Greater Manchester Future Mobility Zone

Final Proposal – September 2019

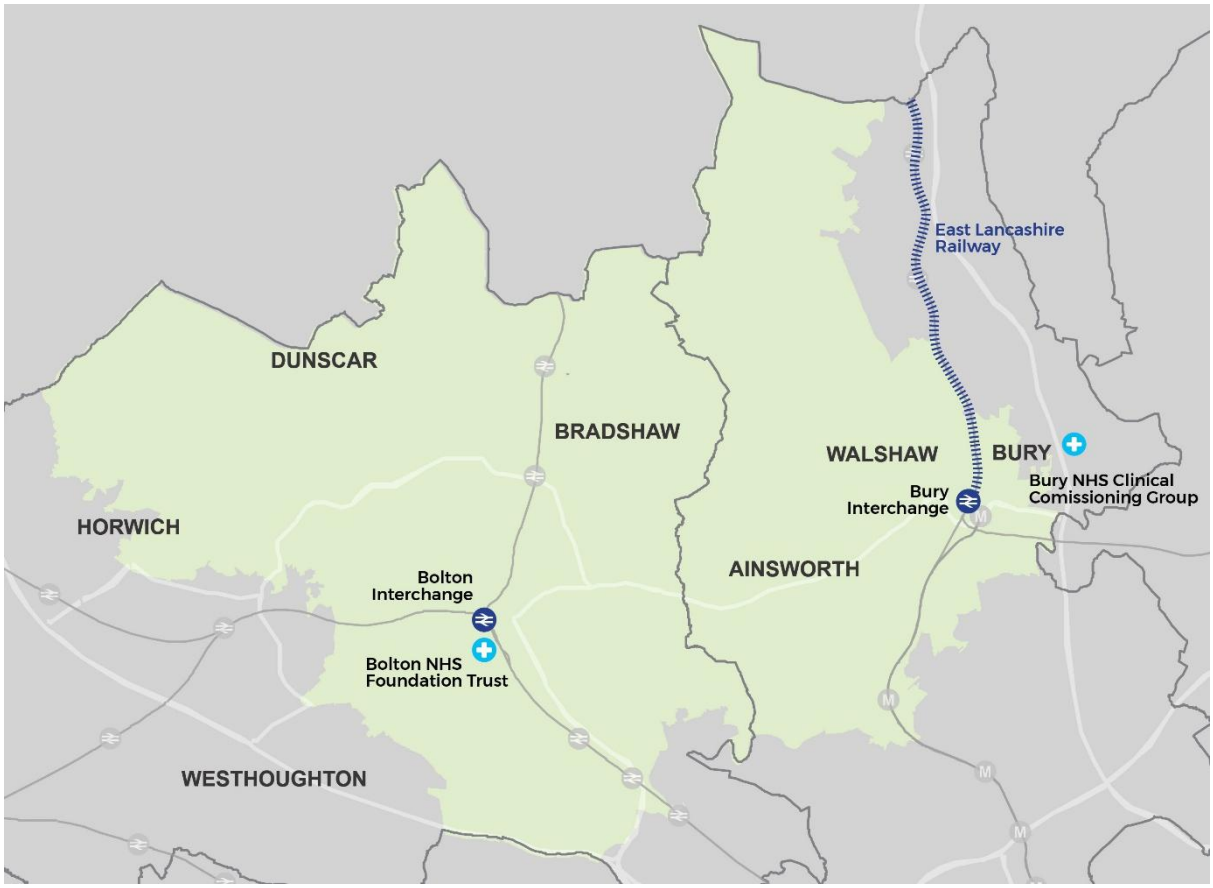
Annex A – Innovation Demonstration Area (IDA) Descriptions

1. Background and Context

As noted in the preceding application, TfGM is eager to demonstrate how innovative solutions can work across a variety of demographics and geographies. These are described in this Annex.

2. Principal Towns IDA (Bolton, Bury and Hinterlands)

Our ambition by 2040 is that our regenerated town centres are easy to get to, particularly by sustainable modes, and are pleasant places to walk around and spend time in. In our local neighbourhoods, walking and cycling will be the natural choice for short journeys for everyone.



The geography

The Principal Towns IDA covers the northern parts of Bolton and Bury (broadly north of the A58 corridor) and have similar characteristics to many of GM's 8 key towns. Bolton and Bury have good rail and Metrolink connections into the regional centre but the rest of the IDA has a less well-developed public transport network, with very high levels of car dependence in many peri-urban and rural communities. Bolton and Bury are linked by the orbital A58 which is a key bus corridor and will also form a key part of the Beelines cycling and walking network. As part of this a "Streets for All" corridor study is currently being undertaken to identify opportunities to improve sustainable and active transport provision through the A58 corridor and to reduce the negative impacts of this road on local communities and centres.

The areas to the north of Bolton and Bury are amongst the 20% most deprived areas in the England, categorised with a variety of urban challenges. The rural hinterland beyond has low housing density, is more affluent, and has commuting patterns drawn towards Bolton, Bury and the regional centre. The urban areas close to both town centres have low levels of car dependency, but areas north into and including the hinterland are highly car dependent. Bolton and Bury town centres have a number of highway links with nitrogen dioxide exceedances and the A666 route south towards Salford and Manchester is expected to be in exceedance in 2021 without any significant intervention.

The IDA also covers parts of the GM's travel to work area over the border into Lancashire as well as areas north of Bury which do not have good public transport links south. The IDA includes 2 hospitals, 1 university campus, 3 rail stations and 2 interchanges.

The Bolton and Bury IDA will enable us to test the potential for future mobility solutions to support our vision for a 20% increase in short neighbourhood trips (<2km) and for two-thirds of those trips to be made by sustainable modes (particularly walking and cycling). Currently 45% of these short trips are made by car, which is a major barrier to achieving our carbon neutrality targets. We also have an ambition to increase the proportion of longer trips in this IDA that are made by public transport and by bike. This is a particularly significant challenge (and opportunity for future mobility solutions), given the limited public transport options and cycle infrastructure in place in the area. Enabling sustainable deliveries will also be important, given the rapid rise in online shopping and the negative impacts of large numbers of delivery vehicles on congestion, pollution and road safety in our local neighbourhoods. The towns themselves have significant regeneration ambitions, and are seeking to attract more residential development into town centres as well as establishing new employment and leisure opportunities for local communities.

In summary the IDA has;

- Urban, peri-urban and rural areas
- Areas of multiple deprivation
- Ageing and diverse population
- Mass transit Metrolink and recently electrified rail links to Regional Centre
- Fragmented local public transport networks
- Less developed energy and digital networks
- Complex peri-urban and rural hinterland need
- Poor air quality in and around the town centres
- Some hard to reach communities particularly in terms of digital literacy.

Mobility Market

The Principal Towns IDA is varied in terms of public transport accessibility, car ownership and local population demographics. The town centres themselves are well served by public transport; the recent development of Bolton Transport Interchange has improved local integration, including the re-opening of a rail platform at Bolton coinciding with wider on-going rail electrification work. Metrolink offers light rail links between Bury and the city-centre, serving the peri-urban communities in-between. Bus routes provide further services from both towns towards central Manchester, as well as serving more local travel requirements.

The Bury Metrolink line offers services every 12 minutes in and out of Manchester City centre. Demand is largely driven by commuting customers, with 35% of all Metrolink trips by GM residents being commuter based. The profile of Metrolink customers skews towards more affluent ACORN Groups, with groups C, E and J ("mature money", "career climber",

and “starting out”) representing 35% of Metrolink customers, compared to just 18% across all modes. However, Metrolink only services Bury Town centre and the immediate peri-urban areas surrounding the line, resulting in poor penetration across the wider IDA. As a result, less than 1% of all trips of residents within the IDA utilise the Metrolink network.

Similarly, the wider lack of accessibility to rail options outside of Bolton results in fewer than 1% of trips residents within the IDA make utilising rail, increasing to over 2% for commuter trips, though remaining below GM average.

This localised accessibility to rail public transport modes has resulted in a reliance upon the local bus network. 8% of all trips made by residents within the IDA take place on the bus network. Unlike rail and Metrolink, the proportion of commuter-based trips drops on the bus network within the IDA to 6%. Bus cordon counts within Bury and Bolton are approximately in line with GM average. Bus users within the IDA are more likely to be travelling to places of education or shopping within the town centres. Similarly, most bus ticket sales within the IDA are concessionary, suggesting local demographics play a part in these local mobility challenges.

Accessibility to public transport options generally decreases rapidly towards the peri-urban surroundings of Bolton and Bury, with poor accessibility from the rural extents of the IDA. The GM Accessibility Levels dataset measures public transport network accessibility. The town centres of Bolton and Bury themselves rank within the top 20% in terms of public transport accessibility within GM. This in stark contrast to the peri-urban region between the two town centres which is within the bottom 30% in terms of accessibility to public transport, and the rural regions to the north of the IDA which consistently ranking within the 10% least accessible locations within GM.

This contrasting nature of public transport provision within the IDA contributes to a high level of personal vehicle use. 62% of GM resident trips originating within the IDA utilise personal car or van vehicles as their main mode, increasing to 70% for commuter trips specifically. Car dependency varies throughout the IDA, typically higher in areas of poor public transport accessibility, however socio-demographic factors result in mixed car ownership rates throughout the IDA.

The IDA’s focus

The IDA will focus on four key use cases to support our vision:

1. To work with key town centre “anchor institutions” which are major generators of travel, including the District Councils and NHS to implement future mobility solutions that dramatically reduce carbon emissions from commuter, business and customer travel.
2. To develop and implement new forms of electrified dynamic demand responsive services to connect outlying communities and those in neighbouring areas with key transport interchanges and local centres.
3. To work with local communities and businesses to identify and deliver new and integrated mobility solutions that reduce the number of short trips less than 5km that are made by car and to reduce long-distance car commuting.
4. To test new dynamic approaches to kerbside and parking management to make best use of limited space for parking, deliveries, servicing, electric vehicle charging and sustainable modes - in support of our carbon reduction objectives.

Summary of Interventions

The IDA will focus on using e-DRT to connect outlying communities to enable access to the interchanges at Bolton and Bury, local hospitals and education centres. It will achieve a step-change in connectivity for those living in deprived communities, those in the urban fringes and the rural communities in the GM travel to work area. The e-DRT will be supported by a range of other new and integrated mobility services and mobility hubs to increase choice, improve interchange and access to local facilities.

Target demographic segments

Within this IDA, the following demographic segments are specifically being targeted for support by the FMZ. The programme of interventions in this IDA will provide them with additional travel options, particularly through the eDRT system but also through new mobility systems, which will support those who currently have to rely on car travel but also those who cannot afford access to a car or are unable to use a car due to health reasons.:

- ***Rural residents, commuters and students (identified market: 55,000)***
  Those for whom existing public transport does not provide them with an adequate service and access to opportunities.

- ***The car dependent (identified market: 61,000)***
  Those for whom there is no cost-effective, alternative choices.

- ***Access to healthcare, particularly by the elderly, infirm and excluded (identified market: 63,000)***
  Those left behind by currently ineffective networks.

- ***Deprived communities (identified market: 119,000)***
  Those for whom the cost of transport is a major concern.

The above segments all typically have problems accessing traditional public transport, either through the lack of services or the cost of travel. Furthermore, using the ACORN suite of demographic data, we have undertaken high level analysis of the propensity of the target demographic segments to interact with future mobility. This analysis has been based on identifying which ACORN demographic categories comprise the above segments, identifying demographic variables which indicate a propensity (or otherwise) to interact with future mobility and calculating an overall index for each demographic category, and then each segment, compared to the national average. Overall, of the segments identified above, the elderly, infirm and excluded segment has the lowest propensity, therefore, the MaaS credits trial in this IDA will focus on supporting that segment.

To describe the potential outcome of the interventions a typical persona has been developed to illustrate the change that the IDA could enable.

Mary, an elderly woman living in rural Summerseat wants to maintain strong social ties to Bury and interests in Manchester

Whilst Mary has driven all her life her car is an increasing financial burden and she is concerned that if she has to give it up she will become disconnected from friends and the activities that she loves to undertake. She currently drives for her weekly shop at the supermarket and when visiting friends or going to the cinema, although she complains about the high cost of parking in the city centre, and is worried that her car may not be compliant with the proposed new Clean Air Zone.

Thanks to the IDA, Mary has sold her car and instead uses accessible, reliable on-demand services that connect her with Bury (for shopping) and to Metrolink for access to the theatre and concerts in the regional centre. Although she still, struggles with apps on her smartphone at times, she doesn't have to worry about finding out and booking complicated travel journeys as she can ask her Alexa voice activated device which sends her a travel itinerary and updates via text.

3. The Regional Centre (Central Manchester & Salford) IDA

Our ambition by 2040 is for fully integrated Regional Centre transport networks that support rapid economic growth, with road traffic levels held at or below 2016 volumes. We want to see much better 24/7 public transport, pedestrian and cycle connections, supporting a more liveable Regional Centre as we seek to deliver 50,000 new dwellings and 110,000 new jobs in the city centre area alone.

The geography

The regional centre IDA broadly comprises Manchester and Salford City centres and the adjacent areas including Media City and Trafford Centre in the west, Strangeways to the north, SportCity, Miles Platting and Clayton in the east and Oxford Road / Manchester Science Park in the south. The Regional Centre is experiencing rapid growth, growth which brings significant transport and environmental challenges and opportunities.

The regional centre is one of the North's key commercial centres (with many of the North's 'top jobs') and a significant retail and leisure attractor with £1.7bn in retail spend per annum being attributable to Manchester City Centre alone. Significant numbers of workers and visitors arrive by car, with those vehicles and the large numbers of HGVs, LGVs and taxis contributing to the air quality exceedances and serious congestion issues. Whilst there are large lows of commuters into the regional core each day (from within the City Region and beyond), over 20% of employees are resident in and around the centres of Manchester, Salford and Media City. The area is extremely mixed in terms of its socio-economic characteristics, including very significant numbers of young professionals as well as a number of areas within and adjacent with high indices of multiple deprivation.

This recognised geographic area includes centres of commerce, innovation, academia & research, healthcare, retail and leisure. The IDA includes 2 economic development areas, Salford Innovation Park and Media City, 4 hospitals, 6 university campuses, numerous rail and Metrolink stations / stops.

GM is planning for a 45% increase in the volume of daily trips (from c.810,000 trips to nearly 1.2m trips) into and out of the regional centre (based on significant projected growth in both jobs and employment over the period to 2040). To accommodate this level of growth without

increasing traffic levels, we will need to achieve a c.70% mode share for sustainable modes, with very significant growth in active travel and rail and Metrolink use in particular. In the core of the regional centre, which is already well served by public transport, the key challenges will be providing sufficient capacity on public transport services, providing better walking and cycling connections to and from our major public transport hubs, and reducing the negative impacts of vehicular traffic within the city centre. In the outer areas of the regional centre (e.g. The Quays and Etihad Campus), public transport, walking and cycling connections are weaker and therefore car use is much more prevalent. Developing more sustainable solutions for freight and deliveries is a challenge across the regional centre.

In summary the IDA has;

- Younger, dynamic, transient populations
- Complex mobility needs (for people and freight)
- Acute air quality and congestion issues
- Highly developed digital and energy networks
- Well-developed rail, Metrolink and bus networks
- Pre-existing foundations of innovation
- High economic and social expectations
- Some peripheral communities missing out on wider prosperity

Mobility Market

The regional centre IDA covers central Manchester and Salford, extending south along the Oxford Road Corridor which is home to Manchester Science Park and the Universities. The Regional Centre acts as an economic hub for the North of England and UK generally, experiencing rapid growth in recent years with an additional 200,000 jobs expected by 2040. Towards the north of the IDA are more residential areas, consistently ranked within the most deprived 20% of areas of England.

The Regional Centre presents contrasting and unique mobility challenges. Commute to work distances within the IDA are significantly below the GM average.

Public transport accessibility (as measured by GMAL) is within the top 10% of GM across the majority of the IDA, owing to the high density of public transport provision within the city centre. There are exceptions to this rule, with deprived highly urbanised residential areas to the North and South of the city centre showing accessibility dropping to within the top 30% only. Similarly, the more industrialised westerly extent surrounding Trafford Park shows poorer accessibility to sustainable transport options, but still ranking within the top 50% of GM.

The Regional Centre IDA is well served by all public transport modes. All Metrolink routes pass through the core of the Regional Centre. Metrolink accounts for 7% of all trips and 9% of commuter trips made by GM residents that originate within the IDA.

Heavy rail transport supply offers connectivity to the wider city region, north west and UK generally. The IDA contains 4 major rail stations, Manchester Piccadilly, Victoria, Oxford Road and Salford Central, serving a combined 45m passengers annually. 5% of trips by GM residents originating within the regional centre IDA utilises the rail network.

However public transport figures for trips made by residents within the IDA do not fully represent the importance of both Metrolink and rail to the Regional Centre IDA. Travel demand on these modes is driven by people travelling into the Regional Centre IDA from further afield, both within GM and externally, acting as key arterial networks connecting the Regional Centre to the surrounding towns and peri-urban residential areas.

The regional centre IDA is increasingly well served by active transport options, with further development of active modes a strategic target for 2040. Currently, 39% of trips by GM residents originating within the IDA are by foot or bicycle. There are however specific locations within the IDA where the agenda to promote active travel is advancing rapidly. Infrastructure improvements are playing a major part. The segregated cycling facilities along the Oxford Road corridor have contributed to an 86% increase in the 12 months following construction. The concentration of facilities / services in this area results in shorter overall travel distances, which combined with demographic factors, such as the concentration of younger student populations, has made this location highly receptive to the promotion of active travel.

Car ownership within the Regional Centre is amongst the lowest within GM at 20%. Despite this, personal vehicles remain an important form of transport within the IDA, accounting for a 26% of all trips made by GM residents that originate within the IDA. Even within this small geography, however, car ownership rates vary considerably, with residents outside of the inner ring road cordon more likely to own and use a personal car or van.

The IDA's focus

The regional centre IDA will focus on four key interventions to contribute to our overall de-carbonisation vision:

1. To utilise digital mobility platforms to enable viable, car-ownership free lifestyles
2. To establish a sustainable commercial model for shared electric automated vehicles to fill the gaps in our current public transport system within the regional centre.
3. To establish and sustainable and fully integrated delivery model for shared micro-mobility within the regional to improve the first/mile last mile trip from major public transport hubs.
4. To test new dynamic approaches to kerbside and parking management to make best use of limited space for parking, deliveries, servicing, electric vehicle charging and sustainable modes - in support of our carbon reduction objectives.

The IDA will operate a fleet of public transport autonomous vehicles linking the Media City UK complex (where BBC, ITV, Salford University and numerous small and large-scale companies are located) with the main Salford University campus and rail stations. The IDA will introduce micro-mobility solutions on various campus environments (including Media City UK, Universities and Hospitals) linking to established mass transit nodes.

It will test kerb-side management techniques to integrate future mobility services within existing networks to assess the implications of integrating parking, delivery and electrified on-demand solutions into a complex and well-established network in a regional centre.

Importantly the IDA will capitalise upon the sector skills at Salford University focused on capacity building in autonomous technology and taking full advantage of the private sector investment in R&D and their desire to demonstrate a commercial and long-term application.

Summary Interventions

The Regional Centre IDA will focus on establishing a sustainable commercial model eCAVs and micro mobility supported by a package of mobility components specifically designed to meet the evolving needs and challenges of one of Europe's most dynamic cities

Target demographic segments

Within this IDA, the following demographic segments are specifically being targeted for support by the FMZ:

- ***Young, dynamic city residents (identified market: 82,000)***
  Those for whom app based services are the norm but are increasingly engaged in the climate change agenda.

- ***Local commuters (identified market 82,000)***
  Those who want to leave the car at home some or all of the time.

- ***Deprived edge of city communities (identified market: 69,000)***
  Those for whom public transport is expensive thus leading to exclusion.

- ***Students and those upskilling (identified market: 65,000)***
  Those for whom public transport is a necessity, but e-mobility would provide sustainable alternatives.

Unlike the Principal Towns IDA, the majority of the Regional Centre target segments have a high propensity to interact with future mobility and this is confirmed by our analysis of the ACORN data. As such these segments provide an initial target market for the MaaS system and its component parts, providing viability for MaaS and enabling harder to reach segments to be focussed on as the FM programme progresses. Of the four segments only the deprived edge of city communities segment has a relatively low propensity to interact with future mobility and therefore they will be the focus of mobility credits within this IDA to encourage the use of the MaaS system.

To describe the potential outcome of the interventions a typical persona has been developed to illustrate the change that the IDA could enable

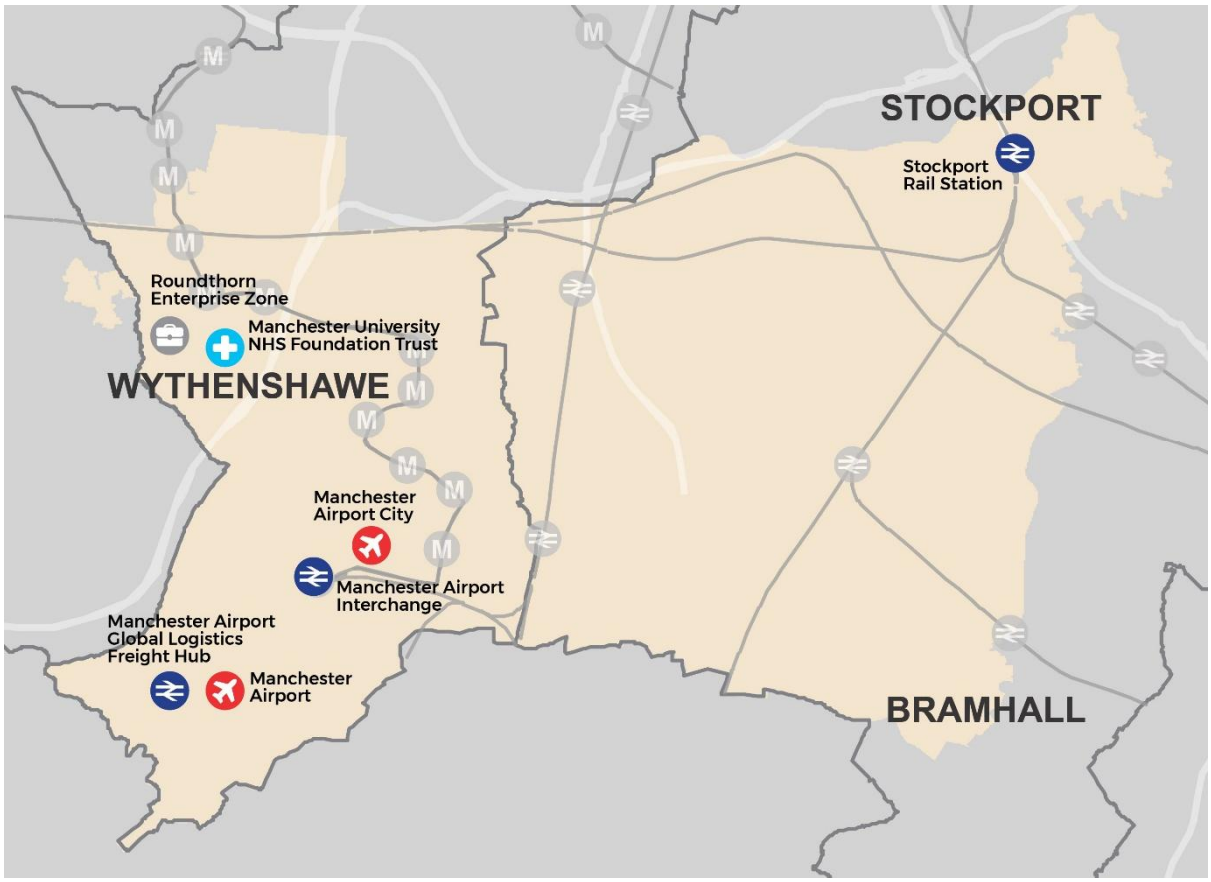
Adam, millennial professional, lives in Exchange Quays, works in Manchester City Centre:

Adam lives in a flat in Salford Quays with his partner neither of whom own a car. Adam currently commutes to work on a busy Metrolink service and is a member of a car club for some non-work journeys. Adam generally negates the need to travel by using online delivery services for groceries and most other retail needs but uses public transport for accessing leisure activities in Manchester.

Through the FMZ programme, a mobility hub at his local Metrolink stop with bike share, e-mobility options and delivery lockers provides Adam with a wider range of choices and reduce unnecessary trips associated with missed home deliveries. Adam now uses a range of mobility solutions to meet his daily needs, combining active, e-mobility and mass transit seamlessly, rather than relying on the Metrolink out of habit.

4. The International Gateway IDA – Manchester Airport and Hinterland

Our 2040 strategy ambition is to support rapid growth at the Airport and adjacent Airport City Enterprise Zone by transforming sustainable transport connectivity from across GM and beyond; enabling more passengers and employees to travel to the Airport by sustainable modes; and improving the reliability of the highway network in the Airport area.



The geography

The International Gateway IDA comprises the wider Manchester Airport estate (Airport Strategic site which includes the airport and freight facilities, ancillary businesses and nearby business parks) Benchill, Gatley, Sharston Industrial Area (an Economic Improvement Area), Northenden, Baguley and Roundthorn Industrial Estate (an Economic Improvement Area), Wythenshawe Hospital and Stockport town centre and railway station. The airport is central to the delivery of a successful Northern Powerhouse economy. Over 300 businesses are based on the airport site, and there are 22,200 direct on-site jobs and a further 45,000 jobs in the wider economy that rely on the airport. The economic value of the airport is estimated to be £950m each year. The IDA area includes 4 economic development areas, 1 major hospital, 10 stand-alone Metrolink stops, 1 rail station, 2 interchanges, 1 international airport and associated freight facilities.

The International Gateway IDA area includes areas with some of the highest level of deprivation in the city region (some being among the 10% most deprived in England). The airport and associated business parks are a major focus for movement in the area and congestion on the SRN and approaches to the airport is a significant issue with obvious local air quality impacts, contributing to predicted exceedances in the area by 2021 without any intervention.

The adjacent Airport City comprises of approximately 5 million sq ft, with a total development value of £1billion. The site encompasses offices, advanced manufacturing and logistics

facilities, along with hotels and retail. Amazon and DHL have both recently opened logistics operations at the site.

In 2018 Manchester Airport handled in excess of 28million people and over 117,000 tonnes of freight via over 201,000 aircraft movements, it now employs over 23,000 people. The Airport has seen significant passenger growth over recent years (and associated growth in employees) and has recently introduced charges for dropping off passengers as part of a way of increasing modal share to public transport (in 2017 15% of passengers arrived by rail, 27% by taxi and 51% by private car). Manchester Airport has ambitious plans to grow passenger numbers to up to 45 million each year. Significant improvements will need to be made to sustainable transport options to ensure that this growth does not lead to significant increases in traffic and congestion. It has set mode share targets of 50% of passengers arriving by public transport and no more than 60% of employees arriving by car.

In summary the IDA has;

- An Enterprise Zone
- 24/7 passenger, worker and freight needs
- Areas of multiple deprivation
- Large areas of social housing
- An Enterprise Zone
- Air quality noise and congestion issues
- Complex mobility movements and use cases
- Modal share challenges / targets
- 'Just in time' access challenges
- Commercial and economic investment focus
- Some peripheral deprived communities

The mobility market

The international gateway IDA is varied in terms of current transport provision, with highly contrasting local demographics. Manchester Airport and the rapidly developing economic hub of Airport City within the east of the IDA are key drivers for both local and strategic cross-country travel. Immediately surrounding the airport are major industrial zones and Economic Improvement Areas, such as the Sharston Industrial Area.

Peri-urban and residential areas within the IDA range from being within the 10% most deprived within England, specifically areas such as Wythenshawe. This gives way to comparatively affluent commuter areas to the West of the airport, largely within the 20% least deprived regions in England.

The SRN, notably the M60 and M56 present a significant local transport network and community severance challenge within this localised geography.

This local complexity presents several challenges to current transport provision. A high number of visiting customers drive demand towards the airport, whilst freight movements are abundant as a result of the economic hub of Airport City and the surrounding industrial areas. More deprived residential often have a reliance on public transport to access opportunities, whilst there is a high level of car reliance in more affluent areas.

Wythenshawe sits on the airport Metrolink line. A total of 10 stops serve people living within the IDA. Despite this, uptake of Metrolink for journeys originating within the IDA is low for both general travel, and commuter travel specifically at 2.5% and 2.8% respectively. Metrolink uptake remains relatively low for all trip purposes originating within the IDA. Generally, Metrolink customers skew towards more affluent demographics, however the

areas served by Metrolink within Wythenshawe are largely within the 10% most deprived areas of England.

Rail accessibility within the IDA is split between large hub type stations at the airport and Stockport, and smaller local stations such as Cheadle Hulme, Heald Green and Bramhall. The airport station offers access for employees, airport customers alongside customers making more strategic cross-country rail trips. Similarly, Stockport acts as a rail hub for services on the West Coast Mainline towards London and Birmingham. Stations such as Cheadle Hulme offer more regional or commuter trips. Despite this comparatively good accessibility, rail uptake for journeys originating within the IDA is limited, with less than 1% of trips made by GM residents originating within the IDA taking place on rail-based modes.

Buses are the dominant public transport provision within the IDA for both general travel demand and commuters (7% and 9% respectively), likely a result of local transport provision and travel patterns, alongside local demographics.

The airport and Wythenshawe area have good accessibility to public transport generally, ranking within the 20% most accessible areas within GM. Stockport town centre to the east of the IDA place ranks within the 10% of most accessible GM locations. Between these areas, accessibility drops considerably. More affluent communities to the south of the IDA consistently rank within the bottom 30% of GM in terms of accessibility to public transport.

As a result, dependence upon personal vehicles within the more affluent towns between the airport area and Stockport town centre is high. 58% of all journeys by GM residents originating within the IDA utilise cars or vans. This increases to 64% for commuter trips, in part influenced by typical commute to work distances within these areas are greater than the GM average.

The IDA's focus

The focus of the International Gateway IDA will be:

1. To work with Manchester Airport Group (MAG) and other major employers at the Airport and Airport City to identify new mobility solutions that reduce the carbon impacts of staff travel to the IDA. This will include supporting through the MaaS platform a transition to e-mobility among commuters; developing new shared demand responsive and micro-mobility solutions (particularly for first mile/last mile trips from mobility hubs; and using mobility credits to incentivise sustainable travel behaviour
2. To expand and develop GM's Airport MaaS pilot to support fully integrated planning and payment solutions that encourage greater uptake of sustainable transport options among passengers and staff

Summary Interventions

The International Gateway IDA will focus on improving low carbon accessibility for the Airport workforce (building upon the success of the Metrolink route to the Airport) to enable access to the Airport, local employment zones including the major hospital at Wythenshawe and Manchester city centre. This will be delivered through a package of mobility components specifically designed to meet the needs of the UK's northern aviation hub and those who live and work in and around it.

Target demographic segments

Within this IDA, the following demographic segments are specifically being targeted for support by the FMZ:

- ***Airport workers (identified market: 16,000)***
  Those who currently drive as there are no viable alternatives.

- ***Those returning to jobs market (identified market: 5,000)***
  Those without access to a car who may be excluded from job opportunities.

- ***Hospital workers and visitors (identified market: 8,000 workers)***
  Those accessing healthcare facilities who are car dependent at present.

- ***Apprentices (identified market: 16,000)***
  Those for whom increased mobility choices could open-up life changing possibilities.

The level of interaction with future mobility will not be uniform between, and in some cases within, each of those demographic segments. Both airport and hospital workers will range significantly across the demographic categories from senior managers to those working on the minimum wage and also from those close to retirement to those just starting their working lives. Indeed, those returning to the jobs market could also varying significantly in terms of demographics. However, this segment, as a distinct group of people are most likely to more consistently have lower propensity to interact with future mobility but also to have lower levels of access to the full range of mobility choices including private cars. It is therefore the segment focussing on those returning to the jobs market that will be targeted by the MaaS credit system within this IDA.

To describe the potential outcome of the interventions a typical persona has been developed to illustrate the change that the IDA could enable

Claire, Airline Dispatcher, lives in Northenden, works in the Airport:

Claire lives with her partner Mike in Northenden. She is a dispatcher for a scheduled leisure flight company at the airport working 30 hours per week on rostered shifts. Claire currently drives to work to take advantage of free parking but with both her and Mike's car needing replacing they are considering their future options. However, whilst the Metrolink service to the Airport covers her shift patterns, the walk to Claire's nearest station is too far and impractical.

E-mobility and shared solutions within the IDA have provided Claire with the reliable public transport services to get to work whilst reducing the financial burden of having two cars in the household. Additionally, mobility credits have provided the incentive to make the change to public, shared and active mobility. Following on from an e-mobility event, Clare trialled using a shared electric bicycle from her local Metrolink stop for the journey home. She has now invested in her own e-bike and is enjoying the new found freedom it provides, whilst she has a car club membership for days when she needs the greater flexibility offered by a car.