

Campobasso Integrated Action Plan

INNOVATION, NEW CONNECTIONS AND
METAVERSE



Co-funded by
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Virtual solutions
for real people



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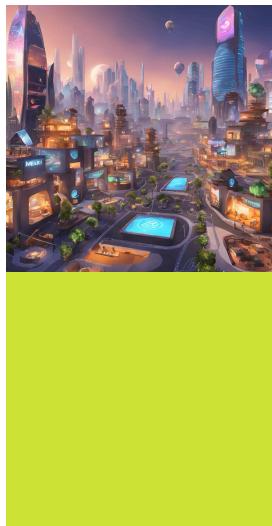
ABC of the Integrated Action Plan

URBACT

URBACT is a European program that funds the exchange of integrated solutions between European cities on challenges of common interest, through networking and mutual learning that brings out experiences and good practices useful for improving urban policies. URBACT contributes to Policy Objective 5 of the European Cohesion Policy 2021-2027 (Europe closer to its citizens) by supporting the definition of sustainable local development strategies.

ULG

ULG is a group of local actors (administrators, associations, citizens) formed within a European URBACT program project, whose objective is to promote the exchange of experiences and good practices for sustainable urban development. This group actively participates in data collection and the definition of action plans, helping to define strategies and innovative solutions at the local level.



IAP

The IAP is a document, drawn up during each project funded by the European URBACT program, which cities develop to respond to specific urban challenges, based on the exchange of experiences and co-design with local actors and international partners. These plans aim to create sustainable and integrated solutions, improving urban policies through a participatory approach and mutual learning between cities.

SSA

The SSA is a small-scale pilot action, limited in time, space, and budget, that partner cities in an URBACT project can carry out to test new solutions and ideas for urban challenges. These actions aim to gather evidence on the effectiveness of an idea before implementing a larger plan, promoting a more agile approach and ensuring a greater likelihood of success for future integrated action plans.



TRANSNATIONAL NETWORK

The transnational network is a network of cities that come together within the framework of an URBACT project to address common urban challenges and develop effective and sustainable responses with a view to European cooperation. The networks follow the program's methodology—Understand, Adapt, Reuse—to successfully transfer good practices from one city to another.

PEER REVIEW

The peer review is the capacity-building activity for European cities in the URBACT program that want to improve the strategies included in their Integrated Action Plan. Through a peer learning process, a city facing a specific urban development challenge (the "city under review") receives support from representatives of other cities (the "peer reviewers") that have already faced similar challenges, sharing their experiences and solutions.

The Metacity project

Campobasso, is a partner of the METACITY project funded under the URBACT IV program, which aims to increase the competitiveness of small and medium-sized tech-savvy cities, benefiting from the opportunity to improve service efficiency and citizen satisfaction offered by the metaverse.

Metacity fits into the digital transformation pathway that the city of Campobasso has been following for some years, also thanks to the CTEMolise project - The House of Emerging Technologies of Campobasso, which has created the first environment to promote well-being and the development of resilient communities with the implementation of digital technologies and innovations useful to government institutions and citizens on the following themes:

- Smart city for citizens and businesses (Smart mobility, eco-sustainability; Cultural heritage for tourism and the natural environment);
- Health, sports competition, Sportech, citizen well-being (Health & Food Platform; Wearables for Health; Quantum Key Distribution – QKD; Wellness Sport & Health).

All this was made possible thanks to the engagement process of the URBACT Local Group of Campobasso, which institutions, associations, digital sector companies, and schools. Their contributions were fundamental in defining the vision, objectives, and interventions of the Campobasso City Action Plan.

The strong need to find answers to the problems that have long characterized the Campobasso Urban Area emerged clearly, particularly concerning depopulation, especially among youth, and the increasing aging index of the population.

The methodology adopted was to analyze the local context by identifying strategic sectors to focus on, creating synergies among institutions, research, industry, and citizens. The Digital Transformation Action Plan of Campobasso combines innovation and development and talks about technology in a context where, until a few years ago, discussing it seemed like science-fiction. It has allowed changing the narrative of a territory often on the margins of major economic dynamics, placing at the center of its development an urban planning inspired by immersive technologies and digital tools, and supporting the ecosystem of startups and innovative companies as a stimulus for socio-economic growth. Citizens are at the center of choices and will be able to benefit from cutting-edge solutions and, ultimately, improve their overall quality of life.



Political Statement

Campobasso is a medium-sized city driven by an ambitious vision. Over the past decade, the local administration has pursued a steady path of transformation, turning the territory into a true laboratory for digital innovation, social inclusion, and sustainable development. With the METACITY project, this commitment takes a decisive step forward, leveraging emerging technologies not only to make public services more efficient, but also to strengthen social cohesion and tangibly improve citizens' quality of life.

The integrated action plan "Innovation, New Interconnections and the Metaverse" is the result of an intensive, multi-level collaboration: among local institutions and European partners, between innovation experts and local operators, and –above all—with the active participation of citizens. It demonstrates that even small municipalities can play a leading role in digital transformation, shaping their future autonomously and consciously.

Campobasso is fully aware of the challenges ahead: an ageing population, territorial inequalities, and limited resources represent real obstacles. However, the city has chosen not to be constrained by them. Through tools such as digital twins, immersive technologies, and inclusive digital platforms, we are rethinking urban planning, service delivery, and policies to support the most vulnerable groups. What truly distinguishes this plan is its strong people-centred approach.

We extend our sincere thanks to our European partners for their collaboration, the exchange of expertise, and their openness to dialogue. METACITY is not merely a project, but a shared and collective commitment to a digital transformation that is genuinely inclusive, collaborative, and firmly rooted in territories and communities.

The vision of this action plan stands as a promise that Campobasso will continue along its path of innovation, building a more connected and equitable future for all.



Bibiana Chierchia
Councillor of the Municipality of
Campobasso





PART I

CONTEXT AND PLANNING PROCESS

THE URBAN CONTEXT AND DEFINITION OF THE PROBLEM

Campobasso, the capital of the Molise region, emblematically reflects the demographic dynamics of the entire region – the second smallest in Italy – characterized by a structural population decline. Between 2002 and 2023, the decrease was almost 7%, with progressive aging and a contraction of the active population (ISTAT, 2024). The aging index (233.8) and the high turnover rate (164.2%) confirm the reduction of the workforce and the increased economic dependence on older age groups. If the demographic trend is not balanced by innovation policies and youth attractiveness, it risks accentuating the economic, cultural, and social impoverishment of the territory.

From an educational perspective, Campobasso boasts quality human capital: over 70% of adults hold a diploma or a degree, a figure higher than the national average. However, this cognitive endowment does not translate into employment, with an employment rate below the Italian average and a significant gap for youth and female groups (ISTAT, 2023). The University of Molise represents a strategic asset still partially leveraged to retain skills and generate local innovation.

The city's entrepreneurial system is mainly composed of small and micro-enterprises, concentrated in the sectors of commerce, construction, and catering. Despite the small size of the productive fabric, there are some industrial excellence and innovative realities, including La Molisana S.p.A., with its headquarters in the city of Campobasso. Molise allocates 1.26% of its GDP to Research and Development, below the national average (1.42%) but with a positive indicator: 43% of innovative companies collaborate with external partners, a sign of openness and cooperation (ISTAT, 2023).

CAMPOBASSO CITY AREA

56 km²

POPULATION DENSITY

846,6 ab./km²

RESIDENT POPULATION

47.026 ab.
in 2023

RESIDENT POPULATION

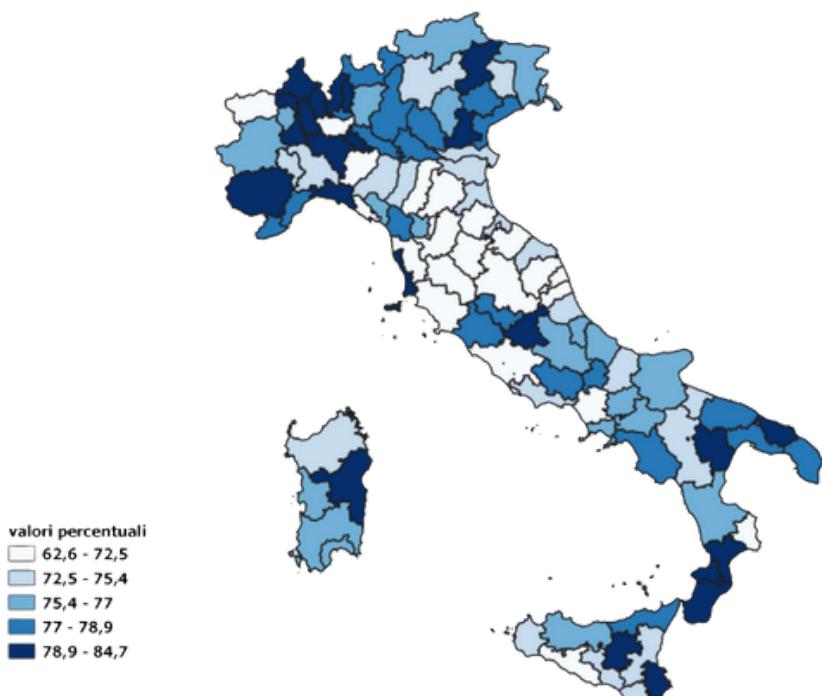
-6,95% compared to 2003



Geographical location of the city of Campobasso within its province

DIGITAL STRATEGY FOR ITALY

At the national level, the Digital Italy 2026 Strategy focuses on digital infrastructure and ultra-broadband connectivity on the one hand, and on measures to transform public administration into a digital key on the other. In 2023, Italy made progress in e-government, particularly in e-health and key digital public services for businesses and continued to make progress in the implementation of Gigabit networks. However, despite some progress, significant challenges remain in digital skills, while Italian businesses lag in the adoption of advanced technologies such as artificial intelligence. In recent years, based in part on the Recovery and Resilience Plan, Italy has made significant efforts toward the country's digital transformation, stepping up initiatives to digitize public administration, support the digitization of businesses, and improve digital skills throughout the country. In addition, Italy can count on a solid foundation in sectors such as semiconductors, edge computing, and quantum technology, which are fundamental to the country's technological position and leadership. According to the Special Eurobarometer "Digital Decade 2024".



Percentage of companies involved in innovative projects.

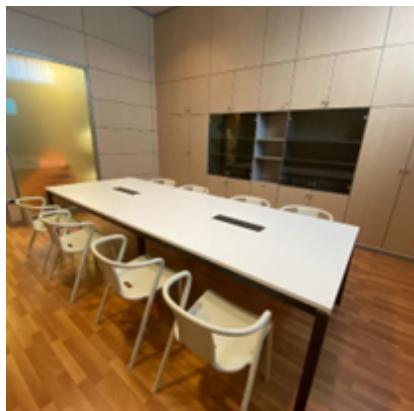
Source: ISTAT

DIGITAL STRATEGY FOR CAMPOBASSO

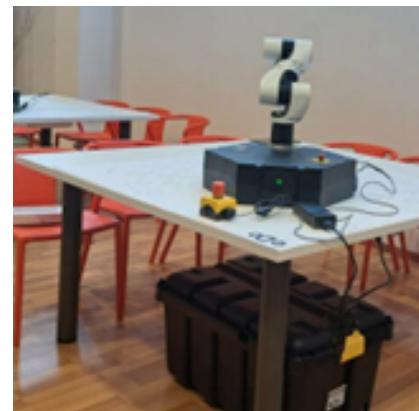
Campobasso is pursuing a bold digital transition to improve services, attract investments, and combat youth depopulation. Starting in 2018 with regional EU funding, the city upgraded its digital infrastructure and launched the "Transition Site" project, proposing a Digital Twin integrated with Open BIM and Open Data. Though delayed, this vision continues under the Metacity project, which supports creating a digital twin near the historic center. With PNRR funds, the city established a Digital Transition Office and joined the Cyber Sentinel initiative to enhance cybersecurity.

A major milestone was the 2023 opening of CTEMolise, the region's first advanced tech hub. It promotes testing of smart city and digital health solutions, supports startups, and develops digital skills through its Living Lab. This ecosystem positions Campobasso as a regional model for innovation, fostering co-creation, citizen engagement, and sustainable urban development.

The presence of the House of Emerging Technologies (CTE Molise), the C-Lab UniMol, and the Samnium Innovation Hub outlines a path toward building a regional innovation system, consistent with the Digital Italy Strategy 2026 (Innovazione.gov.it). These infrastructures form the foundation for development policies focused on startups, digital transition, and social innovation, key elements to counter depopulation and promote territorial competitiveness.

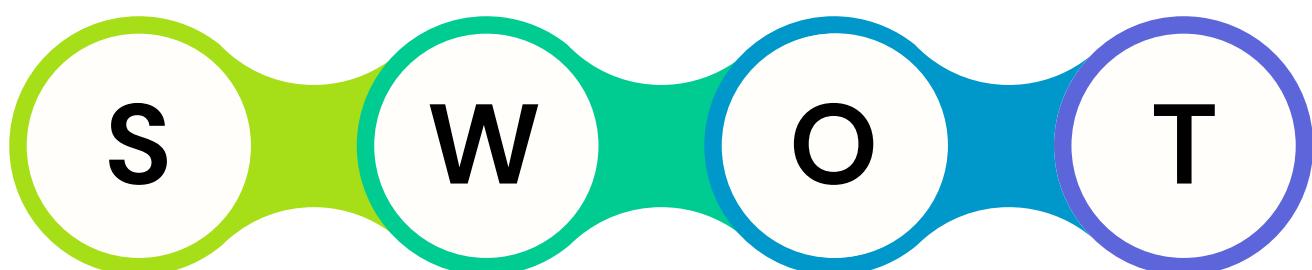


CTE (Casa delle tecnologie emergenti) in Campobasso.



SWOT ANALYSIS

The city of Campobasso shows a growing openness to innovation, digitalization, and entrepreneurship, supported by European networks, infrastructure investments, and the dynamism of innovative youth. However, structural challenges remain: population ageing, a high NEET rate, limited specific skills, resistance to change, and a shrinking active population. Some traditional sectors face negative trends, and the digital divide risks widening. After identifying internal strengths and weaknesses, as well as external opportunities and threats, it is useful to shift to a PEST analysis to explore more deeply the macro-level factors (Political, Economic, Social, Technological) shaping the context. While the SWOT shows what works or does not work, the PEST helps understand why it happens and which external forces drive these dynamics, enabling more targeted and effective strategic planning.



STRENGTHS

- Growing entrepreneurial ecosystem.
- Active participation in European and international networks and funding programs.
- Structured involvement of local stakeholders.
- Cultural and identity-based tourism with potential for digitization.
- Growing culture of youth innovation.

WEAKNESSES

- High aging rate of the population.
- High NEET rate and weak youth employment.
- Entrepreneurial rate below the regional average.
- Lack of specific skills, resistance to change.

OPPORTUNITIES

- Investments in connectivity infrastructures.
- Dynamism in the service sector entrepreneurship
- Digitization of public administration and citizen services.
- Growth in social awareness of innovation.
- Green transition and urban resilience.

THREATS

- Growing digital divide
- Reduction of the active population
- Negative entrepreneurial trends in some traditional sectors.
- Sustainability of welfare and public services

PEST ANALYSIS

POLITICAL FACTORS

- Campobasso is advancing a digital transition aligned with EU and national frameworks (Agenda 2030, URBACT IV).
- Local policies support digital innovation, sustainability, and civic participation through public funding (PNRR, ERDF/ESF 2014–2020, Metacity, CTEMolise).
- Compliance with AGID guidelines and participation in "Cyber Sentinel" show alignment with national cybersecurity and digital governance strategies.
- Urban policies (Urban Development Strategy 2018, Cantiere di Transizione) focus on regeneration, digital infrastructure, and smart city solutions.
- Environmental governance includes IoT-based monitoring of green areas and citizen involvement (e.g., "Adopt a flowerbed").

SOCIAL FACTORS

- Demographic issues include aging, low birth rates, and youth out-migration, reducing innovation capacity.
- Despite this, civic participation has grown (+52.3%) with stronger citizen–institution–business collaboration.
- Environmental awareness is rising, supported by green-space projects and IoT-based monitoring.
- Living Labs enhance co-design, collaboration, and digital skills development across community stakeholders.



ECONOMIC FACTORS

- The digital transition aims to improve services, attract investment, and counter youth depopulation.
- CTEMolise functions as an innovation hub supporting startups and tech transfer, with 20 companies in Open Innovation training.
- Competence Transfer initiatives promote technological skills for local economic growth.
- Tourism is growing (+12.5% in five years) but remains marginal (0.1% of overnight stays), with low digitalization; Campobasso has potential for sustainable, tech-driven tourism due to its position and cultural assets.

TECHNOLOGICAL FACTORS

- The city is developing a Digital Twin using Open BIM, LIM, and Open Data for urban monitoring and maintenance.
- The Office for Digital Transition manages information systems, online services, and cybersecurity following national standards.
- CTEMolise supports emerging technologies across smart city, mobility, sustainability, tourism, and health sectors.
- Digital literacy is low (18.9% vs. 23% national), with generational and educational divides.
- Rising remote work adoption (3.55M workers in 2024, +5% expected in 2025) could reduce isolation and create new opportunities for smaller cities like Campobasso.

METACITY LOCAL AND TRANSNATIONAL LEARNING PATH

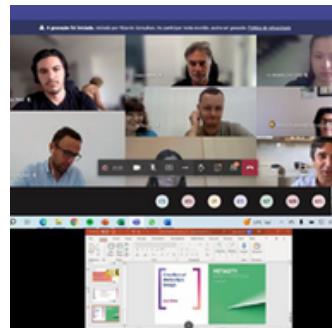
Campobasso's urban transformation is driven by strong political commitment and technological investment but challenged by economic fragility, demographic decline, and low digital literacy. The most promising strategy combines digital innovation, environmental sustainability, and civic participation, in line with Agenda 2030 and URBACT IV goals. Metacity has served as a shared learning platform on three levels: city administration, local stakeholders, and international partners. At the institutional level, a cross-departmental team was formed, coordinated by the European Programming and Policies office, with the Information Systems office developing metaverse and AI solutions, the Urban Planning sector working on digital twins, and Mobility and Tourism identifying relevant projects. Political support remained strong through both administrations involved in the first project year.

The second level involved local stakeholders through an expanded Local Action Group based on the CTEMolise network. Initial participants included universities, regional bodies, business associations, waste management organizations, and companies such as La Molisana. Later, schools and tech firms joined, followed by student associations and youth organizations like EXO Molise, reinforcing bottom-up engagement and attracting young people and startups.

MEETING WITH STAKEHOLDERS

JULY 2023

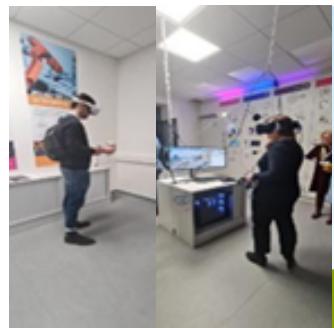
METACITY KICK-OFF
MEETING



SEPTEMBER 2023

First meeting with stakeholders to present the project and begin planning the activities to be implemented.

MAY , 2025
Meetings at the
Technical Commercial
Institute "L. Pilla" and
the Technical Surveyors
Institute "Marconi".



JULY 2024

Meeting between the internal project team and representatives of the University of Molise to discuss the Digital Twin in Campobasso.

JANUARY 2025

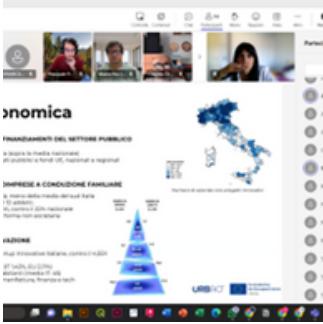
Stakeholder meeting to present the details of the Integrated Action Plan of the project.



MAY , 2025

Meetings at the Technical Commercial Institute "L. Pilla" and the Technical Surveyors Institute "Marconi".





AUGUST, 2025

Online meeting with stakeholders, organized in collaboration with EXO Molise.



DECEMBER, 2025

Final stakeholders event in collaboration with CTE at Vento Bar, Campobasso

NETWORK MEETING

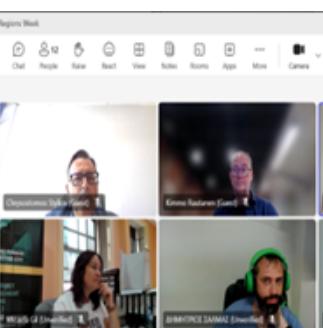
MARCH, 2025

SMETACITY – 4th Core Network Meeting Härnösand, Sweden



OCTOBER , 2025

METACITY -5th Core Network Meeting Brussels, EU Region Week 2025



NOVEMBER, 2025

METACITY - FINAL MEETING Fundão, Portugal



SEPTEMBER, 2025

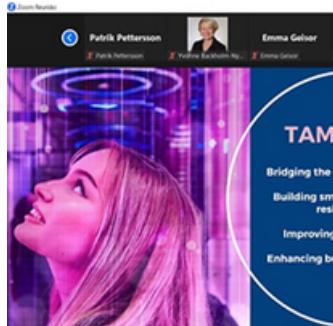
METACITY Catch-up Meeting & preparation of EU Regions Week participation Online@TEAMS



STUDY VISIT AND MASTERCLASS

OCTOBER, 2023

1st NETWORK
MASTERCLASS
“Online collaboration:
friend or foe?”
Online meeting @TEAMS



JUNE, 2024

Study visit – IMAGINE
METAVERSE
Tampere - Finland



2nd MASTERCLASS UNDER METACITY PROJECT
DIGITAL TRANSFORMATION OF EDUCATION IN THE
MUNICIPALITY OF RAZLOG, BULGARIA.
USE OF AI AND IT TOOLS FOR EDUCATION

EDUCATIONAL
SYSTEM IN
BULGARIA

URBACT
Co-financed by the European Union
Interreg

OCTOBER, 2024

2nd NETWORK
MASTERCLASS
“Digital transformation of
education in the
municipality of Razlog,
Bulgaria / Use of artificial
intelligence and IT tools
for education”
Online meeting @ZOOM



MAY 2025

3rd NETWORK
MASTERCLASS
“Beyond Reality: Shaping
Tomorrow’s Industry
through the Metaverse”
Online meeting
@spatial.io

Meetings revealed that even small cities must adopt metaverse and AI tools to enhance citizen services, economic growth, and fight depopulation. A defined methodology included:

- knowledge exchange stimulated by study visits and partner insights;
- a listening phase to assess local awareness and collect priorities for digital innovation;
- a co-design phase through working groups contributing to the Integrated Action Plan.

The third learning level emerged from collaboration with partner cities—Fundão, Písek, Nevers, Razlog, Újbuda, Härnösand, Mostar—and institutions Åbo Akademi and the Athena Research Institute—strengthening Campobasso’s vision for an inclusive, resilient digital future.

The result of the learning path, both local and transnational, was the drafting of the vision and actions of the Local Action Plan of Campobasso. This represents not a final point but a document from which to start implementing activities shared with local actors to ensure continuity of Campobasso’s digital transition process from a perspective of economic and social growth.

PART II

DEVELOPMENT OF THE ACTION PLAN



VISIONS AND ACTION STRATEGIES

Campobasso's vision in Metacity is to become a model of smart, inclusive modernization by leveraging metaverse technologies and artificial intelligence to strengthen the city's cultural and productive identity. Digitalization is seen as a way to redesign the relationship between the territory and its communities, enabling services that are accessible in hybrid form, both in person and remotely, for everyone, regardless of location or digital skills.

KEY PILLARS

URBAN PLANNING AND TERRITORIAL REGENERATION

Experiment with the use of digital twins to enhance urban planning, public service management, and the quality of city life. It falls within the "Digital Urban Development and Smart City" focus of the Metacity project, supporting the development of solutions based on data and virtual simulations.

SUSTAINABLE DEVELOPMENT AND GREEN TRANSITION

Integrate environmental and social sustainability into all stages of the project, promoting responsible behaviors and the efficient use of resources. Aligned with the cross-cutting objectives of URBACT IV and with the European Green Deal priorities, it contributes to making the metaverse a tool for environmental awareness.

CIVIC PARTICIPATION AND GOVERNANCE ENGAGEMENT

Encourage active and informed community participation in public decisions through digital tools, consultations, and immersive environments in the metaverse. Consistent with the "Citizen Engagement and Transparency" principle of the Metacity network, it helps make citizens protagonists of the decision-making process and to test models of inclusive digital governance

TOURISM PROMOTION AND CULTURAL ENHANCEMENT

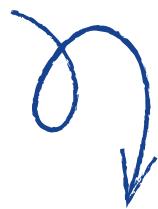
Create immersive experiences and virtual routes to enhance the cultural and natural heritage of Campobasso, thereby increasing its attractiveness to both visitors and residents. Linked to the "Culture and Leisure" principle of the network, it utilizes the metaverse to tell the story of the city and stimulate new forms of experiential tourism.

INNOVATIVE EDUCATION AND SKILLS DEVELOPMENT

Create a space for digital and real collaboration to foster encounters among young people, businesses, schools, and universities, stimulating creativity and local entrepreneurship. Connected to the principles of "Youth Attraction and Combating Brain Drain" and "Smart Service Delivery," it promotes the development of a local innovation ecosystem linked to the metaverse and artificial intelligence.

METHODOLOGY AND APPROACH

The overarching goal of Campobasso's Integrated Action Plan is to create a digital space that reflects real local needs and fosters a sense of belonging and citizen participation. The project serves as a civic innovation lab, where people, institutions, businesses, and universities collaborate to envision a more connected, inclusive, and attractive city. We follow a participatory, flexible, and transparent approach: listen, experiment, evaluate, and continually improve, step by step, to create a digital environment that truly belongs to the community. Our approach is based on two key approaches.



CO-DESIGN & DIGITAL LITERACY

Everything starts with dialogue. Focus groups, public meetings, and thematic tables enable citizens, students, businesses, associations, and experts to share their ideas, needs, and priorities. To ensure that no one is left behind, we anticipate an open online platform that allows everyone to contribute proposals and opinions. In parallel, training paths and hands-on workshops help close digital divides. Through moments of exchange and mutual learning, basic digital skills are strengthened, and emerging needs are turned into concrete guidelines for designing new digital and virtual spaces.



EXPERIMENTATION, MONITORING & CONTINUOUS IMPROVEMENT

All inputs are synthesized into a narrative brief to guide the first pilot projects of the Action Plan. The project progresses step by step: each cycle creates and tests prototypes, which are intended to be evaluated by the end-user. Direct citizen feedback is the primary tool for refining and improving solutions. Once the first pilot projects are active, data on use, participation, and social impact are collected and shared through periodic reports to ensure transparency and contribute to the project's evolution.



GOALS OF THE PLAN

Each pillar is directly linked to a specific goal of the plan, as outlined below:

- SMART CITY DEVELOPMENT
- ENVIRONMENTAL AWARENESS AND PROMOTION OF SUSTAINABLE PRACTICES
- E-INCLUSION OF CITIZENS INTO LOCAL GOVERNANCE
- EXPERIENTIAL VIRTUAL TOURISM
- INNOVATION CENTER FOR YOUTH AND BUSINESSES

The goals of the Integrated Action Plan have been translated into specific Actions in coherence with the project's strategic directions and the city of Campobasso's reference assets. The aim is to structure a set of concrete actions, key stakeholders, and expected results aimed at strengthening Campobasso's role as a smart city, capable of implementing a digitalization process that generates added value for both citizens and public administration.





GOAL 1

Smart city development

DIGITAL TWIN OF THE MUNICIPALITY OF CAMPOBASSO

The action intends to develop the urban Digital Twin of Campobasso capable of providing two-dimensional and three-dimensional representations of the territory, advanced analysis and decision-support tools, as well as channels for active and bidirectional participation with citizens.

| Key stakeholders & Resources | Expected results |
|--|--|
| <ul style="list-style-type: none">• CTE Molise• Municipality of Campobasso• Citizens | <ol style="list-style-type: none">1. create a collaborative environment that makes it possible to add value to existing data, integrate them with new sources, and make them accessible both to decision-makers and to the community;2. visualize the territory in 2D/3D mode, integrating sensors, surveys, open data, and institutional databases;3. offer decision-support tools;4. represent reports on a map with filters by type/urgency, highlight the progress status of interventions, and generate indicators of urban quality;5. ensure accessibility and usability and bidirectional communication channels (notifications, status updates, feedback). |

TRAINING AND CAPACITY BUILDING ON URBAN DIGITAL SYSTEMS

The action is directed to inform three main groups of stakeholders: technical staff (SIT/DT administration, integrations, security), responsible for managing the infrastructure and guaranteeing secure and reliable operations; user offices, in charge of consultation, data editing, report management and communication with citizens; and decision-makers, who rely on indicators and scenario analyses to support interpretation, planning and strategic choices.

| Key stakeholders & Resources | Expected results |
|--|---|
| <ul style="list-style-type: none">• CTE Molise• Municipality of Campobasso• Citizens | <ol style="list-style-type: none">1. improvement of the digital knowledge and skills of the Municipality's employees;2. increase in the efficiency and effectiveness of digital tools. |

MONITORA APP

The action provides for the creation of an app that will allow reporting of faults and anomalies—such as pavement subsidence, problems with urban furniture, or issues in public green areas—so that the technicians of the municipal offices can initiate monitoring actions and manage the entire maintenance cycle: from the report to taking charge through to resolution. The latter becomes a central tool to enrich the digital twin model of Campobasso with information.

| Key stakeholders & Resources | Expected results | |
|--|--|---|
| <ul style="list-style-type: none">• CTE Molise• Municipality of Campobasso• Citizens | <ol style="list-style-type: none">1. improve service efficiency and citizen satisfaction;2. increase the active participation of citizens in the management of the city's urban assets; | |
| GOAL 1 | TIME SCALE | BUDGET |
| | 2026 2027 2028 2029 2030 | 300.000€ (CTE project funds, municipal funds, European funds, PNRR and European projects (Horizon Europe, Interreg) |



GOAL 2

Environmental awareness and promotion of sustainable practices

ENVIRONMENTAL MONITORING

The action provides for the verification of the environmental state of Campobasso, concerning the environmental matrices of air, electromagnetic fields, radon, and noise, by arranging a mapping of the entire territory. The goal is to keep future effects under close surveillance through the installation of appropriate monitoring stations, whose data will be accessible to all citizens via a dedicated portal of the Municipality. This web page should therefore aim to show the environmental situation in real time through continuous monitoring.

| Key stakeholders & Resources | Expected results |
|--|--|
| <ul style="list-style-type: none">• CTE Molise• Municipality of Campobasso• Citizens | <ol style="list-style-type: none">1. check the state of the environment of the Municipality of Campobasso;2. defend and protect public health, responding to the need to prevent or limit pollution phenomena;3. preserve and optimize the quality status of ecosystems and environmental resources; |

PUBLIC GREEN AREAS MANAGEMENT

The action provides for the creation of an innovative system for studying, monitoring, and intelligently managing urban ecosystems, focusing on green areas, biodiversity, and air quality.

| Key stakeholders & Resources | Expected results |
|--|---|
| <ul style="list-style-type: none">• CTE Molise• Municipality of Campobasso• Citizens | <ol style="list-style-type: none">1. Create fully accessible urban environments for citizens.2. Support the health of plants and surrounding green areas.3. Collect detailed plant and soil data to enable intelligent irrigation and prevent water waste.4. Identify critical conditions for individual trees (e.g., risk of trunk collapse) to ensure timely safety interventions.5. Contribute to the conservation and protection of urban biodiversity.6. Enable advanced data analyses to inform decisions on green-area management and maintenance (e.g., pruning).7. Monitor air quality and help mitigate the effects of urban pollution. |

CITTA' SOSTENIBILI PROGRAM

A city program focused on cutting emissions and energy costs, improving the quality and transparency of municipal services, and creating local skills and jobs. It is enabled by a tech stack combining smart district heating, neighborhood Renewable Energy Communities, a city data hub with dashboards, and public Wi Fi in key areas. A short co design phase identifies priorities and pilot zones, followed by a measurable pilot and scaling.

| Key stakeholders & Resources | Expected results |
|---|--|
| <ul style="list-style-type: none">• Municipality (city administration and service managers)• Local partners (implementation and coordination actors)• Residents and households (participants in energy communities, service users)• Public building managers (district heating users)• City staff (data hub and dashboards users) | <ol style="list-style-type: none">1. Lower CO₂ emissions and reduced energy costs2. Cleaner and more reliable heat for public buildings and homes3. Increased transparency via dashboards on energy use and emissions for citizens and staff4. Residents able to share locally produced power and track savings5. Digital access enabled through public Wi Fi in key areas6. Pilot outcomes tracked with indicators such as CO₂ avoided, average savings, and dashboard usage, supporting scale up decision |

| GOAL 2 | TIME SCALE | | | | BUDGET |
|--------|------------|------|------|------|---|
| | 2026 | 2027 | 2028 | 2029 | 2030 |
| | | | | | 80.000€ (CTE project funds, municipal funds, European funds, PNRR and European projects (Horizon Europe, Interreg)) |



GOAL 3

E-Inclusion of citizens into local governance

OFFICE FOR THE DIGITAL TRANSITION

The action aims to systematize and expand the office's activities to operationally ensure the digital transformation of the administration, coordinating it in the development of digital public services and the adoption of new models of transparent and open relations with citizens.

| Key stakeholders & Resources | Expected results |
|--|--|
| <ul style="list-style-type: none">• Digital Transition Manager• Managers of operational units• Specialist consultants supporting the Digital Transition Office• Software providers (management systems) | <ol style="list-style-type: none">1. Create an interdepartmental team that can ensure the implementation of the entity's digitalization process, for specific permanent or transitional needs;2. Adopt coordination and consultation tools for the Office with actors external to the administration and involved in the digitalization process of the Municipality;3. Prepare the Three-year Plan for ICT and the transition to digital of the Municipality of Campobasso;4. Rationalization and simplification of administrative procedures;5. Digitalization of administrative procedures;6. Standardization of forms and dematerialization of documents;7. Integration between the management system, the document system and the front-office system;8. Reorganization of activities and skills in relation to the digitized procedures. |

CYBERSECURITY

Citywide initiative to harden data and services, combining advanced monitoring, clear incident protocols, regulatory compliance, and targeted training to boost resilience, continuity, and public trust

| Key stakeholders & Resources | Expected results |
|--|---|
| <ul style="list-style-type: none">• Digital Transition Manager• Specialist consultants supporting the Digital Transition Office• Data Protection Officer• Software providers (management systems)• Cloud service providers | <ol style="list-style-type: none">1. Greater data protection and reduction of digital vulnerabilities, thanks to the adoption of advanced tools for monitoring and preventing cyberattacks;2. Improved response capacity and operational continuity, with clear protocols for emergency management and rapid restoration of digital services;3. Increased trust among citizens and stakeholders, through a safer, more transparent, and reliable digital environment for the use of public services;4. Alignment with European and national regulations on information security and data protection, ensuring governance, transparency, and accountability;5. Strengthening of internal skills and of the culture of security, through training paths and awareness-raising actions aimed at staff and the community;6. Increase of the territory's digital resilience, with more robust infrastructures, effective backup systems, and a continuous prevention strategy against emerging threats. |

GO VOCAL APP

Go Vocal is a civic participation platform designed to support active citizenship and open innovation. It enables municipalities to collect ideas, run participatory budgeting and voting, gather feedback through surveys and petitions, promote events, recruit participants and volunteers, and produce reports by integrating data and basic AI outputs. It works on web and mobile, can be embedded into external sites via widgets, and can visually present projects with “before and after” renderings.

| Key stakeholders & Resources | Expected results | | | | | | | | | | | | |
|---|--|------------|--------|------|--|------|--|------|--|------|--|------|--|
| <ul style="list-style-type: none">• Municipality (engagement team, communications office, service departments)• Citizens and residents (participants in voting, ideation, surveys, petitions)• Community groups and local organizations (proposal owners, mobilizers)• Volunteers and participants (recruited for initiatives and events)• Platform administrators and technical staff (setup, moderation, reporting) | <ol style="list-style-type: none">1. Structured prioritization of proposals via participatory budgeting, voting, and ranking2. Increased idea generation and knowledge transfer through the Inspiration HUB3. Higher quality citizen feedback and support signals through surveys and petitions4. Better visibility and participation in local initiatives via events pages and calendars5. More effective recruitment of volunteers and participants, with scalable AI support6. Clearer, data supported reporting through data and AI integration into final reports7. Greater reach through embeddable widgets and mobile friendly navigation with district filters8. Improved project communication via “before and after” visualizations | | | | | | | | | | | | |
| GOAL 3 | <table><thead><tr><th>TIME SCALE</th><th>BUDGET</th></tr></thead><tbody><tr><td>2026</td><td>150.000€ (Project funds, municipal funds, European funds, PNRR and European projects (Horizon Europe, Interreg)</td></tr><tr><td>2027</td><td></td></tr><tr><td>2028</td><td></td></tr><tr><td>2029</td><td></td></tr><tr><td>2030</td><td></td></tr></tbody></table> | TIME SCALE | BUDGET | 2026 | 150.000€ (Project funds, municipal funds, European funds, PNRR and European projects (Horizon Europe, Interreg) | 2027 | | 2028 | | 2029 | | 2030 | |
| TIME SCALE | BUDGET | | | | | | | | | | | | |
| 2026 | 150.000€ (Project funds, municipal funds, European funds, PNRR and European projects (Horizon Europe, Interreg) | | | | | | | | | | | | |
| 2027 | | | | | | | | | | | | | |
| 2028 | | | | | | | | | | | | | |
| 2029 | | | | | | | | | | | | | |
| 2030 | | | | | | | | | | | | | |



GOAL 4

Experiential virtual tourism

VIRTUAL ROOM

It provides for the creation of a virtual room (within the premises of the Municipal Palace or of the Casa delle Tecnologie Emergenti) with two stations for consulting immersive content through VR headsets, suitably configured tablets, a PC station to appreciate the city's beauties on a large scale, and an interactive touch window.

| Key stakeholders & Resources | Expected results |
|--|---|
| <ul style="list-style-type: none">• CTE Molise• Municipality of Campobasso• Citizens | <ol style="list-style-type: none">1. A welcoming hub for digital heritage, where residents and visitors can explore Campobasso through VR, large-screen views, and an interactive touch window.2. Inclusive access to immersive content beyond headsets (tablets, PC, touch window), lowering technical barriers for all ages.3. Hands-on digital literacy opportunities (guided demos, drop-in sessions) that build familiarity with VR/XR tools.4. Stronger engagement with local culture and attractions through curated immersive experiences in a single, easy-to-find space.5. A showcase for Metacity outputs, supporting outreach, schools, and events while gathering user |

VISIT CB MOBILE APP

The action provides for the creation of a mobile app that will allow visitors and institutions, through the materialization of 3D content in different and suitably geolocated places, to carry out on-site visits with AR/VR functionalities. Implementation of marker-based AR (QR codes or images) or AR (surface recognition), which makes it possible to superimpose information and 3D models in real time. Digital wallet for reward initiatives.

| Key stakeholders & Resources | Expected results |
|--|--|
| <ul style="list-style-type: none">• CTE Molise• Municipality of Campobasso• Citizens | <ol style="list-style-type: none">1. encourage tourism in the city;2. digitize territorial and experiential marketing activities;3. attract new physical visitors to the area, offering a preview of the attractions;4. facilitate access to content for people with motor difficulties or special needs;5. allow the enjoyment of content also by people with disabilities, especially motor disabilities, who would have difficulty reaching the sites for an in-person visit. |

3D REPRESENTATION OF THE MISTERI OF CAMPOBASSO

The action involves the 3D representation of five of Campobasso's "Misteri" (traditional religious floats), which can be visualized in various contexts through Augmented Reality (AR). The experience may include technical and informational fact sheets, as well as audio guides in both Italian and English.

| Key stakeholders & Resources | Expected results |
|--|--|
| <ul style="list-style-type: none">• CTE Molise• Municipality of Campobasso• Citizens | <ol style="list-style-type: none">1. Richer cultural understanding and pride around Campobasso's heritage through interactive, story-driven experiences.2. Higher engagement with content via 3D/AR assets and 360° media that make history tangible and memorable.3. More inclusive access for diverse audiences, with clear narratives and bilingual guidance available on web and mobile.4. Easier orientation and discovery of points of interest, improving first-time visitor confidence and exploration.5. Stronger partnerships among schools, museums, events, and local stakeholders using shared digital assets.6. A reusable, updatable content base that boosts the city's visibility and can support future initiatives and collaborations. |

| GOAL 4 | TIME SCALE | | | | | BUDGET |
|--------|------------|------|------|------|------|---|
| | 2026 | 2029 | 2028 | 2027 | 2030 | |
| | | | | | | 50.000€ (Municipal funds, European funds, PNRR and European projects (Horizon Europe, Interreg)) |



GOAL 5

Innovation center for youth and businesses

INNOVATION HUB

The action aims to create a hybrid innovation space, combining digital and physical, where young people, schools, universities, and local businesses can collaborate on shared projects. The action promotes creativity, entrepreneurial thinking, and the development of a local innovation ecosystem.

In doing so, the initiative offers tools, mentoring, collaborative environments, and capacity-building activities to support innovative ideas, enhance digital skills, and foster the development of new entrepreneurial pathways.

| Key stakeholders & Resources | Expected results |
|---|--|
| <ul style="list-style-type: none">• CTE Molise• Municipality of Campobasso• Local education institutions• Citizens | <ol style="list-style-type: none">1. Increased collaboration among students, entrepreneurs, schools, and universities.2. Strengthened digital and entrepreneurial skills among young people.3. Development of early-stage start-up ideas and prototypes.4. Improved talent attraction and retention within the territory. |

OPENING EVENTS AT UNIVERSITÀ DEGLI STUDI DEL MOLISE

A launch event at the University of Molise to introduce the Innovation Hub and showcase Metacity opportunities through demos, keynote talks, and interactive sessions. It will highlight how virtual environments, digital twins, immersive applications, and AI can support innovation, entrepreneurship, youth engagement, education, collaboration, and local development. The Hub may also offer elective courses for students on immersive technologies and AI across disciplines.

| Key stakeholders & Resources | Expected results |
|--|--|
| <ul style="list-style-type: none">• University of Molise (students, faculty, researchers, event organizers)• Public administrators and the Municipality• Local businesses and entrepreneurs• Youth and broader community participants• Metacity and Innovation Hub team (program coordinators, tech/demo partners) | <ol style="list-style-type: none">1. Increased awareness of the Innovation Hub and Metacity opportunities2. Hands on exposure to immersive tech use cases via demonstrations and interactive sessions3. Stronger collaboration between university, public sector, and local businesses4. Activation of youth engagement and entrepreneurship interest5. Identification of potential projects and partnerships for local development6. Potential launch of elective courses, building skills and interdisciplinary literacy in XR and AI |

| GOAL 4 | TIME SCALE | | | | | BUDGET |
|--------|------------|------|------|------|------|---|
| | 2026 | 2027 | 2028 | 2029 | 2030 | |
| | | | | | | 50.000€ (Municipal funds, European funds, PNRR and European projects (Horizon Europe, Interreg)) |

TESTING ACTION : DIGITAL TWIN FOR PARTICIPATIVE MAINTENANCE OF CAMPOBASSO

The testing action marked the first experimentation phase of the METACITY – Virtual Solutions for Real People project. It integrated the outcomes of the Casa delle Tecnologie Emergenti (CTE Molise) and the University of Molise (UNIMOL), including the management platform and the Digital Twin of the city, together with the mobile application Monitora Campobasso. The action was designed as a demo and testing activity to validate, under real-life conditions, a digital workflow for the participatory monitoring and maintenance of the urban environment. The goal was to assess the effectiveness of a shared model for managing and caring for urban assets through digital tools. Within this framework, the Digital Twin functions not only as a technical decision-support system, but also as a tool for collaborative governance, enabling cooperation among citizens, technicians, and public administrators. Through geolocated reporting, interactive maps, and visual analytics, the administration can monitor public assets transparently, while citizens actively contribute to identifying needs and priorities. Overall, the testing action promoted a model of proactive, data-driven, and co-designed urban maintenance, strengthening efficiency, accountability, and a shared sense of responsibility for public spaces.

A) ARCHITECTURE AND TECHNOLOGICAL COMPONENTS

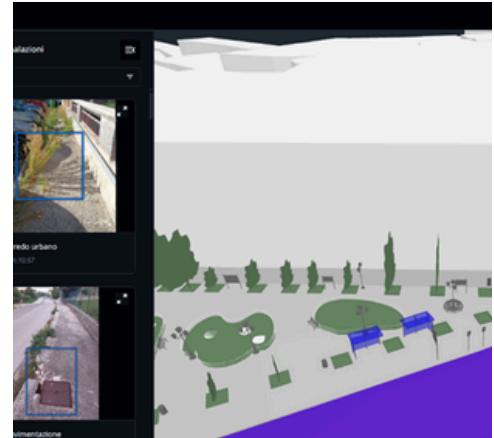
The platform is based on a modular architecture that integrates:

- a GIS/3D engine for the spatial and volumetric representation of the pilot urban area, including BIM-aware models of the historic centre;
- a semantic layer of urban and maintenance data, enabling the cataloguing, classification, and correlation of assets, reports, sensors, and interventions;
- a real-time data acquisition and flow system, incorporating environmental sensors, IoT devices, and mobile applications for submitting geolocated reports;
- an operational web dashboard for technicians and administrators, providing spatial visualization, priority analysis, and maintenance ticket generation.



B) BIM AND 3D MODEL OF THE HISTORIC CENTRE

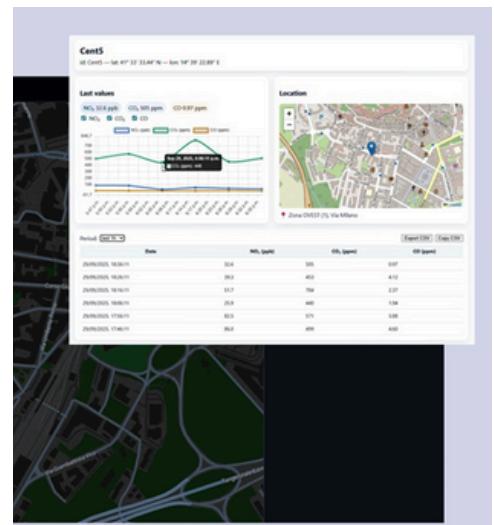
Within the Digital Twin, a Building Information Modelling (BIM) representation of a selected portion of the historic centre of Campobasso has been integrated, offering a high level of informational detail on the city's architectural and infrastructural elements. Users can explore the 3D model, access metadata related to each asset (such as year of construction, past maintenance operations, current condition), and visualize the relationships between buildings, surrounding public spaces, and mobility systems.



C) ENVIRONMENTAL SENSORS AND REAL-TIME MONITORING

The platform also integrates data from a network of environmental sensors distributed across the city, continuously measuring key air-quality parameters such as CO₂, NO₂, and CO. This allows the system to:

- visualize spatial and temporal variations of environmental parameters within the pilot area;
- correlate degradation events or maintenance reports with environmental conditions, identifying potential patterns or trends;
- support informed, data-driven decision-making for sustainability, mobility, and preventive maintenance policies.



D) PARTICIPATORY MAINTENANCE FEATURES AND OPERATIONAL WORKFLOW

The platform supports an end-to-end workflow for participatory urban maintenance. Citizens, through the Monitora Campobasso mobile app, can submit geolocated reports on issues such as urban furniture, paving, vegetation, or lighting. These reports are displayed on the Digital Twin dashboard, where they are validated, classified, prioritized, and assigned to the relevant service department. The system establishes a continuous feedback loop connecting citizens, technicians, and the administration, turning maintenance from a reactive task into a proactive and co-designed process.



STRUCTURE AND RATIONALE OF THE DEMO TESTING

The Demo Testing was conceived as a two-stage demonstration and validation process, aimed at progressively testing and refining the Digital Twin and the Monitora Campobasso application before their full-scale deployment. The decision to organize two complementary demo testing sessions stemmed from the need to ensure both technical reliability and public usability of the digital workflow.

The first session was dedicated to municipal staff, technicians, and service managers, allowing the internal project team to validate the workflow, identify adjustments to reporting procedures, and optimize data exchange mechanisms between the mobile and web components. The second session, subsequently opened to the wider public, was designed to translate the technical testing into an inclusive civic experience, engaging citizens, associations, schools, and local enterprises in the shared management of the city's heritage. This progressive structure made it possible to transform the testing from a specialized operational trial into a collective learning and engagement process, paving the way for the participatory governance model promoted by the METACITY project.

Now for submitting a report of a fault or anomaly related to specific components of the urban system.

Structure of the Digital Twin for Participatory Maintenance

- **Digital Twin:** web-based platform for managing reports of anomalies and malfunctions in selected areas of the city. It enables the visualization of the BIM model and the related maintenance reports.
- **App mobile:** direct channel for citizens and operators to report anomalies and malfunctions in the urban environment.
- **Attori coinvolti:**
 - Citizen (non-expert knowledge)
 - Technical Operator (expert knowledge)
 - Municipal Maintenance Manager

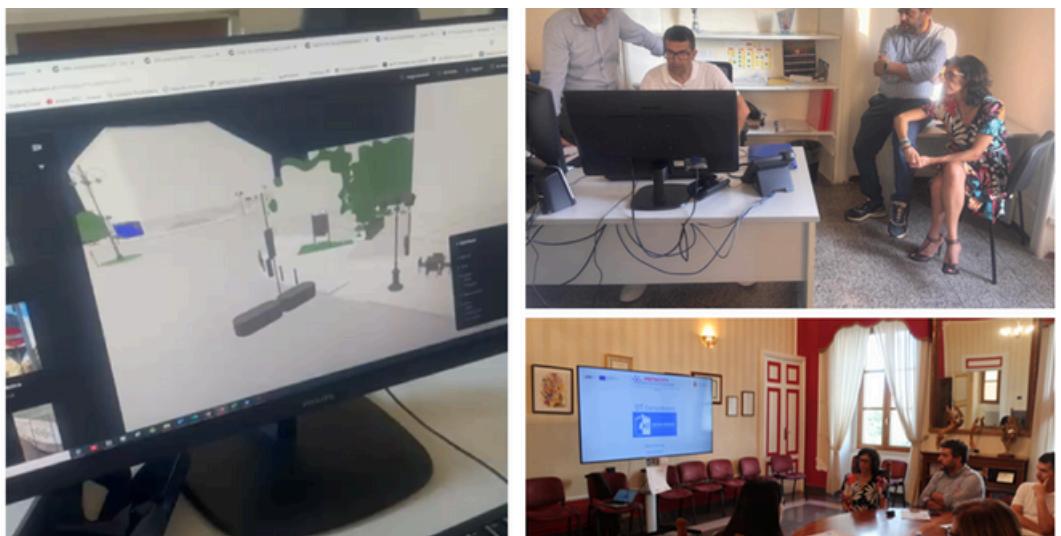
DEMO TESTING

| Phase | Period / Location | Main Participants | Objective and description |
|--|---|--|---|
| PHASE 1 - TESTING ACTION | 16 September 2025 Municipal Hall of Campobasso (Sala Giunta) | Representatives of the Departments of Heritage, Environment, Maintenance and Urban Planning; University of Molise; CTE Molise technical team | First internal test of the Digital Twin and Monitora Campobasso app to validate the workflow and data integration between mobile and web platforms through field experimentation in the ZTL area. |
| PHASE 2 – PUBLIC DEMONSTRATION AND STAKEHOLDERS ENGAGEMENT | 30 September – 3 October 2025 Piazza Gabriele Pepe and Casa delle Tecnologie Emergenti (CTE Molise) | Citizens, schools, associations, companies, research centres, local institutions | Public demonstration combining citizen engagement in Piazza Pepe with technical workshops at CTE Molise, exploring system interoperability and future applications such as AI and metaverse-based tools. |
| TESTING ACTION (16 SEPTEMBER 2025) | | | <p>The first phase of the SSA was organized on 16 September 2025 in the Municipal Hall of Campobasso (Sala Giunta), involving representatives from the Departments of Heritage, Environment, Maintenance, and Urban Planning, together with the University of Molise and the CTE Molise technical team.</p> <p>The session followed three operational steps:</p> <ol style="list-style-type: none"> 1. Presentation and Training – introduction to the Digital Twin platform and Monitora Campobasso app, illustrating workflows for fault reporting, validation, and maintenance ticketing. 2. Field Experimentation – on-site testing in the ZTL area, where participants used the app to report real anomalies (surface degradation, urban furniture damage, vegetation, or lighting issues). Data were transmitted in real time to the Digital Twin dashboard, where technicians validated and prioritized interventions. |

PHASE 1

1. Evaluation and Discussion – review of results in the municipal hall, highlighting two complete pilot cases (from report to intervention), and collecting feedback on system usability and integration with municipal databases.

This first testing confirmed the technical **robustness and institutional** usability of the platform, validating its workflow and its capacity to integrate different municipal departments into a unified digital maintenance process.



Snapshots from the testing action 16th september

PHASE 2

PUBLIC DEMONSTRATION AND STAKEHOLDER ENGAGEMENT (30 SEPTEMBER – 3 OCTOBER 2025)

The second phase expanded the testing into a public and participatory dimension, transforming the Digital Twin into a communication and co-design tool for the entire community. Between 30 September and 3 October 2025, the Municipality of Campobasso organized a four-day demonstration event, divided into two complementary moments:

1) Urban Exhibition and Citizen Interaction (30 September – 1 October)

A temporary exhibition stand was set up in Piazza Gabriele Pepe, where the Digital Twin of the city was presented to citizens, students, and local associations. The stand featured interactive screens displaying the virtual model of the historic centre and live demonstrations of the Monitora Campobasso application.

PHASE 2

Citizens were invited to simulate maintenance reports, explore 3D models developed, and discover how digital technologies can improve communication between residents and public administration. The initiative aimed to promote a culture of participatory maintenance, raising awareness of how digital twins can support transparency, shared decision-making, and collective responsibility in managing public space.



Snapshots from the testing action 30th september – 1st October

2) Technical and Industrial Dialogue (2–3 October)

The following two days were held within the Casa delle Tecnologie Emergenti di Campobasso, hosting technical workshops, round tables, and bilateral meetings with companies, research centres, and local institutions.

The sessions enabled an in-depth discussion of the technical architecture of the Digital Twin, its interoperability with other public data systems, and the potential for industrial and commercial upscaling in sectors such as construction, facility management, and mobility. Particular attention was given to the integration of emerging technologies – such as Artificial Intelligence for predictive maintenance and metaverse-based immersive interfaces.

PHASE 2

Results and Future Perspectives

The combined outcomes of the two phases confirm the strategic and replicable value of the Campobasso Small Scale Action. The experiment validated the effectiveness of the Digital Twin as:

- a **technological backbone** for the city's smart governance and maintenance systems;
- a **participatory interface connecting citizens**, technicians, and administrators;
- a **demonstrator of interoperability between urban data**, BIM models, and mobile reporting systems;
- an educational and dissemination tool capable of **fostering digital literacy** and community engagement.

The experience also laid the groundwork for future activities, including:

- the extension of the Digital Twin to the whole urban area;
- the development of immersive visualizations for participatory urban planning;
- the establishment of a permanent "Digital City Hub" within the CTE Molise, open to citizens, companies, and researchers;
- the integration of predictive algorithms for the continuous improvement of maintenance operations.

Through this Small Scale Action, Campobasso has demonstrated how the METACITY vision – "virtual solutions for real people" – can turn digital innovation into a concrete driver for efficiency, participation, and sustainability in the governance of urban environments.

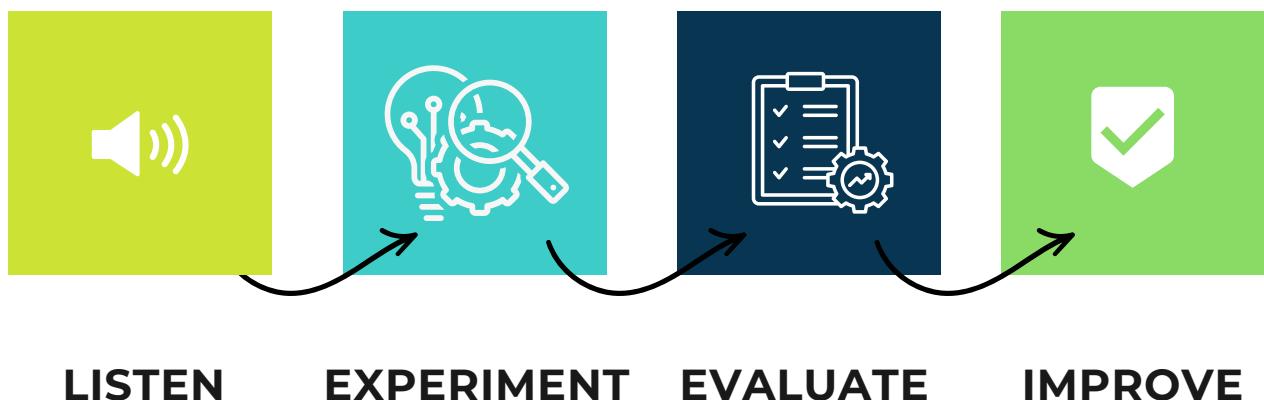


Snapshots from the testing action 30th september – 1st October

COMMUNICATION PLAN

Following our methodological guidelines, the communication plan makes the IAP visible, collaborative, and innovation-driven throughout delivery. Communication is used not only to inform but to mobilize participation and sustain learning. We will communicate actions, milestones, and outcomes clearly and regularly through the Metacity Campobasso portal and the Municipality's website, complemented by local media and public spaces (schools, libraries, community and parish centers). Engagement activities such as open days, workshops, demos invite citizens, students, businesses, universities, and public institutions to experience, test, and co-develop solutions. Two-way feedback (quick polls, idea stations, informal dialogues) keeps messages responsive and inclusive, while stories of progress and co-created tools (e.g., visual guides, VR kits, co-design methods) are shared via URBACT and national platforms to amplify replication.

This communication and engagement layer bridges strategy and delivery: it supports the IAP's participatory method, nurtures co-design and digital literacy, and underpins experimentation, monitoring, and continuous improvement.



| GOAL | KEY ACTIVITIES | TARGET GROUPS | CHANNELS AND FORMATS | TIMING |
|--|---|---|--|--------------|
| Official launch of the IAP | Press release; launch event & demo corner; publish IAP on portal; | General public; local media; institutions; | Metacity portal + municipal site; press kit; social posts; launch livestream; posters in schools/libraries | Q1 2026 |
| Progress updates & outcomes of the Pilot Projects | visual KPI dashboards; short "pilot notes" (what/so-what/next) | Stakeholders of each Goal | Portal dashboards; newsletter; social threads | Annual |
| Hands-on engagement: demos, trials, workshops | Workshops; user testing sessions; school labs | Residents; students; SMEs; third-sector orgs | Events; pop-up stations; VR/AR demo kits | Quarterly |
| Institutional briefings and updates | Staff briefings and training | Stakeholders of each Goal | Internal meetings; slide decks | Twice a year |
| Showcasing Innovation | Open events in local institutions | Citizens; schools; startups; regional/EU partners | Press kit; social media; livestream; posters in schools/libraries | Biannual |
| Sharing methods and tools externally | Conferences; peer exchanges; Toolkit sharing | Extra-local institutions | URBACT/national networks; online publications; webinars | From Q1 2027 |



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metacity

Virtual solutions
for real people

URBACT



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the European Union
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