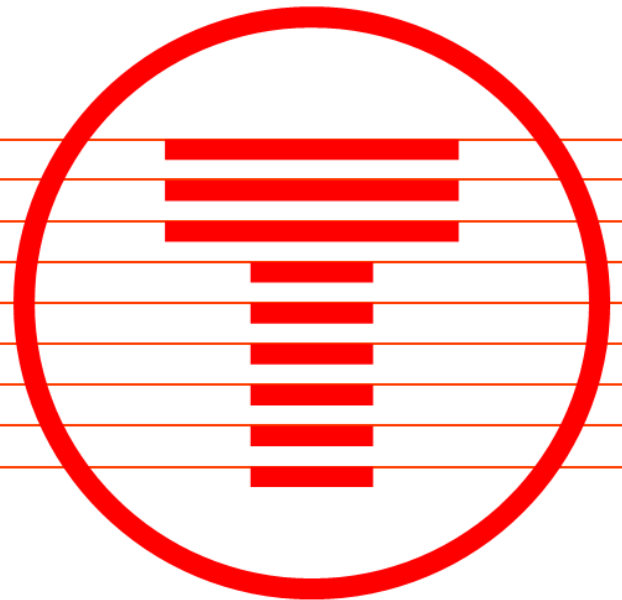


Multimodal Digital Customer programme

Business Case – April 2024 update v2



Date:	30/04/2024		
Author:		Exec Sponsor:	Chief Customer and Culture Officer
Classification:	Official <input checked="" type="checkbox"/> Routine business operations and services, some of which could have damaging consequences if lost, stolen or published in the media. Official sensitive <input type="checkbox"/> Official information could have damaging consequences if it were lost, stolen or published in the media, but are not subject to a heightened threat profile.		

Mission Statement

“ Enable all people in Wales to access sustainable travel choices through seamless and intuitive multimodal digital services. ”

Contents

Executive Summary	3
1. Introduction	6
2. Background.....	6
3. Situation Today	7
4. Proposed solution	8
4. Deliverability	13
5. Strategic case	15
6. Wellbeing Case.....	16
7. Economic and Commercial Case	18
8. Financial Case	20
10. Management Case.....	20
11. Conclusion and next steps	21
Appendix 1. Achieving strategic objectives for transport in Wales	22
Appendix 2 Economic and Commercial Impact Modelling	26
Appendix 3 Programme Timeline	27
Appendix 4 Assumptions regarding Commercial Impact and..	Error! Bookmark not defined.

Executive Summary

The TfW 2.0 remit is to develop a multi-modal culture and support the development and delivery of the vision for **One Network, One Timetable and One Ticket**.

Our *Multimodal Digital Customer Strategy*, adopted in March 2024, is a critical enabler to driving modal shift by making it easier to access and use public transport, and Mobility-As-A-Service is identified as a priority objective in our TfW FY24/25 business plan and National Transport Delivery Plan (NTDP).

We have developed our strategy based on primary customer research, competitor analysis, and using stakeholder input from across TfW. We have drawn on global best practice in our Mobility-as-a-Service vision to inspire the best approach for Wales in realising the goals of Llwybr Newydd. Our behavioural insights work has also recommended that Integrated Journey Planning and Ticketing, through a single Mobile App, be introduced to alleviate barriers to using our Metro services.

Our digital services complement wider corporate strategies across Customer, Integrated Transport and Commercial. Whilst delivering our long-term strategy we will continue to support the on-going needs of the business to drive revenue and improve operational efficiency, whilst working towards long-term modal shift goals and meeting evolving customer expectations and needs in a competitive landscape.

We are also working with Centre for Digital Public Services to benchmark and improve our ways of working to ensure we are meeting the Digital Service Standards for Wales on all future digital services.

Alignment with transport policy and strategy

Delivery of our *Multimodal Digital Customer* programme fulfils the recommendations of Llwybr Newydd, National Transport Delivery Plan, South East Wales Transport Commission, North Wales Transport Commission, Net Zero Wales, Wales Digital Strategy, and is a critical enabler for Bws Cymru as part of the Bus Franchising Customer Proposition.

Furthermore, our strategy enables TfW To achieve objectives of Well-being of Future Generations Act, supports delivery of Active Travel Act, and Welsh Language Standards Regulations.

A fragmented Digital User Journey in a crowded market

Today, we have four mobile apps and websites: TfW, TrawsCymru, Traveline Cymru and fflecsi, plus more than a dozen sub-sites/portals for specific purposes such as Delay Repay claims, Concessionary Cards, and On-Board Catering. We serve over 530,000 Monthly Active Users through our digital channels, but our user experience is fragmented, and it is hard for us to leverage customer insights and drive behavioural change.

Our TfW App is very successful and ticket sales grew 25% during the last 12 months. It is currently rated 4.6 out of 5 on the Apple App Store. We were recognised in the industry winning the 2022 'Digital Champion' award at the Transport Ticketing Global awards and we have received praise from *Cymdeithas yr Iaith*.

However, the reach of our digital channels today is quite limited, with our App selling tickets for only 5-6% of our rail customer journeys. Most of our customers today rely on third-party apps for ticketing and information, such as Trainline (~45% of journeys), Google Maps and National Rail Enquiries.

The marketplace for rail ticketing is commoditised and highly competitive with the likes of Uber, TrainPal and Virgin Trains Ticketing (Virgin Red) challenging Trainline's dominance.

Our key differentiators of the TfW App today are that we offer multiflex tickets (50% of our journeys retailed), capacity checker, and Pay As You Go transaction history. Our TfW App meets the Welsh Language Standards requirement of providing Rail Ticket retail in Welsh but this is used in Welsh by only 0.5 – 1% of our App users.

None of the commercial providers include all transport options available in Wales (fflecsi, bike hire, TrawsCymru, car clubs), they lack expert local knowledge, and do not support the Welsh language. We have met with Google Maps, Citymapper, and Trainline to suggest areas for improvement, but their own product roadmaps are focused on initiatives which scale and impact globally and the size of the market in Wales offers them limited opportunities.

Competing with other Rail ticketing apps is difficult when well-funded competitors exist in this space. Our customer research indicated low likelihood of customers switching away from a channel they know and like, without a significant incentive or reason for doing so such as differentiating features or saving money.

Instead, we should differentiate the TfW App providing a uniquely Welsh experience that purposefully supports the travel needs of people in Wales and the Well-being of Future Generations.

Creating a seamless multimodal user experience

We will transition our digital services from siloed tools into an **expert travel companion** to make transport intuitive and simple, removing friction from multimodal journeys, and giving customers the confidence to make unfamiliar journeys.

We will combine all our apps, websites, and portals into a seamless digital experience across **One App, One Website** and **One Account** and support simplified ticketing with contactless Pay-As-You-Go in our regions.

Pivoting the TfW Mobile Apps into a uniquely differentiated multimodal solution will provide a reason for customers to switch to our app vs commercial alternatives, giving us a greater platform and aggregated audience for achieving well-being and customer goals. Offering multimodal journey planning in Welsh helps further our obligations to reduce barriers to using Welsh language in daily life.

Our multiyear strategy will deliver the following key outputs/milestones:

- **Stage 1 (year 1): Integrated Multimodal Journey Planning** on our Website and Mobile App available fully in Welsh and promoting Active Travel
- **Stage 2 (year 2): Integrated Ticketing and Payment** for all transport modes on our Mobile App with a single TfW Account on our website covering Bus, Bikehire, fflecsi, car clubs, and taxis; this capability is required to retire the TrawsCymru and fflecsi Apps and in readiness for Bus Franchising in 2026.
- **Stage 3 (year 3-5): Driving further behaviour change and modal shift** from personalisation, loyalty and multimodal incentives - working with public sector partners and Corporate Joint Committees across Wales.

At the heart of this investment is procurement of a Mobility-as-a-Service Technology Partner which provides us with the multimodal capabilities we need to integrate into our TfW App and Website and back-office systems to offer a multimodal experience. The at the end of the service agreement we will need to retender for the journey planning and retail capabilities provided as SaaS but we own the IP of the front-end of our mobile app to pivot to an alternative provider. Break points are included in the contract at key milestone stages for if circumstances change.

We are embracing the Wales Digital Service Standards in the development of this programme ensuring that we take a User-Centric approach, with customer research, testing and validation at the heart of development. Data from our multimodal digital customer solution will support business analytics, transport modelling, and ensuring we can generate customer insights for marketing and behavioural change.

Delivering outcomes for the people of Wales

We estimate that induced demand from this programme will deliver an additional 11M sustainable journeys, improving demand for bus travel and generating an additional £34m revenue for TfW across bus and rail and £1.6m of cost avoidance. We have considered in our modelling that many users may simply be switching from a competitor App/website for an existing journey and considered that only 10% of all users are making new journeys shifting from private car.

The Social, Economic and Marginal Impact benefits available through TAG modelling deliver up to £72M/year benefit (£215M during the 7-year programme). Much of this is unlocked through personalised marketing to users, attracting customers to take public transport for existing and new journeys and uses underlying data and assumptions from WebTAG.

Our programme directly supports the Well-being of Future Generations of Wales by improving access to key public services, education, leisure, healthcare and cultural opportunities, however none of these benefits can be quantified using current modelling approaches. We will work with partners to integrate our sustainable journey planning technologies into their own digital services to achieve collective long-term outcomes for Wales and explore ways to quantify these impacts.

Specifically, we will also explore and support the needs of marginalised/forgotten groups including cash dependent, disabled, young people, non-digital natives, and vulnerable travellers through community and partnership working, ensuring there is always an alternative method for customers to achieve the same goals and value for money without relying on digital services.



1. Introduction

This paper reconfirms the business case for our Multimodal Digital Customer programme in support of budgetary approvals by Welsh Government and includes a summary of the following:

2. Background
3. Situation Today
4. Proposed Solution
5. Strategic Case
6. Wellbeing Case
7. Economic Case
8. Commercial Case
9. Financial Case
10. Management Case
11. Next steps
12. Conclusion and next steps

This paper compliments our Multimodal Digital Customer Strategy, adopted in March 2024, which includes in-depth analysis, metrics, governance models and programme ways of working.

Our Multimodal Digital Customer Strategy has been developed built on customer research, competitor analysis, and using stakeholder input from across TfW. We have drawn on global best practice in our Mobility-as-a-Service vision to inspire the best approach for Wales in realising the goals of Llwybr Newydd.

This strategy complements wider corporate strategies across Customer, Integrated Transport and Commercial and will be refreshed Annually in September of each year in support of business planning activities for the next financial year.

2. Background

TfW Mobile App

- In 2018/19 a decision was taken by Keolis Amey Operations Ltd to build a bespoke rail ticketing app to meet requirements to provide ticket purchasing in Welsh.
- No off-the-shelf app provider could offer this at the time and a bespoke solution gives us ownership of our customer data.
- This new TfW App launched in December 2021.

TfW Website (OneDomain)

- A new TfW website was launched in September 2021, combining the old TfW and TfW Rail Services websites into one platform, built by our in-house software developers.
- We have been gradually integrating other TfW websites into this during Phase 2 with fflecsi and traveline.cymru next to go live as part of the TfW website.





Mobility as a Service (MaaS) / Multimodal Digital Customer programme

- In July 2022, a business case was approved by TfW Network Development Committee to extend the TfW App into a Mobility-as-a-Service platform, building out from our existing App user experience and rail customer base.
- A Task & Finish group was established in Autumn 2022, led by Chief Customer & Culture Officer, Marie Daly, to review the procurement strategy.

N.B. Mobility-as-a-Service initiatives worldwide vary in scope from integrated journey planning only, to integrated multimodal tickets and share mobility, to mobility credits and subscription-based accounts. Our Digital Customer Strategy aims for integrated journey planning and ticketing with shared mobility access, and complementing Pay as you go with contactless cards as the primary retail method. To avoid ambiguity, we do not typically refer to Mobility-as-a-Service when speaking to stakeholders or customers but it is useful when engaging suppliers from this space who bring the technology we need. If we want to explore subscriptions and mobility credits with a future policy direction we have the technical building blocks in place to do so.

3. Situation Today

We have four Websites and Mobile Apps which enable people to plan and pay for journeys in Welsh:

TrC TfW for buying train tickets and checking times.		Traveline Cymru for Bus Journey Planning and transport information.	
TrawsCymru for buying tickets and checking times.		fflecsi for booking demand- responsive buses.	

Our TfW app is our primary digital retail channel, built bespoke to our requirements, to provide high-quality Welsh language train tickets booking.

Usage of the TfW App grew 35% during the last 12 months and it's currently rated 4.6 out of 5 on the Apple App Store. We were recognised in the industry winning the 2022 'Digital Champion' award at the Transport Ticketing Global awards and we have received praise from *Cymdeithas yr Iaith*.

We also have over a dozen sub-sites and portals for specific purposes such as Delay Repay claims, ordering refreshments on trains, paying for car parking, applying for Concessionary Cards, Public Consultations, and Recruitment.

Over 500,000 Monthly Active Users engage with our Apps, Websites and Portals however we have a very a fragmented digital user experience and on many of our services are not fully compliant on Welsh language standards (TrawsCymru and fflecsi), Accessibility (Traveline.Cymru) and Welsh Digital Service Standards (all TfW Apps).

The reach of our digital channels today is quite limited, selling tickets for only 10% of our customer journeys.

Most of our customers today rely on third-party apps for ticketing and information, such as Trainline (~45% of journeys), Google Maps and National Rail Enquiries.

Our customer research indicated low likelihood of customers switching away from a channel they know and like, without a significant incentive or reason for doing so such as differentiating features or saving money.

Our Behavioural Insights work on driving modal shift for Metro recommended that Integrated Journey Planning and Ticketing be introduced to overcome barriers such as *"It's too much hassle changing trains / making connections"* & *"It's too difficult to understand the different ticket options"* & *"Planning a train journey is really complicated"*. Solutions should reduce the cognitive load of making transport journeys, including personalised route suggestions based on user history and preferences.

4. Proposed solution

Our Multimodal Digital Customer Strategy has set out a vision to enhance and modernise Journey Planning and Ticket Retail for Wales through an integrated multimodal solution. This will make it much simpler for people to make sustainable transport choices and for TfW to achieve modal shift, well-being of future generations, and net zero goals.

Reflecting the remit for TfW 2.0 as a multimodal transport organisation with **One Network**, **One Timetable** and **One Ticket** at its heart, the Multimodal Digital Customer strategy adopts a vision of **One Website**, **One App** and **One Account** to unify our disparate portfolio of customer-facing apps, websites and portals, into a seamless digital experience facilitating seamless door-to-door journeys.

Our product vision statements articulate the value of our digital services to customers. When accessed through Desktop vs Mobile, our digital channels are valued for different journey types which is reflected in the number of users, sessions, and types of transactions.

One App	One Website	One Account
For <u>regular travellers in Wales</u> , who want to go somewhere new, the TfW App will be an expert travel companion to make door-to-door journeys simple and give our customers confidence throughout their journey.	For <u>customers visiting Wales or customers with more complex needs</u> , the TfW desktop website will be a comprehensive information source for local and national travel options, inspiring customers where to go and how to save on their trip.	For <u>every customer travelling in Wales</u> , their TfW account will make travel seamless across all modes. TfW will be able to provide tailored and personalised services across the door-to-door journey, especially to those with accessibility needs.
Unlike commercial alternatives, our product will include all transport options in Wales with integrated payment and ticketing, multimodal offers for exploring Wales, and real time journey alerts.	Unlike other travel information sites, we will include all transport options, Wales-specific destinations, and have partnerships with Cadw, NHS Wales, etc, to make travelling in simple.	Unlike today where all TfW services are fragmented, and the customer has multiple unconnected TfW user accounts.

Many pioneering Mobility-as-a-Service projects worldwide have achieved unprecedented levels of transport integration between public transport and shared mobility such as bike hire and car clubs, and incorporating on-demand buses such as fflecsi.

We have chosen to leverage digital innovations from Mobility-as-a-Service providers to power the future of Multimodal Journey Planning and Ticketing in Wales, though we are not adopting the term Mobility-as-a-Service going forward to avoid any ambiguity.

Our Multimodal Digital Customer programme (formerly known as MaaS) will introduce door-to-door journey planning for all transport services in Wales, including Rail, Fflecsi, TrawsCymru, Buses (ready for franchising), Bike Hire and Active Travel.

We will integrate this capability into our TfW Website, TfW Mobile App, with rich personalisation from our Customer Database to making it simple and intuitive to explore all options for journeys in Wales. This creates greater reach for TfW marketing to be able to attract more customers to travel, generating additional revenue and supporting modal shift.

Longer term our multimodal capabilities can also include Car Clubs, Car Parking, and Taxis. Whilst providing capabilities which appeal to car users may seem counter-intuitive, we have the opportunity to recommend alternatives such as Park and Ride and enabling car users to compare overall emissions and costs for the journey to make informed choices.

Pivoting the TfW Mobile App into a uniquely differentiated multimodal solution, designed to meet the needs of the people of Wales, will provide a reason for customers to switch to our app vs commercial alternatives. This will give us a modern platform and larger aggregated audience for achieving well-being and customer goals.

Through initial experiments and user research, we are confident that repositioning our TfW App and Website as the go-to-site for anyone considering planning a new journey in Wales will drive growth and engagement on our digital channels, however this new focus may mean that some rail-specific improvements will be deprioritised in the roadmap.

Joining up our digital user experience across modes and services will provide a digital platform on which new behaviour change opportunities can be explored (subject to further investment decisions and wider service design):

- Frequent travellers can be rewarded for their sustainable behaviours and positive climate impact, including earning Active Travel rewards for money off train travel.
- Disabled passengers can have assistance booked automatically for every trip as part of buying their ticket and be supported across all modes on their door-to-door journey.
- Concessionary Pass holders can have free bike hire to stay active and healthy, and discounted rail travel on more routes.
- Mobility credits can be offered to recipients of housing benefits to make transport more affordable to low-income families rather based solely on age brackets as is the case today.

We are not proposing at this stage to launch any new multimodal fares or subscriptions under this business case, but we are putting in place the digital infrastructure to enable us to do so in future.

Our multiyear strategy includes the following key outputs:

- **Stage 1 (year 1): Integrated Multimodal Journey Planning** on our Website and Mobile App available fully in Welsh and promoting Active Travel
- **Stage 2 (year 2): Integrated Ticketing and Payment** for all transport modes on our Mobile App with a single TfW Account on our website covering Bus, Bikehire, fflecsi, car clubs, and taxis; this capability is required to retire the TrawsCymru and fflecsi Apps and in readiness for Bus Franchising in 2026.
- **Stage 3 (year 3-5): Driving further behaviour change and modal shift** from personalisation, loyalty and multimodal incentives working with public sector partners and Corporate Joint Committees across Wales.

Outline roadmap of major initiatives

The high-level roadmap below indicates the types of initiatives we deliver as part of our Multimodal Digital Customer programme, complementing business priorities for TfW Rail.

Stage	Stage 1 Multimodal Journey Planning MVP Year 1	Stage 2 Multimodal Retail MVP Year 2	Stage 3 Behaviour Change and enhancements Year 3-5
Outcome	Customers can easily plan journeys across prioritised transport modes with real-time disruption information.	Customers can conveniently pay for journeys across prioritised transport modes – ready for Bus Franchising.	Personalisation, loyalty and multimodal incentives and enhancements for public sector partners and CJs.
Multimodal Journey Planning	TfW App and Website: <ul style="list-style-type: none"> Door-to-door multimodal journey planner for rail, bus, bike hire and active travel, fully in Welsh. Interactive maps for displaying journey overview and directions. Restructured Service Status pages for Bus and Rail TfW App and Website: <ul style="list-style-type: none"> Multileg/multimodal Timetables Retire Traveline.Cymru Website and App, and TrawsCymru website 	TfW App and Website: <ul style="list-style-type: none"> Expansion of journey planning for car parking, taxi, car hire/clubs. TfW App: <ul style="list-style-type: none"> Turn by turn directions and in-journey notifications with disruption re-routing TfW Website: <ul style="list-style-type: none"> Local Travel Information Portals for every county and National Park in Wales 	TfW App: <ul style="list-style-type: none"> Predictive recommendations about disruptions on regular journeys Recommendations on places to visit nearby Rewards based on sustainable travel choices including Active Travel. QR codes on bus stops to access real-time information[†] TfW Website: <ul style="list-style-type: none"> Widget/integration for third-party sites to incorporate journey planning such as NHS Wales, Cadw, Visit Wales.
Multimodal Retail	<ul style="list-style-type: none"> Preliminary integration of third-party operators and bus ticketing 	TfW App: <ul style="list-style-type: none"> Bus ticket retail for TrawsCymru and fflecsi Retire TrawsCymru and fflecsi Apps 	TfW App: <ul style="list-style-type: none"> Use of bike hire and e-scooters, car rental, car parking payment. Multimodal Combination pricing. Partnerships with local retailers and attractions[†] TfW App and Website: <ul style="list-style-type: none"> Multimodal Pay as you go portal.[†]
Multimodal Account	Back-office: <ul style="list-style-type: none"> Migration of customer account from TfW Rail to TfW[†] Automated follow-up marketing and customer segmentation[†] TfW App and Website: <ul style="list-style-type: none"> Introduction of new registration and sign-on using Azure B2C[†] 	TfW Website <ul style="list-style-type: none"> Customer Account Portal for accessing all TfW services Personalised user experience 	TfW Website: <ul style="list-style-type: none"> Concessionary Card / Mytravelpass applications Back-office: <ul style="list-style-type: none"> Rewards for sustainable journey behaviour Bus Pay As You Go back office[†] Using customer data for transport planning and service design[†]

There are also several other Interfacing work streams/dependencies that will be delivered in parallel to our multimodal goals.

	FY24/25	FY25/26	FY26 - 29
Rail Information and Ticketing	TfW Website <ul style="list-style-type: none"> Improved website rail ticket search TfW Website & App <ul style="list-style-type: none"> Restyled app with new Branding † Loyalty Rewards Subscription Discounts E-ticket and S-tickets Customer Account restructure Voucher codes for campaigns Voucher codes for compensation TfW App <ul style="list-style-type: none"> Proactive notification of on-the-day changes to services (e.g. First Class) † 	TfW Website & App <ul style="list-style-type: none"> Station Information feed upgrade to newest version of industry feed. † Reusing website content in App for Help & Contact and Station Information † TfW Website & App <ul style="list-style-type: none"> Enhanced capacity checker with live occupancy data † 	TfW App <ul style="list-style-type: none"> At-seat ordering of catering
Bus Information and Ticketing	<ul style="list-style-type: none"> Wales Bus Data Service and Content Management Service NaPTAN (bus stops) translation to Welsh TransXchange (timetables) translation to Welsh 	Data Feeds <ul style="list-style-type: none"> NeTEX Fare Data creation for fares data in bus journey planning results 	
fflecsi	<ul style="list-style-type: none"> In-app payment for fflecsi services † Expansion to new routes/regions. † 		
Active Travel	<ul style="list-style-type: none"> Integration of Active Travel Infrastructure data from Data Map Wales † 		
Brand	<ul style="list-style-type: none"> New design style for website and App New map style for use across all digital channels. New symbols and styles defined for journey planning representation of transport services. † 		TfW Website <ul style="list-style-type: none"> Integration with TfW branded merchandise store †

† Separate/additional funding required as part of TfW Business planning

Risks / Caveats

Some initiatives require additional funding to achieve with wider service design and commercial activities to support and this is an indicative roadmap only to be revised quarterly.

To achieve these goals, we are dependent on many interfacing industry systems such as those provided by Rail Delivery Group (National Rail Enquiries), the Wales Bus Data & Content Management Service, Data Map Wales, Ordnance Survey Welsh-language data, and our internal transport Data teams.

We are also subject to the evolving regulatory constraints of the Office of Rail and Road, and policy decisions of Welsh Government and Department for Transport such as regarding Great British Rail and Bws Cymru / Bus Reform legislation.

Making accessible journeys simple and intuitive

Accessibility is very important to our digital services, with 21.1% of people in Wales (Census 2021) having a disability that limits their ability to carry out day-to-day activities.

Our Digital Services need to be accessible to use and they also provide essential information to make it easier for people with accessibility needs to use transport:

- **Making Transport Accessible**
 - Providing information about step-free travel and specialist station facilities,
 - Providing facilities for family members / carers to print out relevant information or send eTickets / collection codes to dependents.
 - Supporting innovations in navigation for people living with disabilities
 - Making it simple to book and use passenger assistance.
 - Ensuring that Digital Services are never the only way to interact with TfW so that non-digital users always have a way to meet their needs.
- **Making Digital Services Accessible**
 - Our designs must be cognisant of how disabled people, might use digital services (e.g. different literacy levels and access needs). We will involve disabled transport users as stakeholders within user research and testing to ensure we design for their needs specifically.
 - As a minimum we will achieve WCAG 2.2 AA standard, and enhanced AAA standards wherever practicable with services audited to ensure they're compliant in line with UK Gov Digital Service Standards for public sector.
 - We will support modern accessibility features of mobile devices and web browsers such as custom fonts, screen readers, colour schemes, etc.,
 - We will ensure compatibility with major mobile manufacturers ensuring coverage of 95% of our existing digital customers where practicable.

4. Deliverability

Three options are available for achieving multimodal integration through digital services:

Option 1: Private sector led innovation and integration	Option 2: Separate mobile apps for separate modes / user needs	Option 3: OneApp Multimodal solution for journey planning and ticketing.
Enable commercial providers such as Google Maps, Apple Maps, Citymapper, Trainline and others to access TfW Open Data services and open ticketing systems to provide innovations for customers.	Provide mobile apps for separate transport modes with limited digital integration. I.e. a mobile app for bus, for fflecsi, for bike hire, for door-to-door journey planning, for rail ticketing.	Provide a single app for all transport modes including journey planning and ticketing across bus, rail, bike hire, and door-to-door journey planning.
Advantages: <ul style="list-style-type: none"> ✓ Focus on designing and operating transport networks without need for Digital Customer Services capability. ✓ Most customers already using apps they're familiar with unaware of their drawbacks in Welsh. ✓ No marketing needs to promote adoption of TfW apps. 	Advantages: <ul style="list-style-type: none"> ✓ Simpler technology stack. Reduces vendor lock-in to one large solution. ✓ Can be procured in stages and budgeted separately. ✓ Existing approach employed today. ✓ Can still deep-link into partner apps to continue the booking process, e.g. how Hotels.com hands off to Google Maps for directions. 	Advantages: <ul style="list-style-type: none"> ✓ Ensures consistent user experience. ✓ Benefits from scale on incorporating Welsh language specific features such as maps. ✓ Demonstrates to public the level of integration of transport services presenting as One Network. ✓ Enables Local Authorities to launch shared mobility services without needing to develop/adapt their own mobile apps. ✓ Provides Active Travel as an option for every journey.
Disadvantages: <ul style="list-style-type: none"> ✗ No Welsh language support. ✗ No integrated ticketing and journey planning from major providers ✗ No guarantee of inclusion of all transport options in Wales. ✗ Limited progress in last 3 years towards supporting bike hire, fflecsi, and bus services in Wales despite supporting in other markets. ✗ Limited impact on future generations goals. ✗ Unable to directly communicate with our customers to influence behaviour change. 	Disadvantages: <ul style="list-style-type: none"> ✗ All mobile apps require bespoke modifications to comply with Welsh language standards such as inclusion of Welsh maps, bus stop and location names, and language toggle. ✗ Customers must download and juggle multiple mobile apps for door-to-door journeys. 	Disadvantages: <ul style="list-style-type: none"> ✗ Large upfront cost. ✗ Complex user interface to simplify. ✗ Many disparate technology stacks to integrate across transport modes including legacy complexity of TfW Rail and TfW group systems. ✗ Risk that commercial providers may disrupt or compete with TfW in this space such as Uber moving into Rail ticketing market.



To accelerate the impact in Wales we recommend pursuing Option 3 as a top priority to ensure the capabilities are ready and mature to support bus franchising from 2026. By leveraging the existing audience of ~70,000 monthly active rail app users, we have a large audience we can attract to alternative modes.

In parallel we will continue to deliver Option 1 to support commercial third-parties to access high-quality transport information. We will support Open Data Initiatives and sector-wide initiatives in Rail and Bus to open up data including from the Wales Bus Data Service. We actively engage with Google and Apple already but their ability to support Welsh user needs is limited due to their global priorities and limited market size in Wales.

5. Strategic case

The Multimodal Digital Customer programme delivers the Integrated Ticketing & Journey Planning Pathway of the National Transport Delivery Plan (realising the Llwybr Newydd goals).

A digital customer solution for bus journey planning, timetabling and ticketing is required for the Bus Franchising Customer Proposition to support bus services across Wales and must be joined up with Rail, fflecsi and Active Travel as part of the integrated transport network.

Our existing Mobile Apps for TrawsCymru and fflecsi have been deemed by the Welsh Language Commissioner as non-compliant with Welsh Language Standards (investigation CS1161) due to the way we have implemented Software-as-a-Service using device-based language selection rather than an in-app toggle. As a result of this judgement, bespoke software development is required for any public sector applications going forward which creates significant additional costs. Our Multimodal Digital Customer programme will address this non-compliance with a fully custom-built front-end incorporating TrawsCymru and fflecsi capabilities and these existing mobile apps will be retired.

In support of the Welsh Government Net Zero Strategic Plan (Action 34) we will support the transition to sustainable business travel by providing the tools through which people can assess the carbon emissions of their transport choices in planning long-distance journeys to promote low-carbon alternatives to private car usage.

To support the Well-being of Future Generations of Wales our programme scope extends beyond simply transport journey planning but focuses on the customer outcomes of improving access to key public services, education, leisure, healthcare and cultural opportunities. These opportunities will be an integral part of journey planning capabilities and we will work with partners to integrate our sustainable journey planning technologies into their own digital services.

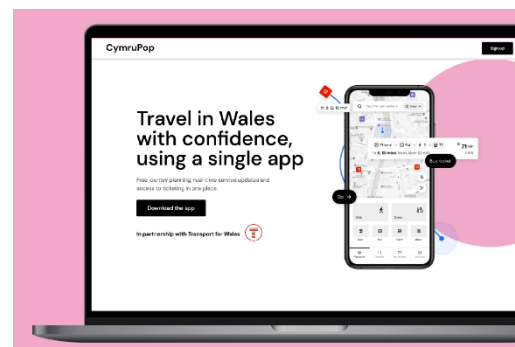
Our Multimodal Digital Customer Strategy delivers on Mission 1 of the Digital Strategy for Wales to Deliver and modernise services so that they are designed around user needs and are simple, secure and convenient.

A complete mapping of the Multimodal Digital Customer strategy to specific policy objectives is included in Appendix 1.

Evaluating desirability

Primary user research was undertaken in January-March 2022 by a Digital Agency working on behalf of TfW which looked into barriers to modal shift of non-rail users. A lack of integrated journey planning and ticketing was seen as a significant barrier.

To evaluate desirability of such an App (buyer intent), a 'smoke test' was carried out where a mock-up of such a product ([CymruPop](#)) was launched and promoted via Google Ads over 4 days. There were 491 page visits from 5,300 ad impressions, and 23 users (4.7%) signed up to hear about the new app when it launches. N.B. 0.5% for a quickly mocked up page is a good result, 3-4% for a well-designed and optimised page is a great result, 4.7% is huge untapped demand.



Behavioural insights work was carried out in Dec '23 – Feb '24 (led by 'The Behavioural Insights Team' and Beaufort Research) to look at barriers to modal shift on metro. The work involved surveying 800 participants, 41 participants in focus groups, and 6 user interviews of persons with particular characteristics or experiences of interest. COM-B analysis was



undertaken to identify challenges and solutions which recommended Integrated intermodal journey planning and ticketing as a way of making it easy to undertake journeys, along with initiatives to improve perception of value of the trip and improve awareness of service frequency.

6. Wellbeing Case

Is the programme or project good for people and communities?

The programme will develop a solution for everyone in Wales to improve their access to opportunities and making journeys simple across Wales.

Our programme will involve user research with people and communities across Wales ensuring we develop features that benefit the whole population, with a particular focus on user groups that generate the largest potential for modal shift to maximise return on investment.

We will also serve the needs of underserved communities and marginalised/forgotten groups to ensure they are not excluded from these initiatives and that specific features can be included to make transport more accessible for all.

We will work with CJs and Community Transport Groups to engage with local communities and work with partner organisations to get their input into our priorities and identify opportunities where our investments can support their aims. Planning for this stakeholder engagement will be undertaken during the mobilisation of the programme, noting that building fundamental capabilities (minimum viable product) for multimodal journey planning is required before we can then get feedback from users and iterate and tailor to specific needs.

Is it good for the environment?

Our integrated journey planning and ticketing capabilities, which is a core part of the Wales Transport Strategy, promotes modal shift with a switch from private car usage to public transport and sustainable transport options. This reduces overall carbon emissions, not only from the journey itself, but also from reducing the need for car ownership in the first place. We have ensured that our digital services utilise renewable energy wherever possible for the hosting of managed services and use this as an evaluation criteria when selecting our preferred supplier.

Is it good for the economy and places?

Our Journey Planning will ensure that more people can access employment and leisure opportunities using transport options they may have been previously unaware of. By developing a trusted companion app for journeys, customers will be supported with step-by-step information throughout their journey to develop confidence using new modes to travel to new destinations.

Is it good for culture and the Welsh language?

Our Journey Planning will specifically improve access to cultural opportunities by ensuring they can be searched for as origin/destinations for trips. We will also introduce a travel-time search feature for customers to discover nearby cultural opportunities that they can reach by public transport without needing access to a car.

Our solution will be fully bilingual, including use of Welsh and English interchangeably for features such as search, so that people who are still learning Welsh can get by without a complete grasp of the Welsh language.



Our inclusion of Welsh language topographic maps in a Mobile App is a first for Wales, pushing the boundaries of what is achievable in Welsh language technology. The maps will represent places, streets, bus stops, and points of interest in the Welsh language with a fall-back to English when no Welsh information is available.

7. Economic and Commercial Case

Our projected growth and impact assessment is based on Journey Growth across our existing Digital Customer Channels of the TfW Mobile App and Website, and Traveline.Cymru, TrawsCymru and fflecsi digital services.

The main factors are considered that lead to growth in journeys:

- Aggregating audiences across transport modes to inspire people to travel on an adjacent mode for all/part of the journey
- Improving user experience making it easier to plan and pay for journeys,
- Improved Unique Selling Point to attract customers to TfW Digital Channels
- Personalised Marketing based on customer data and insights
- Loyalty and Rewards for sustainable behaviours.

Effectively this is making it simpler for train customers to use buses, and for bus users to use trains, and inspiring some customers to consider active travel, whilst forming behavioural habits for long-term impact.

We have assumed only 10% of journey growth is new demand induced by better digital solutions with most growth through channel switching from physical retail or commercial alternatives such as Trainline or Google Maps.

Non-monetary benefits quantifiable in Transport Appraisals Guidance include:

- Social Value of Trip
- Economic activity of trip
- Median Marginal external cost of congestion, environment, noise, accident per vehicle km

Once this strategy is realised, up to 3.7M/year Customer Journeys will be induced by better TfW digital services resulting in £11.9m/year additional revenue and £390,000/year in cost avoidance.

N.B. Active Travel benefits cannot be considered under Transport Appraisals Guidance unless it is for regular journeys multiple times per week for resulting health benefits.

Non-monetary benefits are up of £72M/year through reducing road traffic, social value and economic activity of the trip. Data has been provided by Commercial Analytics teams and GSTAT teams for this impact modelling however the impact modelling has a large degree of uncertainty.

Over the 7-year life of the extended programme a net cash benefit of £35.7M is forecast and a total Social, Economic and Marginal Impact benefits of £215M.

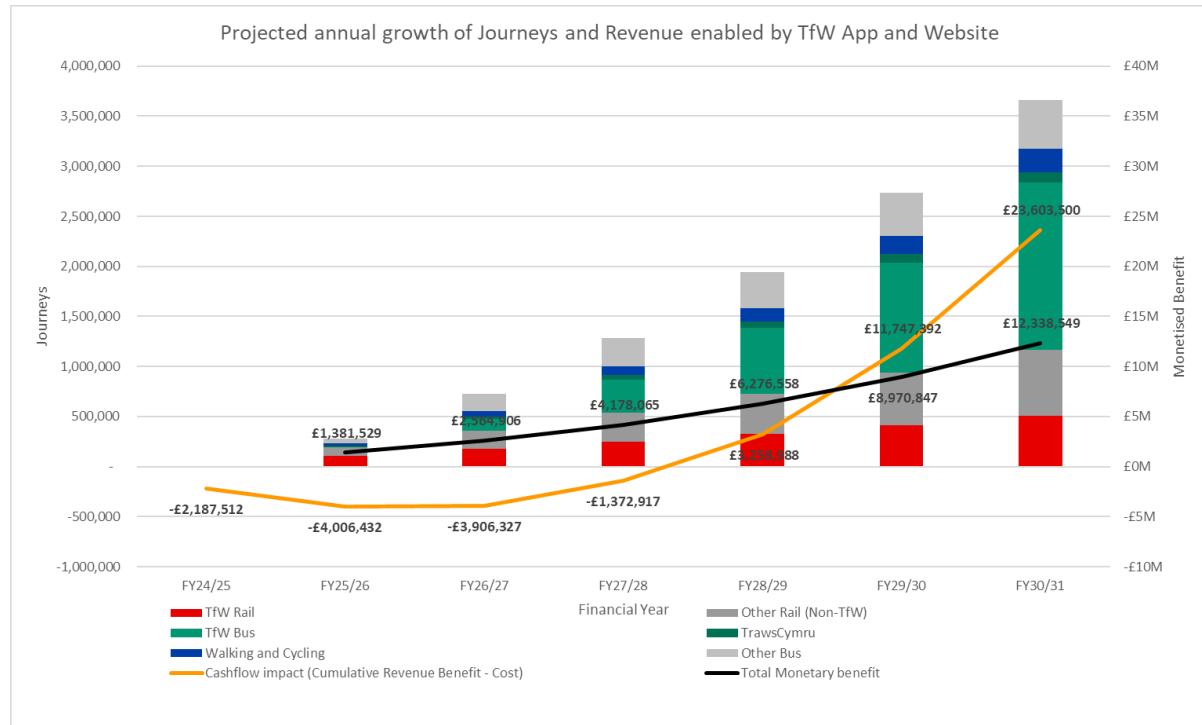
There is limited evidence on modal shift impacts to use as a comparator. Mobility-as-a-Service pilot projects have not yet had research published by scientific monitoring and evaluation and user groups are low. As such we are treating this as an R&D project with uncertain outcomes and impacts which will be monitored and improved upon throughout the life of the project, and we will publish our outcomes and learnings with other authorities as and when findings become available.

We meet monthly with similar Mobility-as-a-Service projects in West of England, Nottingham & Derby, Solent Transport, Kent, and Transport for West Midlands to learn lessons. We have also sought Keolis experience in France through *TfW Innovation Services Joint Venture* to ensure our plans are robust and build on best practices. The insights gained from these

projects have shaped our procurement strategy and delivery planning, by not just procuring technology but ensuring the supplier acts as our delivery partner, bolstering our in-house capability and working with us to realise our multimodal digital customer vision across all business functions and external stakeholders. The MaaS Technology Partner includes capabilities in Project and Programme Management, System Integration and User Research and Experience design – not simply providing a journey planner and ticket engine.

Our position as a train operating company with an existing digital customer base gives us a much greater advantage to achieve our modal shift goals than initiatives led by transport authorities working with commercial operators.

Figure 1 Projected growth/impact of Transport Journeys supported by the TfW Mobile App and Website



The full figures/modelling used in developing this impact graph are included in Appendix 2.

8. Financial Case

Redacted

10. Management Case

We have successfully delivered major customer digital initiatives over the last 3 years including the new integrated TfW Website, TfW Rail Ticketing App, and Pay-As-You-Go. We have a well-established collection of back-office systems which work together to support customer journeys today.

However, we recognise these have been built functionally to achieve business outcomes and aren't always based on best practice in user-centric design. We are currently working with Centre for Digital Public Services to benchmark and improve our ways of working to ensure we are meeting the Digital Service Standards for Wales on all future digital services. After an initial workshop on 7th February 2024 attended by relevant department heads from TfW, representatives from CDPS, and chaired by TfW Chief Customer and Culture Officer Marie Daly, we identified priority areas for improving and growing TfW's capabilities.

Our business case for Multimodal Digital Customer strategy includes costs for strengthening TfW capabilities in User Research, User Experience, and Product Management, to deliver improvements in these areas. A further workshop is planned for Thursday 22nd February to develop a specific action plan for improvements to be delivered as part of the programme.

We will also embrace the five ways of working in Wales in accordance with the Well-being of Future Generations (Wales) Act 2015.

- **Long-term:** prioritising needs of emerging transport users, currently in schools and supporting them to embed sustainable habits early in their adult lives. This will be done as a priority ahead of short-term rail revenue challenges and opportunities.
- **Integration:** Collaborating with other public sector and third-sector bodies to incorporate sustainable journey planning into their own digital services.
- **Involvement:** Prioritising diversity in user research and testing and recruiting participants who represent Well-being goals we set out to achieve.
- **Collaboration:** Working with public sector organisations and Corporate Joint Committees to ensure their specific local needs are incorporated into TfW solutions such as incorporating specific hospital services into journey planning, not simply the main entrance of the campus.
- **Prevention:** Providing intuitive ways for people to access opportunities without the need for owning a private car preventing additional congestion, carbon emissions and air quality impacts.

Metrics and KPIs will be established for monitoring the impact on modal shift, supported by day-to-day usage metrics to evaluate how effective feature improvements are and identifying opportunities to enhance the app. These key metrics (to be determined) will be reported through the Customer Experience Steering Group and included in the CEO report. Further monitoring and evaluation will be established as part of the NTDP/WTS monitoring and evaluation framework and we will work with the G-Stat team on ensuring those metrics are published through our transparency portal.

11. Conclusion and next steps

The Multimodal Digital Customer strategy programme is complex to achieve in that it integrates with existing infrastructure for rail ticketing and must work fully in Welsh.

This introduces both considerable uncertainty in budgeting and additional cost compared to similar local authority led schemes. Nevertheless, the potential impact of the solution is cross-cutting and transformational, underpinning key policy objectives across Wales.

Procurement and delivery of such a programme is a long-lead item and must commence in advance of plans for Bus franchising to ensure the capabilities are ready to support from 2026.

Ensuring this transformation programme has suitable sponsorship and oversight from Welsh Government will maximise its success to achieve the Integrated Transport goals and must be reflected in the governance structure for the programme and reported on as part of the TfW 2.0 transformation programme.

Next steps to mobilise the programme are:

- **Completed** - January 2024
 - Mobilise TfW Programme Delivery team and cross-functional steering group
 - Expert independent review of Digital Customer Strategy
- **Completed** - February 2024
 - CDPS Digital Services ways of working audit
 - ELT approval of Digital Customer Strategy
 - Programme planning and risk workshop
 - Digital Customer Experience benchmarking survey of Rail Ticketing user experience (baselining today to track as we pivot to multimodal)
 - Presentation of Digital Customer Strategy to Deputy Minister for Climate Change
- **Pending** - March 2024
 - Budget confirmation (N.B. potential approval from ministers required).
- **Target** - April – May 2024
 - TfW<>Supplier joint team day for mobilisation
 - Agree schedules and sign contract with preferred supplier
- **Target** - June 2024 – Commence programme delivery

Estimated delivery timescales for Option 2, deferred delivery by 2 months, are:

- Stage 0 – Mobilisation, Discovery and Outline Design (September '24)
- Stage 1 – Multimodal Journey Planning (June '25)
- Stage 2 – Multimodal Retail (February '26) ahead of bus franchising.

A high-level programme timeline is included in Appendix 3.

N.B. These timescales will be revised once Mobility-as-a-Service Technology Partner has had a chance to complete Stage 0 as it will involve multiple parties collaborating, including existing suppliers to TfW Rail Ltd for the TfW App

Appendix 1. Achieving strategic objectives for transport in Wales

The Multimodal Digital Customer strategy directly delivers many objectives of Welsh Government policy and provides a flexible digital platform on which to launch new transport modes and behavioural change initiatives.

TfW 2.0 Remit

[Remit for TfW 2.0 - Developing a multi-modal culture and supporting the development and delivery of an integrated transport network \(gov.wales\)](#)

TfW 2.0 Strategic Policy Objectives	How our Multimodal Digital Customer solutions supporting this
(1) Maximise modal shift to sustainable transport modes to support our Net Zero Wales transport obligations and targets, improve health and wellbeing, and reduce the costs of running public transport networks;	Encourage customers to use sustainable transport modes for first and last mile journeys to/from rail instead of private car and taxi.
(2) Deliver a fully integrated transport system in Wales with one network, one timetable, and one ticket, in close partnership with both local and central government	Capabilities for retailing multimodal journeys in a single digital transaction including shared and demand-responsive mobility charged by the minute/mile.
(3) Nurture a multi-modal culture in Wales across the public, private and third sectors (in line with the Third Sector scheme) through its staff, procurement, and engagements with partners;	Engaging with other public sector partners to support their customers to access key public services through tailored journey planning.
(4) Encourage and support people to adapt and consider sustainable modes as their default transport option by embedding behaviour change into your organisational culture and plans;	Providing a way for customers to plan unfamiliar journeys to anywhere in Wales & Borders and see all their options available to them.
(5) Enhance and develop greater commercial opportunities and behaviours to maximise revenue, minimise costs, mitigate risks, and exploit opportunities.	Retail of any transport modes including commercial operators in e-scooters, bike hire, car clubs, and taxis, generating commission revenue to TfW where appropriate. We will also use deep customer insights from TfW customers to support behaviour change initiatives and promote discretionary travel for sustainable leisure and tourism.

Llwybr Newydd

[Llwybr Newydd: the Wales transport strategy 2021 | GOV.WALES](#)

- **Make fares, tickets and timetables as simple as possible**, and make sure information is easily available and accessible to everyone
- **Make it easier for people to travel door-to-door** using sustainable transport modes
- **Move away from individual vehicle ownership to shared solutions**, including demand-responsive transport, car-sharing, car clubs, bike sharing and mobility as a service
- **Transform the customer experience of public transport**



- Real time information and **integrated, smart ticketing helping people travel confidently across different modes** of transport at the best time and cost for them
- **Electric vehicle/bike charging facilities are readily available** through Wales
- People with accessibility needs can **plan journeys with confidence, using digital approaches that identify the needs of transport users.**
- **Incorporate information about community and third sector transport services** into new transport apps and other journey planning initiatives

National Transport Delivery Plan

[National transport delivery plan 2022 to 2027 | GOV.WALES](#)

Delivering the NTDP Integrated Journey Planning Pathway and specifically the projects:

- IJPT 10 Modernise Traveline Cymru App with intelligent navigation, shared transport, and fflecsi integration
- IJPT13, Integrate all TfW Mobile Apps to create a seamless multimodal user experience, and
- IJPT14 Integrate emerging mobility providers into TfW multimodal app to create a unified marketplace

TfW Business Plan milestones 24/25

- **3-K-1-1** We will award a contract to a systems supplier to provide Mobility-as-a-Service technology for journey planning and web / app integration, and commence development work.
- **3-K-1-2** We will communicate a clear plan of how the digital customer experience will evolve over time, that will also address how this new technology will be supported across TfW
- **3-K-1-3** We will establish and set up the Mobility-as-a-Service technology for journey planning and bus ticketing and integrate into the TfW mobile app and website.

South-East Wales Transport Commission

gov.wales/sites/default/files/publications/2020-11/south-east-wales-transport-commission-final-recommendations.pdf

South-East Wales Transport Commission made the following recommendations which this paper supports:

- Recommendation 191: Ticketing should be **clear and simple** to understand, **not penalise multi-modal** journeys, **encourage modal shift.**
- Recommendation 194: **Ticketing** on rail and bus **should be integrated into a single system.**
- Recommendation 209: **High quality user experience** for ease of use and integration across the network.
- Recommendation 210: **Overarching brand** be applied to all transport services on **the network**, regardless of their operator.
- Recommendation 215: **Good journey planning tools** and easily accessible **live journey time information.**

Bws Cymru

[Bws Cymru: connecting people with places | GOV.WALES](#)

The solution will also be ready to support any future Bws Cymru objectives by creating a scalable platform to offer a national bus ticketing capability and supporting passenger focused objectives of:



- Easy to access – through extensive networks, good infrastructure and welcoming drivers;
- Easy to use – through simple ticketing and sensible routes; and
- Easy to navigate – with fully integrated journeys and clear information.

These capabilities are planned in the Bus Franchising Customer Proposition prepared by TfW.

Well-being of Future Generations

We have explored how the solution can help achieve the goals of the *Well-being of Future Generations Act* goals by looking at ways digital technology can help achieve its objectives:

- A more **prosperous** Wales
 - Helping people access skills and employment opportunities.
 - Support local businesses to attract talent by offering mobility packages as a company car alternative.
- A **resilient** Wales
 - Improve Air Quality by growing public transport usage.
 - Enable people to see and understand their transport carbon footprint.
 - Promote access to Electric Mobility.
- A more **equal** Wales
 - Making it easier for people across Wales to access new transport services.
 - Help transport operators reach customers outside of major urban areas.
- A **healthier** Wales
 - Promote active travel choices wherever appropriate.
 - Integrate bike hire into last mile for rail and bus.
- A Wales of **Cohesive Communities**
 - Support communities to access key-services through better journey planning.
 - Help people to be well connected and safe by supporting their whole journey.
- A Wales of **Vibrant Culture & Thriving Welsh Language**
 - Make it easier to discover and visit Welsh attractions.
 - Experience all transport modes using the Welsh language.
- A **Globally Responsible** Wales
 - Demonstrate globally significant innovation as a platform of best-practice in transport integration.
 - Collaborate with other regions in UK and globally to share best-practice.

Specifically Future Generations Report 2020 stated explicitly to “*Explore the potential of Mobility as a Service (MaaS) to provide flexible alternative transport solutions.*” [FGC-Eng-Exec-Summary.pdf \(futuregenerations.wales\)](#)

Active Travel Act

[Active Travel \(Wales\) Act 2013 \(legislation.gov.uk\)](#)

The Active Travel Act Guidance requires all local authorities to publish maps of their active travel infrastructure and facilities. Today these are only published onto a data platform and not customer centric for planning journeys. The solution proposed in this business case will take this statutory information and make it available in a rich digital customer experience for integrating Active Travel into multimodal journeys with recommendations which prioritise Active Travel approved infrastructure.

Welsh Language Standards Regulations

[Microsoft Word - \(W\) Welsh Language Standards \(No 1\) Regulations 2015\(w\) \(laying version .doc \(legislation.gov.uk\)](#)

We are proposing to enhance the state-of-the-art for bilingual digital services, going beyond the standards set out in the regulations:

- Enabling users to searching in journey planning in English and Welsh interchangeably
- Working with Local Authorities to improve Welsh descriptors of Bus Stop names and working with Department for Transport to make this available to all journey planning providers.
- Creating Welsh and English digital maps for transport journey planning for customers to use Welsh in their door to door journey wherever Welsh is available.
- Translating Real-time disruption information, supported by AI, for when information is available from third-parties in English only.

The relevant applicable standards are 52-57 of The Welsh Language Standards (No. 1) Regulations 2015.

Net Zero Wales Strategic Plan

[Welsh Government's Net Zero Strategic Plan](#)

“Action 34. Provide tools and guidance on the carbon emissions impact of travel choices to empower employees to make sustainable travel choices. The tools will be embedded into business travel decision-making processes to make low carbon travel the default option, with justification required for higher carbon modes of transport including long-distance and air travel.”

North Wales Transport Commission Final Report

[North Wales Transport Commission Final Report \(gov.wales\)](#)

The North Wales Transport Commission recommends that our Multimodal Digital Customer strategy with integrated journey planning and ticketing should be taken forward to improve transport network integration in North Wales.

“We recommend the development of fully integrated ticketing across rail, bus, and where possible community transport, using a digital platform and app. Welsh Government and TfW should set up the necessary processes with timescales for delivery of a digital platform and app that provides this full integration, once franchising has been introduced.”

Appendix 2 Economic and Commercial Impact Modelling

Redacted

Appendix 3 Programme Timeline

