CASE STUDY: NETWORK RAIL

DELAYS AND DISRUPTIONS
In 2009, cable thefts were estimated to be costing Network Rail and UK taxpayers up to £16m a year, causing significant delays and disruptions to the network. The London to North West (LNW) mainline was being particularly badly hit by cable thieves, resulting in delay minutes totalling 119,540.

Despite being highly skilled at building and maintaining railways, there was an acceptance within Network Rail that the knowledge required to successfully influence criminal activity on the railway fell outside of their skillset. Invaluable assistance was, and continues to be, provided by British Transport Police (BTP), but a lack of traceable evidence (the means to link cable thieves to the crime) often made it difficult for the police to prosecute offenders. Criminals quickly became all too aware of this, which perpetuated the problem.

A UNIQUE APPROACH
SmartWater® was initially contracted as a specialist partner to tackle cable theft on the LNW mainline and tasked with increasing the traceability of Network Rail’s cable infrastructure in order to deter thefts. Achieving this would not only drive down delay minutes for Network Rail, it would also maximise opportunities for BTP to prosecute offenders by heightening accountability.

SmartWater devised a holistic asset management and security strategy in close collaboration with both Network Rail and BTP. The first step of this strategy involved analysing Network Rail’s route crime data using SmartWater’s Intelligence Portal to identify hotspots, crime trends and emerging threats across the LNW line.

Threat assessments were then carried out by SmartWater Investigators to identify specific vulnerabilities. Not only did this identify cable and other assets at risk of theft, they also provided intelligence on damage to perimeter fencing and access routes used by thieves, trespassers and vandals to infiltrate the railway.

Activity carried out on the rail network included:
- The use of SmartWater covert cameras at access points to identify thieves and trespassers
- Deployment of SmartWater traceable liquids to mark cable at high-risk locations, making it identifiable if stolen
- Regular scrap yard visits to search for SmartWater-marked metals and influence the buying behaviour of scrap dealers
- Equipping police stations with SmartWater detection equipment and providing training on recovery procedures
- Localised advertising (leaflet drops) and media campaigns to heighten awareness.

ACHIEVING RESULTS
Three years on from the launch of the project, the following results were announced by Network Rail:
- 54.7% overall reduction in live cable theft, which increased to 63.5% following the introduction of the Scrap Metal Dealers Act (2013)
- Delay minutes were cut by 54.9% - dramatically reducing the compensation Network Rail had to pay to train operators.
- During the SmartWater project, more than 50 arrests were made by BTP officers, including several organised crime gangs.

TESTIMONIAL
"Cable theft is a serious offence and causes tremendous disruption to passengers and great cost to Network Rail. The work of SmartWater and British Transport Police is one of a number of important methods we are using to deal with cable theft."

Dyan Crowther
Route Managing Director, Network Rail