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# Collaborative Solutions Are the Future

Cisco and Intel are working alongside Network Rail Telecom (NRT) to bring about innovative technological solutions. These provide the necessary improvements to passenger experience and employee safety.

### What It Means to Live in the 21st Century and Beyond

Dating back to the 18th century it was technology and innovation

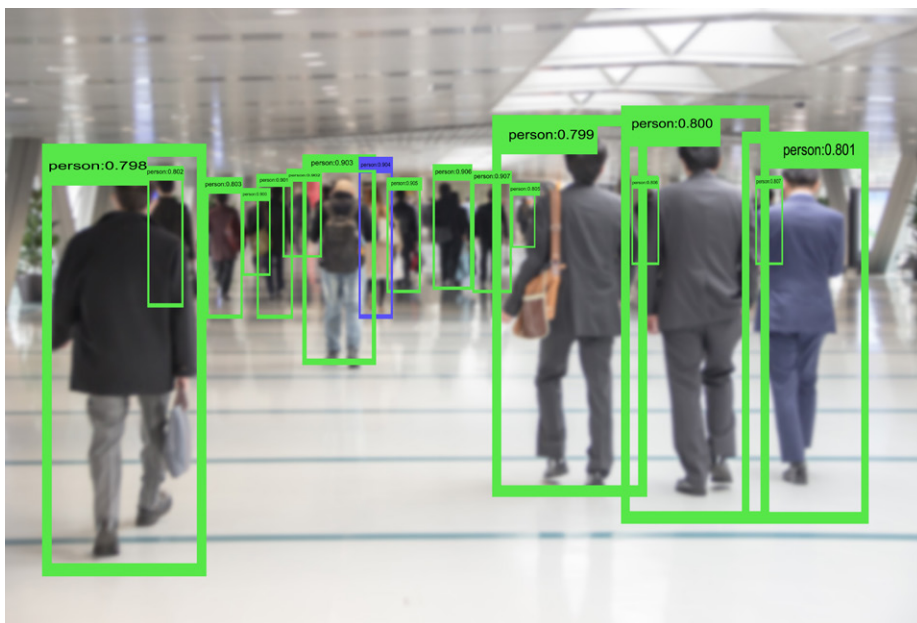
that brought us the first steam train. It's technology and innovation that have brought us to where we are today. And it's technology and innovation that will take us into the future.

As we face a climate crisis, and customer needs and working practices change, the rail industry needs to evolve to keep pace. Working in collaboration we are delivering high-speed connectivity to provide not only a smoother, safer passenger experience, but also a safer and more secure working environment. For the local community this connectivity will bring enhanced retail experience and levelling up opportunities. For

the rail operating companies it brings cost optimisation, greater service efficiencies and further revenue opportunities.

### The Foundation from Which We Build...

Supplying high-speed connectivity for station use and track to train is the foundation of this initiative. With connectivity at the core, you can deploy smart CCTV and sensor technology for use in a proactive and reactive manner. Analytics interpret the data, triggering alerts and initiating reactions to events. This fast response can prevent incidents on the railway in cases such as:



*“Transport has a huge role to play in the economy reaching net zero.”*

**Rt Hon Grant Shapps MP**

- **Crime and security:** Smart cameras and visual analytics can monitor trespass on the line, left luggage, theft and more.
- **Safety and trespass:** Stations can monitor the yellow line ensuring no one steps across, thereby helping to reduce suicide risk.
- **Crowd management:** Smart CCTV analytics can count people on the platform, identify people running or people struggling with mobility and trigger alerts to the relevant service personnel.
- **Maintenance:** Having sensors embedded into the trains provides information on wear and tear of parts, and triggers a maintenance alert when needed.
- **Environmental impact:** Sensors can monitor changing environmental conditions such as crumbling cliffs and shifting sands ensuring such occurrences don't go unnoticed. Likewise, being able to determine temperature and wind speeds helps prepare for weather-related events.

## Next Level Up

Having established a firm foundation, software is able to take information from various data sources (IoT sensors, Meraki MV cameras, backend systems). This software combined with analytical models provides insights into the benefits derived, be that cost, time, or carbon usage. Thus, allowing NRT to demonstrate the real-world impact.

## On Track to Carbon Neutral

Using this technology to monitor the environment and surroundings, tracks and trains, buildings and

offices, NRT can move closer to its ambition of becoming carbon neutral by 2050. This innovative collaboration using Intel processors embedded in Cisco solutions assists NRT in being a more sustainable organisation.

Working together, using both Cisco and Intel labs, provides greater flexibility and speed when it comes to testing and certifying solutions.

## Want to Know More?

Please contact us if you would like to know more about how the technology works or what we are doing with the rail industry.

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**SAFE SECURE SMART  
RETURN TO RAIL  
T R E L  
EVERY PERSON BY STATION**



DELIVERING A BETTER CUSTOMER AND RETAIL EXPERIENCE