

# **Track Asset Management**

Track Maintenance and Capital Renewal Program Optimization

### **Steps to Asset Management**



# Inventory

#### Georeferenced network

- Track network
- Track class
- Curvature •
- Tonnage
- Geography
- Climate



### 2 Condition Assessment



### **Objective tie** condition rating

- Tie cracking
- Plate cut
- Broken ties
- Fastener status
- Adjacent tie condition
- 3rd party condition data

Repeatable **Individual Tie Rating** 







3D laser image from RailAI<sup>™</sup> platform



Tie condition assessment from 3D laser image using AI

Leading with Science®

# **Current Requirements**

# Determine requirements to comply with applicable safety standards

- Current condition vs. FRA requirements
  Assessment of good ties in rolling 39-foot sections
- Current condition vs. railroad specific business rules
  - Assessment of bad tie clusters





# Performance Modelling



## 5 Network Planning

### Scheduling major capital renewals

- Balance cost vs. risk
- Balance operating expense vs. capital programs
- Incorporate railroad constraints

#### 🗸 Data Driven

- 🗸 Risk Management
- Manpower and Material Cost Optimization





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