

Digital Systems benefits

Digital Systems will help achieve the vision of Future Transport 2056, helping to create capacity across the railway network to meet future demand. The program will improve customer experience by delivering more reliable services, reduced journey times and better real-time information.


Digital Systems will:





What will Digital Systems achieve?

Building upon the safety improvements of Automatic Train Protection technology, this program will replace existing signalling and train control technologies with modern, internationally proven, intelligent systems.

Digital Systems consists of three main elements:

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Replacing traditional trackside signalling equipment with the latest 'in cab' train control technology (European Train Control System Level 2).
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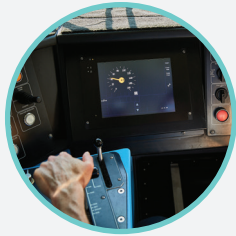
Automatic Train Operation, which assists drivers – who remain in control – to monitor speeds and provide reduced and more consistent journey times.
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Introducing a Traffic Management System (TMS) to help the network recover from any disruption and get services back up and running as quickly as possible.

What is the Digital Systems program and how does it operate?



Complementing Existing Rail Technology



Onboard Equipment

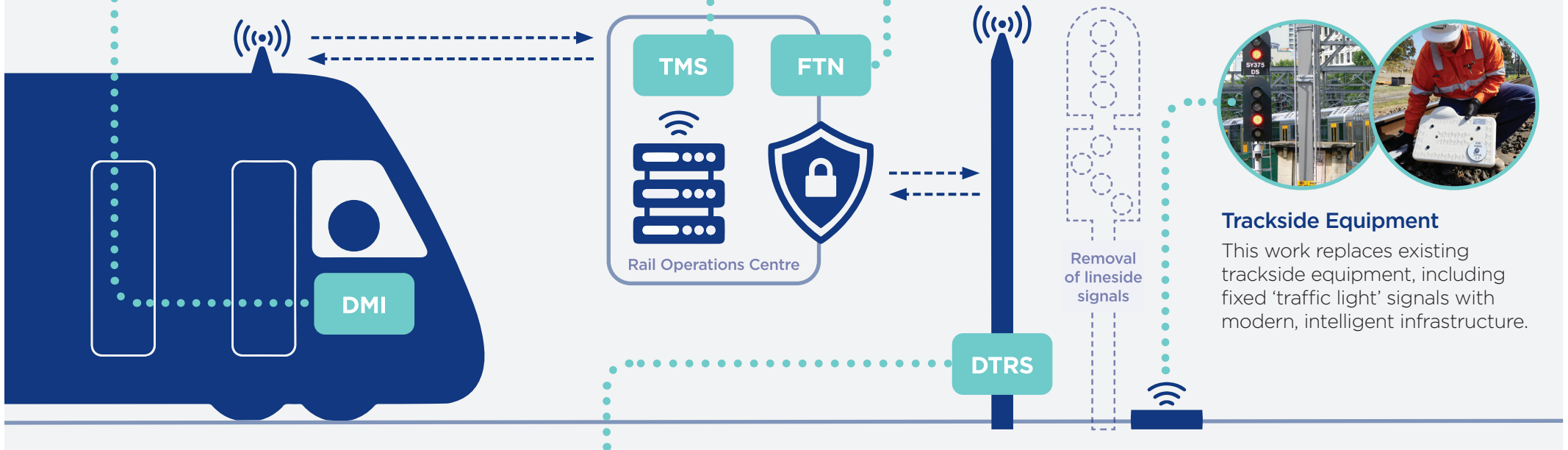
Digital Systems extends Automatic Train Protection (ATP) onboard components to include data transfer between the train and TMS via the radio system. The Driver Machine Interface (DMI) displays information for the driver on the in cab screen, including permission for the train to move, permitted speed and current speed.

Traffic Management System

The Traffic Management System (TMS) will continually monitor the position of all trains across the electrified railway network, helping to ensure the timetable runs as planned.

Fixed Telecommunications Network

The Fixed Telecommunication Network (FTN) is a data communications system being installed to allow information to be sent and received reliably and securely.



Trackside Equipment

This work replaces existing trackside equipment, including fixed 'traffic light' signals with modern, intelligent infrastructure.

Digital Train Radio System

The Digital Train Radio System (DTRS) is wireless technology that allows more effective communication on the same technology platform. Under the program, the DTRS will be upgraded to support reliable data communication between the train and the TMS.

