Smart Urban Infrastructure Management Course

26 – 30 July 2027
Addis Ababa

AGILE LEADERS
Training Center

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Overview

Smart Urban Infrastructure Management Course is a one-week intermediate course for urban planners, infrastructure managers, engineers, technology and data teams, operators, consultants, and public-service leaders who leave with a Smart Urban Infrastructure Management Plan. Participants connect asset baselines, sensors, platforms, interoperability, integrated city operations, mobility, energy, water, waste, cybersecurity, resilience, procurement, lifecycle operations, and performance indicators. The course turns disconnected systems into coordinated service decisions. Agile Leaders Training Center presents smart urban infrastructure management through governance, data, and operational control.

Who Should Attend

- Teams responsible for planning and managing connected urban infrastructure assets
- Functions operating mobility, energy, water, waste, public-realm, and safety services
- Personnel governing sensors, data platforms, interoperability, cybersecurity, and privacy
- Groups procuring technology, infrastructure services, partnerships, and operations support
- Leaders monitoring city performance, resilience, service continuity, and lifecycle value

The course assumes participants can interpret service plans, asset information, performance reports, and technology proposals, and it leaves out detailed network engineering, software development, and statutory approval procedures.

Departments and Industries

The course supports departments and industries responsible for connected urban assets, digital operations, and public-service performance.

- Urban planning, infrastructure, public works, asset management, and city operations
- Transport, mobility, energy, utilities, water, waste, and environmental services
- Information technology, telecommunications, data governance, and cybersecurity
- Engineering, construction, systems integration, consulting, and managed services
- Emergency coordination, public realm, facilities, and community service delivery

Learning Objectives

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

- Analyze smart-city services, assets, stakeholders, data, and operational dependencies
- Apply sensor, platform, interoperability, cybersecurity, and privacy governance controls
- Compare mobility, energy, water, waste, public-realm, and safety operating models
- Evaluate resilience, procurement, partnership, and lifecycle management options
- Build performance indicators, dashboards, escalation, and service review arrangements
- Develop a Smart Urban Infrastructure Management Plan

Course Agenda

Day 1: Urban Services and Asset Baselines

- Smart-City Service and Stakeholder Map
- Urban Infrastructure Asset Baseline
- Service Outcome and Demand Profile
- Connected Asset Maturity Assessment
- Governance Roles and Decision Matrix

Day 2: Sensors, Data, and Interoperability

- Sensor and IoT Asset Monitoring Architecture
- Urban Data Platform and Data Flow Map
- System Interoperability and API Requirements
- Data Quality and Ownership Register
- Cybersecurity and Privacy Governance Checklist

Day 3: Integrated City Operations

- Command and Operations Center Workflow
- Smart Mobility and Transport Service Model
- Energy, Water, and Waste Operations Matrix
- Public-Realm and Safety Interface Plan
- Incident Escalation and Cross-Service Coordination Protocol

Day 4: Resilience and Lifecycle Performance

- Urban Infrastructure Resilience Scenario Matrix
- Technology Procurement and Partnership Strategy
- Lifecycle Operations and Maintenance Plan
- ISO 37122 Smart City Indicator Map
- Service Performance Dashboard and Review Cycle

Day 5: Smart Infrastructure Management Practice

- Exercise: Map Services, Assets, and Governance Roles
- Exercise: Design Sensor, Data, and Interoperability Controls
- Exercise: Coordinate Multi-Service Urban Operations
- Exercise: Test Resilience, Lifecycle, and Performance Decisions
- Capstone Exercise: Smart Urban Infrastructure Management Plan

Practical Exercises

The course uses suggested activities to connect infrastructure assets, digital systems, operational coordination, resilience, and performance decisions.

- Suggested activity: map urban services, stakeholders, physical assets, connected systems, demand patterns, and governance responsibilities.
- Suggested activity: design sensor coverage, data flows, interoperability requirements, ownership rules, cybersecurity controls, and privacy checkpoints.
- Suggested activity: coordinate mobility, utilities, waste, public-realm, and safety responses through an integrated operations workflow.
- Suggested activity: combine resilience scenarios, procurement choices, lifecycle arrangements, indicators, dashboards, and review cycles in a Smart Urban Infrastructure Management Plan.

FAQs

Who suits the smart urban infrastructure management course and what does it assume?

It suits teams planning, governing, procuring, operating, or monitoring connected urban infrastructure and assumes they can interpret service plans, asset information, performance reports, and technology proposals.

How does smart urban infrastructure management differ from smart-city strategy?

Smart-city strategy sets direction and priorities, while smart urban infrastructure management organizes assets, systems, data, controls, operations, maintenance, resilience, and performance reviews needed for service delivery.

Why is interoperability important in smart urban infrastructure?

Interoperability allows sensors, platforms, operators, and service systems to exchange usable data, coordinate workflows, reduce isolated solutions, and support consistent operational decisions.

How is smart urban infrastructure performance measured?

Performance is measured through defined service outcomes, data ownership, indicator formulas, baselines, targets, reporting frequency, accountability, exceptions, and improvement actions across infrastructure domains.

What belongs in a Smart Urban Infrastructure Management Plan?

The plan records services, assets, stakeholders, sensors, platforms, data flows, interoperability, governance, risks, procurement, operations, maintenance, indicators, dashboards, escalation paths, and review arrangements.

Conclusion

Participants take back a Smart Urban Infrastructure Management Plan linking assets, connected systems, data governance, integrated operations, resilience, lifecycle responsibilities, and performance measures. It changes isolated technology and infrastructure initiatives into a coordinated basis for service decisions. The plan supports management without replacing detailed engineering, software architecture, security testing, or applicable approval processes.