WEST MIDLANDS
COMBINED AUTHORITY

Board Meeting

Date	9 December 2016
Report title	Mobility as a Service Commercial Pilot
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Report to be considered by	West Midlands Combined Authority Board

Recommendation(s) for action or decision:

The Combined Authority Board is recommended to:

1. Agree WMCA support for a “Mobility as a Service” commercial pilot project, to be delivered by the commercial sector.

1.0 Purpose

1.1 To brief WMCA on progress towards establishing a "Mobility as a Service" pilot project in the West Midlands and seek agreement for TfWM to facilitate progressing this pilot to a live commercial service.

2.0 Background

2.1 A report was presented to the then Integrated Transport Authority Connected Communities Group on 10 March 2016 outlining the potential for Mobility as a Service supported by an extensive research exercise undertaken by Atkins. Mobility as a Service at its simplest level is:

> *A personalised mobility service that anticipates and plans for the customer's specific needs, ultimately providing a better service than your own car. This service is provided through a commercial provider using a smartphone app who commercially acquires transport services such as bus travel, car hire etc… and then delivers them to customers as a complete mobility package.*

2.2 The minutes from the ITA meeting resolved:

> *"That the development of a small scale trial pilot project for Mobility as a Service through Innovation and European funding streams in 2016/17"*

2.3 Following on from this resolution TfWM formed a small team to develop Mobility as a Service and establish a pilot. This work has now reached a stage where TfWM are ready to progress to implementation of a live commercially funded pilot. This will be the first live commercially funded Mobility as a Service project in the UK.

2.4 If the pilot is unsuccessful we will come back to the CA Board with a revised proposal.

3.0 Impact on the delivery of the Strategic Transport Plan

3.1 The development of Mobility as a Service, supports the delivery of many of the West Midlands Strategic Transport Plan policies listed in table 1.

Policy 1	Accommodating increased travel demand by existing transport capacity and new sustainable transport capacity.
Policy 2	Using existing transport capacity more effectively to provide greater reliability and average speed for the movement of people and goods.
Policy 3	Maintaining existing transport capacity more effectively to provide greater resilience and greater reliability for the movement of people and goods.
Policy 4	Improving connections to new economic development locations to help them flourish, primarily through sustainable transport connections.
Policy 10	Tackling climate change by ensuring a large decrease in greenhouse gases from the West Midlands Metropolitan Area's transport system.
Policy 14	Increasing the accessibility of shops, services and other desired destinations for socially excluded people.

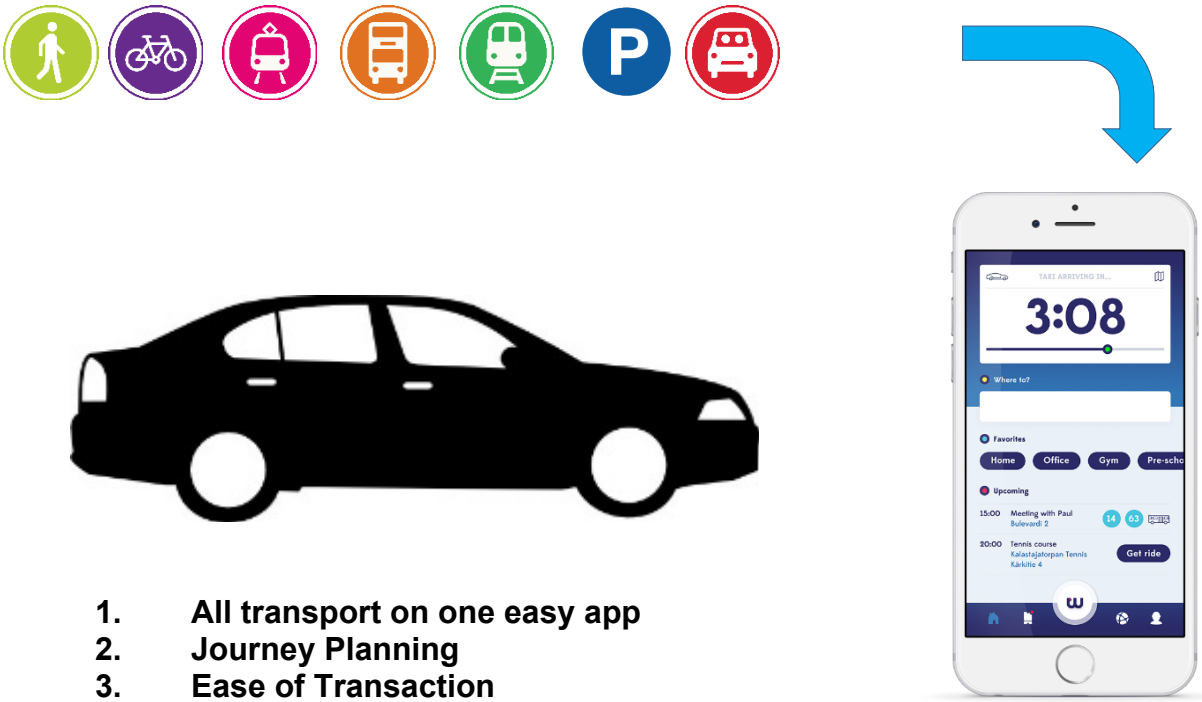
Table 1 – Mobility as a Service links to policy objectives

3.2 This report directly supports the development of Smart Mobility Tier, and as stated in “Movement for Growth”, supports the detailed work being undertaken in the West Midlands to develop intelligent mobility and explore the concept of Mobility as a Service.

4.0 What is Mobility as a Service

4.1 Developments in digital technology and intelligent systems are fundamentally changing mobility business models and consumer behaviour and expectation. The trend towards mobility as an on-demand, versatile, faster and easier service requires a blurring of public and private sector transport distinction and integration of transport modes.

4.2 Mobility as a Service is having all your transport services when and where you need them ultimately being better than owning your own car, figure 1 illustrates.



1. **All transport on one easy app**
2. **Journey Planning**
3. **Ease of Transaction**
4. **Flexible Payment**
5. **Managed User Experience**
6. **Personalised Service**

Figure 1 – Overview of Mobility as a Service

4.3 Mobility as a service allows WMCA to address a number of significant challenges the West Midlands are facing from network resilience with the construction of HS2, to supporting the development of the West Midlands as a centre for connected and autonomous vehicles. Mobility as a Service encourages development of 'beat the system incentives' to improve customer experience and manage the peak loads on the transport network. Appendix 1 outlines these challenges in greater detail.

5.0 Scope and outputs

6.1 Mobility as a Service is provision of transport via a real-time personalised service model that integrates all types of mobility choices and presents them to the customer in a completely integrated manner to get them from A to B as easily as possible. The proposed pilot will be delivered over an 18 month period for to up to 500 customers based in the West Midlands providing them access, through their smartphone, to bus, metro and rail travel, car hire and car journeys. If possible other services, such as cycle hire, will be added as the

pilot progresses. The pilot will be delivered by a commercial provider utilising commercial transport services. Customers will be selected in consultation with the MaaS Service provider and WMCA. More details on the scope of the pilot can be found in Appendix 2.

6.2 WMCA have successfully delivered elements of Mobility as a Service such as smart ticketing and real-time passenger information. However proactively developing Mobility as a Service at scale will lead to improvements in both quality of life and productivity as travel becomes less time-consuming and unpredictable, as well as facilitating access to work, public services and leisure, and at the same time creating new business opportunities and markets for local businesses. If the pilot is successful the commercial provider wishes to continue to grow the service. Mobility as a Service when established is expected to bring the benefits listed in Figure 2.

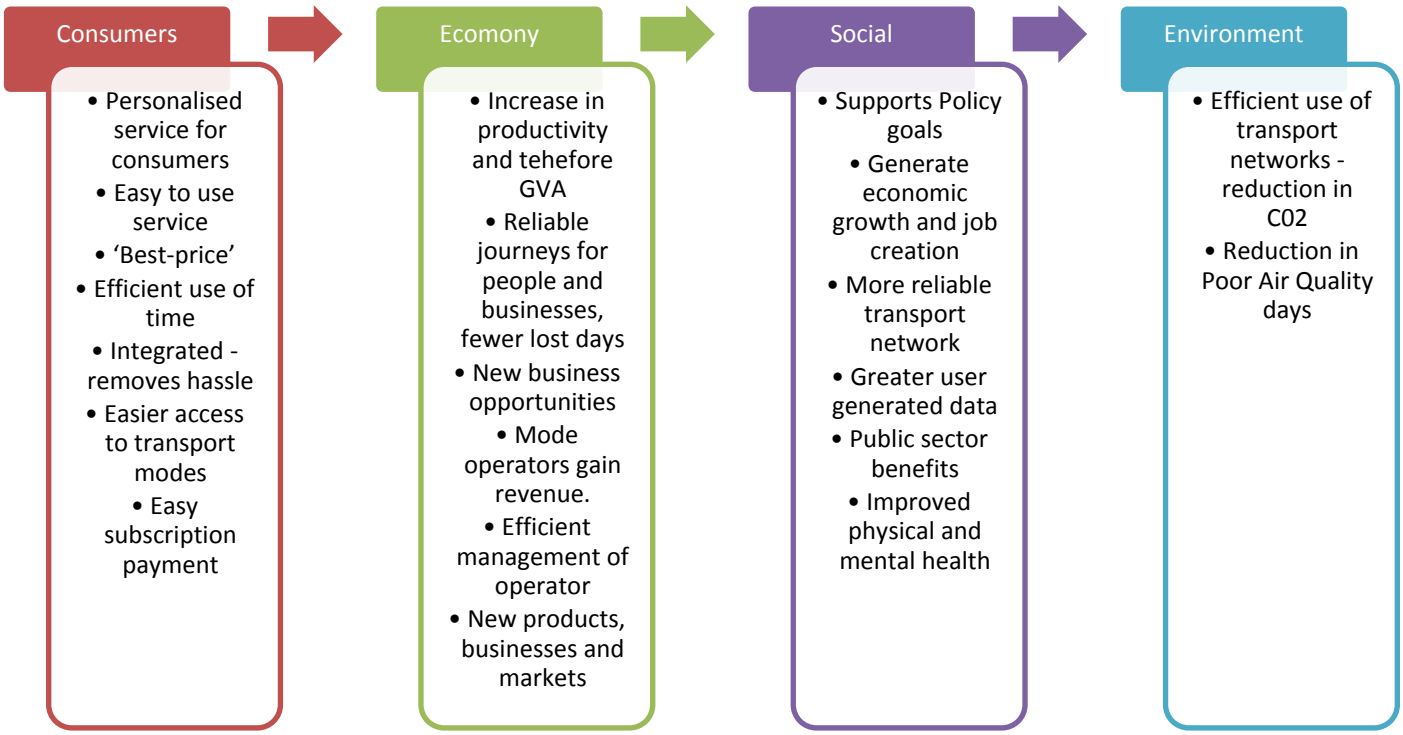


Figure 2 – Expected outputs for Mobility as a Service

6.0 Opportunity

6.1 In the WMCA area, building on a successful Mobility as a Service pilot, there is the potential to create a demonstration environment which will overcome the barriers to mobility. The pilot creates the opportunity for other initiatives that exploit expertise of the region in advanced transport manufacture, combined with digital and creative skills and benefit from the scale and diversity of the region. It would draw in original equipment manufacturers (OEMs) and their small and medium-sized enterprise (SME) supply chains, research centres and universities, transport operators and logistics companies, vehicle manufacturers, transport policy makers and others, to build towards a multi modal, personal travel service that is reactive to both user needs and wider network demand. A demonstration environment of this nature would further build knowledge, economy skills around research, development and testing, creating a global centre for intelligent mobility. A successful MaaS pilot creates the platform to build services for a broad range of services for differing customer and citizen demographics and to support other policy areas.

7.0 Wider WMCA Implications

7.1 Mobility as a Service not only contributes directly to the West Midlands, it is also making a contribution to the wider UK economy. Mobility as a Service makes the West Midlands attractive for both education, businesses and visitors, Appendix 2 provides greater detail. Table 2 lists the geographic scope of each mode within the pilot.

Mode	Reach
Bus	WMCA area
Metro	WMCA area
Rail	National
Car hire	National
Car trips	National

Table 2 – Modal scope of Mobility as a Service pilot

8.0 Progress

8.1 The project has reached the point where commitment to participate has been confirmed verbally by all parties and the commercial provider are taking this proposal back to their financial backers to confirm the West Midlands as the next location for a live service. Competition from other cities to establish this type of service is strong and political support will help secure the service provider for WMCA. Appendix 3 provides more detail on progress to date.

9.0 Financial implications

9.1 All costs to WMCA are contained within existing budgets. TfWM is acting as a facilitator for this pilot and will predominantly be establishing and policing the mobility market place; the commercial arrangements are between the service provider and the service operators. A successful pilot will potentially act as a catalyst for further funding bids and the results should inform a number of related and wide-ranging initiatives, which are illustrated in Appendix 4.

9.2 These initiatives require separate funding and will need to go through the appropriate channels for approval, whether that be through direct government grants, partnership arrangements or through the internal funding arrangements of WMCA. Until the results of the pilot are known, it is not possible to establish any future funding requirements. However, if successful, the pilot should help to direct resources effectively providing a greater understanding of the market and how mobility can be enhanced.

10.0 Legal implications

10.1 The commercial relationships are between the Mobility as a Service provider and the transport operators. To ensure a fair and open environment TfWM will create an open market place for any provider and any transport operator to participate in such a service.

11.0 Equalities implications

11.1 A full Equality Impact Analysis is not required for the Mobility as a Service commercial pilot project and no adverse impact is envisaged for any of the protected characteristics. Should

the pilot be successful, consideration should be given to the potential expansion of the services on offer to include social necessary transport services such as Ring and Ride. The app on offer should also meet key mobile app/web accessibility standards to make sure it is easily accessible to a wider range of users, including people with disabilities.

12.0 Schedule of background papers

- Movement for Growth, the West Midlands Strategic Transport Plan
- Report to Integrated Transport Authority Connected Communities Group on 10 March 2016

Appendix 1

1.0 Addressing challenges

1.1 HS2 provides a great opportunity, but it needs to flow into an effective local transport system to bring the full benefit of connecting citizens to the rest of the UK and beyond, Mobility as a Service will provide convenient links into HS2.

1.2 Whilst we develop transport infrastructure for the future (e.g. HS2), we need to minimise disruption and delays, for example using intelligent connectivity and data to inform the public about planned and unplanned impacts and working with the freight industry to manage movement of goods, including construction materials. Mobility as a Service provides a tool to assist our resilience management.

1.3 Better sharing and use of data in making intelligent connections across road, rail, metro and bus services come through a Mobility as a Service solution that works with a customer from door to door and organises transport not for the masses but for the individual improving the efficiency of the network.

1.4 Mobility as a Service supports the introduction and acceptance of autonomous vehicles as part of integrated transport solutions, overcoming technical and human factors, learning from demonstrators elsewhere.

1.5 Mobility as a Service encourages development of 'beat the system incentives' to improve customer experience and manage the peak loads on the transport network, for example cost saving by sharing assets e.g. the use of minibuses across organisations; payment of travel expenses for walking/ cycling; supporting alternatives to travelling at all – e.g. improved broadband and incentivising work places to support home working; and promoting/supporting local food/energy/transport through the last mile challenge.

1.6 A commercial Mobility as a Service implementation provides a platform for systematic evaluation of pilots and allow learning from elsewhere to encourage informed and innovative local policy.

Appendix 2 – Scope

1.0 Scope

1.1 Mobility as a Service is provision of transport via a real-time personalised service model that integrates all types of mobility choices and presents them to the customer in a completely integrated manner to get them from A to B as easily as possible. At the heart of Mobility as a Service is the enabling of every user to have a better journey experience than they currently experience. This is achieved by offering users the ability to buy a service from a Mobility as a Service provider that 'looks after them' at all stages of their journey. This is a key shift from the block provision of transport, to a much more flexible and customer-centred means of providing mobility in a managed way.

1.2 The pilot will be delivered over an 18 month period for to up to 500 customers based in the West Midlands providing them access, through their smartphone, to bus, metro and rail travel, car hire and car journeys. If possible other services, such as cycle hire, will be added as the pilot progresses. The pilot will be delivered by a commercial provider utilising commercial transport services.

1.3 The pilot will begin to quantify and understand potential benefits and acceptance of Mobility as a Service, in particular:

- Is Mobility as a Service a viable commercial proposition?
- Can Mobility as a Service assist in supporting network resilience by making available mobility packages that change behaviour rather than have to invest in physical measures?
- Will Mobility as a Service achieve a modal shift to more sustainable modes of travel?
- Will customers be prepared to give up their car or not buy one in the first place?
- Can health benefits can be achieved through more walking and cycling. The Mobility as a Service provider has an incentive to encourage this behaviour as much as possible because it is the cheaper mode of travel?
- Is there potential for specialist mobility packages to meet the needs of workless, troubled families, learners that a public body could provide from the commercial Mobility as a Service provider?
- Will the west Midlands require additional powers to make this type of market operate as required?
- Will Mobility as a Service act as a catalyst to other connected project which improve mobility for everyone and attract funding to support them.

1.4 Figure 3 shows that Mobility as a Service not only contributes directly to the West Midlands it is also making a contribution to the wider UK economy. Mobility as a Service makes the West Midlands attractive for both education, businesses and visitors.

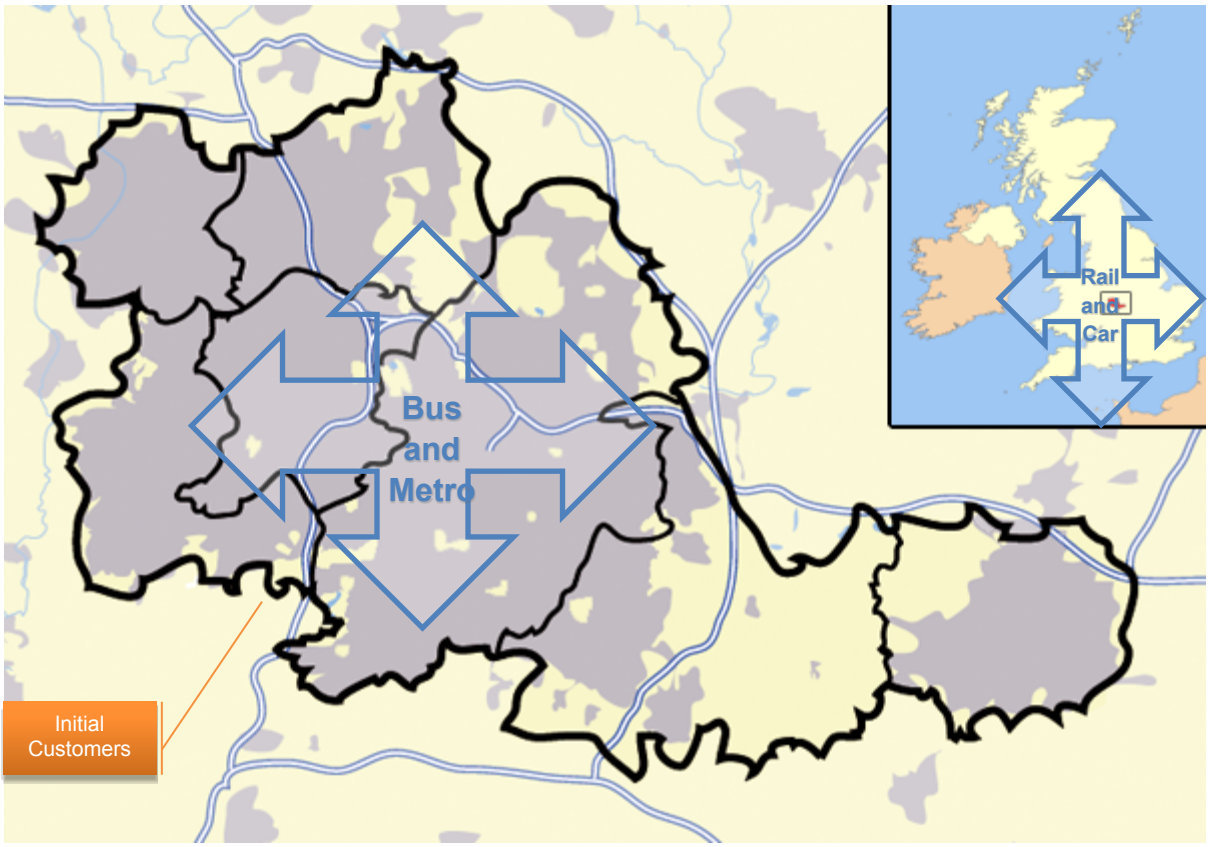


Figure 3 – Geographical impact of Mobility as a Service

Appendix 3 – Progress

1.0 Progress

1.1 TfWM have facilitated a number of workshops and discussion to establish a core group of participants for the pilot. These include:

- a bus operator;
- a metro operator;
- a car hire and car share company;
- a ride / taxi service and
- a commercial mobility as a service provider.

1.2 Figure 4 illustrates the services provided through the Mobility as a Service pilot.

1.3 The commercial provider identified will operate the service which means there will not be a requirement for public sector funding except in facilitating the right relationships and providing TfWM services such as real-time passenger information and a market place to host access to the services. Service providers identified have not named here for commercial reasons. The intention is to provide the following services through the Mobility as a Service pilot:

1.4

Figure 4 – Mobility as a Service – service offer

1.5 The project has now reached the point where commitment to participate has been confirmed by all parties and the commercial provider are taking the proposal back to their financial backers to confirm the West Midlands as the next location for them to implement their solution. Competition from other cities to establish this type of service is strong and political support will help secure a service provider for the West Midlands.

Appendix 4 – Related initiatives and potential funding sources

1.0 Related projects

1.1 There are a number of related initiatives that Mobility as a Service directly supports and these would require separate funding. Figure 5 below illustrates these and suggests potential funding sources to support this activity of work.

1.2 The funding opportunities include:

- devolution process under deal 2;
- Midlands Connect Work Package 6;
- direct bids to WMCA;
- the Consortium for the Demonstration of Intelligent Systems (CDIS);
- Core Cities and National Bids;
- through the commercial sector and industry; and
- through the HS2 digital agenda.

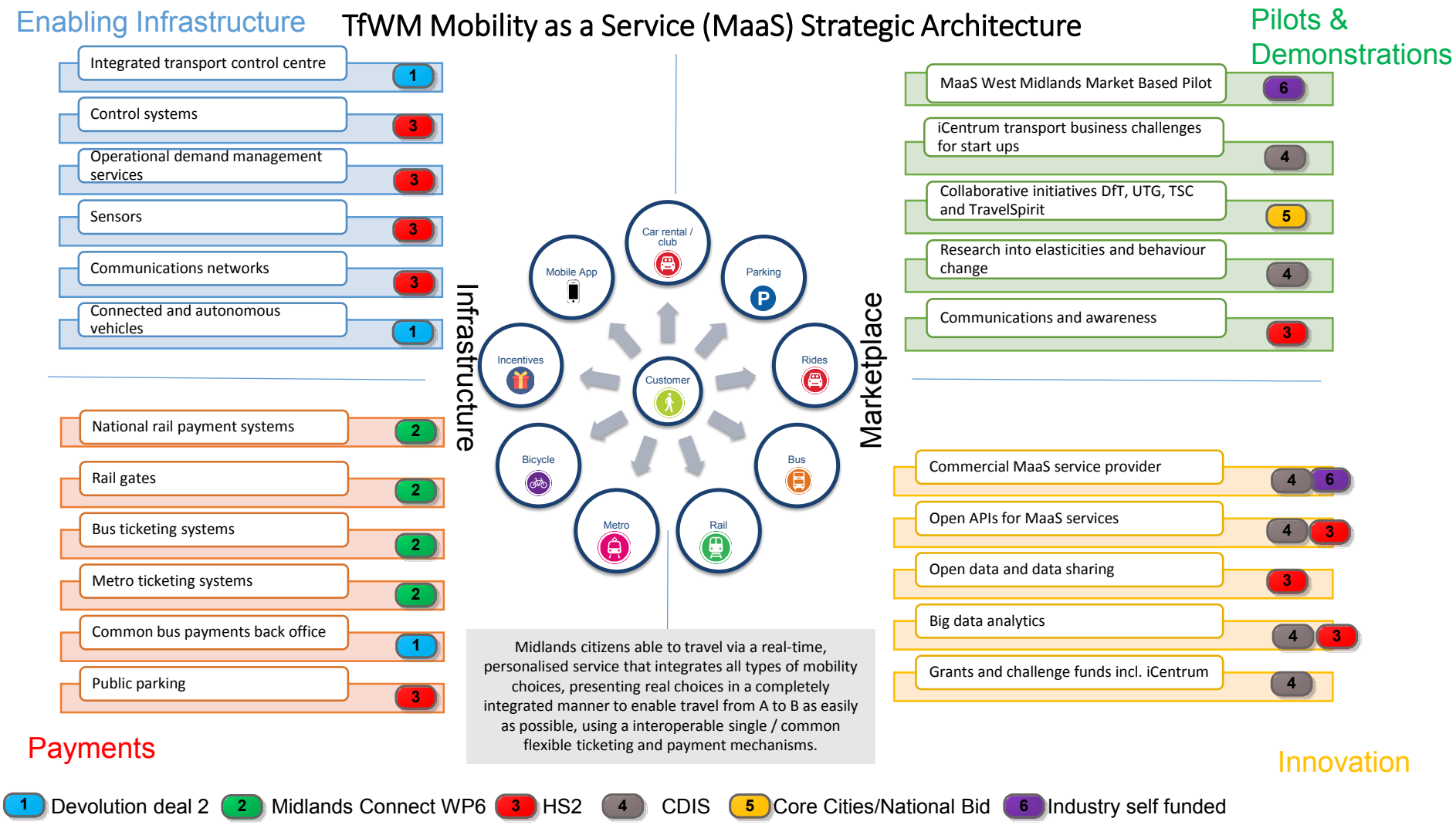


Figure 5 – Mobility as a Services related projects and funding opportunities