

## ASSINGMENT-1

- Define a problem statement and give a brief Executive summary snapshot.
  - A) Executive Summary
  - B) Project Description
  - C) Project Scope

### # Executive Summary:

India is experiencing significant expansion in its road network along with growth in the automotive industry. The worldwide road network has seen constant enhancements to manage congestion. The tolling system across the globe have revolutionized and undergone a remarkable transformation by incorporating Advancements in it.

India is taking leaps in making tolling system efficient, effective and transparent. Fastag's scope is world wide range of services such as Fuel payments and use of several other services. These technology would further lead to a reduction of greenhouse gas emissions due to less idle time for vehicles at toll plaza. Modern systems can also allow the reduction of toll evasion and improve the tolling system for efficient Fleet management and timely upgradation of infrastructure, software and backend systems. This can lead to entirely new ecosystem.



# Project Description.

Traditionally, toll payments were made at toll plaza, which required manpower and cause traffic jams, even with FASTag. The GPS-based toll collection system uses satellites and tracking system in cars to measure the distance travelled and charge toll accordingly. How does it work?

- On-board Unit (OBU): Cars will be equipped with an OBU, acting as a tracking device for toll collection.
- Tracking system: The OBU will track the car's coordinates on highways and toll roads, shared with satellites to calculate distance.
- GPS and GNSS: The system uses GPS and GNSS for accuracy in distance calculation.
- Implementation: The system will be implemented on major highways and expressways.
- Payment Process: The toll amount will be automatically deducted from the linked bank account based on the distance travelled.



## # Project Scope:

Satellite based toll-plaza are an innovative approach to toll collection, offering several benefits.

- Increased accuracy
- Reduced infrastructure costs.
- Enhanced user experience.
- Real-time monitoring
- Scalability.