Infrastructure Asset Management

14 – 18 February 2027
Cairo (Egypt)



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Why This Course

Infrastructure assets — from roads, bridges, and utilities to transportation and energy systems — form the backbone of modern economies.

Managing these assets effectively is essential for ensuring safety, performance, sustainability, and value for money.

The Infrastructure Asset Management program equips professionals with a structured, integrated approach to managing complex asset portfolios.

It covers asset lifecycle management, risk assessment, data-driven decision-making, and sustainable investment planning.

Through a balance of technical insight and strategic application, participants will learn to align infrastructure performance with organizational objectives, policy priorities, and long-term community needs.

What You'll Learn and Practice

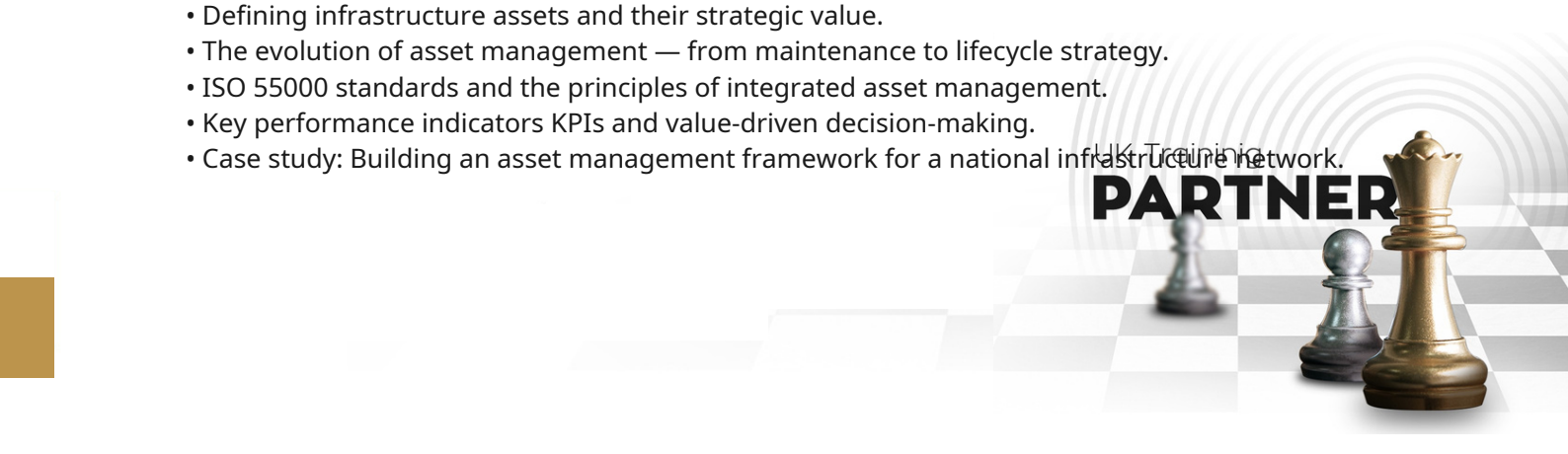
By joining this program, you will:

- Understand the principles and frameworks of asset management in infrastructure systems.
- Learn to develop and implement strategic asset management plans SAMP.
- Gain expertise in asset lifecycle planning, performance optimization, and renewal strategies.
- Apply risk management, cost analysis, and valuation techniques.
- Explore the role of data analytics, digital twins, and predictive maintenance in modern infrastructure.
- Integrate sustainability and resilience planning into asset management.
- Analyze real-world case studies from transport, utilities, and public infrastructure sectors.

The Program Flow

Day 1: Foundations of Infrastructure Asset Management

- Defining infrastructure assets and their strategic value.
- The evolution of asset management — from maintenance to lifecycle strategy.
- ISO 55000 standards and the principles of integrated asset management.
- Key performance indicators KPIs and value-driven decision-making.
- Case study: Building an asset management framework for a national infrastructure network.



Day 2: Asset Lifecycle Planning and Optimization

- Asset lifecycle phases: acquisition, operation, maintenance, and renewal.
- Condition assessment and performance evaluation techniques.
- Prioritization and investment planning for asset maintenance and replacement.
- Balancing short-term costs with long-term value creation.
- Workshop: Developing a lifecycle cost model for a sample infrastructure asset.

Day 3: Risk, Reliability, and Data Management

- Identifying and managing asset-related risks.
- Reliability-centered maintenance RCM and predictive asset strategies.
- Data collection, quality, and integration for decision support.
- Digital tools — GIS, BIM, IoT sensors, and asset management software.
- Simulation: Risk-based prioritization and maintenance planning exercise.

Day 4: Financial Management and Sustainability

- Asset valuation and depreciation methodologies.
- Budgeting and funding models for infrastructure management.
- Life-cycle cost analysis LCCA and total cost of ownership TCO.
- Embedding sustainability and resilience into asset investment decisions.
- Case study: Sustainable infrastructure financing in transport and energy sectors.

Day 5: Strategic Planning, Governance, and Future Trends

- Building and implementing a Strategic Asset Management Plan SAMP.
- Governance structures and accountability frameworks.
- Stakeholder engagement and cross-sector collaboration.
- Smart infrastructure, digital twins, and data-driven innovation.
- Group project: Designing an asset management strategy for a multi-sector infrastructure system.

Individual Impact

- Gain a comprehensive understanding of modern infrastructure asset management practices.
- Strengthen analytical, financial, and decision-making skills.
- Learn to apply international standards and best practices effectively.
- Build confidence in leading strategic asset management initiatives.
- Enhance professional credibility in the infrastructure and public works sector.



Work Impact

- Improve infrastructure reliability, performance, and cost-efficiency.
- Enable data-driven and risk-based decision-making.
- Strengthen compliance with ISO 55000 and sustainability goals.
- Optimize resource allocation across the infrastructure portfolio.
- Support long-term value creation through strategic asset planning and governance.

Training Methodology

The program integrates technical concepts, practical case studies, and hands-on tools to ensure both strategic understanding and operational capability.

Learning methods include:

- Interactive workshops on lifecycle costing and asset prioritization.
- Data-driven exercises using asset management modeling software.
- Real-world case analyses from infrastructure organizations.
- Simulation-based risk and performance management activities.
- Framework templates and toolkits for immediate workplace application.

Beyond the Course

Upon completion, participants will be fully equipped to develop, implement, and lead infrastructure asset management programs that enhance performance, resilience, and sustainability.

Graduates of this program will emerge as strategic infrastructure leaders — capable of transforming complex asset systems into efficient, intelligent, and value-driven networks that support national and organizational growth.

