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SMART CITY CHALLENGE 2025

City Challenge

Max 3 pages

send to smartcity@taltech.ee by Sept 30, 2025

Challenge Title – Public Spaces for Smart Growth

City/county and country - Mazara del Vallo, Sicily, Italy

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1. What is the future urban challenge that would need a solution to?

Mazara del Vallo is facing intertwined social and environmental challenges that shape its future as a liveable, socially inclusive, and resilient city. Public participation is very weak, many citizens feel detached from civic life, and shared spaces such as streets and squares are mostly underused, offering few opportunities for encounters, dialogue, or cultural and business activities. Younger generations are more active in digital environments than in their local community, deepening disconnection. This lack of engagement erodes trust in institutions, limits collective care, and leaves residents isolated. At the same time, Mazara's dense historic fabric lacks shaded areas and green refuges. With climate change making Sicilian summers hotter and longer, the absence of cooling and biodiverse spaces exposes not only vulnerable groups — the elderly, children, people with disabilities, and those in peripheral areas — but all citizens and tourists to discomfort, health risks, and social exclusion. The harshness of the built environment pushes people indoors, weakening social ties. These dynamics reinforce each other: without welcoming public spaces, residents lack places and motivation to participate; without participation, investments in greenery risk neglect. The result is a cycle of weak civic culture, underperforming spaces, youth outmigration, and economic stagnation.

Mazara's challenge is therefore not only to plant more trees or renovate squares, but to **rethink public space as the missing link between civic participation, climate adaptation, and local economy's enhancement**. Even within its heritage-protected centre, many underused spaces could be reclaimed and transformed into inclusive, small-scale, climate-sensitive gathering places. The challenge belongs primarily to the Happy City category, aiming to improve quality of life through a human-centred approach that **fosters social connections, enhance business, strengthens participation, and creates better access to nature and culture while digitally connect the different systems between them**. By embedding opportunities for collective care, Mazara seeks to nurture belonging, inclusion, and physical and mental well-being while in parallel re-activating the local economy. At the same time, new spaces must respect and enhance the natural environment, integrating Nature-Based Solutions that mitigate heat stress and support biodiversity while acting as social connectors and economic boosters. Thus, while rooted in the Happy City vision, the challenge also contributes to a Climate Resilient City.

Addressing this challenge is a high priority, as it affects civic life, cohesion, health, resilience, and local economy simultaneously. Without participation, institutions act in isolation, initiatives respond less to needs, and trust and responsibility erode while young people out-migrate. Attractive, well-used public spaces, instead, can reverse this trend by



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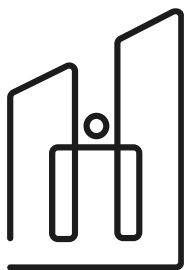


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offering venues where people meet, exchange business and ideas, and access culture—making the city more vibrant, supporting local businesses and cultural initiatives. Such spaces also improve health and well-being by encouraging physical activity, preventing illness, and strengthening mental health through contact with nature. In Sicily’s warming climate, shaded areas and refuges are essential. This is not just about adding greenery but about **making “green” a social connector**—potentially reintroducing local species, enhancing biodiversity, and linking vegetation with cultural events, recycling initiatives, energy production, or any other community-driven activities that generate value and business. On top of this, **digital infrastructure** can further support the management of these spaces.

While grounded in Mazara’s context—its medieval fabric, scarce greenery, and low civic engagement—the challenge reflects a broader European issue: how historic, compact cities can revitalise public life through **inclusive, climate-smart design**. Similar dynamics appear across Europe: Central and Eastern towns face low participation and youth outmigration; northern cities struggle with year-round usability; southern cities with heat stress and biodiversity loss. Although solutions will differ in form, the shared challenge is clear: building participatory, green public spaces in historic cities to strengthen social cohesion, local economy, and climate resilience.

2. Innovation.

So far, Mazara has only been able to address this challenge through small-scale initiatives. The *Pocket Gardens* project, intended to turn underused corners into micro-green areas, stalled due to lack of financing. A funding application to co-design a larger urban park with citizens also failed, not because of missing capacity—the municipality had the resources and willingness to manage it—but because pre-financing was required, which the city budget could not sustain. Beyond these efforts, only minor upgrades to existing squares and green areas have been made, leaving them fragmented and insufficient. The main barrier is financial rather than legal: with limited capacity to pre-fund or maintain projects, Mazara struggles to move from isolated attempts to a coherent, impactful strategy. This explains why existing solutions have not yet delivered the systemic change the city urgently needs.

The future solution could combine **social activation, ecological design grounded on Nature-Based-Solutions, and digital innovation** to transform neglected areas into inclusive and climate-resilient gathering places able to boost the city’s economy and the re-gain of public space from citizens and local businesses. It should prioritise spaces that foster encounters, cultural activities, and intergenerational ties, helping residents reclaim ownership of their city and strengthening civic culture. These places should act as shaded and comfortable micro-refuges that improve liveability during hot summers while enhancing resilience to environmental stress through nature-based approaches. They could also integrate smart and affordable technologies that support sustainability, participation, and adaptive management, while digital tools could enable more inclusive planning and long-term monitoring. Co-design methods would ensure that citizens, including younger generations, are directly involved in shaping and managing the spaces, bridging digital and physical community life and reinforcing shared ownership. Technologically, each intervention could evolve into a kind of “pocket smart park” through affordable, high-TRL solutions that improve comfort, participation, and management. Examples include IoT systems for irrigation and lighting, sensors to monitor microclimate and tree health, and anonymised counters to track space use—ensuring sustainability, lower costs, and adaptable services. Digital infrastructure could support both the design and ongoing management of ecological and socio-cultural functions. Participatory co-design methods, enhanced by augmented reality and gamification, could allow residents to visualise, test, and vote on layouts, attracting younger citizens, bridging digital and physical community life, and reinforcing shared ownership.

Rather than focusing on a single site, the solution should emphasise a distributed **network of interventions** in order to create a visible everyday transformation, and offering a scalable model that can inspire other European cities facing similar challenges, or that just wants to use the **“network theory” and related scientific methodologies** to transform their city, or enhance a specific aspect of them, something that is currently working well and wants to be multiplied.



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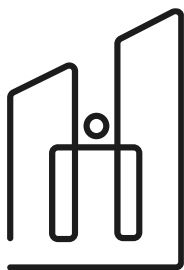


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3. Expected impact of your pilot solution.

If this challenge is solved, Mazara del Vallo will experience a visible transformation in civic life, the local economy, and the urban-natural-environment. Public spaces will become welcoming anchors of happiness and community life, fostering cultural activities, everyday encounters, and healthier lifestyles while countering isolation, especially for vulnerable groups and helping the city on climate resilience challenges it faces more and more. By involving citizens, local communities, and NGOs in their design and care, the city will renew belonging and build a culture of participation and dialogue, making decision-making more inclusive and responsive while addressing climate issues and giving also the possibility to its citizens to enjoy the city in hot summers, being outside, developing new activities outside and taking care themselves of such dedicated areas. This participatory approach will also enhance institutional credibility; it will surely attract partnerships (as the city works already with local companies that would be interested in such projects) and build long-term capacity for co-management that extends beyond public space to other policy areas. Economically, reactivated shared spaces will stimulate ideas, existing and new small businesses, cultural initiatives, and social enterprises, turning social energy into entrepreneurship and helping retain young people and skilled residents by creating local opportunities. Environmentally, Nature-Based Solutions and local vegetation will improve air quality, provide shade, and create accessible climate refuges, strengthening resilience against hotter summers. Altogether, Mazara could become a happier, healthier, more economically vibrant, and climate-prepared city, where public spaces connect people with nature and with culture, and with new business opportunities.

4. Piloting

Piloting a solution would give Mazara del Vallo the opportunity to test new approaches that combine ecological design with participatory processes, while directly improving quality of life for its residents. The city is particularly motivated to take part because it sees this as a chance not only to address a local problem but also to contribute knowledge and practices that are relevant to many other small and medium-sized towns facing similar conditions in Europe. Mazara has the capability to participate thanks to its existing experience with European projects, its strong network of local associations and NGOs, the strong involvement of schools, and especially the availability of municipal staff who can dedicate time to coordinate and support the pilot, particularly the Innovation Department.



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