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Open Data and its Application in Rail

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Director, Transport

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Rockshore
Specialists in Real-Time Information

- Providers of real-time information systems, consulting and managed services
- Privately held, profitable, debt-free, VC-free.
- 60+ people (and counting!)
- Offices in London, Manchester, Leeds and New York

Aviation

NATS

ADR Aeroporti di Roma

manchester airport

Heathrow
Making every journey better

Toronto Pearson
International Airport | Aéroport

Amsterdam Airport Schiphol

Public Transport

Network Rail

ATOC

Reading Borough Council
Working better with you

Telecom

vodafone

BT

Deutsche Telekom

at&t

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What is Open Data?

"Open data is the idea that certain data should be freely available to everyone to use and republish as they wish, without restrictions from copyright, patents or other mechanisms of control" - Wikipedia

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Open Data in UK Rail
The challenge from Government

"The Government will work with the transport industry to make available by April 2012 timetable and real-time train and bus information to support the development of innovative applications to improve passenger journeys."

HM Treasury, November 2011

HM TREASURY

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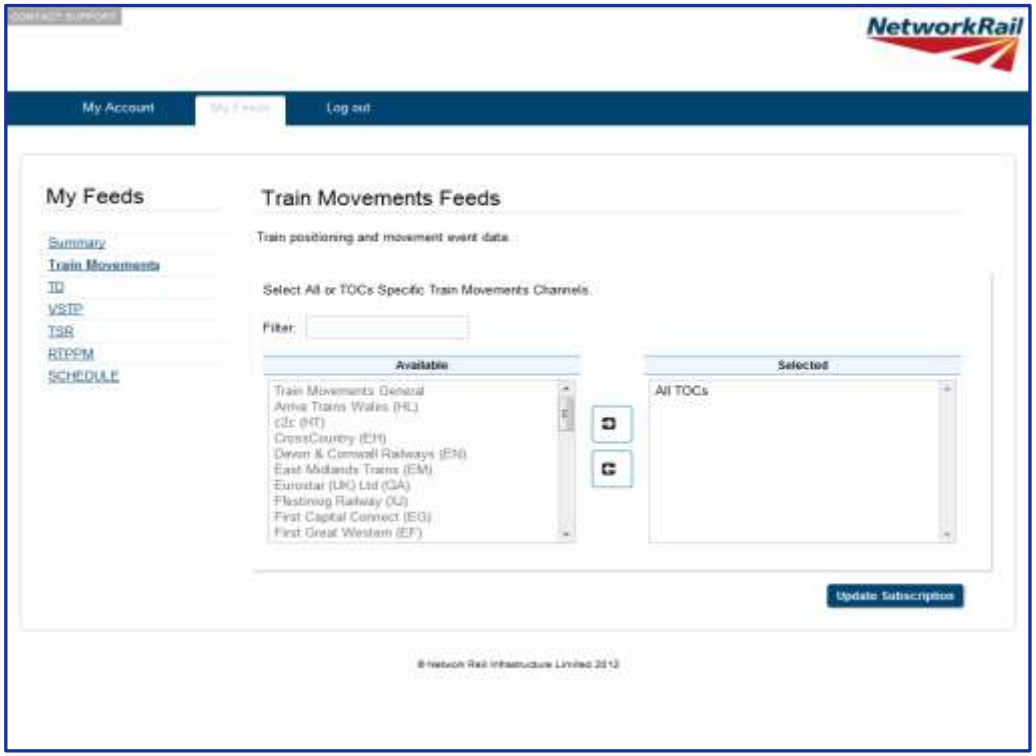
Open Data in UK Rail
What is out there?

- Data available:
  - Train Movements (TRUST)
  - Raw Signaling (TD Berth Steps)
  - VSTP
  - RTPPM
  - TSR
  - Timetable (CIF)
  - Reference Data (Stations, etc.)

- In numbers:
  - 00's of Data Channels
  - Service live for almost a year
  - 00's of Subscribers
  - 00's of millions of messages distributed *per day*



http://datafeeds.networkrail.co.uk

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Open Data in UK Rail

So what?

;-)

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Phase 1: A revolution in Customer Information

- The release of real-time open data enables *anyone* to innovate with low barriers to entry.
- New services are now coming online that are ruthlessly focused on customer needs.
- Lets take a look …

OPENTRAINTIMES

RAILDAR

Realtime Train Info

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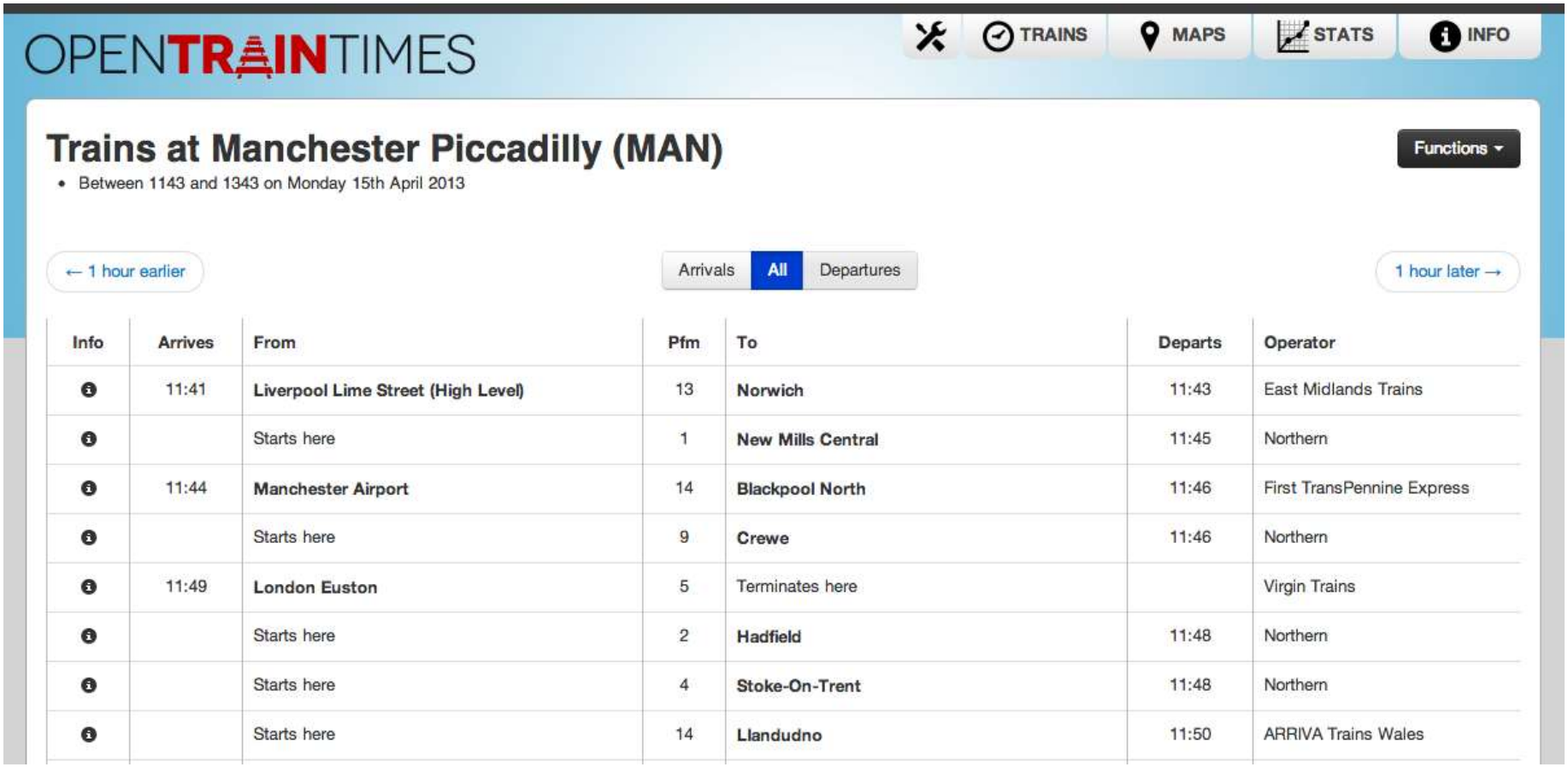
Arrival/Departure Boards



Info	Arrives	From	Pfm	To	Departs	Operator
	11:41	**Liverpool Lime Street (High Level)**	13	**Norwich**	11:43	East Midlands Trains
		Starts here	1	**New Mills Central**	11:45	Northern
	11:44	**Manchester Airport**	14	**Blackpool North**	11:46	First TransPennine Express
		Starts here	9	**Crewe**	11:46	Northern
	11:49	**London Euston**	5	Terminates here		Virgin Trains
		Starts here	2	**Hadfield**	11:48	Northern
		Starts here	4	**Stoke-On-Trent**	11:48	Northern
		Starts here	14	**Llandudno**	11:50	ARRIVA Trains Wales

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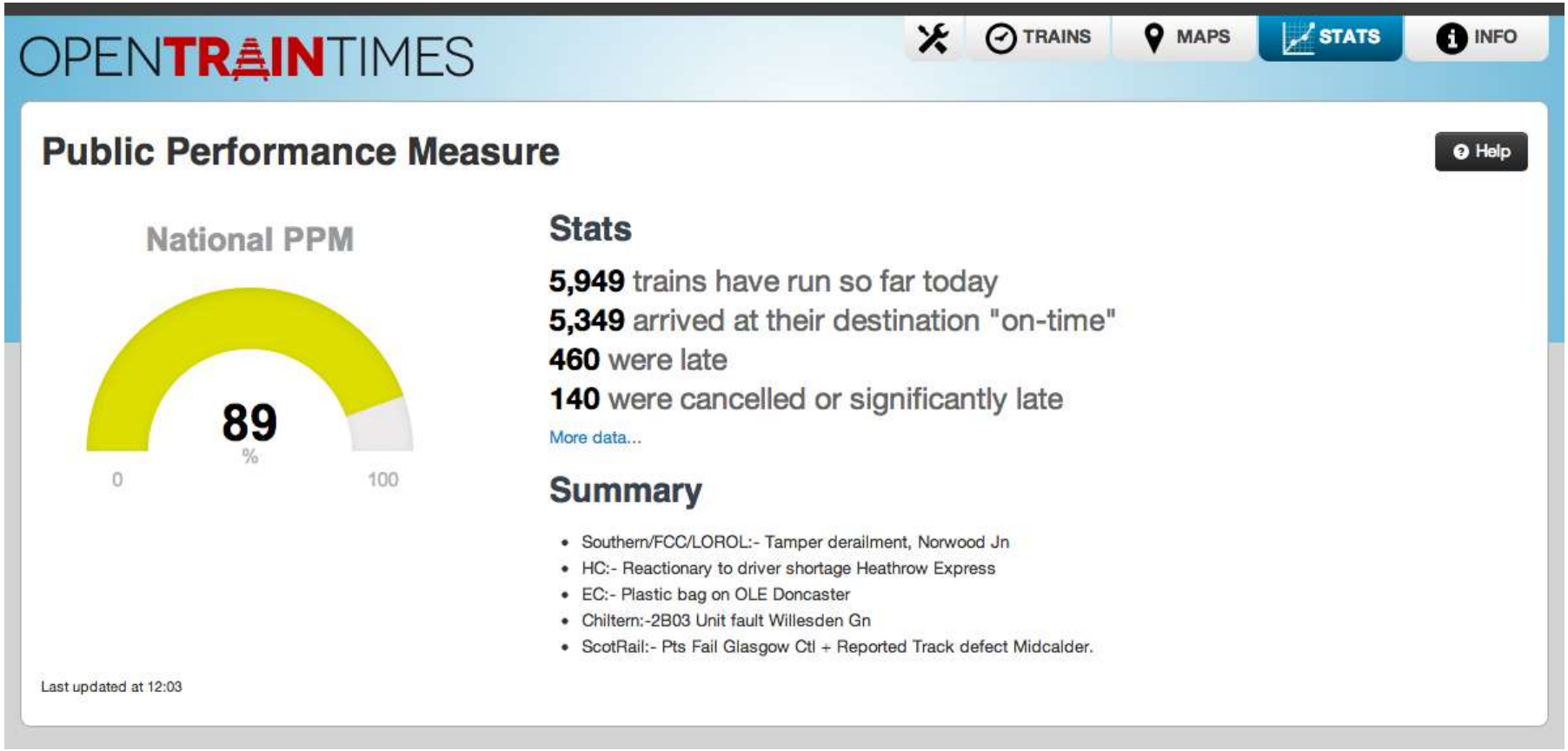
Public Performance Measure



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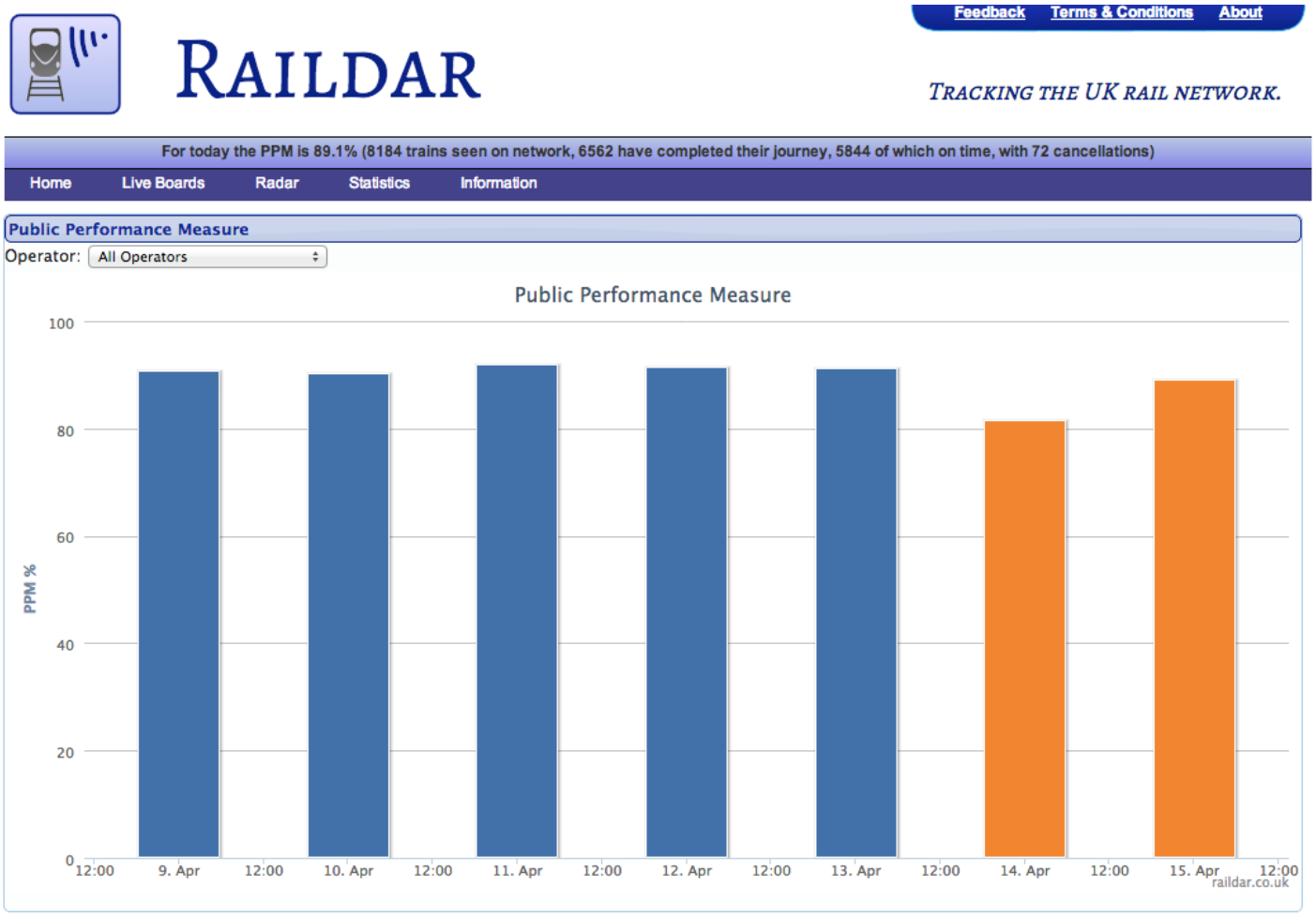
Historical Public Performance Measure



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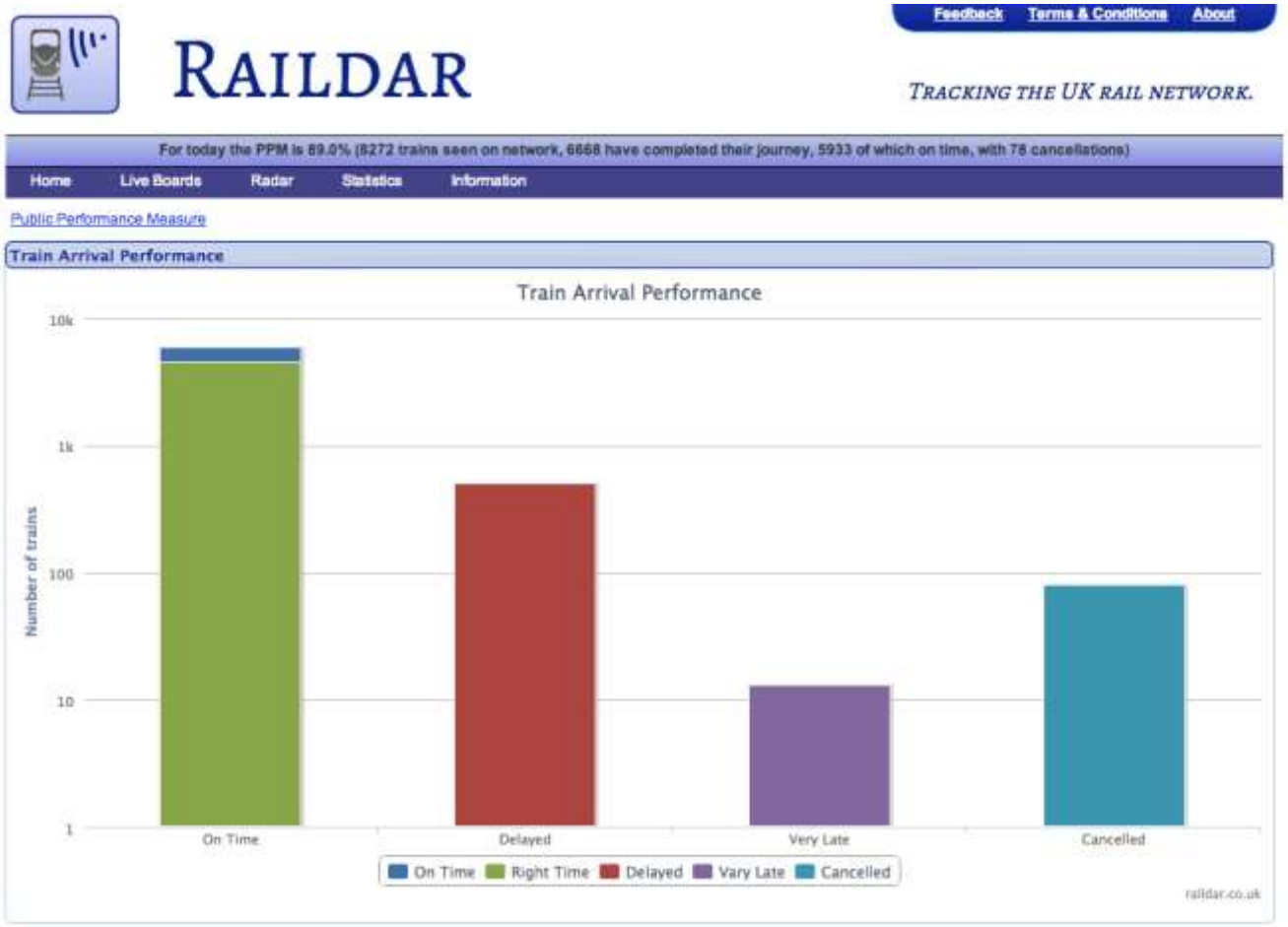
On Time and ‘Right Time’ Performance



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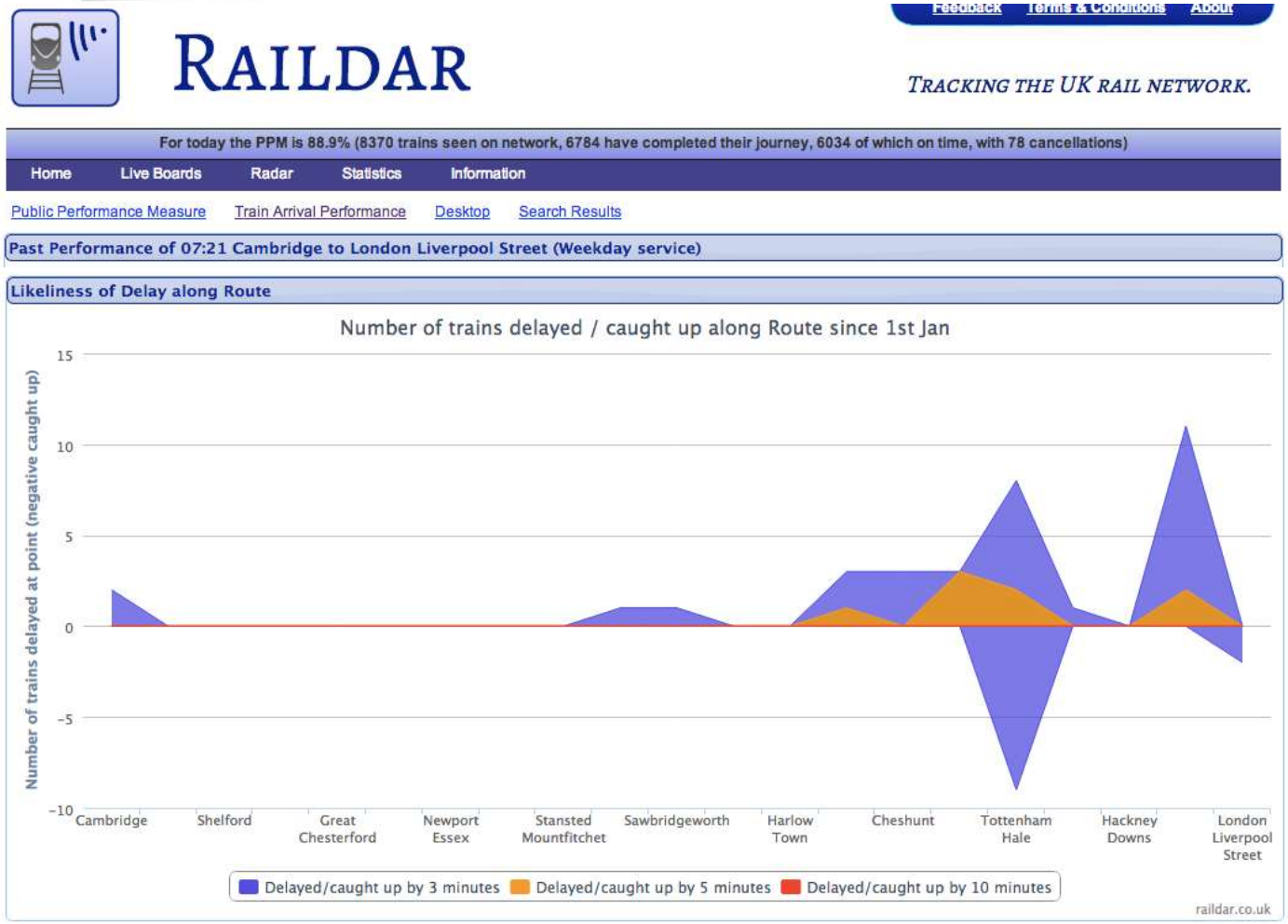
Historical On Time and ‘Right Time’ Performance



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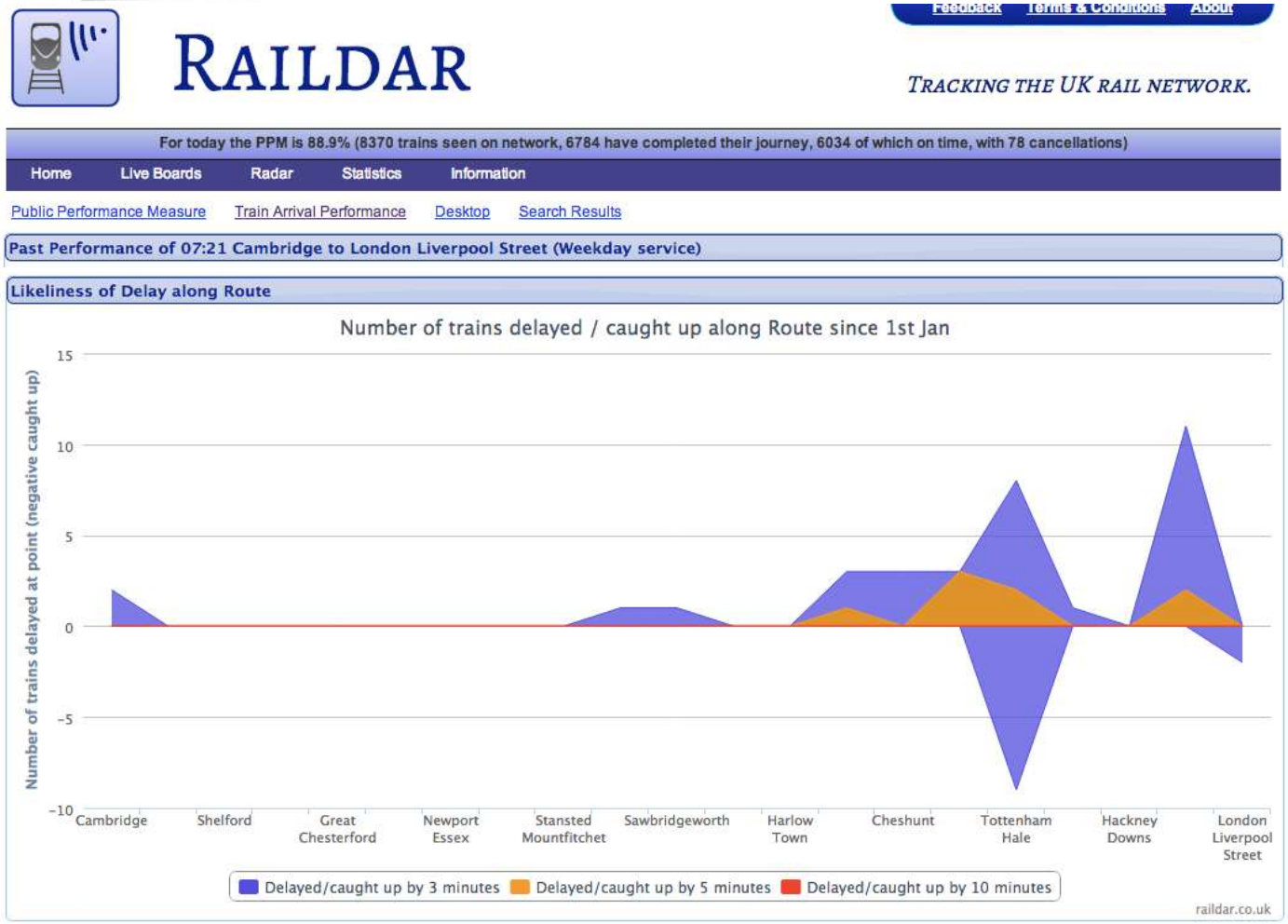
Historical On Time and ‘Right Time’ Performance



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Phase 2: Innovation in Operations

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Phase 2: Innovation in Operations

- Open Data is opening up the Control Room and wider Operational environment to new entrants.
- These new entrants have lower operating costs and higher levels of innovation than traditional suppliers.
- Even Network Rail are consuming their own Open Data with small teams creating Apps to meet point needs.

<u>Prediction</u>

The control room and wider operating environment will be a very different place in 3 years.

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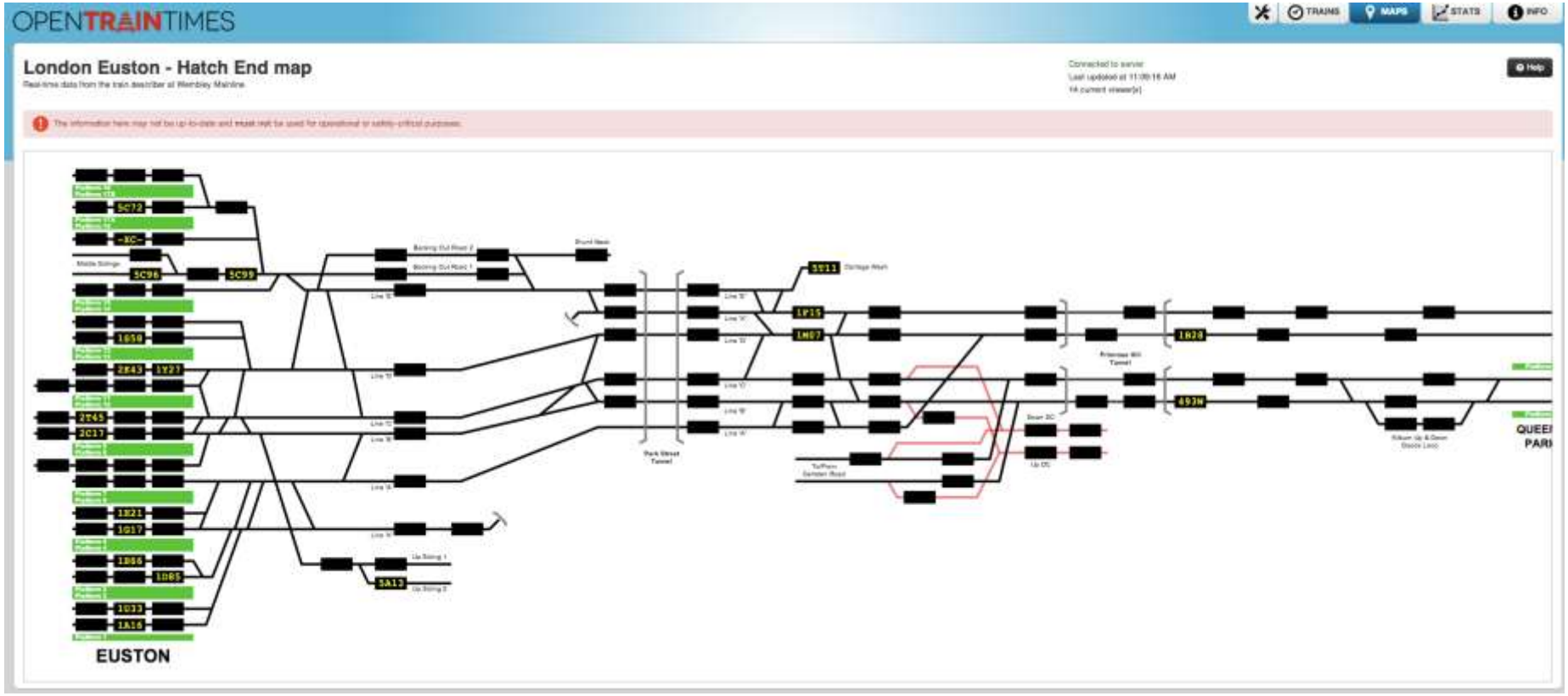
Web-based, Mobile Train Movement Visualisation



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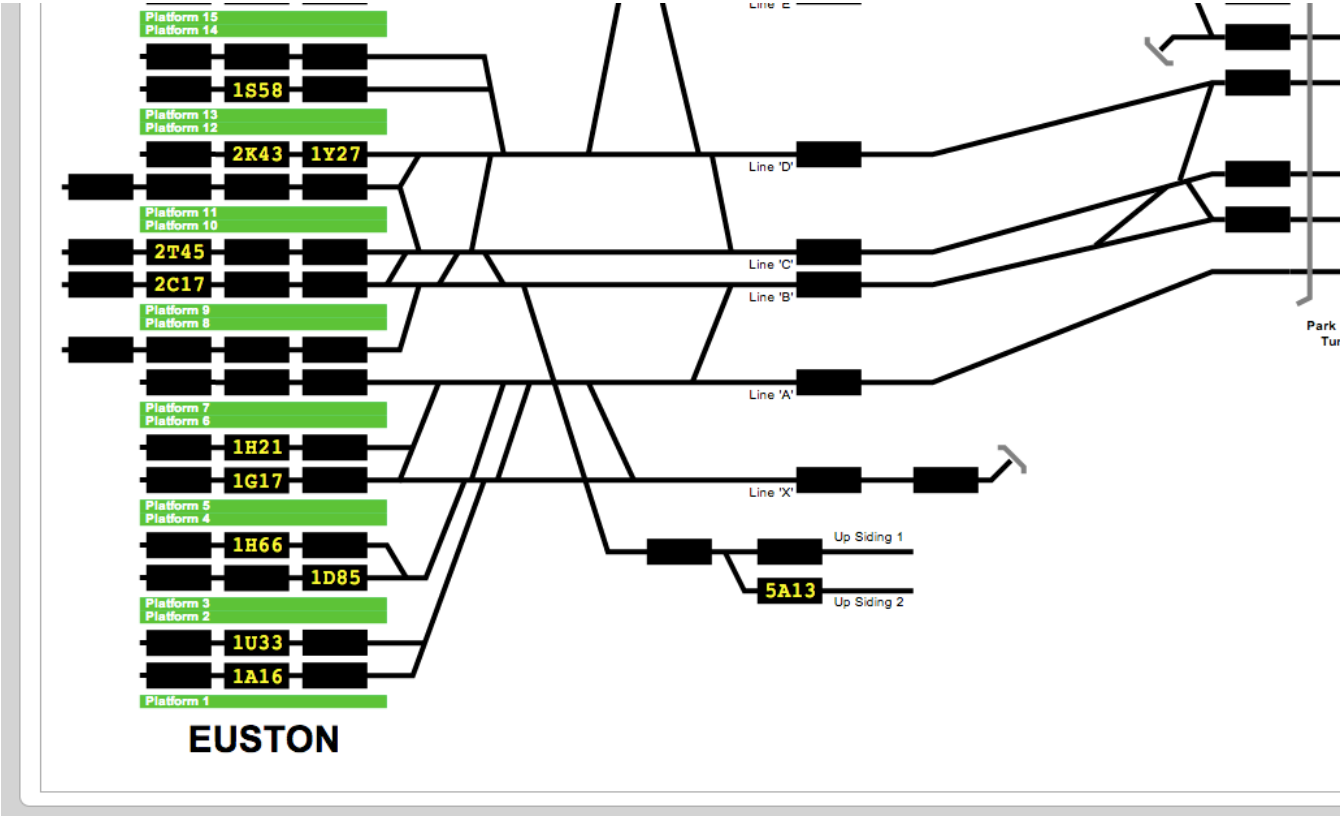
Web-based, Mobile Train Movement Visualisation



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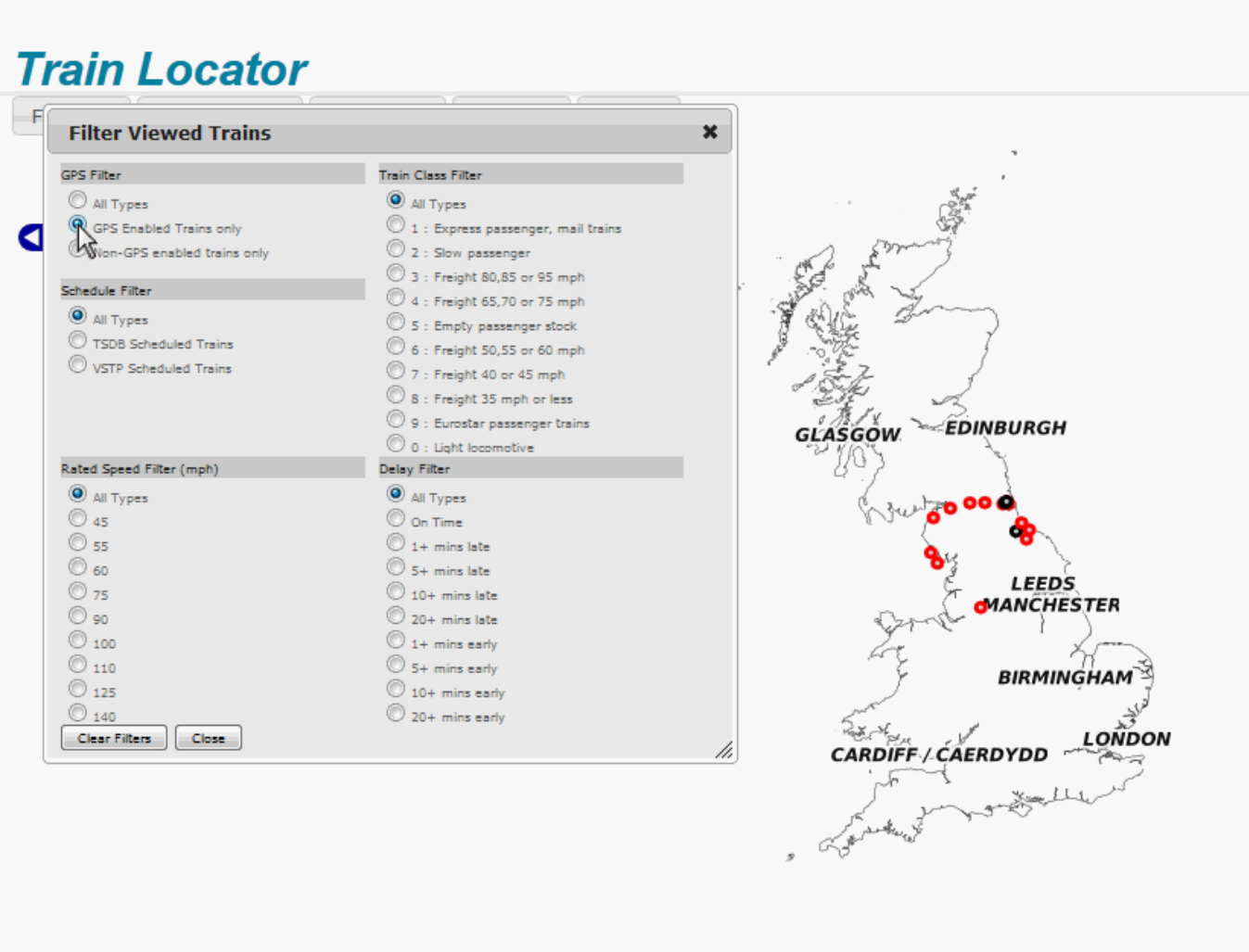
Multi-sourced Geographic Visualistion (Timetable, Signalling & GPS)



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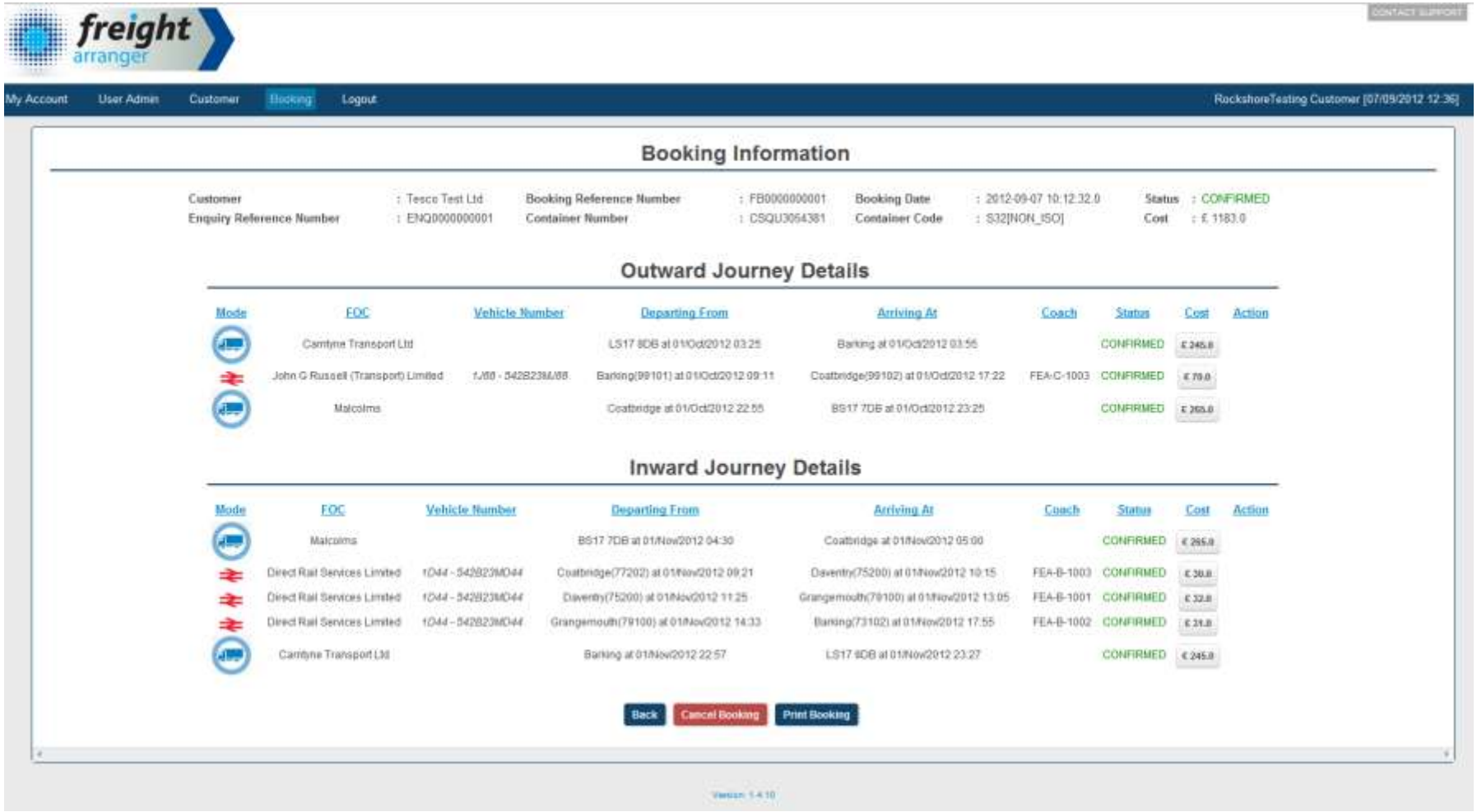
Applications in Rail Freight



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Summary

- Network Rail's release of real-time Open Data has (almost) levelled the playing field with respect to information provision.
- This enables new entrants to compete with the old guard

- Exciting times !!!

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