

Understand movement.

Improve mobility.

AI-enabled Digital Twin and SnapAdvisor Copilot for smarter mobility operations and plan, prediction and decision support



TRAFFIC



PUBLIC TRANSPORT



PARKING



SHARED MOBILITY



PEOPLE FLOW



ENVIRONMENT



EVENTS & SERVICES

TRAFFIC FLOW

68%
NORMAL



PUBLIC TRANSPORT

 **94%**

On-time services

PARKING

 **78%**

LOW ———— HIGH

ACTIVE INCIDENTS



01 Critical

01 In progress

02 Resolved

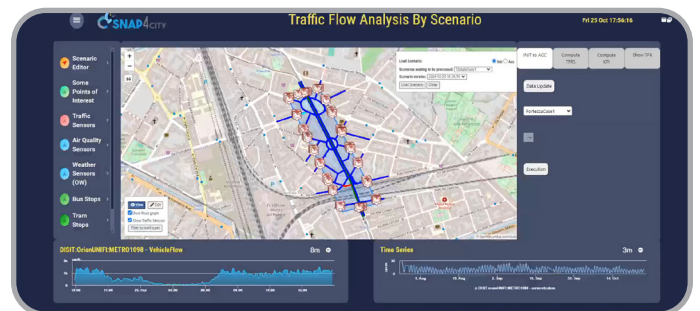
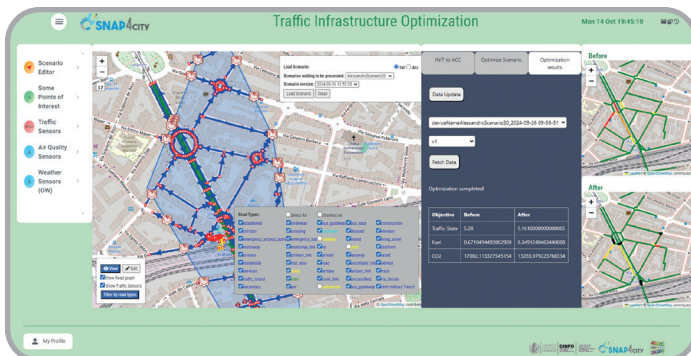
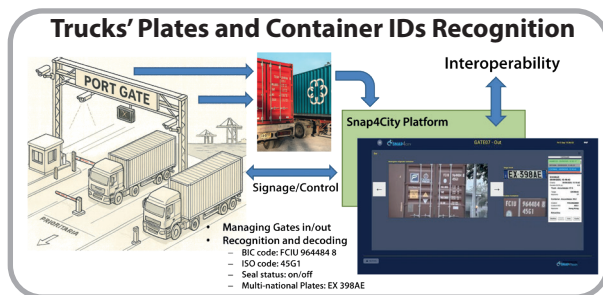
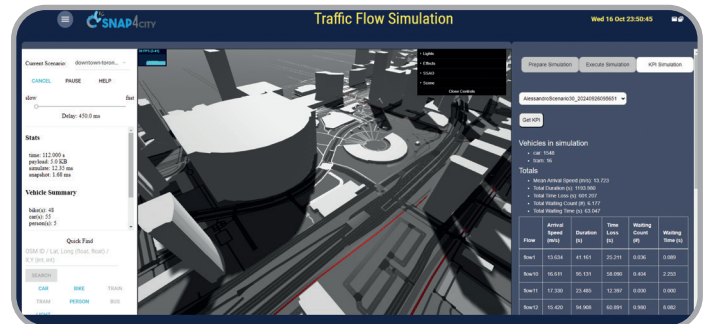
REAL-TIME

PREDICTIONS

SIMULATION

OPTIMIZATION

DECISION
SUPPORT



WHAT SNAP4MOBILITY CAN DO?

Practical use cases for mobility operators and city managers

From city data to coordinated action

Snap4City brings together real-time and historical mobility data, predictive analytics, simulation, optimisation, routing and operational tools in one Smart City Digital Twin. SnapAdvisor Copilot adds a conversational and agentic AI layer that can understand objectives, plan multi-step analyses, invoke configured Snap4City services and explain actionable outcomes in natural language.

01

MONITOR

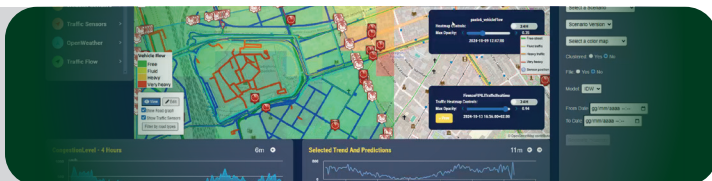
Unified real-time view of traffic, public transport, parking, shared mobility, people flows, events, weather and environmental conditions.



02

PREDICT

Forecast congestion, parking availability, public-transport delays, demand, pedestrian peaks, emissions and other KPIs.



03

PLAN & SIMULATE

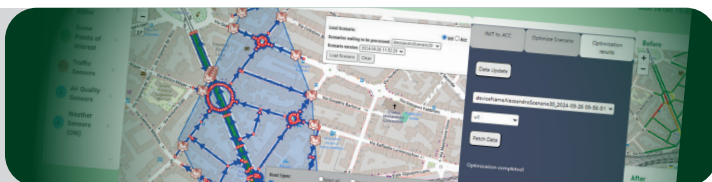
Run scenarios and what-if analyses for road changes, traffic-light plans, routing policies and transport-service alternatives.



04

OPTIMIZE

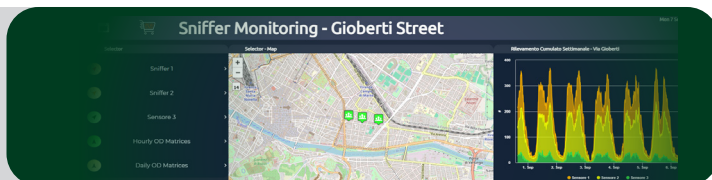
Use decision-support and AI/DRL approaches to improve traffic signals, infrastructure and public-transport offer against measurable objectives.



05

ACT

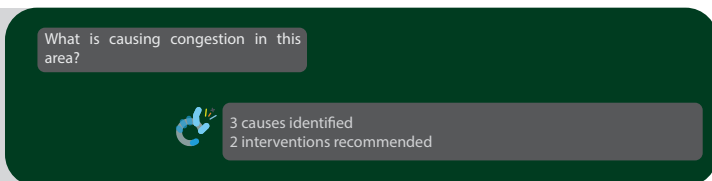
Support dynamic routing, control-room interventions, digital signage, permissions, fleet operations and authorised workflows through APIs.



06

ASSIST

Use SnapAdvisor Copilot as a natural-language interface to data, analytics, routing, simulation, optimisation, RAG knowledge and visualisation.



DECARBONIZATION



SAFETY



ACCESSIBILITY



DECONGESTION



COST REDUCTION

Safer • More accessible • More efficient • Multimodal • Lower-emission mobility

One Digital Twin for the complete mobility management cycle

Snap4City integrates heterogeneous mobility and urban information within a common environment for city operators, transport authorities, planners and citizens. The platform supports the full cycle from monitoring and early warning to prediction, simulation, optimisation and long-term planning.

Traffic intelligence	Public transport
Traffic monitoring, flow reconstruction, critical-condition detection and short-term prediction from distributed sensor networks and other mobility sources.	Schedules, stops, routes, vehicle positions and arrival information across buses, trains, trams and ferries; demand-versus-offer analysis and service optimisation.
Parking: on-road and off-road	Routing & MaaS
On-street and off-street parking, occupancy prediction, smart curb management, loading zones, disabled parking, payments and permissions.	Modal and multimodal routing for drivers, cyclists, pedestrians and public transport, including current traffic, closures, restrictions and specialised public-service routing.
Fleet & shared mobility	Apps & control rooms
Fleet management, sharing, pooling, e-sharing, connected vehicles, charging infrastructure and Mobility-as-a-Service scenarios.	Smart City Control Rooms, dashboards, mobile/web apps, digital signage and APIs for operators, fleet drivers and city users.
Permissions and subscriptions	Enforcement and fines
Permissions for parking for disable, residents, delivering, industries, access to RTZ, waste delivering, etc.	Back office and mobile app for On-Road Operators, Fine management systems, fine emissions on road and from back office.
User Engagement	Open to Multiservices
Collecting user complains regarding services, integration with ERPs, automated management of complains.	Multi-services: environment, weather, POI, personal data, etc.

TARGET OUTCOMES

Planning Goals

- Reduce congestion, travel time, waiting time, fuel use and operational costs.
- Improve accessibility to services, public-transport reliability and city-user safety.Coordinate incident, roadwork, event and restricted-area management.
- Improve the utilisation of parking, curb space, fleets and charging infrastructure.

Sustainable Goals

- Reduce CO2, NOx and other mobility-related emissions.
- Support sustainable mobility indicators such as SUMI/ PUMS and other city KPIs.
- Assess accessibility and 15-minute-city style indicators.
- Evaluate long-term infrastructure and service changes before implementation.

Data and interoperability by design

The mobility vertical is sensor-agnostic and can integrate traffic sensors, ODM/mobile-operator data, GIS/BIM, parking, tickets, public transport, cameras, sharing services, weather, air quality and more. Integration options include LoRaWAN, NB-IoT, MQTT, NGSI, HTTPS, AMQP, REST APIs, Mobility Data Space and standards such as DATEX II, OSM and GTFS, any other format and protocol.



Real-time control, prediction and coordinated response

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MONITOR & DETECT

- Traffic status, reconstruction, queues, roadworks and blocked roads.
- Public-transport offer/status, vehicle positions and delays.
- Parking and curb occupancy, loading zones and EV charging.
- Micromobility and sharing availability; fleet location and status.
- Pedestrian people flow, restricted-zone access and city-user behaviour.
- Weather, environmental conditions, events and incident context.

PREDICT & ANTICIPATE

- Congestion 15-60 minutes ahead and expected queue lengths.
- Public-transport delays and potential impacts on lines.
- Parking-area status and occupancy percentage.
- Pedestrian peaks and accident-risk indicators.
- CO2/NO2 emissions and other sensor/KPI forecasts.
- Any configured time-series or KPI variable using supported forecasting methods.

DECISION SUPPORT: FROM PREDICTION TO INTERVENTION

Traffic Signals Optimization

Recommend or optimise traffic-light plans, dynamic green waves and priority strategies for buses, trams and emergency vehicles, rapid transit busses. AI and DRL.

Information actions

Support Variable Message Signs, digital signage, mobile information and user-engagement/incentive actions.

Traffic Infrastructure Optimization

Recommend or optimize traffic infrastructure viability, reduce travel time, congestion, consumption, emissions, via AI and DRL.

Scenario comparison

Compare alternatives and estimate effects on congestion, queue length, waiting time, reliability, emissions and accessibility.

Public Transport Optimization

Assess demand versus service offer and support route, schedule or dispatching adjustments. AI and DRL.

Safety & resilience

Analyse dangerous intersections, pedestrian/cyclist risks, incidents and demand peaks around events.

Dynamic routing

Re-route according to current/typical traffic, obstacles, restrictions and service-specific constraints.

Example operator question

"What is causing the congestion in this area, which routes and bus lines will be affected in the next 30 minutes, and which intervention is expected to reduce queues and emissions most?"

A conversational and agentic AI layer for the Mobility Digital Twin

SnapAdvisor Copilot extends the Snap4City decision-support system with a multilingual conversational/RAG assistant and Agentic AI capabilities. Users can describe an objective in natural language instead of manually navigating APIs, data models, GIS tools or analytical workflows.

1

UNDERSTAND

Interpret the operator objective in natural language.

2

PLAN

Build a multi-step workflow and select specialist agents/tools.

3

EXECUTE

Invoke Snap4City services and APIs; collect and analyse results..

4

VERIFY

Review outputs, recover from failures and re-plan when needed.

5

EXPLAIN

Return an actionable answer with text, maps, charts or dashboard content.

Built for configured, multi-step decision-support workflows

A city operator can ask the Copilot to collect evidence from the Digital Twin, analyse trends, calculate routes or KPIs, compare locations or periods, invoke configured prediction/simulation and optimization of services, and explain proposed solutions. Full end-to-end workflows depend on the tools and services configured for the deployment; the supplied Copilot roadmap explicitly distinguishes broader workflow synthesis from experimentally validated scope.

ONE CITY. ONE PLATFORM. MANY INTELLIGENT SERVICES.



OPEN

Open Source & Interoperability



SCALABLE

Multiple cities, tenants and verticals



SECURE

RBAC, cybersecurity & GDPR compliance



FLEXIBLE

Cloud, SaaS and on-premise deployment

TRUSTED BY

Tuscany, Florence, Prato, Livorno, Pisa, Modena, Cuneo, Merano, Bari, Lonato del Garda, Santiago de Compostela, Nicosia, Paralimni-Deryneia, Ayia Napa, Strovolos, Lakatameia, Latsia-Geri, Larnaca, ... and many more...