**Topic Name** – Energy Efficient Smarter Travel

**Abstract** – A smart city is a cluster of small localities which use technology to solve various day to day complex engineering problems. The problems include vigilant energy consumption, pollution control, lessening the emission of green-house gasses, smarter ways to travel, parking space constraints etc. The project described here solves the parking problem of daily office going workers. The idea is to make commercial use of the personal vehicle of an employee which is parked in the company parking area.

When an employee arrives at his workplace, he parks his car at a certain parking spot. As there is a space constraint in smart cities, not all employees will get a parking spot for the entire day. When the employee parks his car at a spot, he can leave the car for any commercial use for a transport seeker. The transport seeker can approach the car parking lot and using his authorized access car, unlock the car and take a ride to his desired location.

The employee’s car is connected to his mobile device using the Internet-Of-Things concept. The employee receives an alert on his mobile device that his car has been taken by a transport seeker for a ride. The transport seeker is able to enter the ride details on his smart phone with the parameters like source, destination, path and duration. The same details are visible on the smart phone device of the car owner (employee).

When the ride details are filled in by the transport seeker, the system performs a check of all the other transport seekers who need the same route for the same duration. These transport seekers are notified of the current location of the car using the car’s GPS facility and the primary transport seeker who is currently driving the car is notified where the other transport seekers are located using the GPS facility on the smart phones of the transport seekers.

At the end of the ride, the total amount in dollars is split across all the transport seekers and the car owner is notified with the same.

**The following real life issues are solved by this solution** –

1. Parking space wastage is solved. Now there will be sufficient parking space for all the cars of the employees.
2. As a car pool system is used, the amount of carbon emission is reduced. This is in conjunction with the basic fundamental of a smart city.
3. Commute becomes easier for all the transport seekers.
4. As technology is used in solving this engineering problem, it is a safe and authentic mode.
5. The employee’s car is making money, instead of just being parked in a parking spot for the entire day!