



SMART CITY DEVELOPMENT AND URBAN INFRASTRUCTURE MANAGEMENT TRAINING COURSE

16 - 20 Nov 2026

KUALA LUMPUR

5200 € (PER PERSON)

REF: #CON8722_87116



COURSE INTRODUCTION / OVERVIEW:

The rapid urbanization of our world presents unprecedented challenges and opportunities. This course provides a comprehensive exploration of the principles, technologies, and strategies behind the development of smart cities and the management of modern urban infrastructure. As cities evolve into complex, interconnected ecosystems, a new paradigm of management is required, one that leverages data, technology, and innovative governance to enhance sustainability, efficiency, and quality of life. This program, offered by BIG BEN Training Center, delves into the core components of smart urbanism, from IoT sensor networks and big data analytics to sustainable energy grids and intelligent transportation systems. Drawing upon the foundational concepts discussed by experts like Anthony M. Townsend in his influential book "Smart Cities: Big Data, Civic Hackers, and the Quest for a New Utopia," participants will gain a deep understanding of the socio-technical frameworks that underpin successful smart city initiatives. This training moves beyond theoretical discussions to provide practical, actionable insights into planning, financing, and executing smart infrastructure projects, preparing professionals to lead the urban transformation of the 21st century.

TARGET AUDIENCE / THIS TRAINING COURSE IS SUITABLE FOR:

- Urban Planners and City Managers.
- Civil Engineers and Infrastructure Project Managers.
- Government Officials and Public Policy Advisors.
- Technology and IT Professionals in the public sector.
- Real Estate Developers and Construction Managers.
- Sustainability and Environmental Consultants.
- Telecommunications and Utilities Professionals.
- Investment and Finance Managers focused on infrastructure.

TARGET SECTORS AND INDUSTRIES:

- Government and Public Administration.
- Engineering and Construction.
- Real Estate and Urban Development.
- Information Technology and Telecommunications.
- Energy, Water, and Public Utilities.
- Transportation and Logistics.
- Environmental and Sustainability Services.

TARGET ORGANIZATIONS DEPARTMENTS:



- Urban Planning and Development.
- Public Works and Engineering.
- Information Technology (IT) and Data Management.
- Strategic Planning and Policy.
- Operations and Asset Management.
- Finance and Economic Development.
- Environmental and Sustainability Offices.
- Transportation and Mobility Services.

COURSE OFFERINGS:

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

- Analyze the core technological components of a smart city ecosystem.
- Evaluate various smart city frameworks and models for urban development.
- Develop strategies for integrating IoT and data analytics into urban infrastructure.
- Design citizen-centric services for enhanced public engagement and quality of life.
- Assess the financial models and public-private partnership opportunities for smart projects.
- Manage the complexities of data privacy, security, and ethical governance in a smart city context.
- Formulate a strategic roadmap for a smart city initiative, from pilot to full-scale implementation.
- Lead and manage multidisciplinary teams in the execution of smart infrastructure projects.

COURSE METHODOLOGY:

The training methodology at BIG BEN Training Center is designed to be immersive, interactive, and highly practical. This course moves beyond traditional lecture-based formats to foster a dynamic learning environment where participants actively engage with the material. The program is built upon a foundation of expert-led presentations that introduce core concepts, cutting-edge technologies, and established frameworks in smart city development. These sessions are complemented by in-depth case study analyses of pioneering cities like Singapore, Barcelona, and Songdo, allowing participants to dissect real-world successes and challenges. A significant portion of the course is dedicated to collaborative workshops and group exercises, where attendees will work in teams to solve complex urban problems and design hypothetical smart city solutions. Interactive discussions and peer-to-peer learning are encouraged to leverage the diverse professional experiences within the cohort. Participants will receive continuous feedback from the instructor and will apply their learning to a final capstone project that simulates the planning of a comprehensive smart infrastructure project, ensuring they leave with tangible skills and a strategic mindset.

COURSE AGENDA (COURSE UNITS):

UNIT ONE: FOUNDATIONS OF SMART CITIES AND URBAN INNOVATION

- Introduction to the Smart City Concept.
- Historical Evolution of Urban Development.
- Key Drivers for Urban Transformation: Sustainability, Efficiency, and Livability.
- Core Pillars of a Smart City: Technology, Governance, and People.
- Understanding Global Smart City Frameworks and Models.
- Challenges and Risks in Smart City Implementation.
- The Role of Policy and Regulation in Fostering Innovation.



UNIT TWO: CORE TECHNOLOGIES FOR SMART URBAN INFRASTRUCTURE

- The Internet of Things (IoT) and Sensor Networks in Urban Environments.
- Big Data Analytics and Artificial Intelligence for Urban Planning.
- 5G Connectivity and its Impact on Smart City Services.
- Cloud Computing and Urban Data Platforms.
- Geospatial Technology (GIS) for Infrastructure Management.
- Digital Twins: Creating Virtual Replicas of Urban Systems.
- Blockchain for Secure and Transparent Urban Transactions.

UNIT THREE: SMART SOLUTIONS FOR KEY URBAN SECTORS

- Smart Mobility and Intelligent Transportation Systems (ITS).
- Smart Energy Grids and Sustainable Resource Management.
- Smart Water and Waste Management Systems.
- Smart Buildings and Connected Real Estate.
- Public Safety and Emergency Response Technologies.
- Smart Healthcare and Education in the Urban Context.
- Enhancing Citizen Services through Digital Platforms.

UNIT FOUR: GOVERNANCE, FINANCE, AND CITIZEN ENGAGEMENT

- Models of Smart City Governance and Administration.
- Developing Effective Public-Private Partnerships (PPPs).
- Financing Smart Infrastructure Projects: From Bonds to Venture Capital.
- Data Governance, Privacy, and Cybersecurity in the Smart City.
- Ethical Considerations of Urban Technologies and Surveillance.
- Strategies for Fostering Citizen Participation and Co-creation.
- Building a Culture of Innovation within Public Institutions.

UNIT FIVE: STRATEGY, IMPLEMENTATION, AND FUTURE OF URBANISM

- Developing a Strategic Roadmap for a Smart City Initiative.
- Project Management for Complex Urban Technology Projects.
- Pilot Projects and Scaling for City-Wide Impact.

- Case Studies: Analyzing Successful and Unsuccessful Smart City Projects.
- Future Trends: AI-Driven Urbanism, Autonomous Vehicles, and Resilient Cities.
- Measuring Success: Key Performance Indicators for Smart Cities.
- Final Project: Designing a Smart City Solution for a Real-World Challenge.



FAQ:

QUALIFICATIONS REQUIRED FOR REGISTERING TO THIS COURSE?

There are no requirements.

HOW LONG IS EACH DAILY SESSION, AND WHAT IS THE TOTAL NUMBER OF TRAINING HOURS FOR THE COURSE?

This training course spans five days, with daily sessions ranging between 4 to 5 hours, including breaks and interactive activities, bringing the total duration to 20 - 25 training hours.

SOMETHING TO THINK ABOUT:

Considering the ethical implications of mass data collection, how can a city balance the drive for efficiency and security with the fundamental right to citizen privacy?

WHAT UNIQUE QUALITIES DOES THIS COURSE OFFER COMPARED TO OTHER COURSES?

This course distinguishes itself by adopting a holistic, multi-disciplinary approach that extends far beyond a purely technological focus. While many programs concentrate on the "smart" components like IoT and AI, this training dedicates significant attention to the equally critical pillars of governance, policy, finance, and citizen-centric design. It addresses the "why" and "how" of smart city development, not just the "what." Participants will explore the intricate dynamics of public-private partnerships, the ethical dilemmas of data governance, and the sociological impact of urban innovation, providing a well-rounded and strategic perspective. The curriculum is built around a rich tapestry of global case studies, examining not only the celebrated successes but also the instructive failures of smart city projects worldwide. This emphasis on critical analysis and real-world application ensures that attendees learn to navigate the practical complexities of implementation. Rather than just presenting tools, the course cultivates a strategic mindset, empowering participants to lead transformative urban projects that are technologically sound, financially viable, and socially equitable.