# DSC-14 Public transport access to services

2018-04-12

An inability to access services can have negative health and economic effects by increasing social isolation and limiting job prospects. The Data Science Campus (DSC) worked with the Welsh Government to produce a R package called propeR, which uses multimodal (private and public) transport networks to help others analyse accessibility.

## Team members

- Michael Hodge
- Ioannis Tsalamanis (since left the Campus)
- Jasmine Latham
- Phil Stubbings (since left the Campus)

## The need

The Welsh Government needed a new accessibility and travel time tool to benefit a number of ongoing projects and programmes, including: * the Welsh Index of Multiple Deprivation (WIMD), * The Valleys Taskforce programme, * Cadw website and mobile app, * Transport policy unit, * South Wales Metro programme

## Impact

This new tool allowed Welsh Government to use its outputs for multiple projects and programmes. WIMD measurements will immediately benefit from more frequent calculations and real-time monitoring.

## Data science

The tool was based on open-source tools and data. We gathered public transport (bus, rail) information and transformed it to General Transit Feed Specification (GTFS) format. The tool is built in R and makes extensive use of OpenTripPlanner.

## Stakeholders

We are working with the Welsh Government.

## Code and outputs

- propeR GitHub repository
- graphite GitHub repository

## Delivery

- [x] **May 2018** Scoping workshop with Welsh Government and Sustainable Development Goals (SDG) team
- [x] **June 2018** Obtain public transport (bus, rail) data, transform it to required format and validate
- [x] **July 2018** Build interactive tool based on R to calculate isochrones, choropleths and extract data
- [x] **August 2018** Handover the code to WG for assessing the functionality, outputs and methods used
- [x] **October 2019** Project handed over to Welsh Government and website article written
- [x] **March 2019** Used by Welsh Government to calculate WIMD statistics
- [x] **April 2019** Used by ONS to calculate travel time to job centers
- [x] **May 2019** Used by ONS to calculate travel time to work places

## Further information

Please contact datasciencecampus@ons.gov.uk for more information.

## Updates

#### 2019-11-27T09:44:35Z

Ioannis Tsalamanis wrote a blog post on the findings from this project in October 2018.