

Kingdom of Morocco

Ministry of
Equipment and Water



المملكة المغربية
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وزارة التجهيز والماء
ⵜⴰⴳⴷⴰⵏⵜ ⵏ ⵍⴰⵎⴰⵔ ⵏ ⵏⵓⵔⵓⵎ ⵏ ⵍⴰⵎⴰⵔ



الجمعية المغربية الدائمة لمؤتمرات الطرق
L'Association Marocaine Permanente des Congrès de la Route
The Permanent Moroccan Association of Road Congresses



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Data as Infrastructure - Unlocking benefits through public transport data

Harvey Blundell

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International seminar on Accessibility and Mobility for Urban and Peri-urban Areas: challenges and opportunities for the cities of tomorrow

15 - 17 October 2025 Fez – Morocco

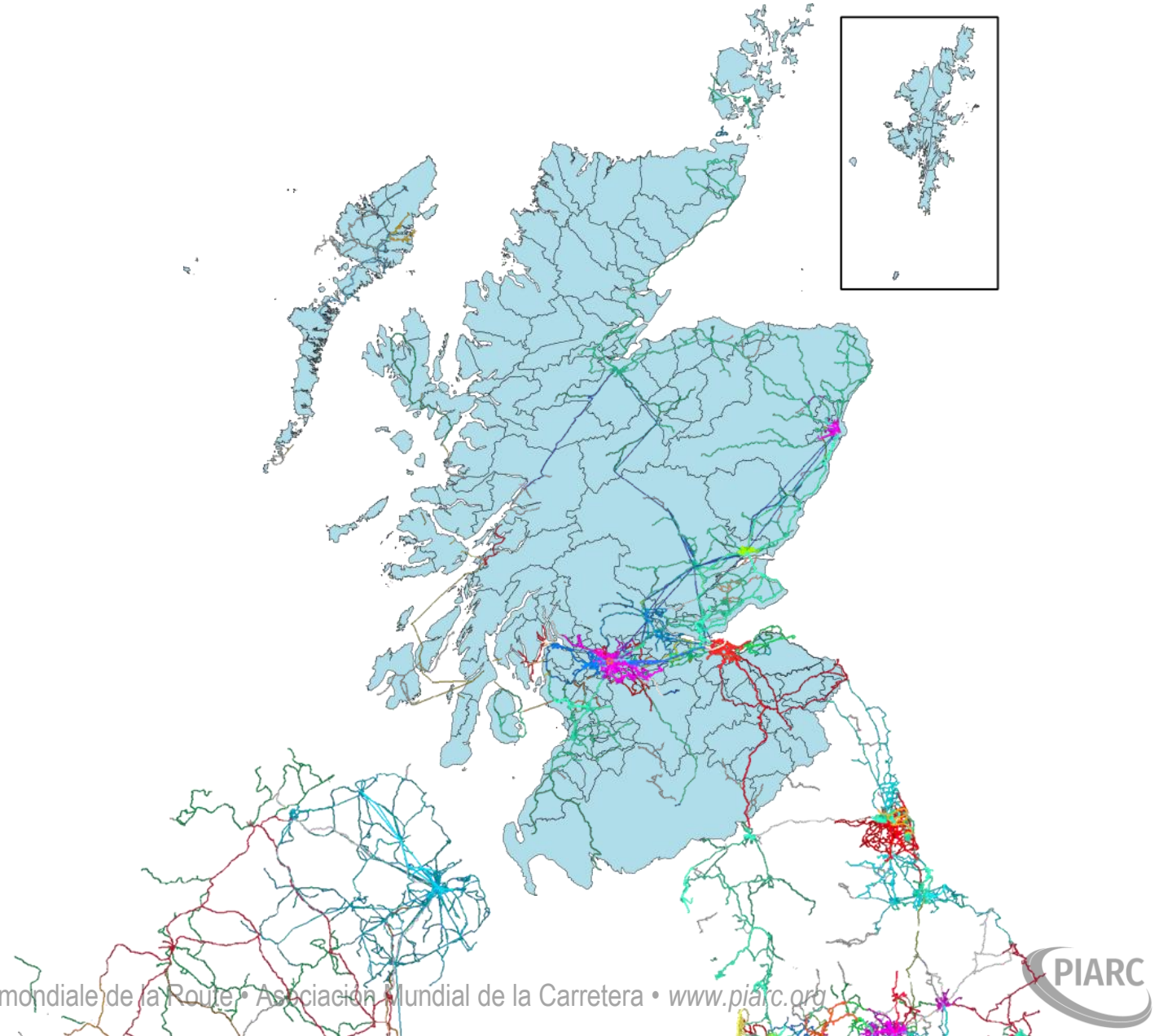
Scottish Context

Scottish Context - Strategic

- **Transport is the Economic Engine** – larger budget share than energy or rural affairs.
- **City Connectivity Gap** – Scottish cities are “effectively smaller” than peers.
- **Inequality Revealed** – car dependency excludes millions (young, old, disabled, low-income).
- **Green Opportunity** – decarbonisation = economic growth + just transition.
- **Geography Matters** – rural, ferry, and island lifelines make connectivity more critical

Bus Landscape

- 200+ Operators across Scotland, from major groups, to single-route independents
- Backbone of transport but data & service consistency and quality vary wildly





The Challenge

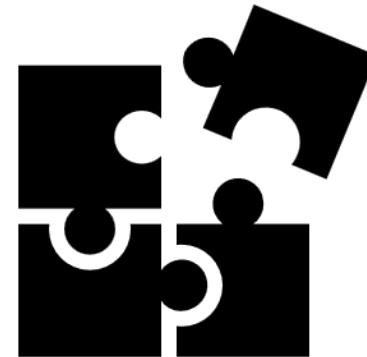
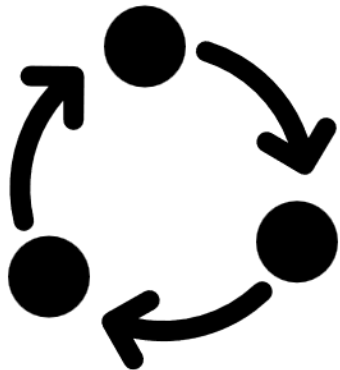
The Cost of Missing Information



A missed bus connection doesn't just cost time - it costs dignity, opportunity, and passenger trust in public transport.

Data Gaps

- No legislative levers to mandate full compliance with national data standards.
- Operators historically supplied feeds to Traveline Scotland on a voluntary basis.
- Quality uneven: coverage, timeliness, and accessibility not guaranteed.
- Bus Open Data Legislation – hoping to pull this together
- Complexities multiply with fares, accessibility, concessions.



The aggregation challenge

- Fragmented operator landscape over bus, ferry, and rail
- No single data supplier – need for aggregation
- Reliability depends on navigating messy, inconsistent data

TransExchange

CIF

NaPTAn

Siri-SM

Siri-VM

NeTEx



Traveline Scotland

Traveline Scotland

- National project to create a single source of high-quality open data for Scotland
- To deliver a refreshed website and app for the modern user
- To support Scottish Government policy ambitions for sustainable public transport that people opt to use over private vehicles

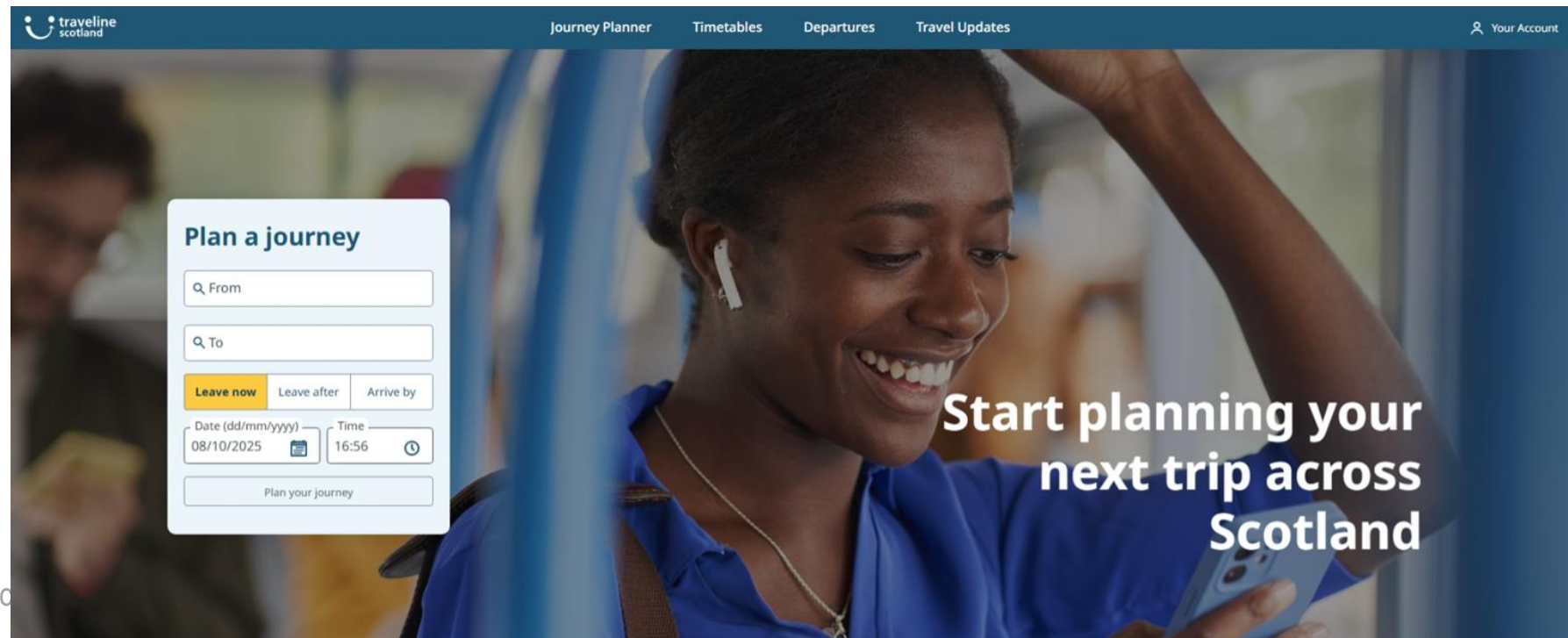


Approach

- **Partnership between:**
 - **Traveline Scotland (call centre, website and app)**
 - **Transport Scotland (data management and systems)**
 - **Transport providers and local authorities (data providers)**
- **User Centred Design**
 - **Driven by Scottish Digital Service Standards**
 - **Agile product team**
 - **User research and engagement strand**

Traveline Scotland

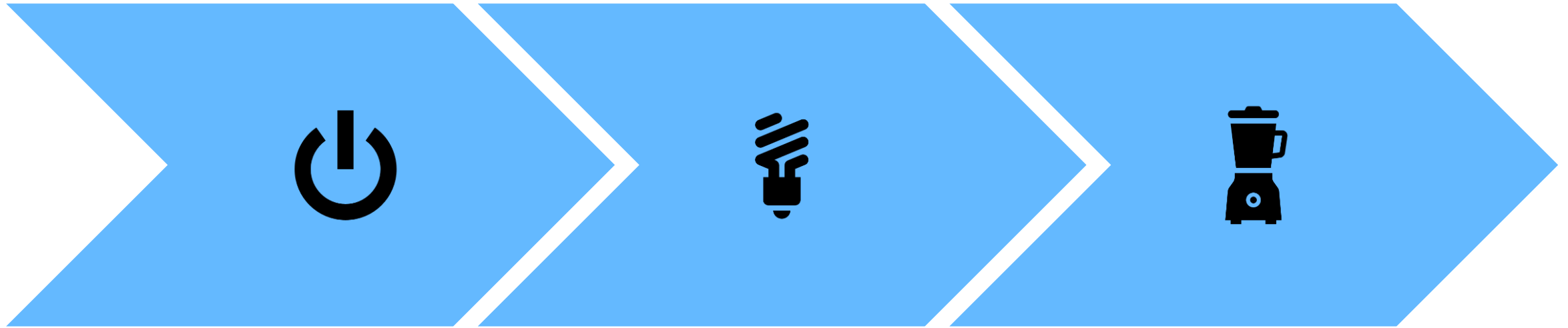
- Aim: provide reliable, integrated journey planning for all of Scotland
- Front end designed through continuous user research
- Powered by a back end API – open to third party developers



Backend Challenges

- Different modes, different operators, different data input methods
- Standardising, organising and sorting all the data tables
- Combining and collating to join up journeys and the related fares, carbon emission, accessibility etc
- Accurately displaying multi-trip tickets (plus single and return)
- Accurately calculating aggregated fares across multi-modal, multi operator journeys (and adjusting for concession and discount cards)
- Giving Scotland a single source of high-quality open data about public transport

The Power Grid Analogy (why standards matter)



Nobody Cares About Wires

The infrastructure is invisible until you need it

Flick the switch

Light come on reliably every time

Any appliance works

Open standards enable innovation

Lessons from delivery

What we've learned so far - 1 year into a 3 year project programme of delivery

Legislative basis would have made integration easier

Most important thing is supplier (or team if internal) alignment to the vision

User insight as core driver of innovation and digital change

Data integrity can be developed through partnership (and lots of hard work)

Open APIs create a force multiplier

Treat data as digital infrastructure > makes abstract work tangible to policymakers.

Your Turn & Questions: What Works in Your Country?

Partnership Models:

Which governance frameworks have succeeded in bringing operators together?

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Which governance frameworks have succeeded in bringing operators together?

Data (or Digital) as Infrastructure

What's worked to make transport information reliable and open?

Thank you for your attention!

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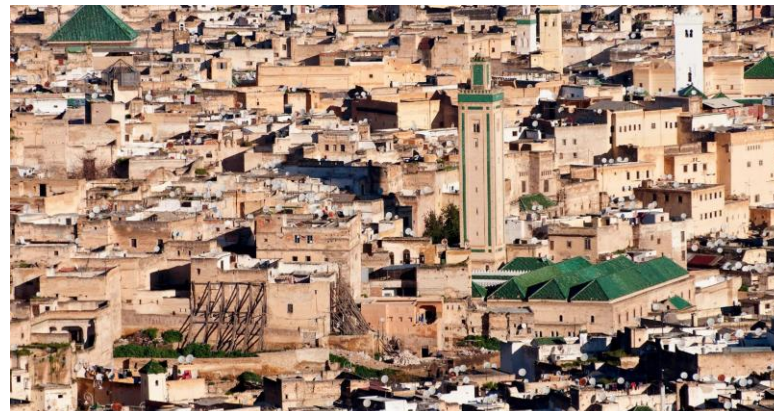
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