

# Digital solutions and AI for net-zero, resilient, inclusive urban transitions

## UTM webinar series, May–September 2026

### Content

<b>About the webinar series</b>	1
<b>Overview</b>	2
<b>Content of the series</b>	3
Module 1: Evidence-Based Planning & Predictive Foresight	3
Module 2: Risk Reduction & Responsive Resilience	3
Module 3: Integrated Infrastructure & Real-Time Optimization	4
Module 4: Governance & Access	5
Module 5: The Environmental Impact of AI	5
Module 6: AI-powered solutions to bolster investments in cities	6

### About the webinar series

The webinar series, "**Digital Solutions and AI for Net-Zero, Resilient, and Inclusive Urban Transitions,**" explores the transformative role of advanced technology in shaping the cities of tomorrow.

Through a comprehensive **six-module curriculum**, participants will examine how data-driven foresight and scenario tools like Digital Twins can simulate policy impacts before implementation, and the potential of AI and digital tools to help successfully integrated infrastructure connecting energy, mobility, and building systems. The program also addresses the critical resource impacts of expanding AI use, discussing the trade-offs of increased environmental footprint of these technologies. By linking technical innovation with governance and financial structuring, the series highlights how AI can de-risk investments and transform ambitious urban climate plans into bankable assets. Beyond technical optimization, the series focuses on how these solutions can help cities to strengthen urban resilience through AI-driven planning for green infrastructure and the delivery of faster emergency warnings to improve crisis response. The program also aims to discuss how access to these solutions can be scaled affordably.

To guide this exploration, the series will address fundamental questions such as:

- How can we design "AI with purpose" that moves beyond efficiency to ensure digital solutions help our cities to become more resilient and inclusive?
- What specific interoperable data foundations are needed to bridge silos between energy, mobility, and planning to de-risk projects for private investors?
- How can smaller cities benefit from "plug-and-play" digital solutions that are affordable and easily replicable?
- What are the concrete oversight standards and procurement shifts required to make AI-driven city decisions fully transparent, accountable, and legally sound?

- How do we effectively upskill municipal teams to manage complex partnerships between academia, utilities, and the private sector without losing public oversight?

This initiative marks **2026 as the year of Artificial Intelligence and Digital Solutions** for the Urban Transitions Mission (UTM). Building on the thematic foundations of Integrated Infrastructures (2023), Urban Planning (2024), and Blended Finance (2025), UTM is now centering digital innovation to help its city cohort leverage technology to expedite their transition pathways.

Each webinar is consistently scheduled from **13:00–14:30 CEST (UTC+2)** on the same day of the week, specifically tailored for city experts engaging with urban planning and future infrastructure implementation. The training offers a vital opportunity to exchange directly with specialists from academia, research, and the private sector, aiming to support the co-creation of a modular training program for the UTM city cohort. Representatives from the UTM team will lead these discussions to ensure technology remains a facilitator of real-world transition goals.

Ahead of the sessions, participating cities are invited to share specific questions or themes of interest they wish to deepen their knowledge on to better support their city's transition journey.

## Overview

### Module 1: Evidence-Based Planning & Predictive Foresight

13 May 2026 - 13:00 - 14:30 CEST

**Focus:** Data-Driven Decision Support: Taking stock of emissions, bridging data gaps, revealing hidden risks and simulating long-term impacts before implementation.

### Module 2: Risk Reduction & Responsive Resilience

27 May 2026 - 13:00 - 14:30 CEST

**Focus:** Planning green infrastructures, managing risks through real-time response systems.

### Module 3: Integrated Infrastructure & Real-Time Optimization

17 June 2026 - 13:00 - 14:30 CEST

**Focus:** Systems Thinking for Holistic Transitions: coordinating buildings, energy, and mobility into a single, interoperable ecosystem.

### Module 4: Governance & Access

8 July 2026 - 13:00 - 14:30 CEST

**Focus:** Establishing the legal, ethical, and procurement frameworks needed to deploy AI safely; exploring solutions to scale cities' access to solutions.

### Module 5: The Environmental Impact of AI

2 September 2026 - 13:00 - 14:30 CEST

**Focus:** The Sustainability Paradox: mitigation of the "Digital Footprint" and sustainable compute strategies.

### Module 6: AI-powered solutions to bolster investments in cities

23 September 2026 - 13:00 - 14:30 CEST

**Focus:** Leveraging AI to predict long-term ROI and infrastructure resilience for private/blended finance.

## Content of the series

### Module 1: Evidence-Based Planning & Predictive Foresight

Register [HERE](#)

13 May 2026 – 13:00 – 14:30 CEST

**Focus:** Data-Driven Decision Support: Taking stock of emissions, bridging data gaps, revealing hidden risks and simulating long-term impacts before implementation.

This opening session establishes the analytical foundation for the series, focusing on how AI and digital solutions can help cities plan, model, reveal hidden risks and predict the ripple effects of climate policies across all urban sectors. The session will address options available and challenges faced by cities in establishing a robust data foundation. It will discuss how to scale data access and standardize management protocols to overlay social, environmental, and emissions data in real-time. We will "unpack" the Digital Twin, analyzing its various layers and functionalities to understand how virtual simulations can optimize urban transition planning before a single brick is laid.

The session explores predictive foresight, demonstrating how advanced forecasting allows municipal leaders to manage complex urban realities and anticipate climate shocks with greater precision. By linking these digital tools to systemic planning, cities can move from reactive management to proactive, data-driven leadership. The outcomes of this session will provide direct inputs and city-level perspectives for the upcoming Innovate4Cities Conference in Nairobi, Kenya (June 2026).

#### Key Content:

- **The Data Foundation:** Bridging data gaps, increasing access to data (including sources, protocols and management); overlaying social, environmental, and emissions data in real-time.
- **"Unpacking" the Digital Twin:** Analysing each possible layers and potential functionalities and what benefits would they bring to urban transitions planning
- **Predictive Foresight:** Using advanced forecasting to manage complex urban realities and anticipate climate shocks, and to predict impact within each and across all sectors.

### Module 2: Risk Reduction & Responsive Resilience

Register [HERE](#)

27 May 2026 – 13:00 – 14:30 CEST

**Focus:** Planning green infrastructures, managing risks through real-time response systems.

As climate shocks become more frequent, the ability to "simulate action" before a crisis hits is a critical survival tool for modern urban centers. We will explore how **planning for resilience** can be transformed through AI-driven simulations that stress-test existing urban systems, allowing city leaders to develop adaptive strategies and optimize the deployment of green and blue infrastructures for long-term climate adaptation.

A key component of this session is **disaster & risk response**, specifically the deployment of AI-powered emergency warning systems that can process real-time data to save lives. We will discuss how these technologies can deepen digital community engagement, ensuring that relief efforts are coordinated, transparent, and reach the most vulnerable populations during a crisis.

Finally, the module tackles **cybersecurity & system integrity**, focusing on the essential protocols needed to protect critical, automated infrastructure from cyber threats. By securing the digital backbone of our cities, we ensure that essential services remain continuous and resilient, even in the face of simultaneous physical and digital shocks.

**Key Content:**

- **Planning for Resilience:** Leveraging AI-driven simulations to stress-test urban systems, develop adaptive strategies and green and blue infrastructures for long-term resilience.
- **Disaster & Risk Response:** Deploying AI-powered emergency warning systems and deepening digital community engagement to coordinate real-time response and relief during crises.
- **Cybersecurity & System Integrity:** Protecting critical infrastructure from cyber threats to ensure service continuity during threats and shocks.

### Module 3: Integrated Infrastructure & Real-Time Optimization

17 June 2026 - 13:00 - 14:30 CEST

Register [HERE](#)

**Focus:** Systems Thinking for Holistic Transitions: coordinating buildings, energy, and mobility into a single, interoperable ecosystem.

This session shifts the focus from planning to active operational synergy, exploring how AI can support integration across urban sectors. The module will discuss links between transport and energy systems to maximize renewable usage, optimizing EV charging, and enabling real-time energy trades between buildings and storage systems. As with the previous session, the findings and practical case studies shared here will serve as critical inputs for the Innovate4Cities Conference in Nairobi (June 2026).

The session also dives into Smart Retrofitting, demonstrating how AI can analyze vast datasets to identify the highest-impact building stock for energy efficiency upgrades, ensuring limited municipal resources are used where they save the most carbon. Beyond energy, we explore dynamic resource Management, where AI-driven tracking optimizes water, waste, and mobility flows in real-time.

**Key Content:**

- **The Integrated Grid:** Linking transport and energy systems to maximize renewables and optimize EV charging, negotiating real-time trades between buildings, EVs, and storage systems.
- **Smart Retrofitting:** Using AI to identify the highest-impact building stock for energy efficiency upgrades.
- **Dynamic Resource Management:** Real-time optimization of water, waste, and mobility flows to reduce waste; AI-driven tracking of building materials (embodied carbon) for future recovery and reuse.

## Module 4: Governance & Access

8 July 2026 – 13:00 – 14:30 CEST

Register [HERE](#)

**Focus:** Establishing the legal, ethical, and procurement frameworks needed to deploy AI safely; exploring solutions to scale cities' access to solutions.

As AI integration rapidly expands across public administration and citizen services, cities are **exploring transparent, ethical, and legally sound frameworks** for the deployment of these technologies. This session will discuss ways in which cities can help ensure AI deployment is safe, unbiased, and accessible. We will explore practices allowing cities to standardize how they tender AI services, ensuring accountability and data privacy are embedded from the start. We will hear firsthand from pioneering cities how they are transitioning toward ethical AI standards.

The session also addresses experiences of cities working to build "plug-and-play" digital foundations and standardized protocols, enabling to **scale access to these technologies** also for smaller cities. In this session, we will explore how available open-access AI technologies can help municipalities to explore AI solutions at a more affordable price point, while retaining customisation options and data management capabilities.

A panel discussion will follow, providing UTM cities the opportunity to share their experiences, challenges, and doubts.

### Key Content:

- **Ethical Oversight & Bias:** Informing procurement with "ethical" AI standards; setting benchmarks to ensure AI-driven resource allocation is unbiased and legally sound.
- **Scaling Affordable Solutions:** Establishing standardized data protocols; open-access and "plug-and-play" foundations so smaller cities can scale without billion-dollar budgets.
- **Public trust:** Making city decisions auditable and visible to citizens (Explainable AI); exploring data privacy concerns.

## Module 5: The Environmental Impact of AI

2 September 2026 – 13:00 – 14:30 CEST

Register [HERE](#)

**Focus:** The Sustainability Paradox: mitigation of the "Digital Footprint" and sustainable compute strategies.

This session will examine the energy cost and carbon footprint of training large-scale urban models alongside the significant water consumption required for cooling data centers and the e-waste generated by rapid hardware turnover.

We will explore cost-benefit analyses to determine if the "carbon saved" by AI optimization actually outweighs the "carbon spent" to run it. Following approaches such as the European Green Digital Coalition (EGDC) method, experts will shed light on **Sustainable AI Strategies**, such as scheduling processing during renewable energy peaks and selecting right-sized models to save energy.

Beyond efficiency, we will explore the recovery of resources – such as repurposing waste heat from data centers for district heating to transform AI from a resource drain into a circular asset.

### Key Content:

- **The Energy Cost of Intelligence:** Understanding the carbon footprint of training and running large-scale urban AI models.
- **Water & Hardware:** Discussing the water consumption of data centers and the e-waste generated by rapid hardware turnover.
- **Sustainable AI Strategies:**
  - **Green Compute:** Scheduling non-urgent AI processing during peaks of renewable energy availability; Choosing "right-sized" models to save energy.
  - **Powering the city:** exploring heat recovery and integrated infrastructures
  - **Lifecycle Assessment:** Measuring if the "Carbon Saved" by an AI optimization actually outweighs the "Carbon Spent" to run it.

## Module 6: AI-powered solutions to bolster investments in cities

23 September 2026 - 13:00 - 14:30 CEST

Register [HERE](#)

**Focus:** Leveraging AI to predict long-term ROI and infrastructure resilience for private/blended finance.

This session delves into the potential of AI to improve and implement urban climate investment plans. We will examine how AI can be used for **investment structuring and de-risking** by predicting long-term Return on Investment (ROI) and quantifying climate risks, creating the transparent data environments essential for attracting private and blended finance.

The discussion will also cover **proposal and bond automation**, highlighting how AI-enhanced tools can streamline the preparation of investment proposals, automate green bond issuance, and ensure rigorous, real-time ESG disclosure. By aligning municipal data with financial structuring, these technologies help create an integrated pipeline, transforming ambitious city climate plans into truly bankable assets. Following interventions from financial experts and leading cities, a roundtable discussion will identify best practices. The main findings from this session will be instrumental in informing the upcoming UTM Summit 2026.

### Key content:

- **Investment Structuring & De-risking:** Leveraging AI to predict long-term ROI and quantify climate risks, creating the transparent data environments necessary to attract private and blended finance.
- **Proposal & Bond Automation:** Using AI-enhanced tools to streamline the preparation of investment proposals, automate green bond issuance, and ensure rigorous, real-time ESG disclosure.
- **Integrated Pipeline:** Using AI to align municipal procurement data with financial structuring, transforming city climate plans into bankable assets.

## About UTM

The Urban Transitions Mission (UTM) was launched at the COP26 in November 2021 with the aim to increase the capacity of cities worldwide, empowering them to shape urban transitions based on robust knowledge and a strong net-zero community of support and exchange. Thanks to increased capacity and access to knowledge, cities will be able to mobilise their inherent strength and the potential of their communities – and develop their own customised solutions to effectively transition to net-zero. The Mission aims to close the gap between research, development and deployment on systemic transition pathways to net-zero, resilient and human-centred cities through multi-level, multi-sectoral, and outcome-oriented partnerships.

The Urban Transitions Mission (UTM) aims at demonstrating that systemic urban strategies along with climate resilience and social aspects of the transition can boost reliable, affordable, feasible and cost-effective solutions for reaching net-zero cities. Successful urban transitions will leverage innovative policies, technologies, financial instruments, business models and cooperative approaches. These points must be integrated for the satisfaction of citizens' needs, building on renewable energy sources and circular economy principles and enhancing resilience for a people-centred urban transition globally.