Leaders Development Institute

Certified Courses

Advanced Intelligent Transportation Systems

INTRODUCTION

- After great success with the Intelligent Transportation Systems (ITS) training course for the beginners, this is a pre – requisite and continuation of the previous course. We are witnessing that technology is evolving at a high rate of speed, and many systems that were a major discovery until yesterday are being replaced by even greater discovery today. This is also happening with the Intelligent Transportation Systems (ITS), and their implementation is becoming rather a necessity than the innovation.
- Intelligent Transportation Systems (ITS), is increasing its footprint, with the introduction of the Big Data, Artificial Intelligence (AI) and IoT. The Intelligent Transportation Systems (ITS) of yesterday are in a way becoming legacy systems as the new technology is rapidly developing and it is creating new opportunities. It is are more and more user centric, and no longer are the drivers at the core of the systems, as the Intelligent Transportation Systems (ITS) is now having vehicles and infrastructure at its core, while all other users are the beneficiaries of the system.

This training course will highlight:

- Intelligent Transportation Systems (ITS) innovation strives
- Intelligent Transportation Systems (ITS) benefits to governments, industries and users
- Design of user centric Intelligent Transportation Systems (ITS)
- Data gathering and analysis from vehicles
- Using drones and video analysis for traffic counting
- Road asset data collection from vehicles
- Pattern recognition and Artificial Intelligence in Intelligent Transportation Systems (ITS)

OBJECTIVES

- Understand the Intelligent Transportation Systems (ITS) benefits and possibilities of innovation
- Apply the tools and techniques of Big Data analysis in Intelligent Transportation Systems (ITS)
- Recognize the Artificial Intelligence (AI) implementation within the Intelligent Transportation Systems (ITS)
- Prepare for Intelligent Transportation Systems (ITS) management of change
- Get acquainted with the use of visualization techniques of traffic data
- Use pattern recognition in traffic monitoring, control and traffic infrastructure maintenance and planning

TRAINING METHODOLOGY

- The participants to this course will receive a thorough training on the subjects covered by the course outline with the instructor utilizing a variety of proven adult learning teaching and facilitation techniques, with examples of traffic data visualization from worldwide cities, use of pattern recognition in the vehicles and connecting the data from the vehicles to the road and traffic equipment maintenance, as well as automatic updates of navigation maps. This include active presentation of technologies and its applications in different countries of the world.

ORGANISATIONAL IMPACT

- The organization will benefit from understanding the principles of innovation within the Intelligent Transportation Systems (ITS) as well as its interoperability and compatibility with other elements of the Smart City. There is no Smart City without the Smart Mobility and this course will help the organizations build and maintain the pillar of Smart Cities related to mobility, as it is also a connection for all other Smart City pillars.

Impact on the organisation from delegates attending this training course includes the following benefits:

- Budgeting optimization and improvement
- Lowering the costs of system use
- Enhancing the level of service without the massive investment
- Improve the mobility within the cities, areas, countries and even cross-borders
- Open the gates of Industry 4.0 within their systems
- Reduce project delays and public trust issues

PERSONAL IMPACT

The participants will gain or enhance their understanding by the following:

- Identify the Intelligent Transportation Systems (ITS) possibilities
- Learn the details of Intelligent Transportation Systems (ITS) innovation streams
- Acquire the knowledge related to IoT and AI in Intelligent Transportation Systems (ITS)
- Learn the data visualization requirements for successful Intelligent Transportation Systems (ITS)
- Adopt the modern technologies across the whole mobility sector
- Recognize the benefits of Intelligent Transportation Systems (ITS) technologies in other areas
- Accelerate their career development
- Adopt the use of data from Intelligent Transportation Systems (ITS) systems to improve road asset management

WHO SHOULD ATTEND?

- This Intelligent Transportation Systems (ITS) training course is suitable for people who have already attended the first part of the course, as well as for clients whose knowledge is higher than ordinary. It is designed for the people involved in traffic and transport planning and organization, IT experts, as well as researchers and consultants involved into management, analytics, optimization, project management and transport optimization.

This training course is suitable to a wide range of professionals but will greatly benefit:

- Project Managers
- Professionals in Urban Planning
- Strategic Development Personnel
- Architects involved in Urban Design
- Traffic Engineering and Researchers
- Transport Engineers and Researchers
- Technology Engineers, CTOs and CIOs

Course Outline

Intelligent Transportation Systems (ITS) and Big Data

- Big Data Use in Intelligent Transportation Systems (ITS) Projects
- Data Visualization for Urban Planning
- Intelligent Transportation Systems (ITS) Data Collection and Analysis
- The Data Sources and Its Correlation in Intelligent Transportation Systems (ITS)
- Data Sharing and Additional Data Sources

Intelligent Transportation Systems (ITS) and Artificial Intelligence (AI)

- Artificial Intelligence in Traffic Control and Monitoring Systems
- Artificial Intelligence in Vehicles
- Pattern Recognition and Use of Drones
- Traffic Signs Recognition and Navigation Map Updates
- Intelligent Transportation Systems (ITS) for Self-driving Cars
- The Multi-layered Traffic System

Urban Mobility Improvement Through ITS

- Travel Time Reduction
- Automatic Routing and Re-routing
- Proximity Detection
- Energy Conservation
- Mobility Social Networking

The ITS and IoT for User Centric Design

- User - Vehicle - System Communication
- System Adaptation of User Behavior Patterns
- Adoptive Speed Limits
- Adoptive Parking
- Multimodal Intelligent Transportation Systems (ITS)

Intelligent Transportation Systems (ITS) Sustainability

- Intelligent Transportation Systems (ITS) Sources of Finance
- Intelligent Transportation Systems (ITS) Cost Reduction Analysis
- Intelligent Transportation Systems (ITS) Adaptation for Road Asset Management
- Intelligent Transportation Systems (ITS) as a Profit Center
- The future of Intelligent Transportation Systems (ITS)

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