

Geo-enabled solutions for improving urban road infrastructure management

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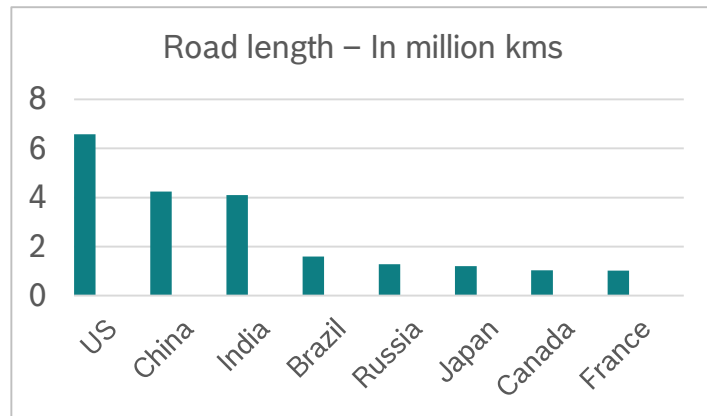
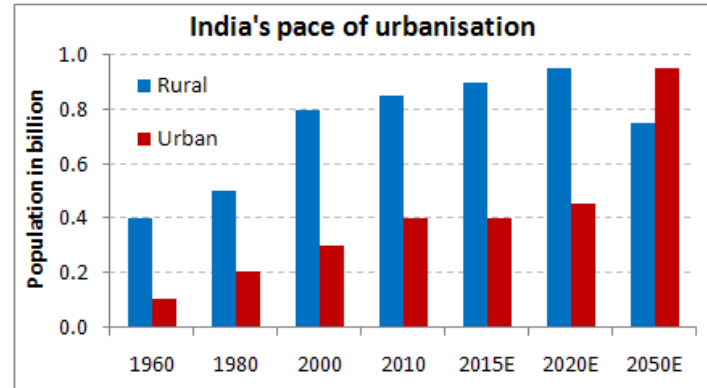




Urbanization – More people, More vehicles

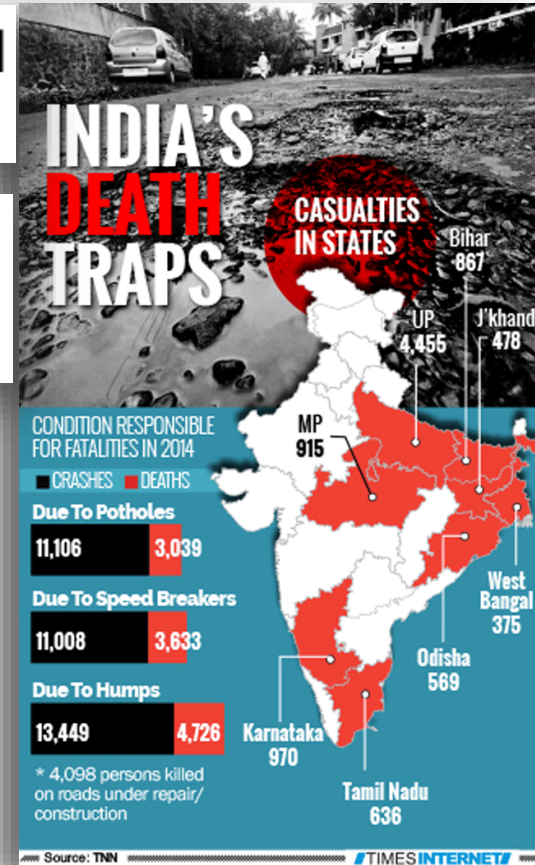
Result

- Traffic congestion
- Fuel wastage
- Pollution
- Accidents
- Poor road quality



Pothole kills 25-year-old woman, 3rd victim in a month

BENGALURU: A 25-year-old employee of an IT firm riding pillion with her husband was killed after their scooter skid on a pothole on an east Bengaluru flyover on Thursday night. This is third death caused by the city's notorious potholes in less than a month.



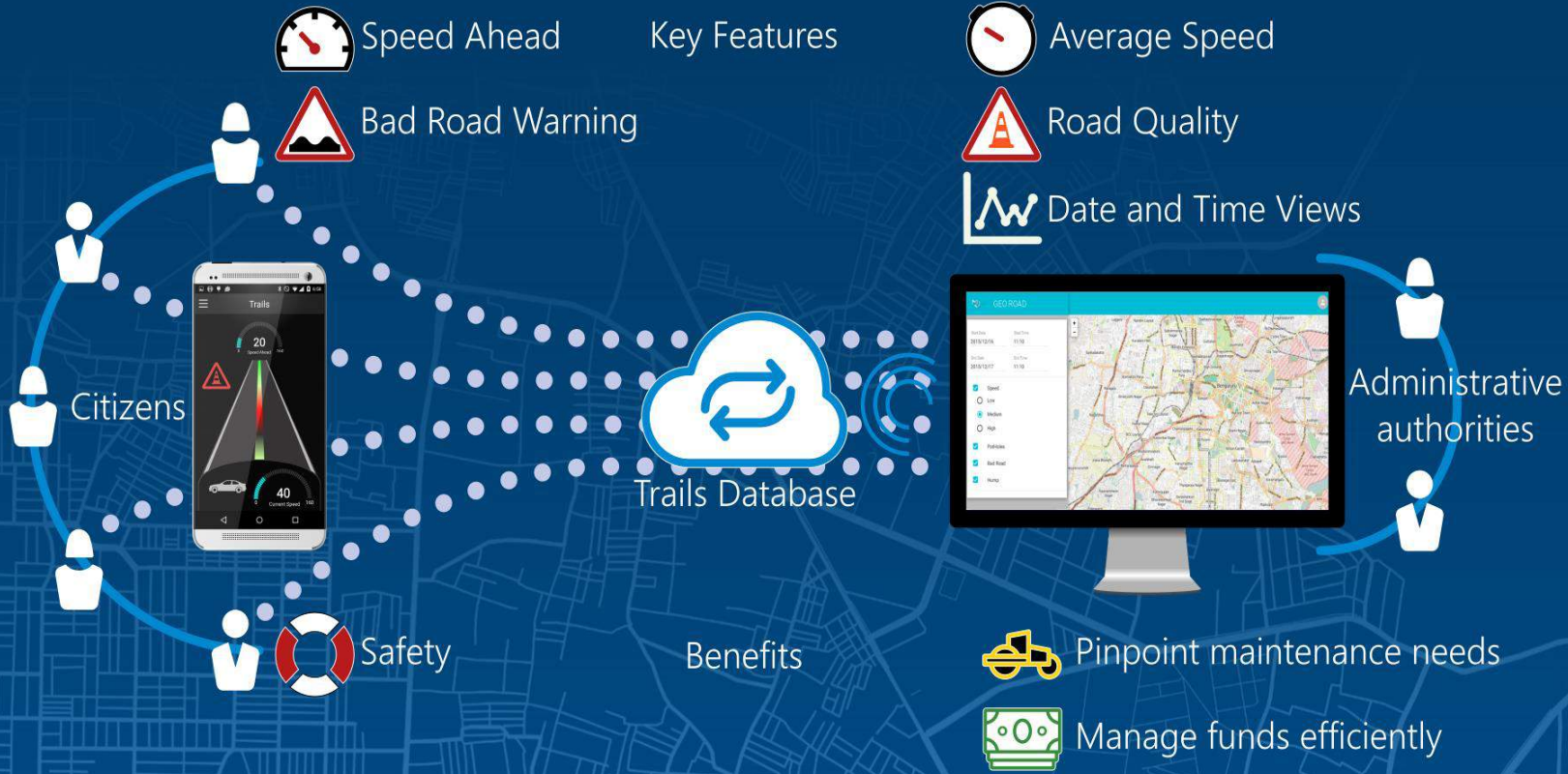
Road maintenance



Challenge: Limited resources

Trails

Aggregation and analysis of road condition through crowdsourcing

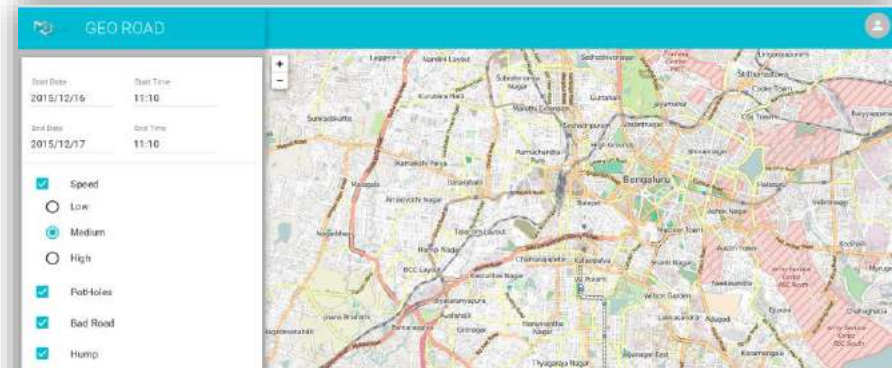
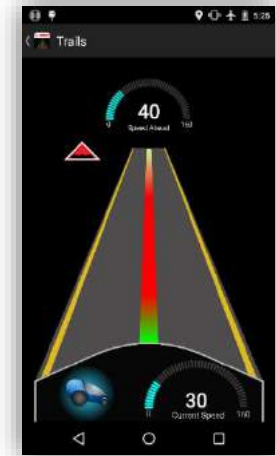


Citizen

- Motorists gets alerts on bad road conditions

Administrator

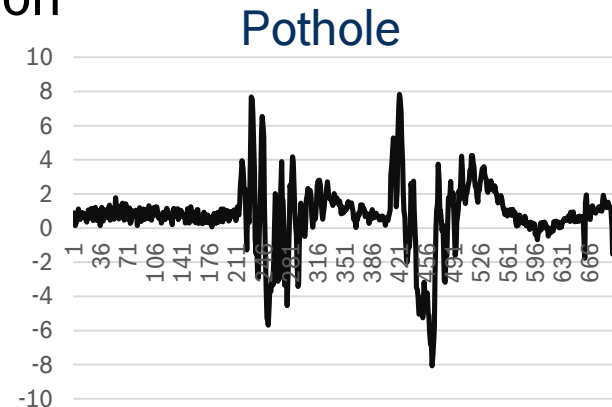
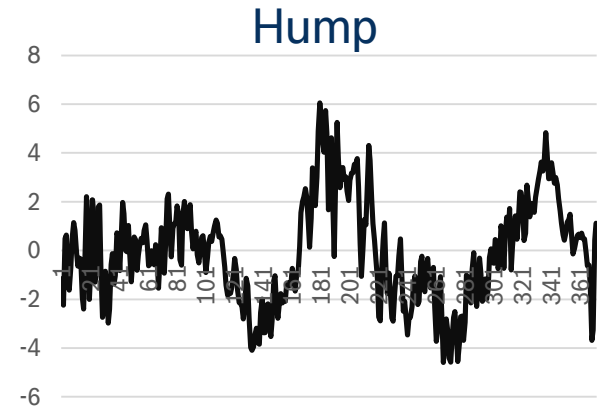
- Identify road stretches with low average speed
- Pinpoint locations that need maintenance
- Identify congestion locations



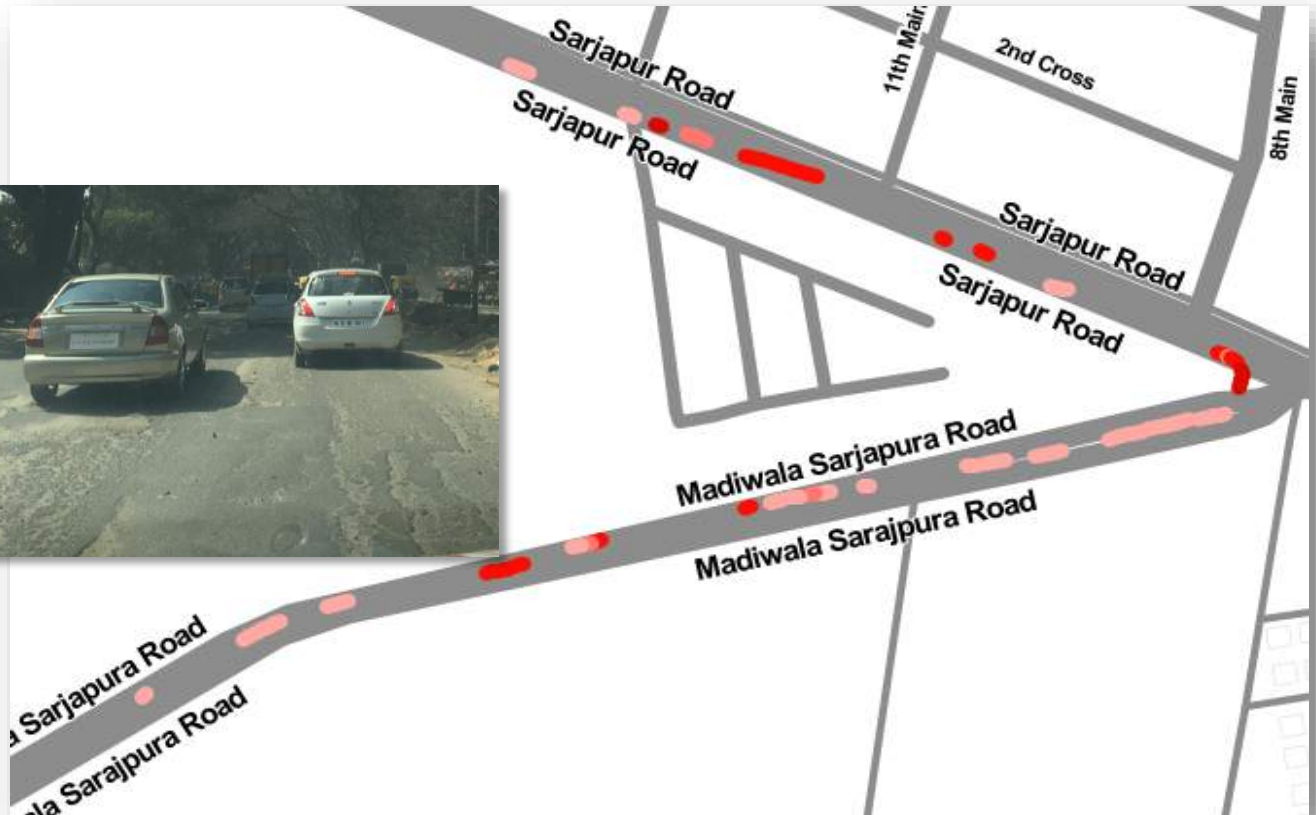
Solution benefits citizen and administrators

Challenges

- Resource constraints on smartphones
 - Limited memory: Optimized geo-data storage
 - Low computing power: Efficient algorithms and configurations
- Data privacy: Data modelling and encryption
- User management: Federated login



How it looks





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