

Project Partner Search Form

- ☒ I offer my expertise to participate as a Partner in a Horizon Europe Project
- ☐ I am planning to coordinate a project and I am looking for Project Partners

TOPICS OF INTEREST

- **HORIZON-MISS-2027-01-CLIMA-01 - Demonstrating transformative solutions to increase cross-border climate resilience**
- **HORIZON-MISS-2027-01-CLIMA-02 - Researching and applying the potential of Artificial Intelligence to foster climate resilience at the regional and local levels**

PARTNER INFORMATION

Description of the Legal Entity

Infrared City GmbH is a Vienna-based deep-tech SME spun out of the Austrian Institute of Technology, delivering AI-powered urban microclimate simulation at hyperlocal 1-meter resolution (wind, thermal, solar, ambient) through an OGC-compliant API for climate-adaptive planning, design, and operations

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| ☐ Higher Education | ☐ Research Institution | ☐ Public Administration |
| ☒ Industry /SME | ☐ NGO | ☐ Other |

Description of the Research Team

The founding team combines expertise across computational design, machine learning, and urban climate science: CEO Angelos Chronis, CSO Theodoros Galanos, CPO Oana Taut, and CTO Serjoscha Duering, all with prior applied-research careers at the Austrian Institute of Technology. The team has a strong publication record in AI-driven environmental simulation and continues active R&D collaboration with academic and municipal partners across Europe, MENA, and APAC regions.

PROJECT IDEA / CONTRIBUTION TO THE CALL TOPIC

Your potential role

- | | |
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| ☒ Research | ☒ Technology Development |
| ☐ Dissemination | ☐ Training |

infrared.city's contribution builds on an existing AI-powered microclimate simulation: deep-learning surrogate models for wind, heat, solar and comfort already replace computationally intensive physics-based simulation, delivering results in seconds rather than hours. Within the project, we would extend that foundation to make high-resolution climate simulation viable for the sectoral adaptation work in scope, in projects and communities where it was previously prohibitively expensive to use.

On top of that simulation layer, we extend our agentic AI interface so it mediates between users and the underlying scientific data: supporting AI-driven decision-making (optioneering, scenario comparison,

reporting, and helping committees reach consensus on shared data) while also translating the same output into citizen-facing communication.

Authorities need climate information they can act on together, and today the underlying models and data don't speak a common language across regions. We implement city-wide, 1m-resolution, pedestrian-level simulation across borders, so that context-specific interventions applied in different locations can be assessed in a comparable way. This allows risk classification and outcome reporting on the same basis, while the regions and local authorities keep ownership of their own processes and get immediate, quantifiable feedback on proposed interventions.

Beyond data provision and digital twin integration, infrared.city can develop and validate the operational workflows that put this to use: early-warning and alerting for extreme weather, event planning, and infrastructure or routing decisions. Built on validated data and the underlying simulations, these workflows still need a consistent approach to calibrate them to local needs and standard processes, and validation with the regional and local authorities in the demonstration sites.

Cross-border climate resilience

- Common risk classification — comparable, city-wide 1m simulation the same data basis across borders
- Monitoring & reporting — early-warning workflows for extreme weather, extendable into cross-border reporting

AI for regional & local climate resilience

- Sectoral adaptation — deep-learning surrogates close the cost/accuracy gap for high-resolution simulation
- AI-driven decision-making — agentic AI interface turns simulation output into committee- and citizen-ready decisions

Already experience as a	Coordinator	☐ YES	☒ NO
	Partner	☒ YES	☐ NO
	Expert Evaluator	☒ YES	☐ NO

CONTACT DETAILS

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