

OUR PEOPLE
OUR PLACE
OUR NETWORK

OUR PROSPECTUS FOR RAIL

Greater Manchester's vision to
transform rail travel to support future
growth and prosperity for all.

**GREATER
MANCHESTER**
DOING THINGS DIFFERENTLY

GMCA GREATER
MANCHESTER
COMBINED
AUTHORITY

**MAYOR OF
GREATER
MANCHESTER**

 **Transport for
Greater Manchester**

**Greater Manchester is at the heart of the Northern
Powerhouse and has developed bold and wide-
ranging infrastructure plans to support a new phase
of economic success for the United Kingdom.**



The Greater Manchester Our Prospectus for Rail has been produced on behalf of the GMCA by Transport for Greater Manchester.

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Scale of growth in rail-based travel required to support planned housing and employment growth in Greater Manchester to 2040.



100%

increase in journeys by National Rail services to Manchester Airport



50%

increase in passenger rail journeys between cities



100%

increase in trips using rail-based modes to the Regional Centre



200%

increase in trips made by Metrolink by GM residents across the wider city-region



100%

increase in people passing through GM stations and stops

FOREWORD BY ANDY BURNHAM



We need a transformational change in rail travel to support our ambitious plans for future growth and prosperity.

Greater Manchester has the most ambitious and wide-ranging agenda of any place in the country because we want to make our city-region the best place to grow up, get on and grow old.

This prospectus is about rail travel – both heavy and light rail – but its implications are far reaching. This is about creating a world-class integrated public transport system for the people of Greater Manchester to support our ambitious plans for future growth and prosperity.

In June I launched 'Our Network', my ten-year plan to create an integrated, simple and convenient London-style transport system; which allows people to change easily between different modes of transport; with simple affordable ticketing. It includes significant investment in walking and cycling and reform of our bus services. It also includes extending and developing the successful Metrolink tram network and my vision for a 'GM Rail' system transformed from the current network that has not kept pace with the rapid growth in demand, has been slow to adapt to modern lifestyles and slow to respond to local priorities.

Trust in the railway is low. The infrastructure is old, and services are unreliable. Too many people don't see train travel as an attractive alternative to driving, others have abandoned the train to return to their cars – adding to traffic congestion and air pollution. In short, our rail service is limiting people's ability to get on and is constraining our economy. The National Rail network also operates in a silo, with a reliance on centralised funding and decisions being made by people outside of Greater Manchester. As a result, the current system fails to connect well with the rest of the transport network; and fails to connect with what local people want. When passengers told me what they wanted from their railways, their ideas were not surprising. All they ask for is a safe, accessible, reliable, affordable service, and the ability to hold people to account when they have a problem.

The industry must be re-structured to allow city-regions to make more decisions for and on behalf of local people. I have been calling for greater devolution because Greater Manchester's record of success with Metrolink shows that you can deliver high quality rail services when those who design and deliver them are close and accountable to the customers they serve. The Government has now set out plans to give the North more control of rail services and stations and I want Greater Manchester to lead the way in revolutionising rail travel.

Local control of GM Rail services and stations, and possibly later of infrastructure too, can support the integration of National Rail and Metrolink with each other and with the wider transport network, helping to address some of the limitations of the current rail system, particularly around capacity and ticketing. More importantly though, I want devolution to deliver a genuinely accountable rail network that is working in the best interests of Greater Manchester and is part of a fully integrated transport network.

This prospectus sets out what is needed for a transformational change in both tram and train services so that all rail travel can play a full part in the future prosperity of Greater Manchester, the North and the UK.

A handwritten signature of Andy Burnham in black ink.

Andy Burnham
Mayor of Greater Manchester

OUR PLACE

Rail should help us to make sure that people who live, work and visit Greater Manchester benefit from world class connections that support sustainable economic growth and access to opportunity for all.

Greater Manchester is growing.

By 2040, we expect our city-region's population to exceed 3 million. This will mean that people are making an extra 600,000 journeys every day on our transport network, with significant growth in demand for the movement of goods. To support this continued population and economic growth, Greater Manchester needs all rail travel – including Metrolink, local and National Rail services – to play a more significant role in transforming our transport network.

Rail should help us to make sure that people who live, work and visit Greater Manchester benefit from world class connections that support sustainable economic growth and access to opportunity for all¹. It should contribute to the continued growth of the Northern Powerhouse, to help rebalance the national economy and support the success of the UK as a whole. Rail has the potential to do this because services passing through Greater Manchester don't just benefit our city-region: they start and end their journeys in towns and cities across the North of England and beyond.

National Rail and Metrolink services have already played a key role in supporting economic growth. More people commute into central Manchester by rail-based modes than by any other form of transport. This 'rail renaissance' has been fundamental in ensuring that economic growth is not dependent on more cars getting into the Regional Centre, causing more congestion and pollution. It has also allowed established and new businesses to access the skills they need.

Greater Manchester needs to go further because the rail network is full. Twelve of the seventeen rail routes that serve our city-region are considered 'over capacity', with some exceeding the DfT crush capacity guidelines. Even if the commitments of the current National Rail franchises are met, the growth in demand that we are likely to see in the future will eat up much of what is delivered in the shorter term. Alongside this, Greater Manchester has a 'Right Mix' transport vision which means that, by 2040, 50% of trips need to be made by sustainable modes: walking, cycling and public transport. This equates to 1 million more sustainable trips a day². Achieving this will involve transforming public transport capacity (particularly in the Regional Centre); offering good alternatives to the car for travel across the city-region and maximising the efficiency and reliability of our existing transport networks.

The May 2018 rail timetable changes, and the chaos that followed, have understandably damaged many people's trust in the rail network. There is now an opportunity, presented by the Williams Review of the rail industry and the Government's announcement to devolve control of rail services and stations to city-regions, to act to repair this lack of confidence in the system. The Oakervee Review of High Speed 2 (HS2) Review is also an opportunity to restate the case for this transformational project.

Whilst 'Our Prospectus for Rail' proposes some new and exciting, transformative interventions, we still need to see the delivery of existing franchise and infrastructure

commitments, including work to address the critical capacity constraint on the Castlefield Corridor and delivery of the TransPennine Route Upgrade project. We cannot pick and choose when it comes to these interventions and schemes. If capacity problems at Castlefield are not addressed, then the benefits delivered by the TransPennine Route Upgrade will not be felt. If HS2 is not delivered, Northern Powerhouse Rail (NPR) alone will not be able to support the economic growth our city-region, the North and the country needs. Without HS2 and NPR to release capacity on our current network, we won't be able to run more frequent local services.









The right infrastructure, services and governance mechanisms all need to be in place to address the challenges we face. Some of this is within our own hands, but we need Government and transport industry partners to work with us to deliver the scale of transformation required.



¹ The Greater Manchester Strategy 2040

² The Greater Manchester Strategy 2040: Draft Delivery Plan 2020–2025

OUR PLAN

To 2025	RESHAPE CURRENT FRANCHISES <p>Services change so that there is a much simpler service offer for the Greater Manchester City Region and its travel-to-work area.</p>	INTEGRATED FARES <p>Simple, convenient multi-modal zonal ticketing allowing people to travel seamlessly.</p>	NEW AND BETTER STOP AND STATIONS <p>New stops and stations at key growth locations, fully accessible with rail stations managed locally to reflect the needs of their communities.</p>	PEOPLE  100% <p>increase in journeys by National Rail services to Manchester Airport</p>  50% <p>increase in passenger rail journeys between cities</p>  100% <p>increase in trips using rail-based modes to the Regional Centre</p>  200% <p>increase in trips made by Metrolink by GM residents across the wider city-region</p>  100% <p>increase in people passing through GM stations and stops</p>	PLACE JOB  200,000 more jobs HOUSING  200,000+ more homes GVA  £34bn+ GVA
	DELIVER INFRASTRUCTURE COMMITMENTS <p>Delivering existing capacity enhancement commitments including Castlefield Corridor, the TransPennine Route Upgrade and Salford Central.</p>	LONGER TRAINS AND MORE TRAMS <p>Eight car trains and lengthening platforms. More double trams operating across the Metrolink network.</p>	TRAM-TRAIN PATHFINDER <p>Pilot the use of tram-train technology to better connect all rail modes and make best use of the current network.</p>		
2025 to 2035	GM RAIL <p>Greater Manchester controlled local rail services and stations that are accountable to local people and responsive to local priorities.</p>	ROLLING STOCK STANDARDISATION <p>Improve reliability and customer experience through the use of a more uniform fleet for National Rail suburban services that is clean and green.</p>	EXPANDING METROLINK <p>Expansion of the network through new branches, extensions, conversion of National Rail lines and tram-train technology.</p>		
	METRO SERVICES <p>Introduce high-capacity, high-frequency rail-based services on key commuter corridors.</p>	REGIONAL-CENTRE METRO TUNNEL <p>Additional capacity to accommodate future rail demand to and through the Regional Centre.</p>	HS2 AND NPR DELIVERY <p>Transform city-to-city links across the North, the UK and globally via the airport. Releasing capacity on the 'classic rail network'.</p>		

OUR FOCUS

Greater Manchester has identified four areas of focus to transform rail travel in our city region, which are:

1

Making best use of what is available now

Rail services need to cope with growing demand in a cost-effective way, while improving comfort for passengers, reliability and punctuality. To meet these challenges, better use needs to be made of the rail infrastructure that already exists, such as by providing longer, higher capacity vehicles with simpler service patterns to improve reliability and punctuality.

2

Delivering more capacity and better connectivity

To meet long-term growth in demand for rail-based travel to, from and within Greater Manchester, the capacity and connectivity of the whole network needs to be improved.

3

A devolved and accountable rail-based network

The rail industry must be re-structured to allow city-regions to make more decisions about stations and services for and on behalf of local people.

4

Integrated travel between all modes

Greater Manchester needs a fully integrated transport network that allows people to travel seamlessly between modes with simple, affordable ticketing. Rail and Metrolink services should connect well with each other and with the rest of the transport network, especially bus services, while supporting more walking and cycling.

OUR NETWORK

Our Network is a vision for a cohesive and seamless single sustainable transport system that brings together the different ways people travel in our city-region.

A truly integrated transport network has the potential to transform Greater Manchester. By allowing people to move quickly and easily around our city-region we can unlock growth, cut congestion and air pollution and enable our residents to lead fulfilling and rewarding lives.

Rail is already a major player at moving the people of Greater Manchester around the city-region, with over 28% of morning peak travellers using rail modes, but the rail network currently operates in a silo and the mechanisms to effectively plan and integrate rail services locally and with the rest of the network are currently limited. To deliver Our Network all rail-based travel needs to be:

Convenient

- Reliable rail services that run and run on time. Less than 1% of Metrolink services are cancelled and over 90% of services arrive on time. That is the standard we aspire to across all rail modes (Metrolink services are classed as late if they arrive more than two minutes later than scheduled. On the National Rail network services can be five or even 10 minutes late without affecting performance figures).
- Regular rail services where passengers can 'turn-up-and-go' with an aspiration for at least four or more services per hour.
- Services that connect well with the rest of the transport network to support seamless journeys.
- Accurate passenger information in real-time, and clear and timely communication in the event of disruption.

Affordable

- Affordable fares and an aspiration to have a London-style cap across all modes.
- A simpler, zonal fares system.
- Integrated fares and ticketing across tram, train, bus and bike hire.

Sustainable

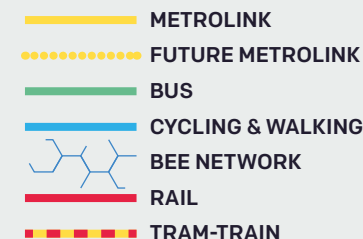
- A significant increase in capacity so that rail can carry twice as many passengers as it does today, to grow with Greater Manchester and support a shift to more sustainable travel.
- All rail-based services to have zero emissions and be powered by renewable energy.
- Stops and stations that are easy and safe to walk and cycle to.

Accessible

- Fully accessible to all passengers at stops, stations and onboard. The age and design of some Greater Manchester's rail stations makes this a challenge both technically and in terms of the costs involved, but the Metrolink network provides an accessible and inclusive journey experience that should be our aspiration for all rail travel.

Accountable

- Metrolink is run by Greater Manchester for Greater Manchester. We need a GM Rail service that is accountable to local people and more responsive to local priorities.



SERVING PEOPLE AND PLACES

Different modes of transport should be planned together as one network to create a fully integrated transport system. Encouraging greater use of sustainable travel options will also be vital to reduce the impact on the environment and congestion as Greater Manchester grows. 62% of daily trips in Greater Manchester are currently made by car. We want to reduce that to 50%, while also supporting significant population and employment growth. To achieve this 'Right Mix' of transport, Greater Manchester is investing to support more walking and cycling and exploring the use of powers to improve bus services. Rail and Metrolink travel will need to take more of the strain and – given that many services are experiencing overcrowding during peak periods – we need to work quickly to increase capacity across our rail network to support existing and future demand.

The Greater Manchester Transport Strategy 2040 is centred on five 'spatial themes', which enable us to take a journey-focused approach to how we move people and goods sustainably around the city-region. The five spatial themes for Greater Manchester are:

A globally connected city-region – Improved rail connectivity to Manchester Airport for visitors, businesses and workers is vital, if the city-region is to fulfil its economic potential. Manchester Airport is the largest global transport hub in the North and has plans to grow passenger numbers to 45 million per annum by the early

2030s (up from 22 million in 2015/16). Rail based links, especially the planned H2/NPR station at the airport, will play an important role in allowing this growth to occur sustainably by moving large volumes of people and reducing journey times across the North of England. Local services will also be needed to be attractive to workers within the employment hub – including the Airport City Manchester development, located in the Manchester Enterprise Zone – which is growing alongside the airport. Manchester Airport's Sustainable Development Plan includes a target for National Rail travel to increase its mode share from approximately 15% to 25% of the airport passenger trips by the early 2030s – an increase from 3.3 million rail journeys to over 11 million within the next 10–15 years.

Delivering better city-to-city links – Manchester city centre is a key rail hub for the North of England with many trips passing through central Manchester as well as starting and finishing there. Capacity enhancements in central Manchester will therefore be critical to improving the whole of the rail system throughout the North. A step-change in quality, speed and reliability is required to allow people to move easily and seamlessly between Manchester and cities across the UK, supporting the critical flow of goods, skills and information that will enable the UK to boost its long-term productivity, with Greater Manchester at the centre of a Northern Powerhouse. The arrival of HS2 and NPR are both critical to this. With the infrastructure creaking at the seams and struggling to cope with the doubling of passengers seen in the past two decades, we need major infrastructure interventions now to fix yesterday's problems today whilst also delivering for the needs of tomorrow.

Getting into and around the Regional Centre – Greater Manchester's Regional Centre is a major hub for transport services, including rail and Metrolink, due to its high concentration of major trip attractors and as the key interchange point in Greater Manchester's public transport

network. Huge volumes of people enter the Regional Centre and rail is well placed to provide the capacity to support this movement. To sustain employment growth in the Regional Centre, the rail-based capacity on which it depends will need to continue to expand. Local rail-based networks will also need to be fully integrated with HS2 and NPR to maximise the benefits for people who visit, live and do business in Greater Manchester.

We have an ambitious target for trips into and around the Regional Centre: doubling passenger numbers on rail-based modes. That will require a step-change in the capacity of rail-based transport, together with improved reliability and connectivity.

Travel across the wider city-region – Rail-based transport can play a much larger role for connecting Greater Manchester's towns with each other and supporting the renaissance of key towns such as Wigan, Rochdale, Oldham, Bolton, Bury, Stockport, Altrincham and Ashton as great places to live, work and visit. Rail is most effective where there are large volumes of people moving on routes, but to make effective use of this, it is important for passengers to have access to a truly integrated public transport system. This includes being able to use more than one form of transport in the same trip without requiring different tickets. Our target – on which work is presently in progress – is expected to entail tripling the number of wider city-region trips using rail-based modes by 2040. Many of these trips will travel through the city centre using improved cross-city links.

Connected neighbourhoods – Walking and cycling should be the natural choice for short journeys in our local neighbourhoods, including to access rail-based services; however, at present, too many very short trips are made by car. Our stops and stations will need to become "Mobility Hubs", with better provision for walking and cycling; bike hire opportunities; electric vehicle charging points and other facilities such as parcel collection points.



THE ROLE OF RAIL IN SUPPORTING SUSTAINABLE GROWTH

We have undertaken analysis – broken down by spatial theme – so we can clearly quantify the step-change in the role of rail needed to support a shift to 50% of journeys being made by sustainable modes while also accommodating growth. Analysis, which is under continuous development by TfGM, provides a clear evidence-base on the role we need rail-based modes to play in future.

100% increase in National Rail journeys to Manchester Airport		A GLOBALLY CONNECTED CITY <p>Better public transport for airport passengers and employees, so less need to drive to work at the airport.</p> <p>More movement of goods by water and rail in the Atlantic Gateway corridor.</p>	IMPROVING AIRPORT CONNECTIVITY <p>Bringing more passengers within one-hour and two hours of Manchester Airport by rail.</p>	MAKING TRAVEL EASIER <p>Expand and simplify the ability to use more than one form of transport at a reasonable price and avoiding the need to purchase more than one ticket.</p> <p>Delivering real-time customer information across the Greater Manchester network.</p>
50% increase in passenger rail journeys between cities		DELIVERING CITY-TO-CITY LINKS <p>A successful Northern Powerhouse economy, with Greater Manchester at its heart, with transformed connectivity between the major cities of the North of England, and to the Midlands, London and Scotland.</p>	JOURNEY TIME SAVINGS <p>Enabling travel from Manchester to Liverpool, Leeds, Sheffield in 30 minutes or less, and to London in just over one hour.</p>	
100% increase in trips using rail-based modes to the Regional Centre		GETTING INTO AND AROUND THE REGIONAL CENTRE <p>Support rapid economic growth with road traffic levels held at or below 2016 volumes to create a more liveable Regional Centre. Key destinations will be accessible by public transport 24/7.</p>	INCREASE PATRONAGE <p>Double passenger numbers by 2040</p>	
200% increase in trips made by Metrolink by GM residents across the wider city-region		TRAVEL ACROSS THE WIDER CITY REGION <p>Regenerate town centres that are easy to get to, particularly by sustainable modes. Easier journeys across the area, between centres, or to other major destinations.</p>	GROWING THE METROLINK NETWORK <p>Expanding the number of Metrolink passengers making trips across the wider city-region from 27,000 daily passengers today to 91,000 passengers in 2040.</p>	
100% increase in people passing through GM stations and stops.		CONNECTED NEIGHBOURHOODS <p>Easier access to interchanges and to local centres, with more journeys made by public transport, leading to more use of local shops and other facilities.</p>	DELIVER AN INTEGRATED TRANSPORT NETWORK <p>Greater Manchester will pursue its ambitions to own and operate local rail stations and make stations accessible for all.</p>	

1. MAKING BEST USE OF WHAT IS AVAILABLE NOW

The transformation of rail travel in Greater Manchester will require new infrastructure and reform of the rail industry. This will take some time. There are, however, changes that can be made now, and in the near future, to make the best possible use of the rail networks that currently exist. The focus will be on making the most of the available capacity and on improving reliability, including:

Existing franchise commitments – Despite their well-publicised challenges, both the existing Northern and TransPennine Express franchises must continue to deliver the substantial transformations promised in 2016 including new trains and services.

Increasing train-length on the National Rail network – This is the most efficient way of increasing capacity within existing infrastructure, and the bare minimum required to bring the service capacity received by Greater Manchester residents up to the standard received by people living in other parts of the country. Selective platform-lengthening will also be needed to accommodate the longer trains, alongside increases in passenger-handling capacity at key stations.

Increasing Metrolink Capacity – 27 new Metrolink units are on order and will start to arrive from early 2020. They will allow more double-unit vehicles to operate across the network. In the longer term, a new fleet of vehicles could be acquired to make full use of the 60 metre-length of city centre platforms, perhaps with tram-train operating capability.

Investing to improve Metrolink reliability – Greater Manchester will continue to invest in projects that are critical to Metrolink reliability, and in extra capacity (for example, at capacity-critical stops) where it is needed to improve reliability.

Customer-focused infrastructure upgrades – Greater Manchester wants to make all stops and stations fully accessible. This will require overcoming some technical and funding challenges. Access for All improvements will provide step-free access to support a more inclusive rail network at Daisy Hill and Irlam stations, and further rail station accessibility programmes at other stations are also in development. Finally, several passenger improvements are planned to transform the Ground Transport Interchange at Manchester Airport.

A simpler service pattern on the National Rail network – Simpler service patterns can reduce conflicting movements between services. This may mean that passengers need to change between services to complete their journey but will ultimately result in services that are more reliable and punctual.

More homogenous suburban rail fleet – Greater Manchester can learn from rail networks such as Merseyrail and Thameslink which operate using a homogenous vehicle fleet. Standardising the Greater Manchester suburban rail fleet over time will contribute to improving reliability and resilience, help to simplify staff training and result in a more consistent customer offer.



2. DELIVERING MORE CAPACITY AND BETTER CONNECTIVITY

Significant investment is required to provide more rail capacity and connectivity to accommodate future demand and support a shift to a more sustainable transport mix. These improvements typically go hand-in-hand: to improve rail connectivity, it is necessary to increase network capacity.

There are limits on the potential for lengthening vehicles on both the Metrolink and National Rail systems. It is expected – without major investment beyond train and platform lengthening – that capacity will constrain the growth of patronage on Greater Manchester's rail networks from around 2030 onwards.

Greater Manchester needs much more ambitious capacity improvements to match the scale of our plans for growth.

There needs to be a clear, co-ordinated agenda for small, medium, large and mega schemes, and we need to leverage the benefits of working together across national, regional and local bodies. To deliver more capacity and better connectivity we need:

Delivery of existing National Rail infrastructure commitments

There are a number of existing commitments that are due to be delivered to improve capacity and reliability in and around Greater Manchester.

Castlefield Corridor – The most critical capacity constraint on the National Rail network in Greater Manchester is the Castlefield Corridor between Piccadilly and Salford Crescent stations. The rail industry has committed to deliver the capacity improvements in and around Manchester Piccadilly and Oxford Road stations to facilitate a combination of increased train throughput and improved service reliability. These improvements now need to be delivered.

Calder Valley Line – Improvements – connecting Manchester, Rochdale, Bradford, and Leeds – will address capacity and reliability issues on that corridor.

Salford Central – The re-opening of disused platforms at Salford Central station will improve connectivity enabling Liverpool-bound services to use the station. The upgrade would also enable longer trains to be accommodated, serving a major area of economic growth around the station

TransPennine Route Upgrade – This scheme has the potential to significantly improve rail travel across the Pennines. The passenger benefits originally promised need to be delivered in full, and that will only be possible if the route is electrified in its entirety and all stations upgraded.

New and better stops and stations

New stops and stations will be required to serve major new developments proposed in the Greater Manchester Spatial Framework (GMSF). There is also potential for adding new stops and stations to serve well-established large towns that are presently not served by rail-based transport. Greater Manchester will undertake further work with rail industry partners to identify suitable locations that have a strong business case and that support Greater Manchester's ongoing growth.



Increased frequency and capacity through infrastructure enhancement

– There are several locations on the National Rail network with high demand potential but low service-frequencies, typically due to limited network capacity to accommodate a mix of inter-urban and suburban services. Mossley and Greenfield stations on the Manchester – Huddersfield – Leeds line are examples.

Extending the Metrolink network to serve major growth-areas

– Several new branches, conversions and extensions of the Metrolink network are proposed, especially where major population or employment centres (existing or planned) are located beyond walking-distance of the existing rail-based network. Examples include:

- The planned extension of the Airport Metrolink line to serve Terminal 2, Manchester Airport HS2/NPR station and growth areas to the west.
- A new link between Salford Crescent station and Salford Quays to facilitate access to Salford Quays by rail from the north-west of Greater Manchester.
- An improved Metrolink frequency between Victoria and Piccadilly facilitating direct Oldham to Piccadilly services, for onward connection by rail to Manchester Airport.
- Greater Manchester is also exploring opportunities for better serving growth locations such as Middleton, Stalybridge and Port Salford by public transport, including reviewing the potential for extensions to the Metrolink network.

Stockport area rail infrastructure improvements

– Stockport is a critically important location for the National Rail network, but suffers from congestion, with operators not able to meet current franchise commitments as a result. When HS2 services arrive in Greater Manchester from 2026, they will initially use the “classic” network to reach Manchester city centre, further exacerbating capacity constraints at Stockport. Greater Manchester wishes to work with the rail industry and Government to urgently address this huge challenge, which could – if not addressed – suppress the recent strong growth in rail

demand on services using the Manchester–Stockport corridor. In the short term – and subject to capital funding – we need to ensure that Greek Street bridge (on the approach to Stockport Station) is reconstructed, and its cutting widened, to enable potential tram-train services on a future Stockport to Airport line to pass through.

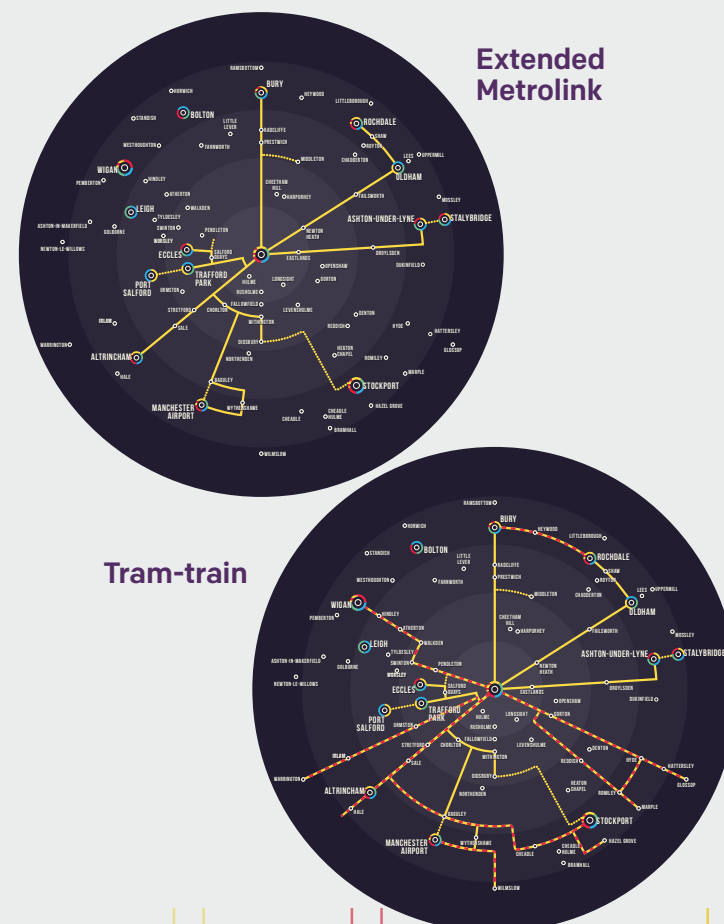
Tram-train – Tram-train technology could enable Metrolink services to use sections of the National Rail network, creating new high-frequency services sharing track with remaining National Rail services. This would support the integration of all rail-based travel and create additional capacity and connectivity. Shorter-distance National Rail services in Greater Manchester compare poorly with Metrolink services on similar corridors. Metrolink gives much higher service-frequencies, better access to Manchester city centre, attracts much higher numbers of trips, and achieves an operating surplus to reinvest in the network. Potential examples include the Manchester – Wigan via Atherton line corridor and making better use of the Stockport – Altrincham railway line to facilitate services to Manchester Airport. In the short to medium term, tram-train pathfinder pilots are proposed between Oldham to Heywood (North), Manchester city centre to Hale (South) and Manchester Airport to Wilmslow (Airport) to test tram-train operation in a meaningful way.

Regional Centre metro tunnel – Increasing Regional Centre metro capacity by tunnelling would enable rail travel in Greater Manchester to continue to grow into the 2030s allowing high-capacity and high-frequency metro services to run to and through the Regional Centre.

Rail freight – Compared with road, rail provides a more environmentally sustainable way of moving freight, especially for longer-distance inter-urban movements. With increasing concern over climate change, a major expansion in rail freight may be needed in the near future. The allocation of limited rail capacity in Greater Manchester between freight and passenger traffic presents many challenges, not least on the Castlefield Corridor, which is used by container-freight trains between ports in south-east England and Trafford Park, from where

the containers are distributed by road throughout the North of England. Routes across the Pennines are another location where passenger and freight trains compete for capacity.

Some lines, for which we have proposals for high-frequency tram-train services, are also used by freight: one example is the Stockport–Altrincham line. There is a need to understand whether both can be accommodated by investing in increased capacity, and what capacity increases would be needed. Greater Manchester is keen to work with the rail industry and Government to explore how these challenges can be overcome: radical solutions may need to be considered, including – for example – the possibility of re-routing cross-Pennine rail freight away from Greater Manchester’s Regional Centre.



High Speed 2 (HS2) and Northern Powerhouse Rail (NPR) –

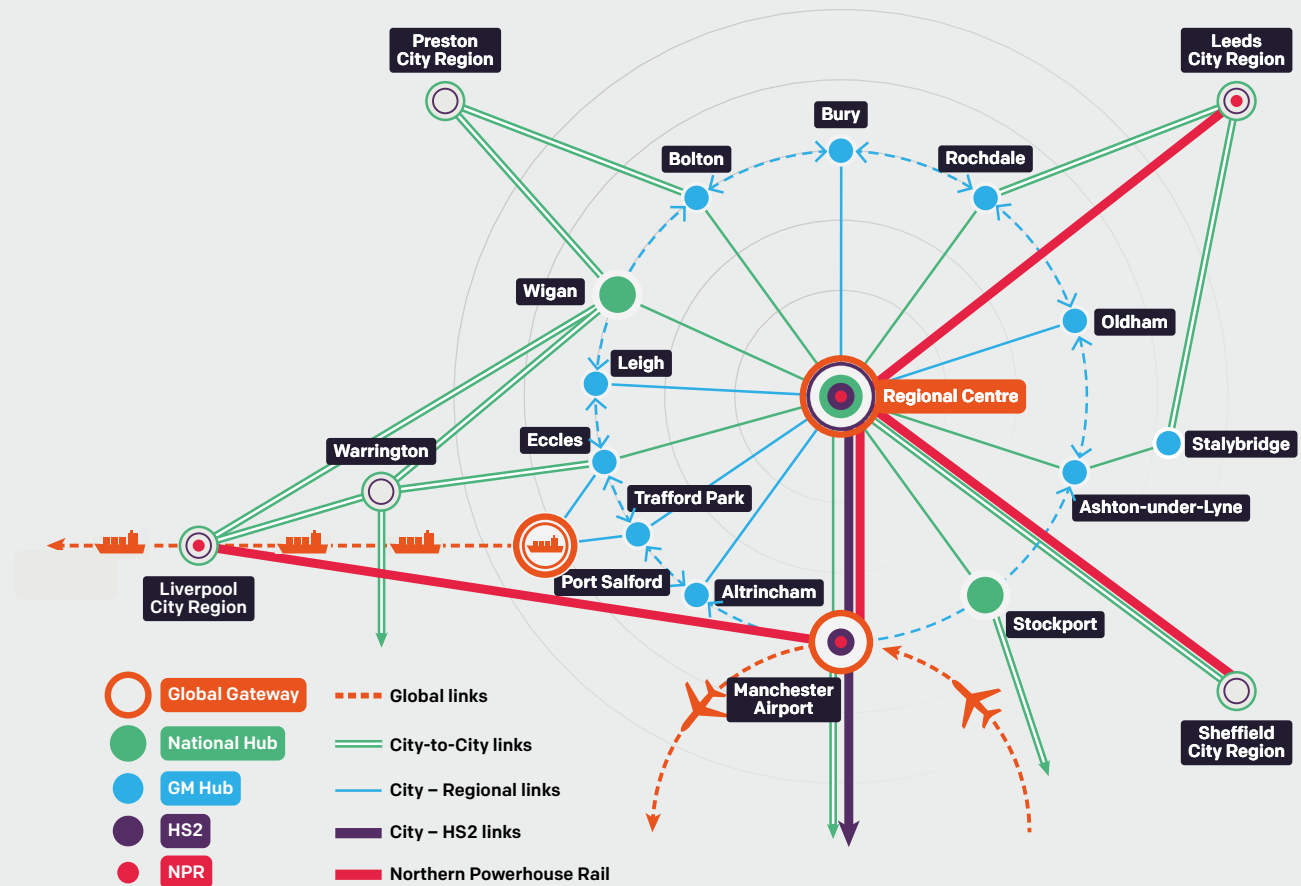
The current Oakervee Review into HS2 is an opportunity to restate the case for this transformational project. Beyond Greater Manchester, HS2 is vital to increasing the capacity and connectivity of Britain's rail network. Northern Powerhouse Rail (NPR), the east-west rail network across the North is also vital to boost our city-region's economy and make Manchester Airport one of the best-connected airports in Europe. NPR will significantly improve capacity, frequency, speed and services between the North's six main cities and Manchester Airport³.

Together, HS2 and NPR are core transformational infrastructure components in the growth strategy for Greater Manchester and the wider agenda for economic rebalancing in the UK. This is not an 'either' or investment decision. HS2 and NPR have shared elements of infrastructure and both schemes are essential to providing the connectivity and freeing up capacity on the existing rail network to support Greater Manchester and the North.

Manchester Piccadilly and Manchester Airport are the optimal locations for new HS2 stations. They will link HS2 and NPR, meaning that Manchester Airport will become a truly integrated transport hub linking international, national, regional and local passengers with fast interconnected public transport networks including trains, trams and buses. Beyond this, there is the opportunity to regenerate the area around Manchester Piccadilly station – creating a new mixed-use neighbourhood which will include new offices, new homes and significant new public spaces – and Manchester Airport, where work is taking place to create a new centre that includes homes, offices and hotels. The delivery of high-speed rail and associated growth strategies at Stockport and Wigan also remain crucial. These transformational schemes need to be delivered in a manner that fully complements the place-making, local employment and sustainable growth objectives of Greater Manchester.

HS2 and NPR represent a once-in-a life-time investment decision – it is therefore essential that these schemes are developed to truly cater for the potential long-term demand and provide the right level of capacity and resilience. All too frequently, we see the impact of infrastructure that is not fit for levels of demand it is trying to accommodate. To truly deliver the long-term future capacity needed, both locally within Greater Manchester and with Greater Manchester at the centre of a network across the North, we now need to look beyond HS2 and NPR.

As growth in demand leads to increasingly full utilisation of the rail-based network, underground infrastructure will be needed across Manchester. This will be essential to deliver the step change in capacity needed to meet the high level of demand across the core of the network and provide the north-south, east-west connectivity that will be essential for economic growth and long-term rebalancing across the UK. The delivery of HS2 and NPR must support this next stage of major infrastructure works.



³ More details about our plans for HS2 and NPR can be found in the "Stops are Just the Start" <https://tfgm.com/press-release/hs2-npr-growth-strategy>

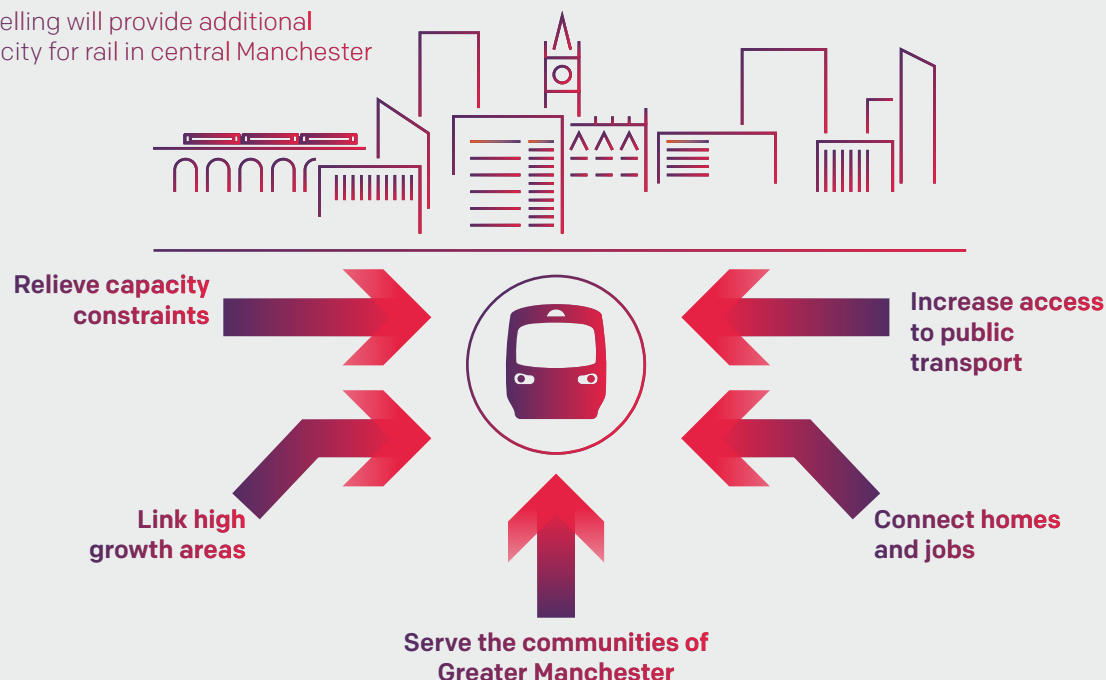
Airport growth

Manchester Airport contributes £5.1bn to the local economy, and £7.1bn nationally. Part of this comes through the 25,000 people currently employed on-site as well as a further 48,000 workers and 300 companies sustained in the wider region, thanks to the airport's operations. In total, Manchester Airport is used by 30 million passengers a year. This could increase, to up to 45 million passengers annually, by 2040 with up to 30,000 more jobs on site at the Airport and the burgeoning economic hub at Airport City. To allow for this significant increase in the number of passengers passing through the airport, there are several interventions planned to improve the various rail links that connect the airport to the city-region, and beyond.

The flagship HS2 project will provide a new interchange and track going into and out of the airport. High speed trains will allow travellers to reach Birmingham in just over 30 minutes, and London in just over an hour, and the new infrastructure will open capacity on existing lines. Northern Powerhouse Rail will, in tandem with HS2, allow for faster and more frequent services in and out of Manchester Airport with goals of 8 minutes to Piccadilly, and 30 minutes to both Liverpool and Sheffield.

Regional Centre metro tunnels

Tunnelling will provide additional capacity for rail in central Manchester



Greater Manchester's journey to a high-capacity metro system

Greater Manchester's ambition to become a global city requires a world-class metro system as in other successful cities. Greater Manchester's future metro system will need to be high-capacity, high quality, fast, frequent, reliable, accessible and fully integrated with other rail-based services and the wider transport network.

Over the longer term, if rail-based modes are to offer more convenient journeys and higher capacity, new approaches are needed to make the best use of the network. Many other cities – including Munich, Stuttgart, Milan, and – closer to home – Liverpool and Newcastle – have linked pre-existing suburban railway lines with new infrastructure to create high-capacity, high frequency metro systems

offering excellent access to and through their city centres. Greater Manchester will need to follow the same path if it is to achieve our 'Right Mix' vision of 50% trips by sustainable modes by 2040.

Longer trains and platforms, simpler service patterns and capacity released by inter-city services transferring to HS2 and NPR will all be necessary, but a Regional Centre metro tunnel (or tunnels) would enable rail-based travel in Greater Manchester to continue to grow into the 2030s and beyond. A tunnel would provide a route to a high-capacity and high-frequency metro service. It would enable the Regional Centre to achieve its growth potential and support a step-change in the use of rail-based travel for cross-city trips linking key centres – both of which are needed to achieve the 'Right Mix' transport vision for 2040.



3. A DEVOLVED AND ACCOUNTABLE RAIL-BASED NETWORK

Making the railway work better and deliver for passengers will be the critical measure of success for the reforms which emerge from the Williams Review. Greater Manchester's view is that devolving decision-making, accountability and funding to us as a city-region will deliver this and so we are pleased that the Government has now set out plans to devolve control of rail stations and services to city-regions. We are committed to working with Government and industry partners to make sure that we really do get the reform passengers and taxpayers deserve.

We propose a programme of work to streamline and align governance procedures across organisations; and agree a communication protocol that provides opportunities for wider participants and stakeholders to contribute and be informed of emerging thinking and decisions without overburdening the management of the industry. A valuable target would be the development of a long-term railway agenda for the city-region from which sensible intermediate steps can be developed and owned jointly by TfGM, TfN, HS2, and DfT.

Local accountability

Devolution of powers to Greater Manchester can bring decision-making closer to the people those decisions affect, resulting in a system that is more accountable and more focused on the needs of passengers and Greater Manchester. There are a number of examples across the North which demonstrate what can be achieved when local rail networks are run by or on behalf of locally elected politicians including Merseyrail, Nexus and Greater Manchester's own Metrolink network. Government has now set out plans for city-regions to take more control over rail services and stations and Greater Manchester looks forward to working with Government and industry partners to grasp this opportunity.

Supporting Greater Manchester's place-based agenda

Future rail strategy needs to be aligned with Greater Manchester's place-based agenda. For National Rail services in Greater Manchester, there is plenty of opportunity to better meet the needs of the people and places it serves as part of an integrated travel offer. We propose the agreement of a joint programme of study and development work relating to the National Rail and Metrolink network as a mechanism to achieve this. This may include the development of tram-train schemes, or light rail conversion schemes, which could provide an early test of how Greater Manchester and the rail industry can work together to deliver key local priorities. Such an approach will require cultural change both in Network Rail and wider Government, as well as train operators, which is also being encouraged as part of the current rail reform agenda.

Devolution of funding

To rebalance the UK economy, the Government must create the environment in which city-regions can genuinely own and deliver their own prosperity. At the moment, almost all funding for the National Rail network is centrally controlled (either directly or indirectly through Network Rail), making it difficult to deliver a coherent and integrated investment and delivery programme for the Greater Manchester area.

Streamlining decision-making

We believe for some types of investment, a continuous programme may be more cost effective. Smaller components of projects could be delivered each year, which can then be exploited as they come live. This would support skills development and retention and provide economies of scale and consistency for the supply chain, without the abortive costs of pausing and re-starting projects. The Castlefield Corridor capacity study would be an excellent place to start.

The development of solutions needs to be quicker and more flexible. There needs to be more recognition of the benefits of building more resilience into design, as well as considering what the long-term future needs may be beyond the immediate funding cycle. Recognising we cannot always build the maximum possible solution, it is important to not 'value engineer' a solution that makes no provision for flexibility in the future. Greater Manchester is now using a process of adaptive planning in developing its 2040 Transport Strategy, seeking interventions that are robust to a range of future scenarios: we look forward to working with the rail industry to apply that approach to the National Rail network in Greater Manchester.

GM RAIL

Rail service provision should evolve to meet the needs of the people and places it serves, as part of a truly integrated travel offer. For the Metrolink system, this already happens to a considerable extent, with most decisions being made locally. This isn't the case for National Rail services, but cultural change as part of the current rail reform agenda, both in Network Rail and the wider rail structure, including train operators, will help to address this. We believe having Greater Manchester fully accountable for our local rail services will allow us to deliver the kind of patronage growth and success we have seen with Metrolink services over the last few years. This is an essential part of the "GM Rail" concept.



GM Rail services, under local control, will ultimately need to meet the demands of today and the growth of tomorrow, while being a brand that Greater Manchester passengers can trust. The vision is to deliver local rail services that operate at a turn-up-and-go frequency of at least four trains an hour on routes that can accommodate eight carriage trains.

We recognise that there will be challenges when it comes to meeting these frequency levels, especially on a railway that is used to transport goods, as well as people. We will need to consider investment in infrastructure (such as passing loops and four-track sections), enhancing signalling (to increase line capacity and improve traffic management) and removing network pinch-points (grade separation of junctions). A high-capacity metro system will play an important role in both achieving the higher service-frequencies on the corridors that it will serve, and releasing capacity at key pinch-points on the network for improved services on lines where metro conversion is not an option. As new infrastructure is built for HS2 and NPR, we will take advantage of opportunities to make better use of existing lines to meet local demand.

It will be supported by a further programme to extend train lengths as much as possible, aiming for – at the very least – a railway capable of accommodating eight carriage trains. This will provide more capacity and allow us to move more people, as well as ensuring Greater Manchester receives the maximum benefits of future network capacity enhancements. Together these enhancements will deliver a step change in the capacity to move people around Greater Manchester and will help rail to take a greater share of the growing travel demand into the Regional Centre.

These changes will take time to implement and, in the meantime, we need to look at the current service provision within Greater Manchester. Simpler service patterns can help reduce conflicting movements and so Greater Manchester would like to see services change so that there is a much clearer offering for the city-region and the surrounding area recognising that very few of the existing service patterns in any of the franchises serving Greater Manchester operate solely – or even mainly – within the Greater Manchester boundary.

To support the transition to a GM Rail service, make the best use of existing rail capacity, and to better reflect the requirements of Greater Manchester, we propose the following short-term actions:

- The first stage will be to examine the viable high-level options available. This will include looking at the operational and practical arrangements to support a GM Rail service such as staffing, rolling stock and depot requirements. Interim arrangements may be needed to support the transition to local control.
- Secondly, we should always be mindful that changes to services can sometimes disadvantage some passengers, so any suggested changes need to assess the impacts on all travellers and ensure that any potential adverse impacts are proportionate and mitigated.
- Finally, proposed changes in service ought to be tested in public so that passengers and their representatives can comment and offer their views on what is proposed.

GM'S RAIL STATIONS

Greater Manchester's previous rail station transfer proposal (the Case for Change) focused on public transport integration, to provide the mobility that modern commuters and businesses expect in a forward-looking city-region. The Government has now announced plans for city regions to take greater control of their rail stations and Greater Manchester's previous exploration of this area means that we are ideally positioned to make use of these new powers as soon as the mechanisms are in place.

If we are to achieve our 'Right Mix' vision, it is vital that demand for public transport grows and that we have the infrastructure to accommodate this growth efficiently. This will require a transformational change in the capacity, quality, ease of use, accessibility and integration of public transport networks. Interchanges, including rail stations, will be increasingly important in extending the practical range of the network and to improve connectivity across a wider labour market. There is a need to ensure that access and interchange facilities are of a consistently high standard and appropriate to the role of each interchange.

Local control will also allow for greater focus on rail stations as part of a community, acting as a community hub, as locations for local health services or amenities or as a site for new housing, retail or employment.

Our vision for Greater Manchester's rail stations is based upon achieving the following five objectives:

Greater Manchester rail station transfer objectives

- **Objective 1:** Improving customer experience;
- **Objective 2:** Improving connectivity, through seamless integration of transport networks, to increase productivity and economic growth;
- **Objective 3:** Increasing efficiency of investment and commercial returns from stations, whilst optimising the efficient management of assets;
- **Objective 4:** Delivering regeneration through unlocking development land and onsite opportunities including for housing; and
- **Objective 5:** Engendering a sense of community ownership of stations, through delivery of changes that increase wider social inclusion and community amenity.



4. INTEGRATED TRAVEL BETWEEN ALL MODES

Greater Manchester needs a fully integrated transport network that allows people to travel seamlessly between modes with simple, affordable ticketing. Rail and Metrolink services need to connect well with each other and with the other modes of transport including bus, while supporting more active travel.

Integrated fares and ticketing

Integrated fares and ticketing across all transport modes is probably the single most important part of Our Network. Delivering this for rail services in Greater Manchester is conceptually very easy, and technically very challenging, but it is an essential step to support seamless journeys. Overall, this will make Greater Manchester feel more joined-up and will make travel easier for everyone.

Fares – Fares in Greater Manchester for multi-modal trips can be more expensive than for single-mode trips. For public transport to provide an attractive alternative to car travel, this needs to change. A zonal fares system for all forms of public transport is needed, eliminating penalties for changing between modes.

New fares and ticketing technology – Improved technology, such as zonal, contactless and mobile ticketing (already available on Metrolink) will help to make purchasing and using tickets easier. Account-based ticketing is a further step towards an integrated, multi-modal ticketing. Rail-based travel also needs to adopt and continually adapt to new technologies: for example, automatic delay repay and notification of when the price of advance purchase tickets will change. People unable to use technology will need to have the same opportunities to travel as everyone else, too: that may in itself require technological innovation.

Integrating with the bus network

Bus Reform offers opportunities for more integration between the bus network and rail-based transport. In a network with more integrated fares, some of the longer-distance bus services that currently run parallel to the rail-based network are likely to re-route to directly serve rail stations or Metrolink stops. Ultimately, Greater Manchester needs a transport network where different modes complement each other rather than competing. Important for this will be integrated passenger information to support people to plan seamless multi-modal journeys.

First and last mile

The “first and last mile” to and from stations and stops is an important element of rail-based travel and can be a critical weakness in the rail service-offer. Future Mobility is likely to change the way users access the network. To that end, mobility hubs will be created, with early proposals at Radcliffe and Whitefield Metrolink stops, together with upgrades of park and ride facilities there. TfGM is preparing plans for a bike hire scheme, with rail stations and Metrolink stops among the potential locations. There is also the need to consider how best to accommodate cyclists on rail services.

The Bee Network

The Bee Network is a vision for a comprehensive walking and cycling network for Greater Manchester. The network builds on the recommendations in the 2017 Made to Move report, which set out a plan to transform walking and cycling in the city-region. The vision is already becoming a reality with 57 schemes endorsed, and £280 million of funding committed. Importantly for rail-based travel, once delivered the network will improve access to stops and stations for cyclists and pedestrians. TfGM’s Streets for All approach will also provide improvements to the walking and cycling environment experienced by rail users accessing the network.

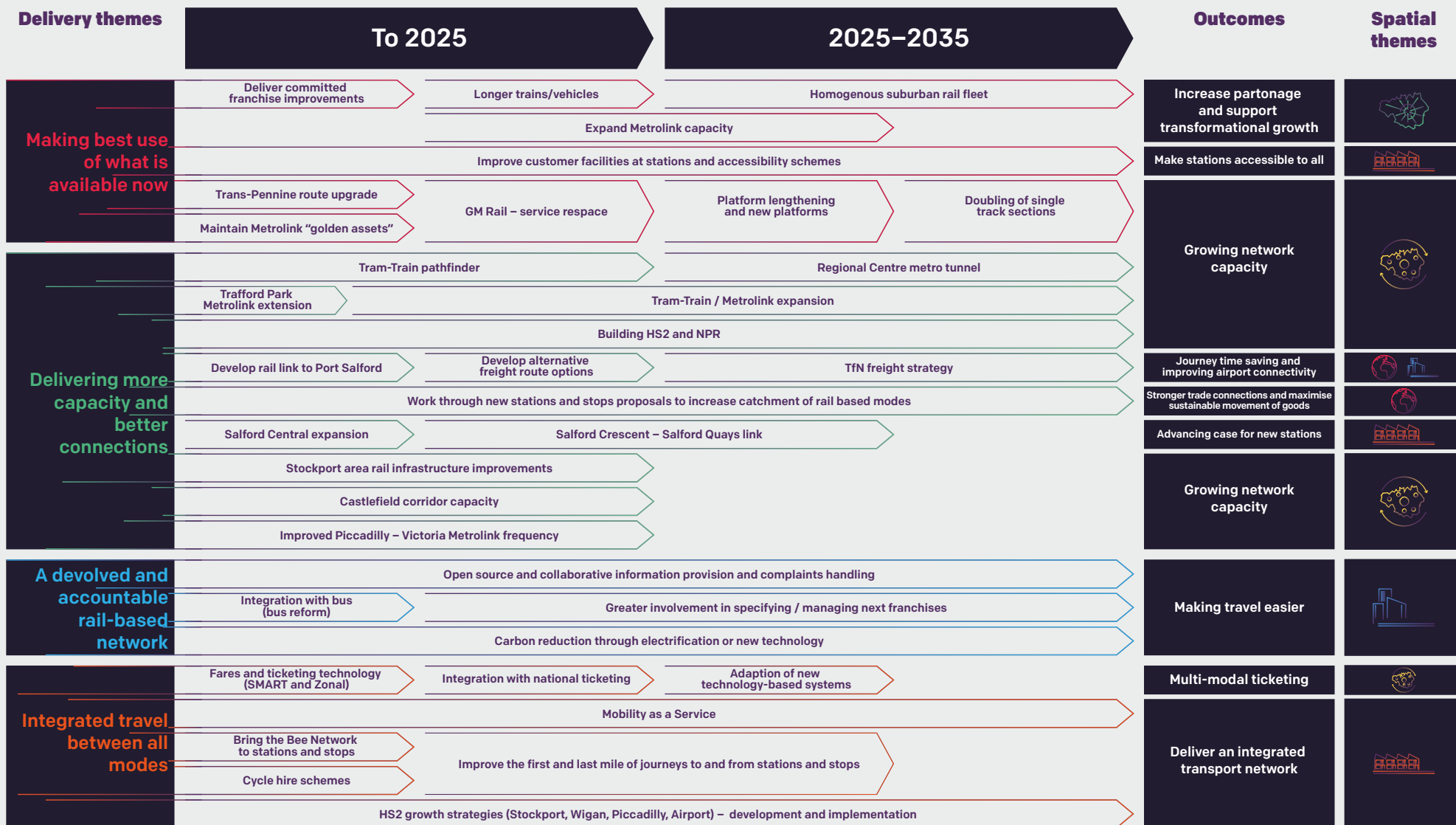
Mobility as a service

Mobility as a Service (MaaS) involves the creation of digital platforms (including mobile phone apps, for example) in which the user can select from a range of travel options to suit their requirements. Options could include rail-based travel, bus, cycle hire, shared taxi, sole-use taxi, and other ride-share and shared-use options. The key customer proposition behind MaaS is to put travellers at the core of transport services, offering them mobility solutions that the individual can shape to meet their specific needs. TfGM is piloting a MaaS solution (called IMOVE) in Greater Manchester.



DELIVERY PLAN

The plan below sets Greater Manchester's proposed interventions to transform rail-based travel in our city-region. Further work is required for some of these interventions to determine whether, and in what form, they should be implemented. Greater Manchester intends to work with the rail industry to inform these decisions.



DELIVERY TIMELINE

This timeline sets out the path Greater Manchester is embarking on to deliver the rail-based network needed to support our ambitious vision for the future. Greater Manchester is looking forward to working with Government and rail industry partners to make this vision a reality.

Integrated fares and ticketing across modes

A zonal fares system for all forms of public transport is needed, eliminating penalties for changing between modes.

Reshaping National Rail franchise service

Services change so that there is a much clearer offering for the Greater Manchester city-region and the surrounding area from which people travel to work.

GM Rail

Local control and accountability for Greater Manchester to be the custodians of travel-to-work area services, working with the wider industry to deliver a step change in the services we provide – a rail network which local people can trust.

Tram-train pathfinder

Testing the operation of tram-train services in Greater Manchester – a necessary staging post to the development of metro services.

Turn-up-and-go frequency

Move towards services operating at a turn-up-and-go frequency of at least four trains an hour on routes that can accommodate eight carriage trains.

2020

Deliver committed infrastructure improvements

The most critical capacity constraint on the national rail network in Greater Manchester is the Castlefield Corridor between Piccadilly and Salford Crescent stations. The rail industry has committed to deliver the capacity improvements in and around Manchester Piccadilly and Oxford Road stations to facilitate a combination of increased train throughput and improved service reliability.

Longer trains

We know that increasing the length of vehicles on the heavy and light rail networks is the most efficient way of increasing capacity with existing rail infrastructure.

Turn-up-and-go tram-train services

Turn-up-and-go services on selected railway lines, where these can be delivered without major investment in new rail capacity in the regional centre.

More frequent trains on key corridors

Conversion of parts of the Greater Manchester suburban network to light rail will release capacity on other key corridors, allowing more frequent services to accommodate demand growth.

Regional Centre metro tunnels

Increasing regional centre metro capacity by tunnelling will enable rail travel in Greater Manchester to continue to grow into the 2030s, allowing high-capacity and high-frequency metro services to run to and through the Regional Centre.

2035

HS2

HS2 is vital in increasing the capacity and connectivity of Britain's rail network and we believe that Manchester Piccadilly and Manchester Airport are optimal locations for new HS2 stations.

NPR

Northern Powerhouse Rail (NPR) needs to deliver significantly improved capacity, frequency, speed and services between the North's six main cities and Manchester Airport. A high-speed east-west rail network across the North, with Greater Manchester at its heart, will boost our city-region's economy and make Manchester Airport one of the best connected airports in Europe.

High-capacity metro system

A high-capacity metro system providing rapid travel to and through the regional centre, connecting Greater Manchester' towns together. A Regional Centre metro tunnel is the key infrastructure requirement.

