Railways Getting SMARTER

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AGENDA

- **Real Time** Train Information
- Satellite based 2-way Com for Indian Railways (IR)
- Railway Display Network (RDN)
- **Monitoring** IR Infrastructure

Improving the **Operational Excellence** of the behemoth INDIAN RAILWAYS
Real Time Train Tracking

• Get real time train **location** and **speed** with **time stamp**
• Tracking of train in between two stations
• No manual intervention required
• **GPS+GSM+Wi-Fi** based equipment for locos & coaches
• **RFID** Tags for Wagons
• Get location from GPS satellite and upload data to cloud through GSM/Wi-Fi/RFID Receivers
Applications & Benefits

- Assisted Loco Troubleshooting
  - Fuel consumption data analytics: section/train wise
  - Emergency messaging, incident operations
- Real time health monitoring for Predictive Maintenance
- Inventory Control for better asset utilization
- Policy Initiatives & Process Optimisation
- Informed Decision Making
- Increased performance, efficiency and quality
• **RDN** at 2175 railway stations across 5 categories by 2019
• Display *railway information, revenue generation content* and *non-revenue information*
• **Self-sustainable** model through contextual advertisements
• Capability to integrate with relevant *social media*
• Integration with *National Train Enquiry System*
• **Centralized & Customized** *Railway Information System*
• **Core Layer**: Long Haul

• **Aggregate Layer**: Short Haul

• **Access Layer**: Very Short Haul, ME switch at every controlled post for integration

• **NMS**: Private IP & Application-wise VPNs

• Railway Infrastructure can be inventoried using GPS and integrated to OFC backbone network to upload data to Central Server

• Relevant **Insights** from Raw Data to meet objectives like information to gang man, LC gate
Thank You!

Batasia Loop of Darjeeling Himalayan Railways

References & Courtesy:

#GWF2017 www.geospatialworldforum.org