BSC Open Data Webinar
Opening up Britain’s transport data
We solve transportation challenges across the globe for millions of travellers every day by delivering real-time transit data feeds and a platform for transit agencies & operators.
Transit data as close to the real-life traveller experience as possible
Markets we serve

Ito Transit Data
For journey planners & MaaS

Ito Transit Hub
For cities, agencies, & operators
Ito World from an Open data perspective

Ito Transit Data
For journey planners & MaaS
Consuming & improving Open Data

Ito Transit Hub
For cities, authorities, & operators
Helping organisations publish Open Data
Ito World from an Open data perspective

Ito Transit Data
For journey planners & MaaS
Consuming & improving Open Data

Ito Transit Hub
For cities, authorities, & operators
Helping organisations publish Open Data

Experiences from both sides of the equation
Experiences consuming Open Data to provide services to Google, Apple, etc.
What we do

We transform operational data created by operators & authorities into highly detailed, human-navigable information.
Why does this matter?

As an example, in the UK alone, Ito has made 140,000 improvements to the current buses dataset.

Stated another way, if an app provider sourced their data from publicly available open data sources, they would have 140,000 opportunities to create a bad user experience.
Open Data challenges

Characteristics that really matter to companies like ours

- Quality of source data not always fit for journey planning purposes
  - Schedules don’t always record the right level of detail
  - Real time may not match well to schedules

- Type of Data license matters
  - Ability to re-interpret, improve and augment the data
    - All of our data is fully licensed and provenance assured

- Scaling the solution
  - Small developers may need only a few thousand hits
  - Large commercial developers typically need to view the whole network
Experiences helping organisations publish Open Data
## TfL open data results

<table>
<thead>
<tr>
<th>Apps created using TfL’s Open Data</th>
<th>% of Londoners using an app powered by TfL Open Data</th>
<th>£130,000,000 – annual economic benefits and savings</th>
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<tbody>
<tr>
<td>600</td>
<td>42%</td>
<td>130m</td>
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Source: [Deloitte. Assessing the value of TfL’s open data and digital partnerships](#)
Bus Open Data Service (BODS)
What is BODS?

An Open Data system that supports operators to publish, index and quality assure their schedule, AVL & fares data while providing a unified single access point for developers to retrieve data for all buses in England, supporting 700+ operators running 32,000 buses.
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The first national platform in the world.
BODS platform overview

**Data Publishers**
- Timetables
- Locations
- Fares

**Outputs**
- Developers
  - Raw data
  - GTFS, GTFS-RT feeds
  - API access
- Reporting
  - AVL feed monitoring
  - Alerts
  - Schedule adherence
- Analysis
  - Reporting & Analytics
  - BI integration

**BODS Front End**

**BODS Back End**
- Data quality tests
- Centralised AVL
- Integrated Transport Model
- Real-time matching
- Archive
BODS – lessons learned

Heterogeneity of Operators
• Belief in the importance of accurate passenger information
• Some don’t have the capabilities
• Operators with a single bus vs operators with 1,000’s of buses

General support from stakeholders
• Industry generally has desire/willingness to open data
• Some scepticism about what is possible (fares, national AVL, etc)
• BODS Data Quality reports will improve data over time
• Excitement in Open Data community & developers

It is important to design systems that cater for the full industry. Allowing both small and large operators to publish their data in the ways that work for them
BODS – lessons learned

Expertise to use Outputs

In a deregulated market, more help is needed to simplify access to data and stimulate innovation, such as MaaS.

- Unified API
- Journey planning API

Integrated transport model with real-time matching

Current BODS implementation

Transit data expert

Low

High

Consistency of end user experience

Level of expertise required to use outputs

General app developer
BODS – the wider benefits
Benefits

National Transit Hub

- Improved Governance: Whole-nation, multi-modal reporting & analytics deliver transparency, accountability and digital transformation.
- Passenger Experience: More accurate passenger information encourages use of transit and saves time & money for passengers.
**Analyse Data Service**

*A Location Intelligence Service using BODS data*

1. **Regulators (OTC and DVSA) benefit from:**
   - Digitisation of compliance checks to reduce roadside monitoring
   - Ability to easily identify instances of non-compliance
   - Raw data accessible as an evidence base if required

2. **Bus Operators benefit from:**
   - Data to optimise network performance & address punctuality issues
   - Ability to perform trend analysis to optimise routes & help with commercial analysis

3. **Local Authorities benefit from:**
   - Ability to conduct pinch-point analysis to optimise road networks
   - Open data from bus operators to support BSIP reporting processes
   - Access to BSIPs dashboard at local transport authority level for top ten metrics
Open Data API
TfWM
What is the TfWM Open Data API?

As part of the work Ito does for TfWM, we delivered an Open Data API modelled on the TfL unified API
TfWM Open Data API – lessons learned

What’s good for the goose is indeed good for the gander

- Many developers have accessed the API
- Very diverse users – app developers, transport planning, academic research
- Another large API user is ARUP
- The single largest consumer of the Open Data API is TfWM!

Making data easily available via APIs promotes better use of resources outside and inside organisations
Experience helping orgs publish Open Data
General lesson learned

Clearly Open Data benefits the Open Data community

What’s less obvious, but equally important, is that when publishing Open Data, the tools/mechanisms used are likely to serve as a forcing function to improve data and internal systems & processes that ends up delivering significant benefits to the publisher.
Thank you