

## Introduction :

The eDetection Application is reshaping road safety by automatically identifying vehicles operating without valid Motor Vehicle (MV) documents, such as Tax, Fitness, Insurance, Pollution Under Control (PUC) certificates, Permits and those which are blacklisted. This system leverages vehicle data from Toll Plazas to issue eChallan seamlessly for the defaulter vehicles detected by the application. Additionally, it helps in identifying counterfeit vehicles with falsified number plates by cross-referencing with the Vahan database. The eDetection application can also utilize the siloed databases of other departments for effective purposes. Overall, the eDetection Application enhances regulatory compliance in motor vehicle operations, contributing to safer and more orderly roadways.



## Features and Functionalities

- Automatic eChallan issuance by integration with eChallan under "One Nation One Challan" policy.
- eDetection can help maximize revenue in eChallan.
- It can be a measure tool to strengthening road safety.
- Tracking & analysis of Defaulter Vehicle Data
- Vehicle Class Comparison
- Category Wise Challan statistics
- Challan History Search
- Sending of SMS to the Defaulter Owners
- Analysis of Vehicle Data
- Wrong Number Plate detection
- Multiple Challan to multiple vehicles Issue at a single Time
- Revenue generation for department

## Benefits



Enhanced Road Safety.



Minimize human errors associated with manual challan issuances.



Reduce stress level, Save time and effort for enforcement officials.



One Platform for integration with Other Dept



Transparency and Accountability



Mitigate revenue losses



Paperless Efficiency



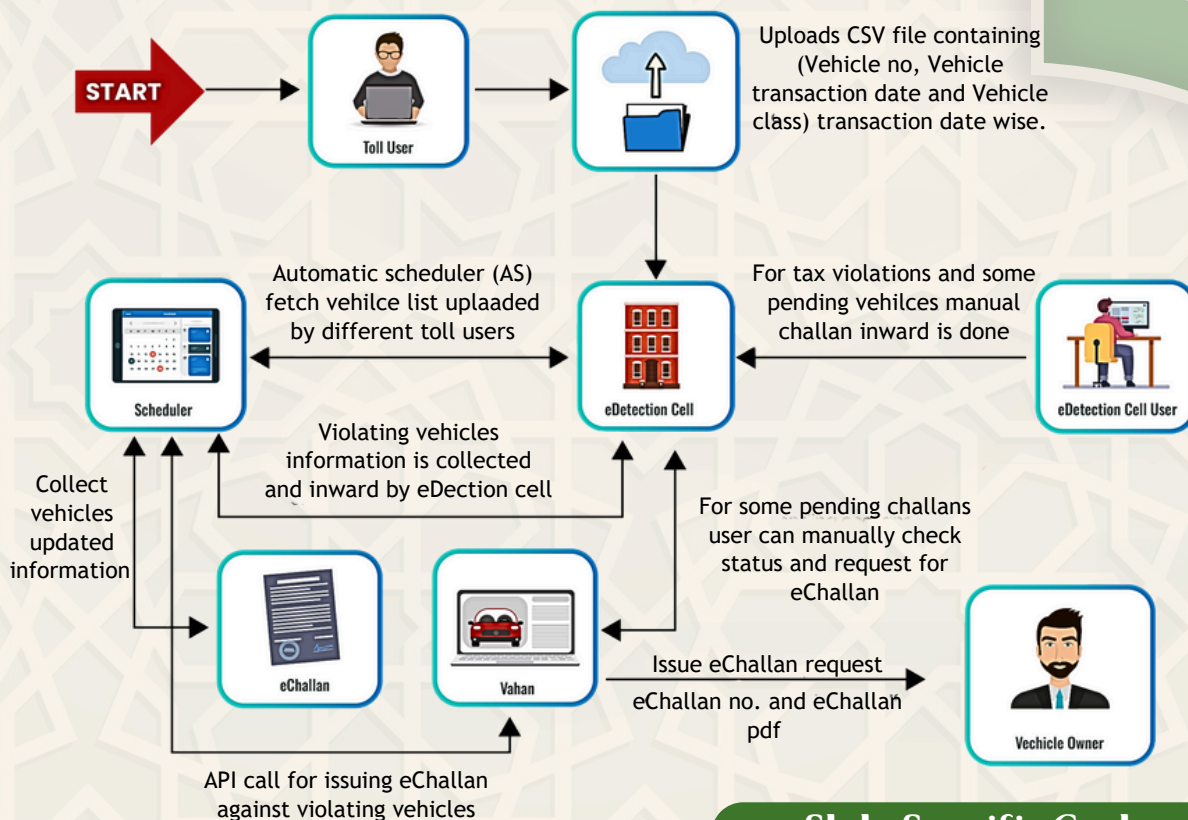
Tracking of theft vehicle

## Methodology

- Data Collection – Toll Plaza user upload the CSV file containing the list of vehicles passed through the tollgate in eDetection portal.
- Data analysis – Scheduler based data analysis and identification of defaulter vehicle using Vahan API.
- eChallan issuance – Automatic eChallan issuance for MV violator vehicles by integration with eChallan System.
- eChallan compounding process – Online fee payment for the issued eChallan in eChallan Portal.
- MIS & Analytics – MIS Reports and Dashboard for Authority.



## Process Flow Diagram



## Implementation Status

- As on it is implemented in 24 Toll Plazas of NHAI in Odisha issuing more than 155K+ eChallan in 1.9 Year.
- It is implemented in 22 Toll Plazas of NHAI in Chhattisgarh and 37 ANPR Cameras issuing more than 73K+ eChallan in 1.5 Year.
- Implemented in 33 Toll Plazas of NHAI in Bihar issuing 25K+ eChallans in only 1 month

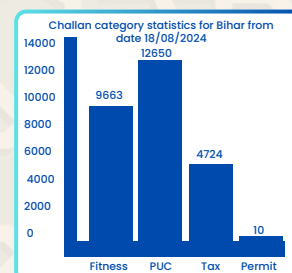
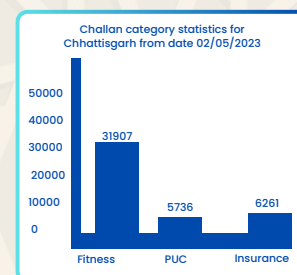
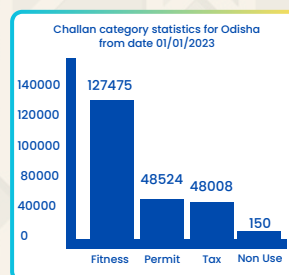
## Way Ahead

- Data Sharing through API
- Development of a Mobile App
- Weigh In Motion Detection WIM for Overload Offence
- Wrong vehicle Class as per vehicle number detection
- Theft/Blacklisted vehicle detection
- Detection of Non HSRP Vehicles
- Integration with VLTD to detect critical offence violators
- Integration with other departments/portal like GST, Mining, Port and e-Waybill etc

## State Specific Customization

State/Offences	Fitness	Permit (PP&TP)	AITP & CHECK POST	NonUse	Tax	PUC	Insurance	Over Load
ODISHA	✓	✓	✓	✓	✓	✓	✓	✓
CHHATTISGARH	✓					✓	✓	✓
GUJARAT	✓	✓	✓		✓	✓	✓	✓
BIHAR	✓	✓			✓	✓	✓	✓

## Statistics



URL :- <https://vahan.parivahan.gov.in/eDetection>