

PTIC 09 June 2023

Video: https://youtu.be/qI8DFUKrK94

The papers presented at the meeting are available on the PTIC website: https://www.pti.org.uk/meeting-20230609

Video timings for the start of each agenda item are provided below.

Actions in red text

Opportunities to engage/test/feedback in green text

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Attendees

John Austin, Southend City Council Amy Brown, Traveline Leon Byford, TfL John Carr, ATCO Nic Cary, DEFT153 Paul Everson, Trapeze Group Josh Goodwin, bustimes.org Adrian Gruetter, Ember Teresa Jolley, DEFT153 Mark Jones, TfW Fatima Lagmouch, WECA Mike Nolan, Traveline Steven Penn, KPMG Aiden Proctor, EPM Group Jonathan Raper, Traveline API Tim Rivett, RTIG Dan Saunders, Basemap Rob West, Elydium Keith Willis, React Accessibility Tricia Wright, Nottinghamshire County Council

1.0 Introduction

1.1. Apologies

David Batchelor, Ticketer Keith Sabin, Shropshire Triumph Okojie , DfT

2. Notes of last meeting 3 March 2023 (1:40 - 7:20)

BODS - challenge around the title of Complex Fares (difficult not complex)

• Steven Penn: can see where coming from, but it is a legacy of NeTEx profile and legal docs. Could rebrand it - not sure how you would do that?

Flexible services - come on to in Agenda

NaPTAN team (not present)

• viewer tool - compiled version discussions continue



- business rules not heard back from Harrah on business rules
- Keith sent stuff about Jersey and Channel Islands to Sarah last week.

Journey Planner performance discussion - Tim to pick up with ATCO / John Carr to get something set up.

European Standards - DfT ownership of standards development - conversations with DfT - quite clear that for standards they need, they will continue to promote and support development of these e.g., TransXChange, NeTEx and SIRI within constraints of legislation and programmes they have got. Has been extended effort in terms of profiles and advice and support of them.

Open and ongoing action - let Tim know if there are things you want PTIC to be doing.

3. Bus Open Data Digital Service (7:20 - 40:29)

Steven Penn update on behalf of Triumph Slides from DfT

Headline points of delivery:

- Fares validator deployed in March / April
- **Matching Timetables to AVL** more reporting been built in to match vehicle journey codes to AVL to give better idea of data quality
- NEW* **Operator profile** can now see operator as an entity, services it has, manage seasonal services and make them exempt from certain reporting (relevance of reporting for relevance)
- New* LTA profile every Local Transport Authority can go into BODS and view data in their area. Quite basic at the moment - showing what we think the OTC has registered in your area, along with volume of data and levels of data compliance. Will be improved iteratively in future to start to look at AVLs, and maybe integrate Disruptions service in future.

Next 3 months:

- Data catalogue improvements, and removing out of date stuff.
- Simplification of AVL compliance
- Flexible services to BODS (Tim's work developing extension to TXC for flexible services, which will be built into BODS)
- Disruptions service now built nationwide system to create SX, and maintained by LTAs (or operators if the situation is right) and integrating this into BODS, and providing an API to grab it in SIRI-SX and maybe in future in GTFS-RT as well.

Questions / discussion



Nic C: Useful to know what the match for Timetable to AVL success rate is - both as a global figure and by some sort of geographic area / by operator.

Stephen: would be - not an instant answer though! Will take it back and report to team.

Nic: Can we have access to a test feed of disruptions for Hertfordshire?

Stephen: there are multiple SIRI-SX feeds emerging, each doing different things. Ticketer and Vix are talking about vehicle journey cancellations. At BODS level the DfT Disruptions Service is at a wider / higher level across an area - network, operators, stops and services, which is not really about cancellation-level events.

Once API is functional and available on BODS, will look to see how we can integrate the stuff from Vix and Ticketer to give a more comprehensive view at more detailed level.

Can provide a feed that WYCA are using, but we don't have direct access to Ticketer and Vix fields at the moment.

Tim: On LTA profile - really positive move for helping authorities understand what is going on with operators in their area, and useful for working with small operators who might not be engaging as well as possible. What promotion is going to be made about this?

Stephen: it will be promoted. Slight issue at the moment, that will be rectified soon (if service can't find reference to your council in OTC, it won't show your profile). Promotion is coming, workshops in July to highlight it, alongside other tools available to Local Authorities.

Conversions from paper to digital brings issues, but it will be improved in coming months. More collaborative approach with smaller operators and LTAs is aim.

Compliance stats data for May 2023 - see slide (17:05 - 22:30)

- stats show we're not quite where we'd like to be, but still progress
- business change team working with operators (small in particular) to help them publish data
- discussions with OTC about accuracy of registrations (API issues referenced above)
- expectation of compliance stats data improving, not through more operators publishing data, but by getting these system issues ironed out
- regular catchups with all involved to help operators publish data

BODS publishing and compliance (year view) - trend is good overall, with target of 80% compliance coming closer to being achieved.

The way registrations issues re stored and maintained is maybe reason behind compliance not being as high as we would like.



Mike Nolan Qu: compliance figures - AVL and Fares - yesterday figures were a higher % (80-90%). Stephen: that was June, but these figures are May (a few weeks out of date)

Jonathan Raper: most of the fares data does not contain all of the information you would want.

Steven: BODS API consumption - a few issues regarding access in November shows up in the graph. Resolved now.

Teresa J: comment on better presentation of data this time round

Steven: Data on slides excludes the BODS team manging / administering it, so it is a fairer representation of use by users.

3.1 Fares Validator (22:30 - 40:29)

Fares data is of varying quality, so the Validator is there to help improve this. Checking for the necessary elements are present. e.g., can't put in 24 hour duration for a single trip ticket.

Slides from programme board in May:

https://www.pti.org.uk/system/files/meeting_files/papers/20230609%20PTIC%20-%20Fares%20Validator.pdf

Things that Validator is expecting - mandatory - soft-block on data validation to check and improve data quality:

- **Product name for service** to be in a specific location (NeTEx name field for every single ting)
- **Line ID** anything that relates to access to services describes that service in a way that is relatable back to TXC data
- **ProductType** now mandatory to state this
- UserType previously free text field, so now making sure enumerations are forced
- TypeofTariff
- **Conditions of use** single trips, roundtrips, frequency etc)
- **SalesOfferPackage** how you pay for it, where you can buy it)

Described in Fares section of BODS as compliant or non-compliant.

A few small issues with the validation data but they will be fixed soon...

- carnet products
- composite frame types
- Ticketer exports

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Public Transport Information Coordination

- Vix progressing toward compliance, along with Stagecoach
- TNDS already compliant

By next PTIC, should be seeing much higher compliance.

Introducing the Fare Data Catalogue - see a breakdown of all fares data live on BODS now: what product types, passenger types there are, and whether they are multi-operator ticket or not. A better idea of what operators are offering.

Progressing toward a coherent data that can be used for analysis and modelling uses.

Questions / Discussion (28:39 - 40:29)

Adrian Gruetter: re: Disruptions feed earlier, can you share details of what would be possible to consume?

Stephen: yep quick demo (see video), and yes also getting people access to it - email me afterwards.

Nic C: could you ask your policy colleagues whether planning to / interested in pursuing Fares data to press for more rationalisation of fares; almost more fares than buses. Extremely confusing for customers. Know steps are being made, and regions enabling purchase of multi-operator.

Stephen: totally agree! Doing this might be above my pay grade, but this data catalogue will enable us to express in a meaningful sense, to express this confusion more easily. £2 cap welcome, but actions are mostly interim extensions which result in cliff-edges. Many agree this needs to be addressed in the longer term. We're bringing the evidence, but policy needs to follow.

Jonathan Raper: Fares Validator is brilliant - massive progress. Will help to put up in lights data quality. But if we turn it round and look at it from view of non-compliant operator - what happens if they publish non-compliant data? Embarrassment of a label of course, but is the DVSA going to do any enforcement? Does anybody know? Seems to be a bit too easy to have non-compliant data and not do anything.

Stephen: Second iteration of Validator later this year. After this, people are expected to comply to complex fares - deadline now Jan 2024. Soft approach and period of grace for the next few months, but probably next year before we will move to more hard approach re: compliance on fares.

Jonathan Raper: Problem is circular - because the data is not good enough, we can't develop the applications and realise the benefits of having the data. We're finding that operators are losing faith and getting annoyed and dragging their feet - doing the minimum because they are not seeing value out of spending they are forced to do. Only way out of this is to drive enforcement and do it soon. Otherwise we risk reaching a point where operators are publishing data that is not good enough for use, but meets compliance requirements.



Stephen: Two elements to this. The validator rules I've input are really for operators to fix. Ticketer and Vix are very close to getting this right. By default, operators will benefit from this. Start then to see where operators are creating nonsense. We can then review this, and start to pinpoint advice and support to help improve quality for those who are not supplying what is correct / needed.

Jonathan Raper: helpful answers, but it is tough to plan investments in developing products; we have the Fares API, but we are shooting at a moving target the whole time.

Stephen: was hoping to use your Fares API as a test case, as you are further ahead than others and hoping these new product and use types should return more accurate results in your API.

Jonathan Raper: true that if the two upgrades from Ticketer and Vix will make a difference and show up who is not co-operating.

Stephen: Ticketer one is close to production, and the volume comes from them. Validator tool has been holding them back. Next month or so?

Tim: interesting thing with Fares - likely to get to point when there is more compliant usable data more quickly than we are seeing with timetables.

Operators who are not getting involved and engaged are beginning to feel the heat. First Public Inquiry into non-compliance with BODS has got a lot of people's attention.

Jonathan Raper: no tying together of schedules and fares, so one of the difficulties with an effective API response is knowing you have got them from the same time epoch. Co-ordinated timing of publication

Stephen: unfortunately, from a competition angle, operators cannot be obliged to have long lead times for fares. All we can do is start to do analysis of fares and services, trying to work out who is doing things correctly.

Jonathan Raper: any meta-data that informs what schedule the fares are based on?

Stephen Penn - tricky, no straightforward way to do this. Best might be saying this product is available during these dates, and then you can infer it relates to these services. Metadata for duration of fares / relevance.

3.2 Disruption Service (40:29 - 52:20)

DfT have built a new tool for all Local Authorities in GB who want to use it

Allows you to create disruptions and events in your area, and define impact on Public Transport to some degree

Organisations will be assigned to admin areas - only able to create data and affect things in their specific areas.

Different user type levels. Every area will have admins from a Local Authority who can then self-serve for their area, including setting up users, permissions and operators etc.

Not being centrally managed by DfT - we set them up, then Local Authorities can manage data in their area

Disruption creation journey:

- live
- upcoming

Planned or unplanned disruption. Every field in form is directly related to a SIRI-SX field.

- dates for when disruption is
- reason for disruption
- publication dates to notify people
- advertisement dates (for planned disruptions)

In future, will look to pull in StreetManager API - next on roadmap for Jul/August. Highlight the roadworks in your area, and prompt users to consider potential impacts for which disruptions need to be created.

Select consequence type:

- Services
- Network-wide (per network)
- Operator-wide (per operator)
- Stops (stops which are affected)

Search using either: Map view to select Stops with polygon, or search by Stop name title

Select which data source you want to use (TNDS or BODS)

Social Media is yet to be supplied - we have HootSuite integration issues to solve

Might want operators to just draft content, and Local Authority / Regional Transport Authority can go in and authorise / approve for publication.

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Backend - codes.

In future, once with integration with BODS complete, will be able to filter in BODS in future to filter just for a specific Local Authority.

LA might want to use this and re-integrate it into other services locally etc. More incentive to get data accurate and update it.

Offer: ask if you would like access to test site to explore API backend, or LA front-end.

Questions / Discussion

Tim: Looks really good Jonathan Raper: GB wide?

Stephen: Yes, as using TNDS data. Once there is a Welsh BODS or Scottish BODS, we can pull that

into the reference data underpinning this quickly.

3.3 Flexible Services (52:20 - 1:08:40)

Tim: slide deck.

Open consultation at the moment - details on an email at least once.

Looking at how you can get flexible services information into BODS. The way that BODS work at the moment - profile only supports fixed routes and timetables, and doesn't cope with more flexible approaches.

But as these become more important in core networks, BODS data will not be able to share this data.

Such a lot of variation of how the service runs, books, named etc.

Trying to cover everything from a fully flexible service of pick-up and drop-offs across a defined area base, through to these services which run normal fixed route and timetable and then do something flexible for a bit, before coming back to more traditional operation.

Because there is no agreed approach, people are trying to get flexible service data into BODS in a number of different ways. Most of them seem to centre around creating sample timetables that enables a route or area of operation to be described. Then in Notes say notional, or to prebook in advance.

But, Notes are often not presented by downstream systems and applications, in part because BODS advice is Notes shouldn't be used for anything meaningful. Fundamentally, that is sound. Because there is a concept of something akin to a timetable, don't necessarily give a proper reflection of what is available

So, solution - come up with a way of supporting bus services that are registerable - is every form of service out there is supportable? There will be something out there we can't cope with. If you have a different way of running your service, or know of one that is a bit different - let me (Tim Rivett) know!

Data requirement - keep this as simple as possible. Information that is on a leaflet or webpage will do:

- Where is it covered?
- What stops or zones?
- Times/days or operation?
- Phone or url to book.

On-demand stops - particular use case for PTIC, from a standards point of view - something slightly different. 'Hotel California'; bus will visit a village only when requested by somebody on the bus, or prearranged:

- number of ways to present this that people use at the moment.
- fundamentally the same problem as the flexible arrangements.
- Journey Planners don't cope with it easily
- Some of the apps causing customer complaints are GTFS-fed we've looked at what does GTFS support and how can we improve things?
- GTFS does cope with this better than TXC does
- Can support co-ordination with bus driver to arrange pick-up / drop-off (TXC does not support this)
- a number of data consumers don't honour set-down only flags against individual stops, which causes some of the problems

Because creating a fully flexible journey pattern for just one stop is overkill, we are proposing an additional to TXC schema (to add into 2.4 and 2.5) - and have learnt we also need to add 'pickup and set down at driver request'

Load of awareness and education activities that will be needed to help people understand how to use this, and get it pushed out on GTFS feeds etc

Most pragmatic approach found so far.

Challenges and risks from doing this:

might need to be some significant rework once reviews and commented received

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- approach we are proposing is within TXC schema, but very few people are using it at
 moment, so industry adoption piece is needed. Encouraging Journey Planner suppliers to
 work out how to use it within their algorithms etc. App providers on how to display it to
 customers etc
- whilst some authorities have been using NaPTAN to create flexible zones (FLX stoptypes), Lincolnshire have done this a lot but not everyone is doing it this way. Toolchain issue, a don't think everyone can create this in all the tools. Discuss with NaPTAN team to help ensure alignment. All this falls down if zones are not in place.

Technical profile document - adjunct to 2.1 profile - this will become merged into v1.2 or 2.0 of the profile.

Currently 'standalone' but can't set up flexible services without using the rest of the profile. But hopefully it provides suppliers and consumers with what they need to enable flexible services to be provided. **Tell me (Tim Rivett) if not!**

Timescales:

- consultation happening now webinars (this and last week) recording available. Slide decks too. By end of next week looking for feedback from people.
- Revision process
- Hope to get out final version by end of June if only minor changes required. If more major impact of comments, might take a bit longer.
- https://www.pti.org.uk/flexible_bus_services_BODS

4. Welsh Bus Data Service (1:08:40 - 1:19:12)

Mark Jones - Technical Lead

Diagram overview

Procurement occurred in the last 12 months - contracts awarded in last 6 months (in 2023),

2 lots:

- 1 by Vix
- 1 by Journeo

WBDS - collation of bus data that is currently quite sporadic around Wales. Trying to centralise the datasets, both for current operation, and also as we look toward franchising - exploring how we catalogue and use data within TfW to support that.

Adopting the BODS standards in terms of Real Time Timetables, Location and Fares data. Interested in Flexible services - run several flexible areas in Wales and are taking part in consultation on that.

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Differences in Wales - commercial data in agreements with bus operators to access data. We have more access to ticket machine data, and that needs to be catalogued and stored for downstream analysis.

Other data - coach and rail datasets too - multimodal world.

NaPTAN editor - to ensure stops are updated and maintained. Historically they haven't been well maintained (similar across UK!). Working with LAs closely on NaPTAN to explore impact on tapon tap-off, stop accuracy, and Welsh language support.

Working with local authorities and DfT to improve data quality

Lot 1: Vix solution is the predictions engine.

National dataset for predictions, with outbound API to numerous data consumers; both externally, and internal to TfW (systems we have/will procure for franchising and analysis of network) and also into the Content Management System (Lot 2).

Traveline Cymru - now moved across into TfW and they produce most of the data for Wales in terms of timetables.

Top 6 operators have their own scheduling tools but the majority (same as in England) don't have the tools, skills or time to produce timetable data, so we do produce data on their behalf.

Working close with local authorities and operators to ensure timetable data is spot-on as we drive it through into predictions engine

Real time (AVL) data providers - we have Stagecoach use Vix ticket machines, and all other operators use Ticketer

Lot 2 - CMS - Journeo.

Worked with RTIG standard to provide a national CMS which can then drive display-agnostic data to displays. Local Authorities procure displays through SAM framework and they will connect through into one CMS.

- 1 national standard for look and feel
- Cost savings for Local Authorities

Disruptions - key within predictions world. CMS does have a disruptions tool built into it. Specification was done a while ago, pre-DfT working on this new tool. We will work closely with ticket machine providers for cancellations service too. Good quality information for cancellations - many stop displays in Wales only display scheduled data, so want to ensure we get good quality predictions data into these displays.



Timescales:

- started in April 2023
- Mobilising now stood up systems and going through migration phase
- summer: Integrating datasets working closely with Cardiff Council testing new displays
- 2024: working with other Local Authorities and new displays next year
- 2024: more datasets available, all of Wales covered with real-time data
- consider with downstream partners re: access to predictions through TfW app

Questions / discussion

Tim: those who provide services cross-border - able to use data from both English and Welsh BODS... interesting challenge?!

Mark: nine services of English operators that go from England to Wales. More the other way (Wales to England), for which we will have to source data from BODS for those operators.

Jonathan Raper: multimodal?

Mark: multimodal in terms of RT displays - can we insert coach arrivals into displays? Connectivity in trail - integrate rail transfers across too.

5. Journey Planner Performance

Nothing to report at the moment

6. Traveline Update (1:19:12 - 1:27:00)

Mike Nolan:

TNDS

- Just introduced automatic sign-up for open data users. Users can access instantly once account created.
- Number of back office changes to data formats received for regions NE and NW providing TXC 2.4 - accepting that data and feed through to TDNS
- Renewing hosting arrangements for TNDS working with suppliers for this
- Working last 3-6 months on trial with NHS England of embedding Traveline widget on websites across Cambridge Wigan and West Birmingham NHS Trusts, to help NHS work on their Net Zero Carbon agenda

Plusbus

- Currently in UAT for e-ticketing
- working with Silverrail to create QR code and it is possible using RDG schema
- Validating those tickets on Bus



- Awaiting feedback from Ticketer part of testing
- Then timescales for rollout later this year
- Real big step-change and huge increase in ticket sales on origin of journeys not just destination as in past.
- talking with retailers, and Trainline are keen to get going with this
- Working with suppliers on interactive Plusbus mapping creation of zones, collection of data from NPTAN stops, and making data available openly
- Working with RDG to make the Plusdata data available on the Rail Data Marketplace (RDM). In final throes of development in making flat files available, and Plusbus will be the first data to be provided on RDM.
- Update zones and fares into single system. System we inherited was very labour intensive. Help to automate in background, so easier to use.

Questions / Discussion

Tim: significant progress! Taken a while for Plusbus to make a major impact in multimodal

Jonathan Raper: plans for any more segments to approach with your widget? Lots of other public services where you could have a widget, if of interest?

Mike: We've known contacts at the NHS - so a useful first starting place. Once this is done, then explore identifying other areas. Not straightforward, but re-energising this.

Jonathan Raper: traditionally Traveline been a head aggregator, and others further down the hierarchy, others produced apps and services. If Traveline moving into a different role, then would be good to have awareness of that.

Paul Everson: project in Scotland a few years back - did embed widgets into NHS. But something that was even more effective was to mail merge journey advice into invite letters. Found to be the most effective driver of modal shift

Mike: met in early part of the year - Journey Planner produced as part of letter was one discussion topic. Thought integration would be easier than it has been.

7. EU Standards Development (1:27:00 - 1:36:52)

Tim: Circulated a note on this.

https://www.pti.org.uk/system/files/meeting_files/papers/20230609%20European%20update.pdf

OPRA

Most of the EU standard for Public Transport including UK NaPTAN and TXC are based around Transmodel. If you look at Public Transport operation :



- plan what you are going to do (vehicles, staff, stops etc) this well defined in NeTEx.
- then what is happening on the day- SIRI.
- then what happened, and how does that effect what I might need to do tomorrow historical and performance view of the world. This has not looked at in Transmodel environment before. There isn't a standard for moving that data around.

Years ago (2017, not published to 2019) started to think about standard to move this forward. Operating Raw Data and Statistics Exchange: OPRA.

Project defined and sat for a long time with EU and CEN to get agreement to move forward. Approval has been given - project teams are getting together to bid to CEN European commission. Expect work to start in September 2023.

Tim was asking for interest back in 2020 - Need to think about use cases, look at early outputs of XML etc - need this and you now if you are interested!

Invite: interest in this work more than just knowing it is going on - please do let Tim know, as RTIG are involved in this.

Won't have quick results, but might be 12-18 months before there is a schema people can start to play around with in anger.

It will be a TR rather than a EN. EN is something you can put into legislation and say 'you shall follow this to the letter'. So start with TR first.

Vehicle standards

New work starting on electronic vehicle data, and access to live vehicle data (braking, acceleration, indicators flashing etc)

Open Journey Planner standards

Update to Open Journey Planning standards - been around a couple of years. Don't think anyone in UK is using it.

Paul Everson - we are using it in Dublin - it is awful!

Tim: recognise this! Trying to make it better, heading to v2. How they might use JSON rather than XML

Action: Paul and Tim to chat

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8. Issue Log (1:36:52 - 1:38:20)

Nothing new.

Once flexible service consultation has closed, will write an issue change request for TXC to cover the activity for Bus Stops to include their pick up, set-down and driver-request thing.

Formal way of making change for TXC, and will circulate it round.

Reminder if you have come across a problem, challenge, difficulty etc - do raise it on the Issue Log; form available on PTI website.

9. Next Meeting + Bus Centre of Excellence (1:38:20 - end)

Slides: Bus Centre of Excellence

Bus Back Better stated this bus CoE will help to drive bus recovery

DfT set up this with CIHT. Mission Statement about supporting bus professionals and training them. Developing the skillsets etc.

Co-ordinate pulling together of material from partner organisations. including RTIG, Bus Users UK, DfT, CPT etc.

Developing training material and events - single source of information

Hopefully will be useful

Big new thing - certificate and training programme developed, introduced and run by CILT - practitioner certificates to develop skills in both Local Authorities and Operators, and provide some form of certification and understanding as people move around between organisations they have relevant skills that are transferable. Launched in the Autumn.

Earlier in the week - website launched. Useful resource of content for modelling, planning bus networks, investment programmes and business cases etc.

Next PTIC Meeting: 29 September 2023. 1400-1600.

Today's event moved from yesterday due to BODS events - useful - looking at future, what it might do and how it might develop. What we can do to encourage more adoption, better data quality etc.

Will share outputs from this. See next meetings agenda.

Concerns about this being on a Friday - viable or not? Comments or views?

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Jonathan Raper and others saying Friday better.

Move next meeting from 28th to 29th Sep.

Tim has invited the Rail Data Marketplace to share updates in next session.