Detrended Correspondence Analysis (DCA) of AI in Urban Studies Research
(n = 5,441 Empirical Articles, 2020-2025)

Networked Digital Systems (IoT, Cybersecurity, Data Infrastructure)

Axis 2: Physical Systems → Cyber-Physical Integration

BLACK-BOX CYBER-PHYSICAL

Deep learning for IoT, Smart city prediction, Real-time surveillance

INTERPRETABLE CYBER-PHYSICAL

Explainable smart systems, Policy-driven IoT, Transparent governance

BLACK-BOX PHYSICAL

Climate prediction models, Land use classification, Environmental forecasting

INTERPRETABLE PHYSICAL

Policy-relevant assessment, Stakeholder-focused planning, Actionable interventions

Traditional Physical Infrastructure (Climate, Land, Hydrology)

Axis 1: Black-Box Prediction → Interpretable Intelligence

Pure Predictive Accuracy
Technical Metrics
Algorithmic Sophistication

Explainability
Policy Relevance
Actionable Intervention

Subject Megatrend

- Digital Transformation & Smart Cities (n=2052)
- Climate Change & Environmental Sustainability (n=1646)
- Urban Mobility & Transportation (n=539)
- Urban Development & Land Use (n=506)
- Social Equity & Quality of Life (n=470)
- Urban Resilience & Safety (n=228)