



SchoolHeroZ

A Holistic Roadmap to Net Zero Schools

KALAMATA, GREECE

Emissions domains addressed by the Pilot Activity



Consumption of electricity generated for buildings, facilities & infrastructure



All vehicles & transport (mobile energy)

Key Terms

Net-zero schools | Digital Twin | Energy monitoring | Indoor environmental quality | Green mobility education | Teacher-facilitated behaviour change | Governance innovation

Levers of Change

Data and Digitalisation | Democracy and participation | Governance and policy | Learning and capabilities | Technology/infrastructure

Description of the Pilot Activity

SchoolHeroZ is transforming schools into net-zero buildings through digital energy monitoring, sustainable mobility education, and a governance framework that positions schools as community hubs for behaviour change among students, teachers, and parents.

Year 1 established the technical and governance foundations. Six pilot schools were equipped with environmental and energy sensors. A key adaptation shaped the year: discovering a pre-existing network of 36 schools already sharing energy infrastructure led to a shift from high schools to elementary schools — enabling faster deployment and stronger data coherence. This required rethinking the engagement model: rather than a student mobile app, mobility education is now delivered in classrooms through teachers acting as "Ambassadors," with parents engaged as the primary mobility decision-makers.

Innovation Highlights

The discovery that pre-existing municipal energy infrastructure could accelerate deployment is a transferable lesson: cities should map what already exists before designing from scratch.

The teacher-facilitated, family-centric model offers a replicable alternative for contexts where direct individual tracking is impractical. Custom low-cost multi-parameter sensors provide affordable indoor environmental monitoring that doesn't require specialist procurement.

Year One Highlights

A three-tier governance framework was established with standardised operational manuals. Custom low-cost sensing devices were designed to monitor air quality, temperature, and energy across six schools now collecting live data. Data management infrastructure enables real-time monitoring and historical analysis. The Digital Twin platform reached 50% completion. Mobility model specifications were completed using a custom GIS database for dynamic routing and sustainability scoring.

Key Insight

"The engagement model shifted to teachers as Ambassadors integrating mobility education into curriculum, with parents as the key decision-makers — targeted around safety, health, and academic benefits rather than climate messaging alone."

Twinning with Urbino (Italy)

Twinning exchanges were held by the two cities focusing on participatory governance and climate education and how these are informing the development of Kalamata's Green Investment Committee and local climate lab.

