What is Telematics?

The integrated use of telecommunications and information technology for monitoring vehicles. Telematics is an interdisciplinary field that encompasses telecommunications, vehicular technologies, road transportation, road safety, electrical engineering (sensors, instrumentation, wireless communications, etc.), and computer science (multimedia, Internet, etc.).

In this article I will discuss about Telematics applied in Fleet management

Fleet management is the management of a company's fleet. Fleet management includes the management of ships and or motor vehicles such as cars, vans and trucks. Fleet (vehicle) Management can include a range of functions, such as vehicle financing, vehicle maintenance, **vehicle telematics (**tracking and diagnostics), driver management, fuel management, health and safety management and dynamic vehicle scheduling.

Telematics help in " Fixing the right part, at the right time, purchasing from the right vendor at the right price. Telematics help in moving from Reactive maintenance to Proactive and Predictive maintenance.

In the Proactive maintenance, Engine faults are captured in real-time by on-vehicle telematics devices. With this repairs are identified PRIOR to actual part failure and maintenance is scheduled based on actual part wear and tear. In the predictive maintenance, we leverage telematics data to predict failures and forecast repairs. This helps in improving capacity planning and identifying the cost saving opportunities. This also helps in reducing the downtime which helps in avoiding customer service interruptions and optimizing the shop efficiency.

How to implement Telematics on vehicles?

We can install telematics devices in vehicles. A telematics device is a system that you install in the car/truck that records information about the driving habits, the fault codes of the vehicles, GPS location points etc of the vehicle. One of the vendor is Geotab.

Geotab is installed in the vehicles by plugging this into the OBDI port of the vehicle. This device collects all the telematics information from the vehicle and this information is transferred to our on-premise big data systems or cloud data warehouse eco-system (whatever we set up) via wifi. The data ware house will store all the telematics data.

Next step is to develop a web application or rule engine which is connected to the database, which will monitor the data entered in the database. Rule Engines should be configured which will monitor the data and alert the users when the threshold is met. This helps in alerting the users when the fault codes occur, and the user can schedule a maintenance for the vehicles. This will reduce the maintenance cost because we will fix the vehicle before the break down and this will avoid unnecessary repair costs because we can reduce the un wanted preventive maintenance.