

**The future of water:
Governance and
innovation. Italy and
the Netherlands
teaming up.**

**Stati Generali della
Green Economy -
Ecomondo**

Gruppo CAP

Michele Falcone, 6 novembre 2024



 GRUPPO CAP



About Us

Gruppo CAP is the all-public industrial group that manages the entire Integrated Water Service (aqueduct, sewerage and purification) in the territories of the Metropolitan City of Milan and in some other Lombardy municipalities.

In terms of customers served, volumes of water distributed and length of network, it ranks among the top organizations in Italy that provide the Integrated Water Service.



1928

Foundation



193

Shareholder



6

Company and subsidiary
entities



€ 571 mln

Social capital



**Management
model**

Entirely public company



922 people

Almost 1000 people work with passion and dedication everyday to bring good, safe water to the homes of the citizens of almost 200 municipalities in Lombardy



Gruppo CAP – What we do



TREATMENT

154 municipalities

2.420.885 inhabitants

Over 300 milion m³ of treated wastewater

115.473.502 m³ treated water (37% of total)

+ 74.608 ton of sludge. 45% reused in agriculture

40 wastewater treatments plants



AQUEDUCT

1.886.014 inhabitants

133 municipalities

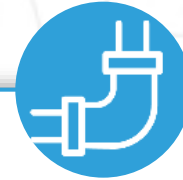
724 groundwater wells

235.962.729 m³ of water supplied

6.531 km water network

21.877 drinking water withdrawal

866.325 analytical determinations



SEWERAGE

133 municipalities

1.886.014 inhabitants

493 km collectors

6.531 Km sewer network and collectors





PLAN TO REDUCE WATER
LOSSES AND THE NRP

Gruppo CAP and the reduction of water losses

In Gruppo CAP we have launched an ambitious **80-million-euro plan to reduce water losses in 133 municipalities**. The project includes the replacement of **18 km of pipes** and the **adoption of advanced digital technologies for real-time monitoring and predictive failure analysis**.

The project is funded **with 42 million euro from the NRP**, obtained in collaboration with **ATO Metropolitan City of Milan**.

MACRO ACTIVITIES

- ✓ Georeferencing of connections
- ✓ **Districing of aqueduct networks**
- ✓ Leaks detection
- ✓ Network modelling
- ✓ Modernization of TLC and control room
- ✓ Extension of DSS
- ✓ IT infrastructures
- ✓ Replacements of networks
- ✓ **Smart metering**



DISTRICING OF AQUEDUCT NETWORKS

A water service network management process. It consists of dividing the entire water network into smaller areas, called districts, each of which is monitored and controlled separately.



SMART METER

Digitalization allows us to offer a better service to the community. Smart metering requires the use of smart meters so that water consumption can be monitored and managed in a prompt manner.





■ DISTRICTISATION OF AQUEDUCT NETWORKS

Districtisation

What is it



Districtisation consists in the **sectorialisation of the water network**. The subdivision of the entire network into smaller areas.

What it is for



Dividing areas into districts or sectors makes it possible to monitor and calibrate hydraulic models and identify criticalities typical of that basin, thus helping to reduce water losses and verify **Water Measurement Districts**.

Benefits



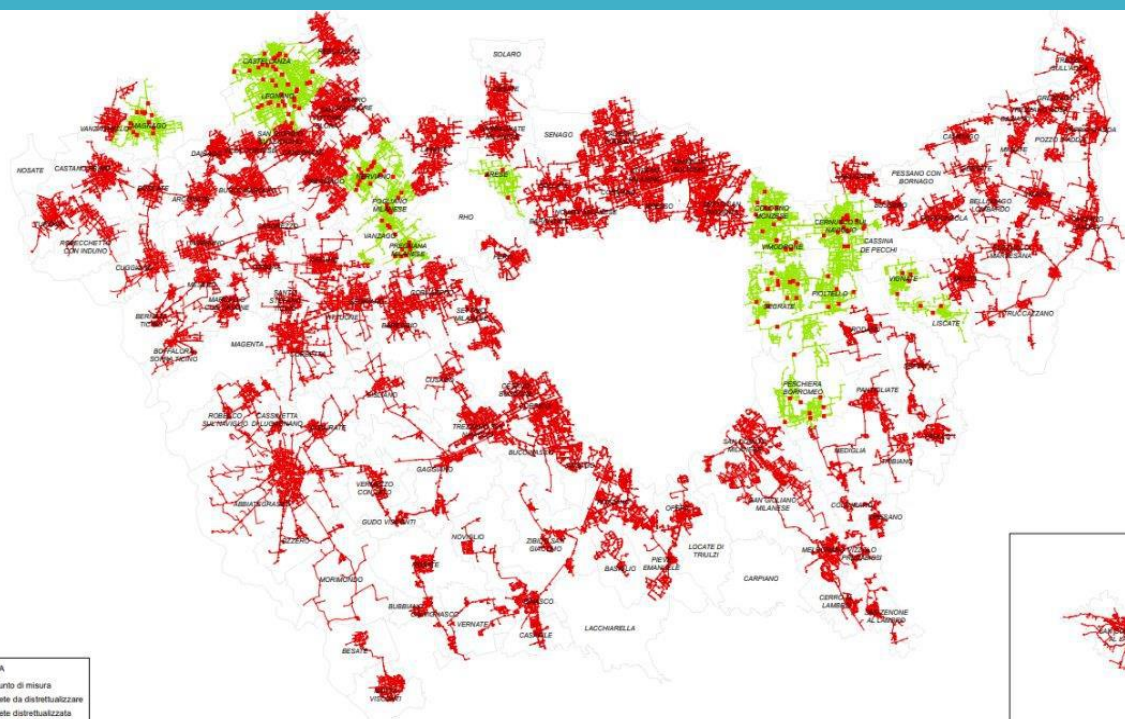
The volume of recoverable water justifies the districtisation of water networks, plant modifications and leakage repair activities, both economically and in terms of **environmental sustainability**.



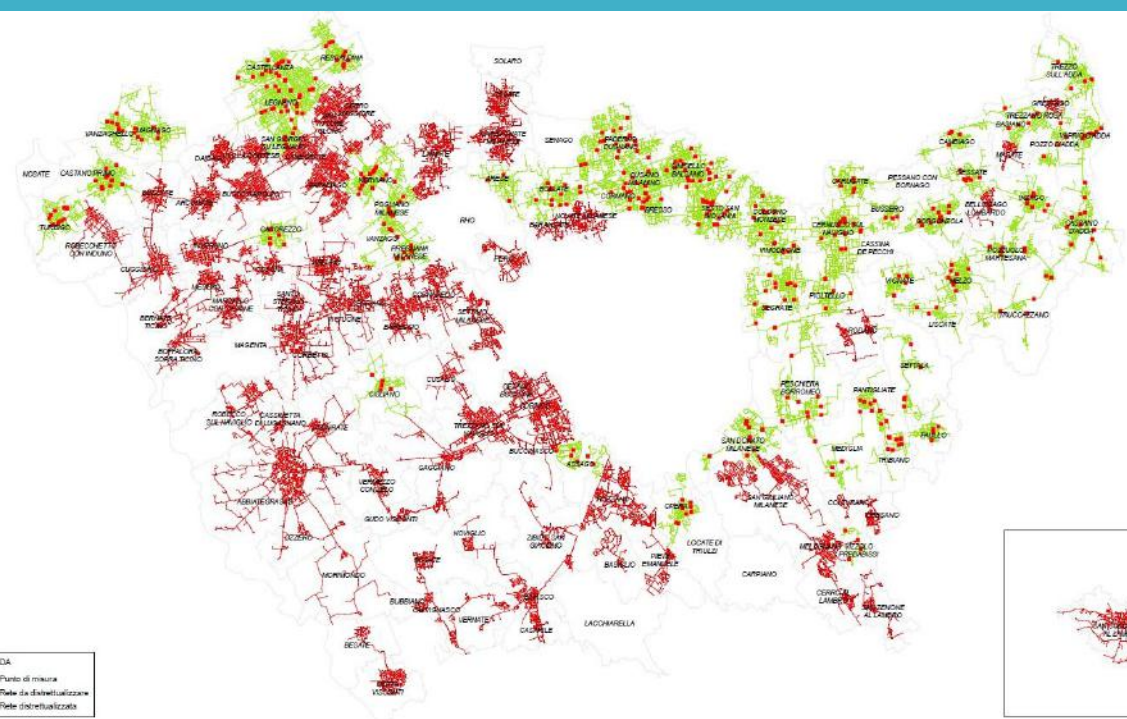
Districtisation: installation of flow meters

Maps of km districtised network

Progress of activities as at
31/05/2024



Progress of activities as at
31/08/2024





SMART METERING

The background is a vibrant, stylized illustration. It features a city skyline with various orange and red buildings of different heights. In the foreground, there's a winding path on a reddish-brown hill where two people are riding bicycles and three others are playing soccer. A blue river flows through the bottom right. A multi-arched bridge spans the river in the middle ground. The sky is a solid blue with two white kites. A blue square with a white grid pattern is positioned to the left of the main title text.

Smart Metering

Smart metering represents a revolution in the way we monitor and manage water consumption.

Thanks to smart meters, we are able to **monitor consumption** in a detailed and continuous manner, allowing us to **quickly identify any anomalies or leaks**.



Water dispersion in Italy registers a national average of 42%, while in Lombardy the average is 23.4%.



Gruppo CAP has already reduced its water dissipation to 19.9%, with **the target to decrease it to 15% by 2033**.



The total funding of **79.4 million euro** will enable innovative technologies such as SAR radar, acoustic sensors, real-time modelling software and decision support systems.



40,000 smart metering devices will be installed by 2025.



Smart Metering – The Project

Smart metering not only **improves the efficiency** and **sustainability** of our operations, but also allows us to provide better service to our users. Sharing best practices and continuous innovation are key to meeting future challenges and ensuring sustainable resource management.

38.657
meters to
replace



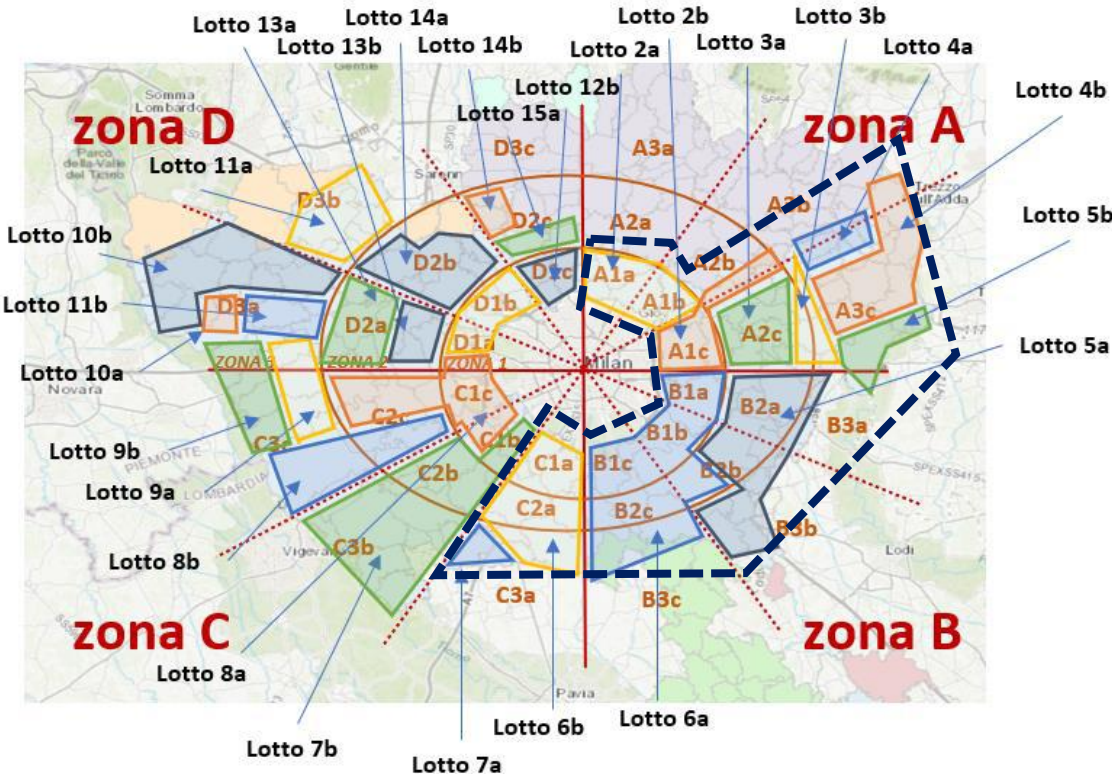
1.078
obsolete meters with radios



37.579
obsolete mechanical meters



The projected replacement rate is about 50% with a target of **20,000 meters** by 2025.



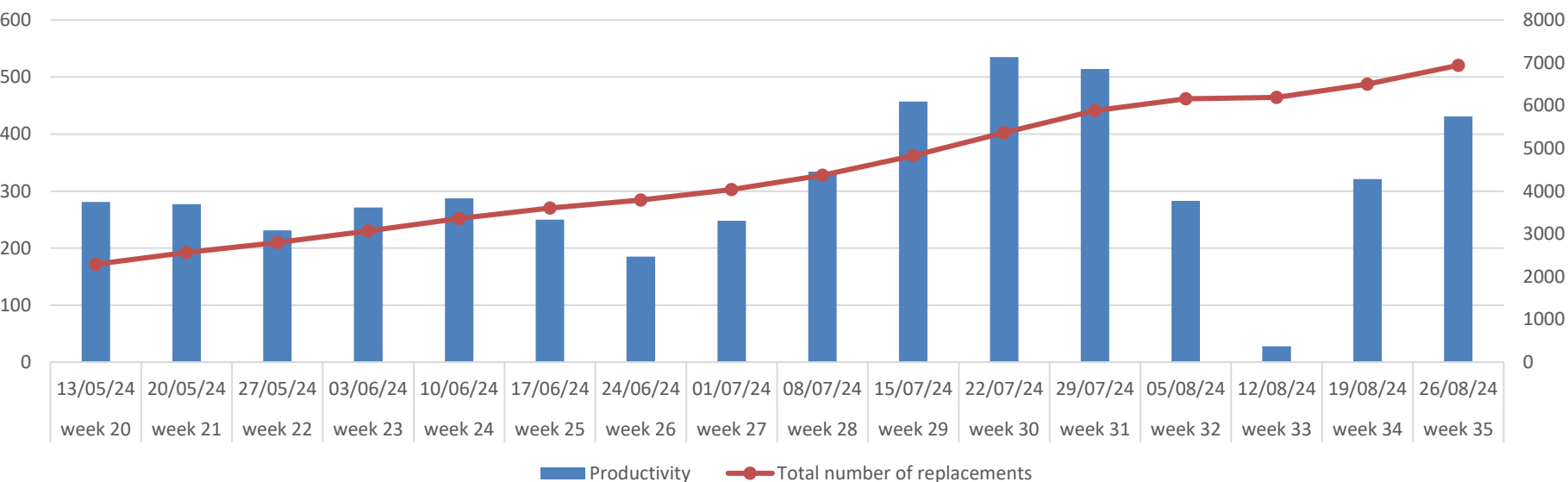
Territorial area where replacements have been carried out or are being replaced



Smart Metering – Project progress

For years, the CAP Group has recorded a **constantly decreasing trend in dispersion**, with numbers significantly lower than the national and European averages, thanks to the technological innovations implemented and the investments made to improve service efficiency.

In 2023, for example, **we reduced the water injected into the network by 2.5% and reduced leakage by 4.5%** compared to the previous year. Overall, we have invested more than **15 million euro** per year against water loss.



Reachability rate
(connectivity)
Smart meters
NB-IoT

97%



Thank you

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