

Welsh Transport Forum Digital Railway vs Digital Transformation

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Digital Railway



The digital railway programme will...

Manage and control trains better

We can **safely and cost effectively** cater for increasing demand for rail travel and freight paths, automating control of trains to smooth the flow and **improve performance**.



It also enables the industry to...

Manage our physical infrastructure better

The system provides data that can be used to operate and maintain these assets in a **predict and prevent** way, aligning with the future operating model for how the industry will work together to maintain and operate the railway.



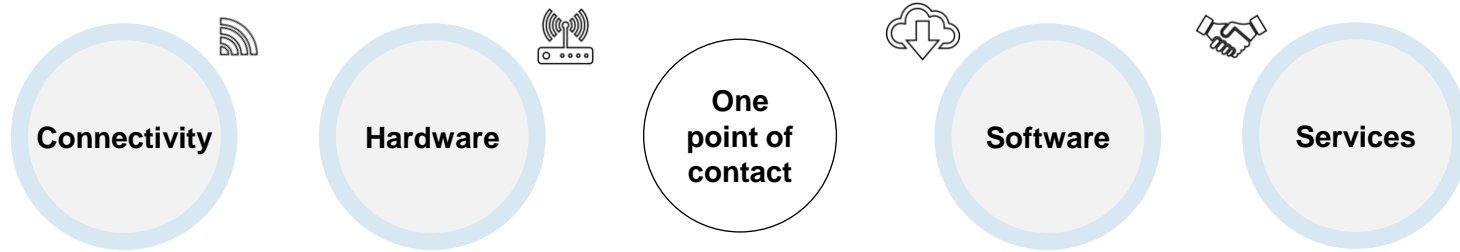
Provide better information

The open data generated by a digital railway will allow other parties to provide **better, more targeted information** about delays. It will provide greater level of real-time detail about the locations of trains between stations.



Our Vision

“Deep environmental understanding across infrastructure and technology with an ability to bring intelligent solutions to help the customer delivers its vision from concept to delivery and maintenance”



What we can deliver

Integrated trackside
connectivity

System Integration
CCTV, PIS, APC, Data

Intelligent
Operations

What you can gain

Customer Risk Mitigation

Improved User Experience

Operational Efficiencies

A Better Life, A Better World

WHY DELIVER DEDICATED CONNECTIVITY?

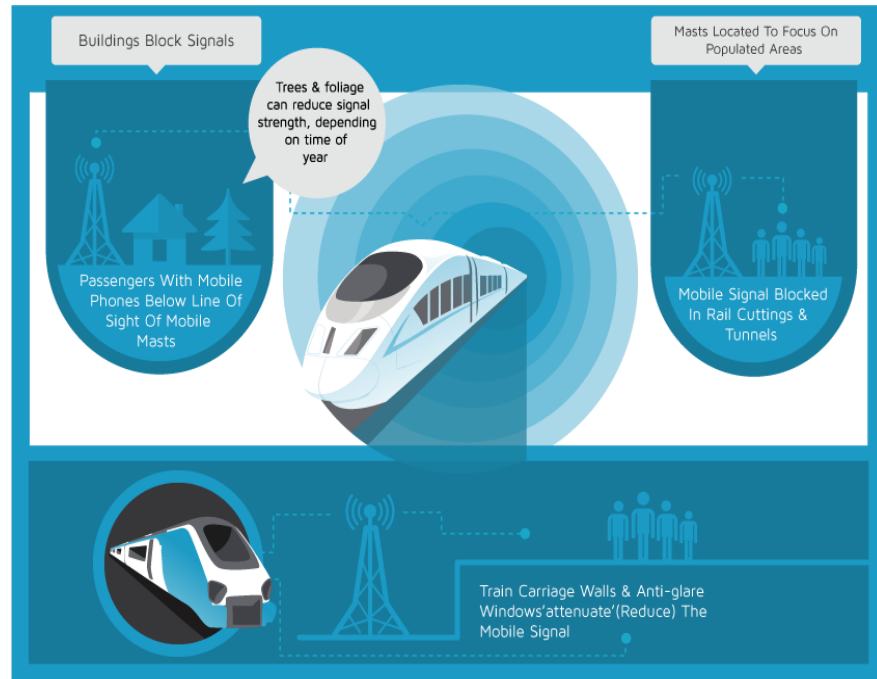
CONNECTIVITY ENABLES
INNOVATION,
INNOVATION ENABLES
FREEDOM!

Challenges

Intelligent Connectivity

Delivering Trackside Connectivity

- Traditional Methods rely on MNO coverage
 - Limitations of coverage
 - Trains non LOS and Signals Blocked
 - MNO mast locations
 - Cuttings, Tunnels cause limit coverage
 - Improved coverage – increased data cost

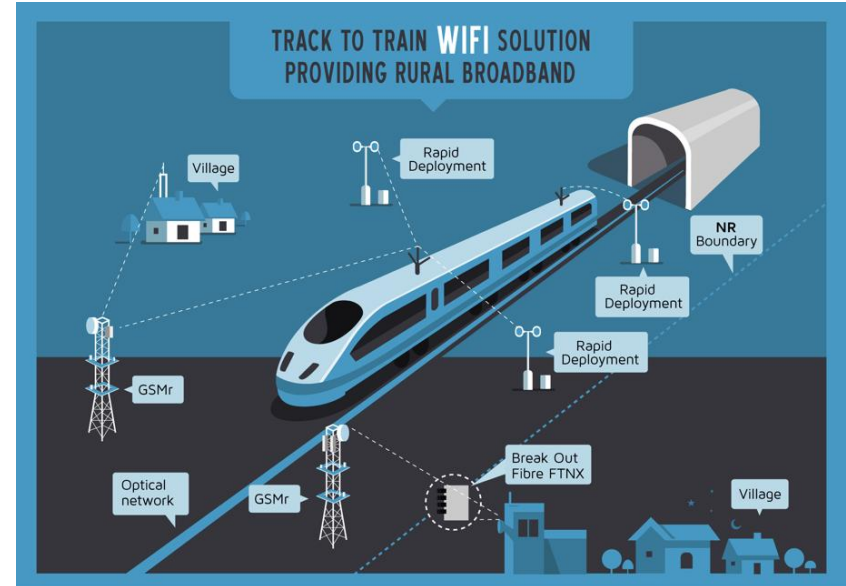


On Board Connectivity

Intelligent Environment &
Experience

All technology on a train
impacts customer experience

- Driver's console
- CCTV – front facing, rear facing, security and surveillance
- Connectivity – train to ground link, customer wi-fi
- PA System
- Entertainment
- Advertising and retail
- Ticketing
- Passenger counting
- Passenger information systems







NUMB3R PL4T3

Automated Payments



Congestion Management



Mobility Assistance


WiFi



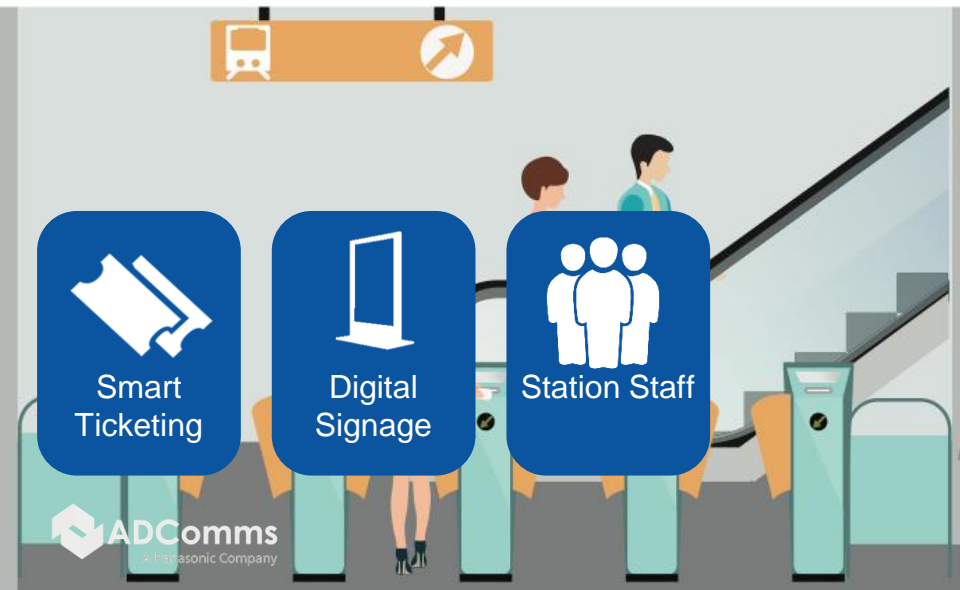
Real Time
Updates

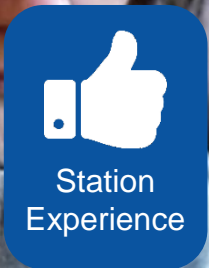


Customer
journey tools



Digital
Marketing





**3 MINUTES UNTIL
THE NEXT TRAIN**



Operation
efficiency

Capacity
monitoring

Dwell
Time



Staying
connected



Safety and
security



Reservations
Retail



Real-time
updates



NIS
GDPR



Onward
journey
information



**RAIL
CUSTOMER
JOURNEY**

ARRIVAL



1

INFORMED



2

PURCHASE



3



4

WAITING



5

BOARDING



6

TRAVELLING

DESTINATION



7

Digital Railway



Rail Delivery Group



National Rail



BRITAIN
RUNS
ON RAIL



Department
for Transport

Stake Holder Engagement



OFFICE OF RAIL AND ROAD



UKRRIN
UK RAIL RESEARCH AND
INNOVATION NETWORK



Department
for Culture
Media & Sport

 **railalliance**



Railway Industry Association



Rail Supply Group