

# FRA's ATIP – Automated Track Inspection Program (December 2023)

## Research to reality

FRA pioneered automated track inspection technology now used by every Class I railroad.

## ATIP fleet

- 3 Staffed geometry platforms (DOTX 216 transferred from MERMEC to ENSCO and is in a transition period)
- 3 Autonomous geometry cars (ENSCO & Tetra Tech)
- 1 Hi-rail geometry vehicle
- 1 Hi-rail ultrasonic rail test vehicle (the DOTX 305 is a new asset for ATIP and is paying dividends)

## FRA has three contractors for ATIP

The two new contracts for operators were awarded in April 2023 to ENSCO and Tetra Tech. (The Tetra Tech vehicle is a contractor-owned, contractor-operated survey car).

ATIP Operations	2021	2022	2023 (Thru 11/30)
Miles Surveyed	152,670	179,442	163,246
Total Exceptions	7,951	9,177	7,640
Safety Critical Exc.	1,898	2,108	1,390

## Data collected by ATIP vehicles support:

- Track safety trend analyses
- State of good repair assessments
- Provide data to railroads for targeted repairs and improved maintenance
- GIS mapping
- Risk analyses
- Manual inspection resource allocation
- Foot-by-foot analyses
- Asset inventory
- Research by various departments, agencies, universities
- Machine learning
- Research and development