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## **GRUPPO CAP**

Gruppo CAP is the entirely public capital company that for over 90 years has managed **the Integrated Water Service in the municipalities of the Milan Metropolitan City area and in several other municipalities in the neighbouring provinces**. According to the in-house providing model, Gruppo CAP guarantees the public control of the shareholder entities in compliance with the principles of transparency, accountability and participation. Transparent, like drinking water; responsible, towards citizens and the territory; and finally participatory, to further underline the Group's commitment to the community.

The company's vision is ever broader, so much so that Gruppo CAP is not only the provider that manages the Integrated Water Service of the Milan Metropolitan City and other municipalities in Lombardy, but also a true 'green utility' at the service of the territory. A green utility that grows by crossing markets that are complementary to the water sector and fundamental to the sustainable development of the planet - such as the waste and design sector - helping them to embark on the path towards sustainability and the circular economy.

### **➤ Numbers**

With a **net worth of EUR 571 million at 2022 budget**, Gruppo CAP ranks among the most important single-utility companies on the national scene. An organisation in which **more than 900 people work** and which **annually delivers** an average of more than **190 million cubic metres of water to about 2.5 million inhabitants** thanks to **6,461 kilometres of aqueduct network and 722 wells, 301 drinking water plants and more than 200 Water Kiosks**. Once used, the water is collected through a **sewerage network** that stretches **over 6,528 kilometres and cleaned by 40 purification plants**, technologically complex systems required to return clean water to the environment. In terms of number of customers served, volumes of water distributed and length of network, **Gruppo CAP is among the most important water service operators in Italy**.

### **➤ Budget 2022: financial performance of Gruppo CAP**

In 2022, Gruppo CAP recorded **the best performance in the 2020-2022 three-year period**, with growth both in terms of **revenues (+13%) with EUR 432 million**, and **investments (+1.5%), with EUR 129 million** earmarked for the sustainable development of the territory served. **EBITDA is EUR 93 million**, while **net profit is EUR 5,724,641**, **assets are EUR 1,316,440,745** and **net worth is EUR 853,373,897**.

With the 2022 budget, CAP Group concludes **a record three-year period** with more than **EUR 1,159 million in total revenue, EUR 277 million in EBITDA, EUR 51 million in profits and more than EUR 361 million in total investments**, despite pandemics, rising inflation, the energy crisis and unstable markets.

### **INDUSTRIAL PLAN 2023-2027**

The Gruppo CAP's **industrial plan** for the **five-year period 2023 - 2027** envisages **investments totalling EUR 582 million** (over one billion until 2033), which translates into **approximately EUR 116 million per year** for the entire Milan Metropolitan City area. An investment plan that has kicked off a real '**Green New Deal**' for the **Metropolitan City of Milan**, providing space for the development of smart infrastructures and increasingly smart services, digitalisation processes, circular economy initiatives and scientific research: a strategy capable of integrating sustainable water management with waste management and promoting the decarbonisation process at the basis of the green revolution and ecological transition.

[Read more about Industrial Plan](#)

### **SUSTAINIBILITY PLAN**

Starting in 2019, Gruppo CAP has defined its **Sustainability Plan**, a strategic document that identifies - with a long-term vision and looking ahead to 2033 - the challenges of the sector, the results already achieved and the next objectives. Through this tool, Gruppo CAP is able to maintain a proactive approach to socio-economic changes in the entire sector and actively contribute to the development of the territory. CAP's sustainability strategy is structured around **3 fundamental pillars that describe the identity of CAP and its people: Sensitive, Resilient and Innovative**. Sensitive to the needs of people and the territory, to increase the wellbeing and trust of the community; Resilient in assets, governance and management to protect an essential asset for life; Innovators in the sector, to anticipate rules and nurture the ability to network.

Gruppo CAP's sustainability strategy represents the completion of the redefinition of its business model, through which CAP has integrated sustainability into its industrial activity. The objective is to ensure the generation of value for shareholders and stakeholders over time in the face of political and social change and the climate crisis.

[Read more about Sustainability Plan](#)

## **A TRULY INTEGRATED WATER SERVICE: AQUEDUCT, SEWERAGE AND TREATMENT**

Gruppo CAP has its core business in the industrial management of the integrated water service, a complex and articulated system consisting of thousands of kilometres of aqueduct and sewerage networks and high-tech plants. The objective is to guarantee quality, safe and constantly controlled water for everyone. In this perspective, **continuity** and **universality** of the service are the cardinal principles of Gruppo CAP's commitment in its daily activities: **continuity**, because water must always flow without interruption from the taps; **universality**, because it is everyone's right and must be brought even to the most difficult and distant points of the territory.

### ➤ **Aqueduct**

Through the operation of 6,461 kilometres of aqueduct network, 722 wells and 301 drinking water plants, Gruppo CAP brings more than 190 million cubic metres of quality water to around 2.5 million citizens every year. The water is drawn from the deep aquifer via wells and pumping systems. Through potabilisation, the water is treated and disinfected to guarantee the rigorous standards required by Legislative Decree 18/2023 regulating the characteristics of water for human use. After this step, the water enters the distribution network.

[Read more about aqueduct](#)

### ➤ **Safe and quality water**

Drinking water is intended for human consumption and must therefore meet certain chemical, physical and microbiological standards, as stipulated by the latest legislation adopted in Italy (Legislative Decree 18/2023). The quality of the water supplied is constantly monitored by the drinking water laboratories of the **Salazzurra Research Centre at the Parco Idroscalo in Milan**, accredited according to ISO 17025, which perform more than 20,000 samplings every year to determine approximately 700,000 chemical and microbiological parameters. In addition to internal controls, the quality of the water is verified by the locally competent Health Protection Agency (ATS).

On the [gruppocap.it](http://gruppocap.it) website, you can consult the results of analyses carried out on the water that reaches the taps in each municipality served, the municipality's water consumption, the wells in operation, the results of the analyses carried out at the Water Kiosks, and the annual report on the aqueduct in your municipality, together with all the information on the geology of the area, treatments and the health of the water table.

In addition, Gruppo CAP adopts the **Water Safety Plan (WSP)**, the global system introduced by the World Health Organisation, for risk assessment and risk management extended to the entire water supply chain with the ultimate aim of making drinking water even safer. The Water Safety Plan ensures greater control over the quality of water in the entire drinking water supply chain, from the entrance into the aqueduct to the final point of delivery. Together with the competent authorities, the parameters to be monitored more frequently or how to extend the list of substances to be monitored in the event of a public health hazard are determined. Gruppo CAP was the first integrated water service operator in Italy to adopt a Water Safety Plan, in 2016, in collaboration with the Istituto Superiore di Sanità (ISS).

[Read more about Drinking Water](#)

### ➤ **Sewerage**

The sewerage system allows wastewater from households and, in some cases, industrial wastewater (black water) and part of the rainwater (white water) to be brought to the purification plants: while the aqueduct is used to bring large quantities of drinking water to the population centres, the sewerage system is used to remove dirty water quickly and continuously, to clean it up and return it to nature.

The sewerage system is generally **natural**: waste water flows by gravity to the sewage treatment plant. During this route, depending on the obstacles present in the area or altimetric requirements, there may be lifting plants, which mechanically lift the wastewater through a series of electric pumps to allow it to move on to the next route.

In addition, with a view to optimising and innovating water and sewerage infrastructures, Gruppo CAP has adopted the innovative **UV relining** technique, a non-invasive solution that allows pipes to be repaired or renewed with a special sheath. Without invasive construction sites and without interrupting the road system, this technique allows a net saving in terms of earth moving.

[Read more about Sewerage](#)

#### ➤ Treatment

Gruppo CAP manages 40 treatment plants in the territory of the Metropolitan City of Milan. These are complex and technologically innovative systems used to treat waste water: water used in human, domestic, industrial or agricultural activities must be 'cleaned and disinfected' before returning to nature. Once the waste water arrives at the purification plant through the sewerage system and inter-municipal collectors, it undergoes a purification process consisting of several stages: from screening to lifting, passing through sedimentation, settling and oxidation tanks to disinfection.

In addition, the purified water must be analysed and controlled before being returned to the environment. In the company's three laboratories in **Pero, Segrate and Peschiera Borromeo**, more than **4,000 controls are carried out each year on purification plants and more than 700 checks on industrial discharges**. The controls are carried out in compliance with the requirements of the relevant regulations in force, and according to a sampling schedule submitted each year for approval by ARPA, the Regional Agency for Environmental Protection of the Lombardy Region.

Following the principles of circular economy, Gruppo CAP promotes the reuse of treated water for non-domestic uses. Already today, in several plants, including Assago, Basiglio, Rozzano and Peschiera Borromeo, treated water is used for civil uses - such as street washing - and agricultural uses, such as irrigating fields.

In addition to treating water, CAP's plants have become 'hubs of the circular economy' where sewage sludge and other organic waste from the local area (e.g. FORSU, the organic fraction of urban solid waste) are used for transformative processes aimed at extracting all possible value (energy, methane, nutrients, etc.) from what has always been considered waste. Sewage sludge is the main residue of sewage treatment and in it are concentrated the pollutants removed from the waste water, i.e. all those substances that render the water unusable. Wastewater treatment sludge, naturally rich in organic substances, first undergoes a dewatering process to reduce its volume. Once dewatered, it is ready to be transformed into fertiliser for agriculture, into methane - thanks to anaerobic biodegradation - or destined for waste-to-energy plants, depending on the treatment plant.

According to its Sustainability Plan, the Lombard green utility has set a target of 87% sludge reuse and recovery **by 2033**, transforming it from waste material into high value-added products for the chemical sector, such as phosphorus and nitrogen, but also biomethane and fertilisers. In this sense, Gruppo CAP has been able to transform a linear process into a virtuous cycle, optimising all activities from an organisational and energy point of view and, above all, reusing what is already produced - purified water and sewage sludge - thanks to the use of cutting-edge technologies, effectively closing the circle, in a perfect circular economy perspective.

In addition, Gruppo CAP has entered into multiple partnerships with the food industry, large retailers and innovative start-ups for the management of food products at the end of the cycle. These foodstuffs, destined to become waste, become biogas and thus energy.

[\*Read more about Water Treatment\*](#)

[\*Circular Economy Projects\*](#)

#### **WATER KIOSKS: GOOD, CONTROLLED WATER TO HELP REDUCE PLASTIC CONSUMPTION**

In cooperation with the municipalities, Gruppo CAP builds **the Water Kiosks, facilities for the distribution of mains water, natural and sparkling, where users can fill up every day**. Through this initiative - which today counts more than 200 Water Kiosks - Gruppo CAP, the first in Italy to introduce this tool, promotes on the territory the culture of a conscious consumption of water, sensibly reducing the use of plastic, the production of waste and CO2. In fact, each Water Kiosks delivers, on average, 500 litres per day, equal to about 36,700,000 litres per year, a real benefit in terms of environmental sustainability.

Also for the Water Kiosks, specific and strict controls are carried out every month, which take into account 40 parameters and thanks to which CAP Group was the first in Italy to obtain the ISO 22000 - HACCP certification for food safety.

[\*\*Read more about Water Kiosks\*\*](#)

### **ARCA, THE NEW HEADQUARTERS DESIGNED ACCORDING TO THE DICTATES OF SUSTAINABILITY**

**The new headquarters of Gruppo CAP** meets the highest standards of environmental sustainability and energy saving. Inaugurated in June 2022, it is a true green building designed to guarantee both optimal comfort levels and reduced consumption, thanks to an accurate ventilation and air treatment system and a plumbing system for the use of drinking and non-potable water.

Thanks to its state-of-the-art features, the building has obtained the "Gold" level of LEED (Leadership in Energy and Environmental Design) certification, developed by the USGBC (U.S. Green Building Council), which promotes a sustainability-oriented approach to buildings, and CENED (Certificazione Energetica Edifici della Regione Lombardia) certification, which supports the improvement of the energy performance of buildings.

Its aesthetics are reminiscent of an ark floating on water, best reflecting both the Gruppo CAP's identity and its being at the service of the community. The theme of inspiration is precisely water and the interconnection of its networks that give shape to a building without fences, a true water square. In fact, it is a place designed to bring concrete added value to the neighbourhood, an open space with multiple services for citizens, with an auditorium and bar, cafeteria, and events space. Around the new Headquarters, Gruppo CAP has developed a path of aggregation and involvement of citizens and social realities in the neighbourhood, in synergy with Super, the suburban festival, and various institutions and associations in the area.

**[Read more about new Headquarters](#)**



## **RESEARCH AND DEVELOPMENT**

Research is at the heart of the Lombardy operator's industrial governance strategy. In this sense, the exchange of skills and technologies becomes a key issue for Gruppo CAP, which has in its Salazzurra research centre one of the country's most important and active centres for scientific experimentation in the sector.

Gruppo CAP is an active participant in Horizon Europe, the European Union's framework programme for research and innovation for the period 2021-2027 and successor to Horizon 2020, so much so that to date it has won four calls for proposals.

Below are some of the main projects in which Gruppo CAP has participated and those in which it is currently involved:

- **"Digital Water City - Leading urban water management to its digital future"**, co-financed by the European Commission under the Horizon 2020 programme and coordinated by the Berlin Water Competence Centre, aimed at implementing digital solutions to support the intelligent use of purified water. In 2022, Gruppo CAP developed these solutions in its plants, e.g. in the Peschiera Borromeo water treatment plant, where there are probes that send alert signals from the Early Warning System developed by the Università Politecnica delle Marche to the WebGIS Acque di Lombardia page. The project ended in November 2022.
- **UPSTREAM project**, drawn up as part of the Horizon Europe 2022 call and involving 17 partners from 10 different countries, for the diffusion and development of a series of 15 advanced solutions to tackle the serious problems of pollution by waste, plastics and microplastics in European rivers and seas. To this end, Novamont and Gruppo CAP are developing a new formulation of biodegradable bioplastics to replace conventional fossil-based bioplastics in the production of products that are responsible for the release of microplastics into rivers through sewage treatment plants, focusing on evaluating their behaviour in the wastewater treatment cycle to qualify their potential in preventing pollution in open waters.
- **SMART-Plant**, a project launched as part of the Horizon 2020 call and which Gruppo CAP is developing in cooperation with the Marche Polytechnic University, for the recovery of cellulose from wastewater.
- **Circular Economy for Water and Energy - CE4WE project**, in which the company participated together with the University of Pavia, A2A Servizio Idrico, ENI, Mogu and NeoruraleHub, and for which a bioreactor was installed for the controlled growth of fungi and their application to sludge from the San Giuliano Milanese Ovest sludge treatment line. The project aimed to validate the quality of the oil extracted from the sludge for biodiesel production, to explore various process alternatives to optimise oil recovery. The project ended in November 2022.
- **LIFE FREEDOM project** to test the applicability of the process known as hydrothermal liquefaction (HTL) for the treatment of sewage sludge. The pilot plant will be installed at the Cassano d'Adda wastewater treatment plant in 2022.
- **CIRCULAR BIOCARBON project**, with the aim of creating new business models based on the treatment of urban waste, again according to circular economy principles. In two different case studies, in Zaragoza (Spain) and in Sesto San Giovanni, a biorefinery will be developed based on the valorisation of FORSU to obtain high added-value products from urban organic flows, taking a further step forward compared to the classical anaerobic digestion and composting systems.
- **Project BIOMETHAVERSE** (Demonstrating and Connecting Production Innovations in the BIOMETHANE uniVERSE), the aim of which is to introduce innovations in the biomethane sector that can increase production, decrease costs, and couple the electricity grid and gas grid to enable the transition to renewable energy in all energy sectors. With this project, Gruppo CAP, together with several Italian and European partners, won a Horizon Europe call for tenders.

- **BIORECER project** - implemented as part of the European Union's Horizon Europe development programme and aimed at stimulating European stakeholders in the use and trade of biological resources through the definition, promotion and transfer of competitive and efficient bio-based circular systems.
- **Sanitation Safety Plan** - realised by Gruppo CAP in cooperation with the University of North Carolina, Istituto Superiore di Sanità, Istituto Mario Negri, IRSA CNR and Politecnico di Milano - aims at implementing an advanced risk assessment system in the field of irrigation reuse of treated wastewater.
- Starting from October 2021, as part of the surveillance foreseen by the "SARI Project", ISS has requested the activation of the analytical protocol **"Surveillance of SARS-CoV-2 in urban wastewater Rev. 3 of 25.07.2021"**. This project envisages sampling and analysis, consistent with European recommendation 2021/472 of 17/03/2021, and the recording of results in the ISS dashboard within 48 hours of sampling.

## **PRIZES AND AWARDS**

Gruppo CAP's work in offering quality services to the entire community every day has earned the green utility numerous awards and recognitions, year after year. In 2023 alone, Gruppo CAP received the **"Top Employer 2023"** award, reconfirming its position as one of the Italian excellences that have made attention to corporate wellbeing one of the key aspects of its business; **"Workplace Health Promotion"** certification, the programme promoted by ATS Lombardia and which recognises workplaces that encourage the adoption and diffusion of healthy lifestyles; and recognition for its support for **United Nations Global Compact**, the world's largest corporate sustainability initiative. In the field of sustainability, Gruppo CAP also received the **"Sustainability Award"** from Credit Suisse and Kon Group, which rewarded the 100 most virtuous Italian companies from a green point of view and with the highest ESG ratings.

Also testifying to the commitment that has always distinguished Gruppo CAP is the **"Top Utility Ten Years"** award, assigned in 2022 as the company that has collected the most awards over the ten years of Top Utility - a recognition destined for excellence in the public service sector. Over the past decade, Gruppo CAP has excelled both in specific areas, such as innovation and sustainability, and in its overall activities.

In 2023, ARERA, as part of the incentive programme involving all water service providers in the country, certified **the excellence of Gruppo CAP**, placing the company in **first place in the ranking of Lombardy's water service providers, and first Italian monutility** in terms of the amount of awards received, behind only Acea and Hera, two of the country's main multi-utilities. CAP was awarded top marks for the quality of the water supplied, for the excellence of its water and sewerage service management, and for the disposal and valorisation of sewage sludge. Gruppo CAP also achieved the objectives of maintaining or improving performance in the commercial area. For the results achieved, ARERA awarded CAP a contribution of more than EUR 8 million.

[\*\*Read more about Prizes and Awards\*\*](#)

## Raising user awareness: Gruppo CAP's communication activities

Gruppo CAP has developed various initiatives to directly involve citizens and users with the aim of educating and raising awareness on the dual role of water, understood both as a public good and as a resource to be protected with a view to sustainability.

- Podcast "The Source": the first Italian climate fiction podcast that recounts the effects and consequences of climate change in a country governed by the new influencers and that for 15 years has ignored scientists' warnings, suddenly finding itself the victim of the first water crisis in history. Thanks to the voices of actors **Massimiliano Loizzi** and **Fabrizio Biggio**, this project aims to give a clear signal for an ongoing commitment to the protection of environmental and water resources. The podcast is available free of charge on all major streaming platforms.
- **"The Source - Scrivere sull'Acqua"**: a project born from the podcast of the same name, this is a **collection of 12 short stories** by emerging Italian writers who won the literary competition promoted by Gruppo CAP. Focusing on the future of a waterless Italy, it is an anthology edited by **De Agostini Libri**, with a preface by Paolo Zardi.
- **Capirci un Tubo" podcast**: the second podcast launched by Gruppo CAP, it is a **journey into the world of water from the point of view of science**, to learn what lies behind the simple act of turning on the tap, to find out how much water is wasted every day and how best to use it. The podcast is hosted by **Alberto Agliotti**, science populariser and communication expert, together with a different guest in each episode. The two seasons of the podcast are available free of charge on all major streaming platforms.
- Podcast **"Tempi Sbagliati"**: the fundamental question that this podcast aims to explore is *"Do we still have any hope or are the times starting to be wrong?"*. Together with **Sofia Pasotto**, a young environmental populariser and tiktoker, this project is aimed above all at **Generation Z**, with the aim of **raising awareness of conscious consumption and greater responsibility in the use of water and all the resources that are too often taken for granted**. The two seasons of the podcast are available free of charge on all major streaming platforms.
- **"Milano Unplugged. Inchiesta di una generazione"**: a project promoted by Gruppo CAP and **Fondazione Feltrinelli** with the aim of **training the future generation of multimedia information professionals**. The initiative involved 14 young people, aged between 18 and 25, from the areas of Barona, Abbiategrasso, Stadera, Chiesa Rossa and San Cristoforo, thus shining the spotlight on the neighbourhoods surrounding the Group's new headquarters and giving voice to those who live them every day.
- **"NABA Design Marathon"**: an initiative launched by Gruppo CAP and **NABA**, Nuova Accademia di Belle Arti, **to rethink and reinvent Largo Tazio Nuvolari**, in the southern part of the city, thanks to projects proposed by the Institute's young students. The Design Marathon is part of the **programme to redevelop the neighbourhood that hosts the water utility's new headquarters and open it up to the citizens of the community**.
- **Stile Libero" events**: a series of appointments that from September to November 2022 enlivened the new headquarters of Gruppo CAP through free talks open to all, with philosophers, artists, writers, as well as chefs and sports personalities **who spoke about the theme of water from a different point of view**.

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