

Tap to the future:

Delivering an integrated, multi-modal ticketing system

April 2026



On 24 March 2026, Campaign for Better Transport convened a half day, delivery focused roundtable to explore one of the most important questions facing the transport sector today: How do we achieve a fully integrated, cross modal, interregional, nationally coherent fares and ticketing system by the end of the decade?

The roundtable, supported by Cubic Transportation Systems, was attended by senior stakeholders across national and regional authorities, operators, suppliers, and industry bodies. It considered the challenges, opportunities, and practical steps needed to unlock national integration across the UK. This policy paper reflects the insights from the roundtable, alongside the priorities set out in *Better Connected*, the Government's integrated transport strategy published in April 2026.

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Executive summary

A fully integrated, cross-modal, national fares and ticketing system has long been the ultimate prize for the public transport sector. Integrated ticketing offers many benefits: simplifying the passenger experience, driving productivity and regional growth opportunities and reducing social inequality.

While there have been improvements over the years, the system remains complex and difficult for many to navigate. Now several policy developments – rail nationalisation and integration, bus franchising and funding reform, devolution and a new integrated transport strategy – have aligned themselves to present an unmissable opportunity for meaningful reforms to be implemented.

Drawing on the experience and expertise of a wide range of sector stakeholders, this paper explores a practical framework for delivery. We have identified the following lessons for central government and local transport authorities looking to implement integrated ticketing:

- 1 Any consideration of ticketing systems needs to start with customer needs** in mind rather than with what the technology can do
- 2 Trust is critical**, both for passengers to feel confident they are paying the right fare, and for the transport sector to ensure fares and ticketing reform is fair and robust
- 3 Local trips within city regions and longer-distance inter-city travel may require different systems**, but the experience of using them should be seamless
- 4 National policy should be enabling and supportive** – specifying shared standards to ensure consistency – rather than highly prescriptive
- 5 Authorities should procure existing, proven technology** rather than building their own systems from scratch
- 6 Central government should support more local authorities to expand integrated ticketing** to the ‘in-between’ areas outside of the combined authorities

Introduction

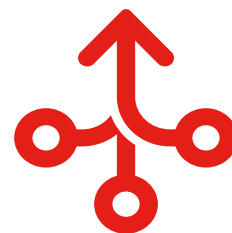
The challenge: the ticketing landscape

A public transport fares and ticketing system that is fully integrated across modes, easy to understand and simple to navigate has long been the ultimate prize for the transport sector. The last national integrated transport strategy – the 1998 *A new deal for transport: better for everyone* – aspired to deliver “tickets which are easy to get, offer value for money, flexibility and make changing easy [to] encourage more people to use public transport”.¹

Yet the fares and ticketing system remains complex. On rail, train operating companies’ different fare structures, ticket validity rules and concession offers over time have made it difficult to understand the best options for specific journeys. As many as 35 per cent of people have been deterred from using the train because of the complexity of the ticketing system.² The experience of buying a ticket differs depending on which operator, which route, and which time of day is involved.

On local transport, some city regions now have a system where tickets are accepted across all bus and tram networks. However, in many areas, services are still fragmented, with different bus routes operated by different private companies. Although contactless payment is now widely accepted across bus operators, a day ticket purchased for one operator may not be valid on services operated by another, even if routes overlap.

In London, devolution enabled the development of an integrated travel and ticketing system across all modes. Greater Manchester’s Bee Network is following the same path, with integrated ticketing across bus and tram and plans to include local rail lines by 2028. But in most other areas, there is still a long way to go to make multi-modal journeys truly seamless.



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Case study: London

The establishment of the Greater London Authority and Transport for London (TfL) in 1999 enabled the development of London’s transport system, which offers integrated travel and ticketing system across bus, Underground, Overground, Elizabeth line, tram, rail, cable car and river services. TfL and technology partners Cubic pioneered pay-as-you-go payments with automatic daily and weekly fare capping, through the Oyster smartcard and contactless payment.

The innovative Oyster card, introduced in 2003, removed the need to select or purchase a specific ticket in advance and reduced the risk of inadvertently choosing the wrong fare. Since 2014, passengers have been able to use any contactless bank card across the network. Combined with fare capping, this has lowered barriers to travel and simplified ticket purchase. Further transparency was introduced in 2018, with passengers able to view their payment and journey history via Transport for London’s online account and app.

As a result, London’s fares and ticketing system is trusted by passengers, intuitive, and consistently rated among the world’s best. This approach provides a seamless, integrated solution to ticketing, which should be replicable across the UK.

The opportunity: policies aligning

The structural and commercial fragmentation that has characterised the transport system in the past is now changing.

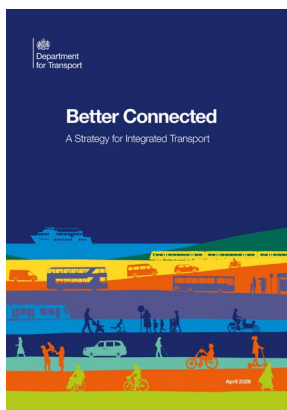


In the rail sector, the Government has started the process of renationalising passenger transport services, with over half of the network already under public ownership. In addition, the Railways Bill is progressing through Parliament, preparing to lay the legislative framework for the creation of Great British Railways – a single ‘guiding mind’ that will set the strategic direction for the whole rail network and unite decision-making and delivery across track and train. Work is also already under way on fares and ticketing reform with a dedicated team within the Department for Transport (DfT).

In the bus sector, the Bus Services Act 2025 gives all local transport authorities across England the powers to franchise their bus networks, including the ability to set fares and collect revenue, in the way Greater Manchester has done with the Bee Network. Several Mayoral combined authorities are already progressing plans for franchising, with DfT supporting a number of pilots for how this can work in other areas.

The funding and governance process is also changing. Local government funding for transport has shifted towards integrated multi-modal settlements for devolved authorities and long-term funding allocations for other authorities. At the same time, more authorities are progressing along the devolution pathway, with enhanced funding and powers over transport and other areas, creating a significant potential for public transport improvements in England’s city regions.

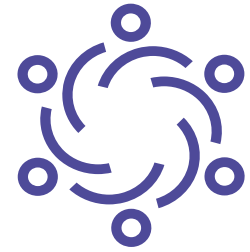
These changes should support removal of several of the structural barriers that made it difficult for integrated ticketing to be implemented in the past.



Crucially, in April 2026, the DfT published *Better Connected* – its long-awaited integrated transport strategy for England. Simplified payments and information were one of its eight priorities, with the aim that “journeys across different kinds of transport will be easy to plan, pay for, and navigate – with integrated ticketing wherever possible”.³ The strategy backs the continued development of Project Coral – a technology platform being developed by Transport for the West Midlands and its partners, with funding from the DfT, to enable contactless payments across bus and trams. The strategy commits to expanding the scope of Project Coral to the rail network and to “developing technologies to give local areas in every part of England a menu of choices for implementing integrated ticketing”.⁴

All these changes create a more favourable environment for the development of nationwide, multi-modal integrated ticketing. This paper sets out the next steps for progressing this and lessons from stakeholder experiences.

The case for better integrated ticketing



Integrated ticketing can help improve the passenger experience, create economic gains and improve accessibility.

The customer case

The passenger experience has to be the starting point for any discussion on ticketing. Passengers do not necessarily want 'integrated payment mechanisms'. They just want their journey to work. They want to pay simply, to trust that they will not be overcharged, and to be able to move between modes and services without having to think too hard about which ticket covers which leg, and for the experience of paying for transport to be consistent in different places. An improved passenger experience would enable more people to choose public transport more often, creating wide-ranging social and economic benefits.



**Improved public transport,
integrated fares and ticketing
could create increased
productivity benefits of**

**£17 billion
a year**

in urban areas. *Better Connected* recognises this, framing integrated ticketing as part of the Government's growth mission rather than as a purely operational issue.

The economic case

For some time, Britain has experienced a slowdown in productivity compared to other developed economies, driven by regional inequality.⁵ This has led to sluggish economic growth and diminishing living standards. Poor transport connectivity has played a large part in holding back productivity in our major cities outside London. Only 40 per cent of people living in Britain's big cities can reach their city centre by public transport within 30 minutes, compared to 67 per cent in European counterparts, limiting employment opportunities and economic growth.⁶

Yet, improved public transport with better integrated fares and ticketing would make longer and more complex journeys easier, bringing an additional 1.2 million people in the UK's six original mayoral combined authority cities within 30 minutes' journey of the city centre by public transport, and creating increased productivity benefits of £17 billion a year.⁷ The UK could therefore realise significant economic gains through the enabling and promotion of capped fare schemes

The accessibility case

Better ticketing, if actively managed, would mean more accessible ticketing. The shift towards contactless and digitally enabled ticketing may present barriers for older passengers, people with disabilities, people with no access to bank cards or smartphones, and people with lower digital literacy. Including accessible options, such as smartcards, paper tickets and cash, alongside physical accessibility improvements to rail stations and tram and bus stops, would enable more people to use public transport with confidence.

In sum, better, more integrated public transport and ticketing will improve the customer experience and generate significant social value, improved productivity and reduced transport-related social exclusion.

The system in practice



A brief explanation of the technology is useful here, because the terminology is often used loosely in ways that create confusion. The glossary at the end of this paper sets out these terms in greater detail.

From the passenger's perspective, the main fare options are either purchasing tickets in advance, buying tickets in real-time on services, or using Pay-As-You-Go (PAYG), where they are charged per journey as they travel.

Advance purchase tickets can be for a single or return journey or they can be a set-price package, e.g. a bus day or week ticket that covers an unlimited number of journeys in a given day or week. They can be bought in advance online or through an app and sent to passengers as QR codes; or bought from a ticket vending machine or ticket office as paper tickets or loaded onto smartcards (such as London's Oyster card or Manchester's Bee card). Most of these tickets can also be bought in real-time on board buses, coaches and some trains. These can be paid for using cash or (contactless) credit or debit card. Depending on the fare integration in place, a day or week ticket might only cover a single bus operator, or it may be valid for all bus (and potentially tram and some rail) operators in a given area.

PAYG can be used for a single or return journey but can also offer capped fares, so passengers are charged no more than a certain amount per day or week however many trips they make or modes they use. This is the equivalent of day or weekly packages bought in advance, but without the need to pre-plan or pay in advance. Capped fares improve certainty and affordability, particularly for frequent travellers. PAYG can be enabled via smartcards (like London's Oyster card or Manchester's Bee card) with pre-loaded credit or via contactless bank cards or mobile wallet payment. In addition, there are now pilots for automatic payments through GPS-enabled smartphone apps.

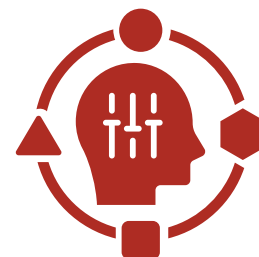
Behind any contactless PAYG or smartcard system, there is an 'architecture' that processes the journey data and calculates the fare, which may require a personal passenger account.

Contactless PAYG is widely used in many city regions at the moment across local transport, but not all local areas or on National Rail yet. Project Coral aims to enable contactless capped multi-operator ticketing across bus and tram in all parts of the country by providing the technology to facilitate revenue apportionment between operators, with the intention to also extend it to rail in future.

For rail or coach travel where passengers can plan their trips ahead of time, advance fares often offer better value, so pre-purchasing tickets may be more appropriate. Therefore, providing a combination of the ticketing methods described above will much better suit passengers' varying needs.

Where next: main lessons

Below we summarise the main lessons for national and local decision makers when progressing integrated ticketing schemes



1 Start with the customer

Any consideration of ticketing systems needs to start with the customer needs in mind rather than with what the technology can do. With 70 per cent of all trips under five miles, ensuring a simple and consistent payment method for local journeys is essential. Passengers want to be able to tap in and out on all modes using whatever payment method they prefer, to be charged a fair fare, and to not have to think about it. For longer journeys by train or coach, they want to be able to buy the best value ticket that covers their journey on the national network, ideally without having to plan the whole journey in advance.

2 Trust is essential

Passengers need to be confident that they are buying the correct ticket, that they are paying a fair fare for the journey they are making, and that any mistake will be rectified quickly and reliably. The reason London's system works is not just that it is technically sophisticated – it is that passengers believe it will give them the best deal.

Everyone involved in fares and ticketing reform should also be able to trust the process. Operators need to believe that revenue apportionment in multi-operator systems works properly. Suppliers need confidence that there will be a predictable pipeline of delivery projects and investment. Politicians need to know that fares and ticketing reform will support delivery of their policy goals, such as improving economic productivity, tackling social exclusion, improving air quality and decarbonisation. The Government should not expect local authorities and operators to adopt systems they cannot trust.

3 Create a seamless experience across local and long-distance travel

Public transport users tend to undertake two main types of trips: trips within the 'islands' of their local areas or regions, and longer-distance trips on the 'bridges' between those local islands.

The islands are city regions or local travel areas where PAYG and capped fares can operate for local or commuter distance trips, covering travel across bus, metro, tram and local rail. The islands are likely to be defined primarily by the political and administrative geographies of the combined and local transport authorities as the bodies responsible for coordinating transport delivery and fares. Nevertheless, functional travel patterns should be considered as much as possible to encourage more journeys from satellite towns into cities. The *Better Connected* strategy suggests that contactless should be the preferred technology for these trips, enabled by extending the Project Coral back-end infrastructure to rail. However, other inclusive means of payments need to be provided for the digitally excluded or those without a bank account.

The bridges are longer-distance, inter-city or inter-regional travel by rail and coach. For these journeys, prices tend to vary depending on distance and destinations; how far in advance passengers book; and what degree of travel time flexibility they want (i.e. the degree of restriction on which services can be used). With advance fares offering better value, monthly or pre-purchased tickets are likely to remain the most popular for most 'bridge' journeys. What matters here is that the ticket-buying experience is simple, with a range of fare and purchase options (e.g. lower price for lower flexibility or slower journey); that GBR removes the current fragmentation between train operators; and that coaches are properly included in ticket system planning.

From passengers' perspective, there is no need for one single system for all types of trips. They do not necessarily need a single ticket covering every stage and every mode of a long-distance multi-mode journey. However, they would like a smooth experience at interchange points and a broadly consistent local transport experience in different 'islands', and they would like to know that they are charged a fair total fare for the trips they make.

4 Enable, don't prescribe

National policy on fares and ticketing should be enabling and supportive, rather than highly prescriptive. It should strike the right balance between standardisation and centralisation on the one hand and localisation and innovation on the other. Experience both from the UK and internationally suggests that central government has a key role to play in developing guidance and specifying shared standards that ticketing technology needs to comply with.

This would ensure that passengers' experiences in different local systems are as consistent and seamless as possible. National policy and regulation should not stifle local variation in fares policy or innovation in developing ticketing technology or products. Ticketing infrastructure and technology suppliers should standardise as much as possible, consistent with continuing to innovate and protecting commercial intellectual property.

The *Better Connected* strategy largely reflects this view. It commits to developing national back-end technology that regions can connect to, alongside a menu of ticketing options rather than a single mandated solution, and to working with city regions to support delivery rather than directing it from the centre. In sum, national policy should set standards and specifications, and support local capacity and capability, while leaving room for local authorities to tailor the passenger experience.

5 Buy, don't build

When developing new fares and ticketing infrastructure, national and local governments face a choice: they can either build their own bespoke systems, or they can buy from suppliers which already operate such systems internationally. Their instincts may be to attempt to build their own systems to allow for more tailored solutions. Though this can work very well, bespoke systems can be slow to build, expensive to develop, prone to problems that only emerge after launch, and damaging to passenger trust when they go wrong.

The alternative is to procure proven, off-the-shelf technology from suppliers who have already delivered integrated ticketing systems elsewhere. Procuring off-the-shelf systems developed by the private sector is more cost effective than requiring engineers to build a new system from scratch – an important consideration in a constrained fiscal environment. British Columbia’s experience of successfully procuring a contactless PAYG system is just one example. Central government can support local transport authorities in procuring ticketing systems by providing access to procurement frameworks and guidance that make it straightforward to buy proven technology.

Case study: British Columbia

In August 2023, BC Transit and the Regional District of Nanaimo introduced a modern electronic fare collection system across more than 30 regional transport systems in the province of British Columbia, Canada.⁸

The programme, delivered by Cubic Transportation Systems, replaced ageing fare infrastructure with a fully digital, contactless solution that includes a mobile app, free reloadable smart cards, and a contactless payment platform. The system enables seamless travel, fare capping, and real-time journey planning, improving convenience and accessibility, while supporting the province’s climate strategy by encouraging public transport use.

By the end of September 2023, BC Transit reported that ridership had returned to pre-pandemic levels.⁹ The system has equipped 884 buses across the province and records more than 27 million annual taps from over 40,000 users. Operationally, it has improved service reliability by reducing the need for drivers to visually validate fares, while also enabling promotions and new programmes to help grow ridership.

6 Include the ‘in-between’ areas

City region combined authorities, facilitated by devolved powers and funding, high density and good existing transport infrastructure, are well placed to deliver integrated, multi-modal ticketing – and many have already done so. But local transport authorities that are not yet on the devolution path may lack the governance and structural requirements to support the development of integrated solutions. This disadvantages the millions of people who live and work in ‘in-between’ areas outside of city region combined authorities – in coastal communities, in market towns, and in rural areas across the country. East Anglia is an example of a more rural region, where the transport system is more fragmented and challenging to navigate outside of the main cities. Areas like Cornwall, which has implemented multi-operator capped tickets across all buses under a single brand, have proven that integrated fares and ticketing for local transport are possible within existing structures. The aim should be that people living and working in these in-between areas have the same trustworthy and consistent ticketing experience as those in city region combined authority areas. Central government should support more local authorities to expand integrated ticketing outside of their main cities and within their larger regions.

Conclusion: the ticketing system of the future

There has never been a better time to modernise the UK's transport ticketing and implement meaningful fares and ticketing reforms. The establishment of Great British Railways, bus sector reform, greater devolution of powers and funding to the local level and the publication of the integrated transport strategy all offer an opportunity to improve passengers' experience.

The case for integrated ticketing is clear: customers want a seamless and trustworthy system which *just works* for them; better integration would fuel growth, productivity and prosperity; and it would lead to a more accessible and inclusive system for all.

However, journey needs differ, with local trips requiring a different approach from long-distance travel. Local leaders need to have autonomy to tailor local systems to local needs, but they need support to access proven, off-the-shelf solutions. While a single, centralised approach is not the answer, centrally-set standards will be important to make sure that passengers' experiences of local transport in different city regions are broadly consistent, and that they effortlessly integrate with national rail and coach travel.

Fare collection systems and technologies have evolved over the last three decades, and there are now market solutions that can ensure integrated systems can be set up quickly and cost effectively. Local and national leaders should embrace the opportunity.



Glossary

Term	Description	Use Cases
Barcodes	1D or 2D (QR) codes – static (single-use) or dynamic (rotating, time limited) – displayed on paper or smartphone and scanned at gatelines or on-board validators. Dynamic barcodes address the fraud vulnerability of static ones.	• National Rail e-tickets: all TOCs now issue PDF and mobile e-tickets using barcodes, replacing the majority of orange magnetic-stripe tickets for advance and off-peak purchases • Third-party retailers like Trainline and other online retailers, enabling ticket purchase without collection at a machine • PlusBus, now has a digital version.
Closed loop	Closed loop means that the revenue comes from within the system for processing transactions. It does not necessarily mean it's limited to an operator. It's whoever has permission to use the value or tickets.	• Oyster card • Concessionary bus passes for older and disabled people across England, Scotland, and Wales – operator systems read a chip but the pass is issued by the local authority and not transferable to non-participating operators.
Contactless/ cEMV	Payment using bank-issued contactless cards or mobile wallets (Apple Pay, Google Pay) based on the global Europay, Mastercard, and Visa (EMV) standard.	• TfL – since 2014, users have been able to use contactless for capped PAYG payments across bus, tube, and tram • Project Oval – expanded contactless PAYG payment at National Rail stations in Southeast England, with delivery partner TfL • The Bee Network in Manchester • You can pay for a specific ticket or tap in and out on local buses.
GPS/ digital PAYG ticketing	Uses the passenger's device GPS to track the journey in real time, calculating fares without physical validators or tap-in/tap-out, with the best available fare charged retrospectively at end of day.	• East Midlands Railway (EMR) and Northern rail pilot launched September 2025. A unique barcode is generated in-app for barrier access and ticket inspection.
Open loop	A payment system where the transaction payments are settled outside the system.	• Any journey on TfL using a Visa, Mastercard, or Amex contactless card or phone – no Oyster, app, or registration required.

Glossary

Term	Description	Use Cases
Pay-As-You-Go (PAYG)	A fare model where passengers are charged per journey as they travel, rather than purchasing a ticket in advance. It can have a daily or weekly cap, so passengers are charged no more than a certain amount per day/week (the equivalent of buying a set-price daily/weekly ticket or travelcard). PAYG can be delivered via smartcard, contactless, or app.	• TfL Oyster and contactless – the established standard, with daily and weekly caps replacing the need to buy day travelcards.
Project Coral	A shared technology solution for integrated contactless capped PAYG across local bus and tram, led by Transport for West Midlands in partnership with major bus operators and Midlands Connect.	• Trial in the West Midlands, with intention to expand nationally. <i>Better Connected</i> commits to expanding the platform to rail.
Smartcards	Chip-bearing plastic cards storing ticket entitlements or e-purse value on the card itself or in a central back-office. UK interoperable smartcards use the ITSO standard, enabling cross-operator reads of concessionary passes and PAYG payments.	• In use for multimodal payments across many large cities.

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