Urbio™



CROSSGUARD Catalog

SMART PEDESTRIAN CROSSING SOLUTION

www.urbio.ai

THE CHALLENGE

PEDESTRIAN SAFETY REMAINS A CRITICAL URBAN PRIORITY

Every day, pedestrians face increased risks at crossings due to:

- **Poor night-time visibility**
- **Driver distraction**
- **High traffic volumes**
- **Adverse weather conditions**
- **Insufficient warning systems**

Urban areas account for a significant share of road accidents, while **pedestrians remain among the most vulnerable road users**.

38%

of road accidents occur in urban areas



>20%

of traffic accidents involve a pedestrian



50%

less road accidents is the EU target for 2030



CrossGuard was developed to help cities create safer crossings through intelligent detection, active warning systems and adaptive lighting technology.

CROSSGUARD

ONE SYSTEM, MULTIPLE LAYERS OF PROTECTION



INTELLIGENT DETECTION & DIMMING

Identifies pedestrians and approaching vehicles in real time.

POSITIVE CONTRAST ILLUMINATION

Pedestrians appear brighter than their surroundings.

WEATHER-ADAPTIVE OPERATION

Fog, rain and snow automatically suspend dimming to maintain maximum visibility.

ON-EDGE INTELLIGENCE

Instant local processing without cloud dependency.



CrossGuard has been successfully implemented by URBIO across urban pedestrian crossings, including projects in **Bucharest, Romania**.
The solution enhances pedestrian visibility and driver awareness through active warning systems and dedicated crossing illumination, delivering safer crossing environments in real traffic conditions.

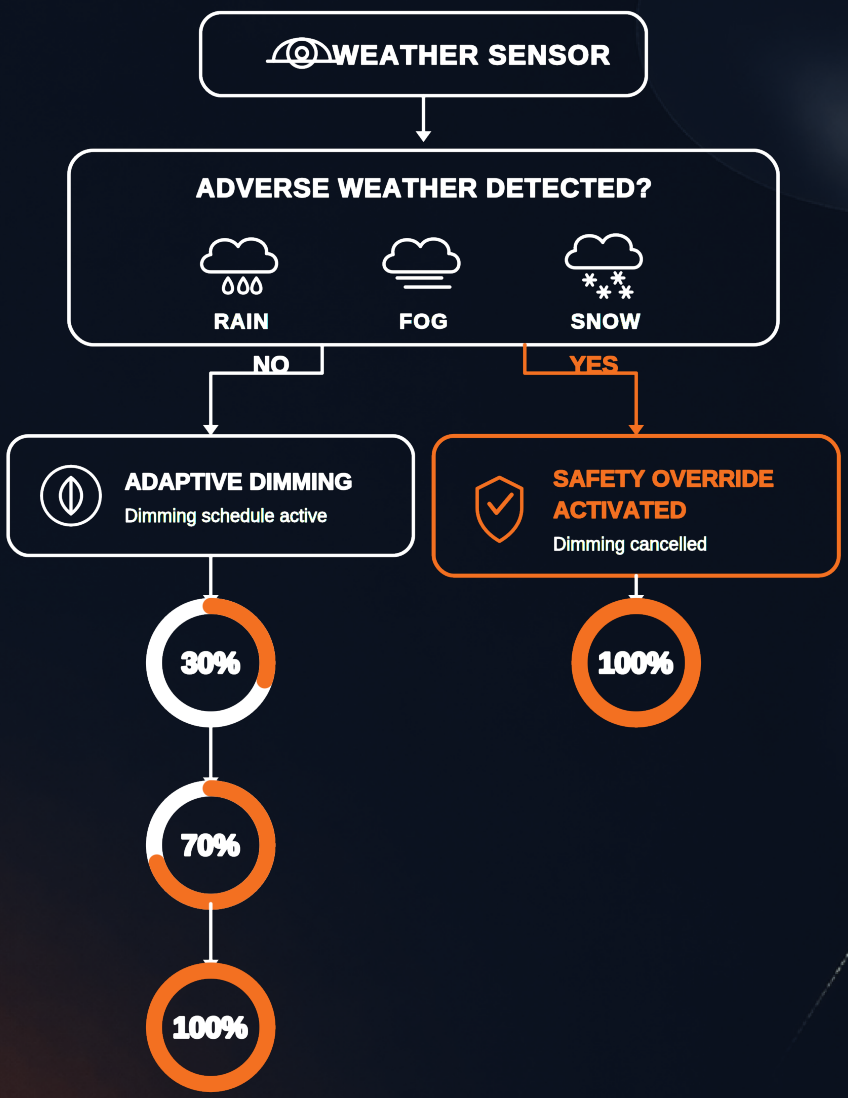
BUCHAREST, ROMANIA

INTELLIGENT DETECTION & DIMMING

Advanced pedestrian detection powered by adaptive sensing algorithms

The system combines intelligent sensors and advanced detection logic to accurately identify pedestrians while filtering irrelevant movements and environmental disturbances.

Designed for real-world urban environments, the technology delivers reliable performance under changing traffic and weather conditions.



ADAPTIVE DIMMING

STANDBY MODE

Energy-saving level
during normal inactive periods.



30%

PEDESTRIAN APPROACH

Light output increases when a
pedestrian is detected near the crossing.



70%

SAFETY MODE

Maximum illumination is activated
when crossing activity requires enhanced visibility.



100%

RETURN TO STANDBY

After the area is clear, the system gradually
returns to reduced consumption mode.



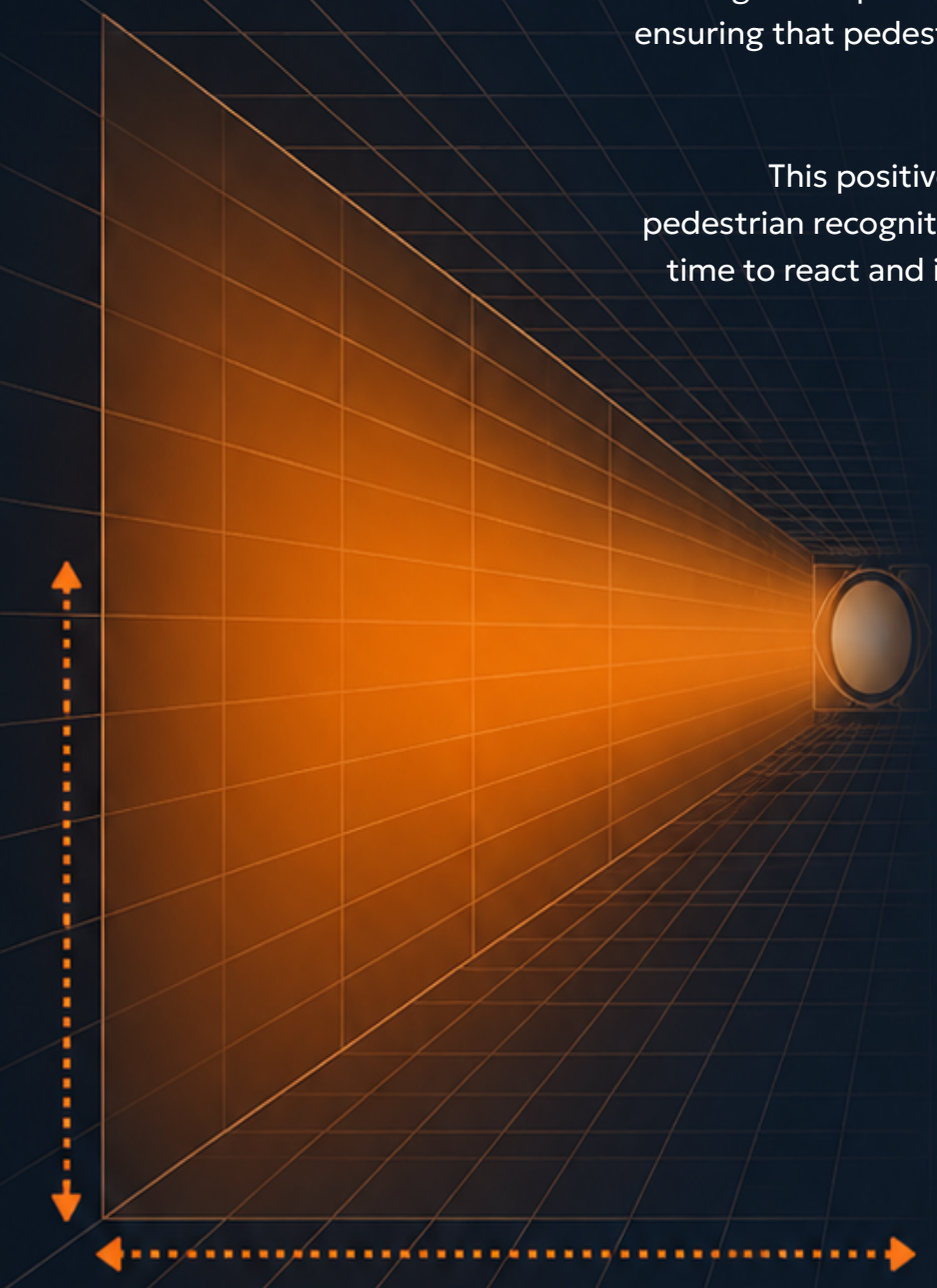
30%

POSITIVE CONTRAST ILLUMINATION

Making pedestrians stand out from the background

Conventional street lighting primarily illuminates the road surface. Dedicated pedestrian crossing lighting is designed to provide sufficient vertical illuminance, ensuring that pedestrians appear brighter than their surroundings.

This positive contrast significantly improves pedestrian recognition distance, giving drivers more time to react and increasing safety at the crossing.



BETTER
pedestrian visibility

IMPROVED
recognition distance

FASTER
driver response

Urbio™

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