WMCA Board

Date	22 March 2019
Report title	Future Mobility Zone Programme
Portfolio Lead	Councillor Roger Lawrence - Transport
Accountable Chief Executive	Laura Shoaf, Managing Director, Transport for West Midlands email: laura.shoaf@tfwm.org.uk tel: (0121) 214 7444
Accountable Employee	Mike Waters, Director of Policy, Strategy & Innovation email: mike.waters@tfwm.org.uk tel: (0121) 214 7150
Report has been considered by	WMCA Programme Board - 8 March 2019 WMCA Senior Leadership Team - 27 February 2019 Senior Transport Officers Group - 25 February 2019 TfWM Leadership Team - 4 February 2019

Recommendation(s) for action or decision:

The WMCA Board is recommended to approve:

(1)   The scope of the proposed Future Mobility Programme as described in Section 7.0 & 8.0, which will be confirmed in the final grant agreement to be entered into with the Department for Transport.

(2)   Approve Delegation of Authority to Officers as set out in Section 9.0 of this report.

The WMCA Board is recommended to note:

(3) The timescales and funding mechanism set-out in Section 5.0 as a ring-fenced Capital and Revenue top-up to the Transforming Cities Fund.

(4) The proposed further bid for additional funding from the remaining national allocation of £70m for Future Mobility Zones, which if successful will build on foundations laid by the first round of funding.

1.0 Purpose

1.1 To outline the purpose and scope of the £20m Department of Transport award to the West Midlands for a Future Mobility Zone; and to seek necessary approvals to commence the programme.

2.0 Background

2.1 Over the last 5 years the West Midlands conurbation has built upon a unique industrial sector strength in automotive R&D to create an incrementally layered programme of real-world transport technology demonstrators and R&D proving environments.

2.2 The West Midlands now has the largest such environment in the UK. A number of additional funded commitments from Government will make this environment globally significant. The programme enables all those industry partners within a broad eco-system (from automotive OEMs, teir1 supply chain and infrastructure technology providers and their supply chain) to collect real-world performance data. This can help them refine products and services. Everything used in the environment is robustly tested in laboratory and controlled off-road environments to ensure public safety before use in the 'real-world' under the close supervision of highly trained engineers.

2.3 Notable examples of recent activity include the UK's first multi-OEM self-driving vehicle test in Coventry city centre in November 2017; a fully self-driving navigation of Coventry's ring-road by Jaguar Land Rover in October 2018; trials of freight vehicles communicating directly with traffic signals in Birmingham to minimise unnecessary emissions through excessive acceleration and braking; and trials of last-mile slow speed passenger pods (various locations). All this activity has been secured in partnership with industry and the local authorities and TfWM activity to support this work has been overwhelmingly 100% grant funded.

2.4 More recent programme additions include the use of transport data to improve operational insight (such as pulling anonymised data from phone Apps and GPS navigation systems) and securing a large scale 5G digital communications technology trial. These all add to the critical mass of West Midlands capabilities. This type of activity is a core enabling theme supported by the West Midlands Industry Strategy, which targets the benefits and economic growth potential of innovation and the automotive sector and future mobility solutions.

3.0 Limitations of the current programme

3.1 Much of the focus to date has been on enabling and building technical capability, which in reality still lags someway behind some of the expectations presented in mainstream media. Despite the clear economic benefits (especially to key West Midlands industry sectors), there remain some significant barriers to adoption at a scale large enough to widely benefit the transport system.

3.2 Some of the barriers are technical, which are being addressed at pace with industry. The emergent 5G communications technologies also offer great potential to accelerate this. Other barriers are user centric and regulatory, such as uncertainties over what types of travellers will be most likely to adopt which type of technology, and how this should be licenced and managed for maximum public benefit.

3.3   It is becoming important, as part of creating a globally competitive offer which can support inward investment, to secure alongside deep technical capability an engaged community of early adopters and end users ready and prepared to benefit from the emergent technology. As well as wider economic benefits this can drive direct benefits for everyday users of the transport system.

4.0   National Future Mobility Programme

4.1   As a consequence of the types of issues outlined above the Government announced in the 2018 Autumn Statement a £90m fund for 'Future Mobility Zones'. The government has directly allocated the first £20m of this to the West Midlands as a recognised centre of excellence in transport innovation. This is intended to help develop the concept of Future Mobility Zones and capitalise on related investments in transport innovation in the region.

4.2   The fund is intended to support the transition of assets from technology R&D environments towards integration within the everyday transport system that people use. There is an emphasis on supporting enhanced transport services such as better travel information during and before journeys; demand responsive services; incentivised travel choices; as well as elements of self-driving vehicle technology. These are intended to be services which everyday travellers can experience and benefit from, and because of this there is a need for regionally driven design and integration.

4.3   The funding is provided without requirements for industry match and is 100% grant funded activity. This reflects the need to undertake a range of enabling activities within the local transport system to support these early forms of new services, which as they become more mainstream would be expected to move towards commercial violability and become self-sustaining.

5.0   West Midlands Future Mobility Funding and Timescales

5.1   The finer details of the funding are still pending confirmation from the Department for Transport (DfT), who have so far confirmed that Transport for West Midlands (via the WMCA) will be allocated £20m of the £90m national programme. This will create a future mobility zone and will be a 'top up' to the Transforming Cities Fund (TCF2), but managed separately with distinct objectives (the detail of which are still to be confirmed at the time of writing).

5.2   The funding will be passed from Treasury (HMT) via DfT in the year 2022-23, but the DfT have confirmed their flexibility to profile the money across the same period of the TCF2 programme, with funding made available for future mobility zone measures from 19/20. The rest of the funding profile will be managed within the TCF2 competitive pot envelope, i.e. up to 2022/23.

5.3   HMT also allocated £2m in revenue development monies as part of the Budget, which is for use in delivering the future mobility zone and will be allocated in 19/20, but can be locally profiled as required. A further £4m revenue monies may also be allocated, with the details pending confirmation during the next comprehensive spending review.

5.4   In summary, this creates the scope for a programme starting as early as April 2019 (subject to confirmation of DfT grant terms and conditions) and running for up to 4 years which is supported by £20m capital monies and up to £6m revenue support.

6.0   Further funding

6.1   At the time of writing details have not been released regarding how the remaining £70m Future Mobility Zone funding will be released. However, it is expected to be competitive with a fund launched before the end of March which will be also be a top-up to the Transforming Cities Fund (TCF). This means that the six Mayoral areas and 12 shortlisted TCF cities will be eligible to bid for funding. It is expected to be available over the same time period as the £20m allocated the West Midlands. Preliminary discussions with DfT have suggested that the West Midlands will be able to apply for some of this fund and during the discussions over the initial funding the case was made by TfWM that this would be necessary in order to release the full potential and ambitions of the DfT's programme and initial investment.

6.2   Once the details and process are released TfWM will work with partners locally and more widely in the UK to form the strongest possible bid and case for further funding. As part of this the West Midlands should reach out to other city and regional areas. This is because many of the benefits of future mobility solutions can only be realised via widely adopted standards which are then integrated locally - as opposed to bottom-up bespoke local technical systems which cannot be re-applied across multiple areas. The West Midlands is in a unique position to work with others to help shape a more national approach which can benefit the UK as a whole.

7.0   Scope of the West Midlands Initial Future Mobility Programme

7.1   The vision behind the Future Mobility Zone is to deploy new mobility services that work seamlessly for travellers, creating a better connected region that enables a positive change in the lives of millions of people.

7.2   The creation of a globally significant new Future Mobility Zone that puts traveller experience first (irrespective of mode) will provide a tangible opportunity for the UK to showcase the best of British innovation and systems engineering. We will pioneer, in a practically scalable way, how this can be done for all urban areas. The principle will be to develop a system which works with an existing commercially operated network and will deliver on-going and financially sustainable better outcomes for all travellers and businesses.

7.3   The initial £20m investment will build the underlying systems capability to provide more effective transport options for people and businesses across the West Midlands. It will allow the whole region to understand how and where new social and commercial mobility service models can be shaped to complement existing public transport. The emphasis will be to stimulate new services which are designed with the needs of all citizens in mind. However, a significant synergy will be enabling businesses and service operators to have access a robust digital information layer which can help secure increased journey predictability and operations planning for existing service operations, not just new services.

7.4	The initial proving zone will build on the innovation asset base already established in a broad corridor across the West Midlands from Wolverhampton, Birmingham, Solihull and Coventry. The corridor contains major employment & housing growth opportunities, HS2, our Connected and Autonomous Vehicle (CAV) testbeds and international connectivity via Birmingham Airport.

7.5	A number of potential key questions about the programme are set out and addressed in Appendix 1.

**8.0	Key deliverables sought through the initial £20m programme**

8.1	A number of deliverables (as set out below) were scoped in discussion with DfT when negotiating the £20m direct grant award. Each of the deliverables and the overall programme will, following CA Board approval and grant transfer, be subject to a detailed design and specification phase prior to progressing.

8.2	The programme is designed to both address the objectives of the DfT funding and to maximise the benefits for key transformation programmes such as the Regional Transport Coordination Centre (by supporting a number of important technical capabilities which do not exist today). An additional design principle is to ensure that successful solutions and measures can be rapidly scaled-up with minimal additional cost to benefit the whole area. Furthermore, several critical underpinning deliverables will provide immediate area wide benefits.

8.3	*A major boost to the Swift ticketing platform:* Benefiting all areas by providing a several new capabilities:- a mechanism for capped public transport fare payments providing best value guarantees; the ability to make payments via Swift beyond just transport (for example for other public services like parking or Local Authority gyms); and a 'white label' electronic version of Swift that any other company can integrate into their service offering or App (providing opportunities to benefit programmes such as Coventry City of Culture and Commonwealth Games).

8.4	*Better customer travel information:* Again benefiting all areas by using existing data and new capabilities generated in the programme to build a universal information portal (an 'API') for travel information covering all modes. Similarly to the Swift tool, this will allow third parties to access the analytics and data tools created in the back-office environments of TfWM and the local authorities in order to provide this directly to their users and customers. The West Midlands is currently one of the only UK authorities providing a comprehensive live version of this for buses and the programme will seek to extend this to other modes and highway data.

8.5	*End user focused research:* Benefiting the whole area. This will ensure that the future mobility technology which is developed and deployed overtime is targeted at people who are willing to use it. The work will address a current research gap in the UK and will be structured in a replicable framework that has wider applications, such as insight into incentives and travel behaviour change programmes which could support network resilience and air quality programmes.

8.6   ***Digitisation of the transport system:*** Working fully in partnership with all Highway Authorities, a number of pilot areas within the zone will have back office and legal records fully digitised with associated mechanisms to maintain the records on an 'as live' basis. This will be done in a way that can be rapidly scaled-up once proven. It will convert the information currently 'locked' in paper based, PDF or proprietary systems that cover highway and legal records into formats which can be easily shared and communicated to transport services and operators. These range from condition data, parking, speed limits, turn bans and temporary works.   Doing this will enabling the services of those organisations dependant on them to be optimised and made more reliable or less vulnerable to disruption. This also has potential to provide direct operational benefits for the local highway authorities and will be co-designed within them to specifically support these highly pressured local teams.

8.7   ***Advanced data analytics and processing:*** This will work in parallel to the routine development of the regional transport model to create a significant operational upgrade which can make use of near to live transport data. This will be a major building block towards a tool which can provide accurate travel guidance and travel time predictions across all modes including public transport. This is distinctly different to the current standard offerings from Google, Waze or others – which do not have access to known planned highway changes and disruptions; are wholly reactive; and are based on historic trend data and observations of what has already happened. These systems also do not offer particularly strong public transport travel support.

8.8   ***A pilot of Mobility Credits:*** A system of electronic voucher credits which would be issued in a controlled trial in Coventry (who have developed a proposal in advance of the Future Mobility Zone award). This would incentivise drivers to give up their private vehicles in exchange for a limited time period of support. This would include using a wrap-around support system of EV car hire, car share, conventional and on-demand public transport, taxi, walking and cycling. This would be supported by a travel App (perhaps similar to the Whim system already operating the West Midlands) to help those partaking make best use of their credits. The aim is to stimulate a long-term sustainable shift in travel behaviour which works better for users and supports the most effective use of the transport system. The trial would be carefully monitored and evaluated with the aim of extending a refined version if successful and subject to further funding business cases.

8.9   ***Taxi-share:*** Working with Wolverhampton to support a trial of taxi sharing in order to improve access to key transport interchanges and destinations which are difficult to access via conventional public transport.

8.10   ***A self-driving vehicle showcase:*** Supporting the implementation of a large-scale Solihull and Coventry based demonstration trial which Solihull MBC is funding the development of with the technical support of TfWM. This will seek to directly address the challenges of enabling major new growth areas (such as UK Central and around Coventry South) which have existing highway constraints and need new solutions which extend beyond conventional public transport solutions. The emphasis will be on last-mile dense development zone solutions and major transport interchange access. The approach will provide a series of progressively more challenging publicly operable self-driving services and will be supported by industry collaborations and a level of match funding.

9.0   Delivery Governance

9.1   In order to manage business effectively and efficiently WMCA is recommended to delegate its powers in respect of this Programme to the Managing Director, TfWM and Director of Policy, Strategy and Innovation, TfWM to:

> 9.1.1   Act on behalf of TfWM as the lead body in delivering the programme in full partnership with the constituent Local Authorities;
>
> 9.1.2   Form a Technical Steering Group reporting to STOG (strategic transport officers working at Director level from constituent and non-constituent Authorities); and
>
> 9.1.3   Operate through TfWM and the WMCA's standard assurance, governance and Member oversight processes to shape and deliver the programme.

9.2   The programme will be delivered alongside existing innovation programmes to maximise project management efficiencies and the use of scare technical skill sets. As part of this the existing structure of Officer based partnership delivery boards for Transport Innovation (covering the Black Country, Birmingham, Solihull and Coventry) will ensure integration with all local programmes and will co-develop any necessary local Cabinet or Cabinet Member approvals which are required to support the implementation of the programme.

10.0   Next Steps

10.1   Subject to WMCA Board approval the following steps will move the programme into a delivery phase:
- Confirmation of final grant conditions and details with DfT;
- Mobilisation of a project team and governance;
- Detailed design and feasibility; and
- Year 1 commissioning of early deliverables such as Swift enhancements, market research and a mobility credits scheme.

10.2   Progress will be reported to the CA Board annually as part of an overall transport programme update.

11.0   Financial Implications

11.1   There are no financial implications arising as a direct result of this report. It is noted in section 4.3 that the Programme is fully funded without a requirement for industry match, with the opportunity for up to £6m revenue support in addition to the £20m DfT Grant. This may offer potential additional cost efficiencies and synergies within existing Programmes across TfWM and Local Authorities, which will be determined further through scope definition. Programme delivery will need to be aligned closely to the funding profile and Grant conditions, which are pending confirmation from the DfT. Given some aspects of the Programme are due to commence in April 2019, a more comprehensive understanding of the funding mechanism and profile is required, which is subject to further discussions with DfT.

12.0   Legal Implications

12.1   There are no direct legal implications arising from this report however appropriate legal and procurement advice and support will be provided once further details of the proposed grant funding are known.

13.0   Equalities Implications

13.1   The fund offers opportunities to improve access through the application of technology to benefit those for whom conventional travel choices can be a barrier. It could potentially help improve the travel experience of those with access needs. An equality impact assessment will need to be carried out at early design stage.

14.0   Inclusive Growth Implications

14.1   The various transport deliverables sets out within this report form an integral part of an efficient and resilient transport system which support inclusive growth objectives by:

- Enabling wider labour markets;
- Providing access to skills, education and training;
- Unlocking high value growth clusters; and
- Supporting regeneration and place making initiatives.

15.0   Geographical Area of Report's Implications

15.1   The initial round of funding is specifically targeted at dense urban areas and is therefore limited to the constituent authority area, but future rounds of funding may be more flexible and are expected to encourage extending this to hinterland areas. This is something which would be of value when considering the wider travel catchment of the urban area, access to strategic Park & Ride locations and, especially in the case of demand responsive transport solutions, rural access.

16.0   Other Implications

16.1   No other implications identified.

17.0   Schedule of Background Papers

17.1   None

APPENDIX 1: Future Mobility Zone Key Questions

1. **Why use this grant money?**
   o We want to transform the transport offer for citizens and enable new markets to grow for businesses using new mobility services, such as demand responsive transport that turns up where you need it and when you need it.
   o We want to support what can become a globally significant demonstrator of this type of future mobility.
2. **When will it happen?**
   o Work has already started in the West Midlands with a pilot Mobility as a Service project already live (Whim) and an existing programme of real-world transport testbeds.
   o Work on this new accelerator project will start immediately and run over 3-4 years with a series of essential new enabling services delivered, such public transport fares being electronically and automatically capped to a maximum daily cost.
3. **Where will it happen?**
   o Some of the systems that will be enabled will provide benefit across the whole of the West Midlands, from the Black Country to Coventry.
   o There will also be number of more targeted pilots of specific technology in key locations along the A45 corridor between Birmingham and Coventry which build upon existing innovation assets.
4. **Who will make it happen?**
   o Transport for West Midlands, will work with Government, the local authorities, bus and rail companies and the wider market place of technology partners to make this a robust reality which is safe and can be relied upon.
5. **What will change for people travelling in the area?**
   o Ultimately they will be able to seamlessly order and pay for all existing and new forms of transport, from public transport, to bike hire, to public car parking or even other public services like public swimming in one simple phone and on-line account. This will also give them accurate information driven by travel data which is not currently available to Google or others about how best to get to where they are going.
   o The system will be combined with a new form of mobility credits, which will provide incentives for cleaner travel choices (like using electric vehicles) and more choices for those who are most in need and for whom the cost of travel is a genuine barrier to work, training and essential services.
6. **Will it be better for businesses?**
   o Yes, as well as being better for those commuting to work, the systems will provide those running complex businesses and logistics operations with far better information about what is happening and what is likely to happen across the transport network, enabling them to plan better rather than simply react to conditions on the network.
7. **What is different about this to what happens in London anyway, or to what Apps like CityMapper do?**
   o The funding aims to create an environment in which it is far easier to deploy new mobility services (new modes such as e-bikes and new offers such as ride sharing) by creating an open marketplace for those services. The need for regulation and licencing freedoms will be explored to ensure that these new modes are operated safely and can integrate with the wider system.

8. **How will other cities and areas benefit?**
   - o A strong programme of collaboration and information sharing will be established to ensure that solutions can be directly replicated and that new transferable operating models support the rapid growth of business models that are proven to work.
9. **Will this cost the public purse more money in the long run?**
   - o No, the aim is to ensure that new financially sustainable business models are created and there is a vibrant competitive market place for new and existing businesses to prosper.
10. **How will we know if it has been a success?**
    - o We will be engaging with travelling members of the public throughout as the services are designed and then experienced. Success will be proven as travellers choose these new ways of making and paying for their travel choices. The recent 40% annual growth in adoption of the West Midlands Swift payment systems, now supporting over 40m trips and over 200,000 regular users is an indicator of the strong potential.