



AVEVAWORLD

ACCELERATE INDUSTRIAL INTELLIGENCE

20 MAY 2026

Environmental services monitoring

Gestione Servizi Territoriali (GST)

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AVEVA

A2A Life Company



We are a **Life Company**: we put life at the heart of everything that we do, for us and **future generations**.

Our technology and our infrastructures are at the service of **people** and of the protection of **nature**, so we work every day to **regenerate** the potential of every resource.

We promote energy from renewable sources, and we accelerate **decarbonisation**, promoting **electrification of consumption**.

We build a virtuous water cycle to save every drop.

We turn waste into resources so that all waste can become new **material**, **energy** and **heat**.

Our **vision** looks **forward**.

We build our **future today**, acting, **consciously**.



Introduction about company

Plants

 Wind	 Waste treatment	 Biomethane/ Biogas production
 Photovoltaic	 Material recovery	
 Thermoelectric	 Waste-to-Energy	
 Hydroelectric	 Landfill	

Services

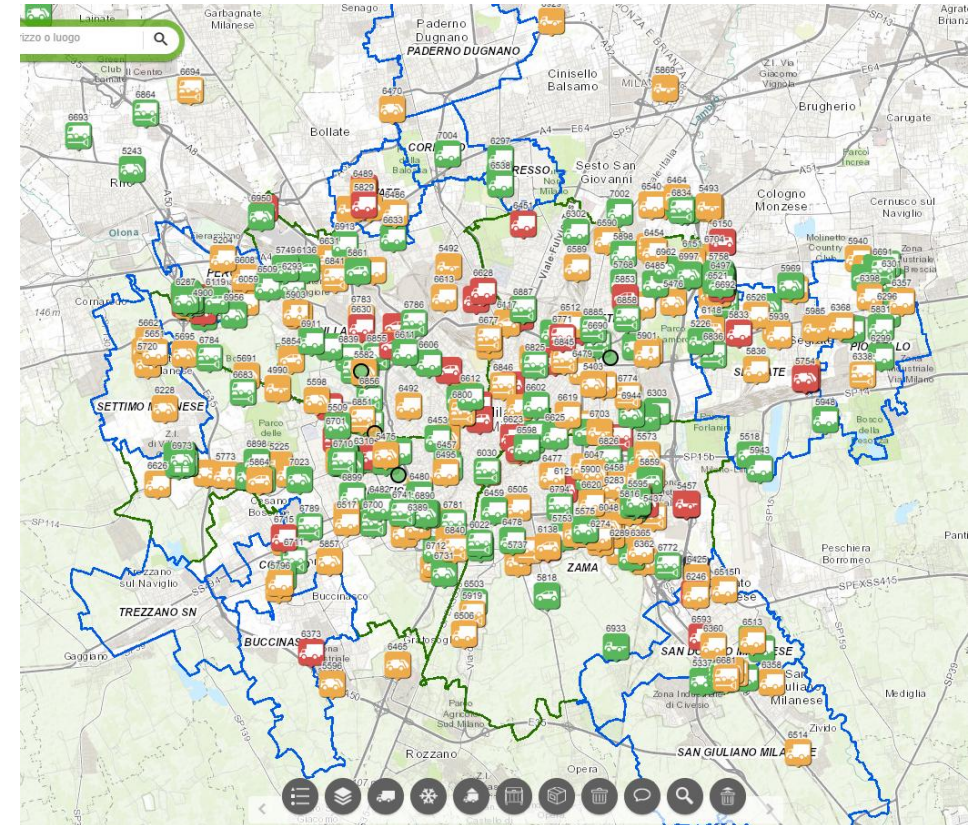
 Gas transport	 Public lighting
 Electricity distribution	 Integrated water service
 Gas distribution	 Recharge stations e-Moving
 Waste collection	 District Heating



GST (Gestione Servizi Territoriali) Application

GST – Platform for monitoring and overseeing environmental operational services

- Digital platform for the **monitoring and control** of urban street cleansing.
- Enables **real-time** verification of activities carried out across the territory.
- Supports rapid identification of **operational issues** and targeted intervention.
- Offers a **complete historical record** of services delivered, useful for analysis and checks.



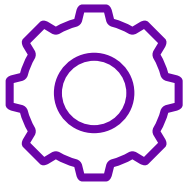
Business challenge



Primary objectives

- Collecting real-time data from the vehicle and organize them in time
- Showing information in order to check and monitor the service and manage possible issues
- Keeping everything in check and react rapidly on possible issue

How we worked to improve our operations



Challenge

- Collect and store information from different sources
- Improved data acquisition
- Create automatic data analysis & alerts

Solution

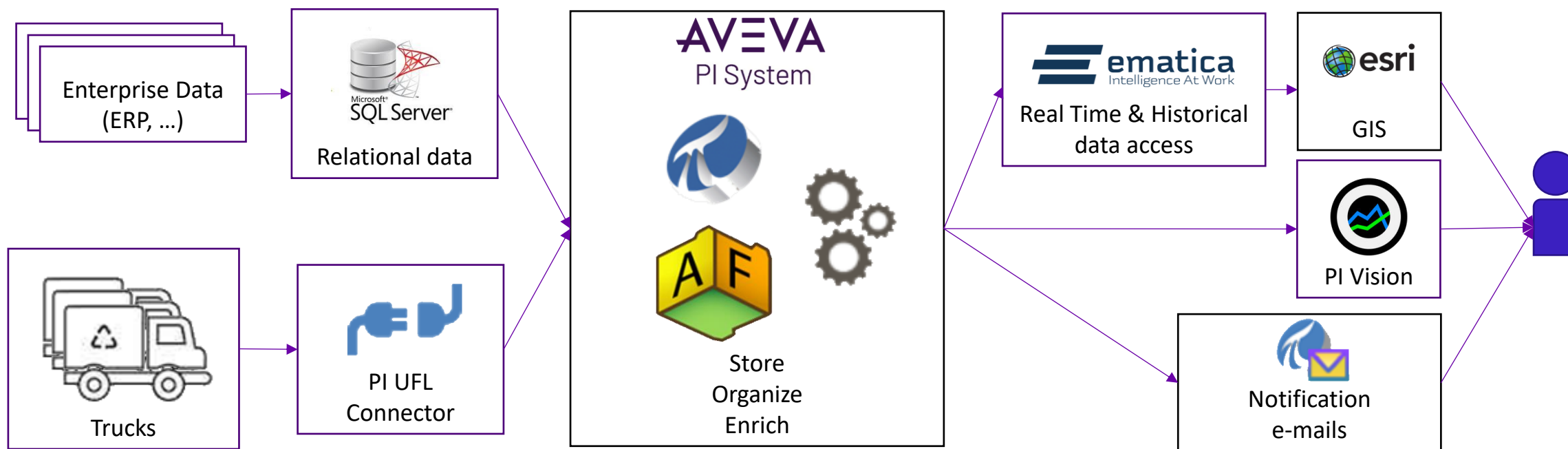
- DBs connection and organic AF
- PI-stack to collect data and analyse all the information

Benefits

- Better and more effective control
- Faster and more precise reaction on issues
- Enhancement of planning the service schedule

- **PI UFL Connector** to acquire data from vehicle black boxes
- **PI Data Archive** to store all the data/information
- **PI Asset Framework** to organize and contextualize data
- **PI Asset Analytics** to calculation of complex data to enhance the monitoring
- **PI Vision** for infrastructure and data flows monitoring
- ematica developments with **AF SDK** for connecting ESRI front end

Architectural schema



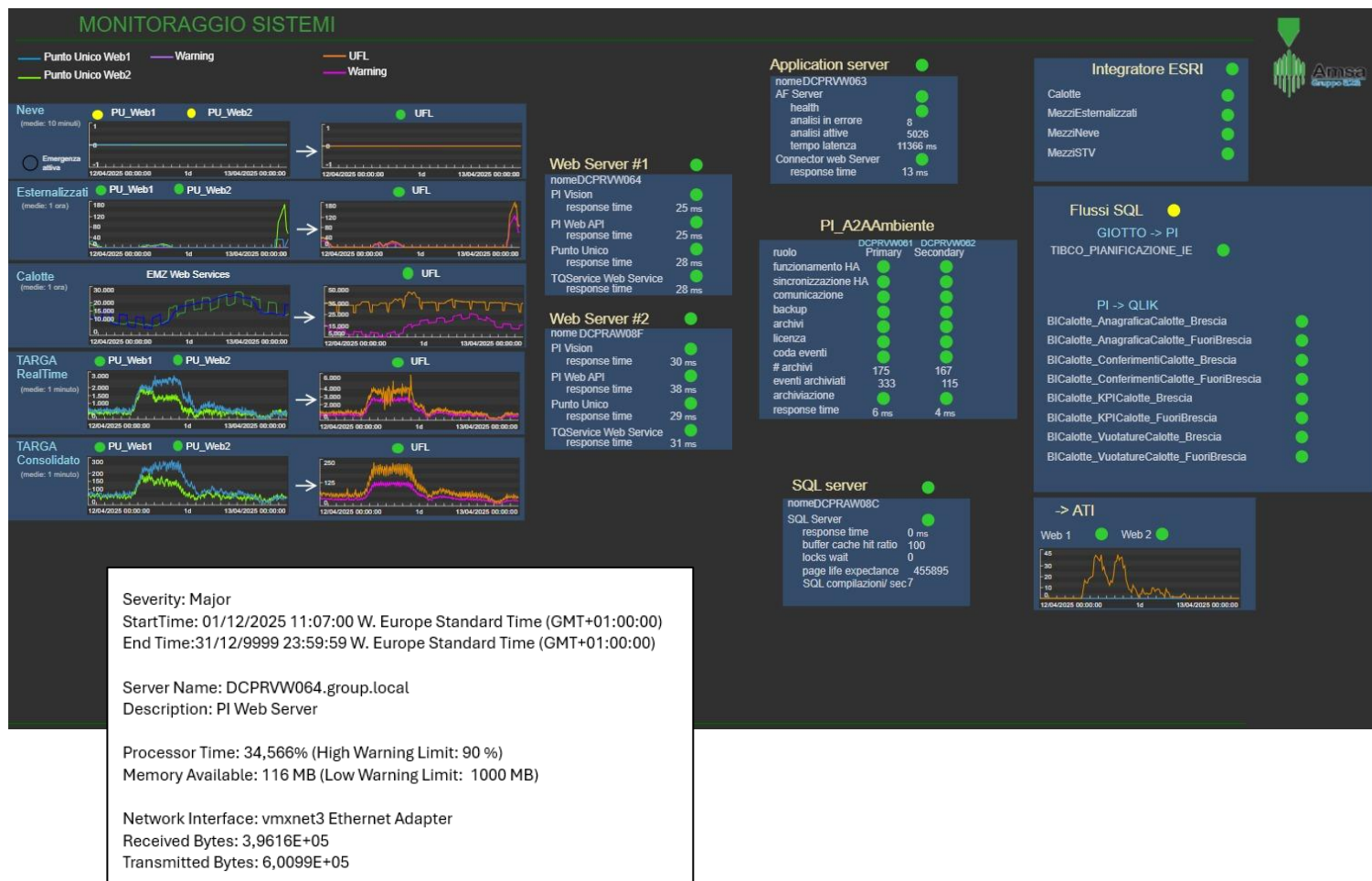
Data Model

Category: Anagrafica	
Azienda	Amsa
CodiceTag	6874
Descrizione	SPAZZATRICE RAVO 540 + AGEVOLATORE LI
Targa	APF 300
Tipologia	Autospazzatrici 4 mc
Category: Pianificazione	
FinePianificazione	19/02/2026 20:43:00
InizioPianificazione	19/02/2026 13:07:00
Pianificazione	01-0156-09
Servizio	SPAZZAMENTO GLOBALE 2
Category: Posizione	
Altitude	123 °
Direction	352
InOutDept	1
LastMovement	19/02/2026 19:08:00
Category: Stati e Allarmi	
LivelloCriticità	1
RitardoTrasmissionePerc	1,4944 %
UltimaPosizione	19/02/2026 19:07:01
UltimoAggiornamento	19/02/2026 19:07:11
UltimoCaricamento	19/02/2026 19:07:16.802

AF Model provides a coherent view of all information:

- Master data from ERP
- Planning
- GPS and events from vehicle Black box
- KPI and alarms calculated by Analysis

Monitoring



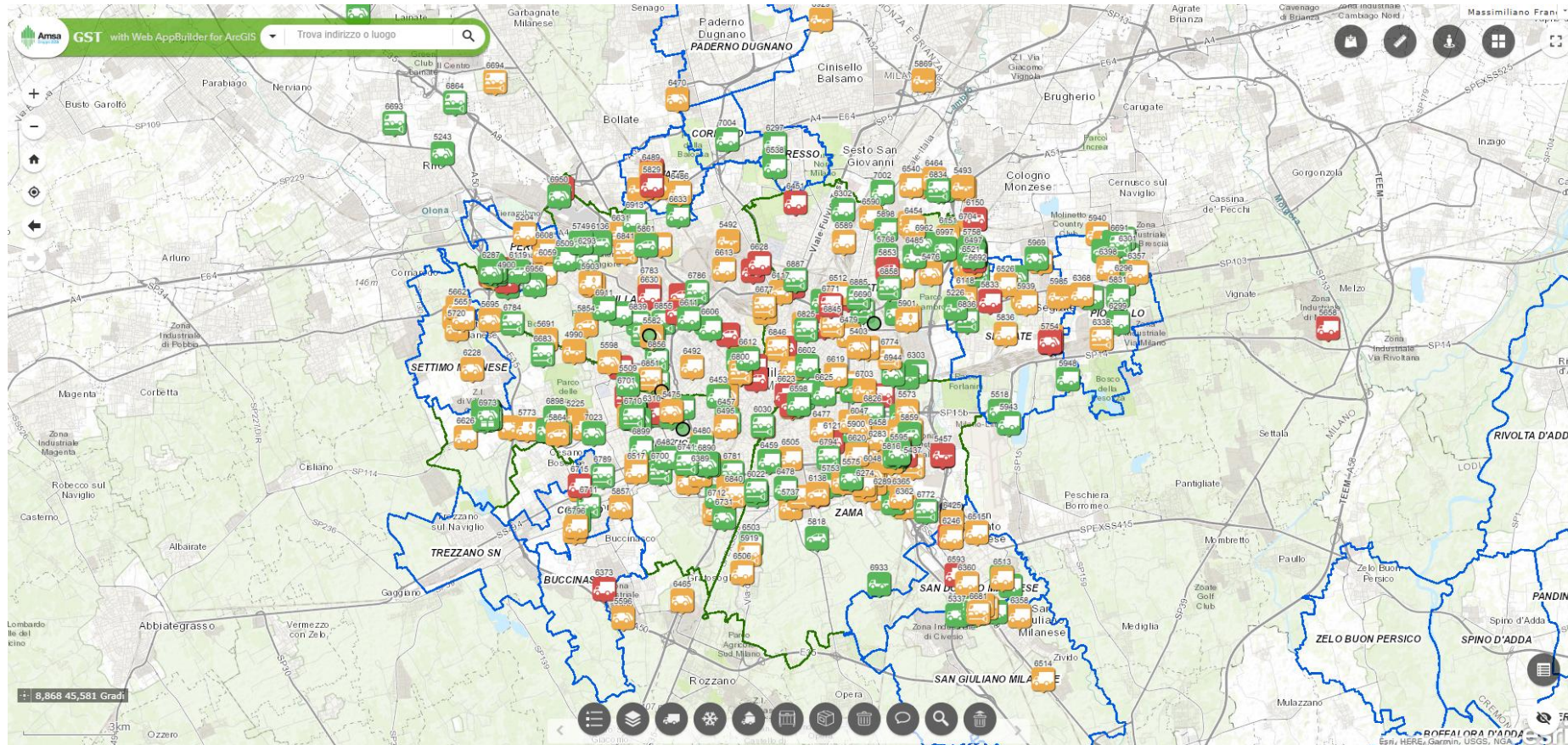
A dedicated AF model is designed for infrastructural monitoring

Using dedicated PI Tags, status of servers and dataflows is under control.

A PI Vision display shows overall status.

PI Notification e-mail alerts AMS Team for proactive actions.

Control room – General view



The color of the icon matches the KPI calculated by PI on specific parameters.

Control room – Vehicle detail

The screenshot displays the Amsa GST control room interface. On the left, a map shows the location of vehicle 6692. A central panel titled 'Informazioni' provides details for vehicle 6692. The details are organized into two columns: 'Pianificazione' and 'WIP'. The 'Pianificazione' column includes fields for 'Pianificazione', 'Servizio', 'Unità territoriale', 'Squadra', 'Inizio pianificazione', and 'Fine pianificazione'. The 'WIP' column includes fields for 'Mezzo spento fuori dipartimento', 'Apparato mezzo - Spazzola', 'Mezzo indisponibile in SAP', 'Velocità', and 'Nessun ticket nel turno'. A small inset window on the right shows a 3D model of the vehicle 6692.

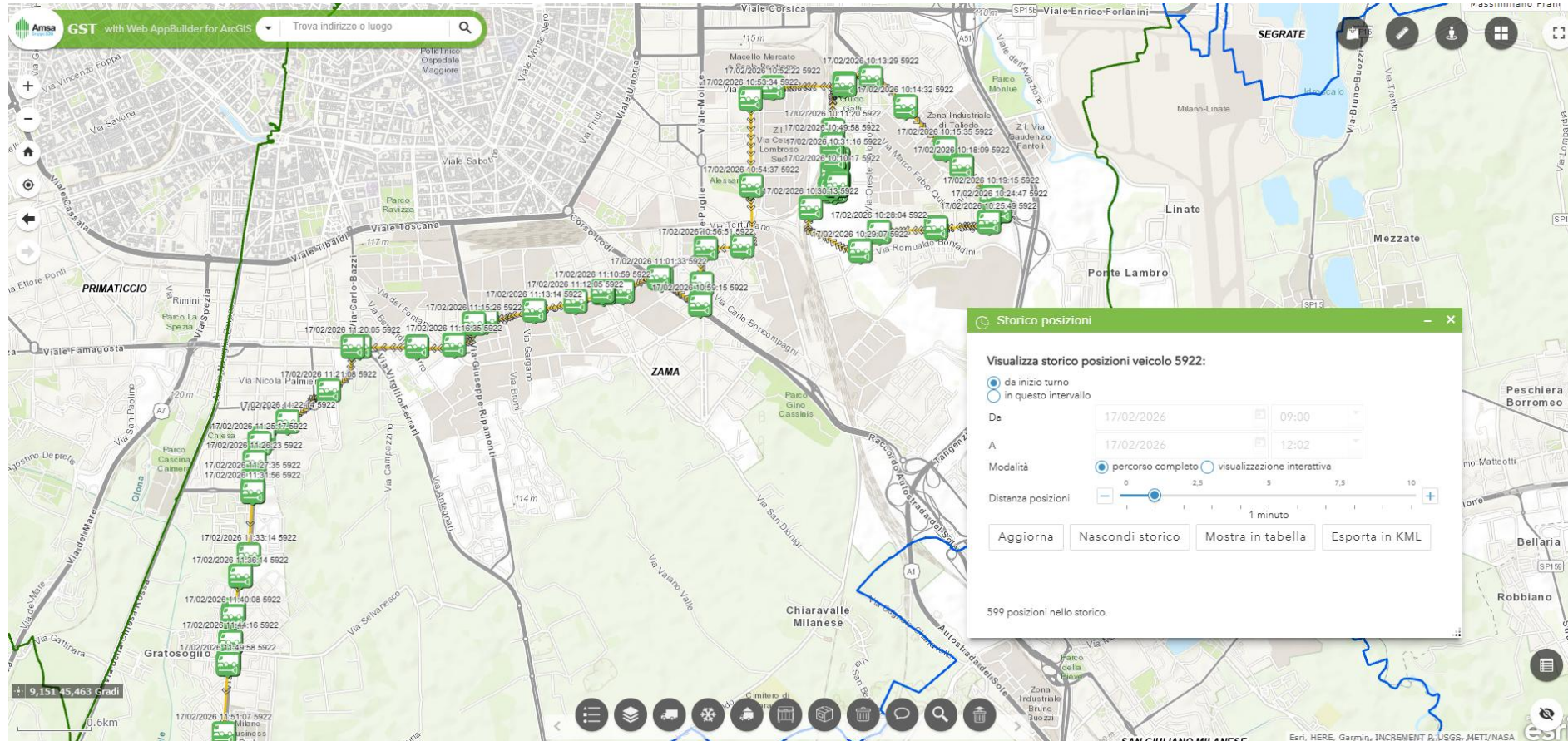
Informazioni	
Icona	
Matricola	6692
Targa	GW 325 KJ
Nodo di appartenenza	UP Olgettina Amsa
Descrizione	SPAZ.SCHIMDT SK 660 IVECO 160E 21 + AGEV
Tipologia	Autospazzatrici 6 mc
Ultimo aggiornamento	24/03/2026 15:30:33 (00:00:05)
Ultima posizione	24/03/2026 15:30:33 (00:00:05)
Indirizzo	VIA FELTRE
Comune	MILANO

Pianificazione	
Pianificazione	01-0156-04
Servizio	SPAZZAMENTO GLOBALE 2T
Unità territoriale	OLGETTINA
Squadra	4
Inizio pianificazione	24/03/2026 13:07:00
Fine pianificazione	24/03/2026 20:43:00

WIP	
Mezzo spento fuori dipartimento	●
Apparato mezzo - Spazzola	Attivo (0gg, 00:12:57)
Mezzo indisponibile in SAP	●
Velocità	5.00 Km/h
Nessun ticket nel turno	

This view shows the current value of attributes in the AF model.

Control room – Historical data



The path of the single vehicle is produced using the data stored in the PI Data Archive and every single fix shows all the information stored and calculated by the PI System.

Speakers' contact

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THANK YOU

謝謝

DZIĘKUJĘ CI

NGIYABONGA

TEŞEKKÜR EDERİM

DANKIE

TERIMA KASIH

GRACIES

WHAKAWHETAI KOE

DANKON

TANK

TAPADH LEAT

SALAMAT

SPASIBO

GRAZIE

MATUR NUWUN

ХВАЛА ВАМ

MULŢUMESC

PAKMET CIZGE

고맙습니다

GRAZIE

شكرا

FAAFETAI

ESKERRIK ASKO

HVALA

GO RAIBH MAITH AGAT

БЛАГОДАРЯ

GRACIAS

ТИ БЛАГОДАРАМ

MAHADSANID

TEŞEKKÜR EDERİM

OBRIGADO

TAK

DANKE

RAHMAT

MERCI

GRAZZI

PAKKA PÉR

HATUR NUHUN

PAXMAT CAĞA

CẢM ƠN BẠN

WAZVIITA

FALEMINDERIT

ありがとうございました

SIPAS JI WERE

TERIMA KASIH

UA TSAUG RAU KOJ

ТИ БЛАГОДАРАМ

СИПОС

DI OU MÈSI

ĎAKUJEM

KÖSZÖNÖM

MAHALO IĀ 'ŌE

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Over 20,000 enterprises in over 100 countries rely on AVEVA to help them deliver life's essentials: safe and reliable energy, food, medicines, infrastructure and more. By connecting people with trusted information and AI-enriched insights, AVEVA enables teams to engineer efficiently and optimize operations, driving growth and sustainability.

Named as one of the world's most innovative companies, AVEVA supports customers with open solutions and the expertise of more than 6,400 employees, 5,000 partners and 5,700 certified developers. The company is headquartered in Cambridge, UK.

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