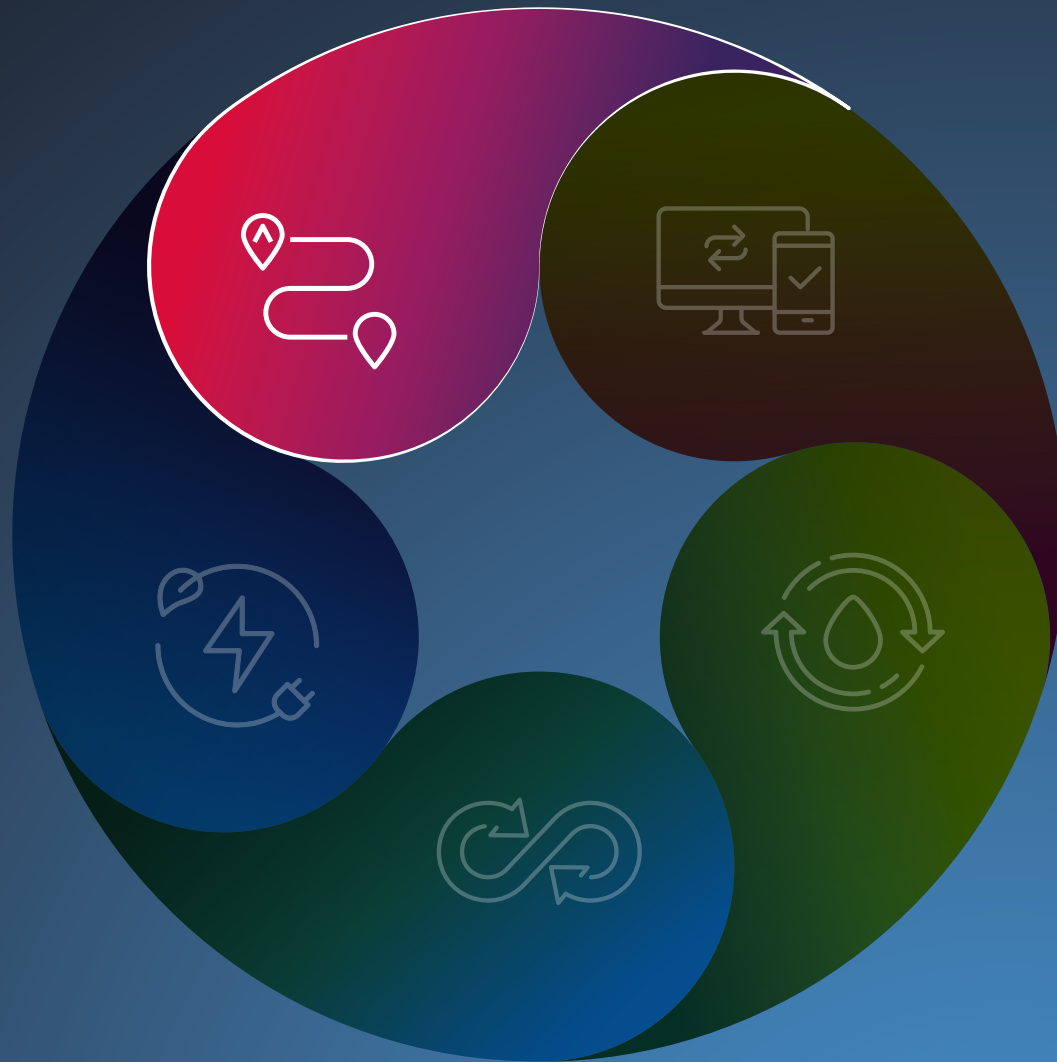




Comisiwn **Seilwaith**
Cenedlaethol **Cymru**
National **Infrastructure**
Commission **Wales**



TRANSPORT SECTOR INFRASTRUCTURE INSIGHTS EXECUTIVE SUMMARY

in partnership with
 **ARCADIS**

The National Infrastructure Commission for Wales (NICW) commissioned Arcadis to assess the current and future infrastructure needs across the energy, water, transport, digital, and circular economy sectors, and to identify the key issues requiring Welsh Government attention.

This summary focuses on the transport sector, examining the state, resilience, and integration of Wales's transport system to identify the most critical risks and priorities.

Transport is fundamental to economic development, social wellbeing, and sustainability in Wales, supporting access to jobs, education, and services. Delivering on the Well-being of Future Generations (Wales) Act depends on a reliable, inclusive, and low-carbon transport network, and these principles underpin Llwybr Newydd, the Wales Transport Strategy.

The sector faces ongoing challenges around ageing infrastructure, limited investment, climate change, and fragmented planning and delivery. Addressing these issues requires coordinated action and policy innovation across a complex landscape of Welsh and UK Government bodies, local authorities, operators, and regulators. Long-term funding and collaboration at all levels will be essential to ensure that transport infrastructure meets the needs of all communities and supports Wales's broader economic, social, and environmental goals.

CURRENT STATE OF PLAY



Relationship with Land Use Planning

- There is a need for stronger integration between transport and land use planning.
- Continued disconnection means new developments often lack public transport and active travel links and rely on access by car, undermining decarbonisation and accessibility goals.



Decarbonisation and Sustainability

- The current pace of mode shift is too slow, risking Wales falling behind its targets for net zero and climate resilience.
- Electric vehicle adoption is limited by a lack of charging facilities especially in rural areas and built-up areas without off-street parking.
- Funding for active travel infrastructure (walking and cycling) is under threat, and there are criticisms regarding the impact and effectiveness of current schemes.
- Limited progress on electrification of the rail network, is constraining progress on rail decarbonisation.



Public Transport Integration and Accessibility

- Fragmented ticketing and poor timetable alignment hinder seamless journeys and make public transport less attractive.
- Public transport in rural areas is often very limited, forcing people to rely on cars and making it harder to access services or stay socially connected.
- Policy aspirations around modal shift seem unrealistic where there are no reasonable alternatives to the car.



Digital and Smart Transport Solutions

- Digitalisation presents opportunities for integrated ticketing, real-time information, and user-friendly networks, but roll out has been inconsistent.
- Data gaps and limited digital infrastructure constrain the ability to optimise services and support innovation.
- Real-time transport information and smart solutions are less accessible in rural areas due to poor mobile coverage, contributing to a digital divide.



Infrastructure Resilience and Climate Adaptation

- Ageing infrastructure and increased climate risks (floods, heatwaves, sea-level rise) threaten network reliability and safety.
- Asset management and maintenance are underfunded, leading to a growing backlog.
- Repeated disruptions threaten economic activity, access to essential services, and community wellbeing, particularly for rural and isolated populations.




WHERE ARE WE NOW

20% of Wales' greenhouse gas emissions are from transport



57.6% of transport greenhouse gas emissions come from cars.



Ultra Low Emission Vehicles account for

2.3%

of road vehicles in Wales,




compared to 3.7% across the UK.

Availability of charging is a key influence on take up of electric vehicles.

There are 3,519 publicly available charging devices in Wales (as of July 2025).

Up to 55,000 new rapid chargers are needed by 2030.



Climate change will increase need for maintenance.

Percentage of network already at high or medium risk of flooding:

12.4% Rail Network

8% Strategic Road Network

5% Local Road Network



49.9% of people in Wales are within walking distance of public transport.



52% of people walk or cycle once a week.

The Welsh Government's ambition is for all public service buses to be zero emission by 2035.

94 of 2,330 local buses are currently battery operated.

Alternative fuels, like hydrogen, are being trialled.



H₂

FUTURE CHALLENGES

1. A clear, consistent policy framework is needed to support long term decision making and funding.
2. Upgrading and adapting transport infrastructure to withstand more frequent extreme weather will be essential for reliable networks.
3. An aging population and evolving work patterns will require more accessible, flexible, and inclusive transport solutions in the future.
4. Integrating digital platforms, automation, and alternative fuels will demand ongoing adaptation, both in infrastructure and workforce skills.
5. Sustained investment and innovation is needed to ensure the transport system remains resilient, low-carbon, and fit for future generations.
6. Better providing for rural and underserved, less accessible areas needs to be a key focus as new technologies and mobility options evolve.
7. There is a need to move from incremental improvements to systemic transformation, creating a truly integrated, sustainable, and inclusive transport system.

FUTURE AMBITION

This study suggests that key future ambitions should be to:

Short Term (to 2040):

- Deliver an accessible, sustainable, and efficient transport system aligned with the Wales Transport Strategy, Net Zero Wales, and the Well-being of Future Generations Act.
- Increase the use of public and active travel (to 39% by 2030), reduce car miles, and expand integrated, low-carbon transport options.
- Invest in Metro projects, rail electrification, integrated ticketing, and zero-emission vehicles.
- Focus on decarbonisation, health, air quality, and community resilience.

Medium and Long Term (2040+):

- Transition to a fully integrated, low-carbon transport network that is resilient, inclusive, and innovative.
- Embed sustainability and digital innovation, making public transport, active travel, and shared mobility the default for most journeys.
- Adopt new fuels, technologies, and mobility models, ensuring equitable access for all communities and future-proofing infrastructure against climate change.

PRIORITY ACTIONS

This review has identified a range of issues and challenges that require further action.

Top priorities are to:



Address funding and resource constraints, especially for maintenance and climate adaptation. As extreme weather events become more frequent, future projects must be resilient to climate change.



Improve integration between bus and rail services and expand digital capabilities to bridge the rural-urban divide.



Enhance public transport provision in rural areas to reduce car dependency.



Accelerate decarbonisation by supporting the transition to alternative fuels, increasing EV uptake, and protecting active travel funding.



Encourage and accelerate sustainable travel behaviour change to achieve the required modal shift.



Better integrate land use and transport planning to ensure new developments are well-connected to sustainable transport and support economic growth.

See the main report for further details on additional actions.



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please scan the QR code.

