



smart roads

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As transportation keeps our world moving, pulse by solutions strives to employ the latest in technology to continuously move the industry only forward with its latest state-of-the-art solutions. Across the industry's diverse modes, services and sub-industries, our solutions are designed to allow our clients to provide safe, green and efficient services.

As a digital transformation enabler, pulse identifies digital transformation as key to smart transportation. To address the growing challenges with urbanization and the consequent demands for mobility, connectivity, safety and sustainability, pulse smart solutions aim to improve customer and passenger experience, by enhancing business and IT agility and improving operational efficiency for cities.

smart road solutions benefits:

- Optimizing transportation system efficiency
- Enhancing mobility
- Improved safety
- Reducing fuel consumption and environmental cost
- Increasing economic productivity
- Creating an environment for an ITS market
- Integrating the traffic control platform (mobile app & web portal) with city operations center

pulse smart roads offerings

advanced traffic management

- Fixed and Adaptive Traffic Signal Systems
- Ramp Management System
- Fleet Management
- Law Enforcement System and Section Speed Control System
- Vehicle Weighing System
- Toll Collection System
- RFID System
- Pedestrian and Cyclist Detection Sensors
- Over-height Vehicle Detection Systems

smart public transport management

- Operation Control Center
- Mobility Platform
- Fleet and Asset Tracking and Management Solutions
- Fuel Station Management
- Tank Content Management
- Parking Management System
- Electronic Ticketing System (E-payment)
- IT Infrastructure and Connectivity

digital signage

- Variable Message Systems (VMS) – Lane and Speed Control Signage
- Parking Management and Guidance Systems
- Surveillance and Analytics Systems
- CCTV
- Data Collection Stations
- Automatic Number Plate Recognition (ANPR)
- Incident Detection Systems
- Smart Environmental Monitoring

tunnel management systems

A centralized solution that monitors and controls all tunnel systems. It is comprised of a network of closed-network television cameras (CCTV), sensors and a centralized automated control center. It includes tunnel infrastructural applications such as HVAC, lighting control, traffic control, telecommunication networks and road weather information, in addition to safety solutions.

smart street lighting

A data-based smart street lighting management system that uses IoT and SCADA systems to enable monitoring and control of electrical consumption of streetlights on luminaire-level against the actual need based on daylight and weather conditions. The solution includes an anti-theft system and can detect and locate defected luminaires and panels.

cybersecurity solutions and services