Personal Travel Zones

Are they answer to passenger centric ticketing?

Ian Robinson – Development Lead for Fares, Ticketing and Revenue Modelling (Bus)

Mae Trafnidiaeth Cymru yn eiddo i **Lywodraeth Cymru**

Transport for Wales is owned by the **Welsh Government**

Lines on Maps

- Public transport has a long history of drawing lines on maps for fares be they:
    - Routes
    - Operator boundaries
    - Local authority boundaries
   - An arbitrary decision made by a committee

This may have worked in the past when people lived and worked within relatively small geographic areas, but people no longer live their lives by the lines and maps that we draw. We need to be more flexible and respond to very disparate and fluid travel patterns.

Changes in Technology, Data and Regulation

- Rapid and continuing advances in the data we capture and our ability to process it have opened up what we can offer
    - We can track individual users across the network
    - We can improve how we structure fares to make them simpler and more transparent
    - We can reward behaviour
- Many areas are seeking to reintroduce greater planning and co-ordination of public networks
    - We can break down artificial commercial barriers
    - We can present a unified offer across routes and modes
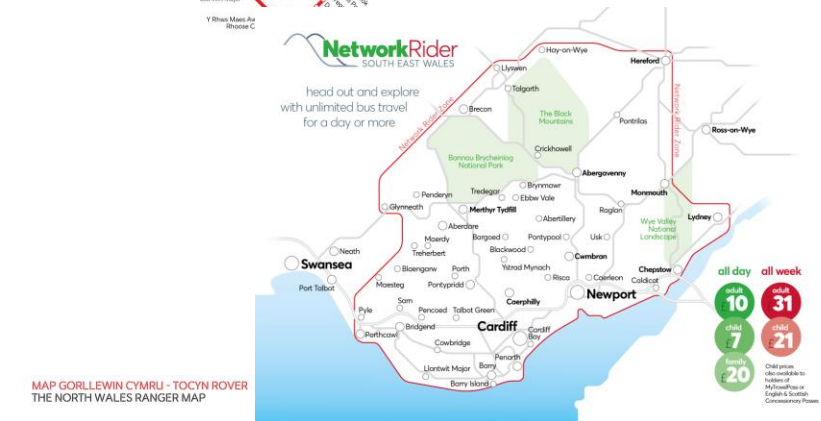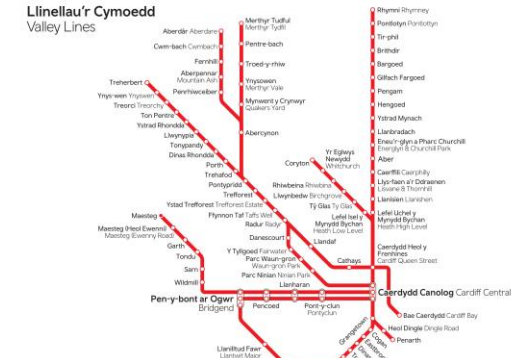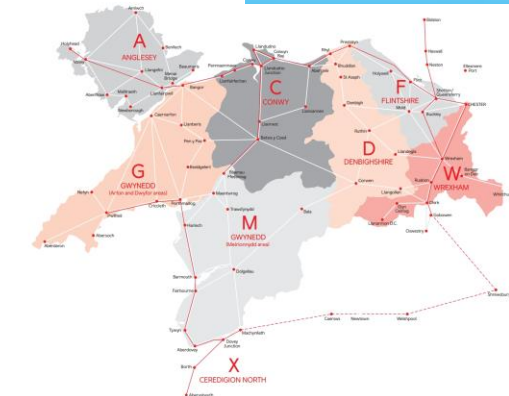
Meanwhile in Wales…..

Bus Franchising
- Later this month a bill will be introduced to the Senedd which will allow us to franchise the Welsh bus network over the next 5 years. We have ambitious objectives:
  - Improved integration between bus and rail
  - Bus services that enable greater use of public transport
  - More affordable public transport whilst maintaining revenue levels
  - Simpler fare structures and products that are consistent across Wales
  - Innovation that delivers to all bus users

Fares and Data Innovation
- As we prepare for franchising, we are already innovating and working with our existing bus partners, we have already:
  - Successfully piloted distance-based fares and growing revenue
  - Established large cEMV PAYG schemes on bus and rail
  - Improved the quality of data about how the bus network is being used
  - Developed a sophisticated fares and revenue model

But we want to do more…..
- We want to harness technology to create fares and products that reflect todays travel needs for individual customers
- Recognise that our users are diverse, and we must not exclude or leave anyone behind

So, should we think beyond lines on maps - the customer problem?

Meet Megan who lives in Menai on Anglesey.

Megan is a mature student at a college in Bangor and attends most days of the week. She does not own a car and uses the bus regularly for travel to college, leisure or shopping, most of which involves a journey over to Bangor which is less than 2 miles away

Megan has the following options:
- Buying singles at £1.50 per journey (at least £3.00 per day and no other travel)
- An Anglesey and Gwynedd Day or Season Ticket at £6.00 per day/£22.00 per week
- A 1Bws North Wales Day or Season at £7.00 per day/£30.00 per week.

Consequently, Megan is buying singles and not using the bus as much as she might otherwise do so.

This compares with her friends who live in Caernarfon which is 8 miles from Bangor who only pay £4.00 per day/£14.00 per week for their Gwynedd tickets despite the greater travel distance.

The injustice of this is making Megan think of buying a car…….
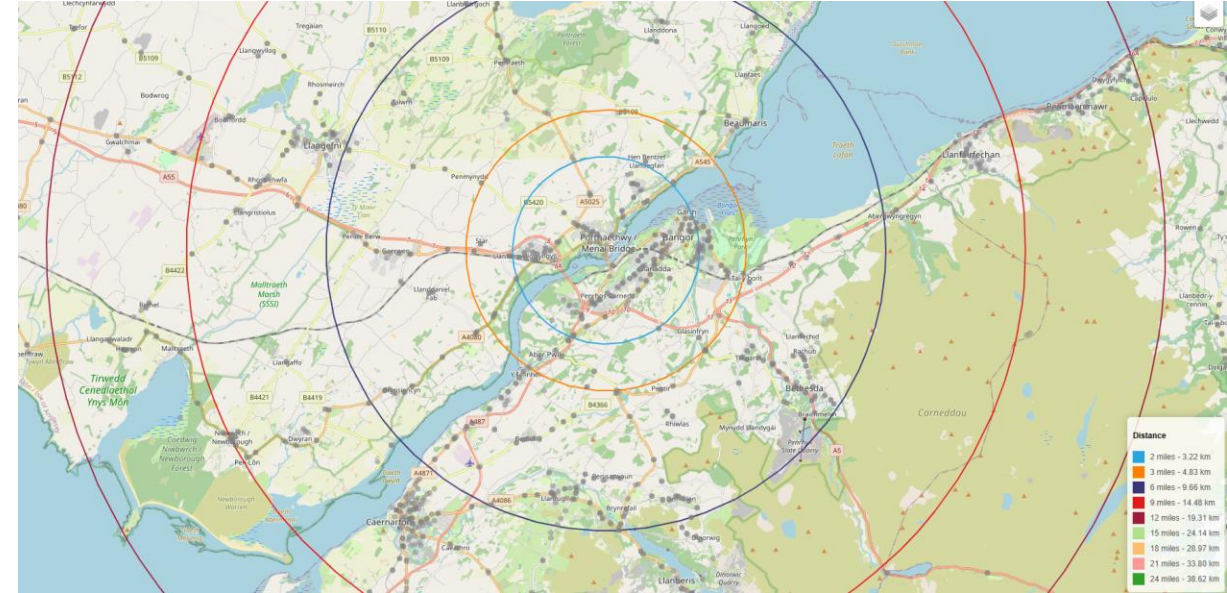
How could a PTZ could help Megan?

No Boundaries or Lines on Maps Objective
- Day and season pricing travel based on how far an individual travels
- Price bands that can expand or contract as the passenger uses the network each day

With a PTZ there is no artificial boundary between Anglesey and Gwynedd. Megan can pop home for lunch between lectures or go back in the evening to the pictures for a capped daily price that recognises its only a few miles away.

If Megan goes to see her friends in Caernarfon it can create a bigger travel sphere for that day and charge accordingly whilst still protecting her weekly accumulation for travel between Menai and Bangor. Megan can now have unlimited travel within her sphere of needs knowing that if it changes the cap can adapt and flex as required.

It sounds like a great idea, but we knew there were some challenges
- Can we process the data accurately and promptly?
- How do complex travel patterns impact the outcome?
- Can we explain it to passengers?

In autumn 2024, we set out to try and answer these questions using tap-on/tap-off data being collected on the North Wales 1Bws capping scheme.
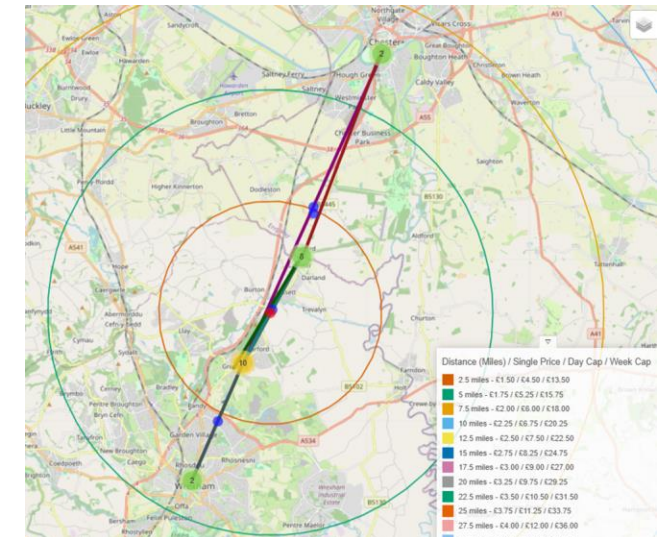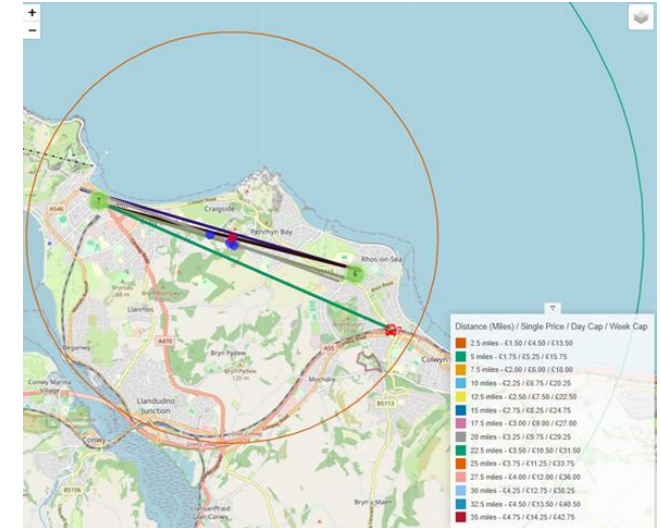
The Outcomes

Can we process the volume and complexity of data?
- Yes - we had over 425,000 transactions in our data sample (about 9,000 per week) and we could look at them all and collate them over a day or 7-day period to identify appropriate caps

Could we handle complex travel?
- Yes – it's a very small percentage of users, but isolated journeys that negatively affected the daily charge could be disregarded and charged as singles (or separate daily caps)
- An unforeseen outcome - the distance cap could be flexible in respect of its location if only occurring on a limited and unlinked basis

Will passengers comprehend and understand it?
- We think so – good visual presentation of data is essential (even for those of us doing the development)

What next?
- Discussions with passengers to further explore presentation
- Implementation of our central revenue system for bus which would undertake the data processing
- A pilot? An operator has expressed interest in looking at this further

Ian Robinson

Development Lead for Fares, Ticketing and Revenue Modelling (Bus)

[Ian.Robinson1 @tfw.wales](mailto:Ian.Robinson1@tfw.wales)