

Spectrail

5
PARTNERS



TRL 7
TECH READINESS



18,000km
RAILWAY FIBRE
CABLES



Partners:

AP Sensing, CSA Catapult, Lightricity, Network Rail, Pyreos

CSA CATAPULT ROLE

SENSOR INTEGRATION | DATA TRANSMISSION



Energy Efficient Infrastructure for Network Rail

The Spectrail project will develop a set of distributed self-powered discrete sensors that will interface with existing trackside optical fibre infrastructure providing telemetry over 15 km of fibre. Impact – Demonstration of an intelligent infrastructure that is low-cost, fast to fit, maintenance-free and can incorporate multiple sensing technologies at lower total cost of ownership with minimum disruption to the rail line.

- Industry lead by AP Sensing, incorporating 5 partners.
- Efficient: will reduce delays due to copper cable theft currently at 50-60,000 hours per year = 42 days per year.
- Expansive: will be implemented across 18,000km of overhead fibre cables.
- Field trials at Network Rail Melton in February-March 2020.
- Predict-and-prevent maintenance strategy across many asset types, which can be passed directly to rail users.
- Less disruption to travel due to intelligent rail technology.
- More efficient way to maintain tracks and rail assets.

PROJECT BENEFITS



Reduced maintenance cost



Autonomous sensing



Internet Of Things