



EPURE :

(**E**stimation o**P**érationnelle des solutions d'adaptation à la s**U**rchauffe urbain**E**)

Operational assessment of adaptation solutions to urban heat island effects

Technical centers in Nouvelle-Aquitaine



Partners



Subcontractors



RÉGION
Nouvelle-
Aquitaine

ABSTRACT

As part of the Nouvelle-Aquitaine Region's call for projects involving multiple technical centres, the Tipee platform and CRITT Horticole are pooling their expertise to develop an operational methodology for assessing solutions to urban heat island effects.

Rising temperatures linked to climate change are exacerbating risks to buildings and urban spaces — thermal discomfort, water stress, increased energy consumption and higher greenhouse gas emissions. In response to these challenges, a number of mitigation strategies are being implemented:

- greening of spaces and building envelopes,
- optimised water and rainwater management,
- use of materials with high reflectivity or suitable thermal inertia,
- integration of resilient energy solutions and appropriate uses.

The EPURE project aims to establish a common methodological framework for comparing these solutions at different scales – from the building to the neighbourhood – using experimental protocols and digital tools for simulation and decision-making support.

Partners contribution :

- Tipee draws on its expertise in thermal and aerodynamic modelling (dynamic thermal simulation, microclimatic models, energy assessment) and experimental instrumentation (test benches, measurement protocols).
- CRITT Horticole contributes its expertise in urban greening, particularly regarding the conditions for the survival, growth and effectiveness of plants in constrained environments.

Operational objectives:

- To provide a digital diagnostic tool to assess the vulnerability of buildings and neighbourhoods to overheating.
- To develop a reproducible method for assessing the effectiveness of landscape design solutions (planting, materials, water management).
- To provide technical and scientific support for the development and implementation of urban adaptation projects.

Ultimately, EPURE aims to become a regional benchmark for the integrated assessment of mitigation solutions, combining experimental data, modelling and life-cycle analysis.



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