Global Smart Roads Market Research: By Technology (Transportation and Communication Systems, Traffic Management System), by Sensor (Anemometers, Strain Gauges, Accelerometers, Temperature Sensors), by Deployment (On-Premise, On-Cloud) - Forecast to 2023

Market synopsis

With technology, the world becomes smarter. However, the introduction of automated vehicles has increased the risk of on-road accidents by such vehicles. Smart roads guide the drivers of vehicles against any object that is in front of the vehicle, which the driver is not able to see. The sensors deployed give signals to the vehicle about any possible incident that could happen and the damage that might occur to the vehicle and to the driver. Heavy investment by major players and government initiatives towards the promotion of the good infrastructure is one of the major drivers of the market. A major trend in the smart roads market is the electrically connected smart roads. These roads along with related technologies try to reduce the vehicle emissions by identifying the best and shortest route for any vehicle to reach its destination. Additionally, the rise in the global traffic marks and need for a better traffic management system creating an opportunity for the smart roads market to develop an advanced infrastructure for the connected vehicles and roadside assistance.

Many integrated systems are applied in the smart roads such as vehicle infrastructure integration, structural health monitoring for roads (highways and state roads), intelligent transportation system or connected vehicle system, photovoltaic pavement, wireless vehicle charging system, and road markings. Photovoltaic pavements are a type of pavement that generate electricity by gathering solar radiations with photovoltaic. These photovoltaic materials can be used in parking lots, footpaths, driveways, streets and highways. Smart roads are a crucial component for a smart city to be operational.

Segmentation

On the basis of technology, the market is segmented into transportation and communication system (ANPR- Automatic Number Plate Recognition, Lane warning/keeping systems, Wireless Radio Communication) and Traffic Management System (GPS and Advanced Traffic Management System).

On the basis of the sensor, the market is segmented into anemometers, strain gauges, accelerometers, weigh-in-motion devices, temperature sensors among others.

On the basis of deployment, the market is segmented into on-premise and on-cloud.

Regional analysis

Among the regions, North America is leading the global smart road market due to the technological advancement. Highly advanced countries in the field of technology such as the U.S. and Canada comprised of many players that are manufacturing smart road equipment. These countries pay high attention to the road safety and as a result creating a wide opportunity for enterprises plying in the smart road market. Virginia in the U.S. has developed the first 3.5 km long smart road and is currently being tested by the many companies. This road is equipped with a high class sensor and other equipment’s and expected that soon the smart road concept will become reality in other countries. The Asia Pacific has emerged as the fastest growing market with countries like China and Japan, which are now paying high attention to the road safety are working on various projects for the smart road.
Key players

Some of the prominent players in the market of smart roads are Alcatel Lucent (France), Kapsch AG (Austria), Indra Sistemas, S.A. (Madrid), LG CNS (South Korea), Siemens AG (Germany), Cisco (U.S.), Kapsch TrafficCom (Austria), Xerox Corporation (U.S.), Huawei (China) among others.

The competitive landscape of the smart roads market involves key players from various industries integrating their services and products. These key players constantly keep innovating and investing in research and development for a cost-effective portfolio. Apart from the key players, there are certain start-ups and new entrants stepping into the smart roads market as this market is one of the biggest segments of the larger smart cities market.

Global Smart Roads Market, USD Billion

Intended Audience

- Smart Roads Market services providers
- IT providers
- Smart components manufacturers
- Government agencies
- Cloud Service providers
- Auto components manufacturers
- Value-added resellers
- Construction builders
- Research firms

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