Advanced Strategies for Airport Master Planning and Development Training Course



19 - 23 Oct 2026

Cape town

4600 € (Per Person)

Ref: #AIR7398_268522

Course Introduction / Overview:

Strategic airport master planning is a critical process that guides an airport's long-term development to meet future demand and operational needs. This training course is designed for professionals who need to understand the complex planning process, from initial forecasting to final implementation. Participants will explore all facets of master planning, including airside and landside development, terminal expansion, and commercial strategy integration. As highlighted by academic authors Alexander T. Wells and Seth B. Young in their book "Airport Planning & Management," a well-executed master plan serves as the blueprint for an airport's future, balancing growth with safety, efficiency, and sustainability. BIG BEN Training Center is pleased to offer this program, which moves beyond theoretical concepts to provide a practical guide for creating and managing a master plan that is both visionary and achievable. You will learn to conduct thorough demand forecasts, manage stakeholder engagement, and navigate the regulatory and environmental challenges that are inherent to large-scale infrastructure projects. This course will empower you to lead master planning initiatives with confidence, ensuring your airport's development is strategic, sustainable, and aligned with its long-term goals.

Target Audience / This Training Course is Suitable for:

- Airport planners and engineers.
- Airport managers and directors.
- Civil aviation authority officials.
- Infrastructure and development project managers.
- Urban planners and consultants.
- Financial analysts in the aviation sector.
- Government officials involved in infrastructure planning.

Target Sectors and Industries:

- Commercial and cargo airports.
- Government and civil aviation authorities.
- Aviation consulting and engineering firms.
- Infrastructure and construction companies.
- Financial institutions specializing in airport projects.
- Aviation technology providers.
- Urban planning and development agencies.

Target Organizations Departments:

- Planning and development departments.
- Engineering and infrastructure departments.
- Operations and airside management.
- Finance and investment departments.
- Strategic planning departments.
- Regulatory affairs departments.
- Commercial and business development.

Course Offerings:

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

- Conduct a comprehensive analysis for an airport master plan.
- Develop accurate demand forecasts for passenger and cargo growth.
- Integrate sustainability and environmental considerations into planning.
- Manage the complex stakeholder engagement process.
- Evaluate airport land use and infrastructure development options.
- Identify and mitigate risks in master planning and project execution.
- Create a long-term capital improvement plan.

Course Methodology:

This training course uses a mix of case studies and hands-on workshops. Participants will work in teams to develop a master plan concept for a simulated airport, addressing real-world constraints and opportunities. The curriculum includes practical exercises on demand forecasting and financial modeling, providing you with the skills to justify your planning decisions with data. Our instructors are experienced industry professionals who will provide direct feedback and guidance throughout the process. BIG BEN Training Center is committed to creating a collaborative and interactive environment where you can learn from your peers and master the art of strategic planning. The course is designed to be highly practical. You will leave this program with a clear understanding of the entire master planning process and the tools needed to lead complex, multi-year development projects with confidence.

Course Agenda (Course Units):

Unit One: Foundations of Airport Master Planning.

- The purpose and scope of a master plan.
- Key components and phases of the planning process.
- Demand forecasting for passenger, cargo, and aircraft traffic.
- The relationship between master planning and business strategy.
- Legal and regulatory considerations.
- The role of sustainability and environmental factors.
- Case study: a major airport's successful master plan.

Unit Two: Airside and Landside Planning.

- Airfield design standards and capacity analysis.
- Planning for runways, taxiways, and aprons.
- Terminal area planning and design principles.
- Landside access, parking, and public transport integration.
- Optimizing land use for both aeronautical and non-aeronautical activities.
- The balance between efficiency and future flexibility.
- Workshop: a simulation of an airfield layout design.

Unit Three: Strategic Land Use and Commercial Planning.

- The strategic use of airport land.
- Developing non-aeronautical revenue streams.
- Planning for commercial developments, including hotels and business parks.
- Integrating air cargo and logistics facilities.
- Master planning for airport cities and aerotropolises.
- Real estate development models.
- Discussion: the long-term value of strategic land use.

Unit Four: Project Management and Financial Feasibility.

- Project management methodologies for large-scale projects.
- Cost estimation and financial feasibility analysis.
- Securing funding and managing capital improvement projects.
- Risk management in airport development.
- Stakeholder engagement and community relations.
- The role of public-private partnerships.
- Group project: a financial model for a terminal expansion.

Unit Five: Implementation and Future Trends.

- The process of planning implementation and execution.
- Performance monitoring and plan updates.
- Emerging technologies and their impact on future planning.
- Resilience and planning for climate change.
- The future of automation and smart infrastructure.
- Trends in passenger experience and their effect on planning.
- Final presentation: a master plan for a futuristic airport.

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:

How can strategic master planning for an airport effectively balance the short-term financial pressures of today with the long-term, multi-generational demands of future growth?

What unique qualities does this course offer compared to other courses?

This training course stands out by providing a deep, practical dive into the complexities of strategic airports master planning. It is not a basic overview. It is a comprehensive guide to the entire process, from initial forecasting to project implementation. We move beyond simple theory to focus on the real-world challenges of a multi-decade planning horizon. Participants will gain hands-on experience in demand forecasting, financial modeling, and stakeholder management. The curriculum's unique strength lies in its integration of sustainability, commercial development, and risk management into the planning process. This course is designed for professionals who need to lead and execute large-scale, transformative infrastructure projects. We provide the tools, the framework, and the strategic mindset needed to build an airport that is not only efficient today but is also resilient and prosperous for years to come.