HI TRANS

THE HIGHLANDS AND ISLANDS TRANSPORT PARTNERSHIP

Report to Partnership Meeting 26 April 2019

RESEARCH AND STRATEGY Delivery

West Highland Line Analysis Tool

Purpose of Report

To introduce the Knowledge Transfer Partnership (KTP) support work for the WHL Review Group.

WHL Analysis Tool

Over the January to March period the project has aimed to develop further functionality for the 'Transport Planning and Appraisal Tool' which is the KTP project's aim. This functionality has been guided by the requirements of the WHL analysis carried out by Partnership Manager Frank Roach and aspirations for improvement of same.

The main purpose of this work has been to provide an automated link between existing rail and bus timetable data and a user-friendly desktop tool. The tool under development will aim to provide insight into service details on any rail line in the region alongside equivalent bus travel but is being built around the WHL as an example, and to a schedule that meets upcoming meetings of the WHL Review Group.

The tool has principally been designed to eliminate all the work necessary to update the existing Excel document, which is a static list of data. Rail station codes, population figures, station footfall and fares will all be entered and updated automatically. Also, the departure and arrival times to Fort William and Glasgow Queen Street, from and to all the stations on the line, will be automatically read and listed. The tool then matches the closest bus stop by geographical coordinates and calculates the fastest rail and fastest bus journeys available. This will allow outputs detailing journey durations and service frequency and provide further ground work for future analysis.

This existing output designed by the HITRANS Partnership Manager allows a quick glance overview of the frequency of services at every point on the line but takes time and effort to update. With the automation added, updating it will take only a few minutes, rather than weeks, and graphical output will be added to make spotting opportunities for improvement on the line easier.

Furthermore, the tool can then be applied to any rail line and the data that is stored to facilitate this functionality can be used for other purposes, not least, linking up with past and future work to provide the tool specified for the KTP project.

It is envisaged that this work will link up well with the work already conducted on ferry services, allowing analysis of connectivity between modes and the facility to better understand variability in isolation and opportunity.

In making data available for use we have begun the process of developing an overview of transport data availability, contextual demographic data and the technical requirements for importing and storing that data. Future work will include advancing this understanding and making recommendations for its use.

Data on the rail network is available in a variety of formats and is passed on to several different systems and organisations but mostly originates from the Rail Delivery Groups 'Train Planning System'. This database can provide the most comprehensive and up-to-date data as a 'CIF' file, which is a specially formatted, machine readable .txt file. This file will contain all services on the route. The 'Service Code' (or 'Train Service Code') is how groups of services are aggregated together: 23545003, for example, is the WHL. This code allows the user to selectively extract the data of interest. The work to develop tool functionality to parse and store this data has yet to be undertaken.

Bus timetable data is provided via Trapeze Group's Novus database as a Bus Registration Report in .xml format. For buses, no equivalent to the service aggregating 'Train Service Code' exists, so multiple registration reports are required to match all the relevant bus services to the rail service in question. The tool additionally performs a compiling function that aggregates the timetables without loss of data.

Future work will develop the capability of reading the Rail Delivery Group data files and look at the processing and storage requirements of this timetable data and the necessary demographic data in order to provide a truly end-to-end, user-friendly automated system, as well as developing additional functionality.

Recommendations

1. Members and Advisors are asked to note the report
2. Members are invited to support a proposal for further development of tools to facilitate analysis.

RISK REGISTER

RTS Delivery

Impact – This work supports several strategic objectives of the RTS

Policy

Impact – This work supports the development of the RTS Delivery Plan

Financial

Impact – This work may require additional resources

<u>Equality</u>

Impact – Improvement of public transport services helps reduce social exclusion by improving access to employment and services for those living in our most remote areas.

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