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European Regional Development Fund
Investing in a Smart, Sustainable and Inclusive Future

Aggregator Discovery Project 2019

Summary of the Options and
Recommendations Report

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1 Project overview

Transport Scotland was approached in spring 2018 by Traveline Scotland (TLS) and transport operators to support a 'Discovery' project.

The aim of the project was to see if the TLS website can be enhanced to 'aggregate' fares and complement the existing journey planning provision. This means that a journey planned via the TLS mobile app or website will include times and fares for the various travel options available for the journey.

The project considered how to gather this information for all modes of transport, including real time fares for rail, ferry and air, as well as demand responsive transit and cycle schemes.

It also looked at ways in which the information contained on the TLS site could be easily enhanced to make journey planning easier – for example indicating whether contactless card payments can be made.

The project reviewed aggregator systems already available on the market and also assessed the potential for TLS to develop a bespoke in-house system. The project developed the technical schematics that would be required for other systems to interface with the TLS website.

Retail options were also considered. Firstly around where the TLS website could further enhance its links to operators website for sales, and secondly the potential for providing a 'one shop stop', for retailing of tickets for end to end journeys.

This project is supported by the European Regional Development Fund.

2 Purpose

The project considered how TLS can be developed to provide:

- a 'one true source' provision of full suite of journey planning and fares information for use by individuals or businesses
- more information about travelling in Scotland, so that more people can feel confident to use public transport and thus support modal shift. This aligns with the Scottish Government agenda's for a greener and healthier Scotland
- improved fares and journey information supporting economic growth within the digital and Mobility as a Service (MaaS) marketplace
- a 'one stop shop' journey planning and retail service
- alignment with the Department for Transport Bus Open Data Programme actions

3 Key outcomes

The key outcomes from the project are:

- it is possible to provide an aggregator service. It recommended that this be approached in a phased manner, starting with adult single fares and expanding to support other fare types. This reflects considerations around the difference between operators fare sets, for example in what constitutes a child fare (some age 16 or under, some aged under 14 etc). This approach also allowed time for the forthcoming DfT Bus Open Data provision 'NeTEx' standards to be finalised
- use real time fares provision and operator data feeds where available - for example, in rail and air travel. Static fares provision to be used as a fall back and for operators that cannot support real time data provision
- there is a need for TLS to continue to support the collecting and cleansing of static data from smaller operators until the standardised approach has been agreed with the Department For Transport (DfT) regarding open data provision (NeTEx). This process should be as automated as possible, for example through a portal interface, to minimise impact on data providers and data processing by TLS
- there are a number of API systems available in the marketplace that can be adapted for purpose. This would be simpler and more cost effective than building from scratch

4 Potential improvements to current information data provision

There are a number of potential information improvements identified for the TLS website and mobile app. These have been classified as achievable in the short term or long term.

4.1 Short term data provision improvements on TLS website and/or mobile app:

- whether an operator accepts contactless bank card payments or cash only
- where there are multi-operator / multi-modal / zonal tickets available
- plus bus services
- where there are seasonal tickets available, and what you need to purchase (i.e. photo card, smartcard, mobile app etc.), information on how to purchase and fulfil
- bus hailing and stopping requirements
- on bus features and services information
- accessibility services, including wheelchair accessible and audio services
- information on local cycle schemes (including boundaries, drop off points, sign up info, and charging)

4.2 Geographic zone display functionality – example information types include local bike schemes, availability of Demand Responsive Transport and visitor information. Longer term data provision improvements on TLS website and/or mobile app:

- improved DRT – comprehensive information around DRT services
- consider using geo-location services to complement NAPLAN

5 Retailing

The following retailing improvements were identified:

- short term improvement could be made with links to relevant operators websites for retail purpose – new window opens
- more advanced linking using information on selected products to deep link to purchase pages on operator websites. Product information can be pre-filled if appropriate APIs are available
- links to relevant apps or other digital solution if available for the journey
- consideration was also given that smaller operators (without this functionality already available) may require additional technical and/or financial support to maintain competitiveness
- the final stage is where travellers select products from multiple operators that are stored in a 'basket'. On purchase, the fulfilment is completed without additional traveller interaction

In advance of progressing the final stage of retailing:

- develop further research and a business case following once the improvements to data provision and retailing are implemented. This will help ascertain if further public sector support is required
- allow DfT NeTEx standards to be implemented before progressing with a the full retailing provision
- give full consideration to complex items such as operator and financier commercial agreements, website upgrades required, customer management system and back office provision, and ticket fulfilment methods
- consider future developments around Account Based Ticketing retail options

6 Current TLS provision

The report also recommended a full user experience / interface review of the TLS site and mobile app is undertaken to provide information on how the site is currently used by travellers. These findings can then be used to inform future improvements of the site and the mobile app, and to inform future marketing activities.

The report also highlighted that marketing campaigns highlighting the improved functionality of the TLS website would be required.

TLS will progress this review in parallel with any actions that result from this Aggregator Project.

7 Risks

Two high level risks were identified:

Risk	Impact	Probability	Risk mitigation
Project may conflict with DfT Bus Open Data initiatives relating to NeTEx standard.	Low	Medium	Retain awareness of DfT programme. Ensure a conflicting data format is not created as suppliers only want to support single format.
Transport for the North (TfN) have issued a Procurement notice for a National fares Data Build Tool. This may conflict/complement with TLS aspirations.	Low	Low	Continue to monitor and liaise with TfN as procurement progresses.

8 Proposed outline implementation plan

The following stages are subject to review and are not definitive:

Stage 1	Discovery
Current	<p>TLS undertake a user experience review of the current web and mobile app interface.</p> <p>TLS review proposed “quick wins” above to identify any activity that can be taken forwards immediately</p>
Stage 2	<p>Real-time, dynamic pricing information to be provided by operators were possible.</p> <p>Improved and streamlined process for manual (static) fares provision. System to take into account the developing NeTEx UK profile.</p>
Stage 3	<p>Redirect retailing of tickets through to an operator web site utilising any available APIs on the retailing site.</p> <p>Improved information provision related to services, vehicles and geographic area.</p>
Stage 4	<p>Any decisions on Stage 3 will be dependent on completion and review of prior stages.</p> <p>Ticket retail and fulfilment across operators and modes via Traveline Scotland website and mobile apps.</p> <p>Potential implementation of Account Based Ticketing.</p>

9 Next steps

The Project Board, transport operators, and Transport Scotland will review the various reports and outcomes, and agree position on next steps on current and future aspirations for the TLS aggregator solution.



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This document is also available on the Transport Scotland website: www.transport.gov.scot
Published by Transport Scotland, May 2019

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