



ASCEND

Athens Superblock

ATHENS, GREECE

Emissions domains addressed by the Pilot Activity



Consumption of non-electricity energy for thermal uses in buildings & facilities



Consumption of electricity generated for buildings, facilities & infrastructure



All vehicles & transport (mobile energy)



Key Terms

Superblock | Smart grid infrastructure | Photovoltaics | Sustainable mobility | Urban greening | Co-creation | School-based engagement | Neighbourhood transformation

Levers of Change

Data and Digitalisation | Democracy and participation | Governance and policy | Social innovation | Technology/infrastructure

Description of the Pilot Activity

ASCEND marks Athens' first integrated effort to accelerate climate neutrality at neighbourhood level. The pilot transforms a multicultural and densely populated area of Kypseli—characterised by limited green spaces, ageing buildings, and heavy traffic—into a living laboratory for sustainable urban transition: Athens' first superblock. The most important element of the project is the participatory approach to planning and implementation.

Year One Highlights

Athens used Year 1 to lay the social, technical, and administrative foundations for a superblock intervention in the Kypseli neighbourhood—centred on the 21st Primary School as a community hub for co-design. Interventions will focus on four areas: energy, water, green space, and sustainable mobility and all solutions emerged from co-creation with students, teachers, and parents through interactive workshops, awareness campaigns, and participatory design sessions, transforming citizens from passive participants into active co-designers, while fostering environmental awareness among children and building local ownership. More than 80 people participated directly in co-creation, while over 500 were reached through wider dissemination events.

Some key interventions from Year 1 include the installation of a 33-kW photovoltaic system (60 panels) on the school's roof, equipped with smart meters and air quality sensors operational through partnerships with the MI-TRAP and InChildHealth research projects. The development of a GIS-based decision support system using AI to identify priority locations for green infrastructure and the creation of forecasting models for PV production and school electricity consumption. A traffic study for the Kypseli superblock was also finalised, covering mobility surveys, road hierarchy, and pedestrianisation design, deliberately paced to ensure all relevant municipal departments were involved, making proposals realistic and implementable.

Innovation Highlights

The school-based model positions the 21st Primary School as a neighbourhood transformation hub, not just a building for PV installation, but a space where intergenerational co-design takes place. Connections with parallel research projects (MI-TRAP, InChildHealth, THESEUS) enabled additional actions such as air quality monitoring and school gardening without extra project resources, demonstrating the value of synergies over isolated implementation.

The AI-based green planning methodology prioritises interventions based on actual needs rather than arbitrary selection.

Twinning with Dos Hermanas (Spain)

Dos Hermanas visited Athens in April 2025 for a walk-through of the pilot area. The exchange highlighted a shared challenge: how to involve citizens early enough so they support, rather than oppose, interventions once implemented. As a city approximately one year ahead in implementation, Dos Hermanas offers directly relevant insights on risks and mitigation strategies.

