

PILOT 2027 · TORREVIEJA

From heat maps to decisions on every street.

A decision-support platform for city councils: where heat is critical, why, which measure cools most and what it costs. Before investing.

THE PROBLEM

01 Heat is now a municipal management problem.

WHAT THE CITY SEES

- More pressure on residents' health
- Higher energy use for cooling
- Less comfortable public space
- Impact on tourism and the local economy

WHAT IS MISSING

A reliable way to know which measure works before paying for it.

Where to intervene, what to do first, what effect it will have and what it will cost: today these are decided without a tool that calculates them street by street.

WHY CURRENT TOOLS FALL SHORT

02 Cities hold fragments of information, but no system for deciding.

	WEATHER STATIONS	CLIMATE MAPS	CONSULTANCY	URBANCLIMATE OS
Street level	×	×	✓	✓
What-if scenarios	×	×	×	✓
Cost and effect per measure	×	×	×	✓
Up-to-date data	✓	×	×	✓

WHAT WE DO

03 We close the full loop, from data to the street.



DETECTION

Where is it hot?

Hotspots at street level.



EXPLANATION

Why there?

Asphalt, no shade, street canyons, materials.



PRESCRIPTION

What to do?

Trees, shade, cool paving, water.



EVALUATION

Cost and cooling?

Effect in degrees, cost and priority.



MEASUREMENT

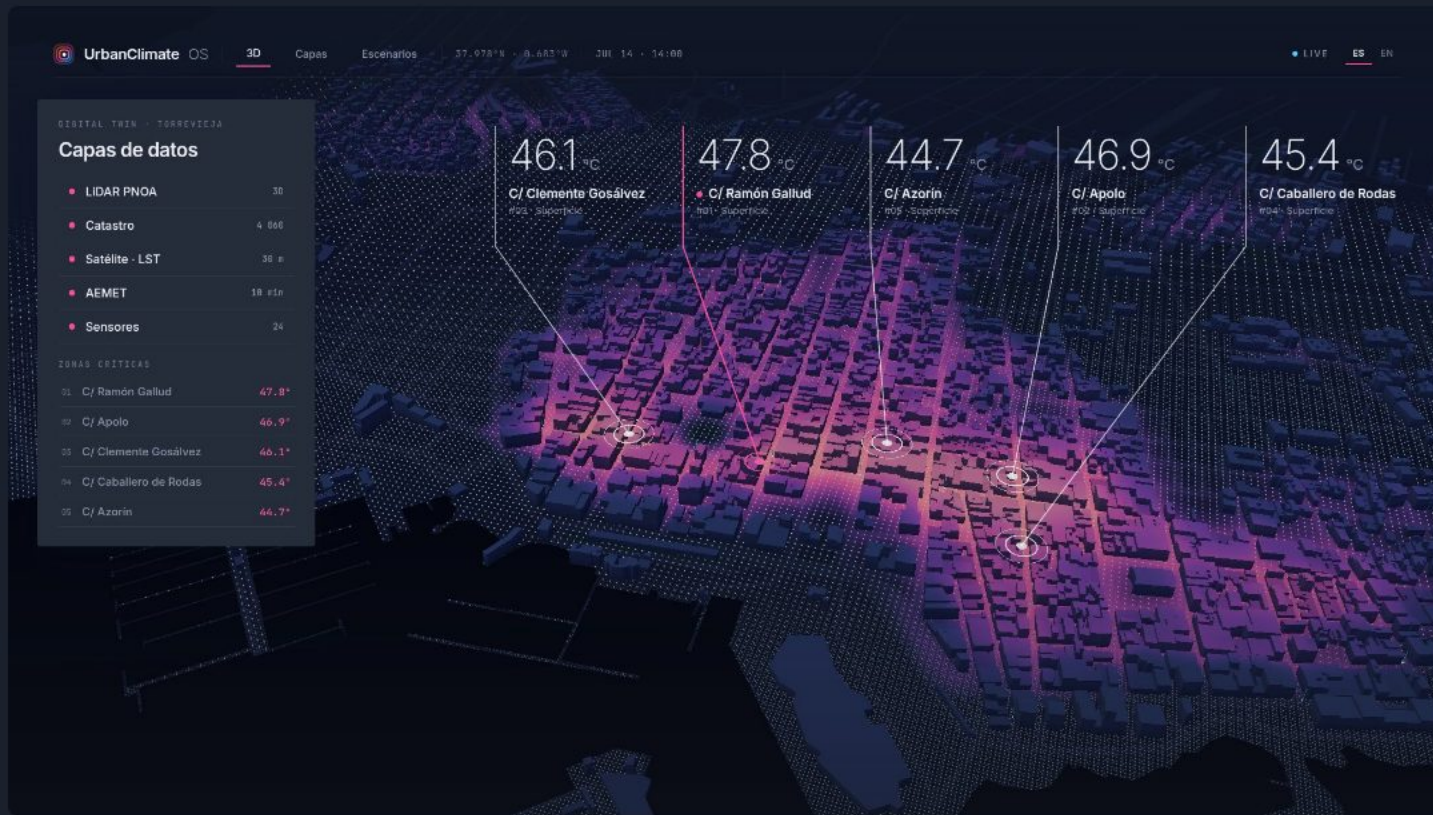
Did it work?

Sensors compare before and after.

↳ Measured results feed back into the model and calibrate it

WHAT IT LOOKS LIKE

Real Torrevieja geometry, 4,060 buildings.



DETECTION • HOTSPOTS BY STREET



EXPLANATION AND SCENARIO • ILLUSTRATIVE FIGURES

04 Urban-climate physics, not just a coloured map.

SURFACE ENERGY BALANCE

$$Q^* + Q_F = Q_H + Q_E + \Delta Q_S$$

Q^* · net radiation

Q_H · heat that warms the air

ΔQ_S · heat stored in asphalt and stone

Q_F · human heat (traffic, air-conditioning)

Q_E · evaporative cooling

Reference framework of urban climatology (Oke, Mills, Christen, Voogt · Urban Climates, Cambridge University Press, 2017).

L4

Result

UTCI heat stress and surface temperature, street by street

L3

Physics

Energy balance, shade, sky view factor, ventilation

L2

Surfaces

Local Climate Zones (LCZ), albedo, vegetation

L1

Morphology

PNOA LiDAR, cadastre, municipal GIS layers

Year 1 → Year 2

Open, validated models (UMEP/SOLWEIG) → AI model trained on simulations and Torrevieja measurements

WHAT THE EVIDENCE SAYS

05 Simple measures work when placed in the right spot.

−2.5°C

Tree-lined streets

On tree-lined avenues in a hot, dry climate, shaded air up to 2.5 °C cooler has been measured. Felt temperature improves even more.

Shashua-Bar & Hoffman (2000), in Oke et al. (2017)

1938

Climate in planning

Stuttgart has built climate maps into its urban planning since 1938. The idea is proven; what is new is doing it street by street with open data.

Oke et al., Urban Climates (2017), ch. 15

3 measures

Simulate before building

ENVI-met studies compare shade, ventilation and water + vegetation before intervening. Each measure tackles a different cause of heat.

University of Parma & TalTech · ENVI-met study

PILOT

06 Torrevieja is the right city to validate it.

WHY TORREVIEJA

- High summer heat load
- Dense urban fabric
- Tourism-sensitive economy
- Local innovation ecosystem

WHAT IT WILL SHOW

- Key overheating zones
- Which factors matter most
- Most effect on a limited budget
- Measured before-and-after result

OCT - DEC 2026

Real heat map and scenarios for the pilot area

JAN - MAY 2027

Agreement and street sensors before summer

JUN - SEP 2027

Measurement in the heat and a first measure, before and after



PARTNER WITH US

07

We are looking for public and scientific partners.

City councils

WHAT YOU GET

- A street-by-street heat-risk map
- Prioritised interventions with cost and effect
- Before-and-after measurement of each action

WHAT WE ASK

- A pilot area, GIS layers, permission for sensors, a letter of interest

Universities and institutes

WHAT WE OFFER

- A product layer that takes research to the city council
- Sensor data and a living lab in Torre Vieja
- An SME partner for Horizon Europe and national projects

WHAT WE LOOK FOR

- Scientific validation, thermal-comfort methods, joint proposals

08

From the pilot to other cities in Spain and the EU.

2026

Validation

Real map of Torre Vieja, letter of interest, scientific partner

2027

Measured pilot

Sensors, a first measure, national R&D (CDTI)

2027

Europe

Horizon Europe · Adaptation
Mission consortium,
Destination Earth data

2028

Scale

A second city, water and
flooding module, AI core

TEAM

09

Strategy, technology and product.



CREATIVE & STRATEGY

Alex Butenko

Vision, strategy, urban research, partnerships.



CTO

Alex Udalov

Platform, AI and data, IoT and sensors, architecture.



PRODUCT & UX

Alex Matiushchenko

Product, UX/UI, user research, roadmap.

WHAT WE ADD

We are looking for a scientific partner in urban climatology to validate models and co-sign proposals.

PILOT 2027 · TORREVIEJA

Let's build it together.

We propose a 20-minute meeting with a live demo.

- See the 3D demo of Torre Vieja
- Choose a pilot area together
- Define data, sensors and measurement

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