



# **geo-URBANHEAT**

## **Urban Heat Islands Platform**





## **Urban Heat Islands Platform :**

is a decision-support platform that turns urban heat data into clear, actionable maps. It helps cities identify heat-risk hotspots and compare cooling solutions, such as green/blue infrastructure and policy measures, to reduce Urban Heat Islands.

### **Cities are able to:**

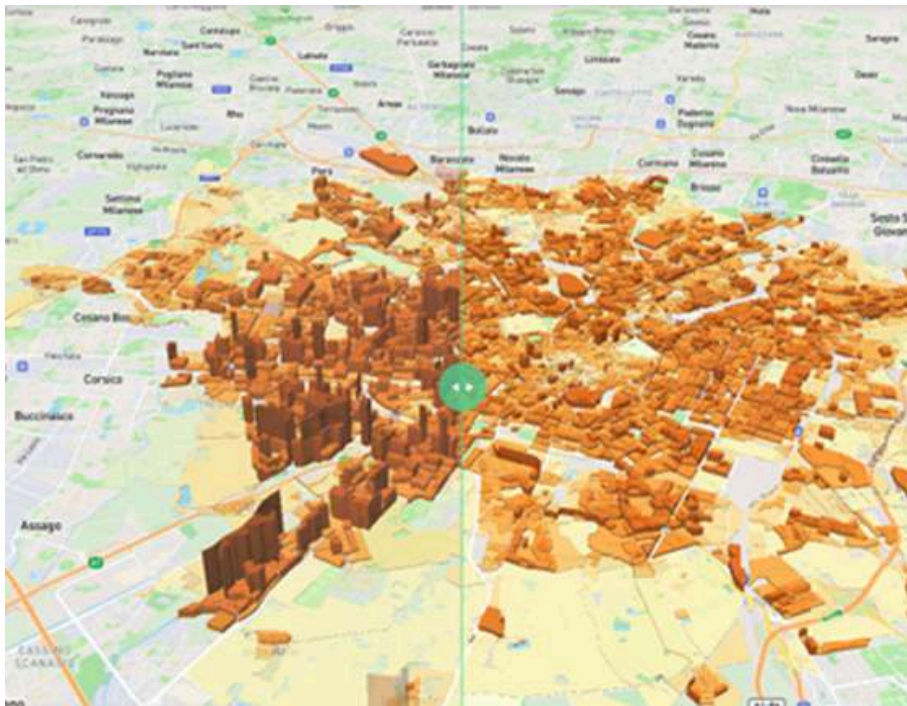
- Map urban heat risk
- Identify priority hotspots at neighborhood/block level
- Compare baseline and mitigation scenarios with measurable indicators

## Use cases :

- **Municipalities:** hotspot prioritization, cooling actions, heat resilience planning
- **Real estate:** heat-risk screening for retrofits and investments
- **Infrastructure operators:** heat-risk assessment for transport, energy, and public assets
- **Public health agencies:** identification of heat-vulnerable areas
- **Utilities & energy providers:** forecasting heat-driven demand and cooling options
- **Researchers & consultants:** high-resolution heat data and scenario analysis

## **Scenario Comparison Statistics Tools**

A tool that lets you compare two urban scenarios for the demo city by displaying a split-screen map layer (orange 3D indicator) and summary charts that quantify the risks of the chosen solutions.



Demonstration of the unique scenario comparison tool, showcasing both the map and dynamic chart visualisations.

## Available Urban Planning Solutions that suggest UHI Index

City Resilience Score (COP-S) **0.2/1.0**

Total Coping Capacity Score (COP-S) **0.2 + 0.0 = 0.2/1.0**

Weights: 1 0.5 2 0.2 3 0.5 4 0.3 5 0.5 6 0.5 7 0.5

**Solution** Cool Roofs

**Categories** Construction Materials

**Susceptibility** Physical

**Cities** Milan Piraeus Ixelles Sofia

**Area of Application** Building Block

**Cost** 3/5

**Performance**

- Area of Effect 2/5
- Urban Heat Islands 5/5
- Flash Floodings 0/5
- Air Quality 0/5
- Climate Index 0/5
- Geohazards 0/5

**Description**

The cool roof is a roof characterized by a high ability to reflect the incident solar radiation (solar reflectance or albedo) and, at the same time, to emit thermal energy in the infrared spectrum (thermal emissivity)

It is achieved by applying on the external surface of the roof paints or layers of surface coating, generally white or light grey materials

**Co-Benefits**

- Biodiversity
- Life Improvement
- Energy Demand Reduction
- Thermal Control
- Health Improvement

Comparison table	Desktop GIS workflows	Commercial City Planning Apps	geoURBANHEAT
Integration of EO data & census information		●	
Spatial resolution (building block level)		●	
Urban context layers (land cover, transport, critical infrastructure, buildings)			
Multiparametric risk assessment	●	●	
Urban risk mitigation scenarios (before/after measures)	●		
Baseline vs mitigation comparison with measurable indicators	-	●	
Actionable recommendations for urban resilience	-	●	
Decision-support for smart policy-making	-	●	
City coverage (scalable and adaptable)			
Target users: municipalities, planners, and stakeholders			

