

THE INTERNET OF THINGS (IOT) IN SMART CITIES

"Enabling Digital Urban Transformation through IoT Connectivity and Intelligence"

Schedule

Date	Venue	Fees (Face-to-Face)
12 - 16 Oct 2026	London, UK	USD 3495 per delegate

► **Available delivery methods:** Face-to-Face & Online Training

Introduction

As cities worldwide embrace digital transformation, the Internet of Things (IoT) has emerged as a cornerstone of smart city development—enabling real-time data exchange, intelligent infrastructure, and citizen-centric services. From smart traffic systems and waste management to energy grids and public safety, IoT offers powerful capabilities to improve urban efficiency, sustainability, and quality of life.

This comprehensive training equips professionals with the knowledge and tools to design, implement, and manage IoT-driven smart city solutions. Participants will explore urban IoT architecture, communication protocols, data platforms, and governance models through real-world case studies and technical workshops.

Objectives

By the end of this course, participants will be able to:

- Understand the architecture and technologies behind IoT in smart cities
- Design integrated IoT solutions for mobility, energy, safety, and urban services
- Evaluate key standards, protocols, and connectivity models
- Assess privacy, cybersecurity, and interoperability challenges
- Develop strategic roadmaps for smart city IoT implementation and scaling

Why Attend

- Gain a strategic and technical understanding of IoT's role in urban transformation
- Learn how to build scalable and citizen-focused smart infrastructure
- Discover leading global smart city use cases and lessons learned
- Strengthen cross-sector collaboration between urban planners, technologists, and government agencies
- Identify and mitigate risks related to data, connectivity, and governance

Target Audience

This program is designed for:

- Smart city planners and municipal administrators
- ICT and IoT infrastructure professionals
- Engineers and solution architects in utilities, transport, and urban services
- Policy makers and government innovation officers
- Vendors, consultants, and system integrators in smart technologies

Individual Benefits

Key competencies that will be developed include:

- Smart city IoT architecture design and application planning
- Sensor deployment, device management, and network integration
- Understanding of LPWAN, NB-IoT, 5G, and edge computing in cities
- Cybersecurity, data governance, and citizen data protection
- Project planning and scaling of smart urban initiatives

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Stronger smart city solution development capabilities
- More efficient urban service delivery using real-time IoT data
- Improved stakeholder engagement and citizen participation
- Compliance with data privacy, safety, and sustainability regulations
- Alignment of digital infrastructure with long-term city development goals

Instructional Methodology

The course follows a blended learning approach combining theory with practice:

- Strategy Briefings - Smart city planning frameworks and IoT infrastructure
- Case Studies - Global benchmarks in urban IoT deployment
- Workshops - System design, use case modeling, and platform integration
- Peer Exchange - Collaborative urban innovation dialogue and feedback
- Tools - Smart city dashboards, IoT architecture templates, maturity models

Course Outline

Detailed 5-Day Course Outline

Training Hours: 7:30 AM - 3:30 PM Daily Format: 3-4 Learning Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 - 02:00

Day 1: Smart Cities and IoT - Vision and Foundations

- Module 1: Introduction to Smart Cities and Digital Urbanism (07:30 - 09:30) • Trends, goals, and components of smart cities • Strategic value of IoT in urban environments
- Module 2: Smart City IoT Architecture and Layers (09:45 - 11:15) • Device, network, data, and application layers
- Module 3: IoT Platforms and Smart Infrastructure Integration (11:30 - 01:00) • Cloud, edge, middleware, and APIs
- Module 4: Workshop - Smart City Infrastructure Mapping (02:00 - 03:30) • Map IoT elements to key urban systems

Day 2: Connectivity, Devices, and Standards

- Module 1: IoT Networks for Cities - LPWAN, NB-IoT, 5G (07:30 - 09:30) • Wireless standards and spectrum management
- Module 2: Sensors and Urban Device Ecosystems (09:45 - 11:15) • Air quality, traffic, smart lighting, utilities
- Module 3: Interoperability and Open Standards (11:30 - 01:00) • Protocols: MQTT, CoAP, REST, OPC-UA
- Module 4: Workshop - Connectivity Strategy for a Smart District (02:00 - 03:30) • Design and evaluate device-to-cloud communication

Day 3: Smart City Use Cases and Data Platforms

- Module 1: Mobility, Energy, and Public Safety Solutions (07:30 - 09:30) • Smart parking, intelligent transport, smart grids, surveillance
- Module 2: Urban IoT Data Platforms and Dashboards (09:45 - 11:15) • Data aggregation, visualization, and analytics
- Module 3: AI and Automation in Smart Cities (11:30 - 01:00) • Machine learning, predictive insights, digital twins
- Module 4: Workshop - Designing a City IoT Use Case (02:00 - 03:30) • Build an IoT-enabled solution for a key urban challenge

Day 4: Governance, Cybersecurity, and Data Privacy

- Module 1: Governance Frameworks for IoT in Cities (07:30 - 09:30) • Public-private partnerships, digital policies
- Module 2: Cybersecurity for Urban IoT Systems (09:45 - 11:15) • Threats, intrusion detection, endpoint security
- Module 3: Privacy, Ethics, and Citizen Trust (11:30 - 01:00) • GDPR, anonymization, informed consent
- Module 4: Workshop - IoT Risk Assessment & Policy Drafting (02:00 - 03:30) • Identify risk and draft mitigation policies

Day 5: Implementation Planning & Certification

- Module 1: Smart City Roadmaps and Pilot Projects (07:30 - 09:30) • Project lifecycle, KPIs, funding models
- Module 2: Scaling and Integration of Smart Systems (09:45 - 11:15) • Change management, system interoperability
- Module 3: Final Project Presentation (11:30 - 01:00) • Teams present a city-specific IoT solution design
- Module 4: Wrap-Up and Certification (02:00 - 03:30) • Action planning and certificate distribution

Certification

Participants will receive a Certificate of Completion in IoT in Smart Cities, validating their expertise in designing, assessing, and managing IoT-driven infrastructure for sustainable and intelligent urban development.

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