally, a version of PULiamo has been created and is now also available on the *Huawei App Gallery* as a complement to the existing iOS and *Play Store*versions.

AMSA and Aprica have continued the activities of **collection and recycling of Nespresso aluminium capsules**, thanks to the "**From Chicco to Chicco**" programme, developed by Nespresso, CIAL, Utilitalia and CIC. The programme allows used capsules to be recovered and given a second life by recycling the two materials of which they are composed: aluminium and residual coffee. Aluminium is recycled and coffee is turned into *compost* used for a rice field in Italy. The rice grown is then purchased by Nespresso and donated to the Food Bank Banco Alimentare, which in turn distributes it to those in need. In the first half of 2021, Amsa and Aprica managed to recover about 117 tonnes of aluminium capsules (+30% compared to last year) and to have 57 tonnes of rice produced (+44% compared to the previous year). A success that adds up to the positive results achieved throughout Italy and which have made it possible to reach, in the first half of 2021, 800 tonnes of aluminium capsules recovered by Nespresso, 29% more - equivalent to over 177 tonnes of used capsules. In 2021, Nespresso was able to donate about 700 quintals of rice to the Lombardy Banco Alimentare and the Lazio Banco Alimentare, the equivalent of more than 780 thousand plates of rice.

Since June 2021, Amsa has been replacing the containers **for the collection of waste oil** present in the various large-scale retail outlets. Now the container is easier to use, thanks to the new door to introduce the bottles containing used oil and safer thanks to the new liquid collection tank at the base.

In 2021, **Linea Gestioni** launched two information campaigns, respectively for the launch of the "Cremona Punctual Tariff" project and for the installation of the mobile ECOISOLA in Lodi. In addition, awareness campaigns were carried out on the correct disposal of plastic, the correct use of roadside bins and the disposal of used vegetable oil in appropriate containers.

Gelsia Ambiente, a company of the AEB Group, supported the local authorities in the organization of ten **Green Days**, ecological days dedicated to the cleaning of the territory. To date, in 23 of the 25 municipalities in which the Company carries out the collection service, undifferentiated waste is collected using an advanced system that allows for better traceability of waste, thus stimulating more virtuous behaviour on the part of citizens. Finally, Gelsia Ambiente has activated 6 information points in the area regarding separate waste collection and environmental sanitation services.

Quality of services provided and attention to customers

The services offered are regulated by a specific Service Charter, which describes the terms, methods and quality of services offered to citizens in the municipalities served. In 2021, the Service Charters for the municipalities of Curtatone and Borgo Virgilio were created.
As regards the call centre service, despite the high number of calls (over 500 thousand in total), customer satisfaction levels are very high. Also in 2021, 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 using CATI methodology, conducting 4 thousand valid interviews in the second half of April 2021. The services surveyed are the municipal waste collection service (overall rating of 8.11 out of 10), street cleaning (7.42), green area cleaning (7.47), recycling (8.51).
Synthesizing the various evaluations collected in the weighted summary index, an average rating of 7.67 out of 10 is achieved.

Aprica's customer satisfaction for the city of Brescia was also analyzed in 2021. The survey for domestic customers involved a sample of 1,501 Aprica domestic users residing in the Municipality of Brescia and was carried out between October and November 2021, using a mixed CATI - CAWI methodology. The overall *Customer Satisfaction Index* indicates a score of 74.7 out of 100 while the following values are reported for the specific CSIs: 76.5 for collection service, 75.5 for contact channels, and 72.9 for improvement potential. The survey for business customers was carried out at the same time as that for domestic customers but using CATI methodology and involved 300 business users. The overall *Customer Satisfaction Index* is 71.7 out of 100, while for specific services the CSI stands at 72.5 for collection service, 76.8 for contact channels, and 69.5 for potential for improvement.

APRICA CUSTOMER SATISFACTION SURVEYS

Also in 2021, two customer satisfaction surveys were conducted for domestic and business customers regarding APRICA's services. The household customer survey was conducted in May 2021 using CATI methodology and involved a sample of 1,025 household users who were of age and resided in the 10 municipalities served. The overall *Customer Satisfaction Index* indicates a score of **76.1 out of 100**, while the specific CSIs stand at 77.6 for waste collection service and 77.2 for contact channels. The commercial customer survey was also conducted in May 2021 but using CATI-CAPI methodology and included a sample of 315 commercial users in the 10 municipalities served. The overall *Customer Satisfaction Index* indicates a score of **71.8 out of 100**, while the specific CSIs stand at 71.8 for waste collection service and 71.6 for contact channels.

Figure 57 Quality indicators of the call centre

AMSA		APRICA	
Accessibility of lines and services (time when line is free vs operator presence time)	100%	Accessibility of lines and services (time when line is free vs operator presence time)	100%
Average response speed (minutes seconds)	29	Average waiting time (minutes seconds)	116
Percentage of successful calls	98%	Percentage of successful calls	92%

10.1.6 Fairness and transparency in customer relations

In 2021, 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.

In 2017, A2A Energia appealed to the Regional Administrative Court of Lazio against the fine imposed in October 2017 by the Antitrust Authority, for A2A Energia's failure to promptly adjust the channel for paying bills online by credit card in accordance with the Consumer Code of June 2014..

During 2017, an AEB Group company appealed to the Regional Administrative Court of Lazio against a penalty imposed on it by the AGCM for alleged unfair commercial practice. The lawsuit is still pending, pending the scheduling of a hearing for arguments. In the meantime, the company paid the penalty subject to repetition.

With a provision of June 15, 2021, the AGCM invited A2A Energia S.p.A. (so-called moral suasion) to remove the profiles of possible unfairness in relation to the commercial offers called A2A Click, Extra2A and Prezzo Chiaro A2A, requesting that, within the scope of any advertising communication, all the price components and other charges be indicated, in particular where said components are fixed at the discretion of the supplier. A2A Energia S.p.A. has deemed it appropriate to make certain changes to the promotional communications relating to its supply offers, making the amount of the price components discretionally defined by the seller and, in particular, the marketing charges, relating to each offer more evident. A2A Energia S.p.A. has also undertaken to apply the same changes on the new website, which is scheduled to be launched in March 2022.

In view of the commitments proposed, the AGCM found that the possible unfairness of the commercial practice had ceased to exist and therefore, on November 26, 2021, it decided to close the proceedings.

10

Relational capital

10.2 Relations with the community

REFERENCE CONTEXT

Engage and protect our *stakeholders*

The crisis due to Covid-19 pandemic continued into 2021, except that, thanks to the availability of vaccines, economic activity resumed and schools were reopened. The whole world is still trying to reorganize itself around a "new normal". All of the companies have reorganized their activities for the community to meet new needs and requirements. Multi-utilities over the years have transformed themselves from simple providers of standard services to real protagonists of the lives of people and communities, thanks to the wide availability of products and services offered (e.g. energy efficiency solutions, the public lighting network, personalized waste collection services etc). Today, the value of the service offered does not lie in the service itself but in the relationship with the citizens, starting from listening to their needs until the actual implementation of a service, and in the ability to innovate.

In this context, stakeholder engagement activities become a strategic tool for the company, which adopts more and more structured and inclusive processes, in order to offer an adequate listening to users' and citizens' requests. Stakeholder engagement meetings aim at actively listening to stakeholders in order to understand their needs and requests, but also to know their opinion on the main ESG issues, on the "direction" that companies should take for a fair and equitable transition towards a sustainable development model. Often, stakeholders' considerations become an active part of the process of identifying material issues, confirming the importance of external stakeholders' opinions in strategic choices.

Moving from the great economic, social and environmental challenges that the territories have to face, multi-utilities can enable and guide the transition towards a new paradigm of sustainable development.

Companies can also give concrete support to schools and hospitals; infrastructural improvements can be made in order to improve Internet connection networks or propose content for students and teachers on specific topics, such as sustainability, or even organize webinars and virtual meetings to make lessons more stimulating. In addition, companies can network and undertake outreach initiatives for hospitals, clinics and institutions to support them in the emergency, either through concrete donations or the development of protective tools for employees and healthcare workers.

Finally, the companies also provide support to the most vulnerable segments of the population, including through initiatives and projects aimed at reducing energy poverty.

> While interest in environmental issues among the younger generations is steadily growing, so is distrust of the state institution. The relationship between state, economy and citizens is still being calibrated and the continuous increases in energy consumption, due to the recovery after the pandemic, make our daily life not a little difficult. However, the environmental interventions promoted by the State are slowly becoming visible: the various bonuses allocated in the building and energy sectors are moving the homes of millions of Italians towards an eco-sustainable change. The role of companies such as A2A in making information of this kind more accessible and facilitating the relationship between the state and citizens, suppliers and consumers, the economy and clean forms of energy should be highlighted. Thus begins a first step towards a future of eco-sustainable coexistence.
>
> *ANDREA, 21 years old, Siena*

2021 IN FACTS

79% OF THE *TOP 100 UTILITIES* IS PRESENT ON *SOCIAL*

29 JULY *EARTH OVERSHOOTDAY:* EUROPE DEPLETES RESOURCES ONE MONTH EARLIER THAN THE WORLD AVERAGE

7.2 billion euro OF INVESTMENTS IN 2019 FOR *UTILITIES*, IN TECHNOLOGIES, NETWORKS AND PLANTS TO SUPPORT THE COUNTRY

THE *UTILITIES* SECTOR SUPPORTS SOCIAL DEVELOPMENT EMPLOYING OVER 153 THOUSAND EMPLOYEES IN ITALY

IMPACTS FOR A2A

IMPACTED SDGs

17 PARTNERSHIPS FOR THE GOALS

MATERIAL ISSUE

Listening and involvement of communities

STRATEGIC PLAN @2030

90% sponsorships with initiatives to raise awareness of SDGs issues

SOURCES

Top Utility, Le performance delle utility italiane - VIII edizione, 2020

Listening and Involvement of communities

Involve stakeholders in an active and transparent dialogue, participate in working tables of national and international bodies and institutions and support initiatives and projects to create shared value on the territory and local communities; promote environmental education initiatives in favor of new generations; identify and meet any needs and requirements of stakeholders.

MANAGEMENT APPROACH (MA)

RISK FACTORS

- Environmental sensitivity of *stakeholders* against Group development projects
- Lack of consideration of social and environmental expectations of *stakeholders*
- Superficial knowledge of sustainability issues by the community

MITIGATE

OPPORTUNITY FACTORS

- Brand promotion
- Territory's appreciation of companies that provide products and services with high quality *standards*
- Initiatives to enhance the architectural and landscape heritage
- Changing consumer behaviour when buying goods and services

SEIZE

- Comprehensive and transparent information on the impact of the *business* on the territory
- Territory specific communication and listening plans
- Stakeholder engagement initiatives
- Dialogue with national and supranational institutions
- Raising citizens' awareness of sustainability issues
- Environmental education for students and plant visits

WHAT WE DID

2021 ACTIONS

- forumAscolto (page 73)
- Territorial Budgets (page 74)
- Collaborations with universities and research centres (page 73)
- Participation in international Think Tanks (page 188)
- Support to ARERA in its initiative to introduce SDGs into its Strategic Framework 2022-2025 (page 190)
- Participation in the "Sustainability Olympics" (page 195)
- Banco dell'energia Onlus (page 192)

WHAT WE ARE DOING

SUSTAINABILITY PLAN ACTIONS

PEOPLE INNOVATION

- Transparency and *Stakeholder Engagement*
- Education
- Vulnerable groups

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 and European institutions. Relations with bodies and institutions are managed in compliance with A2A's Code of Ethics.

In 2021, the main topics covered were:

- positioning of the top management and representation of the new Business plan towards institutional and association decision-makers;
- monitoring of European legislation in the areas of competence;
- representation of the main dossiers of interest to the Group to the new national institutional representatives;
- monitoring and proposals on regulations for the renewal of hydroelectric concessions in Italy;
- regulations on the exceeding of the protected market on the electricity and gas market;
- proposed legislation on the water cycle;
- discipline of end of waste;
- capacity market;
- legislation concerning the district heating sector;
- development of the **hydrogen** supply chain in Italy;
- awareness of the **plant *gap*** in the country for an effective transition to the **circular economy**;
- necessary introduction of authorization simplifications to allow the development of **renewable energy sources** and accelerate the ***phase out*** of coal;
- relaunch of the **White Certificates** tool, also extending its scope of application;
- development of **renewable energy** communities **and self-consumption**, as part of the transposition of EU Directive 2018/2001 on the promotion of the use of energy from renewable sources (Red II).

TRADE ASSOCIATIONS

Financial Capital

Grants

2.2 million euro contributions to 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. Lorenzo Spadoni, CEO of the AEB Group, 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;
- **Elettricità Futura**, the association of companies operating in the Italian electricity sector, in which the CEO of A2A holds the position of Deputy Chair.
- **EUROELECTRIC**, the sector association representing the common interests of the European energy industry;
- **national Confindustria** , where A2A's Chair and Chief Executive Officer are members of the General Council, and the **territorial Confindustria of** reference with respect to the places where our offices and plants are located, including **Confindustria Brescia**, where A2A's Chief Executive Officer is a member of the General Council, and **Assolombarda Milan, Lodi, Monza and Brianza**, **Pavia**, where A2A's Chair is a member of the Board of Directors.
- **Utilitalia**, the Federation of companies operating in the public services of water, the environment, electricity and gas. The Chair of A2A holds the position of Deputy Chair of the Association.

10.2.2 Collaborations with Universities, Research Centers and *Think-Tanks*

The collaborations between A2A and the university and research world allow a mutual exchange of knowledge and cutting-edge information, both on technical subjects and on topics linked to the insertion of young graduates into the world of work.
As part of its relations with numerous institutional *stakeholders*, the Group is a member of the main *think-tanks* of national and international importance. In fact, the Group recognizes the great value of the research and debate activities that these entities create, bringing together the academic, political-institutional and business worlds, in order to generate a genuine and constant process of defining public policies and supporting the decisions of institutions, ensuring their quality and sharing.

In this sense, A2A has strengthened its partnerships with Astrid, Aspen Institute, Institute for International Policy Studies, The European House Ambrosetti and is also developing important collaborations with other excellences at European and global level, in order to be increasingly present in the public debate on the themes of Sustainability, Energy and Ecological Transition and Climate Change.

MIP - Milan Polytechnic Graduate School of Management
A2A participates in the ***Master in Energy Management*** with classroom lectures, company visits and project work; downstream of the Master course, some deserving students have the opportunity to carry out an internship in a company. Also the Company Retipiù, of the AEB Group, sponsored the Master course, financing the participation of resources (4 in 2021) with high potential, in order to train and encourage young talents to dedicate themselves to the world of energy.

RCS Academy
A2A also collaborates with ***RCS Academy***, which offers training for young people, managers and professionals through full-time and part-time Master courses. The collaboration between A2A and *RCS Academy* is articulated on three axes of value creation: the participation of the CEO in the Advisory Board, the participation of representatives of the company in the Scientific Committee of the Master courses and the teaching of managers in the faculties and finally, the selection of candidates for a period of internship in A2A.

ELIS
Elis is a non-profit that provides vocational training, with a focus on economically and socially fragile youth and adults without employment. In 2021, *ELIS Innovation Hub* created *Junior Consulting*, a training programme that integrates academic path with technical and soft skills. A2A took part in a meeting organized with the students of the course related to the themes of innovation and information technology.

ISEO Summer School
A2A participated as a sponsor in the ***17th edition of the I.S.E.O Summer School***, entitled "*The Post Pandemic World Economy*". This is an event of international prestige that over the years has seen students from all over the world converge on Lake Iseo. In 2021, the faculty included five Nobel laureates. The initiative, which for the first time took place in digital mode, saw the participation of A2A with the sponsorship of 3 scholarships.

The iL@b
Starting in 2020, the Group has launched an initiative called the "**iL@b Incubator**" (see also the related section on Human Capital) with the aim of offering young trainees and interns, from the academic world, the opportunity to deal directly with the dynamics. The growth path offered is highly experiential and combines the activity carried out within specific projects with research and dissemination on issues related to the practice and methodological foundations of Project Management. The universities involved to date are Bocconi, Cattolica and Milan Polytechnic.

The European House - Ambrosetti
In September 2021, the study "**From *NIMBY* to *PIMBY*: Circular Economy as a driver of the ecological and sustainable transition of the country and its territories**", carried out in collaboration with *The European House* - Ambrosetti, was presented. The research identifies the gaps existing in the territories of Italy with respect to waste management and analyzes the plant needs for the organic fraction, for the energy recovery of non-recyclable waste and sewage sludge, and for bioenergy. The investments necessary to overcome the current criticalities were also quantified and the relative economic-environmental benefits highlighted.

Sustainability Development Center
The University of Brescia, the Chamber of Commerce, Industry, Crafts and Agriculture of Brescia, Confindustria Brescia, A2A S.p.A. and UBI-Fondazione CAB, under the patronage of the Municipality and the Province of Brescia, have signed a partnership agreement for the establishment of a **Sustainability Development Center** (CSS). The objective of the collaboration is to accelerate the concrete and transversal implementation of the principle of sustainability in the processes, services and activities of Brescia, laying the foundations for Brescia to be fully recognized as a sustainable model of development and innovation.

10.2.3 A2A and the regulation stakeholders

The A2A Group operates in contexts in which regulation by independent administrative Authorities plays a fundamental role in promoting competition and protecting consumers and users.

The Group 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. Monitoring consists of dialogue with institutions such as the **Regulatory Authority for Energy, Networks and the Environment (ARERA), the Antitrust Authority (AGCM)** and technical bodies in the sector, as well as active participation in trade associations. The issues of euro-unitary derivation are also monitored, through participation in the meetings of the relevant Community Associations (including Eurelectric and Cedec), so as to know "in advance" what will be transposed into Italian law.

The emphasis on these policy actions and the holistic approach of the ***Green Deal***, also taking into account the new package of legislative proposals known as *Fit for 55*, have been fully shared by the Group: specific moments of internal discussion have been organized across the various Departments (***Regulatory Breakfast***) as well as more or less formal appointments with Associations and Bodies.

The Regulatory Affairs and Competition Structure plays an active role in the Group's journey towards the new energy and circular economy paradigm. In particular, in the many occasions of dialogue and interaction with the Institutions, the most interesting issues were addressed, including:
- revision of the electricity market design for more efficient integration of renewable generation;
- evolution of regulations dictated by the transposition of the REDII and Electricity Market Directives, relating to the promotion of renewable sources and more efficient consumption configurations;
- evolution of the ***permitting*** of renewable sources in light of the innovations introduced by the Simplification Decree Law 2021, as well as the possible development of the regulations concerning the definition of eligible areas, contained in the REDII Decree;
- resolution of the difficulties affecting the White Certificates mechanism;
- need for a stable and certain framework for initiatives which, as in the case of **biomethane** production, represent essential drivers for decarbonization and circularity;
- need for interventions that ensure greater awareness of end customers to accompany them in an informed transition to the free market;
- regulatory and tariff mechanisms to support investments in **upgrading and digitalization of distribution networks**;
- boosting the development of **electric mobility** through an active role in the infrastructure of public recharging and in the provision of the necessary services for users;
- monitoring of how important **PNRR** resources are delivered and their relationship to incentives and regulation;
- participation in **innovative projects** (e.g., Terna pilot projects on synchronous compensators in Brindisi and on virtual production/consumption units) and analyses of projects that can contribute both to the decarbonization of generation facilities and the provision of useful services to the national electricity grid.

Particularly with regard to "frontier" issues, the Structure has been involved in technical working groups and public hearings within the Ministry and ARERA, where emerging issues such as the **development of the national hydrogen supply chain** downstream of the MiSE National Strategy are addressed.

Intellectual Capital
Hydrogen
"HydrogenValley" project in Valcamonica

A2A 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 particularly taken the form of contributions made, either individually or as part of associations, to issues relating to the resolution of the deadlock in the so-called "end of waste" regulations. With reference to the methodology for defining gate tariffs for plants for the treatment of undifferentiated waste, the Group conducted an in-depth study (in collaboration with Oxera), which led to the identification, as a first best for the sector, of an **asymmetric regulation model** that takes into account the governance and self-sufficiency of the various regions, recognized by the Authority in the tariff method approved for the regulatory period 2022-2025.

The same approach of attention to environmental aspects and opportunities for infrastructural adaptation has also permeated the engagement activities in the water service.

The Group contributed to disseminate the regulatory culture also internally, as a lever for innovation and transparency of services. For example, monitoring and control tools (such as the Regulatory Review prepared every six months or the Regulatory Agenda drawn up at the same time as the Budget/Plan) have been implemented 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.

A2A has also supported the Regulatory Authority for Energy, Networks and the Environment (ARERA) in its initiative of wanting to introduce in its Strategic Framework 2022-2025 metrics for assessing the environmental sustainability of regulatory measures and their contribution to achieving the objectives of the SDGs 2030 Agenda set by the UN.

10.2.4 A2A and relations with Territorial Committees and Consumer Associations

In order to initiate a debate on the open issues of the ecological transition, for updates and developments in business activities, A2A maintains relations with representatives of consumer and environmental associations and with citizens' committees. Constant dialogue with citizens and civil society, organized in its associations, committees and think-tanks, represents a strategic element for the A2A Group, as it enables the main needs and expectations of stakeholders to be identified and understood. In 2021, Regional Affairs was restructured in order to make it more solid and capable of responding in a timely manner to the numerous stakeholders' requests: thus **continuous monitoring between the Group and the external environment** is ensured, an action consistent with the strategic plan based on the principles of the administrative procedure and which takes the form of combined top-down and bottom-up activities, in order to improve the national positioning on the issues of interest.

In addition, the policy - already applied to all Group companies - was updated with the introduction of a procedure defined for the correct management of inspections, questions and requests for data and information from institutional stakeholders.

Advocacy actions on the territories

A2A's commitment *to Sicily's ecological transition-* continued in 2021, through a renewed collaboration with the regional Legambiente: the Group is actively involved in the "Sicilia Munnizza Free" and "Sicilia Carbon Free" campaigns, in order to raise awareness among Sicilian citizens of the issues of innovation in waste treatment and the need for investment in the production of energy from renewable sources.

In addition, the A2A Group is increasingly investing **in relations with the territories of Lazio**, Calabria and Sicily in order to initiate dialogue with the local communities: the presence of active and aware stakeholders stimulates the search for new forms of involvement and debate. Activities in these areas aim to reduce information asymmetries and promote better citizen participation in decision-making.

Lastly, with the territorial consumer associations and local administrations, round tables are underway for the drafting of the "Quality charters of the environmental sanitation services" in the municipalities where AMSA and APRICA operate.

A2A was also present at the **38th Meeting of ANCI** - the National Association of Italian Municipalities - in Parma: the aim of the event was to bring together directors, professionals, mayors, businesses and government representatives on the main issues of interest to Italian municipalities.

In the third quarter of 2021, in view of the economic situation linked to the energy crisis and the consequent increase in the price of energy supplies, A2A and its subsidiaries made available to their customers forms of instalment of the full amount of their bills with the utmost flexibility, according to the specific needs of customers, without the application of interest and with the consequent suspension of detachment actions, even before the due date of the bill, and contacts were initiated with Consumers Associations to share the initiatives implemented to support customers, contacts which subsequently led to an agreement in February 2022.

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ADR - Out-of-court dispute resolution

On April 7, 2021, the **Joint Conciliation Protocol-** was signed, for the first time in Italy, **between the seven major companies in the energy, water and district heating sectors, including A2A, and the 20 Consumer Associations of the National Council of Consumers and Users (CNCU)**. The Protocol renews and strengthens the commitment to a tool that provides consumers with an effective means of protecting their rights without recourse to legal proceedings and provides for joint initiatives aimed at improving awareness and use of joint negotiation as an independent, rapid and free process.

During the year, the activity commenced with the establishment of the negotiation protocol signed between A2A and the national consumer associations for the promotion of multi-service joint conciliation continued. In 2021, peer conciliation files received increased 55% over the previous year. In total, the conciliation secretariat of the A2A – Consumers Association ADR Body received 48 requests on behalf of gas, electricity and water customers, of which 40 concerned A2A Energia, 7 A2A Ciclo Idrico and 1 Unareti, linked mainly to the metering of consumption and billing.

As in previous years, in compliance with the provisions contained in the Integrated Conciliation Act (TICO), training courses for conciliators in the energy, district heating and water sectors were organized through a platform managed by *Consumers' Forum*.

With regard to the ARERA Conciliation Service managed by Acquirente Unico, requests increased by 27% compared to the previous year. The number of files received was 155, of which: 120 concerning A2A Energia, 22 A2A Ciclo Idrico, 1 Azienda Servizi Valtrompia, 11 Unareti and 1 Lumenergia.
The legislation also provides for the distributor to be called into conciliation when the discussion concerns technical data and is necessary and indispensable for the proper and effective handling of the dispute. In these cases, the Authority has provided that the convened distributor has an obligation to participate in the procedure. Unareti, as the distribution service operator, received 142 mandatory convocations as a technical aid.

BANCO DELL'ENERGIA *ONLUS*

The tender, promoted in collaboration with Fondazione Cariplo, **aims to support families in economically and socially vulnerable situations throughout the Lombardy** region. The first two editions of the tender, for which Banco dell'energia raised a total of 2 million euro, doubled by the Cariplo Foundation, allowed the selected bodies 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), however trying to provide broader responses that take into account the issues related to work and social ties. **In the first two editions alone, a total of 10,000 people were supported 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.** The projects of the first editions involved low-income households, at risk of slipping into poverty and with a high percentage of dependent minors (43%), which represent the primary *target of* the tender. Some projects, in particular, were heavily targeted at *single* women with children.

In 2021, the 16 projects awarded the second edition of the "Doniamo Energia" tender, launched in 2019, are nearing completion, while the 17 projects awarded the third edition in 2020 are continuing.

The third edition of the Tender was addressed to the networks supported within the two previous editions, and therefore already able to intervene quickly especially to support families that suddenly slipped into poverty as a result of **the Covid-19 emergency** in the Lombardy territory. In order to allow an in-depth analysis of the data, the tenders also provided for careful monitoring, from which it emerged that the **economic indices concerning employment and resources** (debt, income and access to structural aid) of the families involved **all improved** significantly after the intervention related to the tenders.

Banco dell'Energia has also promoted a new project linked to energy poverty, with the aim of alleviating temporary needs related to the payment of utilities and increasing awareness of energy consumption. "Energy in the Suburbs", in collaboration with *NextEnergy Foundation* and *Signify*, has in fact contributed, with the support of a network of local Listening Centers, to help about 100 households in vulnerable conditions. The people and families involved were offered concrete economic help to pay their electricity and gas bills from any energy operator: thanks to a fund of 30,000 euro **, each family was given about 7 months of electricity or 4 months of gas**. Together with this economic aid, with the aim of achieving goals with medium-long term effects, a **training and analysis of the beneficiaries' consumption** has been started, through the involvement of the operators of the TED network (Tutor for domestic energy), trained thanks to the Aisfor platform. Households involved in the consumption training were **offered a *kit* of energy-efficient light bulbs**, useful for improving efficiency in the use of electricity. Finally, representative indicators on the condition of housing and consumption of the households involved were collected through anonymous questionnaires. Aggregate data will be provided to the Italian Energy Poverty Observatory for compilation of the annual report. In collaboration with Aisfor, a handbook on good practices for reducing consumption was also produced, translated into 6 languages (Italian, English, French, Spanish, Arabic and Chinese) and distributed to the public.

Fundraising is always active and aimed at all citizens, companies, A2A Energia customers and employees of Group companies. The latter, in particular, gave a positive response both to the numerous fundraising campaigns and by offering their free time in various initiatives proposed during the year, giving a sign of sensitivity and sharing of the great social value of the initiative.

Banco dell'Energia was the exclusive *Charity partner of* the **"Corsa dei Tre Parchi" and the "*Walking Day*"** held in Milan in September and October 2021 respectively: two non-competitive sporting events that raised funds through a donation to the Banco for each participant.

For the occasion, A2A employees were also involved, some competing and some offering their support as volunteers during the days of the competitions. In addition, it was charity partner of the exclusive AEMetropolis evening, organized by Fondazione AEM, which was held on September 22 at the South Receiving Station in Milan. For further information www.bancodellenergia.it

Finally, on December 14, a new phase of the Banco dell'energia was launched, with the opening of a national perspective and the aggregation of authoritative stakeholders, with reference both to associations and the third sector, and to the world of companies operating in the energy market. The commitment, made with the promotion of the Manifesto "Together to fight energy poverty", requires a consolidation of activities for the coming years. The following priorities for action have been selected on which the Energy Bank activity will focus:

- Awareness-raising among policy makers and the public
- Definition of Policies and intervention tools
- Energy Efficiency Education
- Active support for national and territorial mapping and monitoring of fuel poverty, including official measures
- Promotion of territorial projects with the contribution of public/private/third sector organizations.

10.2.5 Investments in the community

The ability to respond in a targeted and effective manner to the *expectations of the Community* has always been one of A2A's strengths and a distinctive element. A concrete commitment that has led over time to significant investments in sponsorships, donations, contributions to theatrical institutions and the AEM and ASM Foundations.

FOUNDATIONS OF THE GROUP

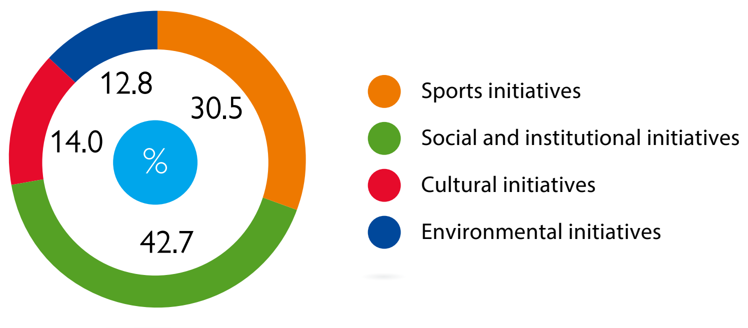
For the year 2021, the **AEM Foundation** has committed to a three-year plan of projects in line with the *SDGs* that it shares with the A2A Group. The areas of activity in which the Foundation operates are environmental education, the protection and enhancement of AEM's historical heritage, research, specialized training and charitable giving, particularly 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/

Through its sponsorships, A2A wishes to contribute to the enhancement and promotion of the cultural and environmental heritage of the areas in which it operates. The commitment is developed in various aspects, with support for large and small initiatives in the sports, cultural, environmental, social and institutional areas, promoting and consolidating the image of A2A *Life Company* and the Group in the areas where it is present. The **Group's total investments for the Community amounted to approximately 4.7 million euro**.
Specifically, **sponsorships** of sports, social, environmental and cultural activities in favour of the territory in 2021 instead come to approximately 1.1 million euro.

Figure 59 Breakdown of sponsorships by area of activity



In 2021, there were several initiatives in which A2A participated.
Among these we highlight the collaboration with **the Italian Alliance for Sustainable Development** (ASVIS) which within the "**Festival** *of* **Sustainable Development**" with the support of A2A produced the innovative research "SDG20: measuring sustainable development in the G20 countries", an analysis of the positioning of the G20 countries with respect to the *Goals of* the 2030 Agenda. The document was presented on October 7, 2021 during the central event of the Festival of Sustainable Development, which took place from September 28 to October 14, 2021 throughout Italy and online.

In 2021, the Group joined the initiative "**Adopt a Statue**", a project conceived and promoted by the Veneranda Fabbrica del Duomo di Milano, which stems from the need to enhance the value of a selection of works kept at the marble workers' site, sculptural elements removed from the Monument for conservation purposes. Through this initiative, it is possible to restore the ancient splendour of some of the works that cannot be used, and they will be able to return to life and tell the story of the Duomo of Milan. With its support, A2A adopted a Duomo gargoyle, "**Mermaid Riding a Sea Monster**."

A2A also took part in various initiatives in the environmental aspect such as, for example, collaboration with Legambiente Sicilia, through the initiatives Sicilia ***Carbon Free***, **Forum Qualenergia** and ***EnergyForum***, while, in collaboration with the Associazione Amici della Terra Onlus, A2A supported the **13th National Energy Efficiency Conference**. A2A's presence at the celebrations for the **51st World Earth Day** held on April 22 was also significant, with a speech during the RaiPlay digital marathon dedicated to the educational project "Sustainability Olympics".

There are also many sports initiatives that A2A promotes in the areas in which it is present, including the "blue derby ", a match between Pallacanestro Brescia and New Basket Brindisi, both supported by A2A.

The initiative, of great social importance, saw the two teams united in the fight against bullying. Before the start of the match, the players took to the pitch wearing a T-shirt made for the occasion with the logos of both teams, of A2A and of the non-profit association "MaBasta" (Movimento Anti Bullismo Animato da Studenti Adolescenti), a movement of young and very young people involved in the fight against the phenomena of bullying and cyberbullying.

A2A has made a contribution to support the initiative of the Spedali Civili di Brescia which, in order to cope with the health emergency, has set up a Covid-19 drive-through center to ensure that swabs can be carried out in total safety while remaining in the car. This was later flanked by the vaccination hub and space for the Covid medical unit.

The AEB Group also supported important initiatives in the territory, such as the Ettore Pozzoli International Piano Competition, and sport events, with particular attention to sport at competitive level for disabled people. In concomitance with the Ettore Pozzoli International Piano Competition, RetiPiù realized a specific artistic project to qualify a building in the historical center, with the announcement of a contest addressed to Italian and international street artists on the theme "All the energy of Music".

Scholarships

Each year, the company holds a competition to award 100 scholarships to the children of Group employees in the Brescia and Bergamo areas, divided as follows: 25 for students who have graduated from high school, 50 for students in intermediate high school classes, and 25 for students with a middle school diploma. 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.

The Municipality of Cremona, LGH S.p.A. and Politecnico di Milano - Cremona Territorial Campus have signed an agreement to support two scholarships and a research project on the topics of energy transition and artificial intelligence. LGH will support through two scholarships of 5 thousand euro each the attendance or graduation thesis of deserving young people enrolled at the Politecnico - Cremona Campus; the support for the two research projects has a total value of 50 thousand euro.

Civil Protection

In 2021, the Group's Civil Defence Volunteer Association continued its commitment to the community, which, since March 2020, has been particularly deployed **in support of the pandemic emergency**. Support services for Covid-19 vaccinations continued at the Hubs of Milan, Brescia and Valtellina, as well as the distribution of medical supplies at Milan hospitals, in coordination with the National Department and the Civil Protection of the Lombardy Region. In addition, services were provided to relocate Air Force physicians to travelling vaccine hubs in Mantua.
On August 5, during the flooding of Lake Como, the volunteers worked in the town of Laglio to clear the streets invaded by debris and mud.
Thanks to the contribution of the AEM and ASM Foundations, a new 100 KVA generator was purchased and will be used during emergencies.
In 2021, on the occasion of the 45th anniversary of the Association, the volume "Men and Waters", a duty of memory and ecological transition, was reissued under the sponsorship of the AEM Foundation.

10.2.6 Education and training

A2A deals with environment, water and energy, necessary conditions for the life of the planet and people. For this reason, it defines itself as a *Life Company*. Being a *Life Company* implies a great commitment: acting responsibly but also creating a shared culture of respect and knowledge of the technologies that allow us to safeguard the Planet.

A2A has been investing for over 40 years in communication with the new generations; in particular, the group has identified Generation Z as the preferred target for communicating its commitment to the environment. This generation is committed to taking active action to protect the planet and needs channels to give voice to these demands.

During 2021, A2A involved around 44,000 students and teachers (+78% compared to 2020) in environmental education and sustainability projects at a national and territorial level. Innovation and digital have been the keys to respond to the new needs of the school: in fact, most of the environmental education activities have been delivered remotely, also to meet the needs of the classes in DAD (didactics at a distance). The territorial projects were mainly focused on the development of greater awareness of the environment and understanding of good practices related to waste reduction, separate collection, recycling, circular economy, including through gaming activities.

the commitment to teachers continued, to whom the training courses "A map to navigate the present" and "Towards 2050: with schools for a sustainable future "were addressed, with the aim of providing them with concrete and innovative tools for classroom teaching accompanied by experts, researchers and authoritative speakers. More than 2,100 faculty were involved in 2021 and appointments will continue in 2022.

Also the Company Gelsia Ambiente, belonging to the AEB Group, carried out some environmental education projects in schools. The projects involved primary and secondary school classes, involving 265 classes for a total of 6,000 students and teachers.

Earth Day and the launch of the Sustainability Olympics

On April 22, on the occasion of World Earth Day, A2A was present at the second edition of *#OnePeopleOnePlanet*, the marathon in live streaming on RaiPlay to launch the "Sustainability Olympics" project, aimed at students in secondary schools throughout Italy, which will end in the spring of 2022. Children were educated on the Sustainable Development Goals with digital tools (podcasts and short videos) on their favourite social media channels; they were then asked to make short videos to tell their peers about their vision for a sustainable and inclusive future.

EnergiaSchool - Energy efficiency explained to children

The project, aimed at all Italian schools, engaged students on the themes of efficiency and energy saving, using interactive tools such as quizzes and energy simulators, to promote both the creation of multimedia works and energy analysis and redevelopment projects of school buildings. The 9 winning classes nationwide were awarded vouchers to purchase school supplies. The project was carried out in synergy with the A2A Energia *PensoGreen educational* initiative aimed at families to raise their awareness of environmental sustainability.

Sensors for the schools of Brescia

323 environmental sensors have been installed in the classrooms of 32 schools in the city of Brescia. The goal is to monitor indoor air quality in classrooms by measuring three parameters (humidity, temperature, CO_2) and provide an advanced digital teaching tool for environmental education. In short, the sensors are able to signal when it is appropriate to open the windows to change the air, but also when it is appropriate to close them to avoid wasting heat and energy.

National Digital Contest #energyschool

The project, aimed at all Italian schools, engages children on the themes of efficiency and energy saving, using interactive tools such as quizzes and energy simulators, to promote both the creation of creative videos and the development of energy analysis and redevelopment projects for school buildings. The 9 winning classes throughout Italy (provinces of Brindisi, Varese, Milan, Salerno, Nuoro, Catania, Brescia, Venice and Piacenza) were awarded vouchers for the purchase of school supplies for a total prize pool of 6,900 euro.

#All4climate - Think sustainable and design circular

A2A was a partner of All4Climate - Italy 2021, a schedule of initiatives launched by the Ministry of the Environment and dedicated to the fight against climate change; it took part in the debate at the Milan Pre-COP (September 30-October 2), which preceded the *Glasgow* COP26 (26th United Nations Conference on Climate Change). Among the various initiatives carried out and supported by A2A, on October 1, in collaboration with Amsa, the University of Milan-Bicocca, the Milan Polytechnic and *Plug&Play, the* digital event "Think sustainable and design circular" was organized, which saw some of the company's managers and university professors talk to the young winners of a challenge launched by A2A on the themes of the circular economy and innovation. The event involved approximately 300 faculty and students.

Broken cities

In 2021, A2A took part, as part of the *European* Feltrinelli Camp, *Broken cities*, in a two-day event of meetings and debates aimed at reflecting on a proposed urban agenda designed to reduce the social gaps and fractures present in cities. Some of A2A's front lines have also taken part in a number of working tables linked to the social and environmental regeneration of cities.

10.2.7 External communication

The year 2021 was characterized by several interventions on the Group's digital properties, both in terms of graphic restyling and redesign and integration of new digital services.
The Corporate website has undergone profound transformations with the aim of explaining and narrating the Group's new business plan, the new "*Life Company*" positioning and the new management. Consistently, the entire presentation of the company, its business model, innovation model, *people strategy* and sustainability model has been reorganized through a navigable tool for the discovery of the objectives and sustainability strategy. At the same time, the website dedicated to the world of School has been completely renewed and a mini-site dedicated to the world of Innovation has been created, to encourage young start-uppers to collaborate with the Group.

During 2021, Press Office activity produced over 400 communications to the media, up about 7% on the previous year. There were also about 250 opportunities to meet with journalists (mainly remotely), amongst interviews and one-to-one dialogues, press conferences and press visits.

The Group is present on the following social channels: *Facebook*, *LinkedIn*, *Twitter* and *Instagram*. Communication through the 10 active social profiles, with a fan base of over 297,000 users, up 15% compared to 2020, allows more direct contact with citizens and customers, informing them about central issues for the Group such as, for example, the energy transition, the circular economy, sustainability. 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 4,400 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.

90% of the contents of communications resulting from Press Office, Web and Social activities are related to ESG themes: in particular, 73% of the contents are related to Environmental Sustainability.

10 Relational capital

10.3 Relations with suppliers

REFERENCE CONTEXT

Improve costs and service levels in the *Supply Chain*

The pandemic has brought to light the need to make global supply chains, and thus those of individual companies, increasingly resilient. The supply crunch caused by the Chinese lockdown in early 2020 and the subsequent demand contraction in the following months highlighted all the critical issues of a globalized supply chain. With the resumption of operations in 2021, many of the problems have not been resolved but the way they are handled has changed.

Supply chain, today, is seen as a business lever to mitigate risk and capture market opportunities. The benefits of sustainable sourcing, both environmentally, socially and technologically, spread throughout the company's value chain. Today, organizations must be accountable to their stakeholders for the ways in which they interact with their suppliers: in this context, it becomes crucial to understand what is being purchased - products with specific sustainability characteristics, products made with environmentally sustainable materials or with production methods that respect the environment and workers and are also safe for end users - and from whom; in order to meet the expectations of their stakeholders, organizations must design and implement processes, practices, policies and reporting systems, with important consequences also on the business model.

A sustainable supply chain allows for a reduction in total supply costs, a reduction in risk throughout the supply chain, more and better involvement of the suppliers themselves, and improved brand perception by users.

Research by Ecovadis shows that 69% of respondents (to the questionnaire) take into account the sustainability performance when selecting their suppliers.

> Of one thing we are certain: maintaining good relationships with those around us is essential. If we looked at the relationship between businesses and suppliers, nothing would change. Any sustainable business that wants to increase its relational capital should surround itself with suppliers who fight the same battles and believe in the same values. Improving for yourself, the environment and your workers would be the ideal solution, a "win-win" solution for everyone.
>
> *Martina, 22 years old, Sassari*

2021 IN FACTS

70% OF *UTILITIES* ASKS SUPPLIERS TO ADHERE TO ESG CRITERIA

SUSTAINABILITY IN THE SUPPLY CHAIN IS A *MEGA TREND* TO BE MONITORED GLOBALLY (MSCI 2022 *TRENDS TO WATCH*)

DEGLOBALIZATION AS A STRATEGY TO MITIGATE THE RISKS OF AN EXTENDED SUPPLY CHAIN

20% OF COMPANIES REPORT EMISSIONS FROM THEIR SUPPLY CHAIN (*SCOPE 3*)

IMPACTS FOR A2A

IMPACTED SDGs

8 DECENT WORK AND ECONOMIC GROWTH

17 PARTNERSHIPS FOR THE GOALS

MATERIAL ISSUES

Responsible management of the supply chain

STRATEGIC PLAN @2030

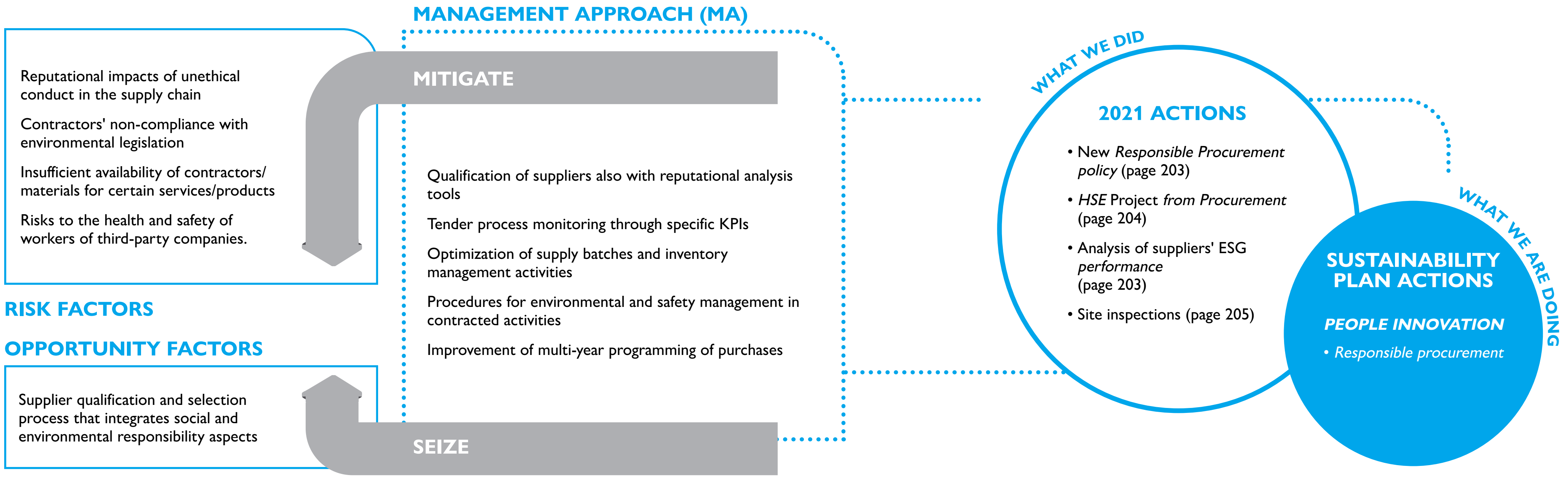
90% of orders to suppliers evaluated with ESG indicator

SOURCES

Ecovadis, Sustain 2021: How We Can Rethink and Rebuild Global Supply Chains, 2021
Ecovadis, Sustainable Procurement Barometer Key Findings, 2021
Top Utility, Le performance delle utility italiane - 9th edition, 2021
MSCI, ESG Trends to Watch, 2022
Deloitte, Supply Chain Sfide e opportunità, da oggi in poi, 2021
CDP, Global Supply Chain Report, 2021

Responsible management of the supply chain

Provide quality, safe and reliable services and act flexibly and promptly in responding to customers' expectations; implement actions and systems to manage risks and emergencies to ensure continuity of service; adopt correct communication and marketing practices; commit to the proper security management of customer and employee data, with a view to protecting privacy. Development and promotion of energy efficiency and green mobility products and services for customers



Relational capital - suppliers

In 2021, **13,096 orders** were issued by Group companies for supplies, services or works, for a total amount of about **2.1 billion euro**, of which about **95.3%** for **Italian suppliers**. In 2021, 69% of orders was awarded by tender.

Figure 60 Order value by Business Unit

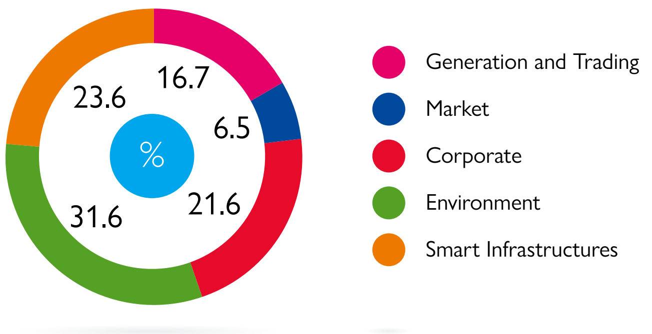
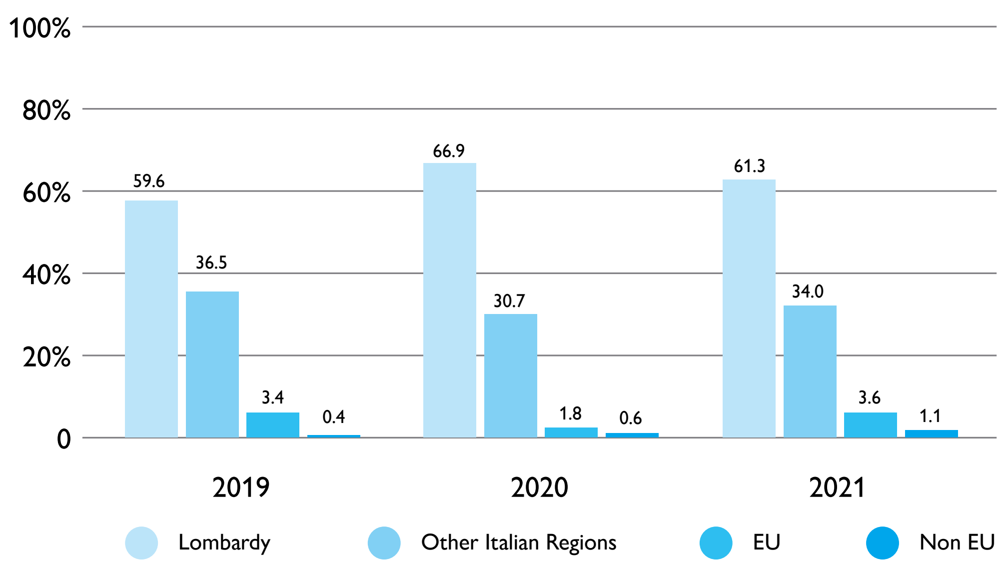


Figure 61 Geographic breakdown of orders (percentage of the total)



PRICE TENSION

Macroeconomic trends in 2021 have created major tensions in the prices of key commodities that affect the entire supply chain, thereby significantly altering the supply-demand balance of resources. There are repercussions on their availability, prices and delivery times. This is an external risk of a macroeconomic nature and affects the productive world as a whole. The Group has a number of impact mitigation measures in place (e.g. increasing inventories of strategic products and ongoing monitoring of the use of material purchase agreements linked to index prices).

10.3.1 Responsible management of the supply chain

For years, the Group has adopted a specific system for assessing the suitability of suppliers, in order to establish lasting business relationships with suppliers who apply high standards of personal health and safety, environmental protection and technical quality. The qualification process, regulated by an internal procedure, is fully compliant with the requirements of the law and the Group's Code of Ethics (in compliance with the organizational model pursuant to Legislative Decree 231/2001).

At the same time, as the opening of tenders called by the Group, A2A selects and qualifies suppliers in a specific Supplier Register. The supplier qualification process - for the product categories identified as significant for safety and environmental purposes - includes technical and financial assessments, the verification of specific environmental and safety requirements, the verification of the validity of any certifications/required registrations and the supplier's accident rates. If deemed necessary, on-site verification (Audit) of the declared requirements may be carried out.

Companies wishing to be accredited on the A2A Supplier Portal are required to sign the **Integrity Pact** (with consequent adhesion to the Group Code of Ethics). Failure to sign will result in the supplier being unable to apply for registration.
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 (certifications obtained, financial rating, etc.);
- ***Vendor Rating* Final**, obtained from the evaluation of performance in the execution of the contract.

The global score of the supplier has acquired, over time, an increasingly relevant weight for the definition of the **Vendor List** to be invited to tender or during the process of awarding the tender itself.
Usually, the qualification obtained is valid for 36 months; if the global score assigned to a supplier highlights criticalities, the Group reserves the right to take steps such as suspending qualification or starting an audit.

Figure 62 Qualified A2A Group suppliers by certification held (number)

	2019	2020	2021
ISO9001	1,721	2,239	2,110
ISO14001	593	731	816
OHSAS18001	507	640	670
SA8000	142	192	177
Respondents to the TenP (Global Compact) questionnaire	188	223	-
Total suppliers with at least one certification	**2,767**	**3,018**	**3,451**
of which activated with order	1,092	1,113	1,239

In 2021, **3,451 suppliers had at least one quality, environment and safety certification, 1,239** of which were activated with at least one order.
The **value of orders** issued by the A2A Group to suppliers with at least one certification amounts to approximately **86%** of the total value.
During the qualification processes for registration or renewal, 1,712 suppliers were evaluated on social issues and 1,719 on environmental issues.

For some product sectors, suppliers are assessed also in relation to their reputational risks, with the assignment of an ***Integrity Risk Rating***, the positive rating of which determines permanence in the register. Declarations made during the qualification process can be verified at the suppliers' premises. Audits may also be requested in the event of serious non-conformities emerging during the execution of contracts, in order to identify the causes of non-performance, therefore exploring critical areas and the **identification of improvement actions**.

Managing business risks also involves identifying, managing and mitigating supply chain risks. In fact, **"critical" suppliers** are defined as **those who are likely to cause a negative impact on the Group due to social, environmental and/or economic misconduct**. Relevant criteria that identify such suppliers are determined by:
- worsening of the economic/financial conditions highlighted by info-providers and provisions;
- rating of ineligibility following the reputational checks carried out (including violations and measures with an impact on safety and the environment);
- serious contractual and/or compliance violations.

Two levels of risk have been identified, based on which specific measures are taken. The "watchlist" level requires the supplier to be under temporary observation; however, it can participate in tenders and stipulate new contracts but the choice must necessarily be justified. The "blacklist" level, on the other hand, does not allow the supplier to be invited to tenders and to submit new applications for qualification.

Responsible Procurement Policy

During 2021, **the new *Policy* relating to *Sustainable Procurement*** was drawn up, in line with what was stated in the A2A Strategic Plan 2021-2030, and with the aim of improving ESG performance throughout the supply chain.
The Policy represents the concrete commitment to the promotion and support of all the values and principles affirmed by international institutions and conventions regarding sustainability along the supply chain and rewarding suppliers who are committed to this purpose. In particular, the Policy clarifies and translates into actions the sustainability objectives of the Supply Chain such as: reduction of the environmental impact on the supply of materials/goods/services; staff training on sustainability issues; and *compliance* and commitment to the principles of Code of Ethics and Human Rights Policy.

Analysis of suppliers' ESG performance

To assess the sustainability of the supply-base and, in particular, for the assessment of ESG risks, the Group has entered into collaboration with an ESG info-provider, market leader in supply chain sustainability assessments.
In fact, a dedicated platform has been made available for the distribution of structured questionnaires to the suppliers involved for the evaluation of a sustainability index/score.
The model of construction of the ESG rating takes into account the *type of company* (sector of activity, country in which it operates, company size) and of *4 ESG pillars* (environment, labor and human rights, ethics and sustainable procurement) and returns an overall score based on 100, which represents a weighted average of the above dimensions.

During the year there was a **first mapping of the *supply-base* of A2A involving 153 suppliers in the campaign covering approximately 50% of the 2021 order**. The average rating obtained by the sample was approximately 57/100, compared to 44/100 for the average industry ratings.

The timely verification of the rating of the Group's strategic suppliers will represent a further important criterion for the identification of the **critical supplier in the ESG sphere** functional to the predisposition of monitoring and ad hoc actions to make the supply chain even more sustainable.

PILOT PROJECT: A NEW SHARED PROCESS TO REDUCE HSE RISK

In order to further reduce the risk of selecting critical suppliers in the environmental and safety field, in 2021, the partnership with the HSE function was strengthened, which actively participates in the sourcing tables for the selection phases of the suppliers to be involved in the tenders (so-called shared process) concerning a product category with a high health & safety impact.

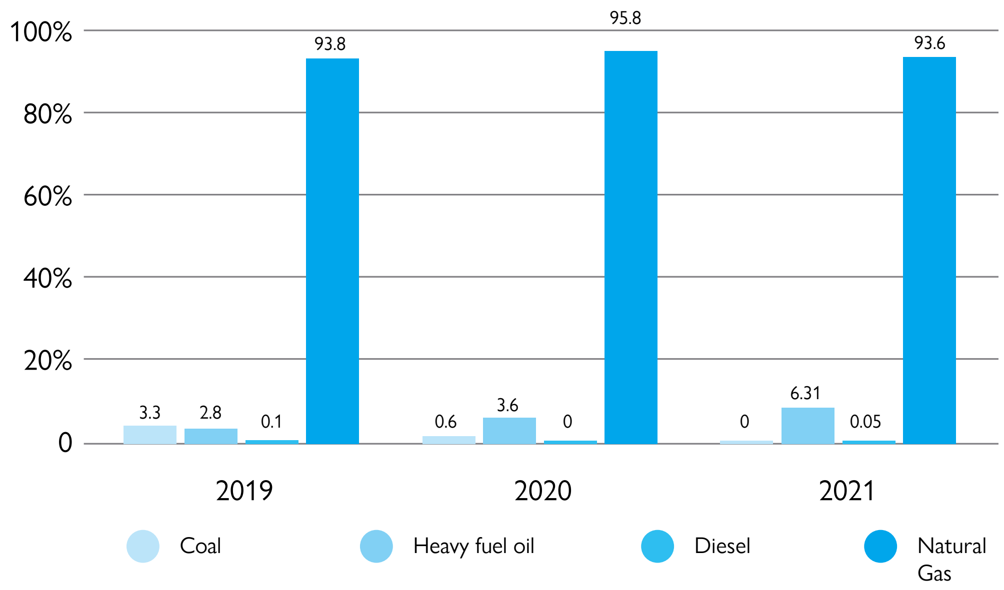
10.3.2 Fuel suppliers

In addition to expenditure on supplies, works and services, approximately 2.9 billion euro was spent to purchase fuels (94% of which was natural gas) used by the Group's power plants or delivered to end customers. As a result of the Group's decarbonization plan, no coal purchases were made in 2021 while diesel and HFO account for about the remaining 6%.

Natural Capital

Emissions
1,100 thousand tCO_2eq emitted for the purchase of fuels

Figure 63 Value of orders issued by fuel type (% of total)



10.3.3 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 Smart Infrastructures 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 2021, the Group carried out inspections of 104 contractors and 44 subcontractors (+42% vs 2020), performing a total of approximately 5,500 inspections (+47% vs 2020); to ensure constant supervision, the same site is inspected several times throughout its duration, even on a weekly basis.

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 2021, approximately 550 inspections (or about 7% of the total) showed at least one anomaly (yellow, orange, or red). 94% of the red anomalies were subject to corrective action.

Human Capital

Training
1,054 third-party employees that have undergone relevant health and safety training

Figure 64 Site inspections - summary

	2019	2020	2021
Number of inspections carried out	2,453	3,961	5,522
No. of checks performed	72,416	118,450	179,017
% inspections with at least one anomaly detected	*20.1%*	*11.4%*	*7.2%*
Companies concerned	Unareti, A2A Ciclo Idrico, A2A Calore & Servizi	Unareti, A2A Ciclo Idrico, A2A Calore & Servizi	Unareti, A2A Ciclo Idrico, A2A Calore & Servizi
Areas concerned	Milan, Brescia and Bergamo provinces and municipalities in the Po and Abruzzo areas	Milan, Brescia and Bergamo provinces and municipalities in the Po and Abruzzo areas	Milan, Brescia and Bergamo provinces and municipalities in the Po and Abruzzo areas
Corrective actions planned	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	238	138	114
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.

Building a better working world

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, 2021 in accordance with article 4 of the Decree approved by the Board of Directors on March 17, 2021 (hereinafter "DNF").
Our limited assurance engagement does not cover the information included in the paragraph "European Taxonomy" of the DNF, that are required by art. 8 of the European Regulation 2020/852.

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.

EY S.p.A.
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Consob al progressivo n. 2 delibera n.10831 del 16/7/1997

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Auditors' independence and quality control

We are independent in accordance with the ethics and independence principles of the *International Code of Ethics for Professional Accountants (including International Independence Standards) (IESBA Code)* 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.

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.

2

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 Aeb S.p.A., Linea Group Holding S.p.A., A2A Calore e Servizi S.p.A., A2A Ambiente S.p.A., A2A Energiefuture S.p.A. 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 Calore e Servizi S.p.A. (Brescia - Lamarmora plant), A2A Energiefuture S.p.A. (San Filippo del Mela thermoelectric power plant) and A2A Ambiente S.p.A. (Brescia waste-to-energy plant), that we have selected based on their activities, relevance to the consolidated performance indicators and location, we have carried out remote interviews 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, 2021 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.
Our conclusions on the DNF of the Group do not refer to the information included in the paragraph "European Taxonomy" of the DNF itself, that are required by art. 8 of the European Regulation 2020/852.

Milan, March 31, 2022

EY S.p.A.
Paolo Zocchi
(Auditor)

This report has been translated into the English language solely for the convenience of international readers.

3

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* Consolidated Financial Statements 2021 - paragraph 3. Notes - Other Information - 7) Update of the main legal and fiscal disputes pending.

** Report on Operations 2021 - paragraph 3. Evolution of the regulation and impacts on the Business Units of the A2A Group.

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2 Governance

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Electric Utility Sector Supplement

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Material aspects and scope of application

Group Ethics and Integrity	ANTI-CORRUPTION (GRI 205) ANTI-COMPETITIVE BEHAVIOUR (GRI 206) ENVIRONMENTAL COMPLIANCE (GRI 307) SOCIOECONOMIC COMPLIANCE (GRI 419) NON DISCRIMINATION (GRI 406) FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING (GRI 407) HUMAN RIGHTS ASSESSMENT (GRI 412)	Group	Community/ Customers/ Suppliers*
Sustainability in Governance	NON DISCRIMINATION (GRI 406) SOCIOECONOMIC COMPLIANCE (GRI 419) ANTI-CORRUPTION (GRI 205) RESEARCH AND DEVELOPMENT (EU SUPPLEMENT)	Group	Community/ Customers/ Suppliers*
Sustainable economic value	ECONOMIC PERFORMANCE (GRI 201)	Group	Shareholders/ Institutions
Sustainable Finance	INDIRECT ECONOMIC IMPACTS (GRI 203)	Group	Shareholders/ Institutions
Infrastructure for the Ecological Transition	ENERGY (GRI 302) *EFFICIENT MANAGEMENT (EU SUPPLEMENT)*	Group	-
Circular economy	MATERIALS (GRI 301) EFFLUENTS AND WASTE (GRI 306)	Waste BU *Smart Infrastructures BU* Generation and Trading BU	Community
Responsible management of water resources	WATER AND EFFLUENTS (GRI 303) EFFLUENTS AND WASTE (GRI 306) ENVIRONMENTAL COMPLIANCE (GRI 307)	Group	Suppliers* Community/ Customers
Climate change	ENERGY (GRI 302) EMISSIONS (GRI 305)	Group	Suppliers*/ Customers
Biodiversity	ENVIRONMENTAL COMPLIANCE (GRI 307) BIODIVERSITY (GRI 304)	Group	Community
Pollution prevention	ENERGY (GRI 302) EMISSIONS (GRI 305) EFFLUENTS AND WASTE (GRI 306)	Group	Community/ Customers
Occupational health and safety	OCCUPATIONAL HEALTH AND SAFETY (GRI 403)	Group	Contractors
Development of human capital	EMPLOYMENT (GRI 401) DEVELOPMENT AND TRAINING (GRI 404)	Group	-
Diversity and inclusion	DIVERSITY AND EQUAL OPPORTUNITIES (GRI 405)	Group	-
Innovation and digital transformation	RESEARCH AND DEVELOPMENT (EU SUPPLEMENT) *DEMAND SIDE MANAGEMENT (EU SUPPLEMENT)*	Group	Institutions
Responsibility and quality in the provision of services	LOCAL COMMUNITY (GRI 413) PUBLIC POLICY (GRI 415)	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.

TCFD Content Index

Scope	TCFD Recommendations	Reference
Governance *Governance* model of the organization in relation to climate change risks and opportunities	a. Describe the Board's oversight of climate change risks and opportunities	- Roles and responsibilities for climate change mitigation page 28
	b. Describe the role of management in assessing and managing the risks and opportunities associated with climate change	- Roles and responsibilities for climate change mitigation page 28
Strategy Current or potential impacts of climate change risks and opportunities on the organization's business, strategy and financial planning	a. Describe the risks and opportunities related to climate change that the organization has identified in the short, medium and long term	- Risk management and climate-related opportunities pages 58-67
	b. Describe the impact of climate change risks and opportunities on the organization's business, strategy and financial planning	- The Strategic Plan 2021 - 2030 pages 46-47 - Risk management and climate-related opportunities pages 58-67
	c. Describe the resilience of the organization's strategy, considering different climate-related scenarios, including a scenario of 2°C or less	- Background information and scenarios pages 41-43 - COP26 and European and national strategy pages 44-45 - The Strategic Plan 2021 - 2030 pages 46-47 - A2A CO_2 emission reduction objectives in line with the Science-Based Targets Initiative (SBTi) page 124
Risk Management Process for the identification, assessment and management of risks connected with climate change,	a. Describe the organization's processes for identifying and assessing climate change risks	- Analysis and management of risks and opportunities pages 34-37 - Risk management and climate-related opportunities pages 58-67
	b. Describe the organization's processes for managing climate change risks	- Analysis and management of risks and opportunities pages 34-37 - Risk management and climate-related opportunities pages 58-67 - Natural Capital pages 118-119 - Energy Transition pages 120-126
	c. Describe how the processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management	- Analysis and management of risks and opportunities pages 34-37 - Risk management and climate-related opportunities pages 58-67
Metrics and targets Metrics and targets used by the organization to assess and manage relevant risks and opportunities related to climate change	a. Disclose the metrics used by the organization to assess climate change risks and opportunities in line with its strategy and risk management process	- Risk management and climate-related opportunities pages 58-67
	b. Disclose Scope 1, Scope 2 and Scope 3 greenhouse gas (GHG) emissions, and related risks	- Energy Transition pages 120-126
	c. Describe the objectives used by the organization to manage climate change risks and opportunities and performance against the objectives	- Energy Transition pages 52-53

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This Report may be viewed on the website
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CIRCULAR ECONOMY

ACTION	KPIs	OVERVIEW 2020	OVERVIEW 2021	PLAN 21 - 30 2023	PLAN 21 - 30 2026	PLAN 21 - 30 2030
WASTE RECOVERY AND TREATMENT Improve the recovery process of waste collected (including through their transformation into energy) and promote separate waste collection	Municipal waste differentiated collection rate (%)	71%	71%	72%	75%	77%
	% differentiated collection Milan	62%	62%	66%	70%	76%
	% municipal waste collected in landfill	0.3%	0%	0%	0%	0%
	Per capita undifferentiated waste reduction (t/inhabitant)[1]	154.4	132.4	131.6	118.1	99.0
	Waste sent for material recovery (Mt)	1.0	0.9	1.3	1.7	2.2
DISTRICT HEATING Help reduce the environmental impact of the cities, paying close attention to air quality, implementing district heating and district cooling	Thermal storage capacity for TLR (cubic metres)	7,620	18,220	26,220	33,220	33,220
	Energy from thermal waste / renewables for the TLR (TWht)	1.4	1.5	1.7	2.4	2.9
	Share of heat from renewables and waste recovery (% of total)	50%	50%	53%	68%	73%
	CO_2 emissions avoided thanks to TLR (t/a)	-225,218	-323,029	-332,263	-476,725	-595,359
	NOx emissions avoided thanks to TLR (t) - cumulative	-241	-275	-800	-1,721	-3,234
WATER implement actions to reduce water consumption in capture and distribution processes, reduce water dispersion and improve the quality of water returned to the environment	Reduction in water consumption from aqueducts in electrical distribution - Unareti perimeter - % reduction compared to 2020 consumption	-	-22%	-29%	-37%	-59%
	Linear water losses (m3/km/days) - average	24.4	23.1	21.8	19.9	18.7
	Total population served by treatment (millions)	0.6	0.6	0.7	1.0	1.8
	Cumulative reduction in consumption of electricity from aqueduct wells (base year 2021) by A2A Ciclo Idrico (kWh/m³)	-	*NEW*	-4.4%	-8.2%	-12.1%
	Number of intelligent sensors installed for water service - cumulative figure	87	841	953	1,123	1,423
	Percentage of new generation water service meters installed	22%	29%	60%	83%	96%
	Percentage of districtualization of the A2A Ciclo Idrico aqueduct network	*NEW*	22%	29%	42%	65%
POLICIES TO REDUCE WASTE PRODUCTION Reduce the production of waste through a prevention, reduction and reuse policy	Territories where waste prevention and reduction actions are active (% of total population served) always >85%	89%	85%	89%	91%	92%
	Number of partnerships launched for circular economy initiatives	7	10	18	26	31
REAL ESTATE Ensure maximum energy efficiency through BAT also for the *assets* of the Group	LEED certification new *building* A2A	-	-	-	Achievement (2025)	
	Develop energy efficiency projects in *buildings* of the Group	-	-	Headquarters Porta Vittoria (2022)	Torre Faro	
	Emissions (*Scope*1+2) from *building* of Group (t)	*NEW*	4,887	5,212	4,722	3,741

[1] Updated to include ACSM-AGAM and AEB.

ENERGY TRANSITION

ACTION	KPIs	OVERVIEW 2020	OVERVIEW 2021	PLAN 21 - 30 2023	PLAN 21 - 30 2026	PLAN 21 - 30 2030
RENEWABLES Increase the proportion of energy produced from renewable sources	Total installed RES capacity (GW) Generation and Trading BU	2.1	2.2	2.8	3.7	5.9
	Percentage of renewable energy on total - Generation and Trading BU	33%	30%	37%	38%	63%
	Total installed RES capacity (GW) Market BU	0.01	0.01	0.03	0.09	0.17
	Total net production (GWh) solar Market BU	10	15	50	136	269
EMISSIONS Develop actions aiming to reduce the environmental footprint, like direct and indirect emissions of greenhouse gases	*Scope* 1 emission factor (gCO_{2eq}/kWh) - perimeter in line with *target* approved by SBTi[2]	310	332	292	283	216
	Emissions *Scope* 2 ($ktCO_{2eq}$)	29	21	8	0	0
	Total methane emissions avoided from distribution networks - cumulative values with respect to 2015 (tCO_{2eq}) - Unareti perimeter	-49,231	-58,611	-83,899	-138,156	-240,964
SUSTAINABLE MOBILITY Develop sustainable internal and external mobility solutions	Charging service contracts *E-moving* (number)	-	-	13,404	57,732	169,632
	Cumulative avoided emissions - *E-moving* (t)	-	-	-18,945	-128,614	-581,976
	Number of electric charging points - cumulative	-	472	2,035	10,079	23,995
	Percentage of Group electric vehicles (out of total cars and light commercial vehicles)	*NEW*	8%	33%	42%	58%
	Number of low environmental impact collection and street sweeping vehicles (Euro 6 vehicles, methane gas, electric)	49%	53%	64%	78%	91%
GREEN ENERGY – END-USE ENERGY EFFICIENCY Contribute to the reduction of emissions of end customers through the sale of green energy and the development of energy efficiency measures for public and private real estate assets	Green energy sold to the market (TWh)	3.9	5.0	7.2	11.2	17.4
	CO_2 gas free sold (Mm^3)	-	21	98	226	311
	Loyal customers with energy efficiency services (Customers with a service/product in addition to the *commodity*)	1.1%	1.9%	4.5%	11.0%	20.3%
	Cumulative avoided emissions - VAS products (HVAC, PV systems) (t)	-	-575	-11,329	-92,833	-440,130
	Cumulative avoided emissions - Energy efficiency b2b - ESCo (t)	-	-78,617	-147,087	-311,461	-555,274
	Cumulative avoided emissions - SEA products for condominiums and commercial buildings (t)	-	-1,117	-8,064	-23,373	-52,168
SMART GRIDS Develop solutions to offer a better information access infrastructure (Smart Grid) and improve the network resilience and to contribute to the growing electrification of consumption	Percentage of users with 2G electricity smart meter (Unareti)	10%	24%	73%	99%	100%
	User interruptions in LV - SAIFI (#/year/POD)	-	1.61	1.36	1.04	0.97
	Installed capacity of the electricity grid (MVA)	4,208	4,686	5,171	5,876	6,493
	Investments in Smart Grids (mln €) - cumulative value	-	38	145	290	486

[2] KPI included in the A2A Sustainable Finance Framework.

DIGITAL

ACTION	KPIs	2020 (OVERVIEW)	2021 (OVERVIEW)	2023 (PLAN 21 - 30)	2026 (PLAN 21 - 30)	2030 (PLAN 21 - 30)
QUALITY *Maintain high quality standards of the services supplied by keeping high Customer Satisfaction levels*	Digitalization of Customer Care: digital contacts of total	15%	14%	21%	29%	41%
	Interventions on Group websites aimed at increasing and improving contact touchpoints - number/year	15	21	27	30	35
	CSI Call Center A2A Energia	> sector national average	> sector national average	> sector national average	> sector national average	> sector national average
	Customer Satisfaction Aprica	*NEW*	74.60	74.80	75.1	75.5
	Customer Satisfaction AMSA	7.77	7.67	7.71	7.77	7.85
	Number of active supplies bollett@mail (energy sales) - thousands	1,046	1,314	2,332	3,566	4,915
CYBER & O.T. SECURITY Adoption of defence mechanisms and protection against logical, viral attacks	Achievement certification Cybersecurity ISO27001 (ICT)	*NEW*	-	Achievement		
	Percentage of impacts to people, services and *assets as a* result of critical *cyber* incidents and events	*NEW*	0%	0%	0%	0%
	Events of cyber security knowledge sharing	*NEW*	3	7	10	10
	Obtaining Business Continuity ISO22301certification	-	-	Achievement		
	Inclusion of ESG logics in reputational analysis / Due diligence	-	-	30%	90%	100%
SMART CITY 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)	Gas cabins, isolation boxes, 2nd ele cabinets and IP poles enabling 5G, FWA and smartsensors	0	5	45	470	10,000
	Data analytics projects for municipalities and utilities in the field of safety, mobility and air quality	0	1	6	20	150
INNOVATION AND R&D Develop investments in research and development, increasing the number of partnerships with international research centres and universities. Develop new technologies, patents for technological innovation.	Number of innovation projects (or investments) related to the SDGs	*NEW*	80%	90%	100%	100%
	Investments in start-ups (new investments and follow on) through a Corporate Venture Capital	4	4	6	6	6
	Initiatives of crowd sourcing of ideas and solutions (e.g scouting, innovation brokers,...) to address sustainability goals	*NEW*	8	12	15	15
ANALYTICS Transforming data into actionable information that improves the company's systems, processes and strategies to achieve sustainable business success.	Advanced Analytics in scale up linked to SDGs	*NEW*	2	4	5	5
	AI projects with sustainability impacts	*NEW*	10%	10%	50%	100%
ICT Infrastructure development and improvement projects of IT/OT/IoT/IIoT platforms and applications.	CO_2 avoided by digital initiatives (t/a)	*NEW*	-123	-166	-217	-288
	Number of digital initiatives with measurable sustainability impact	*NEW*	11	18	27	35

PEOPLE INNOVATION

ACTION	KPIs	OVERVIEW 2020	OVERVIEW 2021	PLAN 21 - 30 2023	PLAN 21 - 30 2026	PLAN 21 - 30 2030
HEALTH AND SAFETY Consolidate the training and prevention plan to reduce injuries and develop new initiatives for worker health and safety	Number of accesses to health promotion initiatives	*NEW*	**5,100**	**7,300**	**10,600**	**15,000**
	Accident Frequency Index (If) with gate on Severity Index (Ig) calculated taking into account only the first prognoses	Updated	**20.0**	**17.67**	**14.99**	**12.60**
MbO and PERFORMANCE MANAGEMENT Add sustainability objectives to the MbO sheets (correlation between Management remuneration and Sustainability KPIs)	Employees with formally assigned objectives (% of total employees)	10%	**12%**	**15%**	**50%**	**100%**
	Extension tool for *continuous feedback*	7%	**29%**	**50%**	**50%**	**100%**
TRAINING 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 sustainability and SDGs (% of employees to whom content is made available)	60%	**60%**	**80%**	**100%**	**100%**
	Investment density of training to the role	*NEW*	**57% for 16.4 hours per capita**	**60% for 10 hours per capita**	**60% for 10 hours per capita**	**60% for 10 hours per capita**
ORGANIZATION WELLNESS Implementation of the best business organization systems for effective development of all work processes	Average hierarchical depth	3.87	**3.84**	**3.78**	**3.70**	**3.50**
	Digitalization of regulatory documents	*NEW*	**0%**	**50%**	**100%**	**100%**
	Interim positions longer than 12 months	*NEW*	**44%**	**31%**	**13%**	**0%**
INTERNAL ENGAGEMENT Develop a systematic listening system to employees, promoting dialogue and collaboration	Employees involved in engagement campaigns (% of the total)	60%	**100%**	**100%**	**100%**	**100%**
	Actions implemented out of the total number of those proposed	100%	**100%**	**100%**	**100%**	**100%**
	Employees involved in Survey/pulse (number)	40%	**100%**	**100%**	**100%**	**100%**
WELFARE, DIVERSITY AND EQUAL OPPORTUNITIES 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 (% of total managers)[3]	21%	**24%**	**25%**	**28%**	**35%**
	Gender Balance BoD	*NEW*	**43%**	**53%**	**63%**	**90%**
	Gender Pay Gap	*NEW*	**Imp: 98% Middle Managers: 96% Managers: 100%**	**Imp: 99% Middle Managers: 98% Managers: 100%**	**Imp: 100% Middle Managers: 100% Managers: 100%**	**Imp: 100% Middle Managers: 100% Managers: 100%**
	Women in succession plans (% of total)[3]	18%	**19%**	**20%**	**26%**	**30%**
	% women among new hires in the Group (excluding blue collar workers)	*NEW*	**45%**	**47%**	**50%**	**50%**
	Training on D&I issues (% of employees to whom content is made available)	50%	**60%**	**80%**	**100%**	**100%**
	Employees with disabilities involved in specific support/inclusion projects (% of total employees Protected categories)	0%	**10%**	**35%**	**80%**	**100%**
	Hours worked in Remote Working % of total (considering the pandemic situation)	*NEW*	**21.7%**	**11.7%**	**13%**	**21%**

[3] Updated to include ACSM-AGAM and AEB.

PEOPLE INNOVATION

		OVERVIEW		PLAN 21 - 30		
ACTION	KPIs	2020	2021	2023	2026	2030
RESPONSIBLE PROCUREMENT 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	17%	**17%**	**>20%**	**>25%**	**>30%**
	Value of orders assigned to certified suppliers	83%	**86%**	**85%**	**87%**	**90%**
	Value of orders assigned to financially sound suppliers (D&B Rating 1-2)	>70%	**77%**	**>70%**	**>75%**	**>85%**
	% of the order to Suppliers evaluated with ESG indicator (Infoprovider Ecovadis)	50%	**47%**	**65%**	**80%**	**90%**
	Corrective actions taken following unsuccessful audits	83%	**94%**	**89%**	**91%**	**92%**
	Inspections of road sites (number/year)	3,961	**5,522**	**4,920**	**5,910**	**6,900**
EDUCATION Consolidate and, where possible, improve the environmental education and promote the awareness of risks associated with climate change in the public opinion	Number of accesses to environmental culture initiatives	0	**5,399**	**7,500**	**10,700**	**15,000**
	Teachers registered in the education portal of A2A	1,700	**2,346**	**2,000**	**2,200**	**2,500**
	Stakeholders involved in Environmental Education initiatives	24,000	**44,000**	**26,000**	**30,000**	**35,000**
DISADVANTAGED GROUPS Promote beneficial tariffs or other solutions for users in difficulty (e.g. Banco dell'Energia)	Design of a multi-year plan for the Energy Bank that develops synergies with the involvement of associations, companies, research bodies and third sector organizations and encourages its expansion throughout Italy, as well as consolidating its presence in the areas where the Group has its roots	*NEW*	**Start**	**Development**		
TRANSPARENCY AND STAKEHOLDER ENGAGEMENT Develop integrated reporting and an adequate information system for planning and control Develop external stakeholder engagement activities, strengthening the relationship with the territory	Territories involved in multi stakeholder engagement initiatives / year	1	**7**	**5**	**8**	**10**
	Develop impact assessment analyses on the territories of competence	*NEW*	**1**	**1**	**3**	**5**
	Group events CO_2 free (offset through credits)	*NEW*	**0%**	**30%**	**100%**	**100%**
	Publishing content for the Group's growth in ESG brand reputation (value of reputational return on digital channels)	>60%	**>90%**	**>77%**	**>80%**	**>85%**
	Sponsorships with initiatives to raise awareness of SDGs issues	34%	**50%**	**50%**	**70%**	**90%**
	Organization of meetings on innovative regulatory and sustainability issues related to the Business Plan between A2A top management and one or more relevant regulatory stakeholders	*NEW*	**>2**	**>2**	**>2**	**>2**
	Elaboration, also in sharing with BUs, of at least one innovative regulatory proposal on an issue of development of the business plan.	*NEW*	**1**	**1**	**1**	**1**

GOVERNANCE

ACTION	KPIs	OVERVIEW		PLAN 21 - 30		
		2020	2021	2023	2026	2030
COMPLIANCE/BUSINESS ETHICS Implement all the principals and the best national and international initiatives for the dissemination of compliance within the Group	Certification ISO37001 - Anti-bribery management systems	-	-	-	Achievement (2024)	
	Training projects per year on compliance issues	-	2	2	2	2
	Employees trained on the Code of Ethics and on Group documents relating to ethical/behavioural principles	81%	82%	>80%	>80%	>80%
SUSTAINABILITY GOVERNANCE Ensure the integration of ESG issues into management models, corporate strategy and purpose.	Number of meetings per year of Induction to BoD/CST on emerging Sustainability issues (tbd e.g. EU Taxonomy, Human Rights, TCFD etc.)	-	1	1	1	1
RISK MANAGEMENT To verify that the system used to identify, manage and prevent business risks adequately covers sustainability risks (and, in particular, social-environmental risks), also in organisational terms	Identify ERM risks on all material issues	-	100%	100%	100%	100%
	Identification and assessment of risks related to the Green Deal	-	*NEW*	>80% of the year's programme	>80% of the year's programme	>80% of the year's programme
	Share of processes and activities covered by Environmental Risk Assessment	*NEW*	39%[4]	100%[4]	100%[5]	100%[5]
SUSTAINABILITY IN PLANNING AND INVESTMENT PROCESSES Inclusion of ESG logic in investment planning and evaluations	Percentage of 'sustainable debt' over total	28%	44%	50%	>70%	>80%
	Identify projects classified as "sustainable" when defining the *budget*/plan, according to SDGs/ESGs/classification logics Taxonomy with indication of ESG performance KPIs	-	100%	100%	100%	100%
	Develop a timely analysis of investors' and analysts' ESG expectations	-	definition of a checklist of ESG best practices	update/revision of ESG best practices at KPI/KI level (2022)		
ESG RATING Participation in assessments to assess ESG performance of the Group, and implementation of activities for continuous improvement of the rating	Improve the score in at least 2 sustainability ratings/year	2	5	>2	>2	>2
BIODIVERSITY Adhere to projects aiming to protect the soil and protected species, monitoring and protecting biodiversity in the territories of competence	Plants monitored with respect to potential interference with biodiversity (protected areas, Natura 2000 and others) (Maintaining full coverage of sites and activities as the company's perimeter is expanded)	100%	100%	100%	100%	100%

[4] Intended as the completion of the roll out of the Environmental Risk Assessments on companies with a defined plan as of 12/31/2021

[5] Understood as meeting the Environmental Risk Assessment timeline in the integration plan for new acquisitions

Operational sustainability targets 21-30

Stakeholder engagement and materiality analysis

Financial capital

Manufacturing capital

Natural capital

Human capital

Relational capital

The Acsm Agam Group

The AEB Group

Stakeholder engagement and materiality analysis

Figure 1 Stakeholder engagement initiatives activated in 2021

CATEGORY	MODE OF COMMUNICATION AND INVOLVEMENT	INTEREST	MATERIAL ISSUES *
Shareholders and investors	• Direct interaction • Events, press conferences and conventions • Road shows • Shareholders' Meetings	• Business development • Knowledge, guidance and request for investment • Knowledge of facilities and services information • Territorial economic development	• Circular economy and responsible use of resources • Sustainability elements in corporate governance • Creation of value for all parties in relation to the Group • Risk management and sustainability opportunities
Customers	• Direct interaction • Plant tours • Communication campaigns • Training	• Costs, efficiency and quality of service • Service continuity and security • Application of and compliance with contracts/payments • Sharing of criticalities and complaints	• Quality and innovation in the provision of services and products • Creation of value for all parties in relation to the Group • Circular economy and responsible use of resources • Responsibility and Safety in the provision of services and products
Community	• Direct interaction • Plant tours • Events, press conferences and conventions • Communication campaigns	• Community, environmental and land protection • Community Well-Being • Knowledge of facilities and services information • Economic contributions and sponsorships	• Circular economy and responsible use of resources • Active local and environmental education • Creation of value for all parties in relation to the Group • Combating climate change
Institutions	• Direct interaction • Discussion tables • Plant tours • Press releases	• Control, regulation and compliance • Community, environmental and land protection • Compliance with environmental requirements • Community Well-Being	• Ethical conduct of business • Circular economy and responsible use of resources • Active local and environmental education • Sustainability elements in corporate governance

* Monitoring on engagement activities related to the year 2021 was based on the material issues in effect in 2020. Beginning with the 2022 monitoring, material issues updated in 2021 will be used.

CATEGORY	MODE OF COMMUNICATION AND INVOLVEMENT	INTEREST	MATERIAL ISSUES *
Market	• Direct interaction • Discussion tables • Events, press conferences and conventions • Work groups/committees and observatories	• Business development • Knowledge of facilities and services information • Application of and compliance with contracts/payments • Sharing *best practice* and creating *networks*	• Circular economy and responsible use of resources • Quality and innovation in the provision of services and products • Responsibility and Safety in the provision of services and products • Creation of value for all parties in relation to the Group
People	• Direct interaction • Communication campaigns • Training • Work groups/committees and observatories	• Working conditions • Dialogue, engagement and raising awareness • Employment • Training	• Protection of occupational health and safety • Development of human capital • Corporate welfare • Ethical conduct of business
Supply chain	• Direct interaction • Plant tours • Discussion tables	• Application of and compliance with contracts/payments • Service continuity and security • Working conditions • Order acquisition	• Quality and innovation in the provision of services and products • Responsible management of the supply chain • Protection of occupational health and safety • Responsibility and Safety in the provision of services and products • Creation of value for all parties in relation to the Group

* Monitoring on engagement activities related to the year 2021 was based on the material issues in effect in 2020. Beginning with the 2022 monitoring, material issues updated in 2021 will be used.

Financial capital

Figure 2 - Statement for calculating the economic value - generated and distributed (millions of euro) [GRI 201 - 1_4]*

	2020	2021
Economic value generated	**6,874**	**11,582**
A. Production value	6,862	11,563
C.15 Income from equity investments	0	0
C.16 Other financial income	12	19
E.20 Extraordinary income	0	0
Economic value distributed	**6,139**	**10,732**
Operating expenses	4,911	9,365
B.6 Costs for raw materials	3,362	7,618
B.7 Costs for services	1,282	1,530
B.8 Costs for use of third-party assets	100	118
B.11 Changes in inventories of raw materials	45	-55
B.14 Other operating expenses (net of taxes)	122	154
Value distributed to employees	705	724
B.9 Personnel costs	705	724
Value distributed to capital providers	95	89
C.17 Interest and other financial expenses	95	89
Value distributed to Public Administrations	175	251
22. Income taxes (current and deferred)	141	218
B.14 Other operating expenses (only the value of indirect taxes)	34	33
Value distributed to shareholders	245	294
Dividends distributed	241	248
Third-party profits	4	46
Value distributed to the community	8	9
Sponsorships	1	2
Donations and Membership Contributions	7	7
Economic value retained	**735**	**850**
Profit (loss) for the period (net of dividends)	123	256
(B.10 + B.12 + B.13 + D.19 + D.18) Amortization, Depreciation / Provisions / Write-downs / Revaluations	654	776
22. Deferred tax liabilities	-42	-182
E.21 Extraordinary expenses	0	0

* It should be noted that the item "Net profit (loss) from discontinued operations/assets held for sale" - entered in the Group's consolidated financial statements - was reallocated to the appropriate items in the income statement, in compliance with the provisions of the GRI *Framework* calculation schedule.

Figure 3 Gross operating margin by business unit - (millions of euro)

	2019	2020 ***	2021
Generation and Trading	301	269	368
Market	229	202	*214*
Environment*	268	282	*341*
Smart Infrastructures **	461	471	*538*
Corporate	-36	-24	*-33*
Total	1,234	1,200	1,428

* From 2020, the International BU has been included in the Environment BU.
** From 2019, the A2A Smarty City BU has been included in the Smart Infrastructures BU; from 2021, the A2A Illuminazione Pubblica company has been included in the Smart Infrastructures BU.
*** In 2020, reclassified revenues and operating costs relating to gas distributionassets held for sale reclassified under the item "Net profit (loss) from assets sold/held for sale".

Figure 4 Balance Sheet (millions of euro)

	2019	2020	2021
Net fixed assets	6,470	7,067	8,026
Working capital	335	507	243
Assets/liabilities held for sale	-	14	147
Net invested capital	6,805	7,588	8,416
Shareholders' equity	3,651	4,166	4,303
- Attributable to the Group	3,289	3,537	3,760
- Attributable to minorities	362	579	543
Net debt	3,154	3,472	4,113
Total sources	6,805	7,588	8,416
Gross debt	3,620	4,516	5,110

Figure 5 Main balance sheet indicators (millions of euro)

	2019	2020	2021
Turnover by permanent worker (millions of euro)	0.6	0.53	0.87
EBITDA per permanent worker (millions of euro)	0.10	0.09	0.11
Average number of permanent workers	12,198	12,907	13,206

Figure 6 CapEx (capital expenditure)

	2019	2020	2021
Generation and Trading	88	76	144
Market	32	64	73
Environment**	96	174	273
Smart Infrastructures***	347	373	516
Smart City*	16	-	-
Corporate	48	51	77
Total	**627**	**738**	**1,074**

* From 2019, the A2A Smart City BU is included in the Smart Infrastructures BU.
** From 2020, the International BU is included in the Environment BU.
*** From 2021, A2A Illuminazione Pubblica is included in the Smart Infrastructures BU.

Figure 7 Share performance

	2019	2020	2021
Average capitalization (millions of euro)	5,011	4,143	5,259
Capitalization at Dec. 31 (millions of euro)	5,238	4,087	5,389
Average volumes	9,593,175	12,072,133	10,371,909
Average share price* (euro per share)	1.60	1.32	1.68
Maximum share price* (euro per share)	1.81	1.90	1.95
Minimum share price* (euro per share)	1.43	1.00	1.31

* Euros per share (source: Bloomberg).

Manufacturing capital

Energy production

Figure 8 Average availability factor for all plants [G4 - EU30]

A2A average availability factor (%)	2019	2020	2021
Traditional coal-powered	91.4%	96.8%	96.6%
Traditional heavy fuel oil	79.8%	81.7%	71.0%
Combined cycle natural gas	86.8%	84.4%	77.4%
Run-of-the river hydroelectric	86.3%	86.2%	79.2%
Basin hydroelectric	89.8%	91.0%	84.4%
Storage hydroelectric	71.4%	83.8%	84.3%

LGH average availability factor (%)	2019	2020	2021
Run-of-the river hydroelectric	85.0%	90%	89%

Figure 9 Electricity produced fed into the grid divided up according to plant type and source GWh [G4 - EU2]

		2019	2020	2021
Generation Business Unit	Thermoelectric plants*	10,910	9,760	11,958
	Hydroelectric plants	4,534	4,388	4,226
	Photovoltaic and wind plants (including energy consumed)	122	126	312
Smart Infrastructures Business Unit	Cogeneration plants	268	264	255
Environment Business Unit	Waste-to-energy plants (including biogas) and natural gas boilers	1,192	1,288	1,409
Total		**17,044**	**15,827**	**18,160**

* Does not include the production of the Scandale Plant, in line with the data of the Natural Capital and Sustainability Plan.

Figure 10 Heating energy produced fed into the grid divided up according to plant type and source (GWh)

		2019	2020	2021
Environment Business Unit	Waste-to-energy plants (including biogas) and natural gas boilers	1,478	1,530	1,604
Smart Infrastructures Business Unit	Cogeneration plants, natural gas thermal, heat pumps, biogas, solar panels	1,140	1,125	1,317
Generation Business Unit	Heat recovery	36	36	36
Total		**2,654**	**2,691**	**2,957**

Electricity distribution

Figure 11 Extension of electricity distribution service [G4 - EU4]

	2019	2020	2021
Km of electricity network	15,359	15,472	15,829
of which underground cable	13,362	13,451	13,812

Figure 12 Extension of the gas distribution service

	2019	2020	2021
Km of natural gas network	11,240	9,852	13,022

Figure 13 Electricity, heating energy and gas released to the network

	2019	2020	2021
Electricity distributed (GWh)	11,573	10,497	11,268
Distributed heating and cooling energy (GWh)	3,079	3,146	3,418
Natural gas distributed (Mm^3)	2,356	2,300	2,819
Transported natural gas (Mm^3)	350	355	426

*Figure 14 Losses in the grid**

	2019	2020	2021
Electricity (GWh) from distribution	301	250	298
Methane (Mm^3) (distribution)*	n.a.	1.44	2.53
Methane (Mm^3) (transport)	0.1	0.1	0.09
Heat (GWh) from district heating	n.a.	542	524

* The figure is estimated.

*Figure 15 Public lighting**

	2019	2020	2021
Light points (no.)	244,951	264,360	275,629

* The 2019 and 2020 figures have been recalculated because the calculation criterion has changed; currently the criterion is pro-rata races of actual light points operated.

Integrated water cycle

Figure 16 Procurement and distribution

Technical data	2019	2020	2021
Wells (no.)	190	190	190
Sources (no.)	255	269	269
Drinking water conversion plants (no.)	123	122	121
Total network length (km)	4,019	4,044	4,042
Water delivered to the user and accounted for (Mm^3)	54	54	56
Water extracted (Mm^3)	93	92	93
Network losses and water not booked (Mm^3)	37	36	33

Figure 17 Collection and treatment

Technical data	2019	2020	2021
Sewers - network length (km)	2,569	2,593*	2,621
Waste water treated (Mm^3)	51	52	51
Purifiers (no.)	57	59	57

* The 2020 figure from the previous document has been changed due to detection of material error.

Waste management

Figure 18 Waste collected

	2019	2020	2021
Tonnes	1,618,000	1,527,000	1,773,000

Figure 19 Waste treated by type of plant (kt)*

	2019	2020	2021
Waste-to-energy plants	1,806	1,790	1,764
Landfills	182	120	129
Bio-drying plants and production of RDF	539	509	552
Recovery of materials and processing	1,024	1,190	1,235
Total	**3,551**	**3,609**	**3,680**

* All incoming waste to the Group's plants is considered. The 2021 portion of waste disposal, net of intermediation (388 kt) and elisions (-737 kt) is 3,332 kt.
Waste treated in plants managed on behalf of third parties (Acerra waste-to-energy plant and Caivano CSS plant) and ACSM-AGAM (collection waste-to-energy plant of Como) is not included.

Figure 20 Waste brokered and cross-border waste (t)

	2019	2020	2021
Waste brokered*	220,368	183,460	196,518
Cross-border waste**	54,431	46,658	43,497

* Brokered waste is third-party waste for which the Group operates a brokerage service.
** Cross-border waste is waste generated by Group companies and sent abroad.

District heating and heat

Figure 21 Thermal energy sold (GWh)

	2019	2020	2021
Heating / cooling energy	2,564	2,604	2,939

Figure 22 Extension of the district heating

	2019				2020				2021			
	USERS* (no.)	VOLUMES SERVED (Mm^3)	Network development** (double pipe) km	Apartment equivalents	USERS* (no.)	VOLUMES SERVED (Mm^3)	Network development** (double pipe) km	Apartment equivalents	USERS* (no.)	VOLUMES SERVED (Mm^3)	Network development** (double pipe) km	Apartment equivalents
Province of Bergamo	672	7.2	75	30,000	692	7.3	77	30,500	719	7.7	81	32,500
Province of Brescia	21,313	42.5	672	177,100	20,513	42.6	678	177,700	21,586	42.8	679	178,500
Province of Milan***	3,585	52.8	343	220,083	3,990	54.8	363	228,183	3,334	56.3	372	235,126
Province of Cremona	749	6.6	77	27,600	754	6.8	77	28,317	772	6.7	78	28,067
Province of Lodi	227	3.1	27	12,700	232	3.1	27	12,735	237	3.1	28	12,848
Province of Monza and Brianza	-	-	-	-	-	-	-	-	223	1.0	16	4,083
Total	**26,546**	**112.2**	**1,195**	**467,483**	**26,181**	**115**	**1,222**	**477,435**	**26,871**	**118**	**1,254**	**491,125**

* 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.

Smart City

Figure 23 Smart City Services- Smart Land (number)

Technical data	2019	2020	2021
Municipalities served	24	184	184
Services offered	40	126	126
Video cameras	2,174	5,919	4,760
Camera Control Stations	51	51	51
Break-in sensors	5,025	7,974	4,788
Fire sensors	3,373	3,885	600
Access and presence readers	841	1,074	841
SoS stations	250	250	260
Variable message panels	15	15	15
Digital islands	29	37	37
Wi-Fi antennae	1,198	1,887	1,887
IoT Sensors	216	7,197	6,792
Environmental sensors	148	159	159
Smart bins	12,880	12,870	12,870
Smart land sensors	125	239	239
Smart parking sensors	2,580	1,861	1,982

Natural capital

Figure 24 Percentages of electricity generated by type of source [G4-EU2]

	2019	2020	2021
Renewable sources (hydraulic, renewable fraction of waste*, biogas, solar)	31%	33%	30%
Coal	6%	1%	1%
Natural gas	55%	58%	58%
Oil products	4%	4%	8%
Non-renewable fraction of waste	4%	4%	3%

* The share of electricity from biodegradable waste is calculated for each waste-to-energy plant and derives from both an analytical procedure and a lump-sum estimate with reference to the Ministerial Decree of July 6, 2012.

Figure 25 Energy performance and gross production of plants [GRI 302-3; G4 - EU11]

	2019	2020	2021
Average yield of thermoelectric plants	47%	49%	48%
Yield of high-performance natural gas combined cycles	51%	52%	52%
Yield of multi-fuel plants	31%	29%	31%
Average yield of fossil fuel cogeneration plants	80%	81%	80%
Energy intensity - Electricity consumption per unit produced (MWh)	n.a.	n.a.	5.7%
Average electricity produced from 1 t waste (kWh/te)	759	746	750
Average thermal energy produced from 1 t waste (kWh/t)	823	855	918
Specific water demand for total thermoelectric production (l/kWh_{eq})*	0.31	0.30	0.28
Specific water requirement for overall waste-to-energy plant production (l/kWh_{eq})*	1.13	1.07	0.92
Specific water demand for total cogeneration production (l/kWh_{eq})*	0.35	0.35	0.35
Gross electricity production by type of plant (GWh)			
Coal	1,161	202	174
Natural gas (CCGT and cogeneration)	9,762	9,494	10,843
Wind	0	0	22
Oil	849	763	1,667
Hydroelectric	4,552	4,424	4,253
Solar	122	127	301
Biomass	22	217	191
Waste-to-energy	1,377	1,341	1,324
Landfill gas	29	22	24
Biogas from biomass digestion plants	0	0	175

* Demand means the total quantity of water withdrawn, including the reuse of wastewater, required for the operation of the plant. The specific requirement from total production is calculated considering the total water consumption from thermoelectric production in relation to the total thermoelectric production. Water withdrawals used for open-cycle cooling, which are then returned to the original water body, are not included in this value.

Figure 26 Global impact indicators

	2019	2020	2021
Ozone-depleting substances - ODs- ($kgR11_{eq}$)	0.4	0.0	0.0
Total acidifying emissions ($tSO2_{eq}$)	2,927	2,168	2,545

Figure 27 Indicators of impact due to the purchase and use of fossil fuels (scope 3) [GRI 305-3]

	2019	2020	2021
Carbon footprint (tCO_{2eq}/year)	853,467	695,408	1,109,739
Water footprint (thousands of m^3 water)	20,383	17,721	25,689

Figure 28 Environmental sanctions [GRI 307-1]

	2019	2020	2021
Number	25	32	39
of which related to the water cycle	*n.a.*	*n.a.*	*22*
*of which relevant**			-
Value (euro)	83,962	106,272	101,569

* Sanctions relate to infractions of authorization measures or administrative imprecisions that did not result in any damages or concrete temporary or permanent danger to the environment.

Figure 29 Water consumed by the Group Business Units according to type of collection (thousands of m³)

	2019	2020	2021
Aqueduct	1,508	1,495	1,567
Well	6,104	5,258	5,410
Surface water body - salt/sea water*	707	618	583
Surface water body - fresh water	218	282	279
From third parties - fresh water	47	54	30
Total	**8,584**	**7,707**	**7,869**

* Salt/sea water is defined as marine or salt water with a concentration of dissolved solids (measured as sodium chloride) >1000 mg/l.

Water stressed areas

Withdrawals

Figure 30 Group water withdrawals in water-stressed areas (thousands of m³) [GRI 303-3_5]

		2019	2020	2021
Water withdrawn for process consumption	From aqueduct	37	29	34
	From well	246	259	217
	From third parties - fresh water	47	54	30
	From surface water body - salt/sea water	707	618	583
	Total	**1,037**	**960**	**864**
Water derived and returned	From surface water body - fresh water for hydroelectric production	493,067	312,028	338,749
	From surface water body - salt/sea water	272,471	247,974	459,462
	Total	**765,538**	**560,002**	**798,211**
Water withdrawn for distribution to water service users		19,692	20,240	20,392

* Salt/sea water is defined as marine or salt water with a concentration of dissolved solids (measured as sodium chloride) >1000 mg/l.

Water discharges

Figure 31 Discharges, returned water and distributed drinking water A2A Group, in water stressed areas (thousands of m³) [GRI 303-4]

		2019	2020	2021
Industrial wastewater discharged	Discharged into sewers	0	0	0
	Discharged into surface water body (fresh water)	0	0	0
	Discharged into coastal waters/channels	736	639	535
	Total	**736**	**639**	**535**
Recovered waters	Recovered in the production cycle	827	292	318
	% of total water withdrawn	80%	30%	37%
Returned waters	Derived water - fresh water	493,067	312,028	338,749
	Derived water - salt/sea water	272,471	247,974	459,462
	Total	**765,538**	**560,294**	**798,211**
Public water supplied to water service users		9,179	7,176	7,060

* Salt/sea water is defined as marine or salt water with a concentration of dissolved solids (measured as sodium chloride) >1000 mg/l. The areas with the greatest water stress are the Calabria Region, the Sicily Region, the Abruzzo Region, the areas of the Mountain Communities in the Province of Brescia.

Natural capital in the Environment BU

Resources and materials used

Figure 32 Resources used [GRI 301-1; GRI 302-1_2; GRI 303-5]

	2019	2020	2021
Fuel (TJ)			
Natural gas	724	750	792
Oil (heavy fuel oil and diesel)	66	73	75
Waste, biomass and CSS	21,035	22,224	25,563
Biogas (from landfills and treatment facilities)	428	463	1,885
Automotive fuels (TJ)*			
Petrol	6	6	10
Diesel	492	463	543
Methane	145	147	170
Energy (GWh)			
Plant self-consumption, electricity		254	253
Electricity consumed (GWh), withdrawn from the grid	58	67	73
of which renewable		64	73
Heat consumed		31	92
of which renewable		21	68
Chemical products and materials (t)			
Mineral acids	1,642	1,997	2,921
Water additives/conditioners	360	1,897	3,981
Ammonia (solution)	5,002	5,593	5,780
Lime and solid neutralisers	32,176	34,937	38,308
Active carbon	1,566	1,495	1,600
Cement, sand an inert materials	219,165	360,771	19,564
Sodium chloride	280	449	5,284
Technical gases (nitrogen, CO_2, hydrogen, oxygen)	939	1,181	808
Sodium hydroxide (solution)	2,316	3,256	3,959
Methanol, solvents and other products	516	992	987
Oils and lubricants	126	112	292
Urea (solution)	2,138	1,977	2,046
Total chemical products **	**266,172**	**414,657**	**85,530**

* Increase due to the inclusion of Agripower in the scope.
** The change in 2021 is primarily related to the minor use of aggregates for post management landfills.

Withdrawals

Figure 33 Water withdrawal (thousands of m^3) [GRI 303-3]

		2019	2020	2021
Water withdrawn for process consumption	Aqueduct	511	467	524
	Well	3,134	2,942	2,808
	Total	**3,645**	**3,409**	**3,332**

Water discharges

Figure 34 Discharges and returned water (water in thousands of m^3) [GRI 303-4]

		2019	2020	2021
Industrial wastewater discharged	In the sewer	535	475*	481
	In surface water body (fresh water)	1,333	1,735	2,096
	Total	**1,868**	**2,210***	**2,577**
Recovered waters	Recovered in the production cycle	384	457	555
	% of total water withdrawn	11%	13%	17%
Returned (cooling) water	In surface water body (fresh water)	764	742	865
	BOD	20	38	26
Pollutant discharges into surface water (t)	COD	49	141	90

* The 2020 figure from the previous document has been changed due to detection of material error.

Waste*

*Figure 35 Waste produced (t) [GRI 306]***

	2019	2020	2021
Non-hazardous waste			
Non-hazardous waste for material recovery			304,927
Non-hazardous waste for energy recovery			9,366
Total recovery			**314,293**
Non-hazardous waste to incineration			1,298
Non-hazardous waste other disposals			197,165
Non-hazardous waste to landfill			4,286
Total at disposal			**202,749**
Total non-hazardous waste produced	490,684	585,541	**517,042**
% non-hazardous waste recovered			60.8%
Hazardous waste			
Hazardous waste for material recovery			31,706
Total recovery			**31,706**
Hazardous waste to incineration			177
Hazardous waste other disposals			71,915
Hazardous waste at landfill			11,505
Total at disposal			**83,597**
Total hazardous waste produced	115,267	113,944	**115,303**
% hazardous waste recovered			27%

* The methodological change, adopted in 2021, to align with the requirements of the GRI 306 2020 indicator limits the comparability of the waste data to total hazardous, total non-hazardous, due to unavailability of higher detail in previous years.
** Indicators calculated in accordance with the GRI 306 - 2020 *standard* update. The energy recovery operation (R1) is classified as a recovery activity under national law.

Emissions

Figure 36 Total emissions (t) [GRI 305-1_2_6_7]

	2019	2020	2021
CO_2 from combustion processes	1,163,222	1,141,439	1,158,388
Biogenic emissions	1,183,778	1,488,149	1,500,460
CO_2 from motor vehicles	44,646	42,612	50,233
CO_2 indirect from energy acquisition			
Location based[1]	17,341	19,133	19,290
Market based[2]	28,085	4,215	302
Fluorinated gases (t CO_{2eq})	303	329	350
of which SF_6 (Kg)	0	0.99	0
NO_x	851.16	811	1133
SO_2	52.83	73	58
Powders	7.0	9.0	7.2
Methane (CH4) - biogas losses released in landfills (t CO_{2eq})	78,701	43,042	22,660
Dioxins (grams - toxic equivalency)	0.032	0.029	0.036
Dioxin-like PCBs (polychlorinated biphenyls) (grams - toxic equivalency)	0.0070	0.0090	0.0033

Figure 37 Percentage of energy produced by the valorisation of waste in relation to total production (thousands of m^3) [G4-EU2]

	2019	2020	2021
Thermal energy from waste-to-energy and biogas process	58%	59%	58%
Electricity from waste-to-energy and biogas process	7%	8%	8%

1 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: ISPRA Report 317/2020).
2 The market-based approach refers to contractual agreements entered into with the electricity supplier. In 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.

Natural capital in the Generation and Trading BU

Resources and materials used

Figure 38 Resources used [GRI 301-1; GRI 302-1_2; GRI 303-5]

	2019	2020	2021
Fuel (TJ)			
Natural gas	64,339	62,604	71,389
Coal	9,604	1,177	1,690
Oil (OCD, diesel)	9,787	8,835	18,258
Automotive fuels (TJ)			
Petrol	2.03	2.79	0.09
Diesel	4.31	5.46	1.05
Methane	0.01	0.00	0.01
Energy (GWh)			
Electricity for plant self-consumption		378	485
Electricity withdrawn from the grid	177	202	213
of which renewable		202	211
of which renewable		-	-
Chemical products and materials (t)			
Mineral acids	204	236	235
Water additives/conditioners	133	232	183
Ammonia (solution)	557	270	457
Lime and solid neutralisers	14,676	10,250	12,758
Active carbon	0	0	20
Sodium chloride	0	4	7
Technical gases (nitrogen, CO_2, hydrogen, oxygen)	67	68	83
Sodium hydroxide (solution)	180	186	174
Methanol, solvents and other products	23	21	32
Oils and lubricants	95	113	120
Total chemical products	**15,935**	**11,380**	**14,069**

Withdrawals

Figure 39 Water withdrawal (thousands of m^3) [GRI 303-3]

		2019	2020	2021
Water withdrawn for process consumption	From Aqueduct	99	85	94
	From Well	2,347	1,922	1,988
	From surface water body - fresh water	218	282	279
	From third parties - fresh water	47	54	30
	From surface water body - salt/sea water	707	618	583
	Total	**3,418**	**2,961**	**2,974**
Derived water for hydroelectric use	From surface water body - fresh water for hydroelectric production	3,082,634	3,108,050	3,060,194
Water derived and returned for cooling	From surface water body - fresh water for cooling	910,481	842,788	971,518
	Surface water body - salt/sea water for cooling	424,753	278,798	521,510
	Total	**1,335,234**	**1,121,586**	**1,493,028**

Effluents

Figure 40 Discharges, returned water (water in thousands of m^3) [GRI 303-4]

		2019	2020	2021
Industrial wastewater discharged	In the sewer	207	188	168
	In surface water body (fresh water)	3,990	4,090	4,175
	In coastal waters/salt water channels	1,412	1,161	898
	Total discharged water	**5,609**	**5,438**	**5,241**
Recovered waters	Recovered in the production cycle	1,374	770	763
	% of total water withdrawn	40%	26%	26%
Returned water (of hydroelectric derivation)		3,082,634	3,108,050	3,060,194
Returned (cooling) water	In surface water body (fresh water)	910,481	842,788	971,518
	In coastal waters/salt water channels	424,753	278,798	521,510
	Total	**1,335,234**	**1,121,586**	**1,493,028**
Pollutant discharges into surface water	BOD	6.1	4.8	5.8
	COD	18	15	31

NOTE: Salt/sea water is defined as marine or salt water with a concentration of dissolved solids (measured as sodium chloride) >1000 mg/l.

Waste*

*Figure 41 Waste produced (t) [GRI 306]***

	2019	2020	2021
Non-hazardous waste			
Non-hazardous waste for material recovery			24,772
Total recovery			**24,772**
Non-hazardous waste other disposals			1,032
Non-hazardous waste at landfill			1,060
Total at disposal			**2,092**
Total non-hazardous waste produced	**27,802**	**23,953**	**26,864**
% non-hazardous waste recovered			*92.2%*
Hazardous waste			
Hazardous waste for material recovery			1,257
Total recovery			**1,257**
Hazardous waste for incineration			6
Hazardous waste other disposals			3,946
Hazardous waste at landfill			8
Total at disposal			**3,959**
Total hazardous waste produced	**3,405**	**16,202**	**5,216**
% hazardous waste recovered			*24.1%*

* The methodological change, adopted in 2021, to align with the requirements of the GRI 306 2020 indicator limits the comparability of the waste data to total hazardous, total non-hazardous, due to unavailability of higher detail in previous years.
** Indicators calculated in accordance with the GRI 306 - 2020 *standard* update. The energy recovery operation (R1) is classified as a recovery activity under national law.

Emissions

Figure 42 Total emissions (t) [GRI 305-1_2_6_7]

	2019	2020	2021
CO_2 from combustion processes	5,228,056	4,260,787	5,518,988
CO_2 from motor vehicles*	467	607	84
CO_2 indirect from energy acquisition			
*Location based***	52,736	57,573	56,142
*Market based***	85,527	1,244	880
Fluorinated gases (t CO_2 eq.)	1,440	1,250	5,355
of which SF_6 (Kg)***	45	37	188
NO_x	1,886	1,416	1,680
SO_2	747	393	437
Powders	49	31	24
Other metals (Sb + As + Pb + Cr + Cu + Mn + Ni + V + Sn+Cd+Tl)**** (kg)	48	237	928
Dioxins (grams - toxic equivalency)	0.002	0.0003	0.0002

* The reduction is due to both improved data reporting and efficiency gains in consumption.
** See notes on page 35.
*** The indicator includes the new parameters (Pd+Pt+Rh+Sn) prescribed at the San Filippo del Mela Plant.
**** The variation compared to previous years is due to accidental losses occurred on High Voltage circuit breakers.

Natural capital in the Smart Infrastructures BU

Resources and materials used

Figure 43 Resources used [GRI 301-1; GRI 302-1_2; GRI 303-5]

	2019	2020	2021
Fuel (TJ)			
Natural gas	3,297	4,039	5,742
Coal	1,805	1,075	-
Oil (OCD, diesel)	0.1	0.1	0.1
Biogas (from group purification plants)	12	10	7
Automotive fuels (TJ)			
Petrol	10	10	11
Diesel	18	18	19
Methane	9	9	12
Energy (GWh)			
Electricity for plant self-consumption		40	38
Electricity consumed	114	108	118
of which renewable		99	117
Heat consumed for heating premises*		2	2
Heat energy (GWh - purchased from external sources)	464	464	505
Chemical products and materials (t)			
Mineral acids	628	601	512
Water additives/conditioners	8,235	9,098	8,690
Lime and solid neutralisers	1,225	841	0
Active carbon	72	67	42
Sodium chloride	21	19	38
Technical gases (nitrogen, CO_2, hydrogen, oxygen)	141	190	213
Sodium hydroxide (solution)	196	170	169
Methanol, solvents and other products	998	1,011	957
Odorants	58	57	74
Oils and lubricants	57	35	31
Urea (solution)	668	529	361
Total chemical products	**12,299**	**12,618**	**11,088**

* It also includes heat used for industrial purposes.

Withdrawals

Figure 44 Water withdrawal (thousands of m³) [GRI 303-3]

		2019	2020	2021
Water withdrawn for process consumption	From Aqueduct	721	800	814
	From Well	623	640	614
	Total	**1,344**	**1,440**	**1,428**
Water derived and returned	From surface water body - fresh water	3	0.1	-
	From acquifer	1,716	2,179	1,861
	Total	**1,719**	**2,179**	**1,861**
Water withdrawn for distribution to water service users (millions of m^3)		93	92	93

Effluents

Figure 45 Discharges, returned water and drinking water distributed (thousands of m³) [GRI 303-4]

		2019	2020	2021
Industrial wastewater discharged	In the sewer	370	308	379
	In surface water body (fresh water)	216	229	255
	Total discharged water	**586**	**537**	**634**
Recovered waters	Recovered in the production cycle	11.0	12.0	11.2
	% of total water withdrawn	0.8%	0.8%	0.8%
Returned (cooling) water	In surface water body (fresh water)	3	-	-
	In the aquifer	1,716	2,179	1,861
	Total	**1,719**	**2,179**	**1,861**
Public water supplied to water service users (millions of m^3)		54	54	56
Pollutant discharges into surface water (t)	BOD	1.1	0.9	0.6
	COD	5.3	6.6	1.7

* Salt/sea water is defined as marine or salt water with a concentration of dissolved solids (measured as sodium chloride) >1000 mg/l.

Waste*

*Figure 46 Waste produced (t) [GRI 306]***

	2019	2020	2021
Non-hazardous waste			
Non-hazardous waste for material recovery			3,725
Non-hazardous waste for energy recovery			19,190
Total recovery			**22,916**
Non-hazardous waste other disposals			4,777
Total at disposal			**4,777**
Total non-hazardous waste produced	**37,395**	**35,862**	**27,693**
% non-hazardous waste recovered			82.7%
Hazardous waste			
Hazardous waste for material recovery			402
Total recovery			**402**
Hazardous waste other disposals			36
Total at disposal			**36**
Total hazardous waste produced	**333**	**468**	**439**
% hazardous waste recovered			**91.7%**

* The methodological change, adopted in 2021, to align with the requirements of the GRI 306 2020 indicator limits the comparability of the waste data to total hazardous, total non-hazardous, due to unavailability of higher detail in previous years.
** Indicators calculated in accordance with the GRI 306 - 2020 standard update. The energy recovery operation (R1) is classified as a recovery activity under national law.

Emissions

Figure 47 Total emissions (t) [GRI 305-1_2_6_7]

	2019	2020	2021
CO_2 from combustion processes	377,631	329,704	307,845
CO_2 from motor vehicles	2,575	2,539	2,858
CO_2 indirect from energy acquisition			
*Location based**	33,970	30,713	31,201
*Market based**	55,092	1,399	489
Fluorinated gases (t CO_2 eq.)	776	1,173	4,760
of which SF_6 (Kg)	18	11	6
Methane (CH4) - losses from natural gas distribution networks (t CO_{2eq})	45,204	28,875	52,333
NO_x	133	101	115
SO_2	117	73	0
Powders	0.2	0.2	0.1

* See notes on page 35.

Figure 48 Distributed Water Quality Analysis

Technical data	2019	2020	2021
Potability analysis – samples (no.)	13,300	11,222	11,537
Potability analysis – total parameters (no.)	279,808	219,240	233,143

Natural capital in the Corporate BU

Resources used

Figure 49 Resources used [GRI 301-1; GRI 302-1_2; GRI 303-5]

	2019	2020	2021
Water (thousand m³)	177	143	135
Electricity distributed (GWh)	14	12	5
of which renewable	NA	12	5
Heat consumed for heating and cooling premises	6	7	5
of which renewable	NA	2	1
Fuel (TJ)			
Methane	26	18	9
Fuels (TJ)			
Petrol	3.6	2.6	6.1
Diesel	48	24	31
Methane	1.0	0.7	0.8
Electricity for vehicles GWh			0.013

Waste*

*Figure 50 Waste produced (t) [GRI 306]***

	2019	2020	2021
Non-hazardous waste			
Non-hazardous waste for material recovery			11,487.85
Non-hazardous waste for energy recovery			42.02
Total recovery			11,530
Total non-hazardous waste produced	134.6	199.2	11,530
% non-hazardous waste recovered			100%
Hazardous waste			
Hazardous waste for material recovery			78.929
Total recovery			79
Hazardous waste to other disposals			0.69
Total at disposal			1
Total hazardous waste produced	18.2	6.5	79.6
% hazardous waste recovered			99%

* The methodological change, adopted in 2021, to align with the requirements of the GRI 306 2020 indicator limits the comparability of the waste data to total hazardous, total non-hazardous, due to unavailability of higher detail in previous years.

** Indicators calculated in accordance with the GRI 306 - 2020 standard update. The energy recovery operation (R1) is classified as a recovery activity under national law.

Emissions

Figure 51 Total emissions (t) [GRI 305-1_2_6_7]

	2019	2020	2021
CO_2 from combustion processes	1,450	1,013	493
CO_2 from motor vehicles	3,827	1,997	2,797
CO_2 indirect from energy acquisition			
*Location based**	4,027	3,392	1,425
*Market based**	6,530	89	22
Fluorinated gases (t $CO_{2\,eq.}$)	165	35	277
of which SF_6 (Kg)	0	0	0

* See notes on page 35 for methodology; In addition, the *Location based* 2020 figure is different than that published in the previous Integrated Report due to a change in calculation methodology.

Human capital

Composition of personnel

Figure 52 Personnel by category and type of contract [GRI 102-8; 405-1]

	2019			2020			2021		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Managers	147	27	174	145	26	171	154	31	185
Middle Managers	507	156	663	510	164	674	541	191	731
White-collar workers	3,266	1,464	4,730	3,337	1,524	4,861	3,525	1,743	5,269
Blue-collar workers	5,104	199	5,303	5,267	201	5,468	5,602	204	5,806
Permanent workers	9,024	1,846	10,870	9,259	1,915	11,174	9,822	2,169	11,991
Fixed-term workers	402	22	424	246	57	303	289	90	379
Managers	1	1	2	3	1	4	1	-	1
Middle Managers	1	-	1	1	-	1	-	-	-
White-collar workers	16	15	31	28	42	70	25	76	101
Blue-collar workers	384	6	390	214	14	228	263	14	277
Total	**9,426**	**1,868**	**11,294**	**9,505**	**1,972**	**11,477**	**10,111**	**2,259**	**12,370**
of which workers with part-time contracts	112	275	387	115	262	377	111	289	400
of which workers with full-time contracts	9,314	1,593	10,907	9,390	1,710	11,100	10,000	1,970	11,970
Workers with non-standard contracts* (temporary/interns/collaborators)	156	66	222	111	52	163	143	62	205

* Workers under non-standard contracts do not include consultants.

Figure 53 Personnel by type of contract applied [GRI 102-41]

	2019	2020	2021
Executive contracts	176	175	186
Electrical contracts	3,511	3,488	3,573
Single natural gas and water contracts	1,579	1,545	1,812
Commercial contracts	490	545	593
Municipal sanitation contracts	4,673	4,797	5,194
FISE contracts	804	872	909
Haulage contract	58	4	-
Other contracts	3	51	103
Total	**11,294**	**11,477**	**12,370**

Figure 54 Average number of employees in service

	2019	2020	2021
Total	**11,311**	**11,431**	**12,282**

Figure 55 Personnel by workplace (Italian Regions) [GRI 102-8]

	2019			2020			2021		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Abruzzo	49	5	54	51	6	57	53	6	59
Calabria	78	1	79	75	1	76	71	1	72
Campania	197	18	215	197	19	216	201	21	222
Emilia Romagna	47	7	54	45	6	51	73	5	78
Friuli Venezia Giulia	143	4	147	125	4	129	119	3	122
Lazio	3	2	5	7	5	12	6	6	12
Liguria	57	4	61	83	5	88	93	7	100
Lombardy	8,531	1,795	10,326	8,563	1,895	10,458	9,159	2,180	11,339
Marche	7	4	11	7	4	11	-	-	-
Piedmont	107	22	129	107	20	127	112	24	136
Puglia	43	1	44	85	3	88	72	3	75
Sicily	156	5	161	157	4	161	149	3	152
Veneto	4	-	4	-	-	-	-	-	-
International	4	-	4	3	-	3	3	-	3
Total	**9,426**	**1,868**	**11,294**	**9,505**	**1,972**	**11,477**	**10,111**	**2,259**	**12,370**

*Figure 56 Main foreign nationalities of employees**

	Number of employees	Percentage of minority employees out of total employees
Romanian	35	0.30%
Peruvian	27	0.20%
Albanian	25	0.20%
Moroccan	22	0.20%
Bulgarian	10	0.10%
Egyptian	10	0.10%
Other nationalities (non-Italian)	108	0.90%

* Calculated based on the employee's citizenship.

Operational sustainability targets 21-30

Stakeholder engagement and materiality analysis

Financial capital

Manufacturing capital

Natural capital

Human capital

Relational capital

The Acsm Agam Group

The AEB Group

Figure 57 Number of hires and turnover rate, by age, gender and contract type [GRI 401-1]*

	2019			2020			2021		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Permanent workers	438	86	524	528	120	648	608	197	805
Up to age 30	169	40	209	220	62	282	255	98	353
From 31 to 40	124	30	154	162	43	205	188	67	255
From 41 to 50	83	10	93	94	11	105	116	28	144
Over 50	62	6	68	52	4	56	49	4	53
Fixed-term workers	338	15	353	285	62	347	369	112	481
Up to age 30	131	14	145	125	40	165	155	74	229
From 31 to 40	102	1	103	69	14	83	99	27	126
From 41 to 50	82	0	82	77	8	85	83	8	91
Over 50	23	0	23	14	0	14	32	3	35
Total	**776**	**101**	**877**	**813**	**182**	**995**	**977**	**309**	**1,286**
Percentage of new employees out of total workforce	8.23%	5.41%	7.77%	8.55%	9.23%	8.67%	9.66%	13.68%	10.40%

* The turnover rate was calculated according to the following formula: (outgoing) / (employees) at Dec. 31.

Figure 58 Selection costs (Hiring Cost) (thousands of euro)*

	2019	2020	2021
Total	2,805	2,209	2,738

* Limited to the A2A Group.

Figure 59 Workers leaving, by age bracket [GRI 401-1]

	2019					2020					2021				
	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	0	0	0	288	288	0	0	0	388	388	0	0	0	400	400
Voluntary resignation	52	68	39	69	228	47	56	47	35	185	98	121	57	19	295
Decease	0	1	3	10	14	0	0	4	14	18	0	0	5	21	26
Dismissal	10	16	29	30	85	4	9	15	61	89	11	8	13	50	82
Other (e.g., end of fixed-term contract)	68	57	32	18	175	76	53	55	50	234	97	60	55	19	231
Total	**130**	**142**	**103**	**415**	**790**	**127**	**118**	**121**	**548**	**914**	**206**	**189**	**130**	**509**	**1,034**
Turnover rate	12.99%	6.34%	3.13%	8.71%	6.99%	11.18%	4.85%	3.77%	11.67%	7.96%	15.41%	7.10%	3.88%	10.14%	8.36%
Voluntary turnover rate**	4.90%	2.95%	1.15%	5.69%	3.76%	4.14%	2.30%	1.46%	9.01%	4.99%	7.33%	4.55%	1.70%	8.35%	5.62%

* The turnover rate was calculated according to the following formula: (departures) / (employees) at December 31.
** Intended as the ratio of voluntary outgoing employees and retirement to total employees.

Figure 60 Workers leaving, by gender [GRI 401-1]

	2019			2020			2021		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Retirement	267	21	288	358	30	388	372	28	400
Voluntary resignation	198	30	228	148	37	185	239	56	295
Decease	14	0	14	18	0	18	24	2	26
Dismissal	68	17	85	70	19	89	62	20	82
Other (e.g., end of fixed-term contract)	161	14	175	221	13	234	193	38	231
Total	**708**	**82**	**790**	**815**	**99**	**914**	**890**	**144**	**1,034**
Turnover rate*	7.51%	4.39%	6.99%	8.57%	5.02%	7.96%	8.80%	6.37%	8.36%
Voluntary turnover rate**	4.11%	2.03%	3.76%	5.32%	3.40%	4.99%	6.04%	3.72%	5.62%

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Figure 61 Personnel by age bracket and gender [GRI 405-1]

2019	Managers U	Managers D	Middle Managers U	Middle Managers D	White-collar workers U	White-collar workers D	Blue-collar workers U	Blue-collar workers D	Total
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
Average age of employees	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total	**148**	**28**	**508**	**156**	**3,282**	**1,479**	**5,488**	**205**	**11,294**

2020	Managers U	Managers D	Middle Managers U	Middle Managers D	White-collar workers U	White-collar workers D	Blue-collar workers U	Blue-collar workers D	Total
Up to age 30	-	-	2	1	332	196	597	8	1,136
From 31 to 40	10	1	94	28	720	464	1,079	38	2,434
From 41 to 50	42	13	158	71	721	432	1,673	100	3,210
Over 50	96	13	257	64	1,592	474	2,132	69	4,697
Average age of employees	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total	**148**	**27**	**511**	**164**	**3,365**	**1,566**	**5,481**	**215**	**11,477**

2021	Managers U	Managers D	Middle Managers U	Middle Managers D	White-collar workers U	White-collar workers D	Blue-collar workers U	Blue-collar workers D	Total
Up to age 30	-	-	1	1	391	273	660	11	1,337
From 31 to 40	10	2	102	37	828	533	1,115	34	2,661
From 41 to 50	34	12	171	83	749	479	1,733	91	3,352
Over 50	111	17	267	70	1,582	534	2,357	82	5,020
Average age of employees	54	52	50	48	47	43	46	48	46
Total	**155**	**31**	**541**	**191**	**3,550**	**1,819**	**5,865**	**218**	**12,370**

Figure 62 Personnel by protected categories [GRI 405-1]

	2019			2020			2021		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Cat. Pro. (Art.18 para.2 Law 68/99)	36	15	51	34	14	48	33	13	46
People with disabilities	302	87	389	277	74	351	263	74	337
Total	**338**	**102**	**440**	**311**	**88**	**399**	**296**	**87**	**383**

Figure 63 Personnel by position and company seniority [G4-EU15]

2019	Managers	Middle Managers	White-collar workers	Blue-collar workers	Total	%
Up to age 10	61	213	1,481	2,323	4,078	36.1%
From 11 to 20	65	193	934	1,705	2,897	25.7%
From 21 to 30	38	120	1,200	1,085	2,443	21.6%
Over 30	12	138	1,146	580	1,876	16.6%
Total	**176**	**664**	**4761**	**5,693**	**11,294**	**100.0%**

2020	Managers	Middle Managers	White-collar workers	Blue-collar workers	Total	%
Up to age 10	62	217	1,716	2,398	4,393	38.3%
From 11 to 20	67	213	1,022	1,786	3,088	26.9%
From 21 to 30	34	108	1,071	994	2,207	19.2%
Over 30	12	137	1,122	518	1,789	15.6%
Total	**175**	**675**	**4,931**	**5,696**	**11,477**	**100.0%**

2021	Managers	Middle Managers	White-collar workers	Blue-collar workers	Total	%
Up to age 10	64	241	2,097	2,752	5,154	41.7%
From 11 to 20	67	248	1,158	1,893	3,366	27.2%
From 21 to 30	38	99	937	886	1,960	15.8%
Over 30	17	144	1,177	552	1,890	15.3%
Total	**186**	**732**	**5,369**	**6,083**	**12,370**	**100.0%**

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*Figure 64 Personnel by educational qualification**

	2019				2020				2021			
	Men	Women	Total	%	Men	Women	Total	%	Men	Women	Total	%
Undergraduate degree	1,143	619	1,762	15.6%	1,280	703	1,983	17.3%	1,424	833	2,257	19.2%
Secondary school diploma	3,711	924	4,635	41.0%	3,828	960	4,788	41.7%	3,945	1,013	4,958	42.2%
Vocational degree	635	66	701	6.2%	635	60	695	6.1%	620	55	675	5.7%
Compulsory schooling	3,937	259	4,196	37.2%	3,765	246	4,011	34.9%	3,638	234	3,872	32.9%
Total	**9,426**	**1,868**	**11,294**	**100%**	**9,508**	**1,969**	**11,477**	**100%**	**9,627**	**2,135**	**11,762**	**100%**

* Does not include AEB Group data.

Personnel training and development

Figure 65 Training delivered by role [GRI 404-1]

	2019				2020				2021			
	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	
	U	D	U	D	U	D	U	D	U	D	U	D
Managers	4,535	1,049	30.64	37.45	1,899	389	12.83	14.42	4,362	1,041	28.14	33.58
Middle Managers	22,952	6,355	45.18	40.74	10,920	3,478	21.37	21.21	21,149	7,279	39.09	38.11
White-collar workers	78,960	22,108	24.06	14.95	64,758	24,552	19.24	15.68	93,695	37,105	26.39	20.40
Blue-collar workers	64,494	837	11.75	4.08	41,585	914	7.59	4.25	60,152	1,063	10.26	4.87
Total	**170,940**	**30,349**	**18.13**	**16.25**	**119,162**	**29,333**	**12.54**	**14.87**	**179,358**	**46,487**	**17.74**	**20.58**

Figure 66 Training delivered by age bracket [GRI 404-1]

	2019				2020				2021			
	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	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Up to age 30	22,937	4,020	27.27	25.12	20,268	4,880	21.77	23.81	27,491	7,114	26.13	24.96
From 31 to 40	32,647	8,484	18.51	17.90	25,977	8,441	13.65	15.90	42,956	12,949	20.90	21.37
From 41 to 50	44,545	9,493	16.60	15.61	27,194	8,422	10.48	13.67	46,139	13,949	17.17	20.98
Over 50	70,811	8,352	17.11	13.34	45,723	7,590	11.21	12.24	62,771	12,475	14.54	17.75
Total	**170,940**	**30,349**	**18.13**	**16.25**	**119,162**	**29,333**	**12.54**	**14.87**	**179,358**	**46,487**	**17.74**	**20.58**

Figure 67 - Health and safety training

	2019	2020	2021
Training hours	96,067	66,722	111,682

Figure 68 Cost of training

	2019	2020	2021
Euro	1,800,839	1,433,437	1,470,932
% of training costs covered by inter-professional funds	37%	37%	42%

Figure 69 Employees trained in the year (percentage of total)

	2019	2020	2021
Percentage	81%	73%	76%

Figure 70 Attendance of training courses (number)

	2019	2020	2021
Total	54,465	99,208	73,248

Figure 71 Percentage of employees who regularly receive performance assessments [GRI 404-3]

	2019	2020	2021
Percentage	49%	50%	48.51%

Figure 72 Third-party employees that have undergone relevant health and safety training (number)

	Number of employees involved	Training hours provided
2019	3,702	6,176
2020	808	1,373
2021	1,054	1,631

Occupational health and safety

Figure 73 Data on injuries [GRI 403-2]*

	2019	2020	2021
Number of accidents (excluding commuting)	461	325	423
Men	436	308	401
Women	25	17	22
*of which with severe consequences***	-	7	3
Number of days of absence	11,238	10,312	10,364
Average duration	24.38	31.73	24.50
Frequency Index (FI)	24.95	17.69	20.91
Severity Index (SI)	0.61	0.56	0.51
Occurrence Index (OI)	7.4	4.3	5.3
Commuting accidents	86	50	66
Lost Time Injury Rate (LTIR with 200,000)	4.99	3.54	4.18

* 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 of absence x 1,000: hours worked)
II = incidence index (no accidents x 1,000: headcount) – it is calculated on the number of commuting accidents.
LTIR= no. accidents x 200,000 hours worked

Commuting accidents: accidents suffered by workers while commuting from home to work and vice-versa (but not while in service).

Figure 74 Percentage of workers represented in formal health and safety committees [GRI 403-1]

	2019	2020	2021
Percentage of the total	100%	100%	100%

Absenteeism

Figure 76 Number of working days lost by gender [GRI 403-2]

	2019		2020		2021	
	Men	Women	Men	Women	Men	Women
Illness	106,409	18,946	125,453	17,649	121,744	16,105
Unpaid leave/absence	6,414	1,028	4,585	494	6,641	1,689
Company strikes	-	-	-	-	-	-
National strikes	30	3	5	1	4,013	300
Accidents	11,355	1,062	10,876	682	13,959	700
Total	**124,208**	**21,039**	**140,919**	**18,826**	**146,357**	**18,794**
Total days worked by the workforce in the reporting period	2,488,184	465,105	2,532,261	489,561	2,707,427	553,211
Absentee Rate	5%	5%	6%	4%	5%	3%

* 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 77 Incident indices of contractors and subcontractors for construction and maintenance works [GRI 403-2_G4-EU17]

	No. of hours worked by contractors	No. Deceased	No. of accidents	No. of accidents with severe consequences	Days lost	Frequency index	Severity index
2019	4,492,370	0	25	n.a.	278	5.56	0.06
2020	2,945,274	0	22	2	736	7.47	0.25
2021**	4,507,139	1	42	3	9,129	9.33	2.03

* The indicator does not include AEB, Fragea and Agripower.
** Number of days lost 2021 includes days lost equal to the remaining working life of the deceased contractor.

Figure 75 Health data by BU

	Generation and Trading BU			Market BU			Environment BU		
	2019	2020	2021	2019	2020	2021	2019	2020	2021
Visits as per 81/08	672	548	751	337	195	535	5,790	5,143	4,039
Tox visits	114	180	171	27	24	27	2,292	2,120	2,759
Assessments	1,797	1,325	1,530	406	194	506	13,686	9,539	8,593
Flu vaccination	13	84	76	71	170	186	274	550	466
Vaccinations	11	8	9	18	6	0	1,497	1,283	629
Site inspections	17	16	28	7	11	16	67	44	57
Reporting occupational illness	8	3	8	0	0	0	11	9	7
Health provisions	17	17	17	5	5	5	27	27	27
Specialist visits	0	0	0	0	0	1	125	26	23

	Smart infrastructures BU			Corporate			Total		
	2019	2020	2021	2019	2020	2021	2019	2020	2021
Visits as per 81/08	1,361	1,192	1,666	536	266	712	8,696	7,344	7,703
Tox visits	368	369	471	12	1	1	2,813	2,694	3,429
Assessments	2,885	1,740	2,190	632	266	678	19,406	13,064	13,497
Flu vaccination	304	567	568	227	341	312	889	1,712	1,608
Vaccinations	174	97	124	18	3	0	1,718	1,397	762
Site inspections	35	24	23	8	13	10	134	108	134
Reporting occupational illness	1	0	1	0	0	0	20	12	16
Health provisions	9	9	9	7	7	7	65	65	65
Specialist visits	5	0	23	0	0	0	130	26	47

Figure 78 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]*

	2019			2020			2021		
	Men	Women	General total	Men	Women	General total	Men	Women	General total
Days lost due to occupational illness	-	-	-	-	-	-	-	-	-
Days lost to accidents	11,355	1,062	12,417	10,876	682	11,558	13,959	700	14,659
Total workable hours of the workforce in the reporting period	18,063,290	3,386,063	21,449,353	18,265,462	3,568,847	21,834,309	19,271,291	4,009,527	23,280,817
Total hours worked by the workforce in the reporting period	15,693,976	2,801,174	18,495,150	15,459,541	2,908,822	18,368,362	16,817,777	3,413,159	20,230,935
Lost day rate	0.06%	0.03%	0.06%	0.06%	0.02%	0.05%	0.07%	0.02%	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.

*Figure 79 Return to work and retention rates after parental leave**

	2019		2020		2021	
	Men	Women	Men	Women	Men	Women
Employees who took parental leave	338	219	312	168	371	170
of whom, employees who returned to work in 2019	328	183	0	0	0	0
of whom, employees who returned to work in 2020	-	-	308	150	0	0
of whom, employees who returned to work in 2021	-	-	-	-	358	141
Employed by the company 12 months after return	-	-	-	-	304	142

* Employees who did not return to work relative to 2020 have not necessarily resigned, but are continuing their leave.

Figure 80 Union membership

	2019	2020	2021
Members of Trade Unions	4,831	4,749	5,035

Figure 81 Hours of strikes

	2019	2020	2021
Total strike hours	237	42	29,572
Strike hours per capita*	0	0	2

* Per capita hours are calculated on the average headcount.

Benefits and remuneration

Figure 82 Contributions to Recreational and Welfare Circles

	2019	2020	2021
Total (€)	5,325,796	5,522,525	5,918,051

Figure 83 Gender remuneration broken down by quartiles

	2020	2021
Share of women among the Top 10% of highest paid employees	14.12%	15.63%
Percentage of women in the first pay quartile globally	15.69%	16.94%
Percentage of women in the upper-middle global pay quartile	18.93%	19.72%
Percentage of women in the lower-middle global pay quartile	17.13%	18.63%
Percentage of women in the lowest global pay quartile	17.02%	17.84%

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Figure 84 Electricity sold to end customers (GWh)

	2019	2020	2021
Total	13,278	14,555	18,020

Figure 51 Gas sold to end customers (Mm³)

	2019	2020	2021
Total	1,987	1,878	2,275

Figure 85 Electricity supply contracts by type of market

	2019	2020	2021
Protected market	476,269	429,707	369,899
Free market	749,554	890,070	1,013,943
Gradual protection market			62,534
Safeguard market			18,486
Total	**1,225,823**	**1,319,777**	**1,464,862**

Figure 86 Electricity supply contracts by type of customer

	2019	2020	2021
Domestic	946,223	961,835	1,063,108
SME	139,574	152,167	200,809
Large customers	82,158	135,805	127,633
Condominiums	34,498	37,458	39,884
Public lighting	23,370	32,512	33,428
Total	**1,225,823**	**1,319,777**	**1,464,862**

Figure 87 Gas supply contracts by type of market

	2019	2020	2021
Protected market	597,714	548,400	539,738
Free market	645,009	699,146	826,423
Total	**1,242,723**	**1,247,546**	**1,366,161**

Figure 88 Natural gas supply contracts by type of customer [G4 - EU3]

	2019	2020	2021
Domestic	1,159,003	1,162,058	1,274,612
SME	67,482	58,819	63,063
Large customers	7,663	17,754	18,722
Condominiums	8,575	8,915	9,764
Total	**1,242,723**	**1,247,546**	**1,366,161**

Figure 89 Geographic breakdown of electricity sales volumes

	2019	2020	2021
Lombardy	65%	53%	60%
Rest of Italy	35%	47%	40%

Figure 90 Geographic breakdown of gas sales volumes

	2019	2020	2021
Lombardy	72%	78%	74%
Rest of Italy	28%	22%	26%

Figure 91 Cerved Energy Monitor survey on the level of satisfaction of A2A Energia customers

		2018			2019			2020		
Service supplied	Business segment	CSI	Market standard	Position*	CSI	Market standard	Position*	CSI	Market standard	Position*
Gas	Domestic	93.3	92.0	1 of 7	91.9	92.9	2 of 7	93.1	93.4	3 of 7
	VAT reg. & SME	93.8	93.4	1 of 6	94.7	94	1 of 6	96.3	95.5	1 of 5
Electricity	Domestic	91.7	91.1	5 of 9	92.2	91.6	3 of 9	93.2	92.2	3 of 8
	VAT reg. & SME	91.1	91.7	3 of 10	93.1	93	4 of 11	95	95	3 of 11

* The position in the rankings derives from the comparison of the performance of A2A Energia with that of the main market players, apart from the macro category of "Other suppliers", which combines several operators and whose results cannot be read individually due to the number of associated interviews.

Figure 92 Customer satisfaction on call centre operations

	2018 (annual)	2019 (annual)	2020 (annual)
A2A Energia	98.1%	95.4%	94.6%
National average	92.3%	92.0%	90.1%

* In 2021, the 2020 figure was published.

Figure 93 Customer satisfaction after a call to the call centre (percentage on assessments recorded) - A2A Energia

	2019	2020	2021
score 1 (very dissatisfied)	5.4%	5.3%	6.7%
score 2 (dissatisfied)	2.2%	2.3%	2.4%
score 3 (satisfied)	8.0%	6.7%	5.9%
score 4 (very satisfied)	84.4%	85.7%	85.0%

Figure 94 Electricity and natural gas complaint trends

	2019	2020	2021
A2A Energia - number of complaints	4,281	5,792	6,121
Lineapiù - Number of complaints	1,766	-	-
Yada Energia (NeN) - Number of complaints	-	39	285
Lumenergia - Number of complaints	6	9	22
Gelsia - Number of complaints			573
ASM Energia	n.a.	n.a.	762
A2A Energia complaints percentage out of average no. of customers	0.20%	0.23%	0.25%
Lineapiù complaints percentage out of average no. of customers	0.55%	-	-
Lumenenergia complaints percentage out of average no. of customers	0.05%	0.08%	0.20%
Yada Energia (NeN) complaints percentage out of average no. of customers	-	0.51%	0.73%
AEB - complaints percentage out of average no. of customers			0.29%
ASM Energia - complaints percentage out of average no. of customers	n.a.	n.a.	n.a.

* 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 95 Electricity bill cost trends (in euro) for a typical household**

	A2A Energia			YADA Energia (NeN)		ASM Energia	
	2019	2020	2021	2020	2021	2020	2021
Sales services	253.92	198.72	370.64	264.68	529.74	237.80	370.64
Network services	231.75	218.46	181.15	218.44	174.10	259.50	181.15
Tax	21.79	21.94	21.82	21.79	21.79	22.88	21.82
VAT	50.75	43.91	57.36	50.49	72.56	51.82	57.36
Total	**558.21**	**483.03**	**630.97**	**555.40**	**798.19**	**572.00**	**630.97**

* 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 96 Cost trends in the natural gas bill in euro for a typical household**

	A2A Energia			YADA Energia (NeN)		ASM Energia	
	2019	2020	2021	2020	2021	2020	2021
Sales services	419.18	309.33	522.17	337.93	913.86	323.20	522.17
Network services	248.71	239.12	237.37	234.22	264.94	242.70	237.37
Tax	224.68	224.68	224.68	224.68	224.68	232.00	224.68
VAT	180.63	159.27	155.39	147.45	256.08	148.10	155.39
Total	**1,073**	**932.40**	**1,140**	**944.28**	**1,659.56**	**946.00**	**1,139.61**

* For gas, domestic use with independent heating in the north-east and an annual use of 1,400 m^3 was taken as the example by the Authority.

Figure 97 Office visits

	2019	2020	2021
Total number of customers served	**240,354**	**134,399**	**185,995**
A2A Energia	168,054	89,065	146,336
Lumenergia	-	3,853	4,816
AEB	-	-	34,843
Average office waiting time in minutes			
A2A Energia	12'54"	5'30"	5'12"
Lumenergia	n.a.	n.a.	n.a.
AEB	-	-	25'

Figure 98 Customer satisfaction on the services provided at the counter

	2019	2020	2021
Positive	98.7%	99.6%	99.4%
Negative	1.3%	0.4%	0.6%

Figure 99 Number of electricity and gas contracts with the Bollett@mail service

	2019	2020	2021
A2A Energia	458,659	916,534	1,093,616
Lumenergia	1,362	1,457	2,333
ASM Energia	-	4,971	6,399
Yada Energia	-	16,629	51,032
Gelsia	-	-	37,096
Total	**536,143**	**939,591**	**1,190,476**
Increase (percentage)	23.7%	75.3%	26.7%

Figure 100 Number of visits to the commercial websites

	2019	2020	2021
Total number of visits	5,135,493	10,269,646	12,806,487
Registered with the online counter	425,985	517,168	636,493

Figure 101 Green energy sold (GWh)

Market segment	2019	2020	2021
Government	2%	5%	28%
Mass market	51%	33%	37%
Others	47%	62%	36%
Total GWh	**2,276**	**3,858**	**4,976**

Electricity and natural gas distribution service

Figure 102 Extension of the electricity distribution service [G4 – EU3_EU4]

	2019	2020	2021
Customers connected	1,190,375	1,204,394	1,219,703

* Weighted average number of POD active during the year calculated on the basis of ARERA and CSEA provisions and valid for tariff purposes.

Figure 103 Extension of the gas distribution service [G4 – EU3_EU4]*

	2019	2020	2021
Customers connected	1,502,645	1,420,545	1,710,707

* Weighted average number of PDR active during the year calculated on the basis of ARERA and CSEA provisions and valid for tariff purposes

Figure 104 Technical quality of electricity [G4 – EU29_EU28]

	Milan											
	High density area				Medium density area				Low density area			
Service continuity indicator	2019	2020	2021	ARERA 2021 objective	2019	2020	2021	ARERA 2021 objective	2019	2020	2021	ARERA 2021 objective
Average annual minutes of outage per LV user due to long outages without notice	32.81	33.80	38.75	25	34.55	47.11	45.37	40	N/A	N/A	N/A	N/A
Average annual number of outages per LV user due to long outages without notice	1.51	1.57	1.55	1.42	1.76	1.98	2.61	2.03	N/A	N/A	N/A	N/A

	Brescia											
	High density area				Medium density area				Low density area			
Service continuity indicator	2019	2020	2021	ARERA 2021 objective	2019	2020	2021	ARERA 2021 objective	2019	2020	2021	ARERA 2021 objective
Average annual minutes of outage per LV user due to long outages without notice	8.81	8.91	7.15	25	22.48	23.71	24.38	40	29.45	30.19	31.47	60
Average annual number of outages per LV user due to long outages without notice	0.83	0.84	0.84	1.0	2.29	2.64	1.9	2.0	3.07	2.64	2.84	4.0

Operational sustainability targets 21-30

Stakeholder engagement and materiality analysis

Financial capital

Manufacturing capital

Natural capital

Human capital

Relational capital

The Acsm Agam Group

The AEB Group

Figure 105 Technical quality of electricity [G4 – EU29_EU28]

	Cremona											
	High density area				Medium density area				Low density area			
Service continuity indicator	2019	2020	2021	ARERA 2021 objective	2019	2020	2021	ARERA 2021 objective	2019	2020	2021	ARERA 2021 objective
Average annual minutes of outage per LV user due to long outages without notice	9.10	7.00	13.00	25	N/A	N/A	N/A	N/A	12.90	24.00	7.00	60
Average annual number of outages per LV user due to long outages without notice	0.29	0.40	0.30	1	N/A	N/A	N/A	N/A	0.78	1.50	1.00	4

Figure 106 Electricity emergency service [G4 – EU28]

	Milan			Brescia		
	2019	2020	2021	2019	2020	2021
No. MV customers with more than 6 interruptions per year for high density areas	12	29	30	0	2	0
No. of MV customers with more than 8 interruptions a year for medium-concentration areas	0	0	0	4	4	0
No. MV customers with more than 9 interruptions per year for low density areas	N/A	N/A	N/A	3	18	2

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. Terna informs customers of the outages, which have a maximum duration of 90 minutes, with advance notice of 30 minutes, and they may occur at any time during the hourly periods indicated, not necessarily at the beginning of each period. The scheduled outage plan prepared by A2A Reti Elettriche, by day and time slot, is available from the company's website.

Figure 107 SAIDI index

	2019	2020	2021
SAIDI Index	0.648	0.487	0.646

* Index calculated on the Milan area (high concentration), the most representative for the Group.
The average duration of interruption (expressed in hours) with long unannounced interruptions (>3 minutes), with MV and LV origin due to other causes (i.e. responsibility of the distributor), as provided for by ARERA indicators, was considered.

Figure 108 Electricity emergency service [G4 – EU28]

	Cremona		
	2019	2020	2021
No. MV customers with more than 6 interruptions per year for high density areas	0	0	0
No. of MV customers with more than 8 interruptions a year for medium-concentration areas	N/A	N/A	N/A
No. MV customers with more than 9 interruptions per year for low density areas	0	0	0

Figure 109 Commercial quality of electricity: specific indicators for the Milan-Brescia area [G4 – EU21]

Specific indicators	ARERA Level Res. 646/15	Services provided on the indicated timetable (%)			Average time to execute the service (days)		
		2019	2020	2021	2019	2020	2021
Time to prepare estimate for work on the network	15 working days for LV 30 working days for MV	96.34%	98.02%	95.77%	7.83	6.63	7.69
Execution time for simple work	10 working days for LV 20 working days for MV	98.22%	96.92%	95.64%	5.46	5.78	6.3
Execution time for complex work	50 working days	99.03%	98.03%	97.31%	13.21	15.13	17.07
Activation time for LV/MV supply	5 working days	99.44%	99.37%	99.14%	0.63	0.6	0.61
Supply de-activation time	5 working days for LV 7 working days for MV	99.57%	99.24%	99.15%	0.64	0.57	0.66
Reactivation time following suspension due to non-payment	1 working day	99.75%	99.72%	99.67%	0.08	0.07	0.07
Observance of time bracket for appointments	2 hours	99.27%	99.57%	99.45%	n.a.	n.a.	n.a.
Time to restore service following failure of meter equipment during business days from 8 AM to 6 PM on the LV network	3 hours	76.58%	85.27%	89.24%	0.11	02:42	2h and 1min
Time to restore service following failure of meter equipment during non-working days from 6 PM to 8 AM on the LV network	4 hours	90.43%	94.54%	96.18%	0.10	02:07	1h and 52min
Time to report results of testing of LV/MV meter equipment	15 working days	75.35%	97.76%	98.50%	11.86	6.92	6.36
Time for notifying the result of the verification of voltage	20 working days	65.38%	76.92%	100.00%	21.31	22.23	13.8

* The position in the rankings derives from the comparison of the performance of A2A Energia with that of the main market players, apart from the macro category of "Other suppliers", which combines several operators and whose results cannot be read individually due to the number of associated interviews.

Figure 110 Commercial quality of electricity: specific indicators for the Cremona area [G4 – EU21]

Specific indicators	ARERA Level Res. 646/15	Services provided on the indicated timetable (%)			Average time to execute the service (days)		
		2019	2020	2021	2019	2020	2021
Time to prepare estimate for work on the network	15 working days for LV 30 working days for MV	100% 100%	100% 100%	100% 100%	4.96 18.60	3.44 10	4.92 9.25
Execution time for simple work	10 working days for LV 20 working days for MV	100% 100%	100% 100%	99.25% 100%	2.28 0	2.54 9	3.16 0
Execution time for complex work	50 working days for LV 50 working days for MV	100% 100%	100% 100%	100% 100%	20.64 22.57	20.47 1	19.83 20.33
Activation time for LV/MV supply	5 working days	99.6% 100%	100% 100%	99.96% 100%	0.35 2.33	0.28 5	0.28 2
Supply de-activation time	5 working days for LV 7 working days for MV	99.80% 100%	99.02% -	99.82% 100%	0.56 1	0.54 -	0.51 0.5
Reactivation time following suspension due to non-payment	1 working day on zeroed 1 working day reduced 15%	99.64%	98.18% 100%	99.74%	0.1	0.14 0	0.09
Observance of time bracket for appointments	2 hours	100%	100%	98.96%	-	-	-
Time to restore service following failure of meter equipment during business days from 8 AM to 6 PM on the LV network	3 hours	100%	100%	100%	1h and 13 min	1 h and 6 min	1 h and 16 min
Time to restore service following failure of meter equipment during non-working days from 6 PM to 8 AM on the LV network	4 hours	100%	100%	100%	1h and 27 min	1 h and 23 min	1 h and 24 min
Time to report results of testing of LV/MV meter equipment	15 working days	100%	100% -	100%	8.38	4.25 -	6
Time for notifying the result of the verification of voltage	20 working days	NA	NA	100%	NA	NA	11

Figure 111 Commercial quality of electricity: specific indicators for the Monza area [G4 – EU21]

Specific indicator	ARERA Level Res. 646/15	Services provided on the indicated timetable (%)	Average time to execute the service (days)
		2021	
Time to prepare estimate for work on the network	15 working days for LV 30 working days for MV	100.00	7.23
Execution time for simple work	10 working days for LV 20 working days for MV	98.98	5.64
Execution time for complex work	50 working days	100.00	15.5
Activation time for LV/MV supply	5 working days	99.74	0.94
Supply de-activation time	5 working days for LV 7 working days for MV	99.22	1.32
Reactivation time following suspension due to non-payment	1 working day	98.28	0.24
Observance of time bracket for appointments	2 hours	100.00	-
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	100.00	1.27
Time for reinstating supply following a fault in the measurement group on working days between 8:00 and 18:00 on the LV network	4 hours	100.00	1.57
Time to report results of testing of LV/MV meter equipment	15 working days	-	-
Time for notifying the result of the verification of voltage	20 working days	-	-

Figure 112 Commercial quality of electricity: general indicators for the Milan Brescia area [G4 – EU21]

Type of service	ARERA level - LV	Services provided on the indicated timetable (%)		
		2019	2020	2021
Minimum percentage of detailed responses to written complaints or requests for information provided within the maximum period of 30 calendar days	95%	95.40%	96.78%	96.56%

Type of service	ARERA level - MV	Services provided on the indicated timetable (%)		
		2019	2020	2021
Minimum percentage of detailed responses to written complaints or requests for information provided within the maximum period of 30 calendar days	95%	98.86%	99.17%	94.87%

Figure 113 Commercial quality of electricity: general indicators for the Cremona area [G4 – EU21]

Type of service	ARERA level - LV	Services provided on the indicated timetable (%)		
		2019	2020	2021
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%

Type of service	ARERA level - MV	Services provided on the indicated timetable (%)		
		2019	2020	2021
Minimum percentage of detailed responses to written complaints or requests for information provided within the maximum period of 30 calendar days	95%	100%	100%	83%

Figure 114 Commercial quality of electricity: general indicators for the Monza area [G4 – EU21]

Specific indicator	ARERA level - LV	Services provided on the indicated timetable (%)
		2021
Minimum percentage of detailed responses to written complaints or requests for information provided within the maximum period of 30 calendar days	95%	80.39

Operational sustainability targets 21-30

Stakeholder engagement and materiality analysis

Financial capital

Manufacturing capital

Natural capital

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Relational capital

The Acsm Agam Group

The AEB Group

Figure 115 Technical quality of natural gas [G4 – EU21]

	Lev. Base	Lev. level	Lev. Effective 2019						Lev. Effective 2020						Lev. Effective 2021						
			Milan	Brescia	Bergamo	Cremona	Lodi	Pavia	Milan	Brescia	Bergamo	Cremona	Lodi	Pavia	Milan	Brescia	Bergamo	Cremona	Lodi	Pavia	Monza
Annual percentage of the high and medium pressure network inspected	30%	90%	72%	0%	100%	100%	100%	100%	100%	0%	100%	100%	100%	100%	100%	0%	100%	100%	100%	100%	99%
Annual percentage of the low pressure network inspected	20%	70%	56%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	99%
Annual number of leaks located per km of network inspected	0.8	0.1	0.22	0.12	0.04	0.04	0.02	0.03	0.08	0.10	0.01	0.00	-	0.01	0.08	0.10	0.01	0.00	0.01	0.01	0
Annual number of leaks located in response to reports from third parties per km of network	0.8	0.1	0.17	0.08	0.02	0.03	0.01	0.02	0.15	0.07	0.01	0.02	0.01	0.02	0.14	0.07	0.03	0.01	0.02	0.01	0.1
Conventional number of measurements of degree of natural gas odorant per thousand end customers	0.19	0.5	0.95	1.73	1.88	1.70	1.80	1.10	0.96	1.85	1.41	1.70	1.8	1.1	0.93	1.82	1.62	1.70	1.80	1.10	2.3

Figure 116 Natural gas emergency service [G4 – EU21]

Annual number of calls to the switchboard with a time to arrival of the team at destination <= 60 min Lev. Base 90% Lev. Ref. 95%	2019	2020	2021
Milan	98.37%	99.68%	99.23%
Brescia	100.00%	96.14%	96.26%
Bergamo	100.00%	100.00%	100.00%
Cremona	99.90%	99.90%	99.90%
Lodi	100.00%	100.00%	99.90%
Pavia	100.00%	99.80%	100.00%
Monza and Brianza	n.a.	n.a.	97.72%

Figure 117 Natural gas commercial quality: general indicators [G4 – EU21]

Services provided within the times indicated (%)	Level ARERA	Unareti			LD Reti			ASVT			Retipiù
		2019	2020	2021	2019	2020	2021	2019	2020	2021	2021
Percentage of requests to perform complicated jobs which were completed within a maximum of 60 working days	90%	98.71%	98.61%	99.60%	98.00%	98.00%	100.00%	100.00%	100.00%	100.00%	93.75%
Percentage of justified replies to written claims or information requests communicated within a maximum of 30 working days	95%	97.54%	98.64%	99.07%	98.00%	92.00%	100.00%	100.00%	100.00%	100.00%	80.84%

Figure 118 Gas commercial quality: specific indicators: Milan, Brescia, Bergamo and Chieti Area [G4 – EU21]

Type of service	ARERA Levels Res. 574/13	Service provided within the indicated timetable (%)			Average time to execute the service (days)		
		2019	2020	2021	2019	2020	2021
Estimating time (simple work)	15 working days	94.07%	98.92%	99.21%	8.46	4.68	4.23
Execution time (simple work)	10 working days	96.37%	96.58%	96.39%	6.84	6.85	7.16
Estimating time (complex work)	30 working days	95.70%	95.28%	90.49%	13.77	12.03	14.79
Supply activation time	10 working days	99.84%	99.85%	99.85%	3.18	3.19	3.23
Supply de-activation time	5 working days	99.66%	98.10%	98.99%	2.75	3.07	3.07
Reactivation time following suspension due to non-payment	2 working days	98.87%	98.56%	99.12%	1.12	1.11	1.03
Observance of time bracket for appointments	2 hours	99.85%	99.80%	99.82%	N/A	N/A	N/A
Time to notify results of testing of meter equipment	20 working days	93.18%	88.06%	87.61%	10.87	10.96	17.12

Figure 119 Natural gas commercial quality: specific indicators for LD Reti [G4 – EU21]

Type of service	ARERA levels Res. 574/13 of 01/01/2014	Services provided on the indicated timetable (%)			Average time to execute the service (days)		
		2019	2020	2021	2019	2020	2021
Estimating time (simple work)	15 working days	99.00%	100.00%	98.65%	4.13	3.42	4.55
Execution time (simple work)	10 working days	97.00%	96.00%	97.54%	3.67	3.67	4.24
Estimating time (complex works)	30 working days	100.00%	100.00%	98.68%	7.58	2.62	5.22
Supply activation time	10 working days	90.00%	100.00%	99.88%	3.03	2.97	2.73
Supply de-activation time	5 working days	95.00%	97.00%	96.36%	2.66	2.86	2.69
Reactivation time following suspension due to non-payment	2 working days	95.00%	90.00%	95.92%	1.27	1.26	1.18
Observance of time bracket for appointments	2 hours	99.00%	99.00%	99.55%	N.A.	N.A.	N.A.
Time to notify results of testing of meter equipment	20 working days	83.00%	73.00%	86.67%	16.63	19.51	13.87

Figure 120 Natural gas commercial quality: specific indicators for ASVT [G4 – EU21]

Type of service	ARERA levels Res. 574/13 of 01/01/2014	Services provided on the indicated timetable (%)			Average time to execute the service (days)		
		2019	2020	2021	2019	2020	2021
Estimating time (simple work)	15 working days	100.00%	100.00%	97.96%	4.66	4.26	6.01
Execution time (simple work)	10 working days	100.00%	100.00%	100.00%	0.94	1.48	0.93
Estimating time (complex works)	30 working days	N/A	1.00	100.00%	1.00	7.19	5.74
Supply activation time	10 working days	99.89%	99.87%	99.88%	3.00	2.95	3.25
Supply de-activation time	5 working days	100.00%	98.67%	99.57%	2.20	2.16	2
Reactivation time following suspension due to non-payment	2 working days	100.00%	100.00%	100.00%	0.50	0.32	0.26
Observance of time bracket for appointments	2 hours	99.74%	99.84%	100.00%	N/A	N/A	N/A
Time to notify results of testing of meter equipment	20 working days	100.00%	75.00%	77.78%	18.50	15.00	18.67

Figure 121 Commercial quality of electricity: specific indicators for Retipiù [G4 – EU21]

Services provided on the indicated timetable (%)	Level ARERA Res. 574/13 of 01/01/2014	Services provided on the indicated timetable (%)	Average time to execute the service (days)
		2021	
Estimating time (simple work)	15 working days	99.74	8.28
Execution time (simple work)	10 working days	97.34	5.60
Estimating time (complex works)	30 working days	96.30	20.72
Time for switching on supply	10 working days	99.98	3.58
Supply de-activation time	5 working days for LV	99.96	3.40
Reactivation time following suspension due to non-payment	2 working day	99.51	0.98
Observance of time bracket for appointments	2 hours	99.89	-
Time for notifying the result of the verification of measurement group	20 working days	72.45	25.75

Operational sustainability targets 21-30

Stakeholder engagement and materiality analysis

Financial capital

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The Acsm Agam Group

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Integrated water service

Figure 122 Extension of the integrated water service [G4 - EU3]

	2019	2020	2021
Municipalities served by Integrated Water Service	95	95	95
Municipalities served by aqueduct service	86	86	86
Customers served aqueduct	217,545	222,451	223,608
Inhabitants served by aqueduct	667,094	667,736	665,152
Inhabitants served by sewers	657,628	655,430	652,845
Inhabitants served by purification	643,385	643,673	641,106

Figure 123 Call center quality[GRI 102-43_44]

	2019	2020	2021
Service accessibility rate (free lines with respect to operator presence time)	100%	100%	100%
Number of calls to the call centre	119,803	161,221	166,792
Average telephone waiting time for calls from end customers (sec)	152	177	168
Percentage of successful calls	87.86%	86.68%	88.87%

*Figure 124 Quality of the A2A Ciclo Idrico and ASVT service**

data in days	A2A Ciclo Idrico			ASVT		
	2019	2020	2021	2019	2020	2021
Response time to requests for estimate for connection to the aqueduct	9.06	8.49	9.82	3.92	3.91	3.48
Response time to requests for estimate for connection to the sewers	9.72	10.55	9.92	2.27	2.35	1.13

* Time charged to the operator.

District heating and heat management

*Figure 125 Transformations made by the heat management service**

	2019	2020	2021
Transformations (no.)	28	37	14
Capacity installed (kW)	17,400	11,015	6,924

* These refer to replacement of methane with 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 126 Population served by the urban sanitation activity

	2019	2020	2021
Municipalities served	28	37	14
Population served	17,400	11,015	6,924

Figure 127 Customer Satisfaction of the urban hygiene service carried out by AMSA (average vote)

Service	2019	2020	2021
Urban waste collection	8.31	8.3	8.11
Road and pavement cleaning and washing	7.39	7.15	7.42
Emptying of large road bins	7.46	7.33	7.33
Cleaning of market areas	8.33	8.16	7.49
Cleaning of green areas	7.3	7.12	7.47
Cleaning and collection during and after events	7.98	7.68	7.50
Cumbersome waste collection	8.83	8.89	8.67
Clarity and completeness of the communication on separate collection	8.06	7.97	8.07
Toll Free Number	8.17	8.17	8.42
Amsa counter	- *	7.36	8.00
Website	7.22	7.17	8.50
App Puliamo	- *	7.83	8.75
Recycling	8.5	8.43	8.51
Snow service	7.64	7.32	7.22

* The counter and app satisfaction ratings are not statistically significant due to the low number of respondents

Figure 128 Customer Satisfaction of the urban hygiene service carried out by Aprica (average vote)

	2021
CSI service	75.99
CSI contact channels	78.19
CSI improvement*	73.00

* The Improvement CSI refers to the quality of service provided over the past 2 years, specifically how the service is perceived to have improved/stayed the same/worsened.

NOTE: Starting in 2021, in order to summarize in an operational manner the outcomes of the *Customer Satisfaction*surveys, it has become necessary to build an overall *CSI INDEX* , consisting of: Service CSI, Contact Channel CSI, and Improvement CSI. These indicators are in turn constructed as a weighted average of specific items investigated with the questionnaire and which are selected in agreement with A2A so that any improvement actions which will be diagnosed by the analysis are to all intents and purposes applicable.

Figure 129 Paid services: waste disposal and other specific services for individuals [G4 - EU3]

Customers served	2019	2020	2021
Amsa	5,661	4,370	5,961
Aprica	1,248	1,229	1,438
La.Bi.Co. Due*	331	-	-
Linea Gestioni	633	637	1,394
Gelsia ambiente	-	-	87

* The company La.Bi.Co.Due has been integrated into Aprica as of 2020.

Figure 130 Waste disposal service [G4 - EU3]

Customers served	2019	2020	2021
Municipalities served (no.)	1,000	1,007	1,285
Companies served (no.)	6,406	6,407	8,482

Figure 131 Call centre services

	AMSA			APRICA		
	2019	2020	2021	2019	2020	2021
Number of calls to the call centre	419,383	398,470	368,197	57,618	75,262	136,054
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)	47	39	29	45	64	116
Percentage of successful calls	97%	98%	98%	93%	93%	92%

Conciliation management

Figure 132 ADR A2A-Consumer associations conciliation procedures

2021 Dispute issues	Electricity	%	Gas	%	Dual fuel	%	Total demand Ele/gas/dual	%	Water	%
Invoicing	5	38%	20	74%	1	100%	26	63%	3	43%
Market	0	0%	0	0%	0	0%	0	0%	1	14%
Contracts	6	46%	5	19%	0	0%	11	27%	2	29%
Late payment and suspension	1	8%	1	4%	0	0%	2	5%	1	14%
Metering	0	0%	1	4%	0	0%	1	2%	0	0%
Damages	1	8%	0	0%	0	0%	1	2%	0	0%
General total	13	100%	27	100%	1	100%	41	100%	7	100%

2020 Dispute issues*	Electricity	%	Gas	%	Dual fuel	%	Total demand Ele/gas/dual	%	Water	%
Invoicing	5	56%	5	42%	1	50%	11	48%	4	50%
Market	1	11%	0	0%	0	0%	1	4%	0	0%
Contracts	0	0%	1	8%	1	50%	2	9%	0	0%
Late payment and suspension	1	11%	1	8%	0	0%	2	9%	0	0%
Metering	1	11%	4	33%	0	0%	5	22%	4	50%
Connections, works and technical quality	0	0%	1	8%	0	0%	1	4%	0	0%
Damages	1	11%	0	0%	0	0%	1	4%	0	0%
General total	**9**	**100%**	**12**	**100%**	**2**	**100%**	**23**	**100%**	**8**	**100%**

* The 2020 data has been recalculated due to a clerical error.

2019 Dispute issues*	Electricity	%	Gas	%	Dual fuel	%	Total demand Ele/gas/dual	%	Water	%
Invoicing	14	29%	7	15%	0	0%	21	44%	1	25%
Market	0	0%	2	4%	0	0%	2	4%	0	0%
Contracts	0	0%	1	2%	1	2%	2	4%	0	0%
Late payment and suspension	0	0%	1	2%	0	0%	1	2%	0	0%
Metering	7	15%	14	29%	0	0%	21	44%	3	75%
Connections, works and technical quality	1	2%	0	0%	0	0%	1	2%	0	0%
General total	**22**	**46%**	**25**	**52%**	**1**	**2%**	**48**	**1**	**4**	**1**

*Figure 133 Contributions to the Authorities**

	2019	2020	2021
Energy Authority operating contribution	2,121,570	2,386,123	2,393,712
Ega operating contribution	474,602	481,201	479,822
Agcom operating contribution	42,005.52	52,409.47	65,105.65

* Contributions made referencing the previous year are shown.

Figure 134 Contributions to political parties and trade associations (thousands of euro)

	2019	2020	2021
Politicians and political parties*	0	0	0
Trade associations	1,614	1,676	1,735
Other associations/organizations (promotion and dissemination of sustainability, research and sector/thematic studies)	269	284	442
Total	**1,883**	**1,961**	**2,177**

* The Group does not make any contributions directly or indirectly to any political party, movement, political and trade union organisation and committee, nor to their representatives or candidates, in Italy and abroad, apart from contributions due in accordance with specific regulations.

Figure 135 Details of higher expenses for trade associations (thousands of euro)

thousands of euro	2019	2020	2021
Utilitalia	615	590	620
Confindustrie	497	531	492
Elettricità futura	129	135	134

Relations with suppliers

Figure 136 Number and value of orders by supply type [GRI 204-1]

Type	2019		2020		2021	
	No. orders	Amount (€)	No. orders	Amount (€)	No. orders	Amount (€)
Supplies	2,381	299,853,423	3,355	550,916,448	3,724	500,434,434
Works	1,922	341,424,019	1,641	535,916,303	1,987	732,303,731
Services	4,318	477,256,457	5,486	542,210,382	5,615	810,340,864
Other types	-	-	-	-	282	6,836,577
A2A Group orders	8,621	111,839,354	10,482	1,629,043,132	11,608	2,049,915,606
LGH orders	2,650	114,846,305	2,060	101,910,000	1,488	98,558,390

Figure 137 Geographic breakdown of orders by business unit (%)

	Lombardy	Other Italian Regions	EU	Non EU	Total
Generation and Trading	42.76%	56.69%	0.11%	0.44%	100%
Market	55.41%	44.48%	0.09%	0.02%	100%
Corporate	69.71%	28.93%	0.34%	1.02%	100%
Environment	57.99%	29.11%	10.71%	2.19%	100%
Smart Infrastructures	71.81%	26.91%	0.75%	0.54%	100%

* A2A Smart City merged in Smart infrastructures BU from 2019.

Figure 138 Geographic breakdown of orders [GRI 204-1] (% orders)

	2019	2020	2021
Lombardy	59.6%	66.9%	61.3%
Other Italian Regions	36.5%	30.7%	34.0%
EU	3.4%	1.8%	3.6%
Non EU	0.4%	0.6%	1.1%

Figure 139 Suppliers with at least one A2A Group certification (% orders)

	2019	2020	2021
Total suppliers with at least one certification	2,767	3,018	3,451
of which activated with order	1,092	1,113	1,239
Value of orders issued on total orders	83%	83%	86%

Figure 140 Validated suppliers, by type

	2019	2020	2021
Large business (more than 250 employees)	295	335	316
Medium business (50-250 employees)	770	911	916
Small business (10-50 employees)	1,572	1,796	1,650
Micro business (1-10 employees)	1,382	1,542	1,501
NA	210	299	279
Total	4,229	4,883	4,662

DISPUTE MANAGEMENT

EMPLOYEES

A total of 65 **labour disputes** were in progress or concluded in 2021 involving employees of A2A Group companies (excluding AMSA and including both the former LGH group and the AEB group), of which 10 concerned the assessment of the illegitimacy of dismissals for just cause or dismissals for justified subjective reason, 14 concerned the assessment of the illegitimate exclusion of the claimant 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, 16 claimants requested for payment of salary differences other than requests for a higher level of classification, 1 claimant applied for a finding that the sale of the business unit was unlawful, with the result that it was reinstated in the transferor company, while 7 claimants 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 2 claimants who took legal action to request compensation for the damage caused by the demotion of which 1 also requested a finding that the measure of secondment ordered against the latter was unlawful. In addition, in 2021, 2 cases were pending concerning the determination of the entitlement to compensation for damages arising from occupational illness or accident. The remaining causes concerned various requests (such as appeals of conservative disciplinary proceedings and appeals against dismissal due to the fact that the compensation period has been exceeded).

With regard to AMSA, there were a total of 85 labour disputes in progress or concluded in 2021, of which 10 concerned the assessment of the illegitimacy of dismissals for just cause or justified subjective reason and 5 concerned the assessment of the illegitimacy of dismissals for exceeding the period of conduct. In addition, 16 claimants challenged the fixed-term contracts and 7 fixed-term workers required the verification of the violation of the preferential right by the employer company in the subsequent permanent recruitments, 10 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 and appeals of conservative disciplinary proceedings.

SUPPLIERS

There were 7 labour disputes in progress or concluded in 2021 initiated by workers of contracting firms that worked on contracts awarded by A2A Group companies (excluding AMSA and including the LGH an AEB groups). There were 4 proceedings for compensation for damages resulting from occupational diseases or injuries allegedly contracted during the contract work while 1 claimant took legal action to obtain compensation for various damages.
Moreover, 1 claimant requested ascertainment of the right of establishment of an employment relationship by the client company.
As far as Amsa is concerned, during 2021, 8 workers took legal action 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 2021, 22 environmental proceedings were in progress or concluded; of these, 4 proceedings were closed, 5 are new proceedings and 13 were already in progress (8 now relating to the former 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 4 proceedings, closed in 2021:

- Criminal proceedings for violation of Legislative Decree no. 152/06 by the Milan Public Prosecutor's Office concerned an (at the time of the facts) employee of A2A's "assets" service who had been served, in September 2014, a notice of investigation underway by the municipal police. The facts referred to work carried out in Milan for which the same had presented the SCIA with annexed certification of conformity of the land prepared on the basis of environmental investigations carried out by a geologist appointed by the contractor and certifying the conformity of the land to the standard for industrial use of the site. However, the annexed table showed an exceedance of a potential contamination threshold that was not mentioned in the conclusions of the geologist's report and, consequently, in the statement made.

Since then, however, the time limit for the closure of the investigation has passed without any action being taken by the Public Prosecutor's Office: more than seven years have passed and the person concerned by the notice left the Group some time ago and never communicated that the initial notice was followed by proceedings against, which have now been archived.

- Criminal proceedings concerned an employee of A2A Ambiente (Brescia Public Prosecutor's Office - Brescia preliminary investigation judge (GIP) for the unauthorized management of special non-hazardous waste) for whom on October 7, 2011 the Brescia GIP ruled that there was no need to proceed due to the fact of not having committed the crime (A2A Ambiente is now only a plaintiff in the trial);
- Criminal proceedings by the Milan Public Prosecutor's Office for an alleged violation found by ARPA at AMSA's "Silla transfer station" and charged to the company's then chief operating officer have been filed (the filing actually dates back to 2016, but we only heard from the defendant last year);
- The proceeding for a hypothesis of "organized activity for the traffic of waste" of the Court of Rome No. 29830/14 against the technical director (at the time of the facts) of the Rovato plant where waste coming from the reclamation of the former Sisas area of Pioltello had been disposed of for a short time and in small part, was defined on November 15, 21 with a sentence of acquittal.

CUSTOMERS [GRI 206-1]

2021 ended with 101 open legal proceedings relating to billing disputes on electricity and 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; of the aforementioned total no. 77 judicial proceedings specifically concern the issue of the repetition of excise duties on electricity of 2010/2011.

A dispute continued in 2021 with a customer of AMSA, A2A Ambiente and Aprica, which is claiming contractual termination for excessive costs incurred.

For the AEB Group, 2021 ended with 1 legal proceeding pending concerning the invoicing of gas supplies and 2 legal proceedings of (former) customers concerning disputes relating to the operation of micro-cogeneration plants installed at their premises.

COMMUNITY [G4 - EU25]

At end 2021, there were 89 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 41 cases seeking compensation for physical damages in respect of personal injuries; these include 1 relating to a fatal accident involving a Group company (an operative vehicle cleaning a cycle path) and a fatal accident involving a Group company (the placement of waste collection containers on the roadside is considered a cause of a road accident).

Finally, three lawsuits are pending regarding alleged violations of property rights.

For the AEB Group, 1 legal proceeding was pending at the end of 2021 between a local authority and a company, involving an AEB company, for a low-value claim involving property damage.

The Acsm Agam Group

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 the Legislative Decree, 231/2001, the Company has adopted a Code of Ethics, which also contains the main elements of its human rights policy. The Group companies are monitored with regards to risks connected with corruption. In accordance with the provisions of the Company's Code of Ethics, the Group does not allow active or passive corruption or collusion of any nature or form.

In 2021, 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.

Economic value generated and distributed

Figure 141 Statement for distributing the gross global added value and Economic value generated and distributed (millions of euro)

	2020	2021
Remuneration of personnel	54.52	55.45
Remuneration of risk capital	16.41	16.87
Remuneration of borrowed capital	0.93	0.87
Transfers to the government	10.83	17.58
Transfers to the local community	2.47	5.62
COMPANY REMUNERATION	310.22	315.43
GROSS GLOBAL VALUE ADDED	395.38	411.83
Economic value generated	397	485
Economic value distributed	333	416

Figure 142 Investments - Percentage of Total (%)

	2020	2021
Group infrastructure investments (M€)	73.2	79.9
Networks BU	46%	48%
Energy BU	23%	27%
Environment BU	9%	11%
Sales BU	3%	1%
Corporate	19%	13%

Efficient infrastructure management

Figure 143 Installed capacity

INSTALLED CAPACITY	2020	2021
Electricity (MW_e)	48	31
Thermal (MW_t)	250	251

Figure 144 Energy production

ENERGY PRODUCTION	2020	2021
Electricity (GWh_e)	78	81
Thermal (GWh_t)	286	318

Figure 145 Natural gas distribution

Distribution of natural gas	2020	2021
Natural gas distributed (Mm^3)	591	623
Gas network extension (km)	3,277	3,286

Figure 146 Electricity Distribution

Electricity distribution	2020	2021
Electricity distributed (GWh)	153	156
Electricity losses in the grid (GWh)	4	4
Extension of the electricity distribution service (km)	570	575
- of which underground cable (km)	413	419

Figure 147 Heating energy released to the network

Thermal energy released to the network	2020	2021
Heating energy distributed (GWh)	195	220
Thermal energy losses (GWht)	32	34

Figure 148 Integrated water service

Integrated water service	2020	2021
Wells (no.)	97	96
Springs (no.)	189	169
Drinking water plants (no.)	20	20
Total network length (km)	1,695	1,703
Water delivered to the user and booked (Mm^3)	29	28
Water extracted (Mm^3)	43	42
Network losses and water not booked (Mm^3)	15	14

Operational sustainability targets 21-30

Stakeholder engagement and materiality analysis

Financial capital

Manufacturing capital

Natural capital

Human capital

Relational capital

The Acsm Agam Group

The AEB Group

Figure 149 Municipal waste collected

Urban waste collected	2020 Quantity collected (t)	2020 % differentiated collection	2021 Quantity collected (t)	2021 % differentiated collection
Varese	38,396	71%	41,015	70%
Province of Varese	37,381	81%	41,904	82%
Other municipalities in the province of Varese	8,548	-	7,435	-
Province of Como	5,647	74%	6,041	77%
Other municipalities in the province of Como	17,366	-	21,612	-
Total	**107,339**	**-**	**118,007**	**-**

Environmental responsibility

Figure 150 Water withdrawal (thousands of m^3)*

Source of withdrawal	2020	2021
Surface water	20,773	20,966
- of which in water stressed areas	0	0
Groundwater	20,311	19,911
- of which in water stressed areas	0	0
Third-party water	1,098	1,115
- of which in water stressed areas	0	0
Total volume of water withdrawn	**42,182**	**41,993**

* Salt/sea water is defined as marine or salt water with a concentration of dissolved solids (measured as sodium chloride) >1,000 mg/l.

Figure 151 Water Discharge (thousands of m^3)*

Destination of discharges	2020	2021
Surface water	20	18
- of which in water stressed areas	0	0
Third-party water	784	879
- of which in water stressed areas	0	0
Total volume of water discharged	**804**	**897**
Public water supplied to water service users (Mm3)	**29**	**28**

* Salt/sea water is defined as marine or salt water with a concentration of dissolved solids (measured as sodium chloride) >1,000 mg/l.

Figure 152 Resources used

Resources used	2020	2021
Non-renewable fuels (GJ)	2,034,244	2,135,595
Electricity (GJ)	153	151
Chemical products and materials used (t)	7,597	2,509

Figure 153 Emission of greenhouse gases (t)

	2020	2021
Direct emissions (*Scope 1*)	163,137	171,424
Indirect emissions(*Scope* 2) - *Location Based*	11,794	11,666
Indirect emissions(*Scope* 2) - *Market based*	19,798	19,188

Figure 154 Pollutant emissions

	2020	2021
Nitrogen oxides (NO_x) (t)	76	82
Sulphur oxides (SO_x) (t)	0.4	1.0
Powders (t)	0.2	0.4
CO (t)	28	29
Fluorinated gases (kg)	27	42

Figure 155 Total waste generated

	2020	2021
Non-hazardous waste (t)	19,282	19,487
Hazardous waste (t)	2,828	2,581
Total (t)	**22,110**	**22,068**
Sent for recovery (% of total)	89%	90%

Responsible management of people

Figure 156 Breakdown of employees and collaborators by gender

No. people	2020 Men	2020 Women	2020 Total	2021 Men	2021 Women	2021 Total
Employees						
Permanent	645	228	873	657	232	889
Temporary Contract	4	1	5	1	7	8
Total	**649**	**229**	**878**	**658**	**239**	**897**
of which with part-time contract	4	42	46	3	44	47
Collaborators	n.a.	n.a.	42	n.a.	n.a.	42

Figure 157 Number of hires, outgoing and turnover rate

New hires, outgoing, Turnover	2020	2021
Hires	52	82
Outgoing	76	63
Turnover*	9%	7%

* The turnover rate was calculated according to the following formula: (departures) / (employees) at December 31.

Figure 158 Percentage of workers represented in formal health and safety committees

	2020	2021
%	100%	100%

Figure 159 Occupational accidents

	2020	2021
Decease	0	0
Accidents at work	27	18
of which with severe consequences	2	0
Rate of recordable occupational accidents	18.59	12.31
Rate of severe accidents at work	1.38	0

Figure 160 Breakdown of employees by professional category, gender and age group

ITALY	2020 Managers	2020 Middle Managers	2020 White-collar workers	2020 Blue-collar workers	2020 Total	2021 Managers	2021 Middle Managers	2021 White-collar workers	2021 Blue-collar workers	2021 Total
Men	17	39	218	375	649	17	40	226	375	658
Women	1	17	210	1	229	1	18	219	1	239
<30	0	0	17	21	38	0	0	34	29	63
30-50	8	33	263	180	484	9	31	269	170	479
>50	10	23	148	175	356	9	27	142	177	355
Total	18	56	428	376	878	18	58	445	376	897

Figure 161 Company population is covered by collective bargaining

	2020	2021
%	100%	100%

Figure 162 Training hours provided by gender

	2020 Number of hours	2020 Average annual hours of training per employee	2021 Number of hours	2021 Average annual hours of training per employee
Men	7,484	12	15,687	24
Women	3,302	14	7,308	31

Figure 163 Hours of training broken down by professional category

	2020 Number of hours	2020 Average annual hours of training per employee [4]	2021 Number of hours	2021 Average annual hours of training per employee [4]
Managers	518	29	1,023	57
Middle Managers	2,136	38	3,887	67
White-collar workers	6,234	15	13,235	30
Blue-collar workers	1,898	5	4,851	13

3 The average number of hours per capita was calculated on the total number of employees in the Group's workforce.

Relations with shareholders

Figure 164 Customer relations

Number of PDRs (redelivery points) and municipalities served by the gas distribution service	2020	2021
PDR	313,458	312,447
Municipalities served	88	88
Number of users and municipalities served by the electricity distribution service	**2020**	**2021**
POD	25,779	25,934
Municipalities served	4	4
Number of users and municipalities served by the municipal sanitation service	**2020**	**2021**
Users	196,500	201,819
Municipalities served	42	52
Municipalities and customers served by the water service	**2020**	**2021**
Municipalities served by aqueduct service	37	37
Customers served aqueduct	85,214	85,515
Inhabitants served by aqueduct	314,775	310,283
Users connected to the district heating service	**2020**	**2021**
Users	633	637
Contracts by type of gas sales service provision	**2020**	**2021**
Protected market	121,481	110,125
Free market	125,179	128,015
Total	**246,660**	**238,140**
Volumes sold (Mm^3)	431	436
Contracts by type of electricity sales service provision	**2020**	**2021**
Protected market	14,814	13,423
Free market	69,988	74,877
Total	**84,802**	**83,300**
Volumes sold (GWh)	369	381

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. Supplier performance, in addition to ensuring the necessary quality standards, must go hand in hand with a commitment to adopt best practices in terms of human rights and working conditions, occupational health and safety, and environmental responsibility. Therefore, the Group has developed specific clauses so that the goods and services it offers are produced in accordance with minimum social standards regarding human rights and working conditions along the supply chain. Almost all orders are from Italian suppliers, of which over 76% are based in Lombardy. In addition, 789 suppliers were activated with at least one order as at December 31, 2021, all in the Group's register of suppliers.

Figure 165 Number of Group orders by type

Orders	2020		2021	
	No.	€	No.	€
Supplies	1,068	29,088,825	760	43,220,601
Works	152	40,072,364	102	25,635,944
Services	1,354	63,433,462	835	102,709,413
Sponsorships	75	444,537	103	572,070
Other	-	-	-	-
Total	**2,649**	**133,039,188**	**1,800**	**172,138,028**

Disputes

No disputes have arisen with Group customers (with the exception of those relating to debt collection in which the company is a claimant), either for non-compliance linked to impacts on consumer health and safety or for supply services and related marketing activities.

There are no legal actions for recourse due to sanctions by the AGCM for causes related to anti-competitive conduct or unfair market practices.

During the year 2021, Acsm Agam Group Companies were not involved in disputes concerning non-compliance incidents involving privacy violations or loss of customer data.

The AEB Group

The AEB Group's *performance* for the year 2021 has been fully integrated into the scope of A2A's Non-Financial Declaration.

For completeness and comparability, the following is an excerpt from 2020 published last year.

Group Profile

The AEB Group represents an industrial company rooted in the social and economic fabric of Brianza and has been operating since 1910 in the public utility services sector. The Group consists of AEB SpA (the parent company) and the four companies involved in the main *businesses*:

- **Gelsia** deals with the sale of methane gas and electricity, the construction of cogeneration plants, district heating networks, building heat management and photovoltaic systems;

- **Retipiù**, a company that distributes methane gas and electricity, and is active in the public lighting sector and smart cities services;

- **Gelsia Ambiente** is the Group company that manages environmental hygiene services.

On November 1, 2020, AEB A2A entered the share capital of AEB with a 34% share against a contribution in terms of gas distribution *assets* and the entire shareholding in the company **A2A to Public Lighting**, which serves more than 2.2 million inhabitants on the national territory.

Governance

The Group has a Code of Ethics that aims to ensure that the activities of each Group company are inspired by the principles of fairness, transparency, diligence, honesty, loyalty, sustainability, efficiency and legality and presupposes compliance with the applicable legal and administrative provisions in force and observance of company regulations and procedures. The purpose of the Code is therefore to provide general ethical-behavioural guidelines to be complied with in the performance of activities and to help prevent the commission of offences connected with the crimes referred to in Legislative Decree no. 231/01 (hereinafter also referred to as the "Decree").

In 2020, 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.

Economic value generated and distributed

Figure 166 Investments by business unit

Group infrastructure investments (M€)	32.2
Corporate BU	4.3%
Market BU	24.5%
Environment BU	14.6%
Smart Infrastructures BU	56.6%
Total	**100.0%**

Figure 167 Installed capacity

	2020
Electricity (MW_e)	10
Thermal (MW_t)	150

Figure 168 Energy production

	2020
Electricity (GWh_e)	14
Thermal (GWh_t)	64

Figure 169 Natural gas distribution

	2020
Natural gas distributed (Mm^3)	346
Gas distribution network extension (km)	2,849

Figure 170 Electricity distribution

	2020
Electricity distributed (GWh)	130,794
Electricity losses in the grid (GWh)	4,709
Extension of the electricity distribution service (km)	252

Figure 171 Heating energy released to the network

	2020
Heating energy distributed (GWh)	68
District heating network extension* (km)	16

* The network is intended as the sum of heat transmission, distribution and supply pipes.

Figure 172 Municipal waste collected

Gelsia Ambiente	2020	
	Tonnes of waste	% differentiated collection
Province of Monza and Brianza	184,111	80.6%

Operational sustainability targets 21-30
Stakeholder engagement and materiality analysis
Financial capital
Manufacturing capital
Natural capital
Human capital
Relational capital
The Acsm Agam Group
The AEB Group

Environmental responsibility

Figure 173 Resources used

Resources used	2020
Fuel (TJ)	340
Automotive fuels (TJ)	52
Electricity (GWh)	5
Chemical products and materials used (t)	50

Figure 174 Emission of greenhouse gases (t)

	2020
Direct emissions (Scope 1)	20,412
Indirect Emissions (Scope 2) - *Location Based**	1,310
Indirect emissions (Scope 2) - *Market based***	2,145

* See notes on page 35.
** See notes on page 35.

Figure 175 Special waste produced (t)

	2020
Non-hazardous waste	164
Hazardous waste	41
Total	**205**

Responsible management of people

Figure 176 Breakdown of employees and collaborators by gender

	2020		
	Men	Women	Total
Employees			
Permanent	497	126	614
Temporary Contract	8	1	9
Total	505	127	623
of which with part-time contract	3	30	33
Workers with non-standard contracts (temporary/ interns/collaborators)*	48	13	61

Figure 177 Number of hires, outgoing and turnover rate

	2020
Hires	30
Outgoing	72
Turnover	11%

Figure 178 Injuries to employees by gender and days lost

	2020			
	AEB	GELSIA	GELSIA AMBIENTE	RETI più
Number of deaths	0	0	0	0
No. accidents at work	1	0	24	1
Men			24	1
Women	1	0	0	0
Accidents with severe consequences	0	0	0	0
Frequency index FI	8.1	0	5.38	5.38
Severity index SI	0.28	0	0.04	0.04
Incidence index II	0	0	2.52	7.58
Commuting accidents	0	0	1	1

Figure 179 Breakdown of employees by professional category and gender

No. people	2020				
	Managers	Middle Managers	White-collar workers	Blue-collar workers	Total
Men	6	26	99	366	497
Women	1	7	112	6	126
Total	7	33	211	372	623

Figure 180 Company population is covered by collective bargaining

	2020
%	100%

Figure 181 Training hours provided by gender

2020	No. employees trained	Participations	Number of hours	Average annual hours of training per employee
Men	434	903	5,089	10.08
Women	83	194	1,041	8.20

Figure 182 Hours of training broken down by professional category

2020	No. employees trained	Participations	Number of hours	Average annual hours of training per employee [6]
Managers	6	23	229.5	32.8
Middle Managers	33	84	323.5	9.8
White-collar workers	121	288	1,588	7.5
Blue-collar workers	357	702	3,989	10.5

Relations with shareholders

Figure 183 Customer relations

Number of PDRs (redelivery points) and municipalities served by the gas distribution service	2020
PDR	285,995
Municipalities served	97
Number of users and municipalities served by the electricity distribution service	
POD	26,048
Municipalities served	1
Number of users and municipalities served by the municipal sanitation service	
Users	414,229
Municipalities served	26
Users connected to the district heating service	
Users	530
Public lighting (net of A2A Public Lighting points)	
Light points	7,059
Gas sales service (number of contracts)	
Protected market	73,910
Free market	63,805
Total	**137,715**
Total gas sales (Mm^3)	260
Electricity sales service (number of contracts)	
Protected market	8,409
Free market	55,509
Total	**63,918**
Total sales of electricity (GWh)	488

4 The average number of hours per capita was calculated on the total number of employees in the Group's workforce.

Supply Chain

The Group adopts a register of suppliers (divided into product categories) whose qualification criteria do not constitute barriers to entry. There are no evaluations of suppliers, who intend to qualify, on environmental or social issues. The geographical origin of orders could not be identified. In addition, 786 suppliers were activated with at least one order as at December 31, 2020, all in the Group's register of suppliers.

Figure 184 Number of Group orders by type

	2020	
Orders	No.	€
Supplies	597	14,865,823
Works	137	5,267,474
Services	1,335	29,864,027
Total	2,069	49,997,324

Disputes

At the end of 2020, Gelsia Ambiente S.r.l., in relation to the management of an ecological platform owned by the municipality, received a warning from ATO MB for discharging first rain water into the public sewerage system in violation of the requirements contained in the single authorization. Gelsia Ambiente requested a hearing from the ATO. The Authority granted the hearing, which was held on 12/21/2020. Developments are awaited. The company had already scheduled the necessary work but was awaiting permission from the owner.

In February 2017, Gelsia S.r.l. filed an appeal with the Lazio Regional Administrative Court against a penalty imposed on it by the AGCM for alleged unfair commercial practice. The lawsuit is still pending, pending the scheduling of a hearing for arguments. In the meantime, the company paid the penalty subject to repetition.

At December 31, 2020, there were six disputes with employees, including five at Gelsia Ambiente (four judicial and one out-of-court) and one at RetiPiù S.r.l. (out-of-court).

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