

SnapAdvisor & Copilot Your AI-Powered Assistant for Smart Cities

For questions to actionable insights,
SnapAdvisor & Copilot understand, plans,
uses Snap4City services and delivers results.



ASK

Natural-language request

Ask complex questions about the city.



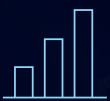
USER REQUEST



(RE)PLANNING



SPECIALIST AGENTS



ANALYSE & VERIFY



ANSWER



REASON

Agentic AI planning

Coordinates data, tools and specialist agents



ACT

Actionable insight

Verified answers, forecasts and recommendations.

DIGITAL
TWIN

AGENTIC AI &
PREDICTIONS

REAL-TIME
DATA

REPORTS &
ANALYTICS

EARLY
WARNINGS

WHAT SNAP4ADVISOR CAN DO?

SnapAdvisor & Copilot is being able to orchestrate a range of tools' families for accessing, processing and generations of:

01

DATA MANAGEMENT

Discover IoT devices and entities, retrieve metadata, live and historical observations, manage data models and connect to data spaces.

05

MACHINE LEARNING / AI REASONING

Predictions, statistics, heatmaps, OD matrices, correlations, regression, causality, interpolation and resampling.

02

GEOSPATIAL REASONING

Geocoding, spatial search, areas and polygons, POIs, distance computation and location-aware analysis.

06

MEDIA PROCESSING

Intepreting images (image to text), generating images from descriptions, modification of images according to description.

03

MOBILITY AND TRANSPORT

Public Transport services show and analysis, mobility analysis, critical road segments identification, What-If simulation, KPIs.

07

REPORTS & ACTIONS

Generate maps, time series, tables, images and PDF reports; create decision graphs and reusable workflows.

04

KNOWLEDGE & EXPERTIZE

Use private collections of documents, slides, images, code and web pages, search the web and extend domain expertise.

08

DECISION MODELS AND GRAPHS

Automated creation of new strategies and decision graphs, local and/or external knowledge and expertise, probability charts.

SNAPADVISOR & COPILOT - YOUR AI-POWERED ASSISTANT FOR THE SNAP4CITY DIGITAL TWIN



Tomorrow, a major event is expected in the city centre between 5:00 PM and 11:00 PM. Considering predicted traffic, parking occupancy, public transport availability, weather conditions and historical event data, which areas are most likely to experience critical congestion, and what preventive actions should we take?

SnapAdvisor

Analysis completed using real-time and historical mobility, parking, public transport, weather and event data.

The highest risk of congestion is expected between 6:30 PM and 8:30 PM along the main access routes to the city centre. Parking facilities in the event area are predicted to reach 90–95% occupancy before 7:00 PM.

Recommended actions:

- Activate temporary traffic-management measures on the most critical access routes.
- Direct drivers to three peripheral parking facilities with available capacity.
- Increase park-and-ride and public transport frequency between 5:30 PM and 9:30 PM.
- Deploy traffic and parking operators at the identified hotspots.
- Send targeted notifications suggesting alternative routes and transport options.
- Monitor congestion, parking occupancy and service disruptions in real time.

If implemented, these measures are expected to reduce congestion around the event area and improve accessibility during peak arrival time.



From data to action

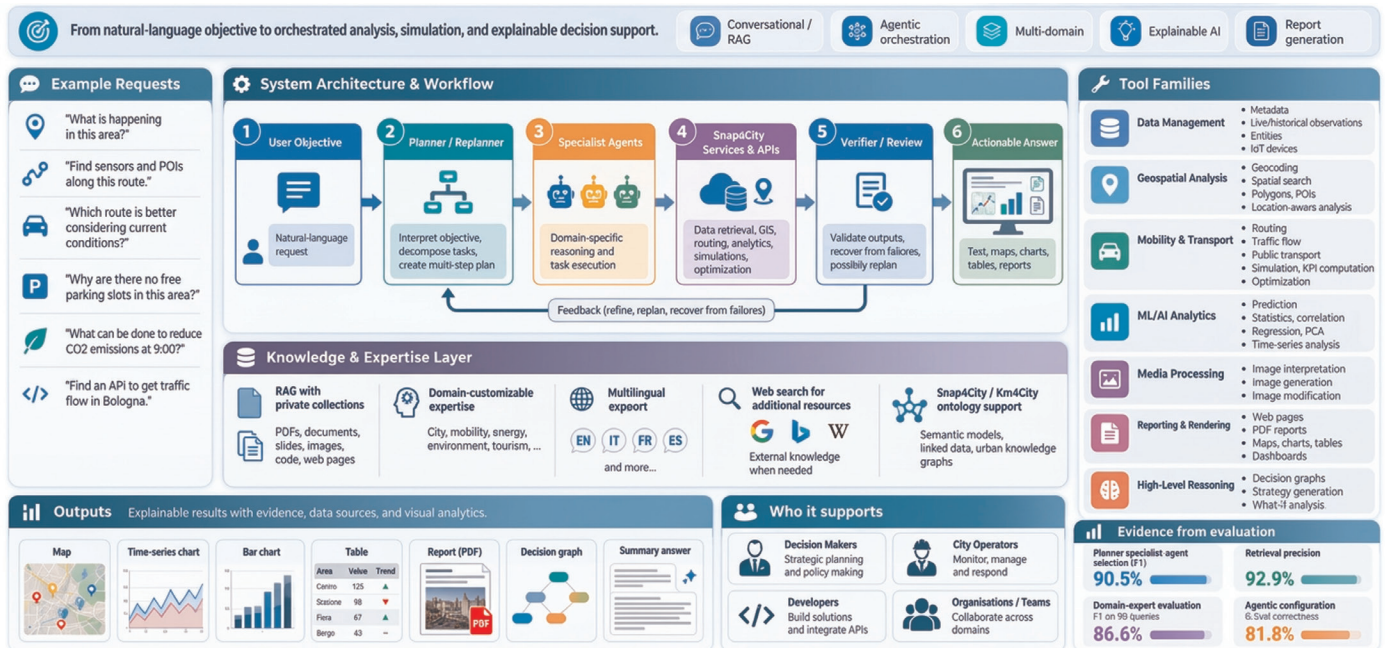
- ☒ Detect anomalies
- ☒ Explain probable cause
- ☒ Recommend actions
- ☒ Evaluate scenarios (What-if)
- ☒ Support authorised workflow

SnapAdvisor & Copilot is the evolution of the Snap4City digital twin decision support system with conversational/RAG assistant and AI Agentic capabilities. Instead of only answering questions from documentation and private knowledge collections, the **SnapAdvisor & Copilot** can interpret a user's objective, construct a multi-step plan, select and invoke Snap4City services and APIs, analyse the returned data, recover from execution failures, eventually replan, correlate results from different domains, and finally explain the outcome in natural language. **SnapAdvisor & Copilot** brings a new generation of conversational intelligence to the **Snap4City Digital Twin**.

Users no longer need to understand APIs, data models, IoT platforms, GIS tools or complex analytical workflows. Simply describe the objective in natural language. Moreover, the **SnapAdvisor & Copilot** provides information about what the user can do to solve problems and develop solutions by using and suggesting Snap4City tools. Therefore, **SnapAdvisor & Copilot is suitable** for decision makers, for city operators and for the smart application developers.

SNAPADVISOR & COPILOT

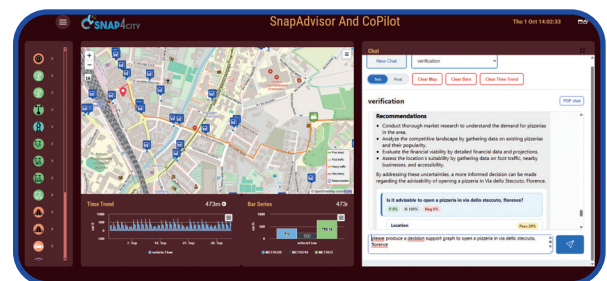
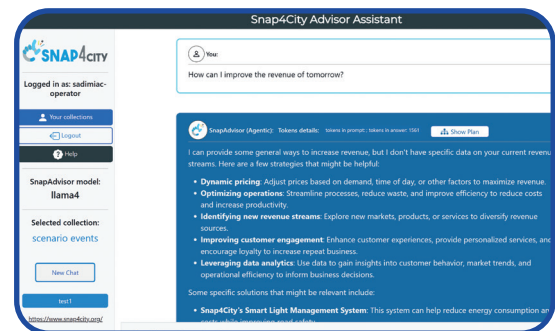
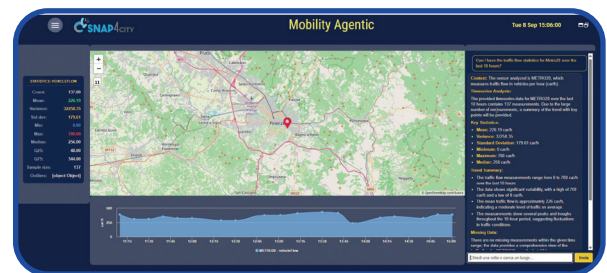
Technical architecture for the Snap4City Digital Twin conversational decision support system.



SnapAdvisor & Copilot provides a strong knowledge-oriented foundation about Snap4City, mobility, energy, tourism, assets, transportation, GIS, etc. It includes a multilingual, domain-customisable virtual assistant based on advanced Retrieval-Augmented Generation (RAG) LLM, capable of working with private collections containing PDFs, documents, presentations, images, code and web pages. Collections can be created, added and changed according to the user's domain, allowing different organisations or groups to add specialised expertise without retraining the underlying LLM.

The **SnapAdvisor & Copilot** is a support tool for developers learning and exploiting Snap4City and as a configurable assistant for operators and decision makers working with application-specific information, in the multiple domains of smart city but also for retails, legal aspects, training, help desk, etc.

The workflow of actions can be summarised as: **User request → (re)Planning → Specialist agents → specialist and Snap4City services → verifier and review (eventual replanning) → answer (in text and graphics).** **SnapAdvisor & Copilot** "Understand what I want, determine how to provide, use the Digital Twin and its services to perform the required operations, and tell me the result".

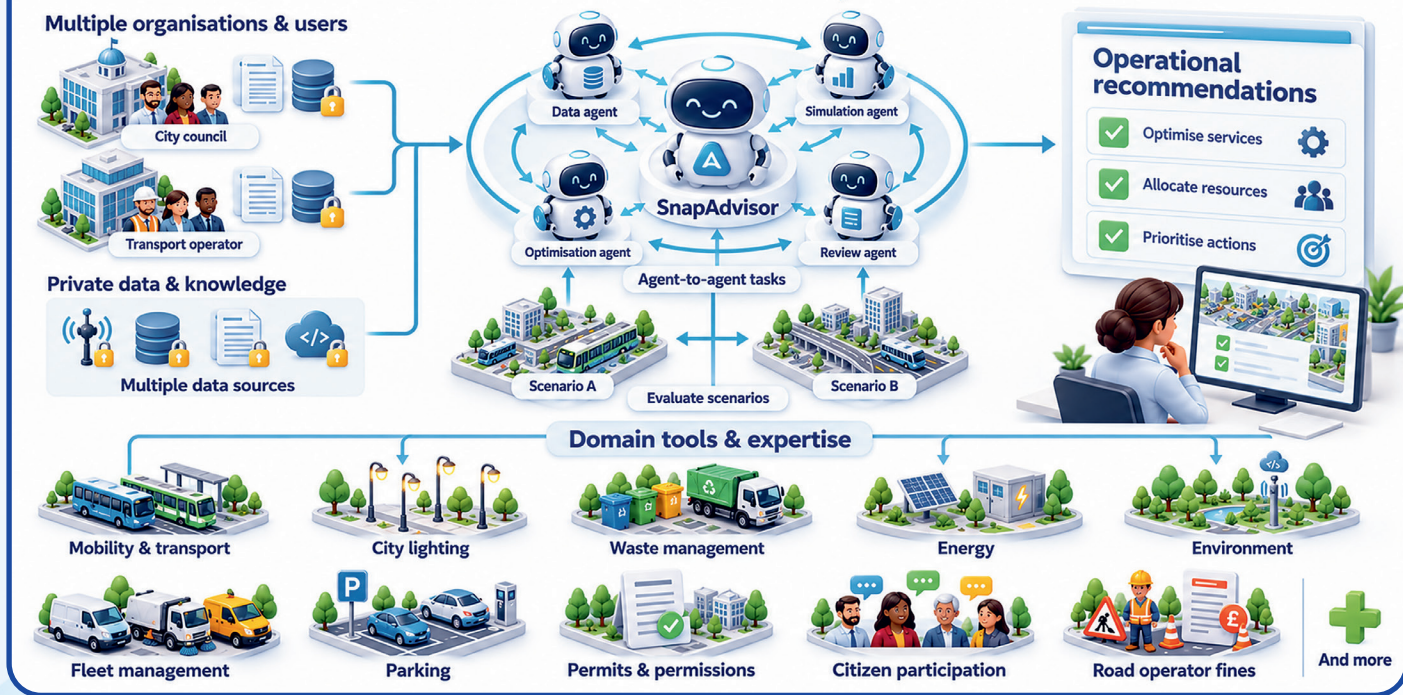


SnapAdvisor & Copilot provides for **city operators**, a conversational interface for the control room: retrieving conditions, comparing locations or periods, identifying anomalies, calculating routes or KPIs, and potentially running simulations and what-if analyses. For **decision makers**, it suggests a transition from information retrieval toward a **conversational Decision Support System**, where the agent can collect evidence, compute indicators, compare alternatives and explain proposed solutions. For **developers**, it is an expert on multidomain documentation (topics: Snap4City, mobility and Transport, Energy saving, Tourism management, parking management, waste management etc.) while potentially becoming a co-pilot can locate APIs and services, construct workflows and exploit the platform's available microservices.

ONE CITY. ONE PLATFORM. MANY INTELLIGENT SERVICES.

SnapAdvisor: tools and expertise across city services

Autonomous scenario evaluation and actionable operational recommendations



OPEN

Based on Open and Full Interoperable Framework



SCALABLE

Multiple cities, tenants and verticals



SECURE

RBAC, cybersecurity & GDPR compliance



FLEXIBLE

Cloud, SaaS and on-premise deployment