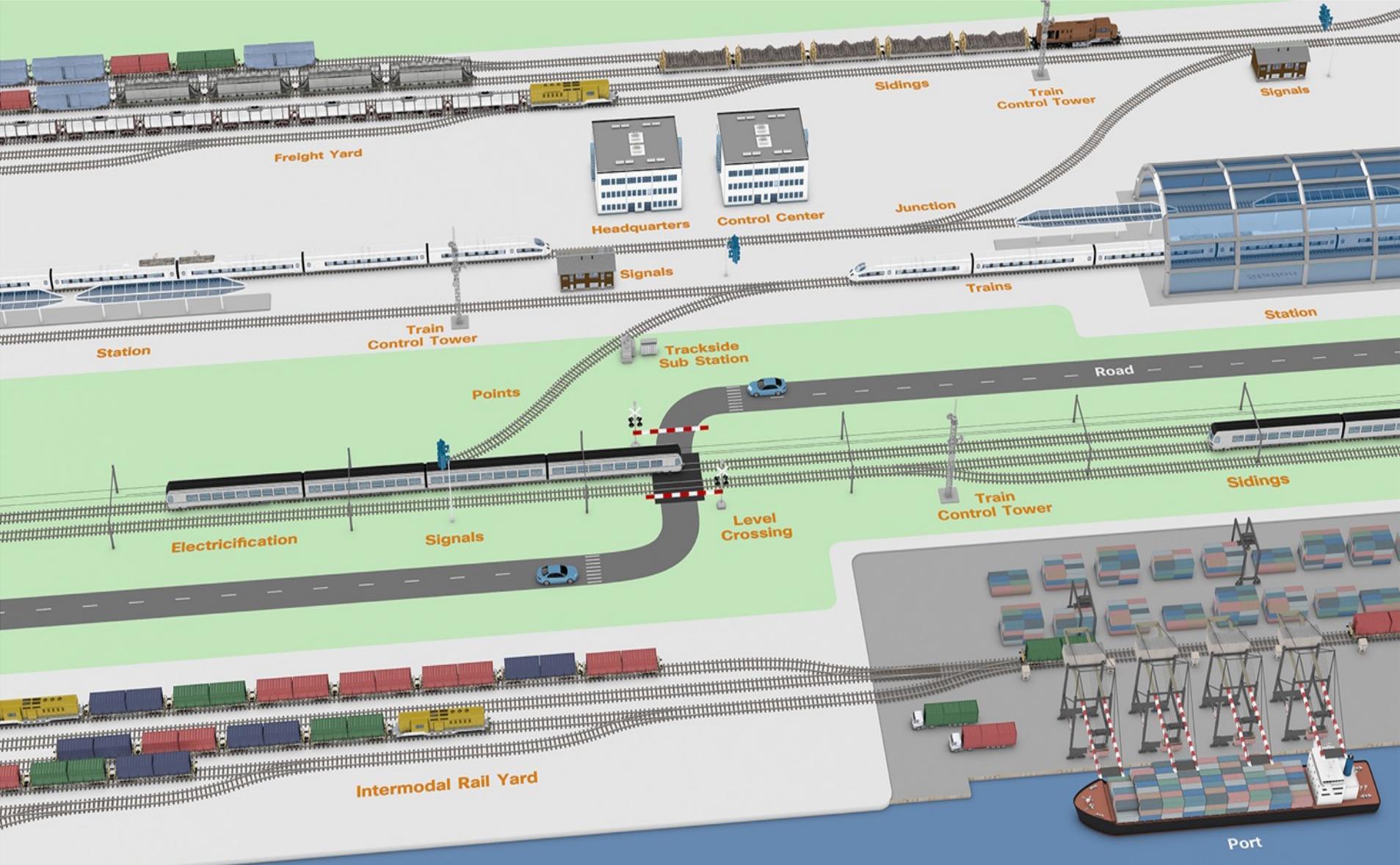


Connected Rail – Use Cases
(Discussion for ITS BOF)
Buenos Aires, 6th April 2016

Sri Gundavelli (Cisco)

Connected Rail



Connected Rail – Use Cases

- **Smart Integrated Ticketing**
- **Automated Fare Collection**
- **IP Video Surveillance**
- **Passenger Wi-Fi**
- **Other Train Control Systems**

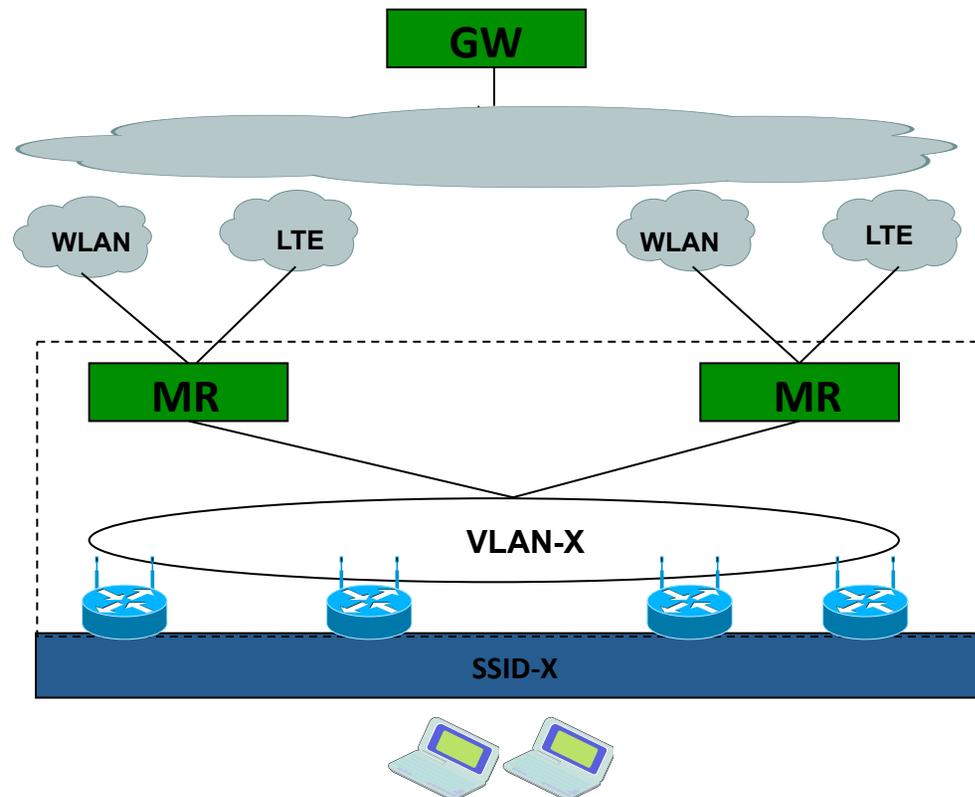


- **Paging**
- **Emergency Communications**
- **Location-based services**
- **Automatic Vehicle Location**

Mobile Router Redundancy

1

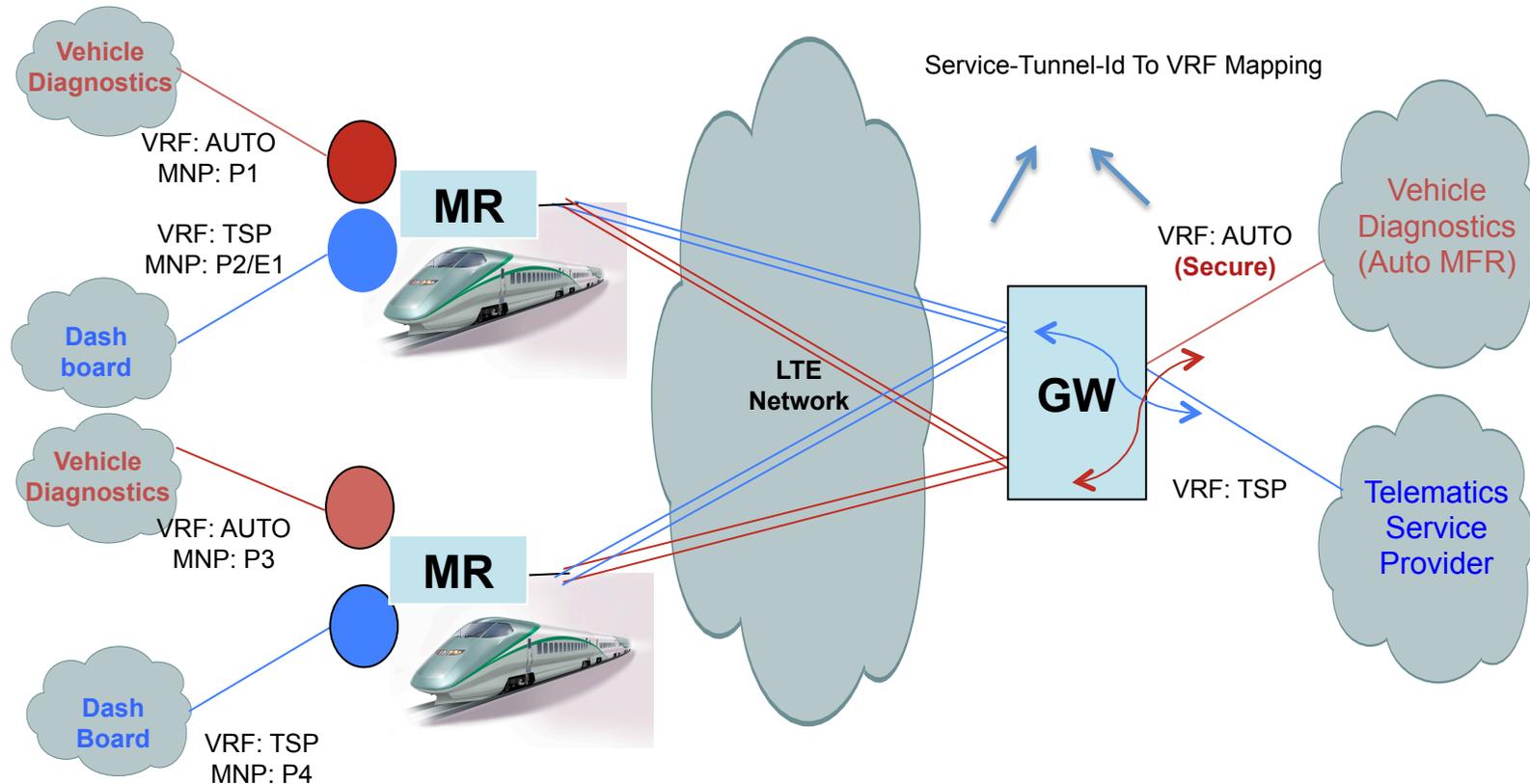
- Each Car of the train has multiple mobile routers. Each mobile router has multiple egress links. There should be approach for load-balancing the routers and links efficiently.



Virtual Private Clouds

2

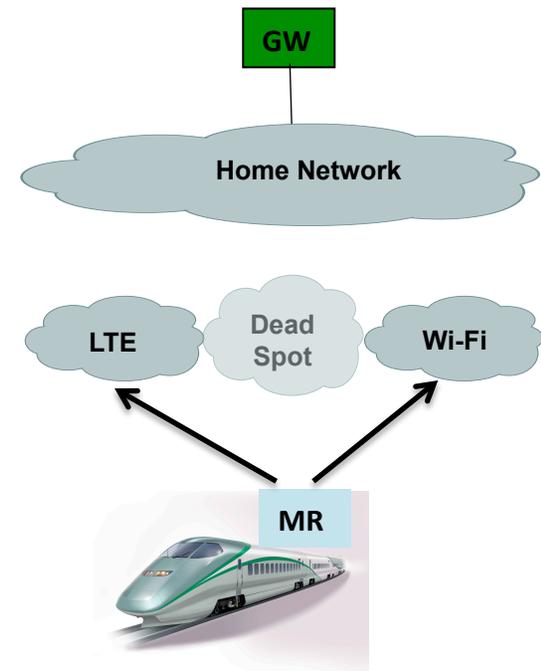
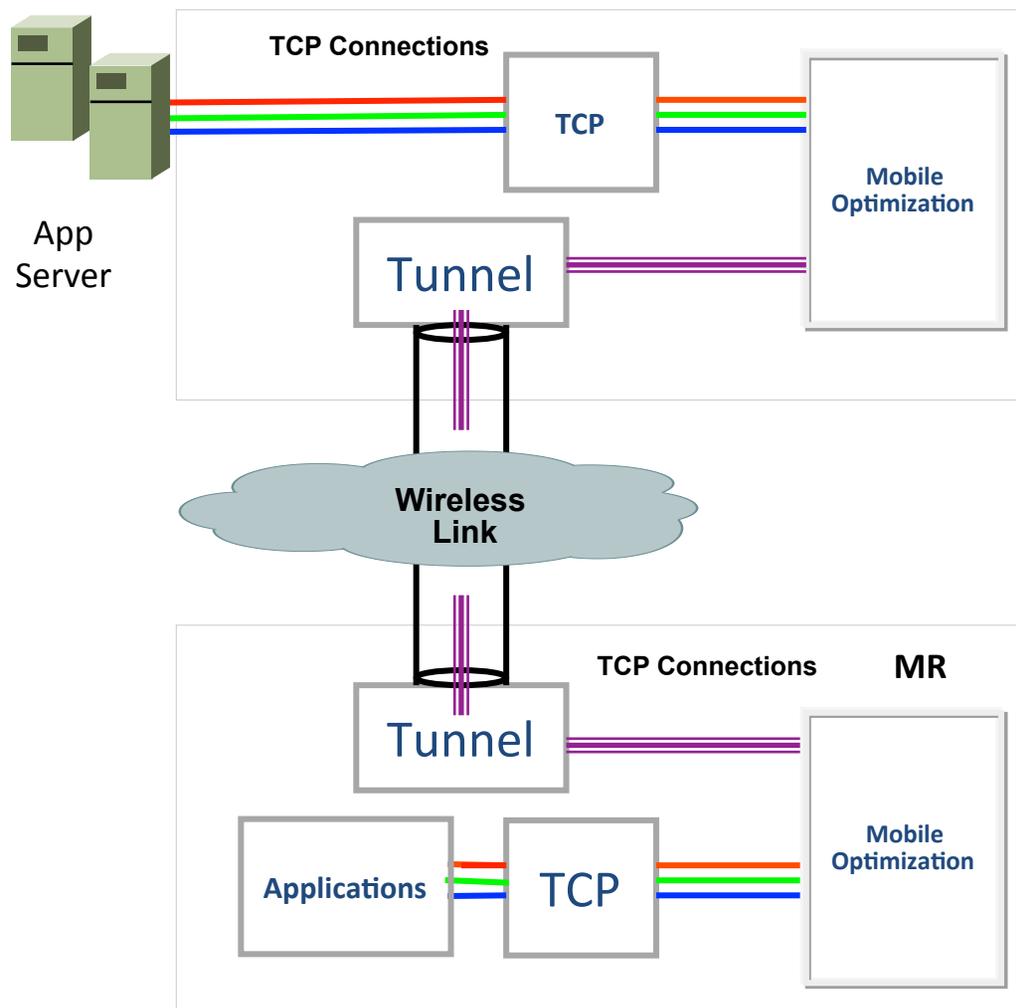
- There needs to be logical separation of the vehicular diagnostic traffic from user traffic. Diagnostic traffic is routed to the manufacturer and the user traffic to the telematics service provider.



Mobile Optimization

3

- TCP flow optimizations for efficient link use, better user experience and for session persistence when mobile router is in blackout areas.



Conclusions & Next steps

- “Connected Rail” is an opportunity for every rail operator. It is a huge market opportunity for both service providers and equipment vendors.
- There are unique technical (mobility / wireless) requirements from this market vertical.
- Request the BOF/WG to identify, analyze and validate the use-cases.