

# Intelligent Transportation Systems of the Future

## Forward Towards the Future

### Introduction

We are seeing a rapid evolution of technology, with many systems that were significant discoveries just a few years ago being superseded by even more recent discoveries. This is also the case with intelligent transport systems (ITS), where adoption is starting to trump innovation as a need.

With the advent of Big Data, AI, and the Internet of Things, Intelligent Transportation Systems (ITS) are expanding their reach. The Intelligent Transport Systems (ITS) of the past are, in a sense, evolving into legacy systems due to the quick development of new technology and the possibilities it presents. The Intelligent Transportation Systems (ITS) are becoming more and more user-centric, with infrastructure and cars serving as the system's key components and all other users as its beneficiaries. Drivers are no longer at the center of the ITS.

**The following will be covered in this Advanced Intelligent Transportation Systems training course:**

- Innovation in Intelligent Transportation Systems (ITS) aims to
- Governments, businesses, and people may profit from intelligent transportation systems (ITS).
- Creation of Intelligent Transportation Systems (ITS) with the user in mind
- Collecting and analysing vehicle data
- Counting traffic using drones and video analysis
- Vehicle data collecting for road assets
- Artificial intelligence and pattern recognition in Intelligent Transportation Systems (ITS)

### Objectives

**Upon completion of this Advanced Intelligent Transportation Systems (ITS) training programme, learners will acquire the following skills:**

- Recognise the advantages of Intelligent Transportation Systems (ITS) and the potential for innovation.
- Utilise Big Data analysis tools and methodologies in Intelligent Transportation Systems (ITS)
- Identify the use of artificial intelligence (AI) in the Intelligent Transportation Systems (ITS)
- Get ready for change management in Intelligent Transportation Systems (ITS).
- Learn how to apply strategies for visualising traffic statistics.

- Utilise pattern recognition for planning, maintaining, and controlling traffic infrastructure.

## Training Methodology

This Advanced Intelligent Transportation Systems training course will cover all the topics listed in the training outline in detail. The instructor will use a range of tried-and-true adult learning teaching and facilitation techniques, and there will be examples of traffic data visualisation from cities across the world, how to use pattern recognition in cars to connect data from the car to the road, how to maintain traffic equipment and how automatic navigation map updates work. This involves actively showcasing technology and their uses in many nations throughout the globe.

## Organizational impacts

Understanding the guiding principles of innovation in Intelligent Transportation Systems (ITS) and how they interact and work with other components of Smart Cities can be beneficial to the organisation. Without smart mobility, there could be no smart city. This course will assist organisations in creating and maintaining the mobility pillar of smart cities, which connects to the other pillars of smart cities.

### **Delegates attending this training programme will have the following positive effects on the organisation:**

- Optimisation and enhancement of budgeting
- Reducing system usage expenses
- Improving service quality without making a significant financial commitment
- Boost travel across borders and within cities, regions, and even nations.
- Let Industry 4.0 in via their systems.
- Minimise public trust concerns and project delays

## Personal Impact

### **The following will help the participants grasp things better:**

- Determine the opportunities for Intelligent Transportation Systems (ITS).
- Find out more about the innovation streams for Intelligent Transportation Systems (ITS).
- Learn about IoT and AI in the context of Intelligent Transportation Systems (ITS).
- Find out what effective Intelligent Transportation Systems (ITS) need in terms of data visualisation.
- Adopt contemporary technology for the whole transportation industry.
- Acknowledge the advantages of Intelligent Transportation Systems (ITS) in several domains
- Expedite the advancement of their careers
- Accept the use of Intelligent Transport Systems (ITS) data to enhance the management of road assets.

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## **Course Outline**

### **Day 1**

#### **Big Data and Intelligent Transportation Systems (ITS)**

- Utilising Big Data in ITS Projects: Intelligent Transportation Systems
- Urban Planning Data Visualisation
- Data Gathering and Interpretation for Intelligent Transportation Systems (ITS)
- The Intelligent Transportation Systems' (ITS) Data Sources and Correlation
- Data Exchange and Supplementary Data Sources

### **Day 2**

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

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- Autonomous Artificial Intelligence
- Identifying Patterns and Using Drones
- Updates to Navigation Maps and Recognition of Traffic Signs
- Autonomous Vehicles: Intelligent Transportation Systems (ITS)
- The Traffic System with Multiple Layers

## Day 3

### Enhancing Urban Mobility with ITS

- Reduction of Travel Time
- Rerouting and Automatic Routing
- Nearby Detection
- Energy Preservation
- Social networking on the go

## Day 4

### IoT and the ITS for User-Centered Design

- Vehicle-User-System Communication
- System Adjustment for User Conduct Patterns
- Acceptable Speed Limits
- Adaptive Parking
- Intelligent Transportation Systems (ITS) that are Multimodal

## Day 5

### Sustainability of Intelligent Transportation Systems (ITS)

- Finance Sources for Intelligent Transportation Systems (ITS)
- Analysis of Cost Reduction for Intelligent Transportation Systems (ITS)
- Road Asset Management Utilising Intelligent Transportation Systems (ITS) Adaptation
- The Profit Centre of Intelligent Transportation Systems (ITS)
- The Intelligent Transportation Systems (ITS) of the future