

Project Design Phase - I

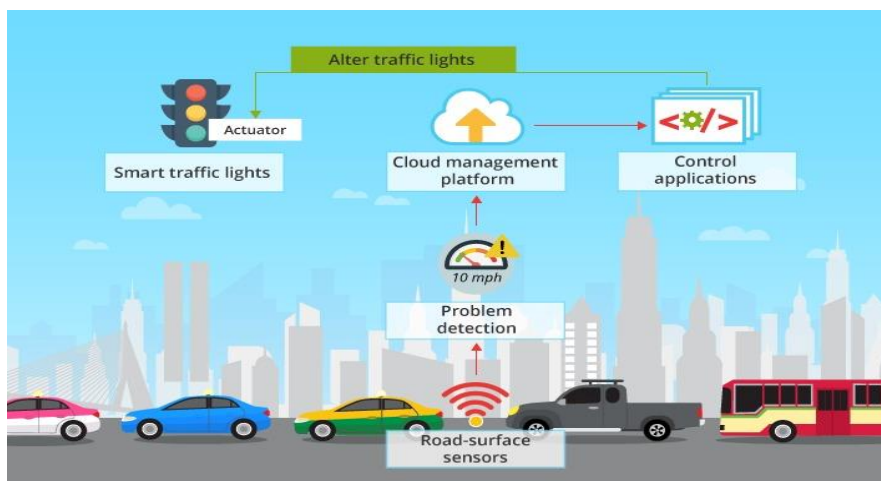
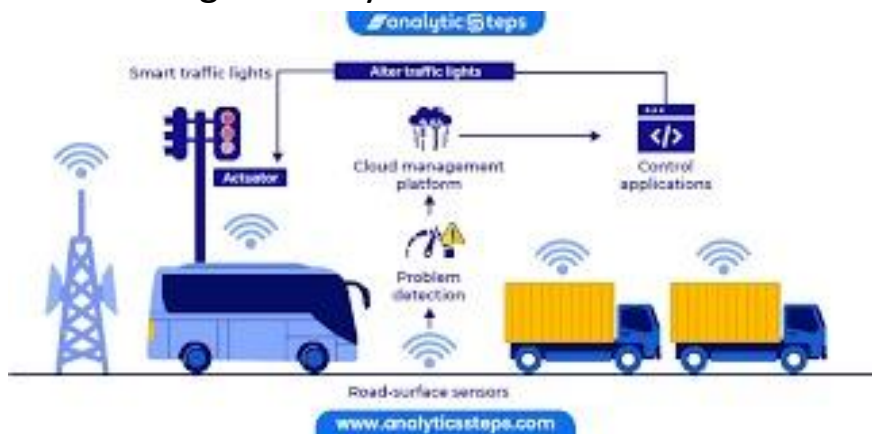
Solution Architecture

Date	1 October 2022
Team ID	PNT2022TMID24762
Project Name	Signs With Smart Connectivity For Better Road Safety
Maximum Marks	4 Marks

Managing Traffic Lights:

- IoT systems, as we all know, are made up of a slew of sensors and other data-gathering devices. The traffic signals are equipped with heat and moisture-sensitive sensors for monitoring weather-related data for better traffic light control.
- These sensors will then send data to traffic lights, which will adjust the brightness and intensity of the lights dependent on the weather and road visibility for vehicles.
- To reduce traffic congestion, real-time data feeds are employed in traffic signals. Sensors installed in key locations may collect data on high-traffic crossings and areas where cars are diverted using IoT technology.
- Big data may be used to further analyze this information and determine alternate routes, as well as improve traffic signals to reduce congestion. Meanwhile, weather sensors installed on roadside lights may enable them to function.
- Light dimming occurs not just as part of the day-to-night transition, but also when weather conditions deteriorate. These signals may be picked up by roadside light sensors, which can then switch them on and off as needed

- Brightness adjustment is beneficial since it saves energy and prevents accidents caused by blinding lights. IoT systems can also use computer vision-enabled CCTV cameras to monitor and regulate traffic by changing the lights intelligently at the appropriate times.
- Check this document from the International Journal of Engineering Research and Technology on “IoT based Smart Traffic Management System”



- **Management and Prevention of Road - Accidents**
- These days, road accidents are a pretty regular occurrence. Losing a life in a car accident is tragic for any cause. People have

died in a variety of scenarios due to a failure to receive timely care.

- Because there would be no one around to aid them, it will be difficult for them to obtain assistance. The most important element here is immediate communication with the hospital or authorities, and if that is accomplished, the rest will fall into place.