

Intelligent Transportation Systems
Architecture, Engineering Processes &
Standards





# Intelligent Transportation Systems Architecture, Engineering Processes & Standards

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#### Introduction:

This Intelligent Transportation System ITS Architecture, Engineering Processes & Standards training course is specifically created for stakeholders in the Intelligent Transportation System ITS or the Transport System as a whole to understand how to use ITS enabling technologies as the heterogeneous but unified system.

In order for the Intelligent Transportation System ITS to function as a system for the advantage of everyone involved or using the system, decision-makers must incorporate enabling technologies for ITS. Securing the appropriate performance standards for each of the component systems independently is crucial, and it is also crucial to make sure that they connect with one another successfully.

In order to define the functionality, communication, interoperability, scalability, hardware and software maintenance, connectivity, and roles and responsibilities of various system stakeholders, the Intelligent Transportation System ITS Architecture, Engineering Processes & Standards is a formal framework.

# Course Objectives:

At the end of this course the participants will be able to:

- Determine the stakeholders and the roles they play in the ITS Architecture, Engineering Processes, and Standards.
- Learn how to integrate existing and new components into the Intelligent Transportation System ITS Architecture, Engineering Processes & Standards.
- Learn about the Intelligent Transportation System ITS Architecture, Engineering Processes & Standards' physical and virtual layers.
- · Learn about the costs and advantages of implementing an intelligent transportation system ITS.
- Adoption of the ITS deployment strategy as the cornerstone for ITS implementation
- Utilize component interdependencies to streamline data exchange

## **Targeted Audience:**

- Study the ITS Intelligent Transportation System standards and learn how to implement them.
- · Describe the iT system's commercial advantages ITS
- Streamline the transportation planning and connect it to the ITES ITS
- Design and implement an intelligent transportation system ITS.
- Framework for Processes & Standards development
- Lay out the groundwork for upcoming development.

#### Course Outline:

#### Unit1: Intelligent Transportation System ITS Architecture, Engineering Processes & Standards

- Introduction
- Intelligent Transportation System ITS Architecture History
- Intelligent Transportation System ITS Service Selection
- Intelligent Transportation System ITS Architecture Benefits and Risks of Not Having One



### Unit2: Intelligent Transportation System ITS Architecture and System Engineering

- · Basics of Systems Engineering
- Enterprise Architecture comparisons
- Intelligent Architecture Using The Open Group Architecture Framework TOGAF
- System of Transportation ITS
- Other ITS Intelligent Transportation System Architectures that Are Available,
- Engineering Methodologies & Frameworks for Standards
- Configurations for Intelligent Transportation Systems ITS

# Unit3: Intelligent Transportation System ITS Standards

- Standardization in Intelligent Transportation Systems is Required ITS
- Intelligent Transportation System ITS Standards Development
- Intelligent Transportation System ITS Telecommunication Infrastructure
- Intelligent Transportation System ITS Standards in Data Exchange

# Unit 4: Importance of Virtualization in Intelligent Transportation System ITS

- Overview of Virtualization
- Layers of Intelligent Transportation System ITS Infrastructure
- Designing Intelligent Transportation Systems ITS Through Modeling and Simulation
- New Concepts in Virtualization

# Unit 5: Transportation System Architecture Design for Intelligent Transportation Systems ITS

- Intelligent Transportation System ITS as a Part of Transportation Planning
- Intelligent Transportation System ITS Performance Assessment
- Intelligent Transportation System ITS Management in Emergency Cases
- Intelligent Transportation System ITS of the Future-multimodal Transport Systems