improving
public transport
through technology

Submission to
The Scottish Bus Open Data Consultation

1. Your views

S1 Type of services

1 Do you agree with our approach that only services registered with the Traffic Commissioner, or within a Local Transport Authority franchise area should be required to provide open data?

No

2 If /No', which of the following services not in scope would you like to include, with the understanding that there is no central list of these services?

Other

If 'Other', please give your answer here,:

The requirement for a fare to be paid is restrictive,

Services which do not require a fare but are important for the overall public transport network should be included, For example, free bus services around a city or town, or between hospital buildings would fall outside the definition, but nevertheless form an important part of the overall public transport network,

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2. S2 Use and disclosure of information

3 Do you have any concerns over the use of the open data in this way?

No

Box to provide additional context if required:

3. S3A The prescribed information - passenger views

4 Do you consider yourself as having additional access needs when using public transport?

Not Answered

5 From the following list of routine information, please tick any that you would find useful if made available to you when planning a bus journey,

If 'Other', please give your answer here,:

6 Assuming all of the routine information you would find useful were available, how would you prefer to obtain a ticket for travel?
Ticket buying options - I would like to obtain a paper ticket for a specific journey, using cash, contactless payment, or mobile payment (for example, Apple Pay):
Ticket buying options - I would like to /tap' a personal bank card or electronic bank card to make unlimited journeys up to a set fare cap:
Ticket buying options - I would like to hold a physical (plastic) card that I can add a balance to or that would result in a /Bill' at the end of a set period:
Ticket buying options - I would like to use a app on an electronic device which allows me to pre-pay for a journey (or a number of journeys):
Box to provide additional context on ticket types:

7 Which of the following /real time' information would you find useful in planning your use of a specific service/services, if it were available?

If 'Other', please give your answer here,:

8 Specifically thinking about the bus stop or stopping place of the bus, which of the following would you find useful to planning your journey, if it were available?

If you have any comments, please leave these below,:

9 The remaining questions are not likely to be of interest to passengers, relating to the more technical aspects of data exchange, If you would like to skip to the end of the consultation, please select 'yes' below,
No

4. S3B The prescribed information - technical questions on routes

10 Do you agree with our approach to require the information listed above, about timetables, stopping places and about route information?

No
If do not agree with our approach, how would you amend the proposed list?:
The requirements currently include demand responsive transport, These services do not have route and timetable information available in advance; the operating area and any restrictions should be published but they would be unable to fully meet the requirements,

11 What barriers, if any, do you foresee in organisations being able to provide this information?

Please answer below,:
It is likely that many, particularly small - operators will not have the resources, skills and software to provide routes and timetable information in the required format, This has been evidenced in England and there are lessons that can be learnt from that for a Scottish implementation - to enable compliance to be achieved more quickly, Ensuring that where operators do not have the resources, skill and software or a combination, there are organisation and tools to support them, For example, simple, easy to use timetable management software and ready access to well publicised bureau who can provide a data management service,

12 How often do you believe this information should be updated?

Please answer below,:
A two week period before a change is insufficient for journey planning purposes and for production of updated printed information: either at stop or in leaflet form, Passengers, particularly when they are planning journeys which they do not normally make, will need to know the availability of transport options in advance, or when a change is occurring so that that can make alternative plans,
For example:
a tourist may plan their journey many weeks or months in advance, it is perhaps not reasonable to expect this duration of look ahead,
Someone needing to attend a health care appointment will need to be able to plan at least two weeks ahead to enable them to confirm they can attend, or to make alternative arrangements,
Providers of passenger information services take some time to process data and have processes which need to consider many sources of data, For example Google, Apple etc have fixed update cycles,

S3C The prescribed information - technical questions on fares

13 Do you agree with the proposed definitions for simple and complex fares concerning tickets?

Neither agree nor disagree
If you would like to share the reason for your answer please do so here,:
14 Do you agree or disagree that the requirement to provide fares information should be phased in over time, with the initial provision of simple fares information required first, with complex fares information to follow?

Neither agree nor disagree
Do you have any suggestions for other information about tickets and fares that should be included? Please also explain why it would be useful,:
Phasing of the introduction has pros and cons:
Phasing of supply of information helps operators with the workload of operators and suppliers in understanding how to use the data, However, close alignment with the English requirements would make it possible to reduce the software development times, This was a significant issue in England, Explaining to passengers why not all ticketing information is available during the phasing in of the requirement more complex, so it is unlikely that information providers would want to use the information until it is complete,
There should be a requirement for fares information to be updated in advance of any planned changes - to enable passengers planning journeys in advance to have certainty, and allow systems to be updated, A requirement for publishing in advance needs to be balanced against competition rules,

5. S3D The prescribed information - technical questions on real time information

15 Do you agree with our list of requirements for real time location information, and real time facilities and accessibility information?

Not Answered
If 'No', how would you amend or expand the list, and why?:

16 What barriers if any do you foresee in organisations being able to provide the information listed?
Please answer below,:
Many of the barriers identified for routes and timetables are also relevant here, as whilst the delivery of information will be largely automated, there will still be a need to manage systems and review the output data to ensure accuracy and completeness, Information about the on-board facilities and emissions from the vehicle are provided once or updated when changed, and would be possible to collect; agreement on the format for supplying that data would need to be reached, but the standards exist,

Updating that information when it becomes unavailable - for example, if the onboard USB charging facility has failed, would be significantly more challenging as currently these systems are not connected to back offices to enable automatic reporting, Again, the standards for the data exist but the systems to maintain that data do not, Information on capacity is dynamic and requires specialist passenger counting equipment to be able to provide the information, which will require significant investment and ongoing maintenance costs; there are few vehicles with this equipment fitted or being specified, During Covid when passenger numbers were small, some operators introduced a driver-managed occupancy solution using the ticket machines, It is not, however, possible for the driver to update occupancy reliably on services operating outside of Covid restrictions,

17 Do you agree with our two stage approach with supporting guidance, or would you prefer to see all the requirements of stage two prescribed in statute openly from commencement?

Yes - I agree with the staged approach
Please answer below,:

18 We propose that real time information needs to be as close to /real time' as possible, We would therefore like to hear your views on an acceptable feed time for location services

Another timescale (please provide)

Please provide details of the alternate timescale:
Data provided every 10 seconds or better - wherever appropriate coverage exists, Where coverage is not available, this could be backfilled when it is, but this should not be to the detriment of the current vehicle location data,
Location updates at a specified frequency are only of use if the accuracy and consistency of the location is acceptable, Whilst harder to specify, this should be a consideration in the development of the detailed requirements and guidance,
Within urban environments, the traffic management systems are preparing for the introduction of connected ITS vehicles with sub-second location updates, Buses should be being prepared to be part of the connected vehicle network,
Current discussions within the future of bus priority working group in RTIG suggest that there is significant benefit to bus services in being able to provide high frequency location updates - every 1 or 2 seconds, as the Urban Traffic Control systems will be able to use that information to provide more effective priority than the current pre-defined tigger location approach at signalised junctions,

6. S3E The prescribed information - technical questions on bus stop information

19 Do you agree with our proposal to include the above information as part of the new statutory duty for local transport authorities to provide bus stop information?

Yes
If 'No', how would you alter or amend this list, and why?:

20 How often do you believe this information should be refreshed? For example, every three months, every year, after any change, etc,

Please answer below,:
After any change in the data about a bus stop, the NaPTAN database be updated accordingly in a timely manner,

7. S4 Training, compliance and enforcement

21 Do you (or your organisation) operate bus services in Scotland?

No

22 How prepared do you believe the industry is for bus open data requirements under the new Regulations in Scotland?

Please answer below,:
Larger operators operating in England will be familiar with the core requirements being proposed and will have the skills and software available to provide the information, depending on the final detail of the requirements there may need to be some amendments to software,
Operators not operating in England - particularly the smallest and least resourced, will not be prepared and may not have the skills and or software tools to provide the data, nor the financial and resource capacity to provide and maintain the data,

23 What topics and content would you like to see included in the guidance?
Please answer below,:
The guidance needs to be understandable for non-technical individuals and provide information from first principles on why it is being required through to how it can be provided,
In addition to operator general guidance, there needs to be documentation with a high level of technical detail: to enable software and system providers to understand how to create systems which can provide data to meet the requirements and reduce the opportunity for different interpretation of requirements,

24 Do you think you will require specific tools or training to be compliant with the new Regulations?

Please answer below,:
25 What is your view on the proposed requirement for new data to be provided two weeks in advance of any planned changes for tickets, routes, fares, or timetables?

Please answer below,:
Please refer to the responses to the routes , timetables and fares questions,

26 What financial impacts, if any do you foresee for businesses in meeting the new bus open data requirements under the new Regulations?

Please answer below,:
Providing the resources to meet the requirements will have a cost as there will be a requirement for training and perhaps new back office/software costs
- particularly for the smaller operators, some of whom may need to subcontract the delivery to bureau services,

8. S5 Timescales

27 Do you agree with the proposed timescales requiring the submission of the prescribed data as detailed above?

Yes
If 'No', what would you alter, and why?:

9. S6A Data standards - route and timetable information

28 Do you agree that we should set TransXChange as the standard for timetable information?

Neither agree nor disagree
If you would like to share the reason for your answer, please do so here, :
Adoption of TransXChange would mean that operators who are used to providing data to Traveline Scotland or the English BODS service, will be able to provide the information with minimal change,
Consideration should be given to adoption of NeTEx because the TransXChange standard is ageing, and links to SIRI and fares data which would likely be in NeTEx are easier, In addition, with many English operators now having tooling to provide route data in NeTEx - as this is required to provide Fares data, the previous high bar for use has been lowered,
More important in some ways than the format itself, will be to ensure that data is provided in a consistent, timely manner to reduce the effort required by data consumers, There are some lessons around bank holiday data for example, which can usefully be learnt from the English experience,

29 What barriers, if any, do you foresee if legislation requires Scottish bus operators to provide information in this format?

Please answer below,:
The development of a Scottish TransXChange profile specifying the required data in detail will be important to reducing the barriers, The closer this is to the English requirements - the less change software suppliers will have to make,

The software to provide TransXChange is readily available and already in place with many operators; the smallest operators will, however, need support to provide the data as discussed in our response to other similar questions,

30 From the point of view of a body using, what standard(s) should data be provided in from the data hub for data consumers?

TransXChange, NetEx, GTFS, Other
If you would like to share the reason for your answer, please do so here, :
GTFS is commonly used by data consumers - particularly international suppliers,
Providing data which has been processed to produce predictions (real time information) in SIRI SM, SIRI ET and or GTFS-RT would be beneficial to some data consumers,

10. 6B Data standards - fares and ticket information

31 To align with the fares standards in England and Wales, we propose to require the use of the NetEx data standard, Do you agree or disagree with this preferred standard?

Agree
If you would like to share the reason for your answer, please do so here,:
NeTEx is the most obvious choice for a standard for fares as other formats would require significant bespoke development,

32 What barriers, if any, do you foresee if legislation requires Scottish bus operators to provide information in this format?

Please answer below,:
The development of a Scottish NeTEx Fares profile specifying the required data in detail will be important to reducing the barriers, The closer this is to the English requirements the less change software suppliers will have to make,
The software to provide NeTEx whilst more available than it was a few years ago, has not been widely adopted by operators; the smallest operators will need support to provide the data as discussed in our response to other similar questions, A tool to produce fares data similar to that available in English is likely to be required to enable completeness of fare information to be achieved,

33 From the point of view of a data user, what standard(s) should data be provided in from the data hub for data consumers?

NetEx
If you would like to share the reason for your answer, please do so here,:
We would support NeTEx and GTFS - survey did not allow both to be selected,
GTFS is commonly used by data consumers - particularly international suppliers,
There are likely to be some extensions necessary to cope with all fares and ticketing products,

11. 6C Data standards - real time information

34 We believe that real time data should be provided in the SIRI data standard to collect more raw data and to align with English and Welsh standards, Do you agree or disagree with this approach?

Agree
If you would like to share the reason for your answer, please do so here,:
The use of a standard in common with England and Wales will mean that suppliers are readily able to provide suitable equipment and systems; and operators who provide services outside of Scotland can use the same vehicle equipment to provide the location data wherever they are operating ,

35 What barriers, if any, do you foresee if the bus open data Regulations requires Scottish bus operators provide information in this format?

Please answer below,:
Many of the barriers identified for routes and timetables are also relevant here, as whilst the delivery of information will be largely automated, there will still be a need to manage systems and review the output data to ensure accuracy and completeness,

36 From the point of view of a data user, what standard(s) should data be provided in?

SIRI
If you would like to share the reason for your answer, please do so here,:
We would support SIRI VM and GTFS-RT for vehicle location,
GTFS-RT is commonly used by data consumers particularly international suppliers,
Providing data which has been processed to produce predictions (real time information) in SIRI SM, SIRI ET and or GTFS-RT would be beneficial to some data consumers,

12. 6D Data standards - bus stop information

37 Do you agree with our proposal to use the NaPTAN data standard for this information?

Yes
If you would like to share the reason for your answer, please do so here,:
The use of a standard in common with England and Wales will mean that suppliers are readily able to provide systems to manage the data; and data consumers already understand how to import bus stop data in NaPTAN format,
In addition, there is good integration with TransXChange, NeTEx and SIRI,
38 What factors, if any, could be a barrier for local transport authorities in maintaining bus stop information this way?

Please answer below,:

Resource for timely management of bus stop data could be an issue in some authorities,
Lack of suitable bus stop data management and or asset management systems may be a barrier for some authorities, particularly smaller ones,
The core piece of underlying data across routes, timetables, fares and real time information is the bus stop, Therefore, ensuring that the information about the location and features of a bus stop is accurate is a pre-requisite to be able to provide accurate and timely data for the other data sets in this consultation,

39 How often should this information be updated?

Other
If 'Other', please give your answer here,:
After any change in the data about a bus stop, the NaPTAN database should be updated accordingly in a timely manner,

7 Any other comments

40 Are there any other comments you wish to provide in relation to bus open data?

Please answer below,:
The detailed requirements and guidelines should be subject to consultation within the supply chain: from suppliers, through operators to data consumers - to ensure that all parties understand the ultimate objectives of the legislation, the rationale for the choices made and what they need to do, and how, to achieve the objectives,
Consideration should be given to how any requirement to provide disruption information - diversions, journey cancellations etc should be provided, This is information which is increasingly key to passenger confidence,

13. About you

41 What is your name?
Name:
Tim Rivett

42 Are you responding as an individual or an organisation?

Organisation

43 What is your organisation?
Organisation: RTIG Inform

44 Further information about your organisation's response

Please add any additional context:

The Real Time Information Group (RTIG) is a community organisation dedicated to establishing, supporting, and sharing good practices in the use of information and communications technology within public transport,
We provide expert guidance, industry collaboration, and best practice standards to ensure transport technology is practical, integrated, effective and as accessible and inclusive as possible,
Our response is based on 25 years of supporting the industry in implementing real time and timetable passenger information and was developed with input from operators, suppliers, authorities and consultants who have been involved in passenger information and operating systems for many years, as well as developing the English BODS systems and providing and consuming data from the live system,

45 The Scottish Government would like your permission to publish your consultation response, Please indicate your publishing preference:

Publish response with name

46 Do you consent to Scottish Government contacting you again in relation to this consultation exercise?

Yes

47 What is your email address?
Email: tim,rivett@rtig,org,uk

48 I confirm that I have read the privacy policy and consent to the data I provide being used as set out in the policy,

I consent

49 Where did you hear about this consultation?

Social media/email of an organisation you follow
If other, please say where::

RTIG Inform

June 2025