Department for Transport

Future Mobility Zones Fund
Application Form – Outline Proposal

This application is for the creation of a single Future Mobility Zone (FMZ). **One application form must be completed for the proposed zone, regardless of how many individual schemes it contains**. Please include all relevant information within your completed application form.

Applicant Information

City region name: Derby & Nottingham

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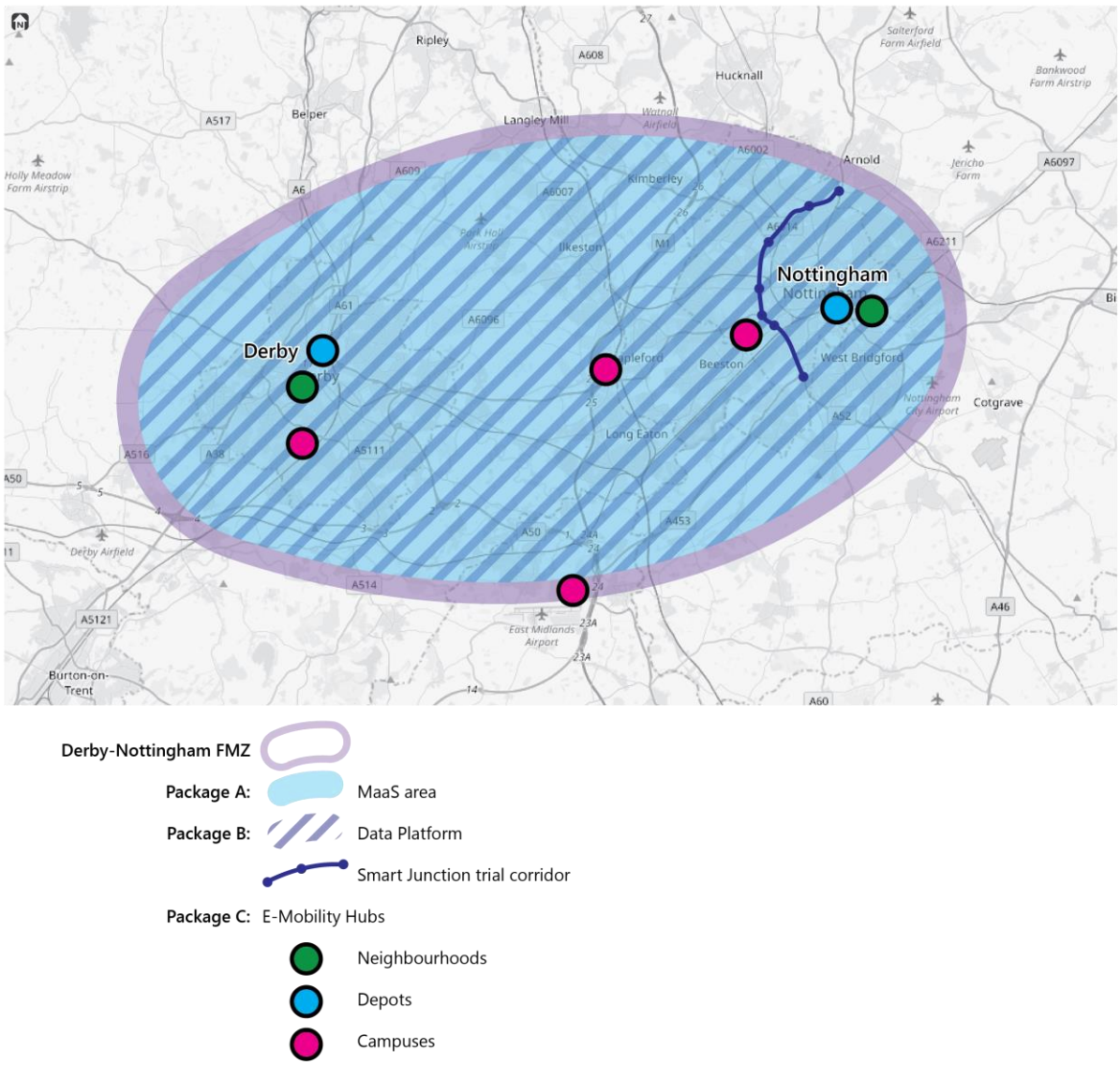
SECTION A – Name, location and description of the FMZ

A1. FMZ name and location (please provide a map of the area in an annex):

Future Mobility City (Derby-Nottingham)

The map of the area and the location of the interventions is set out below:



A2. FMZ description

Please provide a short description of the proposed FMZ (max 300 words).

Our Future Mobility City programme builds on our Transforming Cities Fund schemes, knitting them together to pilot the delivery of innovative approaches to enhancing mobility. This builds on our strong reputation as a national leader for integrated transport planning and delivery, and our position at the forefront of electric mobility. The FMZ covers the Derby and Nottingham conurbations and growth areas including the proposed HS2 East Midlands Hub Station, and East Midlands Airport and East Midlands Gateway employment zones.

Two FMZ packages (A: Open access MaaS platform and B: Data sharing platform) stand to benefit the whole 1,600 km_2 area. They will augment and enhance existing mobilty services that cover Amber Valley, Ashfield, Broxtowe, Derby, Erewash, Gedling, Nottingham, Rushcliffe, and South Derbyshire local authority areas. These interventions seek to integrate information and payment options to support uptake of new and existing mobility services. Uniquely, Derby and Nottingham City Council's will act as coordinators, building atop existing multi-operator fare products and fulfilling a trusted data owner role. The MaaS platform's phased implementation will enable people to learn more about current mobility

habits and spending, thus increasing awareness and knowledge of MaaS benefits, whilst enabling a growing partnership of mobilty service providers to develop tailored account-based payment and subscription offers that meet individuals' needs. The aim is to encourage more widespread uptake of public transport, bike hire, car club, electric vehicle (EV) charging, and other services.

Package C will develop and pilot dedicated e-mobility hubs that exploit the area's rapid roll-out of EV charging and Ultra Low Emission Vehicle (ULEV) support services – building on the Go Ultra Low City investments that come to fruition in spring 2020. Physical hubs will be trialled across local Enterprise Zones and employment growth sites, university campuses, in residential communities, and at council vehicle depots supported by the learning from the LSTF and Access Fund programmes on successful behaviour change. As with Packages A and B, the aim will be to develop a set of blueprints from which the successful elements can be replicated elsewhere and act as exportable demonstrators.

SECTION B – The Strategic Case

B1. Background - What are the zone's objectives

Please provide a description of which issues are to be addressed by the zone - congestion, access to employment sites etc. (max 300 words).

The Future Mobility City primary objectives are:

1. Supporting growth and productivity through innovation
The Midlands Engine identifies Derby-Nottingham as a priority area with potential to drive forward the Midlands' economy. It attracts global businesses, with significant out-of-town employment growth hubs emerging between the cities, driving plans to build ~50,000 new homes. Despite this, existing mobility services focus primarily on the principal cities of Derby and Nottingham. Better integration across the wider travel to work areas, and of its transport services, will make it easier for people to be mobile, participate in society and access employment and services.

2. Improving air quality and congestion
The workday population is 1.4 million, the fifth largest outside London. The conurbation's 425,000 daily commutes are forecast to increase by 11% to 2033, with 55% of trips being into/out of Derby and Nottingham generating significant congestion. This is estimated to cost the East Midlands £825 million p.a., with over half falling to business. Both cities have areas exceeding European air quality limits for Nitrogen Dioxide (NO_x), which e-mobility hubs and increased use of active and low emission transport use will tackle.

3. Promoting social inclusion
The overall unemployment rate is 2.1% but ranges from 5.7% to 0.2%. Whilst access to public transport is generally good, some areas have fragmented ticketing and payment systems. Many Nottingham residents do not own or have access to a car (0.76 cars per person), and although Derby has higher ownership (1.06 cars per person) there is lower public transport use. The population demographics are also varied with a significant young student population contrasted with an aging population prompting the need for a MaaS platform that is inclusive, affordable and trusted. Open Access MaaS, smarter journey information and e-mobility hubs will target those on lower incomes, whose mobility and access to opportunities is otherwise limited.

Our bid also addresses the following secondary objectives:

4. **Testing new emerging technologies** and mobility innovations to assess how they can be planned for and delivered to complement existing local transport options.
5. **Supporting local industry** and forging new business opportunites alongside skills and capacity building in this emerging sector.

B2. Strategic Case - What does the FMZ contribute to the programme objectives?

Please provide brief details of each of the schemes to be included in the FMZ alongside an explanation of how the FMZ will fit with the aims of the Future Mobility Zones, including:

trialling new mobility services, modes and models to create a functioning marketplace for mobility that combines new and traditional modes;
improving the integration of services;
increasing the availability of real-time data;
providing access to digital planning and payment options;
exploring options for providing mobility credits, or other low-cost options for low income household; and
exploring options for delivering efficiencies through shared (dynamic) demand responsive transport.

Please provide information to show how the zone will help to meet strategic transport objectives in the area.

Outline which user segments are most expected to benefit from the FMZ (e.g. existing commuters, prospective workers with new access to work).

Key beneficiaries / user segments targeted by the FMZ
A shared industrial history, transport investment and close proximity means Derby and Nottingham have developed economies worth over £30bn pa, that are complementary rather than operating in competition. They have distinct high value sectors; Derby is a UK centre of excellence for transport equipment manufacturing accounting for 30% of its GVA, and Nottingham increasingly grows jobs in niche sectors such as life sciences, digital and FinTech. There are a range of business and professional services, with many in both cities. Lower productivity sectors (e.g. retail, health and care, visitor) provide significant local employment, and jobs growth is forecast over the next decade.

To achieve effective mobility it is important to develop transport infrastructure and systems that build on high quality public transport services; capitalising on planned investments and exploiting new technology, modes of transport and creating new business models.

With increased growth comes the need for more journeys, and more intensive use of the Derby and Nottingham area's transport networks. Our Future Mobility City package aims to support the delivery of the growth outlined above, and boost productivity, by facilitating the use of new modes of transport and mobility services. Mobility initiatives must join up economic and housing development to improve the existing conditions and unlock transformational growth and productivity, including access to learning and health provision. A large percentage of residents work, and employees live, in the area. This has created a significant opportunity, and competitive advantage, for influencing the ways people travel and access mobility services.

Pockets of Derby and Nottingham have above average levels of unemployment. With larger numbers of work opportunities arising through Enterprise Zones and business parks, it is crucial we provide the means for these people to access employment. Many people do not

have access to a car so facilitating their access to, and willingness to use, alternative modes of travel is essential.

Health and life expectancy in the area is below average, with both cities having significantly lower than England averages across all four life expectancy indicators. The 'window of need' gap between life and healthy life expectancy is marked; in Nottingham, males spend an average of 27% and females 30% of their lives in poor health.

For each preventable cause, Derby and Nottingham consistently have the highest preventable mortality rates in the East Midlands. These are areas associated with the highest levels of deprivation in the region and people living here are more likely to suffer ill health and die prematurely. Health and life expectancy is increased through physical activity which is synonymous with traveling by public transport, cycling and walking. Improved public transport links and a wider active travel network will enable people to incorporate exercise into their daily lives resulting in increased public transport use and more active travel which, combined with reduced carbon emissions through fewer vehicle trips and the increased use of cleaner technologies, will provide both personal health benefits and wider benefits through the improvements to air quality.

Our Future Mobility City programme will therefore target benefits at the following groups:

- **Existing commuters**: The workday population is 1.4 million (fifth largest urban area outside London and in European top 50). Existing commuters within the region will benefit by providing an alternative to the car and shorter journey times through improved network efficiency.
- **Prospective workers** in the region, by providing mobility credits, allowing better access to work opportunities.
- **Young people**, the region has a high proportion of young people largely due to three highly rated universities (76,000 students), who will benefit through measures targeted at campuses and in neighbourhood locations.
- **Those living in lower income households**, improving access to emerging opportunities for communities by making new travel options available and more affordable though targeted mobility credit packages and experiences.
- **Owners of electric vehicles**, by offering charging facilities to support their use and integrating their use into the wider transport network;
- **People in poor health** or at risk of poor health, by increasing opportunities for active travel and improving access to work, education, shopping and for leisure opportunities, whilst reducing nitrogen dioxide through reduced carbon emissions;
- **Businesses** – by facilitating new opportunities and public/private collaboration, new manufacturing potential and skills opportunities through training, apprenticeships etc as well as improved productivity by reducing car-borne trips and therefore congestion for freight transport, and better recruitment potential by increasing workforce access to jobs;
- **Operators**, by reducing the need for additional peak vehicle requirement (PVR) and increasing revenue through additional patronage.

<u>Introducing the Future Mobility City</u>

The area has a longstanding reputation for integrated transport delivery ranging from the implementation of trams, electric buses, integrated ticketing, car clubs, comprehensive business support programmes alongside the promotion of walking and cycling linked to our travel behaviour change measures. More recently, the area has turned its attention to ULEVs to improve air quality.

Since 2016, the area has been designated one of the Office for Low Emission Vehicles Go Ultra Low Cities with a £6.1m investment in a range of innovative measures to encourage

the take up of ULEVs to improve local air quality. Part of the role of our Go Ultra Low City status has been to be an exemplar in ULEV technology innovation and delivery. This resulted in our projects consistently featuring in national strategies, plans and referenced as examples of best practice. This cuminated in the Go Ultra Low Programme Manager being invited to attend a BEIS Select Committee on the experiences of EV charging infrastructure deployment in 2018. The area has hosted numerous events and conferences attracting hundreds of national and international delegates whilst supporting our local business community to make the switch to ULEV technologies. Through community engagement, a local EV Drivers Club has been created by (100 and growing) willing volunteers to support the programme objectives and further the cause. The momentum is building.

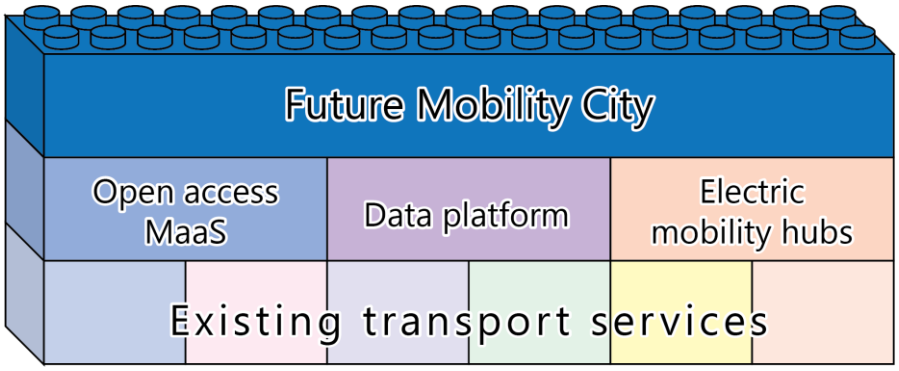
Given our leading position in this space and the government's Road to Zero ambitions, we have focussed our Future Mobility City programme heavily on facilitating the use of ULEVs and associated electric technologies and innovations as a key 'version' of future mobility.

Our core concept incorporates three packages, which work together as building blocks that will deepen the extent of integration across the area's existing transport offer. In summary, these packages comprise:

A: Open Access MaaS – breaking down the barriers to entry and ensuring an integrated network that provides mobility for everyone.

B: Future Mobility Data Platform – pooling, standardising, and sharing transport data to benefit the councils, operators, businesses and public.

C: E-Mobility Hubs – enabling users to have access to a combination of transport services; helping interlink sustainable transport provision, and encourage the uptake of alternative travel methods with an emphasis on e-mobility and innovation.



With all the systems in place, we anticipate the area will be better placed to determine the extent to which innovative and emerging mobility technologies that are sustainable in nature, and support the existing low-emission mobility options available across the local area, can accelerate our delivery of the objectives set out in B1.

Package A: Open access MaaS

The Mobility as a service (MaaS) concept has been discussed and debated in the transport sector for a number of years, with the largest steps towards an effective offer coming from the private sector, such as MaaS Global's *Whim* concept (currently being trialled in the West Midlands). However, MaaS is yet to make the revolutionary impact that has been predicted by some commentators. The open access MaaS offering we are proposing in Package A seeks to break down some of the barriers to entry that existing schemes have

suffered from, namely the cost barrier of subscriptions and a lack of awareness and understanding of the concept by the general public (which has resulted in low take-up).

MaaS systems led by the private sector create a potential inherent risk to the mobility of the general population. By its nature, the private sector will be looking to provide mobility while also making a profit, which will lead to only popular movements or choices being catered for. This exists in the current public transport market (with the public sector assisting through subsidies to provide mobility on less profitable routes), however the impact can be greater when we consider MaaS, as it is not only part of a network, but potentially the full mobility network of a city/region. In this context, we believe there is a risk that totally private sector-led MaaS offerings may fuel the creation of 'new mobility monopolies' that result in sub-optimal long-term sustainability outcomes (e.g. in respect of transport emissions, impacts on air quality and localised traffic congestion) which could outweigh the value of gains that can potentially be achieved through the aggregation of trips across multiple users.

Our vision is for the Derby-Nottingham area to establish a new business model of MaaS by putting the public sector authorities in a leading role to provide integrated information and payment services. This will ensure the overall inclusivity, interoperability, openness, affordability and sustainability of the MaaS platform – thereby maximising the potential benefits of MaaS for the people who live and work in the area.

To date, some of the most successful mass market mobility innovations around smart fares and payment (integrating journeys) has been driven forward by the public sector. For example, over 17 million Oyster Cards are used to travel in London in an average week (daily breakdown of Oyster Card usage data, 2018). Notwithstanding the franchised regulatory environment, this has served to put Transport for London and the Greater London Authority in control of a share of fare revenues (and profits), thereby allowing for higher levels of investment in London's public transport networks and a greater degree of responsiveness to shifting travel trends (e.g. delivery of cycle superhighways in response to higher levels of cycling and road safety impacts).

Our MaaS trial will seek to demonstrate how an open access version could work in a de-regulated public transport system (common to many core cities in England). It will do so in an environment where there is already effective partnership working among local public transport operators, with scope to integrate additional services (car club, public bike hire, EV charging) into a mobility mix that can be paid for through an account. As such it will build on a stable platform of existing services and user based accounts, and is complemented by work done to date by the local authorities on contactless public transport payments. Consequently, we believe that Nottingham and Derby have all the right ingredients to deliver an effective trial of the latest MaaS and data sharing innovations.

The MaaS service will be based around a web and mobile phone application (app) that is delivered in three stages:

Stage 1: Trip data linking and recording

Once developed, the free app would be made available with the main purpose of recording and linking a user's spend on transport, breaking this down by mode and potentially other metrics such as trip purpose, giving the user a single place where they could track and understand the costs of travel. This is similar to the model being used by the rapidly growing Monzo bank account, which groups together spending on the account making budgeting easier. The MaaS app would be automatically linked to other transport based accounts, such as the Robin Hood Card scheme, reading in the relevant data rather than the user being required to enter it (using an API to pull in the data from all relevant sources). The app would also benefit from being linked into a user's bank account, allowing it to recognise

spending on things such as petrol stations, to help complete the picture on travel based spend. This technology is used by companies such as Quidco, which allows you to link your cashback account to your credit or debit card so they can recognise and track when one of the purchases you make relates to any deals they offer, then automatically applying them.

This data, once anonymised, would also be available for the councils to use in order to better understand how the transport networks are being used to complement each other, understand gaps where modes are not being linked, and create detailed trip user profiles to start forming offers, travel bundles and incentives that can be made in Stage 2 of the development. By including services that sit on the edge of the traditional bus, rail and light rail offer in Derby and Nottingham (e.g. car club usage, EV charging, public bike hire) the councils and partner operators will be able to identify the nature of linked trips and those using emerging forms of mobility. Derby and Nottingham already have a network of existing partners and providers, such as Enterprise and BP Chargemaster, which will make the process of securing the data links, which are essential to the public offering at this stage, a streamlined process (see E1 for further details of partners already committed at this stage). One of the options available for app development from an existing partner would be to build on Enterprise's Mobilleo platform, an existing white label tool, which would allow the product to reach the market as soon as possible and reduce the delivery risks.

Stage 2: Payment, incentives and mobility credits
The second stage of development will introduce in-app payment, allowing fares to be paid for specific trips, providing pre-journey cost estimates, and offering contactless payment when starting a trip. This builds on existing work Nottingham City Council is undertaking (part-funded through previous National Productivity Investment Fund and Transforming Cities Fund investments), which plans to install contactless payment into all bus and tram vehicles by March 2020.

The ability to pay through the app, will also introduce the capability to offer users discounts on trips. These will need to be discussed with operators in further detail, but can be used to drive up patronage on targeted modes or journeys, and establish scope to offer rewards for using connecting modes – such as bus and bike share – in place of private car trips. Since this will be in the control of the local councils, we can work with mobility service operators to target specific objectives; such as encouraging people who live/work in areas with poor air quality to reduce their car use in favour of low-emission alternatives.

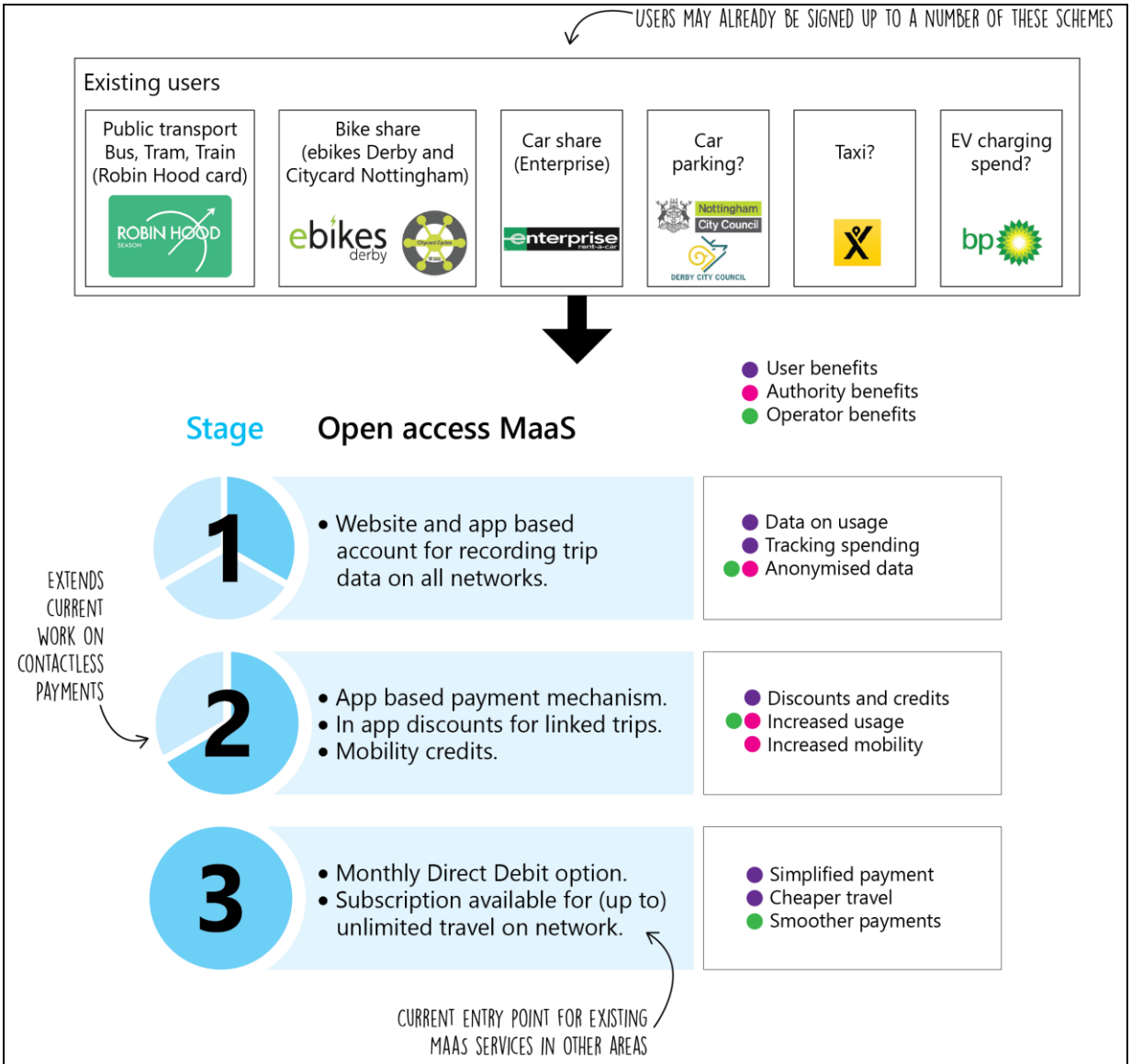
Discounts could also be made available to people to increase their personal mobility by providing credits to those on low incomes to enable access to basic services (or access to key-worker employment) that they cannot afford. These targeted mobility credits will be aimed at low income groups with 'low travel horizons,' offering credits to both the existing and new forms of transport which will be offered through MaaS in order to link people to new employment opportunities. Mobility credit support packages will be provided as part of a structured Personalised Travel Planning offer to low income families and jobseekers, building on the expertise developed through the Access Fund 'NottinghamGets2Work' and Sustrans' 'Access' projects. Mobility credits offered through the MaaS platform offer potential to support local businesses to encourage their staff to try, and adopt, journey options they have not previously considered. Alongside the MaaS platform and mobility credits, we anticipate offering a series of Mobility Experiences across the full sprectrum of services. This will involve a mix of personalised trials and try-out sessions to debunk myths, remove barriers to take up, and create confidence and trust in the modes of transport, building on our learning from the Go Ultra Low funded ULEV Experiences offered to businesses and the public.

Stage 3: Subscriptions and Direct Debit

The final stage of development would establish scope for more refined payment options. These could include tailored pre-paid packages of mobility aimed at people's typical monthly work/leisure trips (e.g. XX days of commute, and XX days of leisure trips to specific/open destinations) or a PAYG option offering the ability to pay for all your month's transport spending in one go (e.g. by Direct Debit at the end of the week/month). The pre-paid mobility options could allow people who are unbanked to pre-pay for their regular journeys by loading-up their account on a micro-payment basis and/or taking advantage of mobility credits issued by the councils, rather than rely on having cash on a given day. This approach could further accelerate the transition towards a cashless on-board public transport system in Derby and Nottingham.

This type of subscription-based offer is where most existing MaaS offerings have sought to enter the market, offering a few options on what level of subscription the user may want to choose from, then giving up to unlimited travel on the network based on the subscription level chosen. This has been one of the barriers to entry for the public, as although they may end up with a saving on their monthly travel spend, this is not clear, and people who typically pay for their journeys in cash, on a daily or weekly basis, are not used to seeing such a large amount (hundreds of pounds per month) compared to their cost of a single return bus journey, for example. By building up the user through the previous stages of the app, this barrier can be broken down – through the greater insight the individual has into their mobility spending. The subscription packages offered can also be highly tailored to the user, as they will already have a trip profile which has been recorded by the app.

The other option would be to use a monthly Direct Debit payment, but based on a PAYG model, where each trip is at the standard rate, but only paid for as a single payment at the end of the month. This option will be beneficial to operators as well as users, as the payments they receive will be fewer large payments, rather than a greater amount of smaller ones, meaning less admin and fewer charges on them. Tailored discounts could be offered to people who PAYG and spend over a defined threshold to incentivise their continued use of low-emission mobility services, and include offers to incentivise other complementary travel options such as free cycle repairs or discounts for cycle commuter insurance. These might be coupled with personalised messages (such as those sent to users of smart domestic heating thermostats) that highlight the potential for alternative mobility packages to save them money.



Overall, this provision of MaaS is adapting to the needs of the individual by providing different payment methods and targeted discounts on specific journeys, rather than jumping to the final stage and limiting the offering to a function that is not flexible for users' needs.

This is a new and unique approach to MaaS, which addresses many of the overarching FMZ objectives including to trial new mobility services and models, improve the integration of services, provide access to digital planning and payment options, and explore options for providing mobility credits. This MaaS model would also align with the FMZ objectives set out by both councils, to promote social inclusion via innovative mobility solutions.

Furthermore, the scheme would be consistent with objectives and outcomes for integrated transport and to make transport more accessible through electronic information, which is set out in the Derby and Nottingham Local Transport Plans.

Package B: Future Mobility Data Platform
The second package of measures looks to develop a data platform for pooling and standardising transport data owned by the councils, and collected via the MaaS platform, and making them available to Open Source platforms (e.g. journey planning tools), through an API.

The data platform will be fed by data from existing projects (Let's Keep Nottingham Moving and Derby Connected) as well as building on an existing Nottingham City Council Open Data project which is being undertaken in partnership with the University of Nottingham, the Smart Nottingham Real Time Data Trial (SNRTTD). This project will collect real time traffic count and journey time data in the west of Nottingham using cameras (provided by Vivacity Labs Ltd) and will also utilise floating journey time data from the Google Maps platform. This will be combined with existing real time data sources for public transport journeys and departure times to provide a complete travel picture across a network centred on the university's main campus. This data will then be supplied to students and staff at the university via screens located on site, a website and an app. The impact of this on travel behaviour will then be thoroughly evaluated with objectives of influencing mode shift away from commuting by car and optimising the operating efficiency of the transport network through an improved customer experience by provision of better, more accessible, travel information.

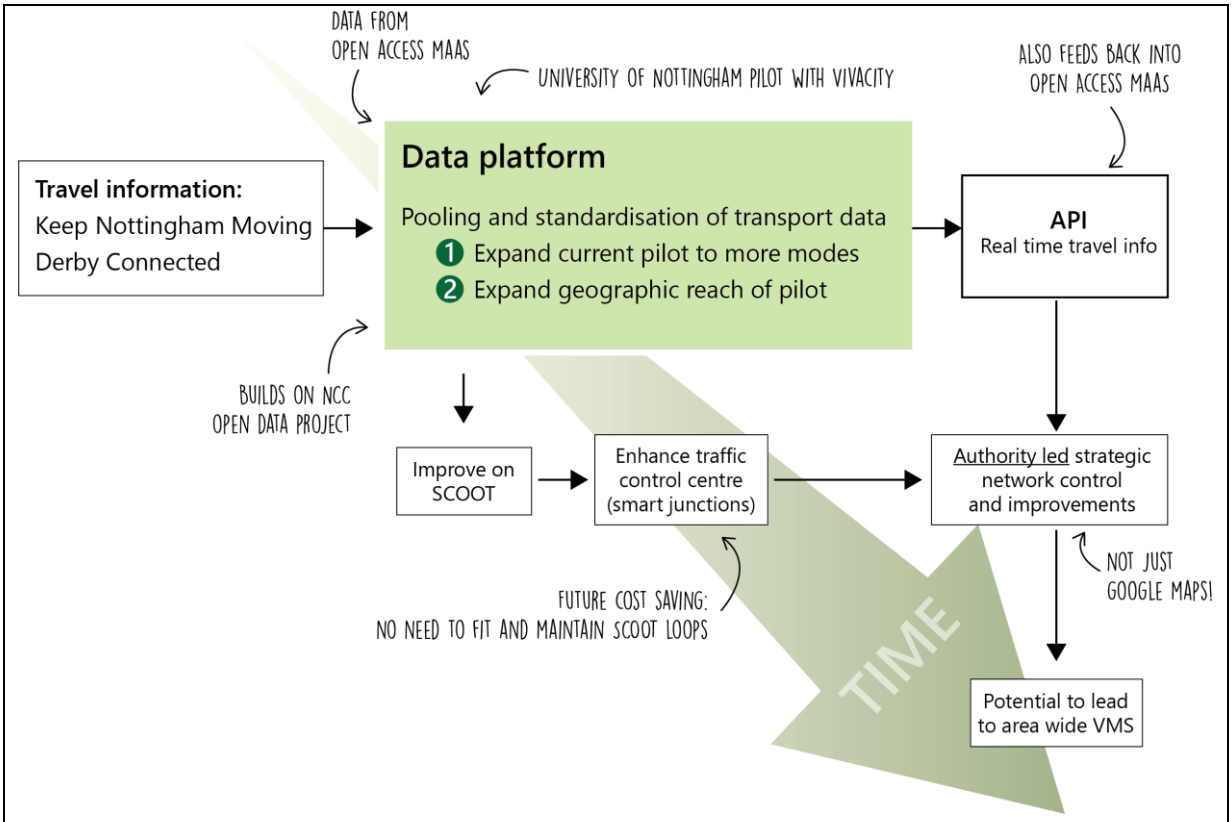
By extending this pilot, both in terms of geographic reach and modes, and feeding this information into the data platform, a number of efficiencies in the transport network and therefore enhanced customer journey experiences can be achieved.

The data platform will also be fed from the data provided by the Open Access MaaS described in Package A.

Having full control of the anonymised data pooled by the data platform will put the councils in complete charge of maintaining data privacy and ensuring the information people share helps to keep Nottingham and Derby moving.

The large pool of data will be used to enhance the performance of one of the city's UTC SCOOT regions (on the A6005 route) to improve journey times through a number of junctions via the traffic control centre and to develop the concept of smart junctions. Over time this could lead to efficiency improvements in the operation of all junctions in the reach of the traffic control centre, and provide the information required to develop an area wide Variable Message Signing. This would give the local authorities a way to control traffic flows when incidents occur, rather than solely relying on Google maps to provide individuals with route options, which may not align with how traffic en masse should best be moved.

By making the pooled data available openly and in standardised formats, this will also attract developments from private companies and academic establishments, further widening the benefit of the lessons that can be learnt. This will be available through an API, learning from the example set by Transport for London and their Unified API allowing the creation of new commercial opportunities for digital businesses. We anticipate working closely with local universities, Nottingham's Creative Quarter businesses, and local tech-focused meet-up groups to raise awareness of these new datasets and enure they are well-used and exploited.

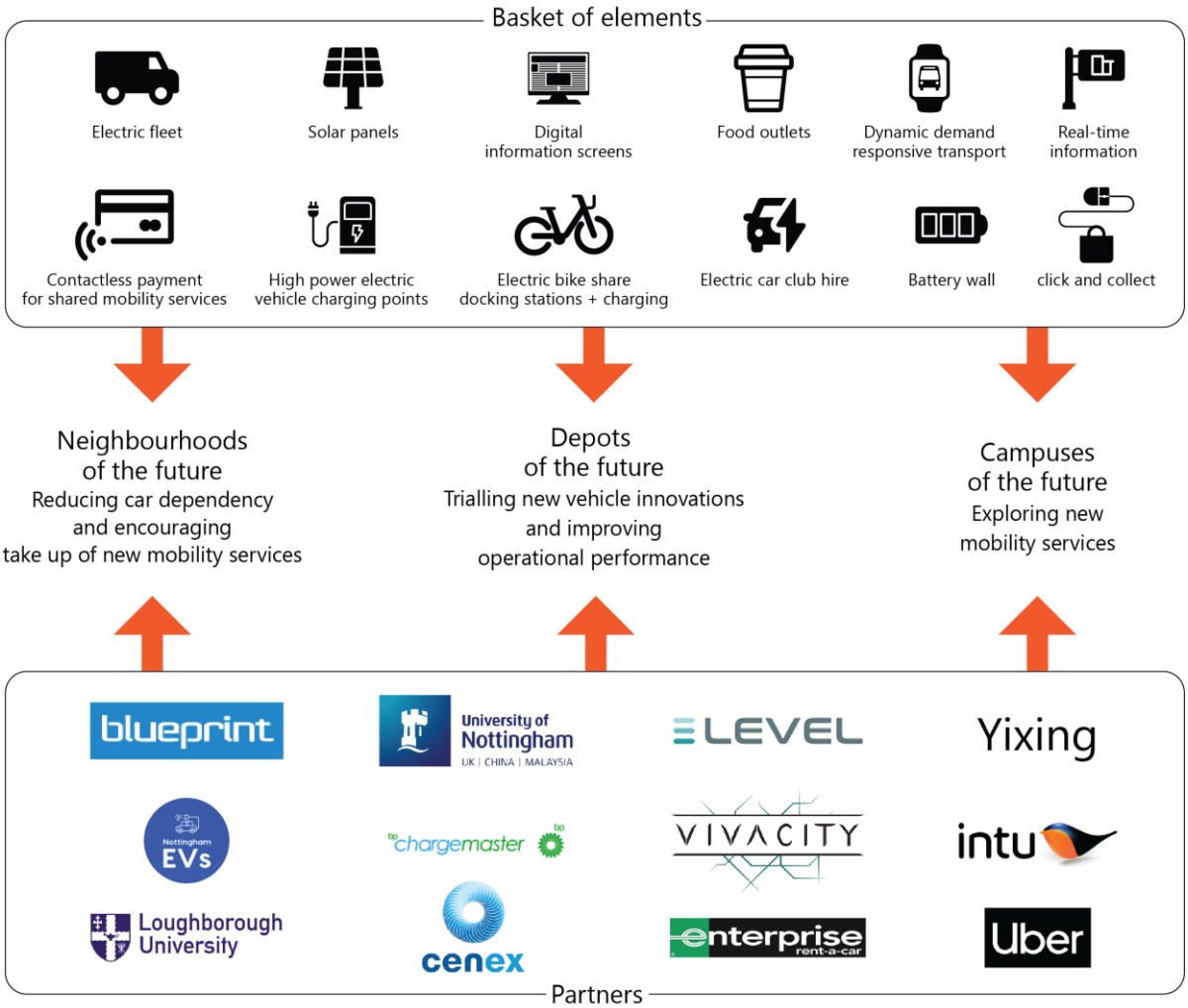


This data platform aligns with the overarching FMZ objectives to improve the integration of services and increase the availability of real-time data. The scheme is also consistent with the FMZ objectives developed by the respective councils, such as to support growth and productivity and promote the area as forward-thinking leading UK cities. It also aligns with objectives and outcomes for the two cities' Local Transport Plans to improve network efficiencies by exploiting new technology systems.

Package C: E-Mobility Hubs

The third package of measures involves offering electric mobility (E-Mobility) hubs that enable users to have access to a combination of transport services; helping interlink sustainable transport provision and encourage the uptake of alternative travel methods. There would be a number of potential combinations of services that could be offered through this model, but it would start by looking at three main hub types (neighbourhoods, depots and campuses) to prove the concept and applicability in a wide range of settings. There is also the potential for a great deal of partnership working, this is detailed more thoroughly in the Commercial Case (Section E).

The E-Mobility Hub concept builds on existing ULEV work already undertaken by the councils through their Go Ultra Low Programme. This includes the UK's first ULEV corridor and a comprehensive programme of fleet upgrades to lead the charge, including a large scale vehicle to grid demonstrator project taking place in Nottingham. The concept also builds on work undertaken through the Access Fund Personalised Travel Planning project, embedding sustainable and active travel cultures in businesses and communities, and improving access to work and jobs as well as improving air quality.



The Neighbourhoods of the Future

The way people travel and access services is changing. Our bid proposes to put communities at the heart of mobility solutions. The 'neighbourhood of the future' concept will first be launched in a new residential housing development in Nottingham, called Trent Basin. Blueprint, the developer of Trent Basin, is widely known for its innovative approaches to delivering sustainable low-energy homes and is building 500 new homes in the Waterside regeneration area of the city. In Derby, the neighbourhood concept will be delivered in an existing residential area to prove the concept is also applicable in established communities.

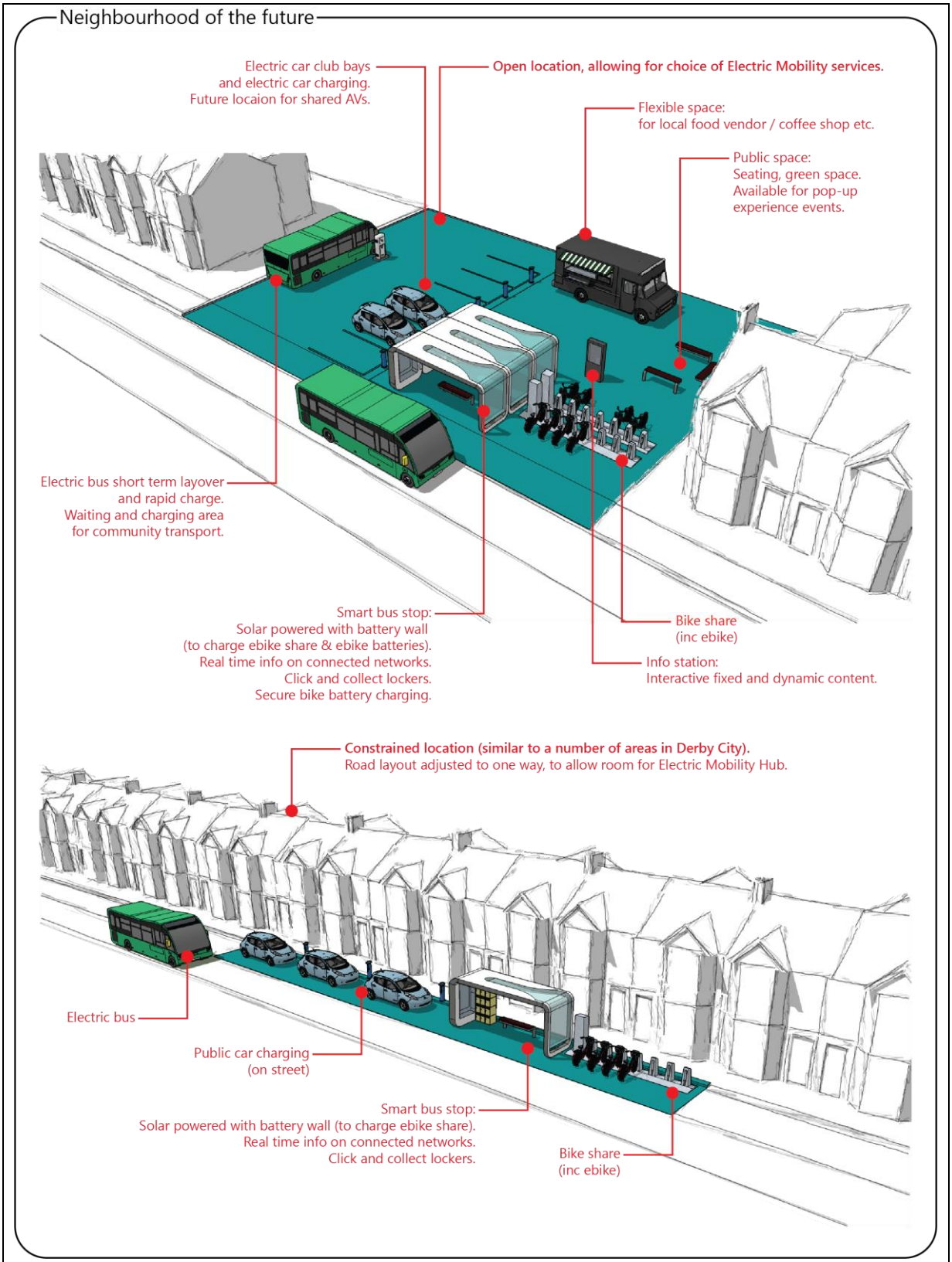
Both will concentrate on reducing car dependency for residents through the provision of a wide range of mobility solutions, including secure cycle parking and community track pump, e-bike hire from docking stations, e-bike charging facilities, electric car club hire, electric vehicle charging and e-cargo bike hire. To enhance the public transport offer smart bus stops with digital information displays and Wi-Fi hotspots will be provided alongside real time public transport displays, and wider community facilities and services such as Click and Collect lockers, delivery hubs for local food schemes, hubs for volunteer driver services linked to car club and mobility credit packages for elderly and vulnerable residents. There is also potential to introduce micro-generation options on site via battery storage and renewable energy generation.

We are in discussions with Enterprise regarding trialling car club 'back to zone' or floating bays which reduce the need for Traffic Regulation Orders and offer users more flexibility by

returing vehicles into specified zones/areas. This concept will be trialled as part of our neighbourhoods of the future.

Our ‘neighbourhoods of the future’ build on the Mobihubs trials in Bergen and Bremen but with a strong e-mobility strand to integrate e-mobility as a version of future mobility available to all. The concept will also seek to prove viability for future residential developments seeking to reduce car dependency and encourage more forms of sustainable travel.

Our ‘neighbourhood of the future’ mobility hubs will support the roll out of electric vehicles, electric bike and scooter trials and provide opportunities for wider active travel offers such as cycle maintenance training, Dr Bike, meeting point for led walks/rides etc, delivered through a programme of Mobility Experiences to give people the opportunity to try new and active modes of transport with low barriers to entry.



The Depots of the Future

The second type of e-mobility hub is our 'depots of the future' concept. Both areas are concentrating efforts to transition to electric and hydrogen fuelled vehicles. The first hub will be located at Eastcroft Depot in Nottingham to trial new vehicle innovations through the purchase of specialist electric vehicles, rolling out vehicle telematics to improve vehicle

performance and receive data on vehicle operations, contributing to vehicle-to-grid development, and embedding training and skills development in an emerging sector through the Nottingham Electric Vehicle Services Maintainance and Repair Centre.

An emerging pressure for the transition to ULEVs, is the need for EV fleet recharging facilties. Currently charge points are placed within depots, which then require vehicles to return to base to charge which results in operational in-efficiencies and unnecessary down time during service. It is proposed to create a 'shared fleet recharging network' in locations owned and managed by public sector partners to include real time availability of high-power chargers (50kW - 150kW) alongside booking functionality to deliver shared efficiencies in vehicle operation and overcome barriers to charge point deployment. This will allow the trial of a new form of shared charging to maximise land assets as well as deliver value for money through investment.

In Derby, a funding bid is being progressed to deliver shared capacity systems through connecting a ring of substations to optimise the use of available power to make the case for rapid charging more commercially viable. To complement the work in Nottingham, Derby will focus on hydrogen fuel trials as a key part of their depot linked to a fleet of hydrogen vehicles secured from Toyota.

Both hubs present a skills and training opportunity to offer apprenticeships, industrial placements and graduate opportunities in this emerging field, which will be maximised through the Growth Hubs and in collaboration with the academic community and businesses in the area.

The Campuses of the Future
The third type of e-mobility hub is our 'campuses of the future', which again involves trialling new mobility modes but is far more site-specific. Locations for these hubs will be at East Midlands Gateway (a large logistics park situated between Nottingham and Derby), Nottingham Enterprise Zone, Rolls Royce, and the University of Nottingham. Autonomous shuttle buses will operate at these 'campuses of the future' and they would be one of the first to operate under these circumstances. These locations provide an ideal location for connected autonomous vehicles as they are contained environments suitable for experimental technology, and require innovative last mile solutions (due to their size) to encourage use of sustainable modes. The provision of bike parking and community track pump, e-bike charging, e-cargo bike hire, smart bus stops, and electric vehicle charging could also feature at the campus hubs. These would be complemented by 'pop-up' Personalised Travel Planning events and Mobility Experiences designed to encourage behavioural change using the learning from the Access fund Workplace Travel Service and Connected Derby business support programmes.

Wider Hub Concepts
There are many other hub concepts that could be drawn out of the basket of elements based on the success of the first pilots, such as e-mobility parks, which would focus on facilitating use of new mobility options, such as e-scooters and e-bikes (as a gateway to wider active travel measures), that would provide greater access to large parklands which may not be explored by less active people or those with mobility difficulties. The park hubs could also be used to offer electric vehicle charging, encouraging greater use of provide modes of e-mobility into rural areas.

These hubs will result in blueprints and evidenced case studies that could be exported and exploited elsewhere as a mobility concept in their own right. Although they will be expanded by Packages A & B (and will further the offer available in Package A), the E-Mobility Hubs are not critically dependent on the other packages to be successful. This helps to limit the

risks that are inherently associated with testing emerging and innovative technologies and approaches.

The e-mobility hubs address some of the overarching FMZ objectives including trialling new mobility services, modes, and models to create a functioning marketplace for mobility that combines new and traditional modes supported by tried and tested approaches to travel behaviour change in the form of pop up events, experiences and promotions to offer Personalised Travel Planning and support packages to provide information and inspiration to encourage transition to new travel options. The hubs also improve the integration of services as they bring together different transport provision. The final FMZ objective it addresses is to explore options for delivering efficiencies through shared demand responsive transport, as individuals can use the shared facilities that will feature at the hubs. In terms of addressing the FMZ objectives set out by the area, it is consistent with improving air quality and reducing carbon emissions through active travel, clean vehicle take up, and new mobility solutions, as it provides facilities and infrastructure suppprted by behaviour change activities for all these services. The hubs will also align with the objectives and outcomes set out in the Local Transport Plans such as to encourage sustainable alternatives, promote sustainable car use through car clubs, and tackle climate change by developing low-carbon travel choices. The overall electric mobility hub package is illustrated in figure 3.

As an extention to the Future Mobility City programme, two additional innovative trials are proposed:

- It was confirmed in the Road to Zero Strategy that government would consult on the use of Green Number Plates. Following discussions with the Office for Low Emission Vehicles about the purpose of green number plates to raise awareness of ULEVs and for local areas to incentivise their use, the Derby-Nottingham area seeks to work on implementing a trial of green number plates in partnership with government to provide key learning, attitudes, challenges and benefits for incentives and enforcement. The Nottingham EV Owners Club has put forward 20 private members willing to trial green number plates and ideas include the use of ANPR technology along the ULEV lane to test the readiblity of plates for enforcement and processing activities, alongside attitudes and perceptions surveying of the plates themselves amongst ULEV owners and non-ULEV owners.
- In addition, the University of Nottingham is seeking to carry out research into consumer attitudes and perceptions around new modes of mobility, specifically understanding, trust and perceptions in connected autonomous vehicles. Further details will be provided at the next stage, should this be of interest to DfT.

How the Future Mobility City will help meet strategic transport objectives

The Future Mobility City programme provides many ways in which the objectives of the Future Mobility Zone (FMZ) fund will be addressed. Detailed in each package description above, Table 1 highlights how the FMZ objectives are met. Table 2 also demonstrates how the schemes will align with the objectives and outcomes of Local Transport Plans by both authorities.

Table 1: Proposed Schemes Aligning with National (FMZ) Objectives

National (FMZ) Objectives	MaaS	Data Platform	Electric Mobility Hubs
Trial new mobility services, modes and models to combine new and traditional modes	✓✓✓	✓✓✓	✓✓✓

National (FMZ) Objectives	MaaS	Data Platform	Electric Mobility Hubs
Improve integration of services	✓✓✓	✓✓✓	✓✓✓
Increase the availability of real time data	✓✓	✓✓✓	✓✓
Provide access to digital planning and payment options	✓✓✓	✓✓	✓✓
Providing mobility credits or other low-cost options	✓✓✓	✓	✓✓
Deliver efficiencies through shared demand responsive transport	✓✓	✓	✓✓

Table 2: Proposed Schemes Aligning with Local (LTP) Objectives

Local Objectives	MaaS	Data Platform	Electric Mobility Hubs
Deliver world class infrastructure and connectivity	✓✓✓	✓✓	✓✓✓
Make transport more accessible through electronic information	✓✓✓	✓✓✓	✓✓
Improve efficiency of the network	✓✓	✓✓✓	✓✓
Encourage sustainable alternatives	✓✓✓	✓	✓✓✓
Improve air quality and minimise transport's contribution to climate change	✓✓✓	✓✓✓	✓✓✓

The approach is strongly linked to wider long term plans and spatial strategies around housing, local growth, productivity and air quality:

- It is consistent with the Government's UK Industrial Strategy and Transport Investment Strategy, given it will greatly improve local transport provision, improve productivity and help to rebalance the UK economy, improve competitiveness and local housing delivery.
- It supports the achievement of the Road to Zero Strategy objectives of increasing the takeup of ULEVs.
- The programme aligns heavily to the DfT areas of research interest, particularly around harnessing and exploiting data, investigating and deploying technology-based services, understanding changing demand and expectations, and electric vehicle related areas of charging infrastructure requirements, vehicle to grid and understanding charging and driving behaviour.
- It supports the Midlands Engine and associated Midlands Connect Transport Strategy in strengthening economic performance by bringing economic activity closer together, and widening access to labour markets, supply chains and customers.
- The D2N2 Strategic Economic Plan identifies that investment in infrastructure will help unlock around 20,000 new jobs, 13,000 new homes and around £800m additional GVA by 2023. It also identifies connectivity as one of the key factors differentiating locations for investment.
- The emerging D2N2 Local Industrial Strategy identifes priority infrastructure requirements for the area and identifies opportunities for joining up strategies for manufacturing and skills.

- The D2N2 Energy Strategy which states 70% of vehicle miles will be ultra low emission by 2030 and seeks to establish the area as a national pioneer in clean growth and a test bed for world-class energy systems innovation.
- The scheme will help accelerate delivery of housing and employment sites set out in local development plans.

The scheme is consistent with objectives for integrated transport set out in our Local Transport Plans, and supports projects contained in the D2N2 Local Cycling and Walking Investment Plan.

In addition, the schemes link to the following plans:
- 2050 Sustainable Development Vision
- Contactless Payment plan
- Public Transport Integration programme
- Advance Quality Partnership Scheme
- Keeping Nottingham Moving / Derby Connected
- Derby and Nottingham Air Quality Plans
- Energy Strategy

B3. Global significance

Please provide a description of how the individual schemes contained in the FMZ would be combined to create a globally significant demonstrator of new mobility services.

Please describe how you would create an exportable template to replicate the success of your FMZ in other areas, including providing evidence for the efficacy of new services, modes and models, to inform the development of future schemes.

The Derby-Nottingham area is already a globally significant area. With partnerships across international countries including India and China, work on local transport delivery and in particular electric mobility, has earnt the area a reputation for innovation and relevance. Investment through a Chinese company (Yixing Transport Industry Group, one of the leading EV charging system manufacturers in China) is resulting in a new joint venture company being established in Derby. Nottingham City Council is participating in a knowledge share partnership with Indian Government following a UK delegation to India to discuss electric mobility best practice. The authority was the only council chosen to share expertise and learning of deploying mobility solutions and this is now resulting in a number of strategy papers and collaborative opportunities through “twinning” programmes between Nottingham and the Indian States. Both Indian and Chinese initiatives have UK Foreign and Commonwealth Office backing. The area benefits from twinning with other European cities such as Karlsruhe (Germany) and Ghent (Belgium), through which learning on cycle infrastructure initiatives has resulted in improved scheme delivery and preparation is underway to trial Belarusian electric buses in Nottingham following a meet up at the 2018 Zero Emission Vehicle Summit organised by UK government and hydrogen vehicles provided by Toyota in Derby. Through European funded projects, the area has benefited from reciprocal learning with a number of cities not limited to Spain, Italy, France, The Netherlands, Belgium, and Germany on a number of innovative projects including a largescale vehicle to grid demonstrator and Innovate UK funded wireless taxi charging project, both being demonstrated in Nottingham.

The area also benefits from globally significant brands such as Boots, Rolls Royce, Toyota and Raleigh, to name a few, who are already engaged on many council-led sustainable

transport, investment and growth activities and therefore can play an active role in the future mobility measures.

Furthermore, both councils' collaboration on developing these proposals presents a unique opportunity to deliver schemes on a larger scale in a real world peri-urban environment across political, economic and social boundaries, which will be meaningful for government when it comes to assessing the package impact in the context of global significance and replicable demonstrators. The economic, environmental, social and technological challenges within the area are echoed in many other places, both within the UK and internationally. The area benefits from two progressive unitary authorities with the ability to deliver in their localities. The area operates under deregulated market conditions alongside facing threats of commercial market entrants (e.g. disrupters) potentially defining this space.

This bid presents an opportunity for the area to plan, influence and shape the future mobility architecture and landscape by giving two very active local authorities te opportunity to trial new modes and models of mobility integrated alongside existing provision. This puts the area in a strong position to be globally significant not just in the design of the package and its deployment, but also in its learning, and long-term legacy.

For example, as accountable body, Nottingham City Council tendered for a charge point concessionaire on behalf of all 16 D2N2 authorities in 2017. In helping to design a business model in a fast evolving market, which reduced the risk to the councils' and ensured long-term sustainability, a working group was formed including industry and technical expertise to ensure lessons were taken from past projects to define a sustainable model for EV charge point deployment. This resulted in the creation of the UK's first charge point concession framework agreement, which was awarded to BP Chargemaster in 2018. This approach has led to the team responding to enquiries from over 25 local authorities to share best practice, expertise and advice and resulted in other areas e.g. West Yorkshire Combined Authority, Coventry City Council and others to follow a concession model approach. Our framework has also been used by Wolverhampton City Council who are investing in taxi rapid charge points. As a result of this work, the authority has developed strong links with the Office for Low Emission Vehicles to act as a sounding board, provide feedback/input to future schemes and also collaborate on innovative measures, share risks and overcome mutual challenges. This was certainly the case in another UK first – recently referenced in the Future Mobility Strategy, the ULEV lane, a bus lane that provides an exemption for ULEVs, which opened in March 2018 and required cross-government support to facilitate the introduction of the scheme through involvement by DfT, DVLA, Chief Adjuication Service and LowCVP.

The bid measures have been chosen as the best fit to meet government objectives and local needs and by their very design present a high level of exportable template readiness. Our solutions are fully aligned to maximise opportunities presented through the Transforming Cities scheme investment.

The Open Access MaaS Platform and the data sharing platform stand to benefit the whole area, augmenting and enhancing existing mobility services. These area-wide interventions seek to integrate information and payment options for existing ways of getting around the area. This will work with the more geographically targeted E-Mobility Hubs that exploit the area's rapid roll-out of EV charging and ULEV support services – building on the Go Ultra Low City investments that come to fruition in Spring 2020 and using the learning for successful behaviour change initiative's from the cities' LSTF and Access Fund programmes.

The Future Mobility City aims to leave the following legacy:

1. A publicly-owned MaaS platform that could be extended elsewhere or made available to other non-metropolitan core cities.
2. A data platform with similar benefits/scope to the MaaS platform – essentially the TfL real time data platform, but for core cities.
3. Evidenced hub implementations, with a set of blue-prints that other core cities can follow (with local delivery expertise that could be internationally exploited to add value to the UK economy and help tackle global climate change / air quality challenges).

Nottingham City Council is investing £100k in a trial scheme, the Smart Nottingham Real Time Transport Data Trial (SNRTTD). The details and objectives of the trial are outlined in Package B above (section B2). This scheme is supported by a further £50k awarded by the DfT via its Open Data funding stream which will be used to develop a platform in partnership with the University of Nottingham to share the council's existing transport data and the new real time data with the public and other key stakeholders, such as the Urban Traffic Control Centre. A key element of the trial is an evaluation of its effectiveness with respect to its objectives and to obtain key information relevant to scaling up the approach to cover a larger area. This scheme will be completed before the Future Mobility City interventions are implemented and thus inform the learning before implementation.

As the concept of the programme is centred around not only the provision of real time data, but also its effective application via, for example, Mobility as a Service (MaaS), the experience gained from the above trial will feed directly into and support all the interventions. The geographical coverage will also be sufficiently large an area (across two multi-centred cities) for the benefits identified from the trial to be scaled up, potentially making a significant impact to the travel offer across Nottingham and Derby and thus become a nationally significant demonstrator as to the benefits of collecting and using real time data.

Furthermore, this programme will also be able to re-use the capital assets from the SNRTTD as match funding as well as utilising the data sharing software solutions which have been developed in partnership with the University of Nottingham. In summary, the SNRTTD/Open Data Project will support the programme as follows:

- Local experience of collecting and utilising real time data to effect behavioural change and optimise network efficiency can be used to specify and deliver the data project
- Enable the area to utilise existing key partnerships with Vivacity Labs Ltd, Ancoris (Google) and the University of Nottingham to build and improve upon the trial scheme
- Use and improve upon an existing data hub for real time traffic and transport data, i.e. not starting from scratch
- Make the council's existing transport data sets more accessible to the public and third party developers
- Make use of existing capital assets capable of collecting real time data

The FMZ will allow the area to apply and optimise the approach taken in the above trial on a much bigger scale, sufficient to realise real tangible benefits to our users, thus providing a large-scale transferable template for the approach to be used elsewhere.
Furthermore the area has had discussions with the West Midlands Combined Authority and would seek to collaborate on initiatives for Future Mobility Zones in areas such as MaaS and mobility to venues and events, innovation in EV infrastructure, energy and Vehicle to grid technology, smartcard development and sustainable travel.

Evaluation of the Future Mobility City
Process and impact evaluation will be a cornerstone to our programme, as the way in which the programme fits together and is evaluated will determine the learning, legacy and real-world large-scale replicability.

A dedicated in-house Highway Metrics team will lead the evaluation of the programme, as per the Transforming Cities schemes. The team has proven expertise in major scheme evaluation, both in capital funded construction projects and in behavioural change programmes such as the Local Sustainable Transport Fund. The team also carried out an evaluation of the Nottingham Workplace Parking Levy (WPL) scheme, using an entirely innovative and untested approach via a joint funded Engineering Doctorate in partnership with Loughborough University. This evaluation was based around a hybrid Theory of Change/Realistic Evaluation approach, but also used quasi-experimental components with oversight from DfT. It is proposed to use a similar approach for this programme, subject to discussion with DfT.

Proposed evaluation approach
The first step in designing the evaluation will be to develop, with the agreement of key stakeholders, a logic map, which clearly explains the consensus as to how the package of interventions is expected to meet the objectives outlined in section B1. This will build on the rationale already provided in this document by articulating in more detail how, why and when the desired change will occur, thus mapping each step on the causal pathway from the implementation of the measures to the desired longer term impacts.

The nature of the programme could lend itself to a Theoretical Evaluation approach, in accordance with DfT guidance, which indicates that interventions that are innovative or untested, such as those presented in this bid, are suited to such evaluation approaches. The Theoretical Evaluation method could be based on a Theory of Change evaluation approach, augmented by utilising aspects of Realistic Evaluation in order to fully document the mechanisms which act to illicit the desired impacts and how their effectiveness is influenced by national and local context. The explicit identification of the mechanisms of change and contextual factors is crucial in terms of the provision of an exportable template for the interventions to be trialled within the FMZ, because local context in other areas where similar schemes may be implemented will differ from those in the Derby-Nottingham area. These differences could make exporting the approach more or less effective than that demonstrated here and thus, an understanding of the interaction of the mechanisms by which change is achieved and the impact of context on their effectiveness is crucial in the design of future similar zones.

Within this framework, a battery of indicators will be identified that are capable of monitoring progress towards each FMZ objective (see section B1) over the evaluation period. A baseline for these will be established and the indicators tracked throughout the evaluation period where appropriate.

Consideration will be given to both the combined impact of the measures as a complimentary package of interventions but also, where appropriate, to the individual elements of the package. Obvious indicators to be monitored within or close to the area are as follows:

- Bus patronage
- Bus journey times and reliability
- Patronage on autonomous shuttle services on Future Campuses
- Non car mode share
- Uptake of ULEVs: public
- Uptake of ULEVs: fleet

- Average travel times for general traffic
- Modelled changes to NO_2, particulate and carbon emissions
- Inward investment indicators in the area
- Inward investment case studies in the area
- Stakeholder surveys to measure behavioural change in response to the interventions together with user satisfaction with the services offered
    - Mobility as a Service (MaaS) user surveys
    - Transport user surveys of targeted groups, e.g. low income or elderly
    - Mobility Hub user surveys – bespoke surveys for residential, depot and campus hubs to gauge behavioural change within each group
    - Autonomous Demand Responsive Shuttle Service Users on Future Campuses
    - Surveys of local businesses to understand how they have responded to the interventions.
- Electric vehicle charge points usage in the area
- Employment levels in the area

In addition to the above, it will be important to estimate actual changes in productivity based on available time series data and the evaluation team will work with the DfT to determine the most appropriate method to achieve this. The indicators will also be analysed with a view to assessing Value for Money of the scheme. This will include an analysis of the outturn costs.

The change observed in these indicators will be subject to further research to take into account exogenous changes which could impact the ability of the scheme to meet its objectives and thus, to determine if the observed changes can truly be attributed to this scheme. While this will need to be considered more carefully in the Evaluation Plan, techniques that could be employed to achieve this for a scheme of this nature could be as follows:

1. A quasi experimental approach whereby indicators in the area subject to this scheme are compared to those from other similar urban areas or other parts of the D2N2 area isolated from the scheme
2. Time series analysis – subject to data ability it may be possible to use a simple time series model to establish a statistical link between a relevant dependent variable and other independent variables including one which acts as an intervention variable
3. Direct interview surveys of service users where they are asked if they have changed their travel behaviour over the evaluation period and why. This will be essential to evidence attribution of any observed mode switch to the scheme.
4. A comparison of actual change with the change expected according to the logic map.

The evidence from one or more of the above research methods, together with the changes to the indicators, will be triangulated to generate robust conclusions as to whether the scheme has met its objectives. Loughborough University is a partner to this package and has confirmed its support to recruiting and part funding a PhD student to assist in the evaluation of the impact of the measures. This will generate academically robust outputs in the form of peer reviewed papers and a PhD thesis, as well as a one year after Evaluation Report and a final Evaluation Report to assess if the impacts of the package have become embedded over a longer period (5 years).

Global positioning and profile

Furthermore, the Low Emission Vehicle Enterprise and Learning (LEVEL) project (established in the area in 2016 that has grown to have an international reach) will carry out dissemination activities including CPD accredited training courses, events and conferences

and capacity building in an emerging marketplace. LEVEL already delivers ULEV-related training workshops and e-learning courses and a priority area of work has been 'Intelligent Mobility'. This involves exploring the implications for cities and businesses of emerging mobility technologies in the context of the shift towards ultra-low emission, connected and autonomous vehicles. LEVEL has run a number of Intelligent Mobility themed events over the past two years including a major Mobility-as-a-Service industry conference and the first UK training workshop on the application of Blockchain technologies in EV charging.

LEVEL's role in this programme will be to:

1. Disseminate insights and best practice, from the Derby-Nottingham project case studies, to other local authorities and transport agencies via a series of conferences, master class events and project 'exportable template' reference guides.
2. Work with the Nottingham Electric Vehicle Service (NEVS) Centre – to develop training content and collaborative links across the UK. This would include exploring the opportunities to develop collaborative training projects with NEVS and training providers on a UK franchise basis and offer apprenticeship opportunities via the Derby-Nottingham Growth Hubs to build skills and capacity in an emerging market.
3. Develop a LEVEL 'Future Mobility' accredited training course building on other training courses designed to date and using the knowledge generated by the project. The aim of this would be to create a series of short training courses covering a range of future mobility and ultra-low emission vehicle topics. Such courses can be undertaken through e-learning or a blended learning format with an optional attended workshop. The Courses will be modular in design providing introductory, 'light touch' overviews and delivered in a visual format with text material being limited to course notes downloads. All courses will be accredited to offer a continuing professional development (CPD) qualification.
4. Maximise opportunities for skills development e.g. apprenticeships, industrial placements and graduate trainee opportunities through links with Derby and Nottingham Universities, local businesses and partners.

In addition the area is part of a number of national peer networks e.g. Go Ultra Low, Access Fund, Clean Air, Core Cities as well as the Community of Practice to share best practice and learning.

SECTION C – The financial case

C1. Financial case – scheme costs

This should include total scheme cost, total Future Mobility Zones Fund contribution, total public sector contribution to scheme, total local and private contributions and any contributions in kind. This should include, if possible, a profile of costs for each financial year up to 2022/23.

All costs associated with the Future Mobility Zone programme are expected to commence in the 2019/20 financial year, through preparatory and development work on all work packages. Delivery builds in 2020/21 with full delivery achieved from 2021/22. This financial profile subject to change, however indicative values presented here are based on experience of previously funded programmes. The package value break down is:

Total scheme cost (£m): £19.720m
Total DfT (FMZ) funding contribution (£m): £15m
Total public sector contribution (£m): £2.300m
Total local and/or private contribution (£m): £2.420m

Details of any 'contributions in kind' (e.g. operators agreeing to run a service):

- BP Chargemaster public EV events support organisation (concession contract proposal)
- Enterprise car club MaaS platform and mobility credits development staff time and own investment
- Public transport operators
- Section 106 developer contributions
- University of Nottingham Industrial Placement recruitment support
- Cenex InclusivEV project dissemination to inform electric car club deployment in lower income areas

A full breakdown of the scheme costs is set out in Table C1 below.

Table C1. Derby-Nottingham Future Mobility Zone scheme costs

Scheme measures	2019/20	2020/21	2021/22	2022/23	Total Cost
Work Package 1: Open Access MaaS Platform (5.500)					
Creation of Open access Maas (facility for trip data recording, contactless payments and subscriptions)	0.200	1.000	1.000	1.000	3.200
Mobility Credits including MaaS incentives	0.200	0.700	0.700	0.700	2.300
Work Package 2: Data Platform (2.100)					
Data pooling, consolidation and sharing	0.100	0.200	0.250	0.250	0.800
Traffic control/smart junction trial	0.100	0.400	0.400	0.400	1.300
Work Package 3: Electric Mobility Hubs (6.900)					
Neighbourhoods of the Future (Inc. mobility experiences)	0.200	0.500	0.700	0.700	2.100
Depots of the Future	0.200	0.600	0.800	0.800	2.400
Campuses of the Future	0.200	0.600	0.800	0.800	2.400
Work Package 4: Programme Coordination and Evaluation (0.500)					
Programme coordinator, programme evaluation and dissemination activities	0.125	0.125	0.125	0.125	0.500
TOTAL (DfT Funding Sought)	**1.325**	**4.125**	**4.775**	**4.775**	**15.000**

The confirmed match funding over the duration of the programme is provided in Table C2 below.

Table C2. Match funding contributions

Match Funding	2019/20	2020/21	2021/22	2022/23	Total Match
Public Sector Contribution					
Nottingham Vehicle Replacement Programme (Up to £3m per annum).	0.150	0.250	0.250	0.250	**0.900**
Derby Vehicle Replacement Programme	0.150	0.250	0.250	0.250	**0.900**
Nottingham Electric Vehicle Service Centre contribution	0.100	0.100	0.100	0.100	**0.400**

Match Funding	2019/20	2020/21	2021/22	2022/23	Total Match
NCC Local Transport Plan Smart Data Trial contribution	0.100	0.000	0.000	0.000	**0.100**
Local/Private Sector Contribution					
BP Chargemaster concession contract match funding	0.300	0.300	0.300	0.300	**1.200**
Enterprise car club vehicles (target of 40 vehicles @£20k up to 2023) plus marketing contribution	0.110	0.110	0.110	0.010	**0.340**
EU Vehicle to Grid contribution	0.300	0.250	0	0	**0.550**
EU Shared Sustainable Mobility Project	0.100	0.100	0.100	0	**0.300**
Loughborough University 50% funding contribution for PhD student	0.000	0.010	0.010	0.010	**0.030**
TOTAL (Match Funding)	**1.310**	**1.370**	**1.120**	**0.920**	**4.720**

In order to achieve the ambitions set out in this bid, the measures require £15m DfT funding support. We believe the funding package delivers high value for money, builds on progress made to date and makes use of our key strengths in this area. DfT's request for flexible bids is noted and for that purpose, this bid can be confirmed as scalable to £12.5m as a minimum, in discussion with DfT.

A low base scenario (£12.5m) would deliver many of the elements – with the outcomes proportionate to the investment. For instance:

- A reduced roll out of mobility credits (number of individuals supported/credit value provided)
- Scaled back the number of smart junction trial locations
- Reduced number of or size of e-mobility hubs.

Alternatively, should DfT decide certain elements of the bid are less attractive, the over funding profile could be cut accordingly.

Notes:
1) DfT funding will be awarded in 2019/20.
2) Where appropriate, please indicate the maximum and minimum level of funding needed to create the FMZ and give an indication of scalability.
3) Please provide details of the source of any local and/or private contribution.
4) Outline the breakdown in costs year-by-year if possible.

SECTION D – The management case

D1. Management case – Delivery and risk management

Please provide details of key milestones (a detailed project plan is not required at this stage).

Please provide details of any technical risks around delivery of the schemes and any mitigating actions.

Driving the change
Our bid presents a compelling case for investment through an integrated package of measures which will deliver a step change in future mobility measures by building on our strong track record of delivery. We benefit from a sustained long-standing partnership working with a broad range pf public, private and third sector organisations involved in all aspects of transport. We are fortunate to have a rich and active partnership that represents all aspects of energy and transport innovation, research and deployment. This collaboration has developed over a number of years and provides the foundation on which we can design and implement an innovative package that will deliver maximum benefit to local citizens and businesses by accelerating the uptake of new mobility services. The area has been punching above its weight for over a decade, bringing forward creative solutions to support integrated transport and this approach will be utilised to pioneer the Future Mobility City programme.

Track record in delivery
As lead authority, Nottingham City Council will provide a clear and coordinated strategic approach to the management and delivery of the programme using PRINCE2 project management processes and act as the central budget holder responsible for financial management. **Nottingham is an award winning authority** (City of the Year, Fleet Heroes 2018). We have learnt skills in designing, testing and implementing a range of highly innovative transport solutions all within tight delivery timescales and meeting funding requirements, as demonstrated by the successful and effective delivery of these DfT-funded and other-funded programmes which will benefit the delivery of the bid.

Delivery arrangements
Our delivery approach is supported by a lean delivery framework; effective project/programme management processes based on PRINCE2 methods, comprehensive financial and risk management approaches, smart procurement and collaborative communications and monitoring arrangements.

Established governance and decision making arrangements are in place across Derby-Nottingham for the Go Ultra Low, Access Fund and Tranforming Cities programmes which will roll on and oversee the delivery of this programme. The established governance and management arrangements will be fully utilised to oversee delivery:

1. **Strategic overview and direction:** this comprises of the key senior groups which will endorse delivery, make decisions and provide input and overview in the wider planning and transport context in particular to achieve economic growth, improve air quality and social inclusion;
2. **Management**: this comprises of the day to day project management, coordination and liaison which will be led by Nottingham City Council's Transport Strategy team and will provide an interface between the strategic bodies and delivery teams. Responsibility for procurement/contract management and monitoring and evaluation activities are also included here;

Delivery: this comprises of the key delivery teams responsible for executing the activities in line with the mandate set by the transport strategy team, escalating any issues and reporting progress/monitoring outcomes

Further detail on the governance arrangements is included in section D2.

A full project plan can be provided at the next stage, however a table of the key milestones is included below:

Key milestones linked to successful delivery

Milestone	Implications	Date
Outline Bid submission	• Derby-Nottingham FMZ bid submitted to DfT	24th May 2019
Bid outcome	• Successful shortlist	June/July
Final bid	• Derby-Nottingham FMZ bid submitted to DfT	July
Launch of Future Mobility City Prospectus	• Stakeholder feedback on measures proposed • Establishment of Future Mobility City partnership	Summer 2019
Future Mobility Zones announcement	• Confirmation of funding • Project initiation activated	August 2019
Nottingham City Council Executive Board Approval	• Formal acceptance of funding and procurement arrangements	September 2019
Meeting with DfT	• Programme inception	September 2019
Baseline monitoring completion	• To establish baseline monitoring and evaluation plan	September 2019
Meeting of Joint Board	• Derby-Nottingham Board • Commit resources • Approve initiation of projects	October 2019
Commence delivery of quick wins	• Through agreements in place with existing suppliers	October 2019
Project scoping	• Stakeholder engagement • Site selection e.g. e-mobility hubs	October – December 2019
Market engagement	• Soft market testing, where required	January – March 2020
Tender procurement	• Specification • Contracts • Competitive procurement activities	January 2020 – August
Contracts awarded	• New schemes commenced • All projects underway	September 2020
Financial reporting to DfT	• To activate efficient release of payments	Quarterly/Annually – subject to DfT
Progress reports	• To provide update on programme/project delivery	Quarterly/Annually – subject to DfT
Programme completion	• Cessation of Future Mobility City activities	31 March 2023
Final evaluation	• Final evaluation activities to support impacts/legacy	31 March 2024

Risk Management
Risks are tracked in accordance with the council's corporate risk management principles which draw upon the PRINCE2 methodology. The strategy requires the identification and recording of risks, an evaluation of their likelihood and any mitigation actions. This approach ensures that all risks are captured and processed in a consistent manner.

A risk log for the Future Mobility City programme is included below includes risks which relate to political, financial and operational risks. Without mitigation, these could result in increased costs to the programme, reductions in the quality of outputs and slippages in timelines, all impacting the overall benefits and outcomes the bid seeks to deliver. Ownership of the risk register falls with the Programme Manager. These risks will be subject to on-going monitoring and mitigated through effective programme management and partnership working.

Table D1. Risk Register

Risk	Probability 1=Low 10=High	Impact	Effect	Strategy	Risk Resolution Plan	Person / Team in Charge	Timescales	SRO Approved
Agreement from transport operators not secured	4	9	HIGH Will cause slow start to project or result in only some partners being involved	Brief senior managers and relevant elected portfolio holders to ensure high level agreement from the Operators	Ensure early plans are shared, negotiations at officer level take place and sign up is received from Operators. Set up regular project working group meetings during the scheme.	Programme Manager	2019/20	Yes
Account-based app/website provider is yet to be confirmed and there is a possibility that this type of service could fail.	4	9	HIGH Inability to deliver Open Access MaaS platform	Engage Enterprise (one market provider through the Mobilleo App) and the open market on possible solutions.	Early engagement, scoping and specification. Utilise the community of practice.	Programme Manager	2019/20	Yes
Data provided to the traffic control system will be unreliable / trigger unintended consequences	5	5	MED Unnecesary traffic disruption	Ensure lessons are learnt from pilot stage.	Plan the deployment of interventions driven by UTC data in stages. Test system offline.	Programme Manager	2019/20	Yes
Data security	5	5	MED Implications for General Data Protection Regulations	Utilise anonomysed data wherever possible.	Build protocol into the specification.	Programme Manager	2019/20	Yes

Risk	Probability 1=Low 10=High	Impact	Effect	Strategy	Risk Resolution Plan	Person / Team in Charge	Timescales	SRO Approved
Not finding suitable sites for Hubs that meet all necessary criteria	3	6	MED Hub sites chosen that do not meet all requirements around e.g. access, safety, electrical supply will be lost or provide poor/reduced outcomes	Early stage evaluation and assessment of sites across scheme area	Utilise local knowledge from each local authority to help select suitable sites during scoping stage. Engage key stakeholders in design.	Project Manager	2019/20	Yes
Reduced funding awarded from DfT	2	2	LOW Inability to roll out complete programme	Ensure business case is articulated in the bid and work with DfT through co-development if further information is requested	Prioritise strongest projects in discussion with DfT. Programmes designed to be scalable.	Programme Manager	2019/20	Yes

D2. Management case – Governance

Do you have governance processes in place to deliver the scheme?

☒ Yes ☐ No

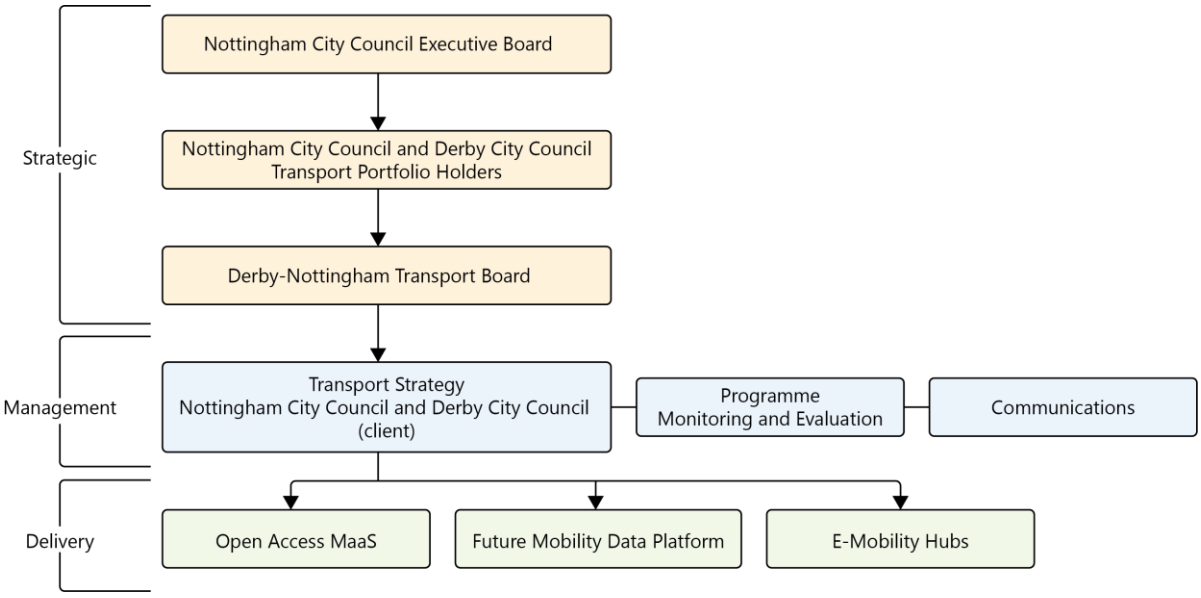
Please give brief details including the name and position of the Senior Responsible Owner:

The **Senior Responsible Owner** (Chris Carter, Head of Transport Strategy) will have an overall decision-making responsibility for ensuring the programme meets its wider objectives and delivers against the desired outcomes. Overseeing the programme to time, budget and quality, the SRO is responsible for the success of the proposals and owns the business case, provides leadership, manages relationships with partners/stakeholders and recommends opportunities to optimise cost/benefits.

Governance Structure

The area has an established governance framework for overseeing and managing delivery of major programmes. Nottingham City Council will act as the lead partner with overall financial responsibility for the programme. A joint Derby-Nottingham Transport Board is proposed to fulfil the decision making responsibility for the Future Mobility City proposals. The Programme Manager and Senior Responsible Officer will meet regularly at a Derby-Nottingham Transport Board to update on progress against project timescales, spend and outputs. Project implementation will be led by the Programme Manager with technical support and input from project teams, including expert input from procurement, legal, communications and evaluation expertise.

An organogram is provide below setting out the three key governance levels of strategic; management; and delivery:



Roles and Responsibilities

- The newly proposed **Joint Transport Board** will hold primary responsibilities for providing overall direction, management and assurances including Quality, Business, User and Supplier. The Board will acts as the overarching programme management

governance for all transport programmes developing and informing the emerging transport vision for the area. Membership of the Board will include: Portfolio Holders for Transport, Directors for Traffic and Transport and Commercial, Director of Major Programmes, Transport Strategy Managers, Heads of Finance and others as required.

- A nominated **Programme Manager** (based within the client team in Transport Strategy, Nottingham City Council) will manage the day to day delivery of the programme on behalf of the Transport Board, ensuring it delivers to the required quality standards and within the specified tolerances of time, costs and resources. The Programme Manager will oversees the change control and risk management functions, is responsible for commissioning activities, both internally and other Contractors, financial monitoring, reporting of progress to the Board and other stakeholders, coordinating communications activities and undertaking evaluation activities.
- The **project delivery teams** will consists of specialist skilled staff responsible for the delivery of the specified initiatives within the programme and of reporting project deliverables and other outputs to be fed into the overall evaluation activities. For significant divergences to timescales, costs or any other variations, these changes are captured by the Programme Manager and where necessary escalated to the Board/SRO for resolution.

SECTION E – The commercial case

E1. Commercial Case

Please provide a brief description of the level of any market engagement.

Please describe the procurement strategy for the schemes contained in the FMZ.

Future Mobility City partners
Both council's' have had a number of conversations with current partners and potential collaborators, who have demonstrated an interest in the proposed schemes or have taken part in discussions about their involvement with the Future Mobility City proposals.

The outcomes from these discussions have been set out in the table below.

Market Engagement	Progress So Far
Yixing	Yixing, a Chinese company, are establishing a joint venture company in Derby alongside Yixing Traffic Transportation Group. The company is very interested in the Future Mobility City package and potential opportunity for collaboration over the duration of the project. The partnership also presents an opportunity to provide exportability to China.
Indian State Government	The Indian government at the national level introduced the '**Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles**' Policy [a.k.a **FAME**] to provide a comprehensive approach to the challenges of migration from conventional fuel based mobility and economics to a carbon free regime. The FAME programme is moving into its second phase now under the **FAME II**, carrying forward some of the unfinished tasks of FAME I and building further relevance of this both within the present & future contexts. As part of the UK government's (Foreign and Commonwealth Office and Department for Industries and Trade), the area is participating in a number of programmes to share best practice

	and learning with four progressive Indian states involved in electric mobility. These include the states of Karnataka, Andrah Pradesh, Tamil Nadu and Kerala. The mission is resulting in an Indian delegation visiting the UK during June 2019 to further discuss twinning/sistering opportunities to establish the collaborative venture. Discussion with the Indian states as resulted in strong interest in the future mobility city programme, given some of the states are home to a number of nationally recognised 'smart cities' and would provide further opportunity for exportability.
LEVEL	The Low Emission Vehicle Enterprise and Learning network has been delivering ULEV-related conferences, workshops and e-learning courses since 2016. The network has organised 16 major conferences attended by over 1,300 industry delegates. As the incumbent contracted dissemination partner, LEVEL can build on its significant industry and academic partners to support the knowledge share of the Future Mobility City progamme nationally and internationally.
Cenex	Cenex are the UK's leading not for profit independent low emission mobility research and technical support organisation. Cenex supported the development of the electric charging point network, provide support to local businesses and have assisted in the creation of CPD accredited learning programmes. Cenex will be providing match funding through two key projects (Shared Sustainable Mobility and InclusivEV) providing expertise and opportunities for dissemination which will benefit the Future Mobility City package.
BP Chargemaster	BP Chargemaster are the contracted concessionaire to provide publically accessible charge points on behalf of the D2N2 local authorities. BP Chargemaster are an enthusiastic willing partner to continue the rollout of charge points as part of the e-mobility hubs including higher power charging, real time availability and smart booking functionality.
Blueprint	Blueprint, who is the developer for Trent Basin, have confirmed that they are happy for an electric mobility hub to be installed at the residential development. Furthermore they are especially interested in how sustainable developments can be planned and delivered to offer residents high quality alternatives to car ownership.
University of Nottingham	The University has historically collaborated with Nottingham City Council over a number of smart city, transport, energy and mobility projects. A current project the University is collaborating on includes the ongoing SNRTTD scheme. Discussions have been held to consider how the learning from the SNRTTD pilot could be fed into the Future Mobility City proposals. The council also works in partnership with the University of Nottingham Fauclty of Engineering to host an Industrial Placement undergraduate during their year in employment and have expressed a willingness to do so to support the Future Mobility City programme.
Loughborough University	Nottingham City Council have developed a strong partnership with Loughborough University, particularly the evaluation of the Workplace Parking Levy, which was part funded by the University through a PhD. A further PhD has been jointly funded for a PhD student to evaluate the Go Ultra Low programme. This approach will be transferred to the Future Mobility City programme to provide academic and robust evaluation to feed into the exportable template.
Enterprise	Enterprise is the incumbent car club operator in Nottingham and is in talks with Derby. Enterprise is contracted to deliver 40 car club vehicles over the duration of their contract and having already expressed an interest in expanding the electric car club offer, have deployed an

	additional five battery electric vehicles in 2019/20. Enterprise have also expressed willingness to help with the provision of mobility credits for low income users potentially through their MaaS platform or in collaboration with the areas Open Access MaaS platform.
Nottingham EV Owners Club	Following the award of the Go Ultra Low City funding, a number of EV drivers have gradually reached out to support initiatives and participate in organised vehicle showcases. As a result a number of drivers have formed a EV Owners Club currently with 100 members with the aim of organising events, meet ups and encouraging the growth of EV ownership. The Owners Club have expressed an interest in supporting the Future Mobility City programme, in particular the trial of green number plates.
Intu	Intu own and manage both shopping malls in Nottingham and Derby. Intu have a strong sustaianle transport focus and are part funding the installation of charge points in their car parks. Intu have expressed an interest to be involved in the Future Mobility City programme, particularly the pop up events and mobility experiences which could be held in their centres.
Vivacity	Vivacity Labs Ltd are the current provider for the fixed cameras for the SNRTTD project offering cameras capable of counting and classifying not just vehicles but also vulnerable road users. Vivacity is supporting the trial project, after which the learning and recommendations will be fed into the Data Platform (Package B) as part of the smart junctions trial. One particular strength is the integration of machine learning capabilities within the camera systems to respond to incidents and put in measures benefitng road users on the network.
Uber	Uber are the electric bike provider for Derby, and will also be important in the implementation of electric bike infrastructure at the e-mobility hubs.

Letters of support from key partners are appended to this bid.

Procurement Strategy

The area has a proven track record for delivery of integrated transport schemes, not limited to mass transit, Workplace Parking Levy, cycling, road space transformation, ULEVs and behaviour change programmes. The area has successfully forged effective partnership working with a wide range of organisations across the public, private and third sectors whilst leveraging other public and private sector investment.

The teams involved hold is significant knowledge and expertise in delivery of both large-scale infrastructure and specialist, innovative improvements. This includes legal, finance and procurement expertise who will be vital in helping to deliver the procurement strategy. This has been employed on a number of innovative Go Ultra Low programme funded projects including the creation of a UK-wide public sector ULEV vehicles and infrastructure framework.

As the accountable body, Nottingham City Council will lead on relevant procurement activities on behalf of the area. The council has a commitment to ensure it's procurement will be fair, open and transparent. New procurement to be undertaken will comply with all relevant legislation, including European and UK Procurement Regulations and will be in accordance with the council's Financial Regulations and Contract Procedure Rules. To achieve this, the council will:

- Follow robust governance procedures to ensure accountability and compliance,

- Work in an inclusive way, valuing diversity and actively promoting equality, diversity and equity
- Implement onsistent, open, transparent, proportionate and accessible processes and systems to enable the full participation of all potential suppliers,
- Ensure a level playing field for all supplies and that third sector, small and medium sized or start ups are not disadvantaged by the council's processes.

Our procurement strategy for each element of the Future Mobility City is set out in the table below:

Package	Element	Procurement Strategy
Open access MaaS	Trip data linking and recording	Either via partnership with Enterprise's MaaS provide, Mobellio or via external competitive procurement.
	Payment, incentives, and mobility credits	Either via partnership with Enterprise's MaaS provide, Mobellio or via external competitive procurement.
	Subscriptions and direct debits	Either via partnership with Enterprise's MaaS provide, Mobellio or via external competitive procurement.
Data Platform	Real time traffic information using cameras	Providing OJEU procurement threshold not exceeded internal approval will be sought to direct award to Vivacity who have been identified as the preferred partners for this pilot project given their success in rolling out the system in Greater Manchester.
	Improving SCOOT	Urban Traffic Control System upgrades and SCOOT detection equipment can be procured via the councils' existing framework with Siemens, enabling all orders for works to be placed.
	Area-wide VMS	To be procured via the council's existing framework.
E-Mobility Hubs	Secure cycle parking/e-bike docking stations	Delivered internally via inhouse DLO/framework contract.
	Electric vehicle recharging	Charge points, civil engineering works and electrical connections can all be procured via the existing contract with BP Chargemaster.
	Electric car club hire	Enterprise Car Club are the appointed concessionaire until 2022 with an option to extend to 2024 so no procurement required.
	Real time information displays	Displays and Data Feed Brokerage system can be procured from an existing Nottinghamshire County Council framework which the

		Councils' are able to call upon.
	Wi-Fi hotspots	To be procured via a new competitive tending procedure.
	Collection/delivery lockers	To be procured via a new competitive tending procedure.
	Electric scooter trials	To be procured via a new competitive tending procedure.
	E-cargo bikes	To be procured via a new competitive tending procedure.
	Shared fleet recharging network, including higher power chargers	Charge points, civil engineering works and electrical connections can all be procured via the existing contract with BP Chargemaster.
	Autonomous shuttle bus	To be procured in partnership with the East Midlands Gateway developer.
	Pop-up mobility experiences and behaviour change actitivities and services	To be procured via a new competitive tending procedure.

SECTION F – Additionality

F1. Additionality

Please provide details of how the schemes contained in the FMZ differ from and/or complement schemes expected to be funded as part of the wider TCF programme. Assessors will have access to any information submitted to the TCF, but additional information relating to any TCF bid may be submitted if relevant.

Please provide details of how the schemes contained in the FMZ differ from and/or complement other innovative transport schemes in the area.

With a strong corridor focus, the schemes proposed under the Transforming Cities Fund (TCF) programme largely aim to link the growth areas around the cities, with the city centres, enhancing both intra and intercity connectivity. Similarly, the Future Mobility Zone (FMZ) schemes aim to support growth and productivity and promote social inclusion via innovative mobility solutions. Whilst there is some overlap in the objectives of the schemes in both programmes, predominantly enhancing connectivity into, around and between both cities, the way in which these objectives are achieved differs between the two funding strands.

Complimenting Future Mobility Zone and Transforming Cities Fund Schemes
The implementation of an app-based payment system through the FMZ open access MaaS scheme will build on the contactless payment system under TCF. The two are aligned by removing the need to use cash to pay for transport services and together they can offer more in the way of digital payment options. The contactless payment system under TCF will allow people to use multiple operators' services across the Derby-Nottingham area, and the infrastructure provided by the TCF contactless payment service can be used to enable app-based payments too. The TCF contactless payment scheme will feed into the MaaS platform as passengers can use the app to either monitor how much they've spent using the contactless payment service, or use the app as another option to pay for their travel.

Real time information will be fed into the data platform that sits within FMZ and it will play an important role in enhancing traffic control centres, to enable schemes such as smart junctions. The collection of real time information and sharing it to said platform will allow companies to access it and use it to support the movement of people and services. Therefore, investment in improving the real time information (RTI) back office under TCF will help support the digitisation and sharing of transport data of the FMZ programme.

Looking at the regeneration and growth corridors for Nottingham and Derby under TCF, improvements to infrastructure and services will connect key developments in and around the cities. This includes the southern growth corridors running east to west (taking account of Boots Enterprise Zone and established communities such as Colwick and Netherfield), and the northern growth corridor which includes Top Valley and Bestwood. Regeneration and growth corridors in Derby include Mickleover to Mackworth, Pride Park to Chaddesden and Spondon, and Pride Park to Infinity Park and Derby South. Improvements to these corridors will provide transport infrastructure on which the basis of the FMZ schemes can build and expand. TCF schemes can feed into the electric mobility hubs by ensuring the hubs are served by well-connected walking and cycling routes, and public transport priority. This will be an important part of the development of electric mobility hubs, as it is recognised that sound infrastructure along corridors, particularly relating to walking, cycling, and public transport, will help facilitate uptake of electric mobility hub services. Furthermore, mobility credits offered through the MaaS scheme under FMZ will support the focus of connecting people with employment opportunities under TCF; demonstrating that the objectives align, even though the approaches used to achieve them differ.

The e-bike expressway that falls into TCF will link the city centres. This scheme will have e-bike stations situated at different locations along the corridor, such as at Long Eaton train station, which compliments the creation of electric mobility hubs under the FMZ programme. The electric mobility hubs, particularly 'neighbourhoods of the future', will have e-bike charging and parking facilities, as well as infrastructure for other transport services. Therefore, the electric mobility hubs will expand the overall e-bike network by providing additional charging facilities to the e-bike expressway stations collectively facilitating the uptake of active travel.

Differences Between Transforming Cities Fund and Future Mobility Zones
The schemes that fall within TCF focus on connectivity between housing growth areas, employment, and the cities, particularly the city centres. Whilst this is important for the schemes under FMZ, trialling new models, such as the unique MaaS platform, and innovative mobility services, such as electric mobility hubs, are the main concentration. TCF schemes provide the initial infrastructure and means to support the trial of innovative mobility solutions under FMZ.

A shuttle bus feeder service operating from East Midlands Parkway train station, to East Midlands Gateway and on to East Midlands Airport, will be a bus providing a new link between key destinations is proposed within the TCF programme. The trial of an autonomous shuttle bus operating on the East Midlands Gateway site as part of the FMZ programme is an extension of this scheme but with a forward-thinking delivery approach.

The collection of electric mobility hubs under FMZ will bring together different transport services; functioning as a key transport node for active travel, public transport, car sharing, and electric mobility, as well as supporting the collection and utilisation of transport data. This is a novel approach to transport provision that Nottingham and Derby are confident can be showcased as a first-class exemplar to other authorities in the UK and internationally. TCF schemes will feed into these hubs by providing infrastructure that supports access to the hubs, but the delivery of these hubs is new – again demonstrating that TCF is focussed on connectivity, but FMZ concentrates on trials of innovative approaches. The new MaaS

model and the electric parks are also examples of the delivery of transport services that have either had application previously,or are completely novel. Several FMZ schemes will compliment schemes proposed under TCF, such as upgrades to public transport feeding into MaaS provision.

The FMZ schemes will have a strong, robust evaluation plan to assess how new mobility services have addressed the objectives. Due to the trial of new and innovative transport services, it is crucial to have a comprehensive and structured evaluation approach. A PhD student from Loughborough University will conduct the evaluation into FMZ with assistance from an industrial placement student from University of Nottingham.

Additional Learning to be Gained that will Inform the Development of Future Schemes

The Low Emission Vehicle Enterprise and Learning (LEVEL) initiative will share insights and experiences gained from these schemes with local authorities, enabling for the dissemination of best practice from the Derby-Nottingham case studies. LEVEL will also seek to explore opportunities to develop collaborative training projects with the Nottingham Electric Vehicle Service Centre and training providers on a UK franchise basis, and create a LEVEL 'Future Mobility' e-learning accredited training course. The intention is to 'white label' the courses so different cities and local authorities can, for a fee, customise and add their own branding to create their own bespoke offer. Other income streams will include delegate fees for non-local authority participants attending workshop sessions. Further income, enabling the project to move from grant dependency to self-sufficiency, will be generated by having access to an archive of training materials which can be used in delivering commercial training courses.

SECTION G – Declarations

G1. Senior Responsible Owner Declaration	
As Senior Responsible Owner for Future Mobility City I hereby submit this request for approval to DfT on behalf of Derby-Nottingham and confirm that I have the necessary authority to do so. I confirm that Derby-Nottingham will have all the necessary statutory powers in place to ensure the planned timescales in the application can be realised.	
Name: **Chris Carter**	Signed: 
Position: **Head of Transport Strategy**	

G2. Section 151 Officer Declaration

As Section 151 Officer for [*name of city region*] I declare that the scheme cost estimates quoted in this bid are accurate to the best of my knowledge and that [*name of city region*]

- has allocated sufficient budget to deliver this scheme on the basis of its proposed funding contribution;
- accepts responsibility for meeting any costs over and above the DfT contribution requested, including potential cost overruns and the underwriting of any funding contributions expected from third parties;
- accepts responsibility for meeting any ongoing revenue and capital requirements in relation to the scheme;
- accepts that no further increase in DfT funding will be considered beyond the maximum contribution requested and that no DfT funding will be provided after 2022/23;
- Confirms that the authority has the necessary governance and assurance arrangements in place and the authority can provide, if required, evidence of a stakeholder analysis and communications plan in place.

Name:	Signed:

Submission of Bids

The deadline for bids is: 23:59pm on 24 May 2019.

An electronic copy (including supporting material) should be submitted to:
FutureMobilityZones@dft.gov.uk

However, if you must send hard copies of papers, please provide three copies to:

Fran McMahon
Future Mobility Zones
Department for Transport
3/27, Great Minster House
33 Horseferry Road
London
SW1P 4DR