



## **External Training Course**

# **Megaproject Management in Traffic Engineering**

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**From 22 Jul. To 26 Jul. 2024**  
**From 16 Sep. To 20 Sep. 2024**  
**From 04 Nov. To 08 Nov. 2024**

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**Hotel Monterey Ginza  
Tokyo, Japan**

**Mr. Ghanem F. Al-Otaibi  
GM & Institute Owner**

☛ **Tel.: 00965 22248901**  
☛ **Mob.: 00965 65548855**  
☛ **Email: admin@agi-kw.com**

☛ **Fax: 00965 22204999**  
☛ **Mob.: 00965 97273712**  
☛ **Email: agi-kw@hotmail.com**

**W/SITE: WWW.AGI-KW.COM**

**External Training Course:**

## **Megaproject Management in Traffic Engineering**

**From 22 Jul. To 26 Jul. 2024**

**Fees: 2500 KD**

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### **INTRODUCTION**

This Megaproject Management in Traffic Engineering training course will present the next step in solving challenges in megaprojects related to traffic and transportation planning and management of the mobility within the urban areas as well as between the urban areas. This will emphasize the unprecedented planning and engineering involved in megaprojects related to the traffic engineering, as they most often if not always encounter delays, cost overruns and even from time to time different technical failures, therefore underscoring the requirements for adequate planning, risk management and improvement through design in the traffic and transportation projects, as they are quite often dependent on the traffic flows and the behavior of the people that use the network. This training course will highlight:

- The stakeholders in megaprojects related to traffic and transport.
- Defining characteristics of megaprojects.
- Mega-risks associated with megaprojects.
- Time and money management in megaprojects.
- Improvement while under construction.
- Technical complexities of megaprojects related to traffic.
- Overdesign or under-design issues in megaprojects.
- Complex Dynamics of Traffic Management.

### **OBJECTIVES**

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

- Understand the issues related to the high number of stakeholders in megaprojects.
- Use adequate techniques of time and money management in megaprojects.
- Create a risk management adaptive planning approach for the megaprojects.
- Evaluate complex dynamics of traffic management in a modern environment.
- Plan and prioritize the traffic engineering activities in megaprojects.
- Identify possible improvement options while the megaproject is ongoing.
- Remove the problems of over or under design.

## **TRAINING METHODOLOGY**

The participants will receive thorough training on the subjects covered by the course outline utilizing a variety of adult learning techniques tailor-made for the application in the traffic engineering discipline. The focus on actual case studies from Europe, Asia, US, and developing countries and solving of actual problems through the guided examples. The Instructor will use a theoretical basis, extended onto the practical examples of issues addressed in different projects, with the videos and tabletop exercises.

## **COURSE OUTLINES**

### **DAY 1: What are Megaprojects?**

- Megaproject Definition.
- Megaproject Framework.
- Characteristics of Megaprojects.
- Collaborative Partnerships in Megaprojects.
- What can Constitute a Megaproject?

### **DAY 2: Traffic Management Complexity**

- Standard Traffic Theories and their Failure in Real World Applications.
- The New Paradigms.
- Three-Phase Traffic Theory.
- Empirical Nature of Traffic Breakdown.
- Congested Pattern Control Approach.
- Importance of Traffic Demand Planning in Megaprojects.

### **DAY 3: Megaproject Risk Management**

- Cost / Benefit Analysis of Wider Issues of Megaprojects.
- Risk Management Framework for Megaprojects.
- Risk Management Optimization.
- Under-design and Overdesign Risks.
- Change and Integration as a Constant in Megaprojects.
- Mitigation of Stakeholder Concerns.

### **DAY 4: Megaproject Cost Management**

- Megaproject Governance Framework – Incorporation of Multiple Governance Frameworks.
- Scope Management of Megaprojects.
- Triple Constraint.
- The Megaproject Budget Process and Cost History.
- Cost Centers and Cost Management Teams.
- Strategies to Avoid Scope Creep and Cost Escalation.
- Structured Change Process through the Time of Project Delivery.

### **DAY 5: Dynamic Schedules in Megaprojects**

- Impact of Design Development on Schedule.
- Parallel Schedules.
- Impact of Simultaneous Operations.
- Scope Evolution and Scope Creep Planning.
- Lessons from Different Megaprojects: EU, Asia, USA, Africa.