



Department  
for Transport

# How does the Government see Digital Rail?

Digital Railway Conference, 25<sup>th</sup> and 26<sup>th</sup> June 2019

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## The Digital Railway – Government support





## The DfT view...

Given the clear benefits, I am as impatient as anyone to see the Digital Railway delivered. I want these technologies to be commonplace on the network within a decade.

Chris Grayling, Launch Digital Railway Strategy, May 2018

The use of digital technology is a huge opportunity for rail... will help ... make better use of the existing infrastructure and capacity .. reduce ...costly and disruptive civil engineering schemes...[at] lower cost for rail users and taxpayers.

Strategic Vision for Rail, November 2017



## ... and the wider Government view

Digital rail technology will transform the railways, enabling trains to run more frequently, at lower cost and greater resilience, and replacing the legacy of Victorian railway technologies....

Budget & Industrial Strategy 2017



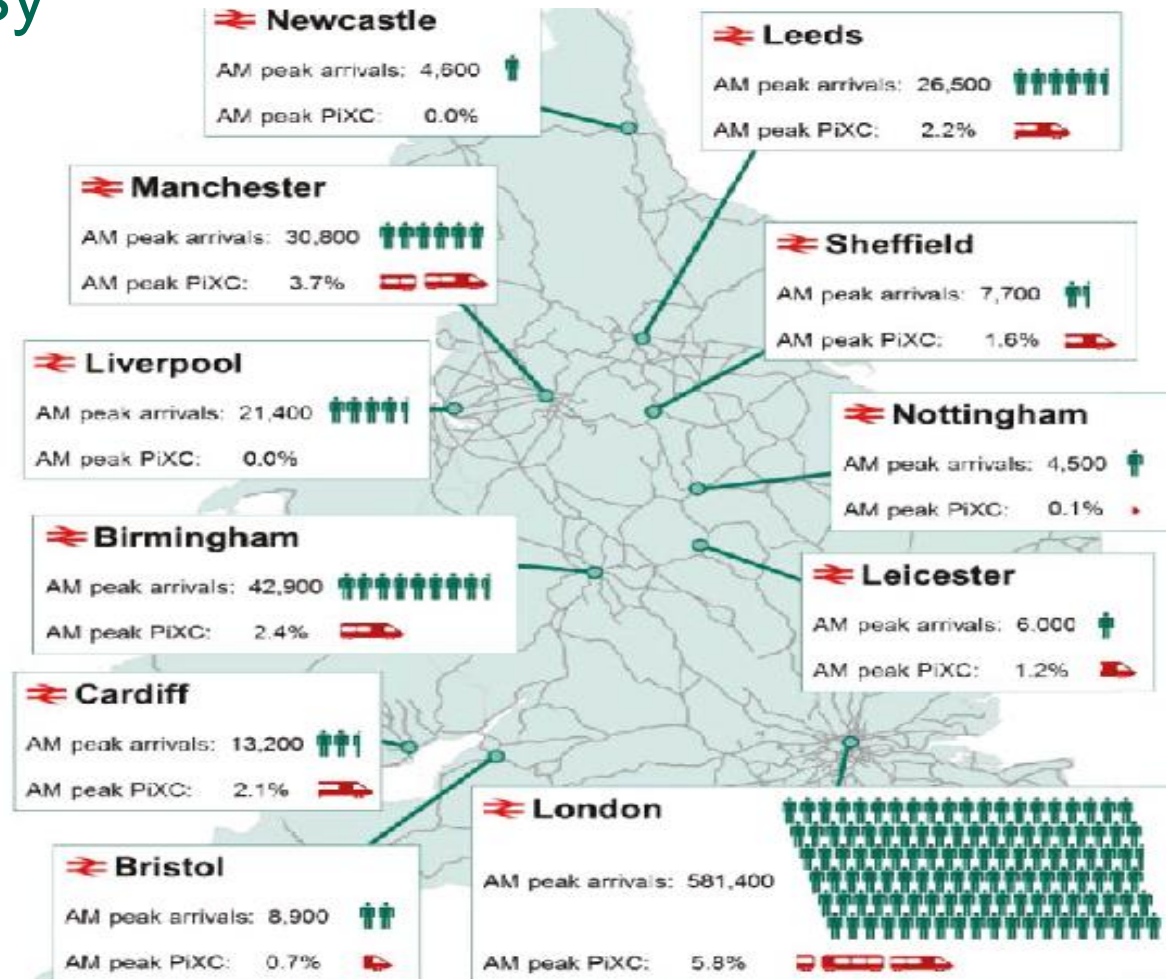


# The Railway is busy

## Key

**AM peak arrivals** is the number of passengers arriving into the city centre by National Rail on a typical autumn weekday during the 3-hour morning peak (7-10am).

**AM peak PiXC** is the percentage of passengers in excess of capacity (PiXC) across the morning peak on a typical autumn weekday. A higher PiXC percentage represents a worse crowding level.





## Punctuality and reliability matter to passengers



### Timetabling and poor performance drove increases in passenger complaints

Latest ORR complaints stats show a **6.6% increase** in passenger complaints in 2018-19 Q1.

Complaint type	% all complaints	Change on 2017-18 Q1
Punctuality/Reliability	22%	↑ 1 pp
Quality on train	19%	↑ 1 pp
Fares and retailing	12%	↓ 7 pp
Staff conduct and availability	9%	↓ 1 pp
Company Policy	8%	↓ 2 pp
Complaints handling	8%	→ 0 pp
Delay compensation	7%	↑ 3 pp
Timetabling	5%	↑ 4 pp



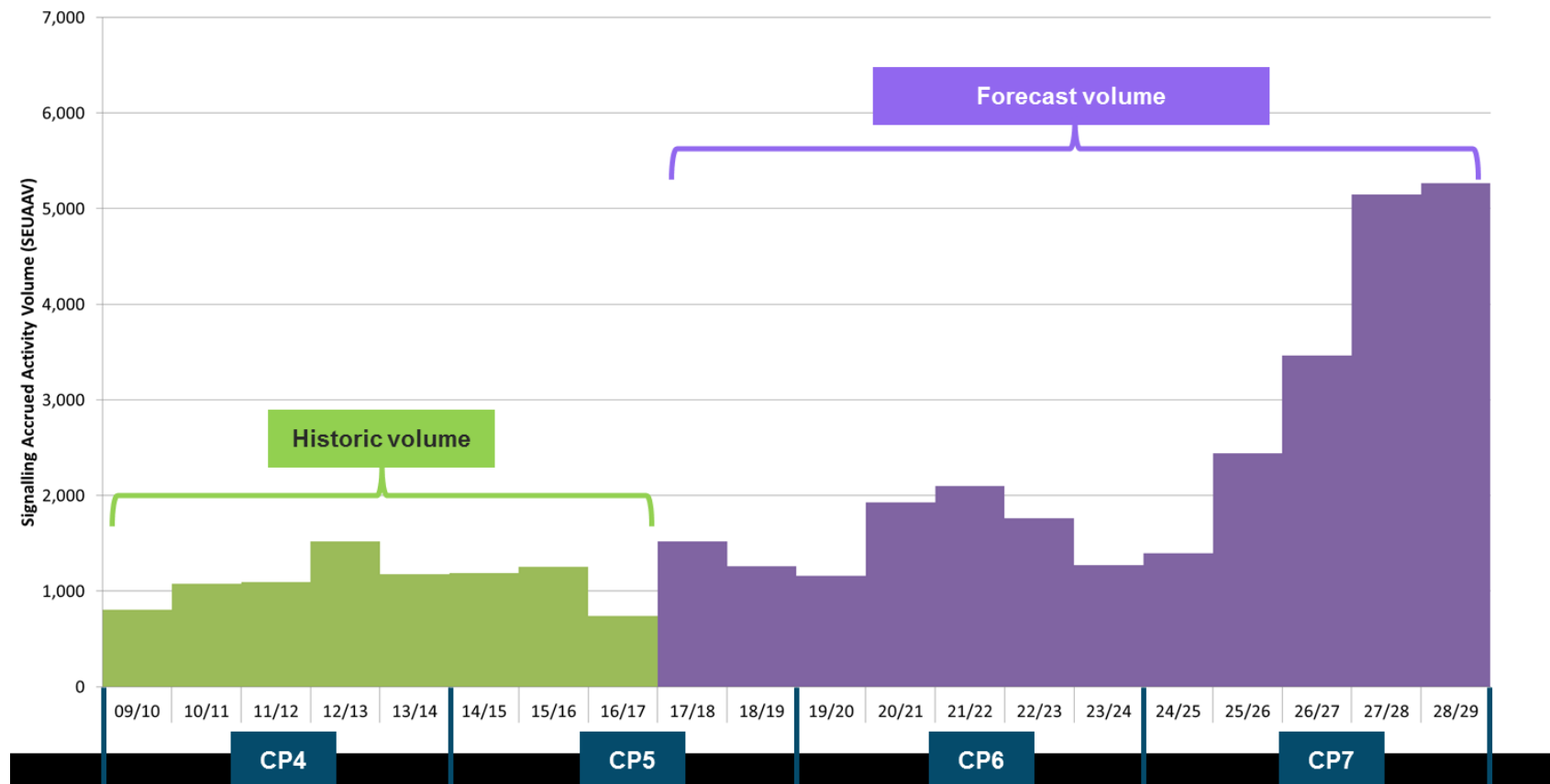
**Northern** recorded a **63% increase** in complaints, the largest increase of franchised TOCs.



**GTR** complaints grew by **23%** following a large increase in timetabling complaints.



# Digital Railway Strategy: bow wave of signalling renewals





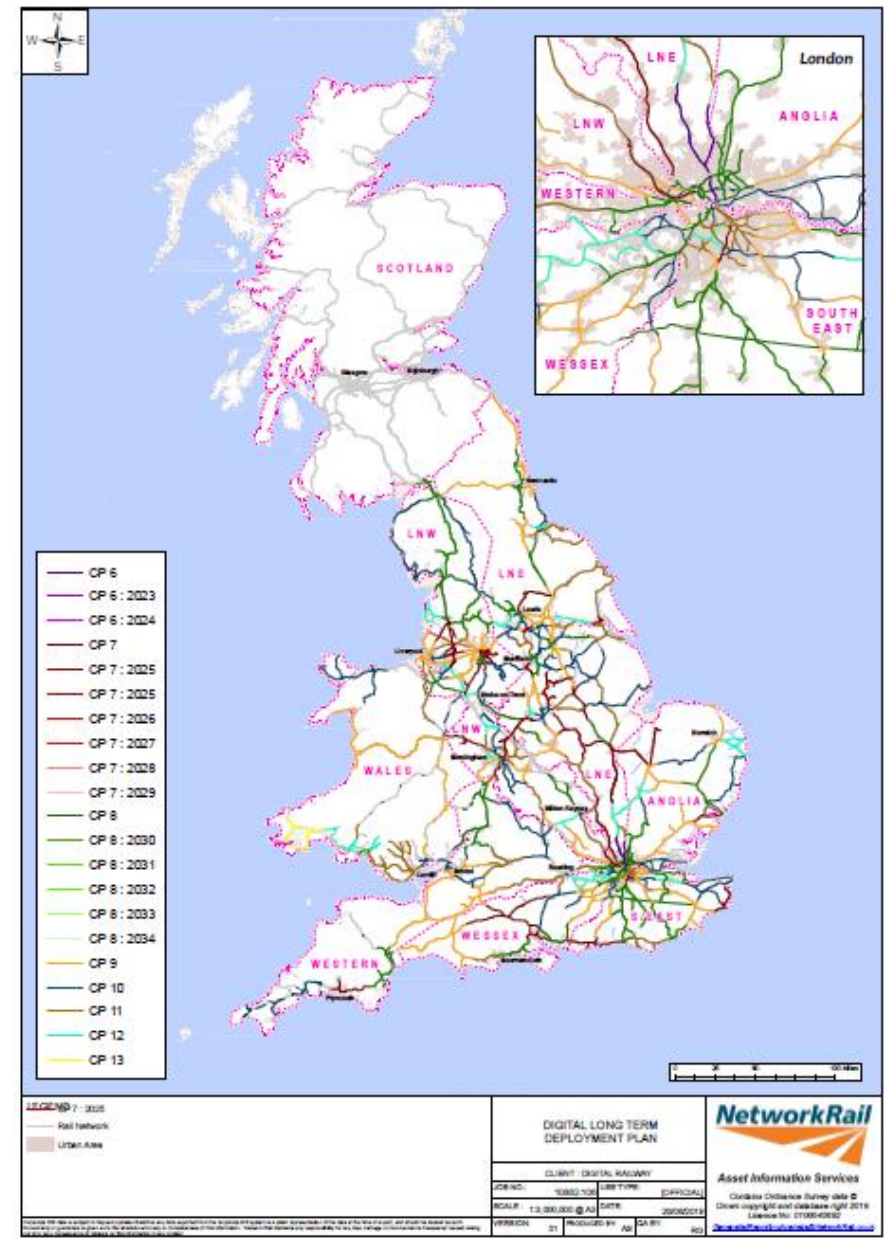
# Long Term Deployment Plan

In 2018, Chris Grayling asked Network Rail for a long term deployment plan for signalling.

Network Rail gave this to DfT earlier this year:

- ▶ A renewals led plan, to tackle the bow wave, from CP7 onwards, to reduce whole life cost
- ▶ Shows that train fitment is a small part of the cost
- ▶ Meets the first commitment in the Sector Deal (an agreement between the Rail industry and Government/Network Rail, agreed and published in Autumn 2018). The supply chain agreed to work towards a lower Signalling Equivalent Unit cost in return for a long term signalling plan.

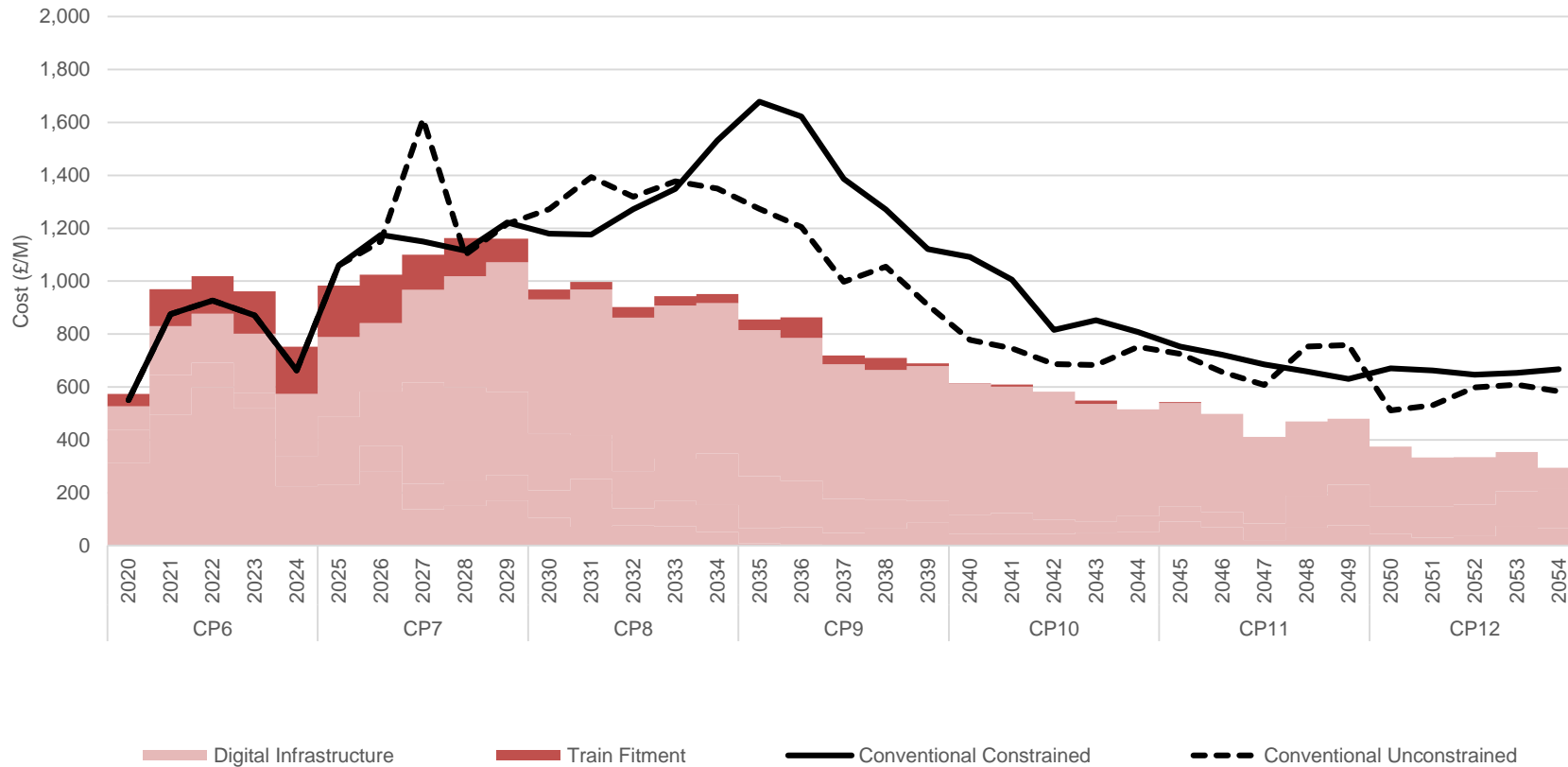
Department considering it – has implications for funding CP7, what to require in franchises and how to handle train fitment.







# Long Term Deployment Plan – why it is renewals led & more affordable than conventional signalling





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## LTDP assumes some big schemes in CP6

Long Term Deployment Plan assumes that various digital schemes are delivered in CP6:

- ▶ East Coast digital signalling
- ▶ Digital signalling as part of Transpennine Route Upgrade

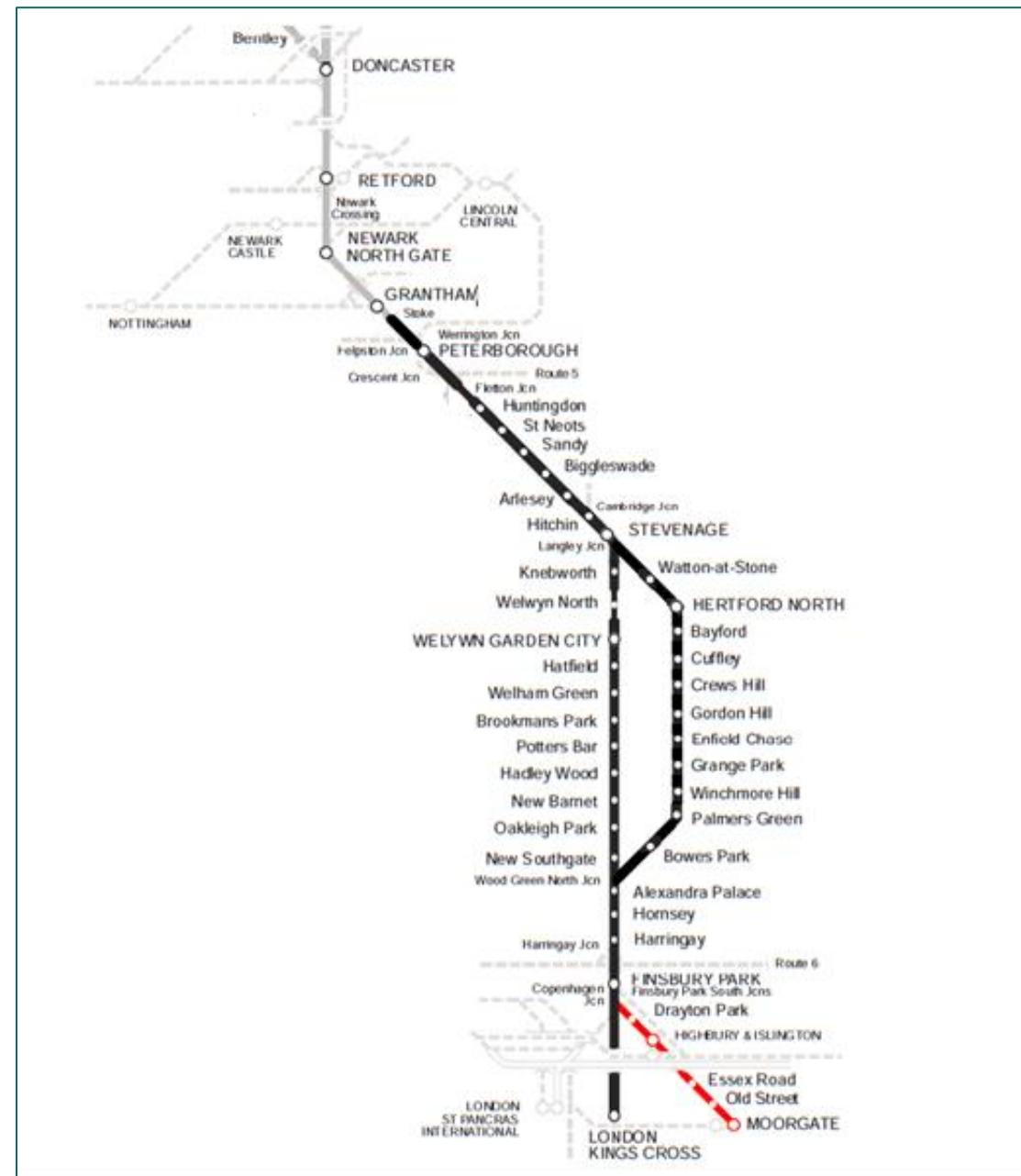
Business cases for these schemes are currently being developed.



## East Coast and Moorgate

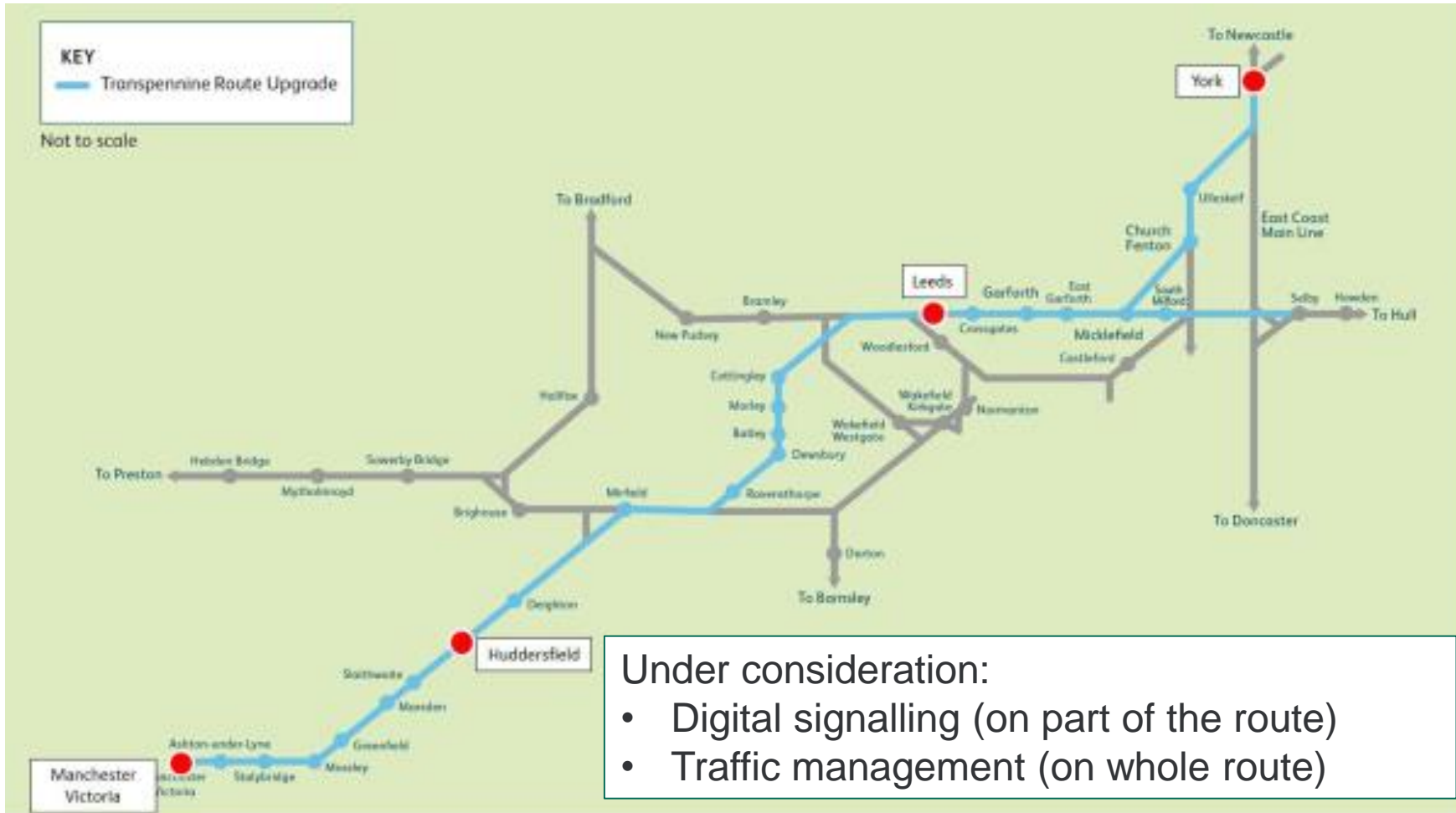
Scheme under  
consideration:

- ▶ Between London and Peterborough
- ▶ Signals are life-expired on significant sections of the route
- ▶ 70% of the passenger trains will be fitted by early 2020s



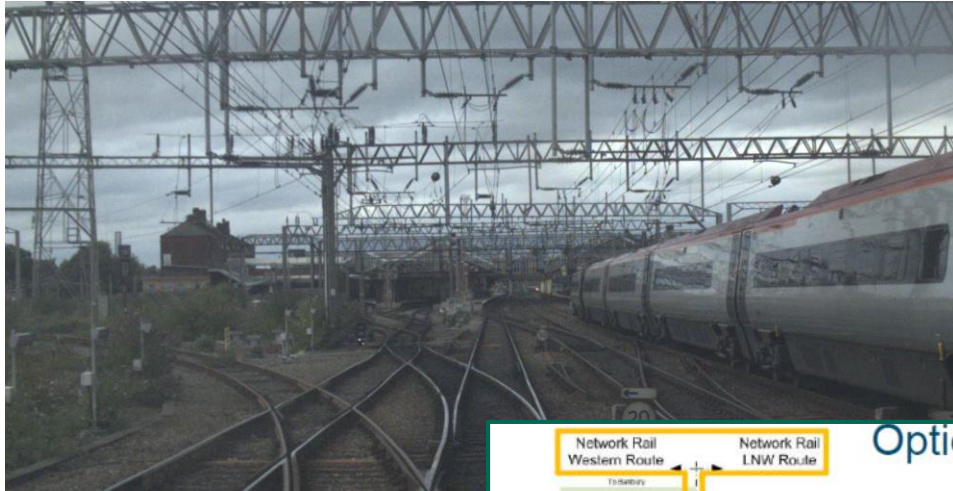


# Transpennine Route Upgrade



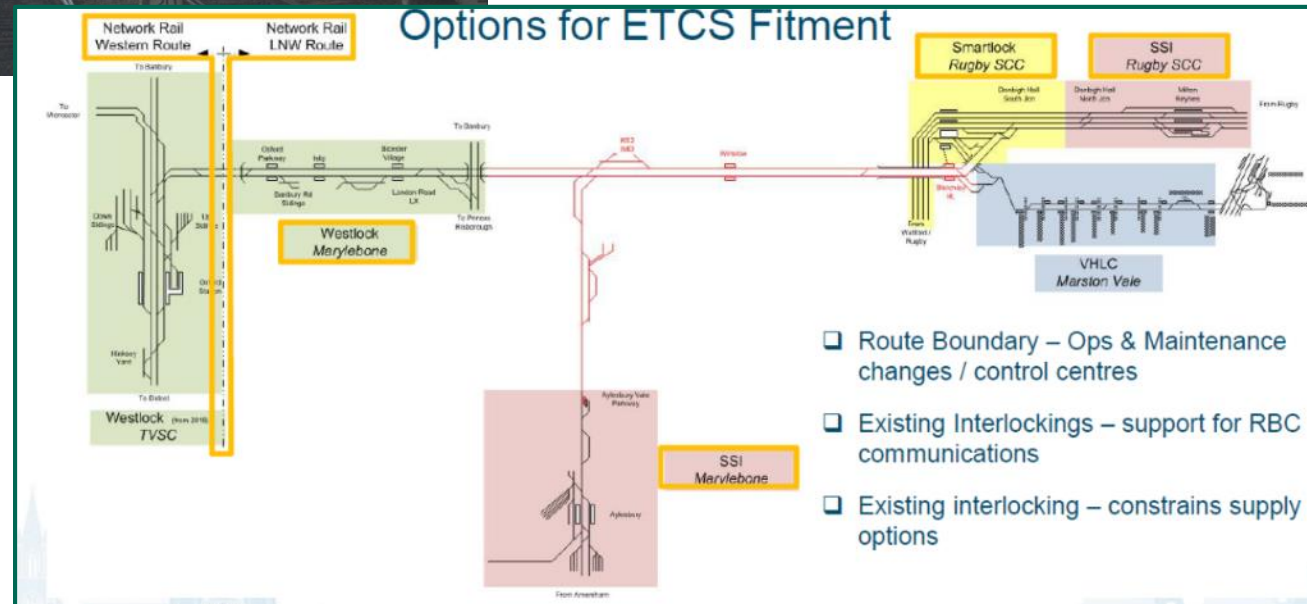


# HS2, Crewe and East West Rail



HS2 will have ETCS signalling. We are considering the interfaces with the conventional railway, particularly at Crewe.

East West Rail is expected to have ETCS signalling on its new stretches, between Oxford Parkway and Bletchley flyover.





## Before the big schemes in CP6, we have some smaller schemes

£450m to accelerate digital rail, from the National Productivity Investment Fund

Name of scheme	Rationale/Description
<b>First in Class</b>	Already in delivery and a vital enabler for the national strategy
<b>TM on South East &amp; East London Line</b>	Highest value option to maximise passenger benefits. Retains Thameslink skills.
<b>TM in Southeastern Franchise</b>	Tests franchise process as delivery mechanism
<b>DR options in Manchester area</b>	Extending Transpennine TM to include Manchester area
<b>ETCS on the Moorgate branch</b>	ETCS being delivered by 2022



## Some deployments are already operational or will be shortly



### Thameslink

- ▶ digital technologies to enable 24 trains per hour through core London section once full timetable is implemented
- ▶ successful introduction of ETCS Level 2 & Automatic Train Operation
- ▶ TM operational later this year

**Crossrail** new trains with ETCS, in use around Heathrow, from 2020

**Traffic Management** at Cardiff (from January 2019) and Romford (from end March 2019)

### “Luminate” traffic management system

- ▶ the first use of an integrated Traffic Management system on the Great Britain railway
- ▶ NR and British innovation company Resonate are running a pilot between Paddington and Bristol Parkway
- ▶ could reduce delay minutes by up to 15%; pilot started on 10<sup>th</sup> June 2018



## Conclusion – there is a lot under way and more to come

