

The Smart City market is growing

161.3 Billion \$

The global urban planning software and services market was valued at \$161.3 billion in 2024.

6.5% Growth

An expected compound annual growth rate (CAGR) of 6.5% from 2025 to 2034.

Multiple Market Drivers

Growing urbanization and the need to manage urban spaces efficiently

Adoption of **cloud technologies** and **digital planning solutions**

Government investments in infrastructure and smart city initiatives

12 Billion € in EU

The European smart city platform market was valued at over €12 billion in 2023.

10% Growth in the EU

An expected annual growth rate of 10% in the European market.

Our Goal

Offer an integrated vision of the territory through innovative, intuitive, and interactive digital solutions that enhance understanding and support transformation and development.



Territory Digitalization



Territory Digital Twin

Data Sources

TLS/ALS
LiDAR

Geospatial
Data

Satellite Images

IoT Sensor
Data

Weather Data

Others

Data Collection
and
Elaboration

Territory Digitalization
Development of a tool to
represent, elaborate, analyze,
and monitor Territory data



Natural Disaster Risks
(flood, wildfire,
earthquake, etc.)

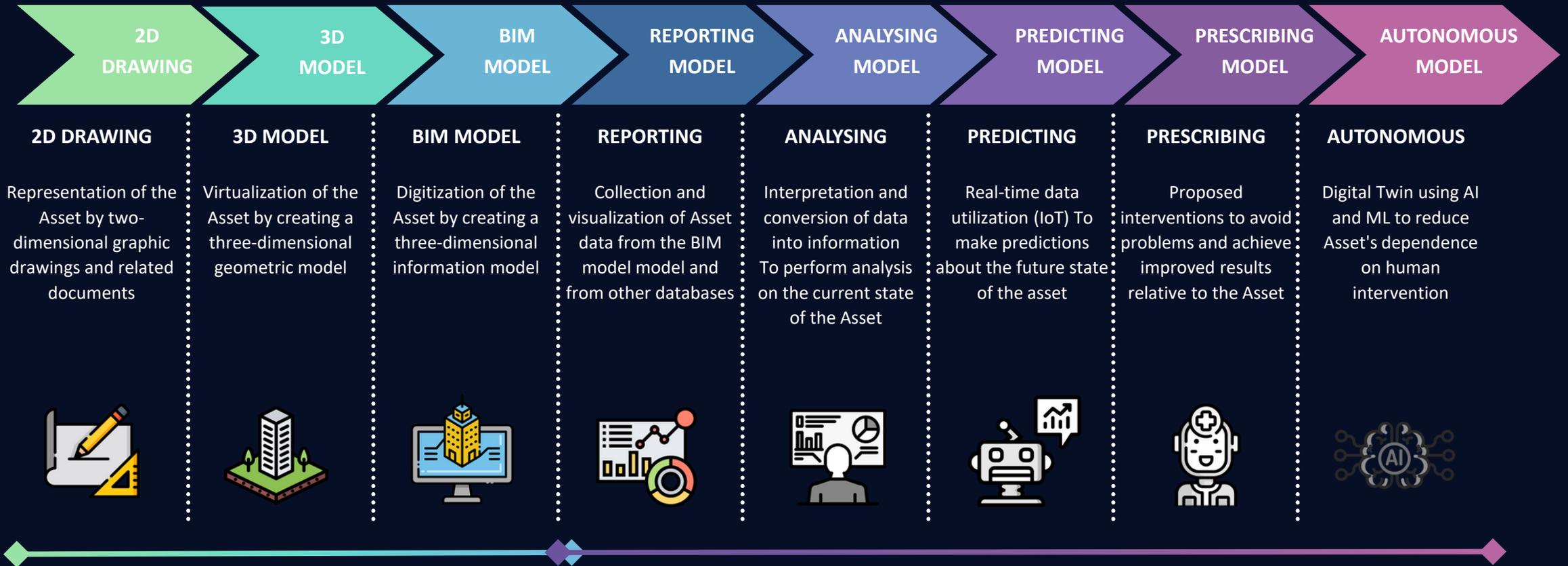
Territory Analysis
and Monitoring
(green area,
demographics,
safety, tourism, etc.)

Urban Planning

Mobility Planning

Others

Our Digital Twin Journey

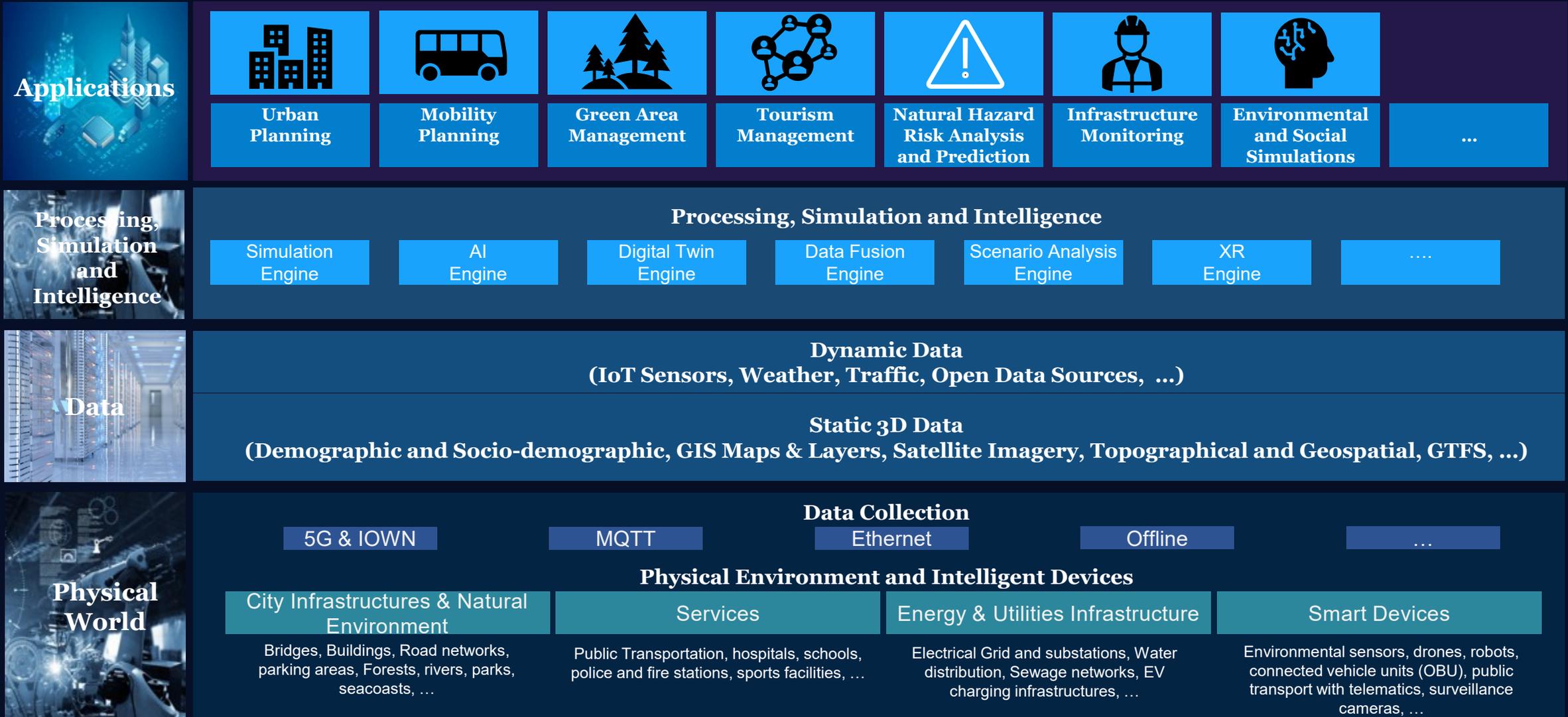


Some of our partners and solutions:



How Our Solutions Work - Logical Architecture

TERRITORY DIGITAL TWIN PLATFORM



Territory Digital Twin

Main Enabled Use Cases



Urban Planning Case Study | Challenges

Transform urban planning through a **data-driven**, **participatory**, and **sustainable** approach, thanks to an innovative platform that **turns data into knowledge** and **knowledge into action**.

THE CHALLENGES

Urban information is often fragmented across different sources and departments, making it difficult to obtain a unified understanding of the territory.



Unify data, maps, and indicators in a single tool

Urban planning decisions require assessing real impacts and future scenarios, but predictive and interactive tools are often missing.



Plan in a predictive and measurable way

Our Solution

*A single platform to read and understand the city through data, transforming complex information into **shared knowledge** and **informed decisions**.*

Platform based on the
Digital Twin
paradigm



in combination with

AI and Machine
Learning techniques
for analysis and
simulations

What we are talking about

A digital platform that supports urban planning through data, maps, and interactive analyses.

- *Multi-layer approach to combine and visualize territorial and socio-demographic data*
- *Indicators/KPIs to analyze cities and neighborhoods*
- *Scenario simulations for service addition*



What we are talking about



WHY THIS SOLUTION IS STRATEGIC

It transforms data into operational knowledge, enabling planning based on **concrete evidence**, not just intuition.

It analyzes service accessibility and measures how close the territory is to the “**15-minute city**” model, **promoting equity** and **quality of life**.

Urban Planning | Features

Combined visualization of information layers

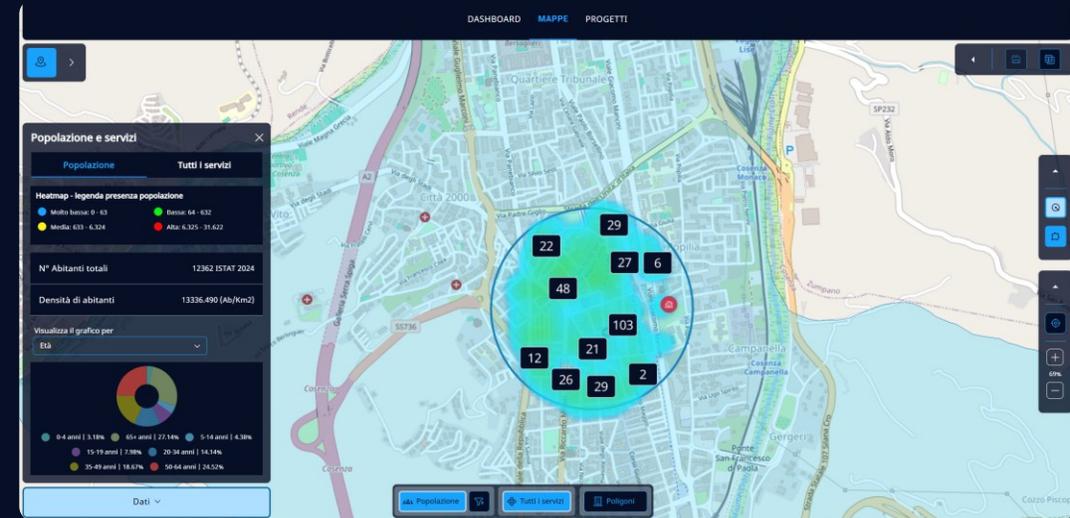
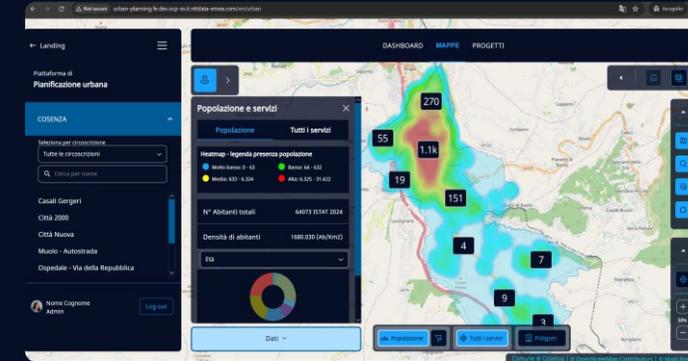
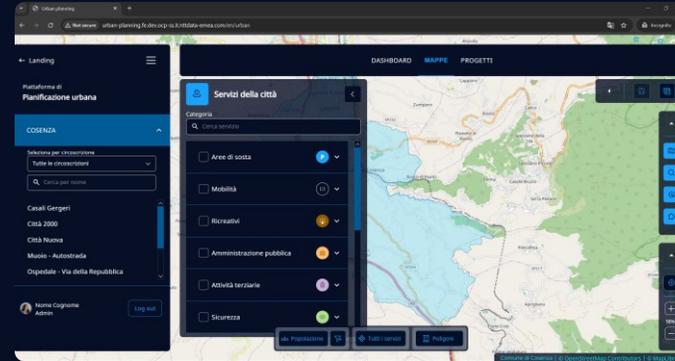
Primary services, specific services, and population distribution, with the ability to switch each layer on or off.

Demographic filters

Age groups, employment status, education level, and nationality. This functionality allows the analysis of the overlap between population and services in the territory, helping to understand how residents are distributed within the municipality.



Supports the administration in assessing and planning the provision of primary services



Urban Planning | Features

Accessibility Analysis

Assessment of primary services reachable within 5, 10, and 15 minutes from a selected point, with an indication of the number of services and the average travel times.

15-minute city score evaluation

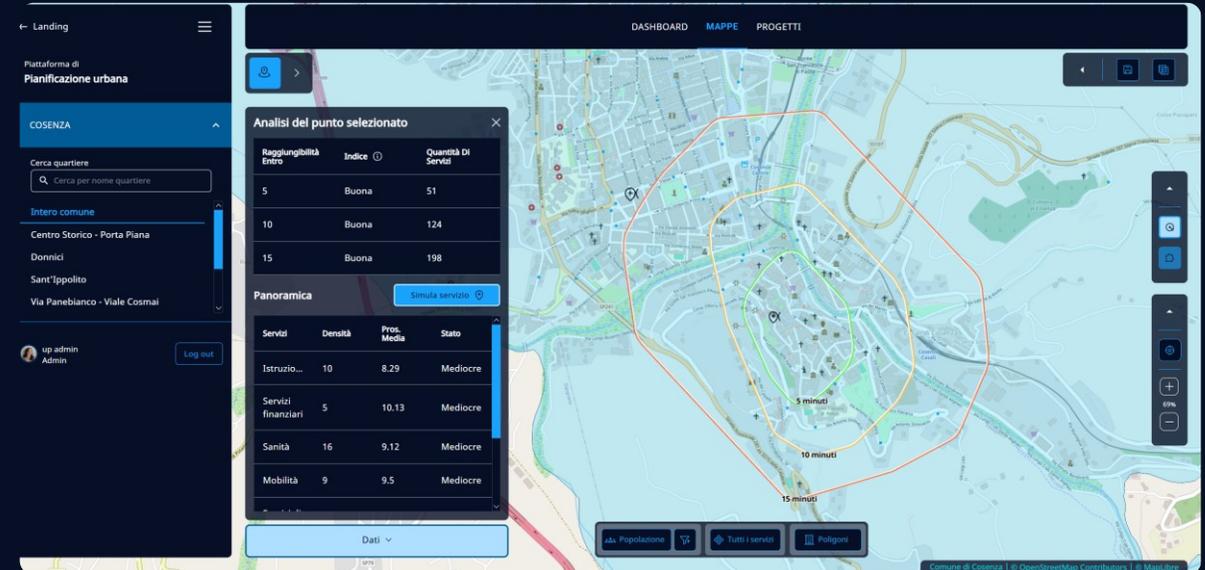
Assignment of a proximity score (Excellent, Very Good, Good, Average) based on the average access time to services.

New service simulation

Add a new service in one of the three proximity zones, with KPI impact analysis and comparison across 5, 10, and 15 minutes.



Support for urban planning through accessibility assessments and simulations of the impacts of adding new services, exportable in report format.



Analizza impatti

Servizio selezionato: Scuola primaria

Area 5 minuti | Area 10 minuti | Area 15 minuti

Impatto previsto



Cambia servizio | Salva scenario

Urban Planning | Features

Dashboard – Synthetic analysis of the city

Allows evaluation of population trends over time and consultation of key indicators on urban structure and services.

Observable indicators

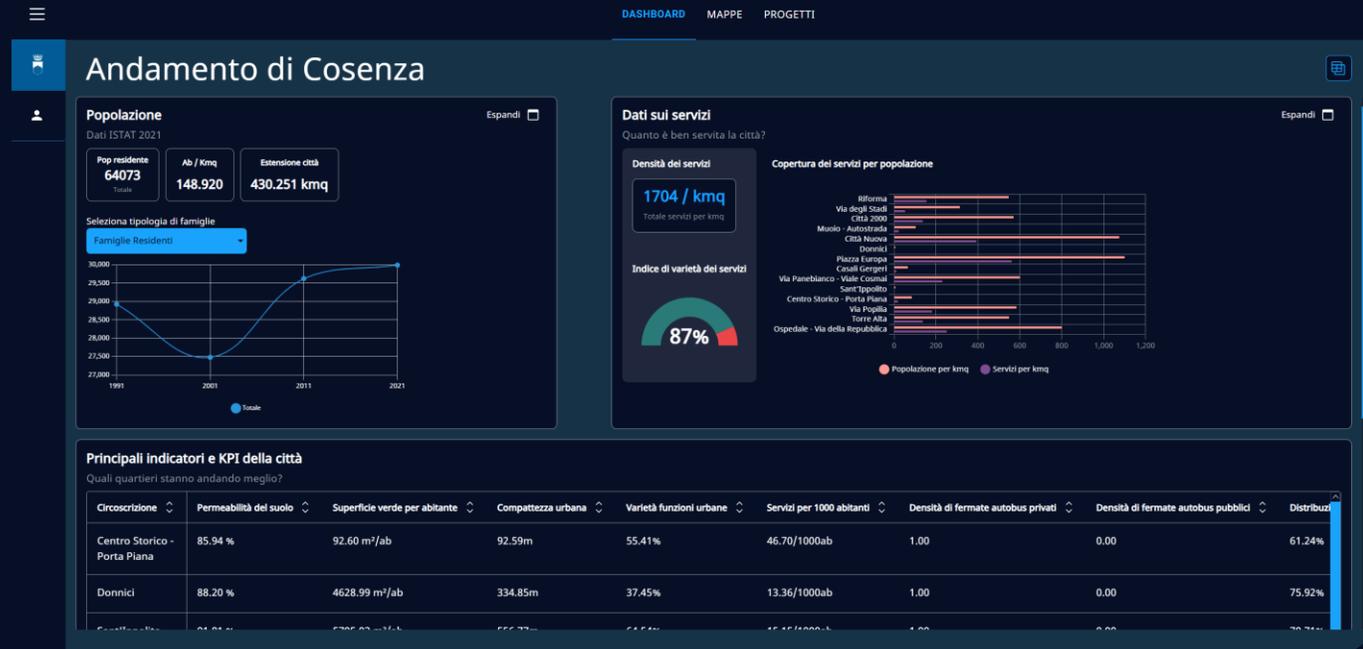
Includes KPIs such as soil permeability, green areas per inhabitant, diversity of service offerings, urban compactness, and other neighborhood-level parameters.

Detailed exploration

Each section can be expanded to access complete datasets, export tables, and download information in CSV format.



Supports rapid analyses and comparisons across the city's neighbourhoods, providing an objective basis for planning decisions and urban monitoring



Roadmap and Evolutions



- Short-term Evolutions
- Medium-term Evolutions
- Long-term Evolutions

Urban Planning for Cosenza

Enabling Smart Urban Planning Through Federated Geospatial Data

Context & Challenge

The municipal administration faces increasingly complex challenges in the management and planning of its territory. Urban growth, the need to improve citizens' quality of life, and sustainability goals require decisions based on accurate, up-to-date, and easily accessible data.

However, territorial information — originating from heterogeneous sources such as land registries, geographic information systems, socio-demographic databases, and service networks — is often fragmented, non-standardized, and difficult to integrate.

In particular, several challenges are observed in:

- understanding the distribution of public and private services across the territory;
- monitoring urban and socio-economic phenomena in an integrated way;
- assessing the impact of planning decisions in terms of accessibility, sustainability, and quality of services;
- communicating transparently and collaboratively with citizens and local stakeholders.

As a result, urban planning processes are often slow and lack predictive or decision-support tools, leading to operational inefficiencies and difficulties in achieving sustainable urban development goals.

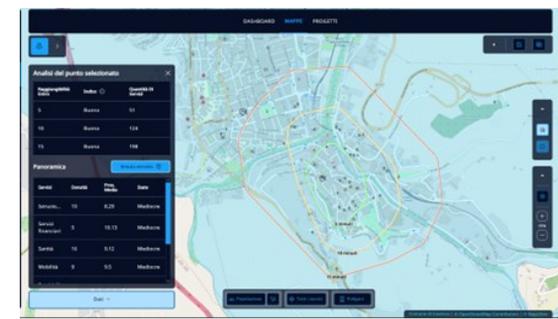
Solution

Development of an innovative platform capable of providing a snapshot of the current state of neighborhoods in terms of public services (e.g., nurseries, bus stops/lines, parking areas, etc.) and private services (e.g. supermarkets, restaurants, etc.):

- analyzing the distribution of aggregated services by neighborhood and/or within a user-selected area on a map;
- displaying information through graphs/dashboards for a clear view of service distribution across the territory;
- performing correlation analysis with socio-economic, urban, and territorial factors;
- simulating scenarios (e.g., adding a new service in a certain point)

Impact (expected)

- Reduction in urban planning time by 15%
- Decrease of urban project costs by 15%
- Increase of citizen satisfaction: by 20%
- Reduction in planning errors by 20%



Customers



Città di Cosenza

Reference: Port Observatory



16
Port System
Authorities

5
KPI Categories

60
Ports

+70
KPIs

Context & Challenge

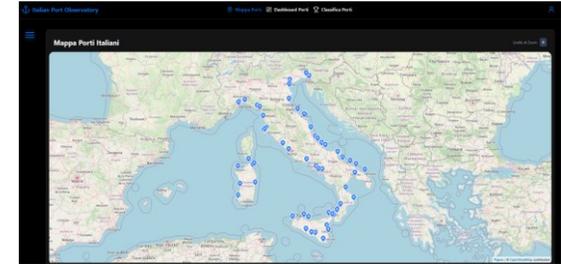
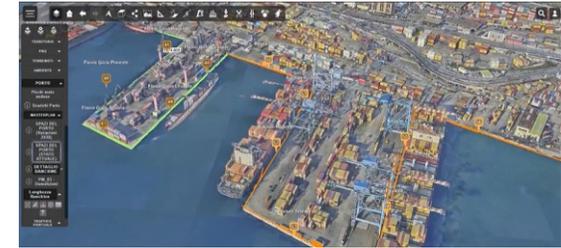
- Fragmented data and non-homogeneous KPIs across terminals and regions make performance benchmarking difficult.
- Limited visibility on operational efficiency, sustainability, and competitiveness across multi-port networks.
- Decision-making often based on isolated or outdated data, without a unified view of trends and correlations.

Solution

- **Digital Platform for Port Monitoring:** Developed in collaboration with the University of Naples Parthenope and DISAQ, the platform provides a centralized observatory to track, compare, and analyze port performance.
- **Digital Twin Integration:** The platform includes a Digital Twin of the Port of Naples, continuously fed with real-time data from MarineTraffic and Open-Meteo, enabling dynamic visualization and operational scenario analysis.
- **Strategic KPI Framework:** Focused on five strategic KPI categories, with over 30 indicators calculated from heterogeneous and officially validated data sources, enabling consistent and comparable performance analysis across Italian ports.
- **Standardized Data Model:** Integration of official data (e.g., ministerial reports, financial plans, sustainability KPIs) for consistent and comparable benchmarking.
- **Dynamic Visualization & Analytics:** Interactive visualization tools providing decision-makers with actionable insights on performance, efficiency, and investment priorities.

Impact

- Data-driven governance through standardized and comparable performance metrics.
- Holistic visibility across terminals and regions, integrating efficiency, innovation, and sustainability KPIs.
- Evidence-based decision-making for strategic planning and investment prioritization.
- Scalable and replicable model adaptable to any port or multi-terminal network worldwide.



Main Steps Towards the Construction of the DT Model:

- **Aerial 3D Survey**
High-resolution photogrammetric flight covering the entire port area, with certified equipment and ENAV-approved flight plans.
- **3D Data Processing**
Generation of a high-precision point cloud (3 cm/pixel) and classification of all surface objects and infrastructures.
- **Digital Twin Platform Setup**
Upload of all 3D assets (point cloud, orthophoto, DSM/DTM) into a dedicated web platform.
- **Integration of Static and Dynamic Data**
Inclusion of all relevant georeferenced datasets and connection with Marine Traffic data for real-time visualization, alerts, and predictive insights.

Urban Planning

TOWARDS A TERRITORY DIGITAL TWIN

B24

