

CONNECTING TO THE FUTURE

THE NEXT GENERATION OF INFRASTRUCTURE
PRIORITIES FOR SCOTLAND



A whole system approach can drive positive change

The journey to a well-connected, low carbon Scotland presents significant opportunities for people, business and the Scottish economy. Taking a 'whole system' approach and harnessing the power of technology and digital connectivity can equip us to take advantage of the mobility systems of tomorrow, while at the same time getting the most out of our existing infrastructure.

Developing a low carbon transport system is not just about low-emission vehicles. It is also about supporting broader behavioural change – with better digital connectivity making flexible working easier and smart ticketing systems encouraging more people to use public transport.

Ensuring Scotland's strategies for future infrastructure connectivity pull together the different strands – physical, digital and behavioural – can have a positive impact on reducing congestion and carbon emissions, while at the same time helping to boost productivity.

4 priorities for a better-connected Scotland

CBI Scotland has been working with members to identify the next generation of infrastructure priorities for Scotland that can have a positive impact on productivity and help generate sustainable and inclusive economic growth. Below, we outline four key areas for action and investment from the UK Government, Scottish Government and business to ensure Scotland can take advantage of the opportunities of the future.

Step 1: Prioritise digital infrastructure investment, which is critical to connecting Scotland to the opportunities of the future

Seamless connections, from full fibre networks to 5G, offer unprecedented opportunities for businesses to drive productivity improvements and generate sustainable economic growth.

Delivering a full fibre future is vital for a competitive economy

- Digital connectivity is the number one infrastructure priority for businesses across Scotland. Firms welcome the Scottish Government's commitment to ensuring every residential and business premise in Scotland has access to superfast broadband by 2021 and meeting that target should continue to be a priority.
- However, this alone is not enough to fully future proof our economy. A quick rollout of gigabit connectivity is required to support the ambitions of business and maintain our international competitiveness. Today, 4% of premises in the UK have access to full fibre broadband compared to 71% in Spain, 95% in Sweden and 97% in Japan.¹ These high levels of fibre access were achieved by fostering private sector investment and competition where possible.
- Incentivising private sector investment in digital infrastructure must be a priority for both the UK and Scottish Governments, to ensure businesses can rely on UK networks to adopt new technologies, communicate with clients around the world and attract investment in a competitive international market. This should include:
 - Using planning laws to ensure that future telecoms infrastructure falls under permitted development to unlock private investment and help digital infrastructure providers go further, faster;
 - Committing to the public spending necessary to deliver full fibre to remote and rural areas across Scotland. This should be focused on areas where it is not commercially viable for digital infrastructure providers to go it alone.



Digital infrastructure has a central role in maximising present and future transport infrastructure opportunities

- As business models and workplaces change, so do connectivity needs. More people are working from home and jobs are becoming more mobile, requiring remote working on transport and in public places. This working style is reliant on technologies like cloud systems and video conferencing that underpin core business functions and need reliable and fast digital connectivity.
- Creating seamless digital connectivity is therefore critical to facilitating flexible working practices, which in turn reduce demand on transport infrastructure, bringing down journey times. The subsequent reduction in greenhouse gas emissions from commuters also makes a positive contribution towards meeting Scotland's ambitious climate change targets.
- With integrated infrastructure a priority, all major transport routes and new infrastructure projects must be equipped with appropriate digital infrastructure, including full fibre and 5G where possible. This should include:
 - Mandating gigabit connectivity in new builds;
 - Bringing forward the legislation necessary to ensure access to gigabit-capable connections in tenant properties, where providers are unable to gain access to land through written consent.
 - ↳ Providers are often unable to obtain permission from absent landlords, for example, which delays access to improved digital connectivity for the tenants living in the building.



Scotland must maximise the opportunities of 5G, which has the potential to supercharge Scotland's businesses, productivity and the economy

- Scotland is well positioned to be at the forefront of the 5G revolution and take advantage of the opportunities it creates. 5G will connect people, machines and devices in previously impossible ways, and pave the way for a range of technologies. The benefits will include:
 - Increased data capacity and speeds, with potentially 100x speeds and the ability to reliably connect billions of devices;
 - Improved coverage across the UK;
 - Better flexibility of provision, for example businesses may be able to buy a portion of the 5G network for an event, project or time period;
 - Shorter delay, also known as lower latency, which will enable applications like autonomous transport and remote surgery that require instantaneous reactions.
- 5G test beds in Scotland can be a catalyst for a greater understanding of the benefits and opportunities the technology will create. The lessons learned from UK Government test beds, including the projects in Orkney and Perthshire exploring 5G in rural settings, must be disseminated widely to raise awareness of its uses to business and help firms learn more about how to better exploit the technology through government trials.
- The Scottish Government's forthcoming 5G strategy should aim to make Scotland the go-to destination for pioneering 5G projects, maximising the opportunities of existing UK Government commitments and resource where appropriate, and setting out a clear path to a fully 5G connected Scotland. With 5G connectivity cutting across several government portfolios, the strategy should be clear where ultimate responsibility for the delivery of 5G sits within the Scottish Government.



Step 2: Use technology to get the most from our roads and railways

From smart ticketing and payment services to embracing autonomous vehicle technology, there are a range of ways to help maximise the capacity of existing infrastructure.

- Multi-modal smart ticketing and payment services are an essential element of a modern public transport system and increasingly expected by customers. Simpler, more convenient public transport can encourage wider use, which in turn reduces congestion and carbon emissions. Alongside digital infrastructure improvements, this can free up significant capacity on road networks.
 - The focus should be on developing a system that revolves around smart payment structures that give travellers a seamless journey across all modes of transport, at the best possible price. This type of system is already available in some parts of the UK, while other areas have set out plans to implement the 'back office' required to enable customers to use contactless bank cards to travel on multiple modes of transport.²
- Data driven travel information helps people make informed choices about the fastest, most convenient and cost-effective ways of booking and travelling within towns and cities. The Scottish Government should consider what steps it can take to allow open access to the data required for travel apps, such as Citymapper³ and Transit⁴, to operate in Scotland to help facilitate a step change in the way people make personal travel choices.
- The introduction of connected and autonomous vehicles (CAVs) presents a significant opportunity for Scotland's people, businesses and economy. The Scottish Government should aim to put Scotland ahead of the curve and set out what steps it will take to make Scotland a world leader in showcasing the benefits of CAVs. Doing so would not only bring direct benefits but also send a strong message internationally about Scotland as a place to do business and invest.
 - Actions could include running a competition to identify one area to become the first autonomous vehicles hub for Scotland to showcase the benefits and opportunities they create. Working together, the UK and Scottish Governments could also explore opportunities to expand existing initiatives, such as one of Scotland's 5G test beds, to include the creation of a CAV hub.
 - Scotland's first self-driving bus trial, which will run between Fife and Edinburgh in 2019, is an opportunity to raise awareness and excitement about the benefits and opportunities of connected and autonomous vehicles among businesses and people. The Scottish and UK Governments should work together to maximise the impact of the trial and explore avenues for the operation of further, similar trials in Scotland.
- The use of smart motorways – technology which allows you to monitor traffic levels, change speed limits and open the hard shoulder for use by traffic at busy times – increases road capacity faster and at less cost than traditional road widening schemes. This technology should be rolled out as widely as possible across Scotland's trunk road network to stimulate the economic benefits associated with reduced congestion.



Step 3: Set out a clear roadmap to a low carbon transport future

Certainty, consistency and collaboration will be key in driving Scotland to a greener future.

- The Scottish Government has set a clear ambition to phase out the need for petrol and diesel cars by 2032. This ambition must now be matched with a clear roadmap showing how the Scottish Government will use the policy levers at its disposal on the pathway to 2032 and beyond. This should incorporate a 'whole system' approach, recognising that transport and energy do not operate in isolation.
 - In a digital world, this interconnectivity between sectors is crucial given the interactions between our homes, industry, power and transport are wide ranging and complex. Most notably, this transition will require those in energy, the system operators and networks, to understand transport users, both consumer and business. The Scottish Government should therefore use the newly established Infrastructure Commission to bring together representatives from the energy, transport and digital sectors to ensure developments in infrastructure meet the needs of users across the country.
- Business is leading the development of technology needed for a low carbon future but government has a critical role to play in driving a change in consumer behaviour and ensuring everyone can access the benefits.
 - Collaboration between central government, local authorities and business – including financial support for the roll-out of electric vehicle infrastructure – to get the right infrastructure in the right places is crucial to making switching the easy choice no matter where you live or work.
 - Consistent policy and messaging are also important to ensure consumers feel empowered to switch to an electric vehicle. The Scottish Government should consider what additional financial support it can provide to consumers through the Greener Scotland initiative to incentivise the change in customer behaviour required for electric vehicles to become the road transport of the future.
 - In a world where the definition of mobility is changing, the infrastructure developments of today must be able to support the mobility systems of tomorrow. Future proofing infrastructure investments must therefore be a key consideration for the forthcoming Strategic Transport Projects Review and the work of the Scottish Government's Infrastructure Commission. This will avoid money being misspent on potentially short-lived projects and ensure infrastructure developments are equipped to take advantage of anticipated technological developments.



Step 4: Look outwards and improve connections to key markets

Exporting is a key driver of productivity and strengthening links between Scotland and key markets, including the rest of the UK, can help foster an exporting culture.

- Taking steps to encourage the creation of new, direct flights between Scotland and overseas markets, such as China, India and the United States, can help facilitate a greater exporting culture among businesses. Direct routes to foreign hub airports, such as Hong Kong and Singapore, can be equally valuable to many businesses who have activities in markets including Asia and Australia.
- Connectivity to and from airports is also important in creating a strong first impression of Scotland for overseas visitors and for getting freight to where it needs to be as seamlessly as possible. Delivering first-class connectivity to our key airports will also increase the likelihood of attracting new direct routes to Scotland and business has long supported the creation of a direct rail link between Glasgow Airport and the city centre.⁵ Further delay and uncertainty over the future of this long-anticipated project risks missing out on significant economic opportunities from increasing the capacity of transport infrastructure in the area and reducing congestion on the surrounding road network.
- For many firms that export, connectivity to deep-sea ports is vital. Improving rail connections between Scotland and the UK's deep-sea ports would give firms greater flexibility between using feeder ports in Scotland and accessing main ports directly by train, supporting firms to get their goods to market efficiently.
- Better links between the Central Belt and cities across the North of England presents a significant economic opportunity. For example, linking Glasgow, Edinburgh, Newcastle, Leeds, Manchester and Liverpool creates an economic area with a population in excess of 10 million. Reducing travel times between these major economic hubs would broaden the labour market pool, give firms access to a wider range of markets and suppliers and make it easier for firms to share best practice, people and technology.
- Moving more freight from road to rail can help reduce greenhouse gas emissions and free-up more space on our road networks. Investment in Scotland's rail freight terminals to improve the efficiency of operations would make rail freight more attractive and encourage a modal shift.
- Increasing the gross vehicle weight limit of HGVs transporting goods to and from rail terminals from 44 to 48 tonnes would also help to facilitate a modal shift, by allowing rail to compete equally with road.⁶ The UK Government controls maximum vehicle weight limits on the road network and should consider how the 48 tonnes for 48 miles initiative could be adopted to support the growth of rail freight traffic.
- Strengthening the resilience of our transport network and minimising the level of disruption during extreme weather is vital to all businesses, particularly those that rely on the ability to move people and goods across Scotland and further afield. The Scottish Government should carry out a resilience review of the transport network, with the aim of producing practical recommendations to minimise the impact of severe weather on our roads and railways in the future.

References

- 1 *Ready, Set, Connect*, CBI, December 2018
- 2 *Transport for the North*, Strategic Transport Plan, 2018
- 3 As of January 2019, Citymapper is available in 39 cities worldwide: www.citymapper.com/cities
- 4 As of January 2019, Transit is available in more than 175 cities worldwide: www.transitapp.com
- 5 *Accelerating our ambitions: A business vision to drive success in Scotland*, CBI Scotland, October 2015
- 6 <http://www.malcolmgroupp.co.uk/media/2589/48t-for-48m-brochure-final.pdf>



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