

ICE briefing paper: Public transport funding after Covid-19 – what happens next?

March 2022

Executive summary

Public transport use plummeted due to the Covid-19 pandemic, with some countries and cities experiencing up to 90% decreases in use during lockdowns. Globally, recovery has varied in response to restrictions being eased or removed. The initial trend post-vaccine has seen increased levels of hybrid working, resulting in lower overall public transport use compared to pre-pandemic levels, particularly at peak times.

This overall decrease in patronage has meant a loss in farebox revenue, which has led to huge budget shortfalls in some cases. Operators have largely relied on emergency funding from governments; emergency funding that is increasingly being re-evaluated as government priorities shift and Covid-19 becomes a managed part of daily lives. On top of this, car use has returned to pre-pandemic levels in many countries, increasing the risk of a 'car-led recovery', while some operations and capital projects have been scaled down or suspended as a result of budget shortfalls.

ICE's previous work on Covid-19 and the 'new normal' identified that long-term infrastructure planning should still be driven by existing long-term challenges, including population growth, meeting carbon emission reduction targets and the UN Sustainable Development Goals (SDGs).¹

Affordable and accessible public transport is vital to addressing these challenges. Getting more people onto public transport and implementing policies that support greater take-up of active travel will reduce carbon emissions and improve air quality, while reducing congestion. A sustainable future funding model for public transport must therefore be established and implemented if national and international objectives are to be met.

It is fair to say that the past two years have fundamentally reshaped society's relationship with public transport, particularly in terms of commuting patterns. While, as of March 2022, some services have recovered up to 80% of passengers compared to pre-pandemic levels, this still leaves a considerable gap in revenue generation. Indeed, even a small percentage drop in patronage can result in lasting structural changes to the operation and funding of public transport.

This has major implications for governments and public transport operators, which have built substantial parts of their infrastructure, services and revenue models around transporting commuters during peak hours on a consistent basis.

Funding models which focus on transport systems covering their operating costs should therefore be a very important concern. In the UK, the last tranche of emergency Covid-19 funding for local public transport is due to end in October 2022² and Transport for London's in June 2022³, which raises questions about the long-term sustainability of the sector and what options exist to policymakers and operators beyond then.

¹ ICE (2020) [Covid-19 and the New Normal for Infrastructure Systems – Next Steps](#)

² Department for Transport (2022) [Local Transport Update: Financial Support for Bus and Light Rail Services](#)

³ Transport for London (2022) [TfL Statement - TfL Funding Update \(25th February\)](#)

As the world moves towards recovery from the pandemic, there is an opportunity to do things differently. The policy choices made regarding spending on public transport during recovery and beyond will determine countries' ability to reach sustainable development goals and national strategic objectives.

So, what happens next?

- Will there be a continual need for further government subsidies or incentives, and will this be palatable to governments and the taxpaying public?
- Will operators need to find ever-greater efficiencies in providing their services, perhaps to the point where service levels decline? Will business cases for capital projects need to be re-evaluated?
- Will operators and authorities look to new funding models, such as road pricing, land value capture, and more diversified revenue sources?
- Will transport policies be considered more holistically, incorporating active travel and ensuring that hybrid working is integrated with sustainable access to work?
- Are there lessons that can be shared and applied internationally?
- Or is 'do nothing' a viable option – what if passengers begin to return to public transport in the same numbers as pre-pandemic?

ICE wants to hear views from across the sector on these questions and more when considering funding public transport post-pandemic. Using the ICE's [Infrastructure Blog](#) as the platform for debate, we are keen for opinions and thoughts on the main issues policymakers should be considering to be brought to the fore.

This briefing paper provides an initial starting point for this discussion, which will culminate in an online panel debate providing an honest look at options for what policymakers need to do next.

Please contact policy@ice.org.uk if you are interested in authoring a guest blog on this topic or attending the panel debate.

How have travel patterns changed?

Before the Covid-19 pandemic, passenger journeys on Britain's rail network were at an all-time high, having doubled over the past 20 years to almost 1.8 billion.⁴ Investments were targeted at relieving congestion and pinch-points, while improving capacity both on the existing network, through improvements and new rolling stock, and by creating new lines.

In 2018/19, 4.8 billion bus journeys were made in Britain, greater than the number of journeys made on the national rail network and London Underground combined.⁵ A further 300 million journeys were made by tram and light rail.⁶

The Covid-19 pandemic and associated restrictions had significant and dramatic impacts on public transport use in Great Britain. Following the announcement of the initial lockdown in March 2020, public transport use fell by 80 to 95% for

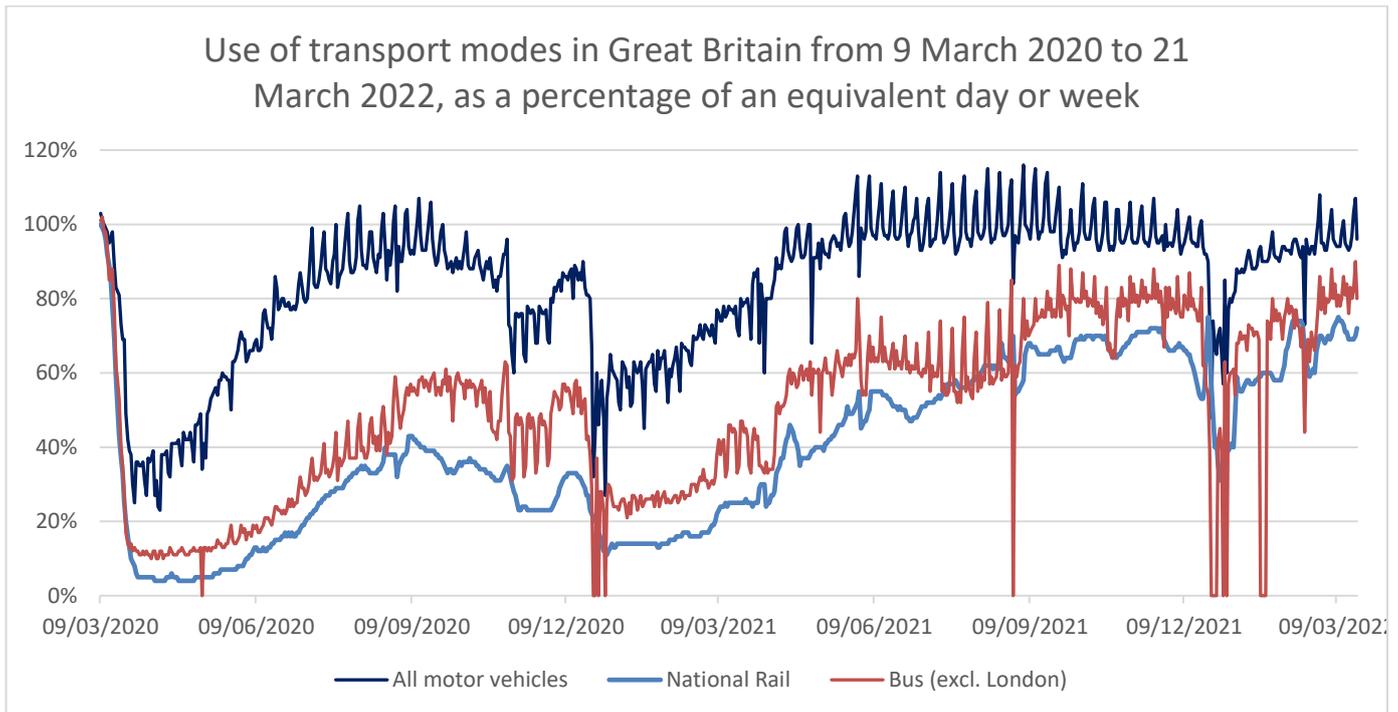
⁴ Department for Transport (2019) [Rail Factsheet](#)

⁵ Department for Transport (2019) [Transport Statistics Great Britain 2019](#)

⁶ Ibid

different modes. As of March 2022, public transport is seeing approximately 70% to 80% of use compared to equivalent dates in 2019 and early 2020.⁷ Allowing for seasonal effects and pandemic-related restrictions, demand for public transport has generally risen steadily since March 2020, but has at no point reached pre-pandemic levels.

Motor vehicle use has rebounded significantly with weekend usage above pre-pandemic levels for much of the latter half of 2021.⁸ However, weekday car traffic was averaging 91% of pre-pandemic levels, and there is no evidence of increased car ownership.^{9 10}



Source: Department for Transport¹¹

Notes: Days of 0% usage are where data is not available

Motor vehicle usage data is a percentage of the equivalent day in the first week of February 2020.

National Rail usage data is a percentage of the equivalent week in 2019.

Bus usage data is a percentage of the equivalent day of the third week of January 2020.

In Australia, data from November 2021 showed that passenger journeys remained close to 20% below pre-pandemic levels, with Sydney seeing a 33% decrease in trips.¹² As of March 2022, ridership on the New York City subway is 58% of its pre-pandemic weekday levels, with commuter rail ridership to and from the city as low as 43% of its pre-pandemic weekday level.¹³

⁷ Department for Transport (2022) [Transport Use During the Coronavirus \(COVID-19\) Pandemic](#)

⁸ Department for Transport (2022) [Transport Use During the Coronavirus \(COVID-19\) Pandemic](#)

⁹ Anable, J., Brown, L., Docherty, I. and Marsden, G. Centre for Research into Energy Demand Solutions (2022) [Less is More: Changing Travel in a Post-Pandemic Society](#)

¹⁰ National Infrastructure Commission (2021) [Behaviour Change and Infrastructure Beyond Covid-19](#)

¹¹ Department for Transport (2022) [Transport Use During the Coronavirus \(COVID-19\) Pandemic](#)

¹² KPMG Australia (2022) [Spreading the Peak? Covid-19 and Travel Patterns](#)

¹³ Metropolitan Transportation Authority (2022) [Day-by-Day Ridership Numbers](#)

Working from home and hybrid working has increased. Just two months into the first lockdown, almost 50% of UK adults in employment reported they were working from home. This was a pattern repeated across the Western world; in the United States, approximately 48% of the workforce worked from home, and 42% in the European Union.¹⁴

A 2021 Transport Focus study found that just 12% of UK commuters planned to travel to work five days a week after the pandemic.¹⁵ This is a pattern repeated globally – a study by Deloitte Switzerland found that 23% of Swiss adults would decrease their use of public transport long term in response to the pandemic¹⁶, while research from Transurban in Australia found people across Brisbane, Sydney and Melbourne expect to be using public transport 21% less than pre-pandemic levels.¹⁷

Even before Covid-19, the regular five-day commute was in slow decline due to increases in flexible working and use of technology to promote collaboration across teams and geographies. The proportion of people who primarily worked from home stood at 6% in early 2020 (pre-pandemic), while it is estimated that up to 25% of UK workers occasionally worked from home.¹⁸

As the world begins to move out of Covid-19 restrictions, and flexible working becomes a blend of personal choice and business need, as opposed to a matter of public health, it is becoming clear that pre-pandemic travel patterns are unlikely to be repeated.

Analysis from the CBI has shown that 76% of UK businesses expect flexible working to become more widespread in their organisation post-pandemic, and 47% expect most of their workforce to adopt hybrid working practices.¹⁹

This is particularly true for those working in professional services, such as in the accounting, technology and legal professions. In the UK, more than half of these employees worked from home during the January 2021 lockdown, with approximately 20-25% continuing to do so after July 2021, and another 30% electing to work hybrid.²⁰ Throughout the latter part of 2021 there was a gradual movement away from full homeworking towards hybrid working, until work-from-home guidance was re-introduced in December 2021 as a result of the Omicron variant.²¹

Since mid-January 2022 in the UK, there has been a continuing increase in the percentage of all working adults travelling to work only. Between 19th - 30th January 2022, 48% of working adults did not work from home in a seven day period, whereas between 3rd - 13th March 2022, 60% of working adults did not work from home in a seven day period. In comparison, hybrid working has remained constant; in every seven day period between 19th January and 13th March 2022, 13% of working adults – approximately 1 in 8 – both worked from home and travelled to work.²²

It remains to be seen whether these patterns change, though a January 2022 survey of more than 30% of UK businesses indicate that they intend to use homeworking as part of their permanent business model, with over 20% of these businesses indicating that they expect the majority of their employees to continue to work remotely.²³ This, alongside stable levels of hybrid working in the first months of 2022, suggests that current work and travel patterns may remain in place at least for the medium-term.

¹⁴ International Transport Forum (2021) [Transport Outlook 2021](#)

¹⁵ Transport Focus (2021) [Flexi-Season Tickets – The Future for Rail Commuting?](#)

¹⁶ Deloitte Switzerland (2020) [Mobility After Coronavirus Crisis – From Public to Private](#)

¹⁷ Transurban (2021) [Urban Mobility Trends from Covid-19](#)

¹⁸ Felstead, A and Reuschke, D, Wales Institute of Social and Economic Research (2020) [Homeworking in the UK: Before and During the 2020 Lockdown](#)

¹⁹ CBI (2020) [No Turning Back](#)

²⁰ ONS (2022) [Coronavirus and the Social Impacts on Great Britain: 18 March 2022](#)

²¹ Ibid

²² Ibid

²³ Tony Blair Institute for Global Change (2022) [Returning to the Office After Omicron: What Past Trends Tell Us About the Future of Work](#)

What has been the impact on funding models?

Governments globally responded quickly to changing demand and subsequent reductions in revenue once lockdown restrictions came into place, subsidising public transport to significant extents and, in some cases, nationalising provision. Regardless of whether these operators were fully in the public sector, franchised or fully private, they required substantial financial support to maintain at least a basic level of service to keep economies running, notably for key workers.

In the UK, the Office for Rail and Road confirmed that government funding for the railway increased by £10.4 billion in 2020–21, reaching a total of £16.9 billion.²⁴ Fare income in 2020–21 was £1.8 billion, a drop of £8.6 billion from the previous year.²⁵ Approximately £2 billion of funding support has been provided to the bus industry in England.²⁶

In 2020, public transports operators in Spain lost €250 million per month²⁷, while New York's Metropolitan Transportation Agency (MTA) estimated a \$5.7 billion deficit in 2021 and that it would still face a \$4 billion deficit in 2024.²⁸ In Canada, transport agencies faced a financial shortfall of CA\$400 million per month in the immediate aftermath of the country's first lockdown as passenger numbers collapsed by up to 90%.²⁹

Without the additional funding provided by governments, there would have been even more severe cuts to services. The Urban Transport Group estimate that around 30% (or 300 million passenger journeys) could have been lost from the bus network without the additional support.³⁰

It is clear, however, that there can longer be a blank cheque. In the UK, the government has asked train operating companies to provide 'credible, efficient and sustainable business plans'³¹, and the Department for Transport has confirmed that the £150 million support for local transport to cover the period March to October 2022 will be the final package of pandemic-related support.³² Funding of mass transit schemes in the UK is still likely to persist in terms of the government's levelling up agenda, most notably through the government's pledge in its Levelling Up White Paper for local public transport connectivity across the country to be 'significantly closer to the standards of London' by 2030.³³

Public transport provides positive economic, social and environmental benefits. This is why supporting growth in public transport networks – including bus, rail and tram/light rail – is a focus of central and local government transport policy and capital programmes.

If public transport services are run well, they support the achievement of wider national goals such as net zero, climate change resilience and reducing air pollution.

Few, if any, public transport systems fund their operations entirely from fare revenues, and none can use it to entirely cover their capital costs. Pre-pandemic in the UK, central government provided between £3 billion and £7 billion per year in revenue support across the rail sector, with fare revenue in 2018/19 accounting for 49% of rail industry income. In the same year, 40% of the bus industry's revenue came from central government and 60% from fares and very few other

²⁴ Office for Rail and Road (2021) [Regulator's Rail Industry Finance Report Shows Impact of Pandemic](#)

²⁵ Ibid

²⁶ Anable, J., Brown, L., Docherty, I. and Marsden, G. Centre for Research into Energy Demand Solutions (2022) [Less is More: Changing Travel in a Post-Pandemic Society](#)

²⁷ C40 (2021) [Why Now is Exactly the Right Time to Invest in Public Transport](#)

²⁸ Office of the New York State Comptroller (2021) [Financial Outlook for the Metropolitan Transportation Authority](#)

²⁹ Deloitte Canada (2020) [Tackling Public Transit's Funding Gap During the Recovery](#)

³⁰ Urban Transport Group (2022) [Continuing COVID Funding Support for Urban Public Transport](#)

³¹ House of Lords Debate (15 March 2022). vol. 820, col. 161 [Payments to Train Operating Companies](#)

³² Department for Transport (2022) [Local Transport Update: Financial Support for Bus and Light Rail Services](#)

³³ Department for Levelling Up, Housing and Communities (2022) [Government Unveils Levelling Up Plan That Will Transform UK](#)

sources. This approach is common across both the developed and developing world, with fares typically making up less than 50% of operating costs, and public subsidies, commercial revenues or other ventures providing the rest.

Paradoxically, this means that the operators who were the most successful pre-pandemic are now facing the most acute funding shortages. The London Underground in particular had one of the highest farebox recovery ratios in the world, which means the reduction in passenger numbers has affected Transport for London's business model more harshly than other operators and left it highly reliant on government support.³⁴

Overall lower levels of commuting and more variable patterns of commuting, particularly fewer peak-time journeys, will impact on revenue and service provision. But a careful balance must be sought. Lower public transport use can bring about poor outcomes where service reductions or withdrawals make the service less attractive to the public, who in turn look for other transport options. A deterioration in the quality of transport networks would impact directly on economic performance and significantly reduce the ability to deliver on long-term objectives such as net zero.

The bigger picture

Public transport systems are a significant enabler of economic, environmental and social prosperity. Their continual development requires strong stewardship, ensuring the correct interventions are made at the right time for the public benefit.

Even after Covid-19, the long-term drivers for infrastructure have not changed and should remain the driving force behind major transport system interventions.

On decarbonisation and achieving net zero, transport is critical. There is no path to delivering net zero by 2050 that does not run through decarbonising transport, which in the UK represents the largest source of carbon emissions.³⁵ Many cities around the world continue to have poor levels of air quality, the health problems of which are intensified by inactive lifestyles.³⁶

While providing a vital service, public transport has not evolved a great deal over past decades. Reductions in public sector subsidy, outside of emergency funding, and an increasing burden of cost on the users of services have resulted in operators focusing on efficiency and managing their bottom line. This approach reduces scope for innovation or new technology, meaning that the offer to passengers has broadly remained the same.³⁷

Arup has argued that the post-pandemic period presents an opportunity to re-imagine public transport and indeed the wider transport system, particularly in light of drivers such as net zero and the advent of new mobility modes, services and business models, such as ridesharing, car-sharing, micro-transit, micro-mobility, and connected and autonomous vehicles.³⁸

There are also spatial issues that need to be considered. Continued patterns of working from home will result in fewer commutes into cities. The increase in flexible working options could change where people live, resulting in increased population levels in smaller towns and rural areas, which are not as well served by public transport as larger towns and cities. This could increase people's reliance on private car use, and raises questions about how the infrastructure system will cope with the changing demands.

³⁴ Moody's (2021) [Structural Fall in Ridership Post Pandemic Opens Substantial Funding Shortfall](#)

³⁵ ICE (2020) [A Plan for Transitioning Infrastructure to Net Zero](#)

³⁶ World Health Organization (2016) [Global Urban Ambient Air Pollution Database](#)

³⁷ Arup (2021) [Tomorrow's Public Transport System](#)

³⁸ Ibid

What are the options for future funding models?

Policies aimed at growing the economy and strengthening the resilience of transport networks can at the same time address longstanding environmental challenges and social inequalities if they are designed and implemented well.

Regaining pre-pandemic levels of public transport passenger numbers will be difficult, if not impossible. If a lack of funding forces operators to cut services or increase fares, public transport becomes both less attractive and less affordable. This would undo the years of progress in improving passenger numbers, reliability and journey satisfaction.

If public transport is not effectively funded, there is a risk of causing a spiral of decline in which poor-quality services lead to lower passenger numbers and therefore lower revenues which, in turn, lead to further cuts. This situation must be avoided if there is any likelihood of achieving net-zero emissions by 2050, and the UN SDGs by 2030. Affordable, accessible, low-carbon public transport is vital to addressing these challenges, through reducing carbon emissions, improving air quality and reducing congestion, as well as a host of wider social benefits.³⁹

Given the immediate and longer-term challenges facing public transport, there are likely to be changes in where revenue comes from, whether that is through continued support, higher fares, diversified funding streams or new/devolved taxation powers.

Maintaining government support

With the enormous impacts on public transport fare revenue resulting from Covid-19, the question should perhaps not be whether support should continue, but what structure and shape that support should take.

The most straightforward long-term solution is a stable agreement between the government and public transport operators to fund the gap, recognising the contribution that public transport makes to achieving wider societal goals.

However, such an approach could be expected to meet with public and political opposition, particularly if passenger numbers do not significantly increase. Enormous sums of money have already gone into subsidising the sector, and as government priorities shift and Covid-19 becomes a managed part of daily lives, people and politicians may demand that taxpayer money is directed towards other concerns.

Above all, if government funding is to continue, it should support the transport sector's ability to pursue a transition to a sustainable future, and include incentivisation packages to encourage public transport use. There are holistic solutions that can be used. For example, capital funding could come with conditions that stipulate transport authorities produce plans to reshape their networks with greater levels of active travel, shared and public transport. Future funding could then be linked to these plans.

Raising fares

In the UK, the trend since the 1990s has been for the largest burden to fall on the user of a service. In public transport terms, this means rail fares have remained relatively high and utilise peak-load pricing.

There are two potential outcomes from changes in demand:

- a reduction in overall demand while peak demand stays the same
- a reduction in peak demand while there is still demand for regular services.

³⁹ United Nations (2021) [Sustainable Transport](#)

Either scenario would require public transport networks to operate similar levels of service as they did pre-pandemic, but with lower income from fares. Essentially, capacity will need to remain at a network level, but for fewer passengers.

If passenger numbers remain low or take a long time to return to previous levels, a model that relies on passenger revenues for large parts of funding is unsustainable. In the case of TfL, there are estimates that a 20% permanent drop in passenger numbers could lead to an approximate average 12% loss of operating revenue.⁴⁰ In the case of operators that rely less on farebox revenue, the impact would be lower but still significant – the New York MTA, Vancouver's TransLink and Île-de-France Mobilités, which covers Paris and the surrounding region, would experience an approximate 8% loss of operating revenue with a similar 20% drop in passenger numbers.⁴¹

With fewer passengers but similar levels of capacity under the existing system, fares would have to rise – perhaps significantly – or concessionary travel schemes would need reconsideration. While this option would lead to more fare revenue, it does not improve the long-term sustainability or resilience of the model. In addition, raising fares could make public transport both less accessible and less attractive for the wider public, which puts at risk the achievement of wider economic, environmental and social prosperity.

Cutting back services

Another option is for operators to cut services to try to reduce costs. However, most operators have been under strong political and social pressure to maintain full or near-full service levels to support essential workers and, latterly, to encourage people back onto public transport as pandemic-related restrictions lift.

Initial service cuts may weaken revenue and reduce overall public support if passengers permanently shift to alternative modes of transport in response to service reductions. In the long term, underinvestment in the quality and capacity of services is likely to make public transport a less attractive option, leading to a slower recovery in passenger numbers and increasing the risk of not meeting national strategic goals.

Introducing road user charging

Most large cities have witnessed year-on-year reductions in the use of private vehicles. However, with private cars deemed safer to use during the pandemic than public transport, this trend has slowed, with other factors such as the rapid growth in the number of delivery vehicles contributing to congestion.

Some urban areas already have a road charging system in place where drivers pay to access some parts of cities, such as the Congestion Charge in London and Clean Air Zone in Birmingham.

Recent polling from Ipsos MORI shows that support for road user charging in the UK has increased significantly since 2007. In 2007, support for road user charging was about 33%; it is now up to 62%.⁴² Support increases further if the revenues are then used to improve public transport or to tackle climate change or air pollution. Public support is particularly strong if the cost is higher for the most polluting vehicles.

⁴⁰ Moody's (2021) [Structural Fall in Ridership Post Pandemic Opens Substantial Funding Shortfall](#)

⁴¹ Ibid

⁴² Ipsos MORI (2020) [Public Support Charging Motorists to Use Roads, But Want it to be Done for the Right Reasons](#)

ICE has previously explored the practicalities of a 'pay as you go' (PAYG) system on the UK's Strategic Road Network, though not at city level, and found that there was public support for road user charging if it was used as a replacement for both Vehicle Excise Duty (VED) and Fuel Duty.⁴³

Road user charging as a means to solely obtain more funding is a difficult and thorny issue, and one unlikely to be accepted by the wider public. At a city level, this mechanism could be counterproductive to fund transport measures when one of the overarching objectives for transport in most urban areas is to reduce car use. There are other risks associated with introducing local schemes, notably displacement effects. If only one authority in an area introduces it, economic activity could be displaced to another authority.

In Singapore, road user charging is not seen as a revenue-generating exercise. Instead, it is understood by the public that the benefits are reduced congestion and better air quality.⁴⁴ Indeed, distance-based road user charging must be about delivering outcomes that benefit society, including cleaner air, better journeys and improved public transport accessibility. As ICE outlined in a set of principles for PAYG roads, it must be ensured that any system is fair and transparent so that it cannot be challenged in terms of its pricing method and integrity.⁴⁵

There is therefore a need to think strategically and holistically when considering potential road user charging solutions. Implementing them in order to generate revenue lost as a result of an unprecedented crisis is not a decision that should be taken lightly.

However, the clock is ticking, with UK government policy for the sale of all new cars and vans to be effectively zero emission by 2030. An increasing number of vehicles exempt from Fuel Duty and VED will mean that these mechanisms will raise significantly less than they do at present by the end of the next decade, and it is clear that some form of road user charging policy will be required in order to avoid a £37 billion black hole in the government's finances.

Land value capture

Land value capture provides a potential mechanism for public transport authorities to generate revenue. It seeks to monetise the gains landowners can realise from land in proximity to newly developed public transport and to use it to pay for the network.

The 'Rail Plus Property' model used by Hong Kong's Mass Transit Railway (MTR) Corporation allows Hong Kong's public transport company to be self-financing – unlike many transport authorities in the world.⁴⁶

The model sees MTR construct new rail lines and tender for private developers to build residential and commercial properties above its stations, then take a share of the resulting sale or rental income. This provides the capital for operations and maintenance as well as for funding new projects.

It effectively captures the increase in the land's value resulting from a new metro station via the deals it extracts from developers of new housing, offices and retail space over and around the line. Developments are also carefully managed to ensure the mix of services that customers want. The result is developments that feed the railway in exchange for a railway that maximizes the value of developments.

⁴³ ICE (2019) [Pay As You Go – Achieving Sustainable Roads Funding in England](#)

⁴⁴ Transport Committee evidence transcript (2021) [Reforming Public Transport after the Pandemic](#)

⁴⁵ ICE (2019) [Pay As You Go – Achieving Sustainable Roads Funding in England](#)

⁴⁶ McKinsey & Company (2016) [The 'Rail Plus Property' Model: Hong Kong's Successful Self-financing Formula](#)

London has a similarly dense population and so could apply this model, and it has been used to an extent to fund Crossrail through a revenue-limited Community Infrastructure Levy (CIL). Studies have found, however, that there is an estimated land value uplift of £5.5 billion within 1km of a Crossrail station, with the CIL capturing only just over 10% of that value.⁴⁷

There are, however, concerns that land value capture in this way would only be suitable for densely populated urban areas – it is one potential solution as part of a wider toolkit of available policy options.⁴⁸

Low-fare/fare-free public transport

While unlikely to be politically acceptable in the UK, it is worth noting that some cities around the world have adopted a model centred around low-fare or fare-free public transport. Cities and towns have been experimenting with these policies since the 1960s, with Luxembourg introducing fare-free public transport nationwide in 2020.⁴⁹

It is of little surprise that introducing low-cost public transport increases passenger numbers. Strong passenger growth has been reported everywhere free public transport has been introduced, with the impacts more evident several years after implementation.⁵⁰

The most successful schemes are those whose goal is to grow passenger numbers, primarily in areas where public transport use has been historically low.⁵¹ There is limited evidence that fare-free schemes as a means to meet environmental or social objectives are effective. Indeed, some fare-free schemes have actually had a damaging impact on achieving wider goals such as increasing active travel uptake, as people have shifted modes from active travel to public transport.⁵²

Most notably, with low or free fares, increased demand is not associated with a similar increase in revenues. The costs of running the network will further rise as demand increases. If public transport operators are to encourage passengers back onto their networks post-pandemic, fare-free or concessionary rates could be considered as an incentive, but would most likely need to be used in conjunction with revenue-raising measures to sustainably cover the costs of operations.

About ICE

Established in 1818 and with over 96,000 members worldwide, the Institution of Civil Engineers exists to deliver insights on infrastructure for societal benefit, using the professional engineering knowledge of our global membership.

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⁴⁷ ICE (2018) [State of the Nation 2018: Infrastructure Investment](#)

⁴⁸ Ibid

⁴⁹ Mobilitéitszentral (2020) [Free Transport](#)

⁵⁰ Fearnley, N, *International Journal of Transportation* (2013) [Free Fares Policies: Impact on Public Transport Mode Share and Other Transport Policy Goals](#)

⁵¹ Ibid

⁵² Fearnley, N, *International Journal of Transportation* (2013) [Free Fares Policies: Impact on Public Transport Mode Share and Other Transport Policy Goals](#)