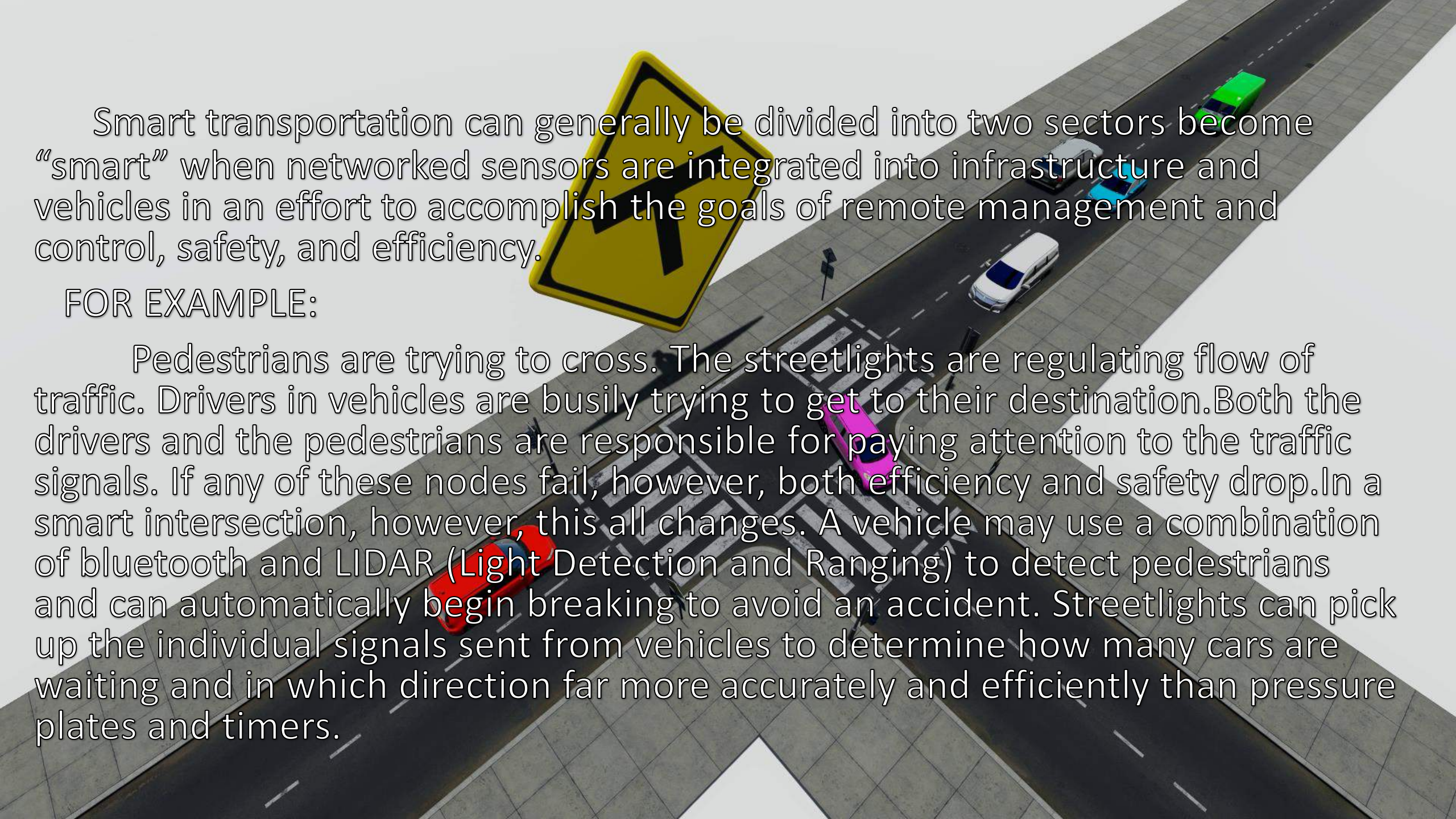

SMART TRANSPORTATION

Smart transportation are called as intelligent transportation or smart mobility, refers to the use of advanced tecnology and data-driven solution to improve the efficiency, safety,subtainability, and overall effectiveness of transportation systems. It is used with sensors, advanced communication technologies, automation and high-speed networks.

BENIFITS OF SMART TRANSPORTATION:-

- Smart Transportation is safer and better managed.
- It is more efficient and cost effective.
- One major fear among smart city skeptics is its vulnerability to cyber attacks.Proper software updates, encrypted communications through virtual private network (VPN) tunnels and other multilayered security practices can mitigate the risk of cyber attacks.
- Environmental considerations are the history of transportation is inexorably tied to the environment. From steam vehicles that burned coal and wood to today’s gasoline hungry combustion engines, transportation takes a toll on the planet’s resources and atmosphere.

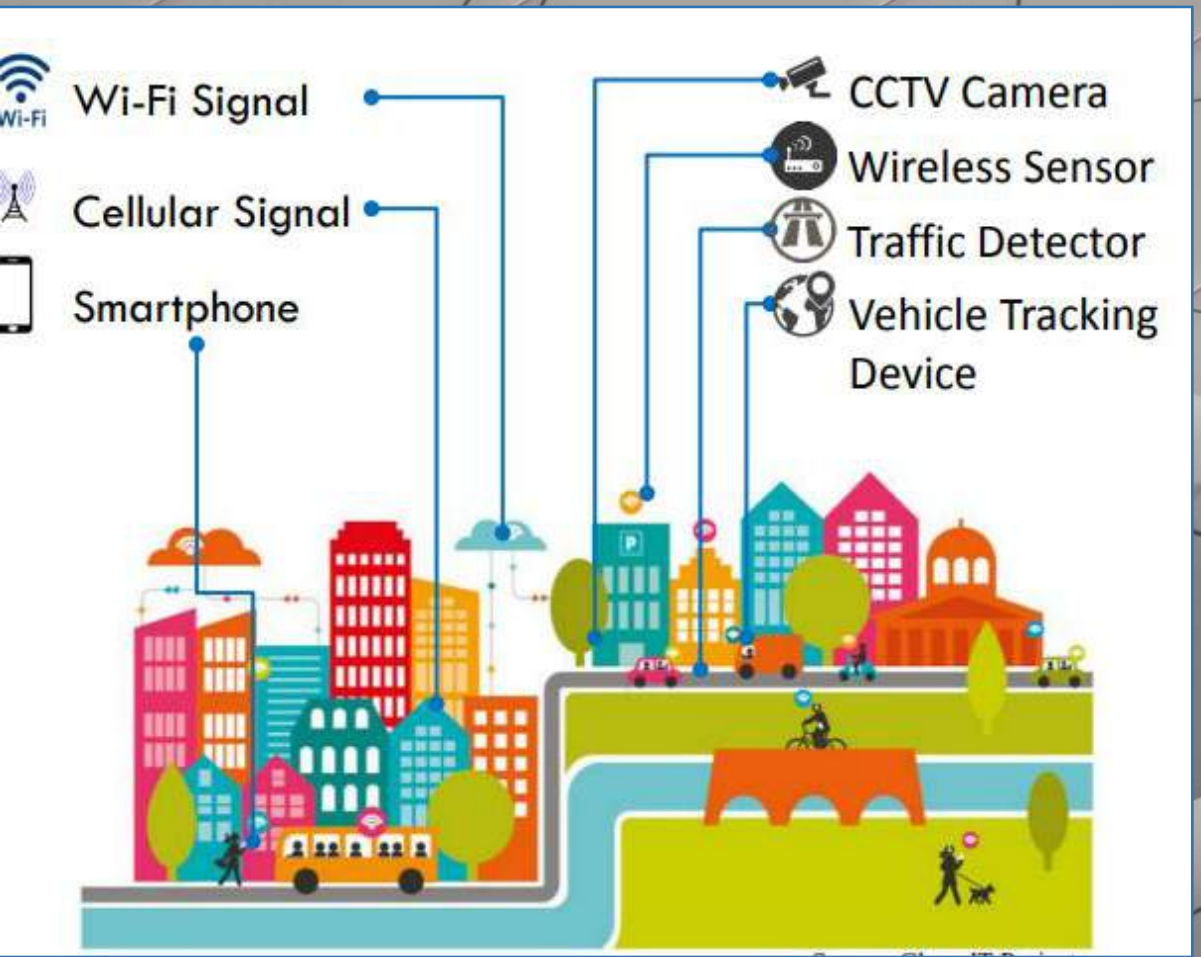


Smart transportation can generally be divided into two sectors become “smart” when networked sensors are integrated into infrastructure and vehicles in an effort to accomplish the goals of remote management and control, safety, and efficiency.

FOR EXAMPLE:

Pedestrians are trying to cross. The streetlights are regulating flow of traffic. Drivers in vehicles are busily trying to get to their destination.Both the drivers and the pedestrians are responsible for paying attention to the traffic signals. If any of these nodes fail, however, both efficiency and safety drop.In a smart intersection, however, this all changes. A vehicle may use a combination of bluetooth and LIDAR (Light Detection and Ranging) to detect pedestrians and can automatically begin breaking to avoid an accident. Streetlights can pick up the individual signals sent from vehicles to determine how many cars are waiting and in which direction far more accurately and efficiently than pressure plates and timers.

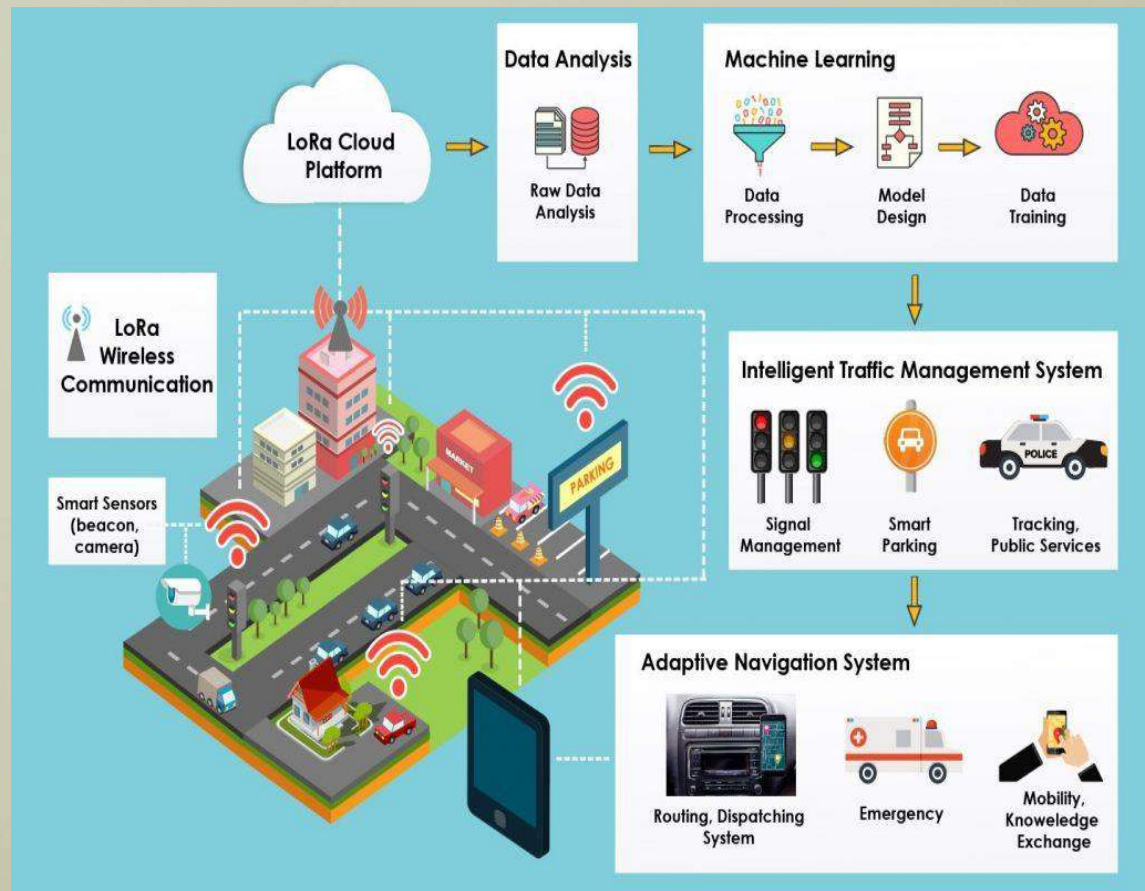
SMART SENSING:



In transportation, sensor technology supports the design and development of a wide range of applications for traffic control, safety, and entertainment. Monitor the traffic conditions in specific zones, gathering data that improves the traffic management. For example cameras, radars, ultrasonic, proximity.

Intelligent Traffic Management:-

Intelligent Traffic Management System (ITMS), is one of the advanced solution to the congested traffic conditions face by many cities. As a result of rapid industrialization and urbanization, many cities are facing increased volume of population which resulted in an unplanned city infrastructure.Unplanned infrastructures includes Road & Junctions, Sewerage Networks, and Utility Ducts etc. Increased population will be requiring Multi-mode Transport System for seamless daily commute.



CONNECTED VEHICLES:-

A connected vehicle is one that is capable of connecting over wireless networks to nearby devices. Connected vehicles are an important factor in the advance of IoT. The use cases range from connected entertainment systems that connect with the driver's mobile phone to Internet-connected vehicles that have bi-directional communication with other vehicles, mobile devices and city intersections.

SUBTAINABLE MOBILITY:-

Sustainable mobility is another trend in the smart transportation market, with a growing focus on reducing emissions and promoting alternative modes of transportation such as electric vehicles, bike-sharing programs, and public transportation.


THANK YOU