



**ARINC**

**APTA Rail Conference**

**Back Office Shared Environment  
PTC Communications**

**Denny Lengyel**

Vice President

ARINC Surface Transportation & Security

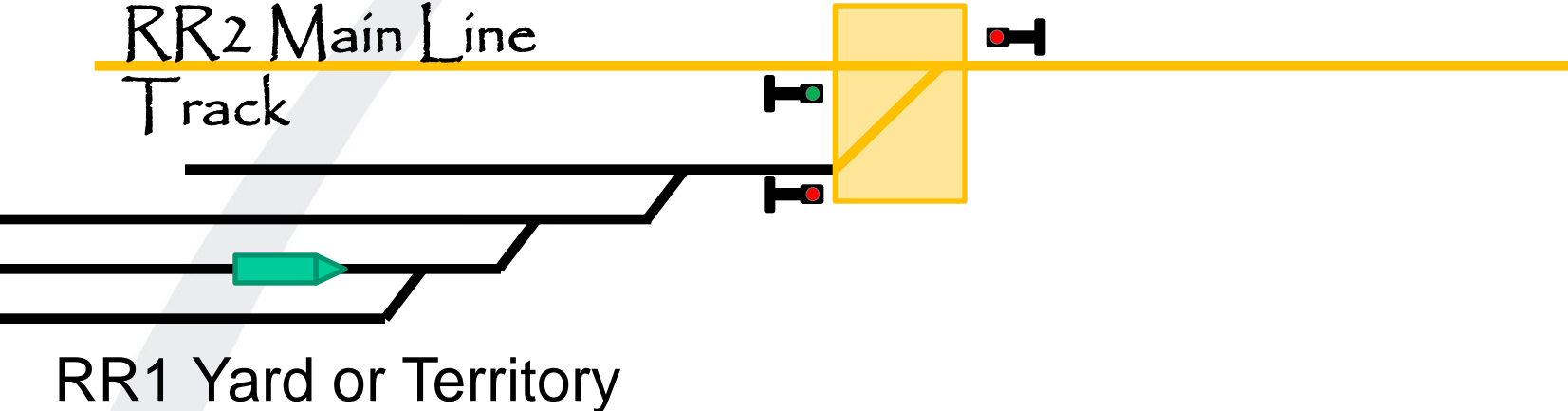
Systems

Annapolis, Maryland

# Topics

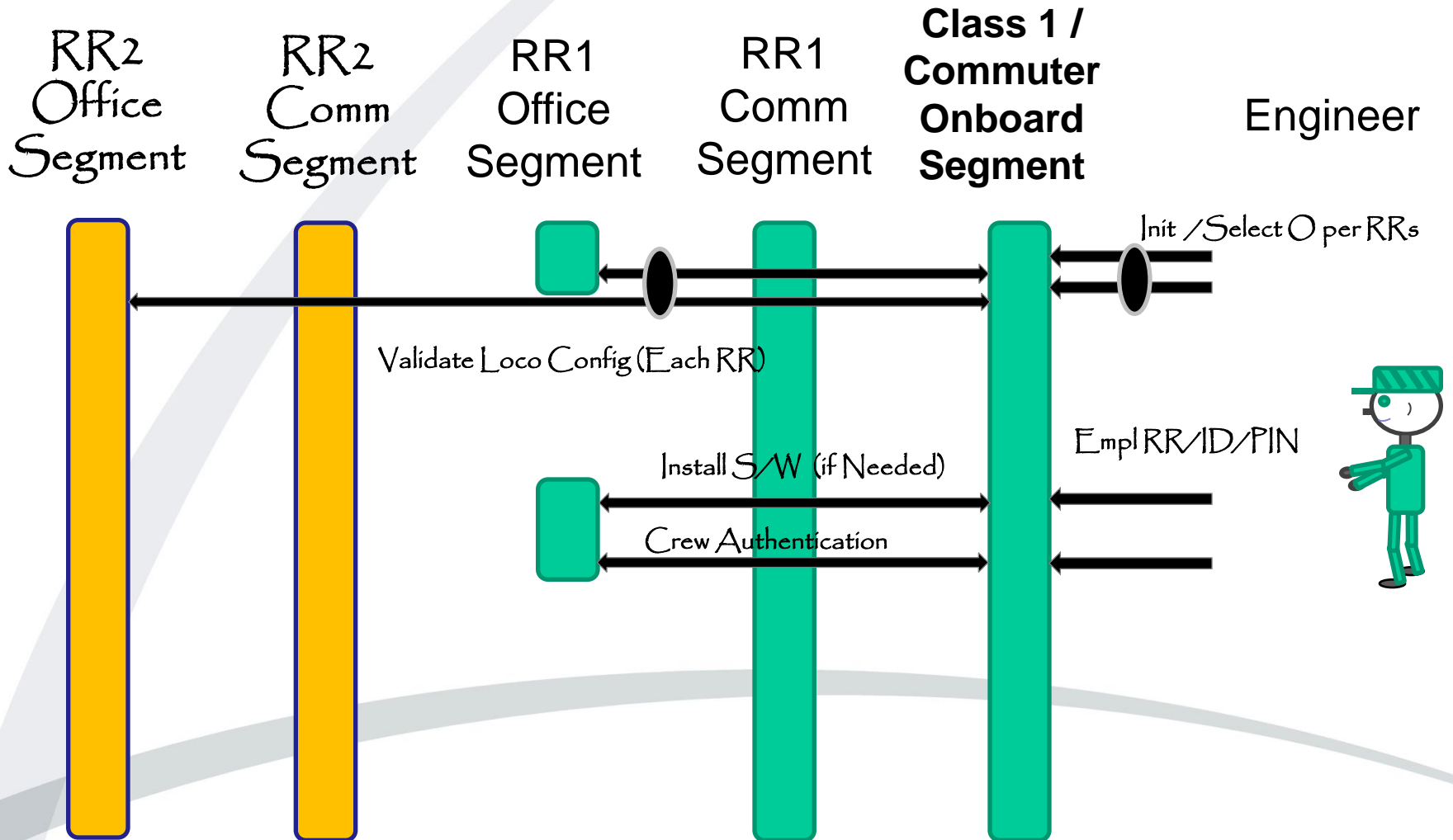
- What is driving the need for interoperable communications?
- Overview of PTC Network Environment
- Shared Back Office Concepts
- Benefits of Shared Back Office

# Need for Interoperable Communications Train Initialization

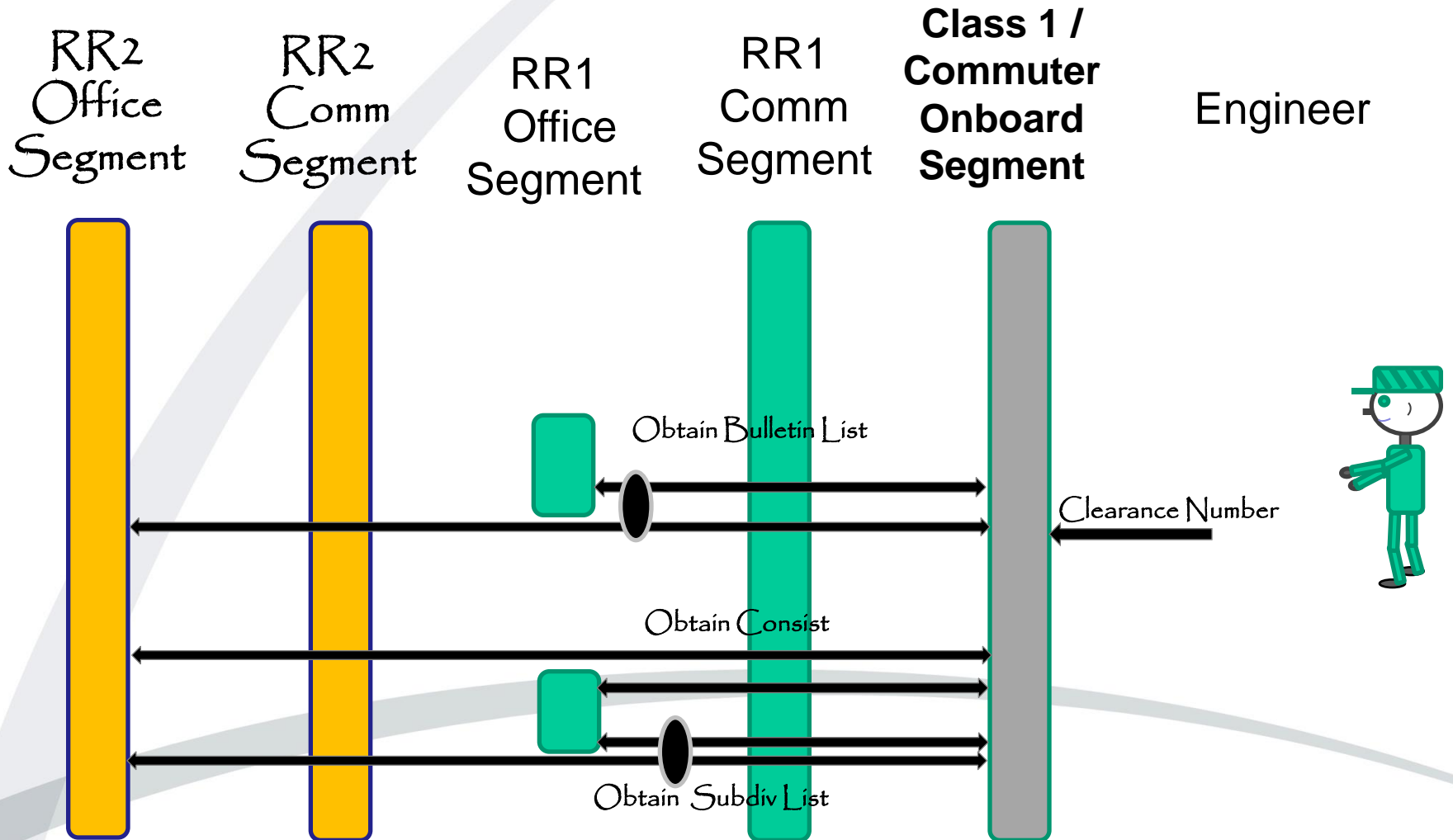


# Train Initialization

## Data Exchange - Administrative

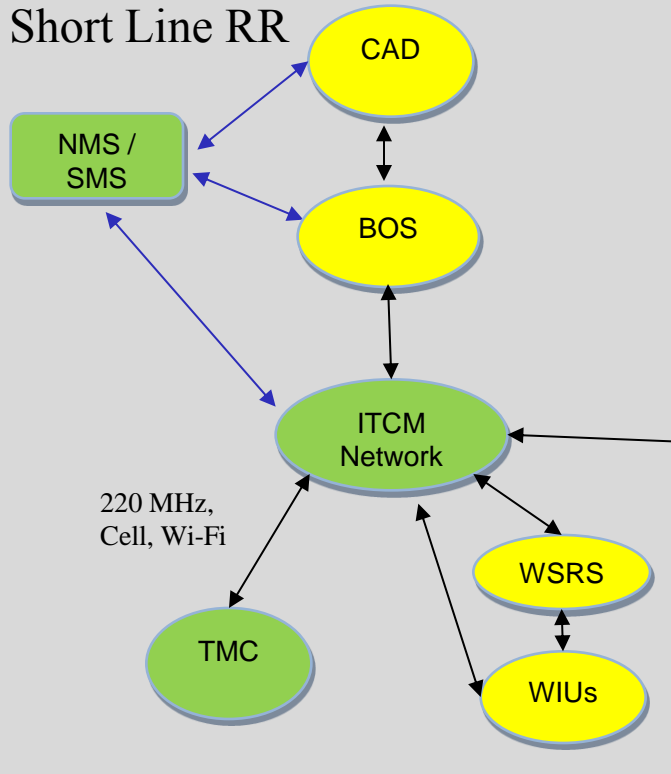


# Train Initialization Data Exchange - Operational

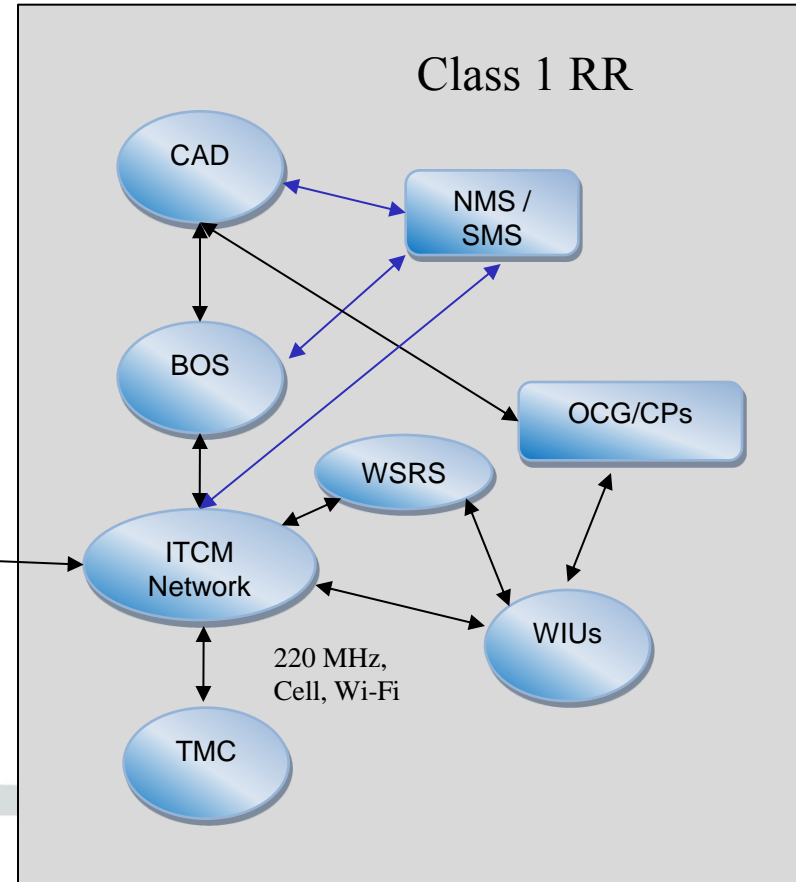


# ITCM Communications Overview

Commuter / Short Line RR





Class 1 RR



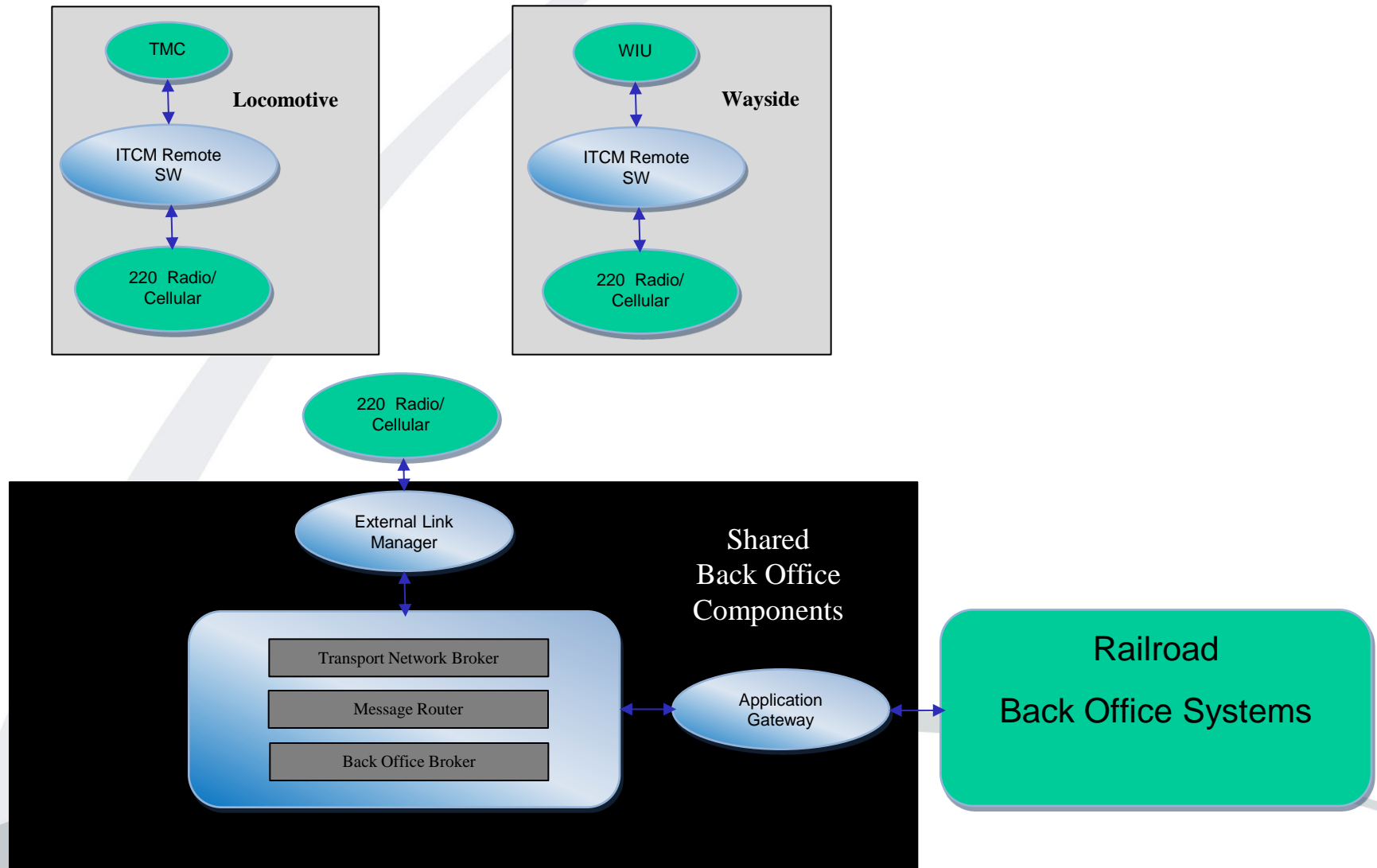
MPLS Connection

Forms-Based Authorities  
Temp Speed Restrictions  
Work Zone Limits  
Advisories  
Train Consist Data  
Control Point Status  
Encroachment Events

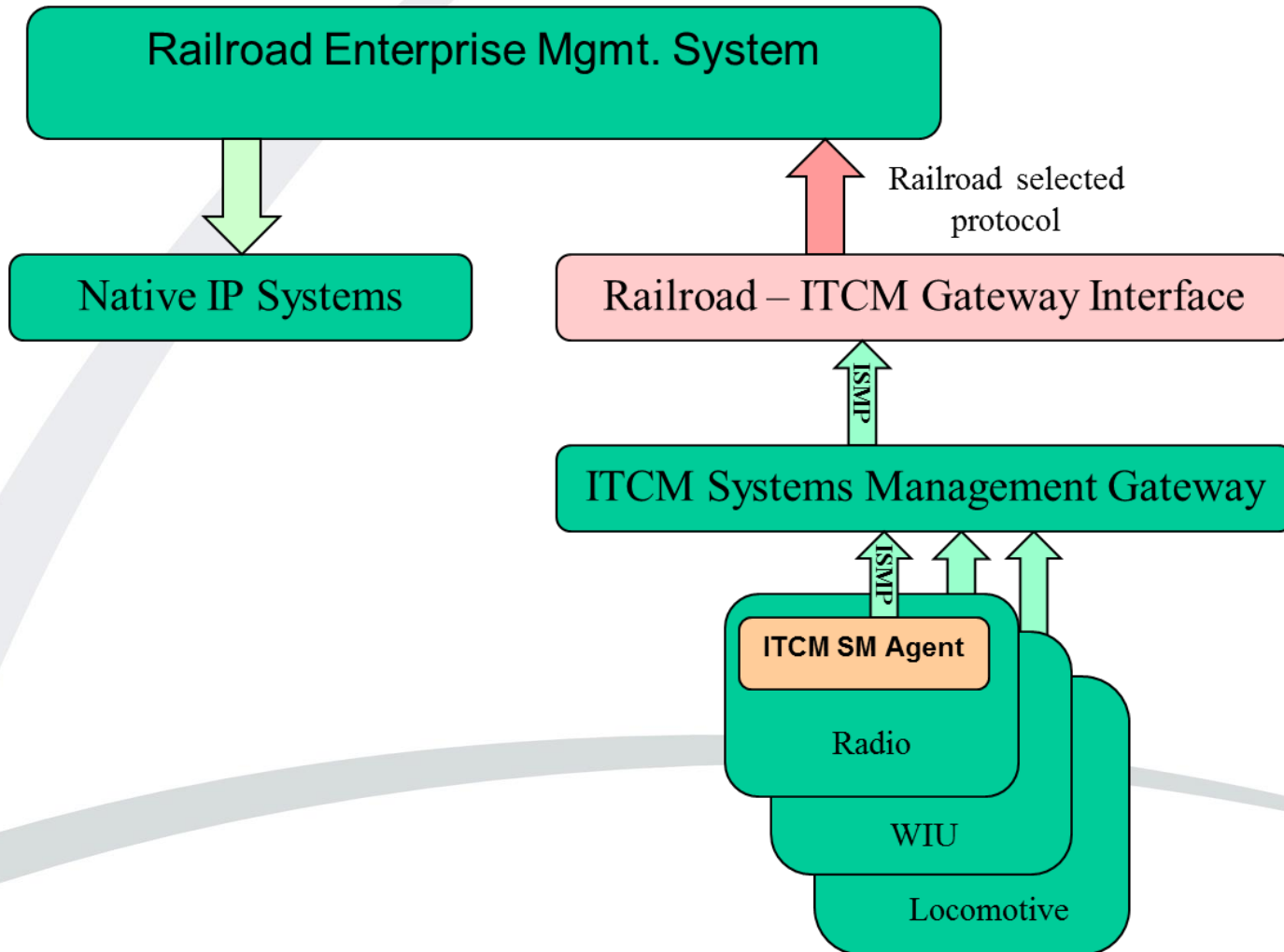
 RRs that operate fleet, office and field

 RRs that only operate a fleet

# ITC Network Building Blocks

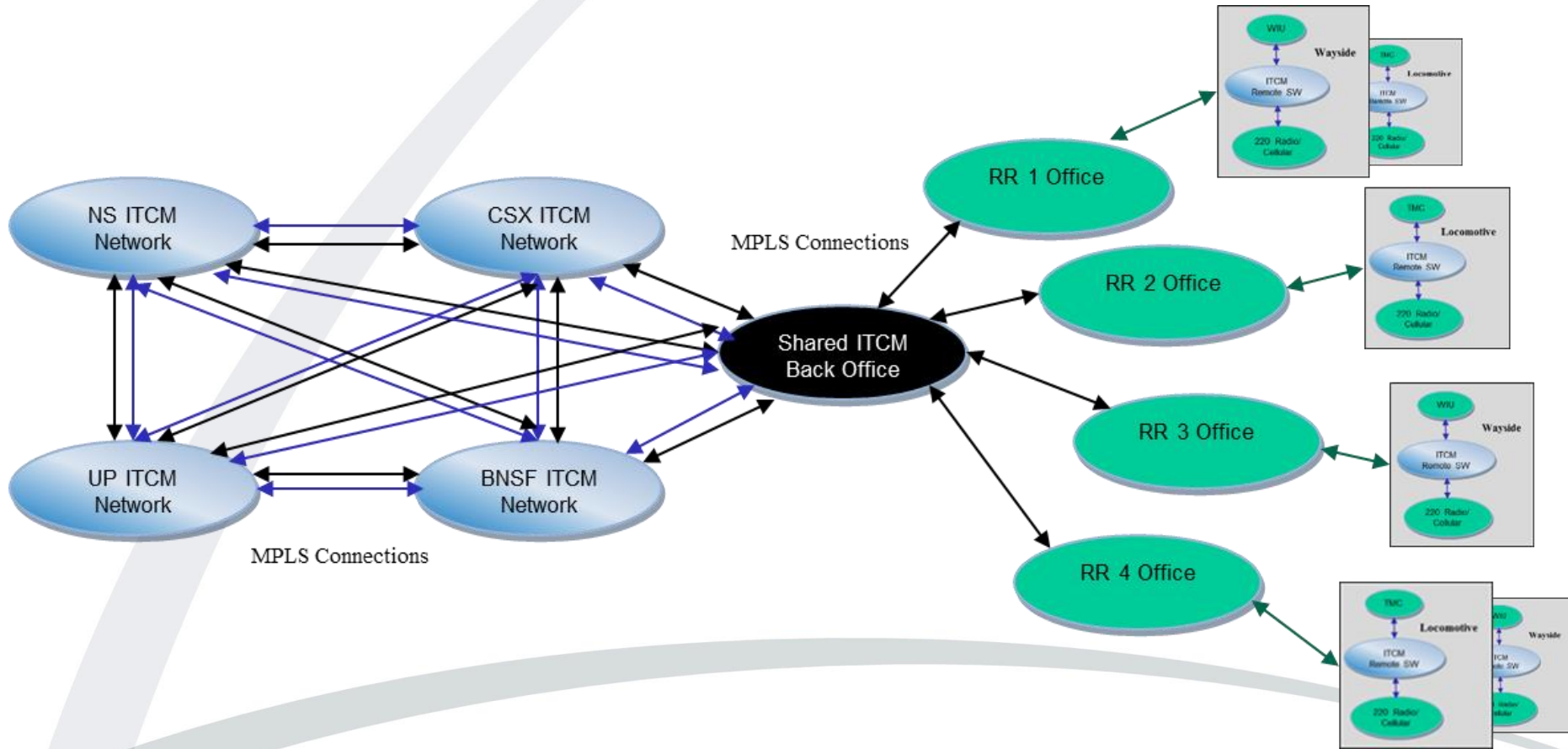


# Back Office System Management





# Shared Back Office Concept



# Benefits of Shared Back Office

- Reduce commuter rail investments in IT human or computer resources required to implement ITCM
- Minimize the efforts required by the commuter and Class 1 railroads to implement interoperable messaging functions among multiple organizations
- Reduce commuter railroad and FRA resources needed for testing
- Training requirements for the commuter railroads would be reduced and allow them to focus on the more operational oriented components of the PTC
- Simplify the configuration management problem – a single IT staff focused on keeping the ITCM messaging software current for all user agencies