GPS BASED VEHICLE TRACKING SYSTEM FOR SCHOOL TRANSPORT FACILITY

1. Name of the Initiative:

GPS based vehicle tracking system for School Transport facility

2. Objective (Need of the initiative or challenges faced before the implementation of the initiative)

- Centralize monitoring of transportation program
- Real time tracking of vehicles through GPS
- To stop over speeding
- To ensure parents about safety of their children
- To get alert if something goes wrong with vehicle during students transportation

3. Coverage of the initiatives (Details of coverage of the targeted population eg. State, District, block, cluster, school, student, teacher, parents etc.)

The beneficiaries of this initiatives are Students, Parents, School management and administrative authorities at Districts & State level. At present, more than 1.4 lacs students from 2600 nos. of schools, in all 259 Talukas / block level across all the 33 districts & 4 corporations from the Gujarat state are covered under this project. This numbers are increased day by day.

4. Description of the Initiative including innovative aspects of the solution

A Web Based Online System with Mobile Application was launched to ensure the safety of children during transportation being provided to children in need. This helped in improving quality of support provided to children through technology-based solution. The application was deployed for tracking of vehicles through GPS & real-time monitoring of Driver behaviour, restricting misuse of vehicles, number of students getting benefitted, etc. Currently, after the development of the application and its deployment the stake holders are benefitted with following features on real time basis:

- SMS alerts when school bus reaches or leaves school premises.
- SMS alert when school bus is just one stop away from their location for pickup or drop thereby saves their time from unnecessary wait for bus.
- Various reports of school bus i.e. Average speed, top speed, Tracking History with route map, etc.
- Monitoring of unsafe driving of drivers and get over speed alerts.
- Planning the bus routes better, saving money and ensuring smooth and quick rides to the destinations.
- Geo-Fence: a virtual area or boundary of certain territory. If vehicle goes in or out of that area, then it will alert with SMS.
- Multiple mobile numbers can be authorized in who can get alert messages.
- Over-speed alert

- Travel History with route map

5. Date of Launch of the initiatives/ Start date of the initiative

1st October 2017

6. Implementation details (Process followed for deployment/implementation)

A mobile application to capture the relevant details has been developed. Mobile app can be used for GPS tracking instead of GPS devices. Vehicle tracking system will be integrated with SSA developed Transport application.

- Driver has to download the app in his mobile. They must register themselves with school.
- Driver will have to insert detail with school code / school name, driver detail, vehicle type and vehicle number.
- OTP will be received on Driver's as well as Principal's mobile no.
- Head teacher must enter beneficiary students updated details with address and parents contact number at very first time.
- In many remote places, internet connection is an issue. The mobile application saves data locally and sync with server once internet is available.
- Tracking happens only during school hours. Ex. A two hours' window could be set for the school start time and end time and location tracking will happen only during these hours.
- If driver or vehicle will be changed then driver must have informed to the informed to the school and head teacher will send SMS to parents for the update.
- Vehicle replacement can be updated by head teacher.
- If driver is change then new driver must be register himself as new registration.
- Mobile App has been designed and developed for Android and iOS. Mobile App is compatible for latest OS of Android 6.0 and onwards. For iOS it is compatible with iOS 7 or above.

7. Challenges faced during the deployment/implementation

Initially for this transport facility being provided, the required details pertaining to the number of beneficiary students, number of vehicles, schools name of drivers was required to be maintained physically at various levels & also to ensure the authenticity of the data being submitted and maintained was a big challenge.
During deployment of the Application, Training was required for all Drivers on use of Application & data management. The same was decentralised at SMC / Cluster level for batter implementation.

8. Outcomes/Impact of the initiative

The state wanted to ensure the safety of children during transportation. To improve the quality of support provided to children who are not finding schools nearby their living

location, a vehicle tracking, and monitoring system was deployed. The system covers following,

- Centralize monitoring of transportation program
- Real time tracking of vehicles through GPS application
- To stop over speeding
- To ensure parents about safety of their children
- To get alert if something goes wrong with vehicle during students transportation
- Decreasing dropout rate, Increasing attendance rate
- Completion of elementary education
- Benefits for the children of deprived group and children of slum areas' regularity in class attendance
- Benefits for Children living in forest, scattered areas, desert and border areas
- Safety of students
- Driver behaviour
- Stop misuse of vehicles
- Real time monitoring of how many students actually getting benefitted
- SMS alerts when school bus reaches or leaves school premises.
- SMS alert when school bus is just one stop away from their location for pickup or drop thereby save their time from unnecessary wait for bus.
- Various reports of school bus i.e. Average speed, top speed, Tracking History with route map, etc.
- Monitoring of unsafe driving of drivers and get over speed alerts.
- Planning the bus routes better, saving money and ensuring smooth and quick rides to the destinations.
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- Multiple mobile numbers can be authorized in who can get alert messages.
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  Travel History with route map

9. Documents/media related to initiatives (Submit any of the below as a documentary proof with short description on the same)

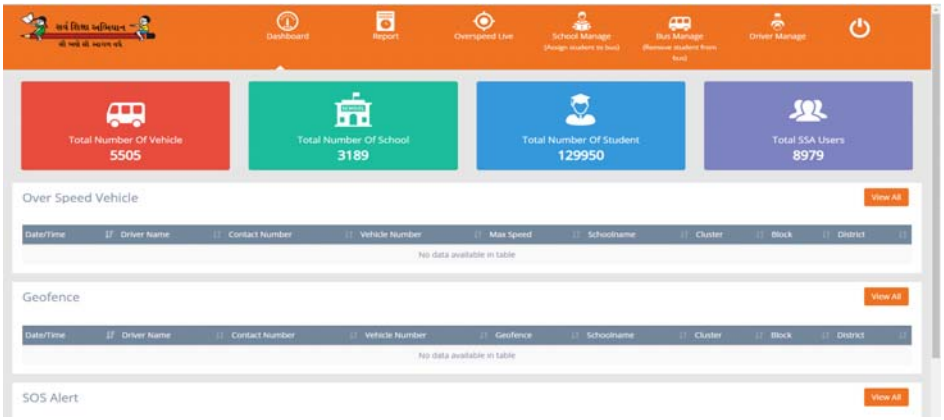
a. Testimonials

b. Quotes from stakeholders

c. Press release

d. Video/Audio

e. Photos



f. Others