National Centre for Social Research

Implementation and Process Evaluation: Wave 1 Report

National Evaluation of Future Transport Zones

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Executive summary

This report presents findings from the first longitudinal case study conducted as part of the Future Transport Zones (FTZ) National Evaluation. The FTZ programme is a Department for Transport (DfT) funded initiative that involves selected areas trialling new transport services and innovations. In each area, the local FTZ programme is made up of distinct 'schemes' all of which contribute to innovation in transport delivery.

Case study aims and methodology

This case study focuses on the implementation of the programme, informed through qualitative research with stakeholders in each of the FTZ areas: West Midlands Combined Authority, West of England Combined Authority (WECA), Solent (representing Portsmouth, Southampton, Isle of Wight and Hampshire) and Derby and Nottingham. It also draws on information taken from the quarterly updates that areas submit to DfT. The report explores:

- The scheme design, implementation and delivery processes FTZ areas have put in place to support successful programme and scheme roll out;
- The progress areas have made;
- Challenges experienced, and lessons learnt thus far.

Schemes included in this report involve both direct transport interventions, such as mobility hubs, bicycle-share and logistics micro-consolidation hub, as well as data innovations, such as data hubs and customer insights. Most of the schemes included in this case study are in the design and planning stages, with some due to launch in 2022. This case study presents a useful insight into the factors that are likely to contribute towards schemes meeting their intended objectives and outcomes in the future.

Key findings

Scheme design and implementation

Flexible funding and experimental design of programme welcomed

- Some programme leads and senior leaders involved in programme delivery welcomed the experimental design and flexible funding model of the FTZ programme. The funding model facilitated the ability to think innovatively and to undertake a 'fail fast' approach to delivery.
- There appeared to be tension between FTZ programme design, which encourages flexibility and experimentation, and established approaches to project delivery and management in local authorities. Some areas overcame this by adopting more flexible approaches to project management that were underpinned by an experimental ethos.

Moving from conceptual thinking to delivery has taken time

- While some of the schemes require greater innovation, planning and creative thinking than others, all of them were introducing new innovative transport solutions to their area. Given this, moving from conceptual thinking to the tangible has, in some areas, taken time.

Cooperation from a range of stakeholders has been important to support scheme progression

- Securing the co-operation and buy-in of key decision-makers was crucial to ensuring successful roll-out of the FTZ programme. A range of interlinking factors influenced the ease with which decisions could be made. This included navigating multi-level governance and decision-making sign off from a range of partners, changes in political leadership and seeking additional planning approvals from multiple highway authorities.
- Each FTZ area covers several different local authorities. Successful buy-in has been driven by strong stakeholder management and setting clear expectations of how the different authorities should engage. Some areas appointed a designated officer in each authority to facilitate efficient communication and enable schemes to stay on track.
- In some areas, sharing the scheme's vision and, where possible, developing a minimum viable product or proof of concept as early as possible have proven successful in securing buy-in from constituent local authorities and supported scheme progression.
- Working collaboratively by meeting regularly and, where feasible, meeting in-person with all programme members was important to avoid any siloed working and to ensure everyone was working towards a shared vision.
- Securing public interest and buy-in was prioritised by areas. Successful ways of achieving this included consulting community groups and developing strong communication plans to mitigate against any anticipated negative publicity. Similarly, developing schemes that meet the needs of their users was seen as crucial to ensure behaviour change.

Scheme progress

Fostering closer and collaborative relationships with suppliers helped to facilitate the flexible nature of scheme design and delivery

- Areas engaged with a wider pool of suppliers than they would typically use to access new technologies and specialist skills.
- Working with suppliers, particularly new partnerships, raised some challenges, such as being unfamiliar with a contractor's working practices, lack of control over delivery deadlines, and - where multiple suppliers were used - limited co-ordination of delivery.
- A close and collaborative working relationship with suppliers was perceived as important to facilitate the flexible nature of scheme design and delivery. It also helped to ensure suppliers delivered against the expectations set out in procurement specifications.

The COVID-19 pandemic posed both opportunities and challenges to FTZ scheme set-up and delivery and impacted areas to differing degrees

- In some areas, moving to remote working caused communication to become less fluid, making it harder to build relationships in newly established FTZ 'teams'.
- The pandemic impacted the public's travelling behaviours which meant some schemes were no longer viable or required a re-scope.
- The pandemic diverted corporate function resource, such as procurement, to other projects, for example to secure Personal Protection Equipment.
- The pandemic has led to prolonged lead-in times for suppliers to secure materials such as bicycle parts. There were some concerns that this might cause delays to the implementation of schemes such as bike share.
- However, the pause to programme implementation due to the pandemic allowed areas to reflect on their planned approaches and make changes to ensure schemes were designed most appropriately to meet their intended outcomes.

Challenges

Areas were grappling with how to achieve long-term scheme viability and financial sustainability

- Securing senior stakeholders' buy-in that innovative changes should remain after programme completion and scoping out how to make schemes financially and commercially sustainable are two key challenges being tackled at present.
- While scheme sustainability is important, it does raise the issue that focus is shifted from experimenting and trialling of schemes to exploring future viability.

Securing resource across a range of posts and support services posed a challenge for the FTZ areas

- Areas required significant time investment from corporate functions, such as procurement and legal teams. Needs were not always met due to a lack of capacity, COVID-19 was a factor, as indicated above. This contributed to scheme delivery delays, as some programme managers had to wait longer than usual for specifications to be published and contracts to be confirmed with suppliers.
- Areas overcame this challenge in one of two ways. Some bought in support from external suppliers to keep programmes on track. Others learnt that they needed to provide corporate functions with advance warning to receive timely support.
- Finding candidates with the right skills and expertise to deliver specific schemes or core programme activities also proved challenging in some areas. In some cases, this had been overcome by dividing jobs into multiple roles, but in others, vacant posts remain.

Key lessons learnt

Participants reflected and shared key lessons learnt so far and three lessons emerged:

- Sharing learning in relation to factors that fed into scheme design within and across FTZ areas was considered by some to be the most useful aspect of the programme.
- Acting early to avoid delays and to ensure scheme set-up could develop at pace. Activities considered important at scheme inception included giving corporate functions, such as procurement and legal teams, advance warning of support required. It was also important to consider permission approvals needed where transport solutions require use of private land.
- Working collaboratively with internal and external stakeholders was important to ensure that programme and scheme visions were shared. It also enabled areas to embrace setbacks and challenges and work together to find solutions.

Glossary

Agile project management	Agile project management approaches are iterative, meaning that a project can be regularly adjusted in response to emerging needs. Unlike traditional project management approaches, which typically work well when delivering a project with a pre-defined end, agile project management approaches allow for greater flexibility and innovation.
Capital funding	Funding provided to public bodies for the development and improvement of significant fixed assets, including land, buildings and equipment, which will be of use or benefit in providing services for more than one financial year.
Combined authority	A legal structure established between two or more local authorities in England, for the purpose of holding greater shared decision-making power.
Dynamic Demand Responsive Transport (DDRT) / Demand Responsive Transport (DRT)	DDRT / DRT is a flexible mode of shared transport that responds to real-time changes in traveller demand. For example, rather than having traditional or example, rather than having traditional buses which operate along a scheduled route, smaller minibuses may take multiple people directly to, and from, destinations they specify, completing multiple journeys at one time.
Dynamic Purchasing System (DPS)	DPS is a procedure available for contracts for works, services and goods commonly available on the market. A DPS is an electronic system which suppliers can join at any time. The purpose of DPS is to give buyers access to a pool of pre-qualified suppliers.
E-mobility	Electric transport (i.e. cars, bicycles, buses or scooters) which are either partially or fully powered by electricity.
Fail fast	Fail fast is a concept used in Agile project management and is characterised by working in short sprints of time on activities, immediately assessing the outcomes of these activities and using this to inform next steps to programme set-up.
Highway authority	A highway authority has statutory duties to record and keep public rights of way open. A local highway authority is usually the top-tier local authority in an area i.e. A unitary authority, county council and metropolitan

	boroughs. Where FTZs are run by combined authorities they have to seek permission from any relevant highway authority within their jurisdiction.
Matched funding	Funding allocated to a project with an expectation that the organisation receiving the funding also secures a defined proportion of funding from other sources.
Micromobility	Micromobility describes transportation via small, lightweight vehicles such as bicycles or scooters which may be privately owned or rented for short periods of time.
Revenue funding	Funding provided public bodies to cover daily activities, services or to maintain fixed assets. For example, employees pay, travel expenses and IT consumables are all deemed to be revenue expenditure.
Unitary authority	A single local government responsible for services that would typically be delivered separately by a county council or district council.
Work package	A single strand of work that sits within a wider programme of activity.

1 Introduction

This report presents findings from the first in a series of longitudinal case studies which explore the implementation of the Future Transport Zones (FTZ) programme and is conducted as part of the national evaluation of the intervention. The case study consisted of qualitative research with stakeholders contributing to the implementation of the FTZ programme in each of the intervention areas: West Midlands Combined Authority, West of England Combined Authority (WECA), Solent (representing Portsmouth, Southampton, Isle of Wight and Hampshire) and Derby and Nottingham.

1.1 Future Transport Zones programme

The FTZ programme is a Department for Transport (DfT) funded initiative that involves selected areas trialling new transport services and innovations. FTZ areas are a key element of the Government's Future of Mobility Urban Strategy[a] and part of the wider shift to cleaner transport technology. With a focus on trialling new and innovative modes and approaches, the DfT's core objectives for the programme are to:

- trial new mobility services, modes and models;
- improve integration of services;
- increase the availability of real-time data; and
- create a digital marketplace for mobility services.

There are four areas participating in the programme. West Midlands Combined Authority was selected by the DfT to act as a 'pathfinder area' in 2018. The West of England, the Solent region and Derby and Nottingham were subsequently selected in March 2020 following a competitive bidding process. Each area is implementing a set of schemes designed to meet the objectives of the programme detailed above, whilst reflecting local needs and ambitions. Each FTZ area is structured slightly differently which has implications for programme delivery, decision-making powers and financial management.

West Midlands Combined Authority – The combined authority was established as a legal entity in 2016 and can make certain collective decisions across council boundaries. Within the combined authority there are seven constitute local authorities[b]. The combined authority is chaired by an elected Mayor. While the Mayor does have some executive powers, most decision-making must be approved by members of the combined authority. The FTZ programme is being delivered by Transport for West Midlands (TfWM), who manage the region's transport system on behalf of the West Midlands Combined Authority (WMCA). TfWM[c] schemes have been divided into five main Work Packages, a number of which focus on use of data.

- **West of England Combined Authority (WECA)** – The combined authority was established as a legal entity in 2017 and contains three constituent unitary authorities[d]. The combined authority is also chaired by an elected mayor. Again, while the mayor has some executive powers, most decision-

making must be approved by members of the constituent authorities. The programme consists of five schemes that make up the WECA FTZ programme.

Solent – this FTZ programme is delivered by Solent Transport, which represents a partnership with three unitary authorities (Portsmouth City Council, Southampton City Council and the Isle of Wight Council) and one county council (Hampshire County Council)[e]. Solent Transport is not a legal entity. They oversee FTZ programme delivery and require buy-in across the four local authorities the programme covers for all programme decisions around scheme design and delivery. Solent Transport[f] also draw on support functions such as procurement, legal and finance teams from across the four local authorities. Southampton City Council are the budget holders on Solent Transport's behalf. Schemes sit under two themes – 1) personal mobility and 2) sustainable urban logistics.

Derby and Nottingham – are both unitary authorities. While the two areas are seen as one for FTZ funding purposes, conceptualisation, set-up and delivery of the schemes is undertaken separately. However, the FTZ programme is being overseen by a joint governance board which includes senior stakeholders from each council. The FTZ has three core schemes which aim to build on the area's existing transport offer.

For the purposes of this report the term local authority is used to describe all types of local government (combined authority, unitary authority, county council, district council). Where findings relate to a specific type of local government this is made clear in the report.

Table 1 sets out the full range of schemes by area. As noted, schemes have similar objectives but are designed to respond to local needs. Mobility as a Service (MaaS) and e-scooter trials[g] are the only schemes that are consistent across areas, but even then, design features and implementation models differ by area.

Table 1 Scheme by FTZ area

TfWM	WECA	Solent	Derby and Nottingham
MaaS	MaaS	MaaS	MaaS
Data projects	Data hub		Data Hub
E-scooter trials	E-scooter trials	E-scooter trials	E-scooter trials
Mobility Credits	Mobility Credits	[Mobility Credits]	
Dynamic Demand Responsive Transport (DDRT)	DDRT	[DDRT]	
Mobility hubs	Mobility hubs		Mobility hubs
Innovation showcases	Urban freight	Bike share	Depot of the future

Segmentation models		Drone logistics	
Sensor network		Delivery consolidation	Data Platform (Sensor Network, Smart Junction, Data Hub)
		[Lift sharing]	

[denotes scheme on hold]

1.2 The National Evaluation

The core objectives of the national evaluation are to maximise the opportunities for learning, to understand how new digitally enabled mobility modes, services and business models can be delivered successfully, and to assess the extent to which the programme has achieved its intended outcomes. NatCen's role as national evaluator is to provide support to the FTZ local evaluations and to evaluate the FTZ national programme as a whole, bringing together insights from across the areas.

The national evaluation is taking a theory-based approach – this approach to evaluation stipulates that all programmes have an underlying theory or rationale as to how they expect change to occur. The overall programme level Theory of Change (ToC) has been built around a typology that has categorised schemes based on their ultimate aims (see Appendix A). Broadly speaking each pathway was aligned with an overarching objective:

- **Customer Offer pathway:** Improve the customer offer and experience to encourage sustainable transport use.
- **Use of Data pathway**: Improve the availability of data to improve transport planning capability within local authorities.
- **Movement of Goods pathway**: Use new technologies to make the movement of goods more efficient.

The case study is intended to explore the design, implementation and delivery processes that areas have put in place to support successful programme roll out.

The evidence from this study will be used to identify learnings that can be applied to other schemes and will also be collated to build an evidence base to support future roll out of similar schemes. It will also contribute towards the broader understanding of how and why schemes have achieved locally identified outcomes articulated in the national ToC. The case study supplements areas' own process evaluations by bringing in an outsider perspective, offering cross-cutting learning about schemes, and addresses

evidence gaps. A MaaS longitudinal case study was also delivered in parallel to this study.

1.2.1 Implementation case study

The implementation case study aims to answer the following research questions:

- How is the programme being implemented across areas?
- What has gone well and what has proved challenging?
- What lessons have been learnt?

The research also explores how different factors, such as characteristics of local areas and governance structures, affect delivery of the programme and specific schemes. In order to capture these insights in depth, the case study was designed to focus on the whole FTZ programme for each area and up to two schemes per area[h]. The schemes included in the implementation case study are set out in Table 2 below. NatCen asked FTZ areas to select the schemes they wanted to showcase. Areas were advised by NatCen to consider selecting schemes where a wide range of lessons learnt had emerged and/or

where they felt the lessons learnt would be useful for other areas to observe. These schemes will be revisited each year during the course of the evaluation.

Table 2 Selected scheme for implementation case study

Area	Scheme	ToC pathway	Aim
TfWM	Customer insight/human centred data	Customer Offer	Improve understanding of customers' travel behaviour, to enable better planning and design of transport services
TfWM	Mobility Hubs	Customer Offer	Support greater transport connectivity in deprived areas
WECA	Data hub	Use of data	Centrally produce more knowledge about how transport services are used in order to help people plan and deliver services better
WECA	Mobility Hubs	Customer Offer	Enable seamless interchange between transport modes
Solent	Bike share	Customer Offer	Strengthen sustainable transport offer, by introducing secure shared bike parking
Solent	Micro consolidation	Movement of Goods	Provide a more sustainable, lower carbon last mile delivery and collection offer
Derby and Nottingham	Mobility Hubs	Customer Offer	Provide electric vehicle charging, car club and other electric modes (e-scooters, e-bikes) in one place

1.3 Methods

A qualitative approach was used to answer the research questions set out in section 1.2. This consisted of 23 in-depth interviews with stakeholders who had a key role in implementation of the FTZ programme and schemes in their area. This approach enabled the evaluation to gather in-depth insights into stakeholders' experiences of implementing the programme and schemes, including their views on what has gone well, key challenges and the lessons learnt. Interviews lasted approximately 60 minutes, were conducted using MS Teams and took place in October and November 2021. To supplement the

interviews a review of the quarterly reports that areas submitted to DfT in October 2021 was conducted. The purpose of this was to ensure we fully captured details of the schemes showcased in the case study report. Broader engagement with the FTZ areas has also fed into the development of this report. This includes information gathered from the quarterly Community of Practice sessions which are attended by FTZ areas and facilitated by NatCen. As well as six-weekly meetings that NatCen and the areas have to discuss programme implementation and evaluation activities.

1.3.1 Sampling and recruitment

A purposive sampling approach was used to capture a diverse range of insights from four key types of stakeholders with varying expertise and involvement at both a programme and scheme level. At the programme level, this included staff with direct responsibility for delivery of the programme and internal stakeholders, such as senior leadership and personnel responsible for programme project management. At the scheme level, this included project managers leading on schemes and external stakeholders working on specific schemes. Each FTZ area was well represented and a fairly even spread of programme and scheme level stakeholders was achieved. A breakdown of the achieved sample by area and stakeholder type is shown in Table 3.

The national evaluation team worked closely with FTZ areas to identify and recruit participants. The team designed an invitation email which set out clear information about the study and what participation would involve. FTZ areas issued invitation emails and stakeholders were asked to opt-in to participate. Contact details were then securely transferred to the national evaluation team and interviews arranged over email.

Table 3 Achieved sample

Stakeholder type	TfWM	WECA	Solent	Derby & Nottingham	Totals
(A) Programme Delivery	2	1	2	2	7
(B) Programme level stakeholder	1	1	1	2	5
(C) Project manager/lead	2	3	1	1	7
(D) Project stakeholder	1	2	1	0	3
Total	6	7	5	5	23

1.3.2 Fieldwork and analysis

A topic guide, designed in collaboration with the DfT, was used to guide the interviews. The guide was designed to be used with different types of stakeholders and was thus organised into modules. The main themes covered included background and context, programme management, scheme delivery and lessons learnt.

All interviews were audio recorded with participants' permission and then transcribed verbatim. The transcripts were managed and analysed using NatCen's Framework approach which allows in-depth exploration of the data by case and by theme. Coded data was then reviewed to draw out the range of views across participants to identify any similarities and differences within and across FTZ areas. Patterns in responses were identified to ensure analysis went beyond just a description of themes and offered a rich explanation, where possible.

1.3.3 Interpreting the findings

The report avoids giving numerical findings, since qualitative research cannot support numerical analysis. This is because purposive sampling seeks to achieve range and diversity among sample members rather than to build a statistically representative sample, and because the questioning methods used are designed to explore issues in depth within individual contexts rather than to generate data that can be analysed numerically. What qualitative research does do is to provide in-depth insight into the range of experiences, views and recommendations.

In order to protect participant's anonymity quote labels only include FTZ area. Due to the small sample size, any other detail regarding a participant's characteristics would potentially lead to identification.

1.4 Report structure

The report brings together findings from interviews with stakeholders on implementation of the FTZ programme and selected schemes, with a focus on drawing out learning. Findings are reported thematically, with comparisons

between areas and schemes discussed where relevant. The report is structured as follows:

- **Chapter 2** describes **implementation of the FTZ programme**, including governance arrangements and project management approaches.
- **Chapter 3** explores **implementation of FTZ schemes**. An overview of the schemes selected for inclusion in the case study is provided, followed by a discussion of key successes, challenges and learning so far.
- **Chapter 4** concludes the report with an overview of the **key lessons learnt** and next steps for the case study element of the evaluation.

2 Programme implementation

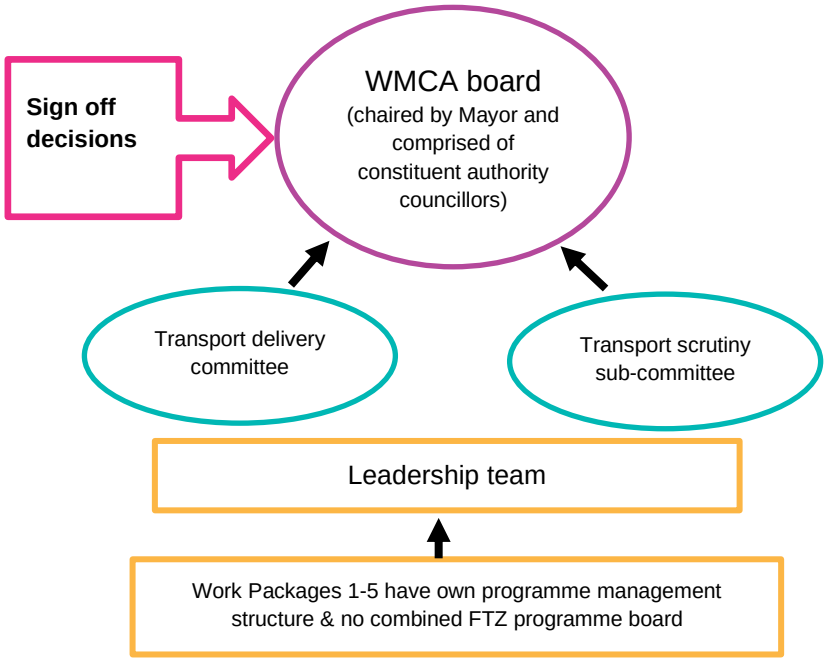
This chapter explores how the FTZ programme has been managed and implemented while chapter 3 describes implementation of specific schemes within the programme. It describes the approaches and processes that have been put in place to set-up and deliver the FTZ programme and where applicable, any lessons learnt.

2.1 Governance and legal status

Each FTZ programme area has shaped their governance structure differently and this is largely underpinned by the structure of the FTZ area (for more information see section 1.1):

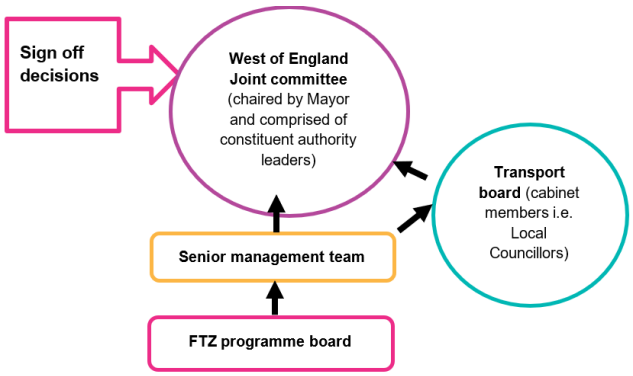
TfWM have no specific FTZ governance board, each of their work packages feeds into existing governance structures as shown in Figure 1.

Figure 1 TfWM FTZ governance structure



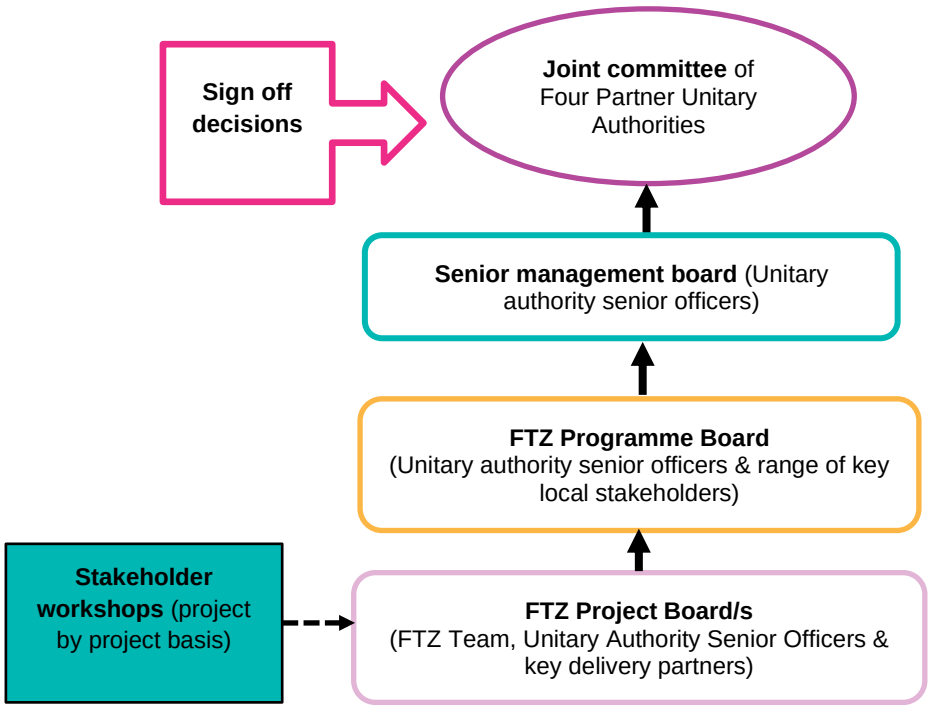
WECA's FTZ governance is multi-level as shown in Figure 2.

Figure 2 WECA FTZ governance structure


Sign off decisions
West of England Joint committee (chaired by Mayor and comprised of constituent authority leaders)
Transport board (cabinet members i.e. Local Councillors)
Senior management team
FTZ programme board

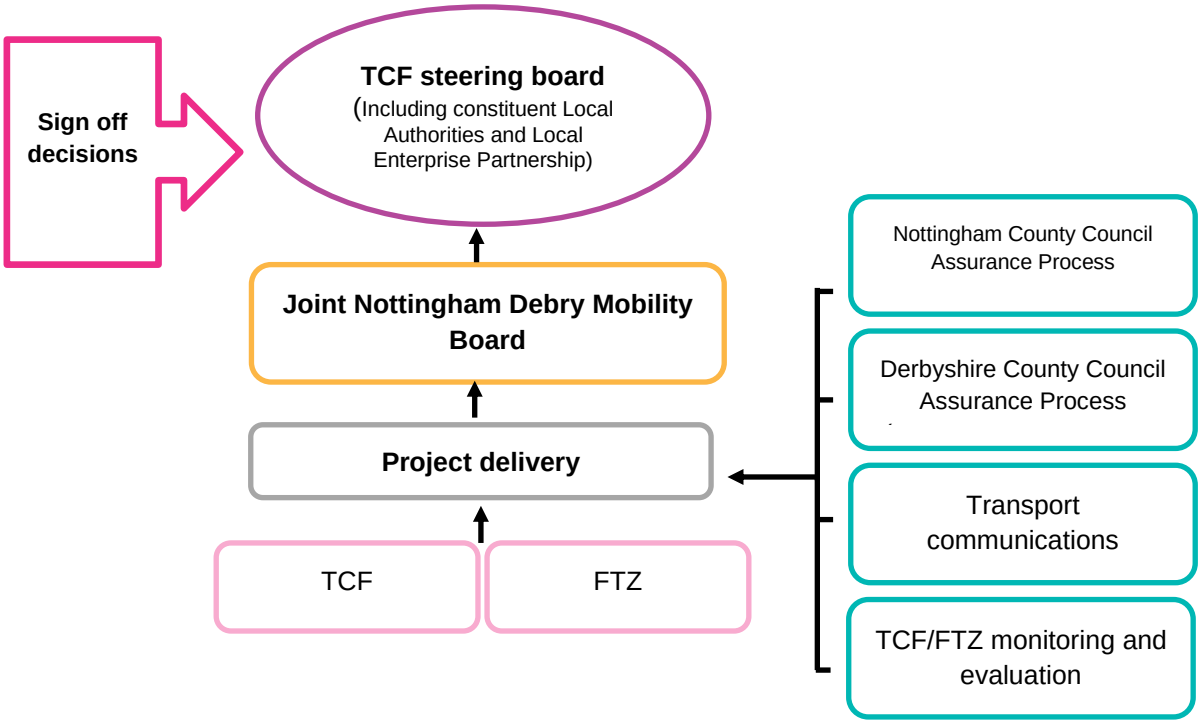
Solent operates outside of a combined authority and as a result governance is also multi-level as shown in Figure 3.

Figure 3 Solent FTZ governance structure



Derby and **Nottingham** are both unitary authorities and there is no combined authority. As a result, they have a similar multi-level governance structure to Solent as shown in Figure 4. The FTZ governance structure follows the same pathway as the TCF programme. While the TCF steering board have final sign off, formal approval on decisions is sought at the Nottinghamshire and Derbyshire County Council Assurance boards.

Figure 4 Derby and Nottingham FTZ governance structure



A range of interlinking factors appear to be influencing the ease with which decisions around the FTZ programme can be made. This includes navigating multi-level governance and decision-making sign off from a range of partners, changing political powers and navigating the additional planning approvals needed from all relevant highways authorities programme schemes cover.

One of the core functions of every programme team, since programme inception, has been to secure buy-in, from all the relevant decision-makers. Where areas operate from within a combined authority, such as TfWM, buy-in and support from a mayor was perceived to have been important to keeping programme progress on track.

> *"We've got a direct relationship with the mayor's office and the mayor. The mayor is very supportive of innovation generally, and it's part of his manifesto and it's got that political support."* (TfWM)

In other areas that are operating without a combined authority, such as Solent and Derby and Nottingham, participants explained that they needed to secure buy-in from a wide range of stakeholders, including from those across the party-political spectrum. It was noted that undertaking decision-making co-operatively can sometimes take longer to achieve, particularly when each authority has different views on how schemes should be implemented in their jurisdiction. In some FTZ areas, such as Solent, having an experienced programme lead who has the knowledge and skills to navigate through challenging governance board meetings has been essential to ensure critical decisions about schemes are made.

Some participants perceived that delays to decision-making and challenges in securing scheme specific buy-in was a result of recent political changes in council leadership, including changes to the mayor and local councillors. In some circumstances, this has caused delays to specific schemes as key decisions had not been signed off in a timely way.

FTZ areas led from the combined authority level suggested that gaining approval from the necessary highway authorities could add an additional layer of decision-making to the sign-off process. However, as yet no area had encountered any delays to programme implementation because of this.

Overall, the legal status and resulting shape of governance structures across the FTZ areas appears to be posing both opportunities and challenges. These are discussed throughout the remainder of this chapter and the next, which focuses on implementation at the scheme level.

2.2 FTZ programme design

The FTZ programme receives additional innovation funding as part of the Transforming Cities Fund (TCF). The TCF programme focuses on delivering improvements to more traditional public transport modes to boost productivity and promote connectivity while FTZ has been designed to provide an opportunity for trials of *new* modes or services. Additional differentiating aspects

of the FTZ programme are the experimental nature of the programme and schemes and funding which can be used flexibly over an extended time period.

2.2.1 Experimental design

The experimental nature of the FTZ programme, and the ability to trial new schemes with no pressure for immediate success, was welcomed by some programme delivery stakeholders and senior programme stakeholders from across the different FTZ areas. Some areas referred to the design as a 'fail fast' approach to delivery.

Allowing areas to focus on outcomes, rather than outputs, was felt to be the right approach for this programme. It enabled areas to think strategically and coherently about the sequencing of activities needed to achieve the programme's intended outcomes.

The experimental nature of FTZ schemes did however pose a tension with local authority project management practices. Typically, project management processes are set-up to ensure projects follow a linear progression. Similarly, there is close monitoring of a risk register to ensure projects do not fail. In contrast, the FTZ programme encourages a more flexible and dynamic approach to project management which is underpinned by experimentation, a non-linear path towards progression and some risk taking (for more information on the project management processes used by FTZ areas see section 2.4.1).

This disconnect posed a range of challenges. In some instances, not all stakeholders understood the experimental ethos, and this sometimes led to protracted decision-making. Scheme and programme leads explained a key activity that helped secure buy-in was spending time with internal stakeholders (i.e. wider teams, such as policy teams within the combined authority or unitary authorities) explaining the programme ethos and how it aligns closely with wider local authority values. In addition, in some areas, the governance structures underpinning the programme meant decision-making could only be signed off once a quarter. This did not always align with the agile approach which required working at pace and timely decision-making to keep progress on track.

2.2.2 Flexible funding

Some programme delivery stakeholders, who had a long track record of delivering traditional transport programmes within a local authority, welcomed having an extended funding period within which they could spend their budget flexibly. The funding approach was seen as nicely complementing the experimental programme design, as it facilitated the ability to offer flexibility on how budgets were allocated across and within programme schemes. This model created a range of opportunities and challenges, the first being access to matched funding.

In some areas, having longer-term flexible funding enabled areas to engage with corporate investors and other government departments to match fund and

broaden out the scope of some schemes. For example, TfWM already received funding from the Department for Culture Media and Sport (DCMS) to deliver a 5G urban communities demonstrator pilot. They used FTZ funding to match fund this scheme and broaden its focus and explore how 5G could support transport initiatives. In other areas, some of the proposed plans included in the original funding bids relied upon the expectation that matched funding would come from transport operators and businesses. However, due to the COVID-19 pandemic and the negative impact this has had on operators and some business revenues, these plans have been reconsidered. For example, Solent Transport's planned budget for their car share scheme was based on matched funding from businesses. An independent review is being undertaken to establish the feasibility and scope of the scheme. Decisions on to how to progress with the scheme will be based on the findings.

Having a four-year funding period has given some areas the time to find candidates with the relevant skills needed. The funding also provided some areas with the opportunity to upskill staff where there were particular skill gaps or new skill requirements that were linked to the programme. For example, in TfWM a few team members were trained to code to support the data schemes. However not all areas have been successful in attracting personnel with the right experience (see section 2.4.4 below for more details).

There were, however, two challenges raised with the funding model. First, in some areas, there were initial concerns that the FTZ programme only provided capital funding and some of the work planned relied upon revenue funding. Given the rules that determine what local authority expenditure can be categorised as capital spend[i], this raised a challenge in allocating budgets. Areas were able to overcome this challenge in two ways, either by using matched funding for revenue purposes or reviewing more closely whether there was any flexibility in how capital funding could be allocated, to ensure it met the programme's needs.

Second, it was noted that while capital funding offers the opportunity to develop these innovative schemes, there is no long-term funding to ensure that once the schemes are set-up, they are sustainable, and services continue to be available. To combat this, areas were already considering how to deliver schemes so that they could become financially sustainable in the long-term. This, however, raises the issue that the focus is removed from experimenting and trialling schemes and shifted to exploring how schemes' future viability and sustainability can be secured.

2.3 Programme set-up

2.3.1 Structuring delivery team

FTZ areas chose one of two ways to structure their core delivery team. TfWM, Derby and Nottingham and Solent made use of existing personnel and bolstered this capacity with new staff. Programme team size varied and was

largely dependent on current capacity and the legal status of the delivery organisation:

- **TfWM** initially made use of existing staff capacity to deliver the programme and there was limited co-ordination of the whole programme. Instead, each work package was delivered by specialist departments within the combined authority. Over time, a decision was made to introduce a programme lead to provide programme coordination.
- **Derby and Nottingham** took a similar approach after initially relying on existing personnel to deliver the programme and recruited external people where there were gaps.
- **Solent** had to significantly expand their team to deliver the programme. As described in chapter 1, they are a partnership and not situated within one local authority so they could not draw on a wide pool of existing personnel.

The second approach, utilised by WECA, involved resourcing the programme mainly using consultants, rather than increase internal capacity. There was an overall programme lead and scheme leads and they were supported by three different consultant groups that were involved in scheme delivery and monitoring and evaluation.

2.3.2 Challenges with set-up

There were two key challenges raised when discussing programme set-up. First, programme set-up coincided with the onset of the COVID-19 pandemic which led to remote working. Here, some participants noted that remote working hampered effective programme set-up. For example, where there had been new staff brought in to deliver the programme it was difficult to build rapport quickly remotely. Participants reported that remote working stifled the opportunity to have informal conversations that were perceived as beneficial when developing an innovative and experimental programme of work:

> *"I think something like FTZ, the whole concept of it is to try and look at new technology and using, thinking of new ways of doing things. I think if you were in the office, it would be easier to have groups of people working all the time, working together and collaborating and pushing different ideas off each other. I think when you're working at home, it's more effort to do that. I'm not saying you can't do it - you can have a collaboration meeting on Teams, but you get less of that informal stuff, I think, so it becomes, everything has to be arranged."* (Derby and Nottingham)

The second challenge centred on the ability to secure personnel to deliver the programme. In some areas, such as Solent, who had to expand their capacity to deliver the programme, this this was overcome by appointing interim consultants who progressed with programme set-up at pace, while permanent staff were recruited.

Other areas, such as Derby, sought to recruit a permanent core programme team from the outset. This resulted in core FTZ programme posts being vacant

for longer periods. It was perceived by some participants that this may have led to delays in progressing certain schemes.

In some areas, a lack of continuity between the team that bid for the FTZ funding and those who joined to deliver the programme meant new personnel struggled to understand the funding proposal content and the rationale behind some of the proposed plans. Over time this was seen to be an opportunity rather than a challenge. New personnel explained that they were able to interrogate the assumptions made in the bid and contribute and improve the overall Theory of Change originally developed for the programme.

2.4 Ongoing programme management

2.4.1 Programme management

Traditionally, local authorities have used methods such as PRINCE2[j] or Waterfall[k] to manage projects. Such approaches typically work well when delivering a programme with a pre-defined end, such as the development of some form of transport infrastructure. While some areas, such as Derby and Nottingham have chosen to continue with these approaches, others, including TfWM and WECA, have recognised that making use of agile project management methods, or at least using some principles (in the case of Solent), is more appropriate for the FTZ programme. Agile project management takes an iterative approach to delivering a project throughout its life cycle. The agile principles were felt to better suit management of the FTZ programme as they align with the principles of taking a flexible approach to delivery in order to foster innovation.

To date, areas have implemented the agile project management approach and/or principles with varying success. Examples of where agile project management has worked well include the development of TfWM's mobility hubs and rules of the road schemes. TfWM's set-up of mobility hubs was undertaken in "short sprints". This involved setting targets and reviewing these on a fortnightly basis in order to establish how much progress had been made and whether scheme direction needed changing. In other areas there has been appetite to use the agile approach, however it has been a challenge to find candidates at recruitment with the right mix of agile project management experience and transport programme management.

2.4.2 Financial management

While a perceived key benefit of the programme is that the budget can be spent flexibly, there are still strict and robust financial management processes applied to budget management across the areas. This includes regular reviewing and re-forecasting, if needed. Areas have also taken a transparent approach to financial management, clearly documenting any changes to budget allocation across schemes as it occurs. In some areas changes to budget allocations are signed off by the relevant governance boards. Some areas have chosen to

share this level of detail with the DfT for transparency purposes, even though it is not required.

The 'budget holder' varies across FTZ programme areas. TfWM, WECA and Solent have responsibility for their FTZ programme budget. In Nottingham and Derby, Nottingham hold the budget and Derby must submit business cases to release their share.

On the whole, participants from all areas felt that financial management had worked well thus far, but this may be due in part to the fact that many schemes that require significant spend have yet to be launched. Some areas predicted that a few issues may arise in the future. For example, due to a local authority's financial authorisation policy, in one area the programme lead was only able to sign off low levels of expenditure (i.e. anything that is £25,000 or below). As spending increases there was concern that there may be a 'bottleneck' created if sign-off on expenditure can only be done by senior management. Some areas raised that their local authority was experiencing challenging financial circumstances and as a result there was extensive scrutiny over any outgoing expenditure, even if it was utilising the FTZ programme budget.

The findings suggest that FTZ areas know broadly how the budget will be allocated to each scheme, however participants noted that there will still be a degree of flexibility on specific expenditure. Some areas have conducted soft market testing in part to establish costs. This has been particularly useful when engaging with new suppliers where costs of their services and supplies were unknown.

2.4.3 Stakeholder management

Alongside the core delivery team, all areas relied on a range of wider internal stakeholders. This included stakeholders from within their combined authority or unitary authorities and, external stakeholders (e.g. suppliers) to deliver the FTZ programme.

Internal stakeholders

Key internal stakeholders included project management teams who often hold timetables, risk registers and in some cases budget management. Other internal stakeholders included scheme leads who may sit in other teams and have a broader remit than leading an FTZ scheme. Procurement and legal teams have also been central in securing suppliers to deliver aspects of particular schemes. One of the key challenges identified across all areas has been limited capacity and resource, particularly within the procurement and legal departments which has led to programme delays (please see section 2.4.4 for further details).

Implications or lessons learnt

- **Strong stakeholder management**. Establishing strong working relationships, through regular meetings to discuss programme and scheme specific progress, with internal departments was thought to be key to the

successful delivery of the programme. In addition, ensuring all internal stakeholders share the same vision for the programme.

- **Provide advance warning of support required.** Areas explained that it was key to give other local authority departments such as procurement, legal and communications teams as much forewarning as possible that their support is required. This allowed these departments to factor the time requirements into their planning so timely input can be achieved.

External stakeholders

FTZ programme areas have also engaged with a wide range of external stakeholders, including, but not limited to, local universities, consultants used for programme delivery, consultants that offer monitoring and evaluation support, and suppliers of products or services, such as bikes for bike share schemes or the MaaS app. The extent to which areas had engaged with external stakeholders varied and largely depended on the programme delivery model used (i.e. reliance on external partners, or not, to deliver core components of the programme) as well as how far along the areas had progressed with their schemes.

One example of positive engagement with external stakeholder includes WECA's work with consultants. In WECA where there is strong reliance on consultants to deliver core components of the programme, taking a collaborative approach, rather than applying the usual contractor/supplier relationship proved helpful when trialling innovative schemes. Participants explained that taking a collaborative approach to design and delivery enabled WECA to input more regularly, than they typically would, to a supplier's work. For example, they were able to offer 'live' feedback as decisions were being made, rather than waiting for outputs to be submitted for review.

Another example of positive stakeholder engagement was provided by TfWM. They found that the programme's focus on innovation and experimental design led to more interest than usual from private businesses, who were keen to support the public sector to achieve innovative transport solutions. This contributed to the commissioning of projects on a much smaller operational scale than their usual contracts and some useful lessons have been learnt in terms of down-scaling delivery for the public sector.

2.4.4 Resourcing

One of the key challenges for programme delivery across all FTZ areas has been access to staff resource. Areas reported difficulty accessing staff resource across a range of roles including programme leads, corporate functions such as procurement and legal teams and specialist roles such as monitoring and evaluation. In some cases, specialist roles have been advertised multiple times with no success. Reasons for a lack of resource included redundancies, which have seen a reduction in size of procurement and legal departments. In other areas, participants explained that posts remained vacant because they had not found candidates with the expertise required. Some areas also received fewer applications for roles advertised than usual and assumed this was due to people being less inclined to move jobs during the pandemic.

The pandemic has also had an impact on staff availability as procurement and legal departments had been focused on responding to the pandemic, for example focusing on Personal Protective Equipment (PPE) procurement.

A lack of resource in procurement and legal teams had caused delays in procuring services and formulating, agreeing and processing contracts with suppliers. These delays posed a tension with the need to deliver at pace in order to undertake the 'fail fast' approach to delivery. Alongside this lack of resource, some areas found that personnel within procurement teams lacked the specific skills and experience to procure highly technical services or supplies. Some areas overcame this challenge by buying in specific procurement resource for the programme. In other areas, where the programme team could select from a number of different unitary authority procurement teams, a team was chosen on the basis that they had sufficient resource and skill to meet the programme needs.

In one area they had found it challenging to recruit someone to manage a package of schemes that required a range of disparate expertise. The solution to this was to split the role into a number of different roles so they could secure the expertise required.

2.4.5 Procurement

A core part of the FTZ programme is delivering new innovative services at pace to test success. In some cases, this required procurement activities to be undertaken at speed and with a wider market of suppliers (including those outside of the UK) who offer specialist services or technological skills. Several key lessons have been learnt thus far in terms of procurement practices:

Implications and lessons learnt

- **Start early and get expert input.** Procurement processes for contracts, particularly new innovative solutions, can often take time, especially on a complex programme such as the FTZ. Getting the process started as early as possible, planning ahead and requesting internal resource in advance has thus proved important consideration. Early engagement with the market and providing suppliers with enough time to respond to invitation to tenders has proved important for ensuring a good level of responses. More broadly, sufficient support and expert input from procurement and legal teams at key points was viewed as essential to simplify procurement processes.
- **Procure services/suppliers at pace.** In other cases, for areas like TfWM who were utilising a **'fail fast' approach** (see section 3.1.1. for more information) to their Mobility Hub scheme, procuring at pace worked well. Expediating the procurement processes helped to test whether what had been procured was the right fit.

While these are two opposing examples, they could both be feasible depending on scheme requirements.

- **Use flexible approaches.** Areas sought to use flexible approaches to speed up or simplify procurement processes. Some areas used existing Frameworks to speed up procurement. Solent set up a Dynamic Purchasing

System (DPS) for their FTZ programme. While the DPS took time to set-up, it was felt that it was easier to use than most local authority procurement systems.

3 Scheme Implementation

This chapter examines early findings from each of the FTZ schemes selected for inclusion in this baseline implementation case study. The chapter first provides a detailed overview of each scheme, including key successes, challenges and learning. It then discusses the successes, challenges and learning that cut across the schemes in focus.

3.1 Overview of each scheme

The five schemes selected for inclusion in this report are displayed in Table 4**Error! Reference source not found.**. It should be noted that more data was collected for mobility hubs as three areas chose to focus on their mobility hub scheme. It appears that there has also been more progress made on this scheme compared to other schemes of focus in this report.

Table 4 FTZ schemes included in the baseline implementation case study

ToC pathway	Scheme	Area
Customer offer	Mobility hubs	TfWM
Customer offer	Mobility hubs	WECA
Customer offer	Mobility hubs	Derby and Nottingham
Customer offer	Human Centred Data (Customer insight)	TfWM
Customer offer	Bike share	Solent
Use of data	Transport data hub	WECA
More efficient movement of goods	Micro consolidation	Solent

3.1.1 Mobility hubs

In academic literature, mobility hubs are generally understood to offer seamless connectivity to multi-modal and public transport. This is achieved by providing a choice of various shared transport, active travel and micromobility options at a single mobility hub site. There is often a focus on e-mobility and, increasingly, mobility hubs seek to improve the public realm through provision of wider community and commercially oriented amenities such as cafes, gardens and

parcel lockers. A range of mobility hub sites will typically be placed throughout a region to form a mobility hub network. The following quote from CoMoUK, a UK charity focused on the public benefit of shared mobility, helpfully summarises the purpose of mobility hubs.

“A mobility hub is a recognisable place with an offer of different and connected transport modes supplemented with enhanced facilities and information features to both attract and benefit the traveller.”

In relation to the FTZ programme, participants described mobility hubs as a platform that consolidates existing transport modes alongside the innovative new modes provided by other schemes (for example, e-scooters, e-bikes, urban freight or Dynamic Demand Responsive Transport (DDRT). Just as MaaS apps present all available transport options digitally, mobility hubs provide a range of transport options in one physical space.

“They aggregate transport modes, give people one place they know they can go to.” (TfWM)

Anticipated scheme outcomes

Mobility hub schemes sit within the ‘customer offer’ pathway of the national FTZ Theory of Change (ToC) (see Appendix A). The pathway incorporates all activities that target travelling members of the public. The expectation is that schemes that sit within this pathway will in the short-term improve awareness of transport options and provide greater ease of using transport options. In the longer-term, it is anticipated that they will support an increase in use of new transport options / active travel. The ultimate goal being that this integration and connection of travel options will eventually influence modal shift away from private car use. For more information on the activities and outputs planned and underlying assumptions underpinning this pathway please see the customer offer logic map in Appendix B.

Mobility hubs were also thought to contribute to a wider set of outcomes including the need to facilitate safer journeys, provide sustainable / decarbonised transport choices and improve the public realm. TfWM have also chosen mobility hubs to address regionally high levels of transport-related social exclusion. They intend for mobility hubs, alongside other FTZ schemes, to improve transport connectivity and affordability for those living in deprived circumstances, who are either excluded from the transport network or forced to spend a disproportionate amount of their income on private car ownership.

Scheme overview

At the point interviews were conducted (Autumn 2021), all three mobility hub schemes were in the early stages of development and no area had a final design in place. The concept differed slightly across areas, but all were based on the idea of placing a range of complementary mobility hub types across a region, that would connect up to form a mobility hub network. Across all three areas, the intention was to provide a centre of activity. So, rather than simply

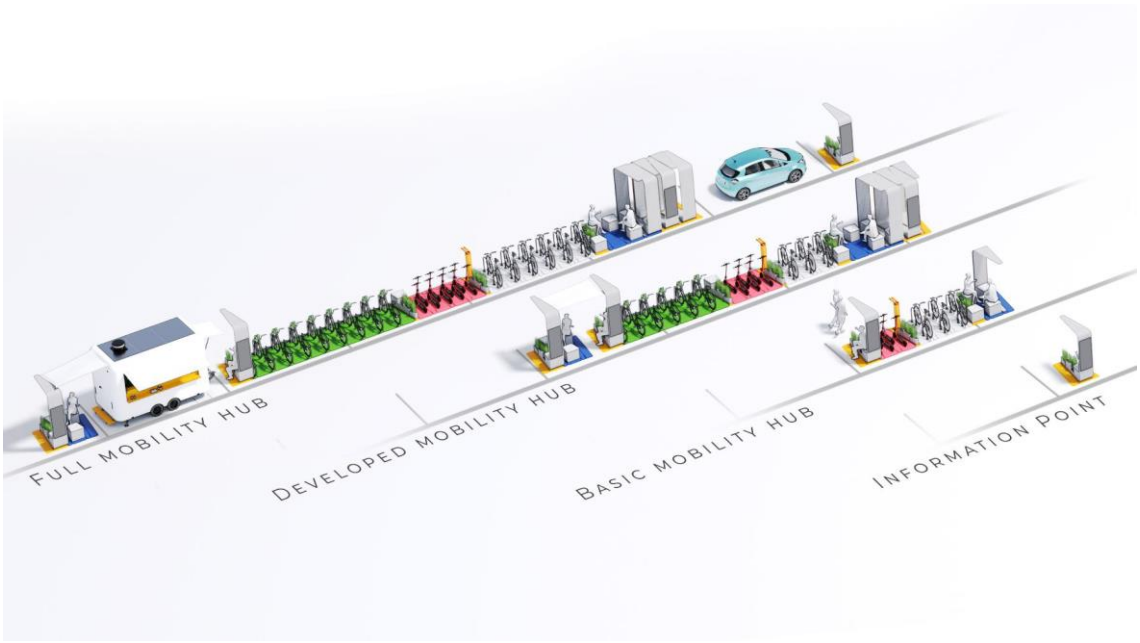
facilitating multi-modal journeys, mobility hubs will provide amenities such as parcel lockers, co-working spaces and refreshment kiosks.

The following section describes the types of mobility hub under consideration in each area and progress with scheme design to date.

TfWM's mobility hubs are modular, movable and scalable (see Figure 5 below for prototype plan). The chosen design can be quickly adapted to fit any space available. For example, it can bend around corners or be placed in a square formation in the middle of a car park. TfWM identified an inability to progress out of the conceptual stage as a pitfall of past mobility hub schemes and so, by adopting a 'fail fast' approach, they developed a prototype within three months. This prototype has acted as a minimum viable product that is easily transported between showcase and conferencing events during the trial phase. The hope is that this facilitates early stakeholder buy-in.

TfWM intend to include seven or eight 'hubs' throughout the region. The locations were still to be decided but may include West Bromwich, Birmingham city centre, the Birmingham periphery, Coventry and the West Midlands Combined Authority inclusive growth corridors[l]. The University of Warwick will also have its own site. Exact site locations were to be decided through engagement with TfWM personnel and external suppliers responsible for managing / delivering the transport services provided at the hubs (e.g. e-scooters), and local councillors who may advocate for the implementation of mobility hubs in their constituencies.

Figure 5 TfWM Mobility Hub Prototype



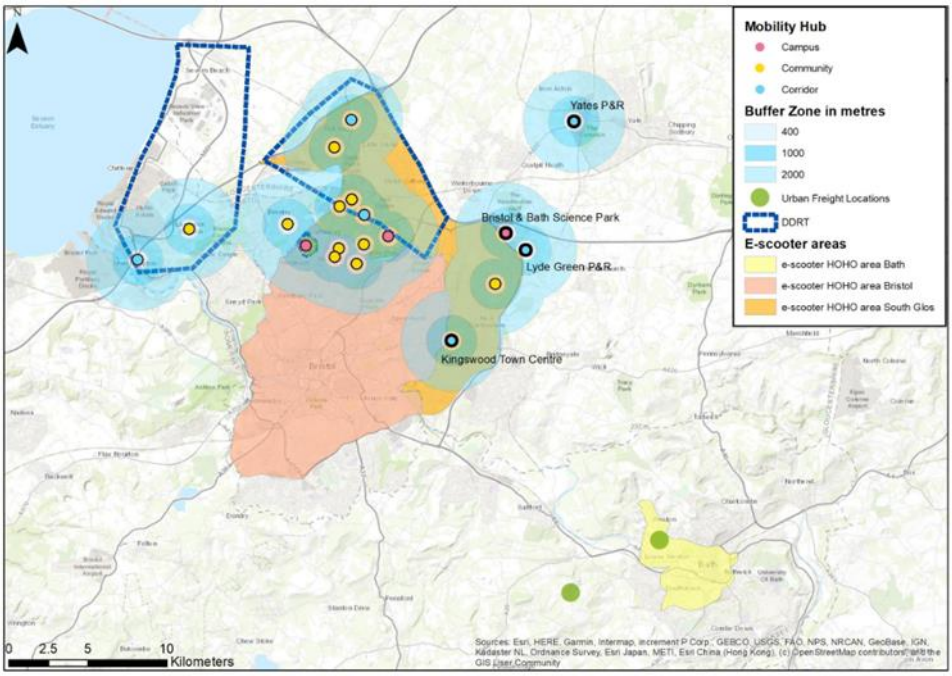
Source: TfWM

WECA's design has been informed by what would be most innovative and deliver most value to specific areas in need of transport improvements. So, rather than placing hubs in the city centre, they will be placed across the

Northern Arc[m], which is characterised by higher private car usage and fewer existing transport links.

WECA intend to place 15 hubs across the Northern Arc, with 5 large and 10 small sites. The large hubs will comprise of campus hubs (placed at single-use sites such as hospitals, university campuses, business and retail parks) and corridor hubs (placed along high-frequency bus corridors and at high-frequency bus stops). Below is a map which indicates the locations that WECA are considering placing hubs. All locations are still to be confirmed.

Figure 6 Map showing possible placement of WECA hubs



Source: Aecom

The small hubs will comprise of community hubs (placed at neighbourhood locales such as shopping parades) and compact hubs (placed at the end of high-frequency bus corridors to cover the first or last mile at the beginning or end of a bus journey). They will include a limited number of components. Each hub will be carefully placed to target the local population, based on demographic work carried out by transport consultancy firm, WSP.

“We've got nine personas, I think, of different types of people who live in the region but also, we know what the populations of them are at the different hubs, as well.” (WECA)

When reflecting on the success of TfWM in developing a modular prototype, WECA said they may instead opt for a more permanent design to ensure the FTZ programmes trial a diverse range of innovative designs.

In **Nottingham and Derby**, while scheme delivery will be undertaken separately in the different cities, they share the same intended outcome – to reduce car dependency. To achieve this, e-mobility hubs will be created to provide communities with a range of alternative mobility solutions, including e-bikes and e-scooters, secure cycle locks, electric car club hire and on-street electric vehicle charging. The intention is to connect centrally located residential hubs with peripherally located satellite hubs, which in turn connect to key transport infrastructure such as bus stops. Nottingham and Derby City Councils are implementing this in parallel with the fleet hub scheme that is funded by the TCF, which focuses on e-vehicle charging. It was initiated independently of the

FTZ programme but has benefitted from FTZ funding and is being implemented by many of the same authority staff.

Progress and next steps

- At the time of reporting, each mobility hub scheme had a defined area of coverage, but exact site locations were still to be decided through engagement with stakeholders and suppliers.
- TfWM had developed a modular, flexible prototype and had begun demonstrations at showcase events.
- Next steps reported by stakeholders included choosing or finalising prototype design and site locations through community and market engagement activities. This will help identify designs that are most practical for an area and offer the most improvements to the public realm through the provision of wider community and commercially oriented amenities.

3.1.2 Transport data hub

Data hubs are online platforms that host and process both historic and real-time data from a range of sources, for use by local authorities and customers. This enables decision makers to improve service planning and management.

WECA's Transport Data Hub is intended to support WECA and local authorities in the development of any transport innovation under the FTZ programme vision (for example, new apps, products or services), by facilitating more 'intelligent' management, planning and delivery of transport. The hub will consolidate data that is currently disaggregated across separate files (such as Excel spreadsheets) under one central repository. There will be a need for data on transport management, planning and connectivity but also wider transport-related data, for example environmental or housing data.

Anticipated outcomes

Engagement with key combined authority stakeholders helped to identify five key objectives of the hub. These were to: maximise the value realised from data; work with data more efficiently; embed data-driven decision making; increase knowledge of the scheme customers; and support innovation in the region.

The scheme sits within the 'use of data' pathway of the national FTZ ToC (see Appendix A), which primarily targets transport planners or local authorities. Activities undertaken within this pathway, like the data hubs are intended, in the short-term, to offer local authorities the chance to access better data to plan transport. In the mid-term, the expectation is that outputs produced will contribute towards improved network performance / management. For more information on the activities and outputs planned and underlying assumptions underpinning this pathway, please see Appendix B.

Scheme overview

Participants explained that the hub interface will not be fixed, but specific to each of its use cases. The flexibility of the FTZ funding model has enabled the team to adopt a 'bottom up' approach to identifying use cases and so the eventual hub design would be based entirely around the needs of its users. It should be noted that, at the time of the research, WECA had not yet defined their use cases and so were not able to discuss the specific data that will be aggregated in the hub or what the hub interface will look like.

However, one possible example given included stopping the use of Excel spreadsheets to generate monthly bus contract reports. Instead, the data hub would present this data via a custom-built dashboard. Participants explained that for this approach to work successfully, the requirements of each use case must be clearly identified through stakeholder engagement.

Participants noted that once established, the hub will not only provide data but also analysis and simulation functions. For example, by establishing a 'digital twin', WECA will have the capability to simulate large multi-modal transport systems.

The data hub will be designed to be scalable and flexible, and the aim is to build a minimum viable product with new functionality added to it as it is created.

Progress and next steps

- At the point interviews were conducted, consultants, contracted to deliver the scheme, were undertaking a review with WECA to identify the best time to develop each component.
- Workshops had been held with WECA staff, who utilise transport data and are likely to benefit from the scheme, to identify potential use cases internally and the work necessary to deliver them. The next stage involves deciding collaboratively which use cases to allocate funding to.
- Next steps reported include holding use case workshops with the regional constituent unitary authorities for WECA, followed by end users such as universities, research organisations and start-up companies. There may also be opportunities in the future to provide data services to the public.

3.1.3 Human Centred Data (customer insight)

User research is important for increasing the value a transport intervention can deliver to its customer base. TfWM's customer insight scheme was created for this purpose. Prior to securing FTZ programme funding, TfWM had identified a gap in the availability of customer insight into attitudes and behaviours surrounding use of new innovative services and transport modes. Schemes pre-dating FTZ had sometimes failed as a result of insufficient customer uptake. Therefore, it was felt that a better understanding of the travel habits and

aspirations of transport users in the region was needed for new transport interventions to succeed.

Participants explained that through using data driven insights, the scheme provides an in depth understanding of regional traveller needs and behaviours, and how behaviour change can be achieved.

“Not only understanding people, but understanding how we communicate to them. How we communicate to them in terms of changing their travel behaviour, particularly.” (TfWM)

The scheme itself does not have specific outcomes which map onto the national FTZ ToC. Instead, it aims to provide customer insights that may be used to ensure other FTZ schemes can deliver on customer needs and can effectively facilitate behaviour change amongst their user base.

Scheme overview

The scheme comprises of two components:

1) **All traveller segmentation model**. The segmentation tool enables the design and modelling of new transport services that account for the needs of different types (or ‘segments’) of transport user. TfWM have identified eight archetypal personas which demonstrate the range of ways that regional customers typically use transport throughout their lives. This has been achieved by interrogating the intersection of geodemographic datasets produced by Experian[n] and transport use data (e.g. TfWM transactional customer data) for regional transport users.

2) Market Research Online Community (MROC). The MROC is an additional tool to ensure that transport interventions meet the public’s needs by enabling qualitative research, co-creation and co-design with the public. The MROC is a closed non-representative panel of over 1,000 West Midlands residents. Different types of transport user and business representatives are included and incentivised to take part in ongoing discussions and surveys about transport design.

It is worth noting that WECA have undertaken similar demographic work, using Experian data and interviews with the general public, to identify the predominant groups of transport users who live in the region. As a result of this work, they had produced nine archetypal personas. The intention was to tailor the design of FTZ interventions to the needs of these groups.

Progress and next steps

- Three separate suppliers had been commissioned to support project set-up and deliver the scheme. Firstly, Connected Places Catapult were brought in to advise the team on how to undertake customer segmentation. Mustard Research were contracted to run the MROC and establish ‘granular’ customer personas. However, once the scheme is fully established, Mustard will only be required in an advisory capacity. Finally, Experian were

contracted to provide household level geodemographic data and a ‘mosaic geodemographic profiling tool’ (segmentation tool).

- The next steps include undertaking an additional segmentation refresh in light of the changes to travel behaviour caused by the pandemic. There will also be continued awareness raising about the scheme and its benefits through dissemination activities and engaging with more potential members.

3.1.4 Bike share

Bike sharing schemes provide bike or e-bike docking stations to the public. This enables use of bikes across short distances or for short periods of time. Bike share is one of several innovative transport solutions Solent have included under their ‘sustainable urban logistics’ theme (which also includes MaaS and e-scooters).

Anticipated outcomes

As with mobility hubs, bike share sits within the ‘customer offer’ pathway of the national FTZ ToC (see Appendix A). It is anticipated that the introduction of the scheme should contribute towards improved awareness of transport options and greater ease of using transport options in the short-term. In the longer-term, the assumption is that schemes such as bike share will increase the use of new transport options and increase active travel. Bike share facilities are the output expected to facilitate these intended outcomes. Further details on anticipated activities, outputs and assumptions associated with customer offer schemes can be found in Appendix B.

Solent also have four key aims for the scheme:

- Encourage more people to cycle by improving access to bikes;
- Provide an alternative to short distance car travel;
- Promote multimodal travel; and
- Encourage more people to get their own bike/e-bike after trying one via the scheme.

Scheme overview

At the time of the research, Solent had not yet settled on a scheme design. They intended for the competitive bidding process to allow suppliers the flexibility to suggest the optimal design, scale, coverage and payment model for the region. Based on a feasibility study and early learning from the e-scooters scheme, participants highlighted the following key design elements to consider:

- Placement of bike docking stations (if applicable) and density of coverage
- Provision of bikes, e-bikes or a proportion of each
- Payment models, including pay-as-you-go and subscription-based options.

The scheme is intended to first provide bike share coverage to Southampton and Portsmouth city centres and a small area of the Isle of Wight. There will be a possibility to later expand the scheme so that it covers the urban peripheries and, eventually, key locations in the wider region including Winchester, Eastleigh airport, Gosport and Fareham.

The intention is to use the MaaS app branding for the bike share and to limit use of bike share to app users to drive up usage of the app.

Progress and next steps

- Progress was initially delayed after Solent secured government funding to implement e-scooters, which were not included in the FTZ bid. E-scooter funding had a shorter timeframe for use which meant the scheme's launch was prioritised over bike share.
- Soft market testing had been completed with registered suppliers which informed the scope and detail the specification.
- The next steps include a procurement exercise, where potential suppliers will be expected to suggest an optimal design for the region. There will also be user testing research where potential customers will have the opportunity to test the top scoring supplier's equipment. Feedback from this research will inform contract award.

3.1.5 Micro consolidation

Micro consolidation is one of three schemes included in the sustainable urban logistics theme of Solent's FTZ programme (which also includes macro consolidation and the use of drones for medical deliveries). Together with macro consolidation, the schemes aim to facilitate freight consolidation[o]:

- **Macro consolidation** ensures that delivery vehicles enter a city through a consolidation depot, which they leave at full shipment capacity, thereby reducing the number of delivery vehicles entering a city.
- **Micro consolidation** streamlines trips made in the 'last mile' of the journey through the provision of local 'points' at which shipments are dropped off. Goods may then be picked up directly by customers, or e-vehicles such as cargo bikes may be used to complete deliveries.

Anticipated outcomes

The scheme sits within the 'movement of goods' pathway of the national FTZ ToC, which includes all activities associated with sustainable urban logistics (see Appendix A). It is expected to enable more last mile deliveries using e-cargo bikes and promote better use of parking spaces when dropping off shipments. In the longer term, and in combination with the macro consolidation scheme, it is expected to reduce the number of freight trips, reduce congestion, bring about improvements to air quality and increase the sustainability of last

mile journeys. Further details on anticipated activities, outputs and assumptions associated with customer offer schemes can be found in Appendix B.

Scheme overview

Through trailing of micro consolidation options, the scheme will assist last mile deliveries across the region, with a focus especially on Portsmouth and Southampton. The locations considered for micro consolidation points include existing parking spaces that may be used to facilitate timed drop-offs and pick-ups by parcel carriers or customers. Another option is to provide locker systems from which parcel carriers may collect shipments and fulfil the last mile of the journey by e-cargo bike or foot. Customers may also have the option to pick up their goods directly from a locker.

The scheme comprises of two initial work packages:

- **Work package one** will involve gathering and analysing local transport authority data to identify gaps in freight data availability, trends in logistics land use and any pre and post COVID-19 trends.
- **Work package two** will involve identifying and engaging with businesses who may become involved in the trials.

Progress and next steps

- A project plan has been agreed by all parties and signed off by the FTZ board.
- A Memorandum of Understanding had been signed with the University of Southampton and University of Portsmouth, who will both manage the scheme's trial. At the point interviews were conducted they were due to begin recruitment of researchers to run it.
- Discussions had started about data requirements and about potential project partners already operating in the area.
- Early discussions had also been held on potential trial sites in Portsmouth and the next step was to develop an engagement approach for local businesses and logistics operators.

3.2 Key successes, challenges and learning

Given that most of the schemes involved in the FTZ programme are in the early stages of planning and implementation, much of the learning is likely to emerge over time. This section focusses on the early successes, challenges and learning that has emerged so far. They relate to three common elements of

each FTZ scheme: scheme planning and implementation, stakeholder engagement, procurement and risk management.

3.2.1 Scheme planning and implementation

This section explores the factors which have affected ability to progress in the planning and delivery across each scheme. It is grouped thematically, drawing on key successes, challenges and learning. Themes explored include information sharing, the FTZ programme funding model, scheme sustainability, moving beyond the conceptual stage and timing limitations.

Information sharing

Participants indicated that disseminating key information and learning across FTZ schemes contributed toward successful programme management, scheme design and set-up. Where this has been possible so far, it resulted in intended and unintended cross-scheme improvements.

For example, TfWM intentionally used their MROC to gather feedback about three mobility hub prototypes, enabling the selection of a design that the public preferred. The MROC is now being used to gather feedback about the materials that should be used in the prototype, and what amenities to provide. Whereas Derby and Nottingham's e-scooter implementation generated journey mapping data which the mobility hub team had not intended to use, until they realised it would enable them to identify areas where e-mobility vehicles were used the most. This led to the development of satellite hubs (see 3.1.1), which were not originally included in the bid.

Some areas also indicated information was not always available when needed, or it had not been possible to anticipate the information required from other schemes. For example, WECA's Transport Data Hub team know that other FTZ schemes will rely on them for data but don't yet know what specific data will be required.

Implication

Regularly sharing insights and learning across schemes can facilitate unexpected opportunities for other schemes.

FTZ programme funding model

As described in Chapter 2, to enable the trial of transport interventions that are truly innovative, there is flexibility as to when and how FTZ funding can be spent. The FTZ programme was considered somewhat unique in that it funds simultaneous improvements to multiple modes of transport, whereas typical programmes would target transport improvements independently of each other.

As discussed in 3.1.2, the model is working well for WECA's transport data hub. Flexible spending has enabled the team to take a 'bottom up' approach to identifying use cases, rather than being constrained to a brief. Participants felt

that by engaging users in scheme design they would be more likely to use the hub longer-term as it has been designed to meet their needs.

However, TfWM reported difficulty in identifying the number of mobility hubs they could cost for because there may be a requirement to share funding with other schemes. WECA's mobility hub team reported that, while the FTZ budget was sufficient to deliver 15 mobility hub sites, spending the same budget on fewer sites may achieve something more ambitious and potentially deliver greater value to the programme.

Implication

The difficulties participants raised in relation to the funding model were ongoing and individual to each scheme. As such, it was not possible to uncover any cross-cutting learning. Nonetheless, these examples demonstrate the types of trade-offs that must be considered when pursuing simultaneous transport interventions that require both ambitious experimentation and cost effectiveness.

Scheme sustainability

Participants highlighted that if viable, it is important that schemes can continue operating once FTZ programme funding ends. At the time of reporting, areas were facing two key barriers to achieving this. Firstly, difficulties in securing buy-in and an understanding from senior stakeholders that, where a scheme would provide innovative changes, they should remain. Secondly, some areas explained that they were experiencing difficulty scoping out how to make schemes financially sustainable.

Participants from WECA reported difficulty explaining to senior colleagues that the Transport Data Hub will necessitate irreversible changes to the internal business model and IT systems which will stay in place after the programme ends. Furthermore, even if implemented on a trial basis, employees will become dependent on the Transport Data Hub for all their data needs and reversing this at the end of the programme would be counterintuitive.

> *"I can't just say, 'It's a trial. You use it for six months and after that, we're reversing the change!' If it's an improvement, we need to keep this improvement. From our perspective, it's what we want to do."* (WECA)

TfWM's customer insight scheme was conceptualised before FTZ programme funding became available. Participants noted that the funding base had facilitated scheme development, but it is not sustainable, yet demand for the scheme is likely to continue once funding ends. Unless TfWM can utilise other revenue sources there is a risk the project could 'disappear' once funding comes to an end.

Lessons learnt: To support the development of scheme suitability

- Communicate from the outset that if trial interventions require irreversible changes, that are likely to improve working practices, then arrangements should be made to sustain such changes after the scheme has ended.

- Share scheme vision with stakeholders as early as possible to secure buy-in and to support efforts to move towards sustainability once funding ceases.

Moving beyond the conceptual stage

Some participants explained that traditional transport interventions based on physical infrastructure are more straightforward to implement because the planning and financial requirements are well established. In comparison, the experimental nature of the FTZ schemes are proving more difficult to implement. For instance, participants noted that for some schemes it is difficult to anticipate what is needed (for example, in terms of budget and staffing requirements) to implement a product that is in the conceptual stages. For example, currently, the concept of a mobility hub is not well established and there is limited evidence about how they should be designed or implemented. This meant it has taken a long time to establish the realities of how a site could be delivered and sustained in the long-term. Meanwhile, WECA's transport data hub has so many potential use cases that the team were struggling to pin down exactly what it should achieve.

Lessons learnt: To support the 'move beyond the conceptual'

- **Establishing proof of concept**. Adopting a 'fail fast' approach to prototype development (for more information see 3.1.1) has enabled TfWM to progress quickly beyond the conceptual. Similarly, in WECA the transport data hub could have been developed faster by making key decisions earlier and selecting one initial use case to develop as proof of concept.
- **Stronger decision making**. In WECA, participants explained that earlier decisions could have been made by convening a forum of senior stakeholders that are representative of the transport data hub user base.

Timing and delays

A range of different factors outside areas' control have delayed scheme progression. Specifically, where schemes rely on the installation of new equipment or involve engagement with stakeholders and the public, there have been various delays to implementation.

For example, due to COVID-19, Solent's soft market tests highlighted prolonged lead-in times for securing bicycle parts and docking infrastructure. Participants from Solent explained that it would be important to procure a supplier who can offer access to equipment quickly. Delays to TfWM's on-street mobility hub demonstrations stemmed from difficulty securing sponsorship from local councillors. In Derby and Nottingham, delays to one mobility hub site were due

to delays in the construction of the residential development where the hub will be placed.

3.2.2 Stakeholder engagement

As outlined in Chapter 2, a range of stakeholders are involved in the direct and wider delivery of each scheme. This section explores experiences of working with internal and external stakeholders at the scheme level.

Working collaboratively

As discussed in Chapter 2, the delivery of some schemes has required close collaboration between internal staff, consultants, and other stakeholders.

Participants in Derby and Nottingham reported developing a close and constructive partnership with Blueprint, a developer specialising in sustainable homes development and workspaces. Blueprint are supporting the development of the mobility hub in Nottingham Trent Basin. Similarly, WECA have contracted three external consultants to work across FTZ schemes. However, working collaboratively sometimes led to a lack of coordination. For example, in WECA it made it harder at times to reach consensus or achieve task ownership. Participants from Derby and Nottingham noted that collaborative working within and across the local authorities sometimes made it difficult to know whether key scheme deadlines were going to be met.

Lessons learnt: To support successful collaborative working

- **Strong collaboration may underpin scheme efficiency.** Particularly where there is a lack of resource or expertise within the core team.
- **Strong collaborations require close coordination**. Helpful approaches included having one dedicated project manager and nominated points of contact or leads for specific tasks.
- Working relationships can also be strengthened and visions aligned by holding regular meetings between key staff.

Generating buy-in

As discussed in 3.2.1, generating buy-in from key stakeholders is crucial for ensuring that schemes can move quickly enough beyond the conceptual stages. Participants indicated that it is much easier to demonstrate value for a tangible, on street, product such as an e-scooter. And much harder where the physical product is not yet defined, such as a mobility hub, or where the project is wholly intangible, such as a transport data hub.

Where mobility hubs are being implemented in areas that operate from within a combined authority (WECA, TfWM), or in partnership between local authorities (Solent), local / unitary authorities must often be consulted. For example, in WECA, unitary authorities constitute the highway authority, whose permission is

required for land-based developments. Participants indicated that consulting other authorities complicated planning as any tender must go through multiple internal and external approval processes. Some stakeholders explained that because mobility hubs are such a nebulous concept it has proved difficult generating buy-in to one shared project vision. However, where one site is being developed on land owned by the University of Derby, this was reported to be much easier to get approved, as the land is owned by the university.

Participants from WECA raised similar challenges with the transport data hub scheme. They had struggled to generate full buy-in as it required some understanding of technical, data-specific terminology that is not accessible to non-technical stakeholder audiences. In relation to micro consolidation, some participants from Solent noted that partner unitary authorities found it difficult to conceptualise how behaviour change can be achieved within freight logistics, as traditionally it has been associated with large, polluting vehicles.

“People involved in travel planning or cycling and walking, more sustainable modes, they don't quite understand how to transfer the skills across, but […] you can make behaviour changes whether you cycle or walk; you can make behaviour change as to how you shop for the last mile; businesses can do a similar process.” (Solent)

Finally, participants in Solent explained that it has also proved challenging to get agreement on a single specification for the bike share project. The scheme will be implemented across three cities and local authorities, each with multiple stakeholders such as Highway Officers and legal teams.

Lessons learnt: To support securing early buy-in

- **Use explanatory resources**. Where schemes are conceptually challenging, explanatory resources can be used to bring officers and councillors onboard faster. TfWM disseminated one-page summaries of the mobility hub project vision and WECA shared visuals of their mobility hub designs, both to positive effect. In relation to the transport data hub, a participant in WECA suggested that developing a ‘data dictionary’, for example in the form of an Excel spreadsheet, would simplify the process by making the language more accessible for a non-technical stakeholder audience.

- **Develop a minimum viable product as early as possible**. This provides tangible proof of concept, giving stakeholders something, they are able to advocate for.

- **Engage stakeholders before their input is required**. Especially where they are likely to be unfamiliar with the concept being developed. For example, in relation to Solent’s micro consolidation scheme, it was suggested that stakeholders from unitary authorities should be engaged with early to ensure they understand how freight logistics works in the context of the FTZ programme.

Securing buy-in of mobility hubs in particular has been challenging. Even where stakeholders had understood the project vision, buy-in could still prove difficult.

In WECA, local politics played into this. One participant felt that the regional unitary authorities under Conservative control could be more likely to favour private car ownership and may be less willing to support the implementation of a mobility hub scheme. While senior local authority personnel generally understood and supported the concept of modal shift, it had proved more challenging to secure the buy-in of local ward and parish councillors. However, communicating the tangible outcomes of a hub, for example uptake in ticket revenue or new bus stop installation, had proved successful.

"It's about how we get them to mode shift. Whilst that's understood at a more strategic level, it's sometimes how you distil it down to the very local benefit." (WECA)

Meanwhile, in TfWM, programme stakeholders at officer level reported feeling far removed from local democracy and so securing buy-in from local councillors who can advocate for the trial of mobility hubs has been especially challenging. However, some success was reported by WECA, who have used their network of contacts to advocate for the mobility hub scheme among private landowners who may be interested in hosting a mobility hub. When implementing a hub on private land, it was considered crucial to identify site owners whose ambitions are likely to align well with the project vision – for example, at the University of the West of England and Southmead Hospital. Where this was the case for Derby and Nottingham, a participant described it as comparatively easy to have their site approved on private land (as mentioned above).

Public engagement

An upcoming challenge for Solent's bike share scheme will be public engagement. Participants indicated that, as highlighted by the e-scooters scheme, without 'good news stories', negative press coverage could dominate. They also stressed the importance of prioritising feelings of public safety. One example of public engagement included Solent's consultation with community groups in relation to their e-scooters scheme. The consultation identified that residents would feel safer if Southampton Common was an e-scooters 'no-go-area', as a result it was geofenced[p].

Lessons learnt: To support positive public engagement in FTZ schemes

- Having a strong communication plan from the outset. Any communication plan should market the benefits of micromobility schemes and involve dissemination to key public stakeholders such as community groups, residents and councillors.
- Consult community groups: Public engagement is key to buy in and ensuring plans are fit for purpose.
- Public education. Educating users to ride bikes and e-scooters responsibly is also key, as take-up of micromobility schemes will usually be high among users who are relatively young and potentially less familiar with the highway code.

3.2.3 Procurement

Procurement had been particularly successful where the scheme lead was already familiar with procurement lots and processes. For example, a participant from TfWM felt their procurement expertise had enabled them to bring in consultants who offered an optimal balance of quality and affordability. Some participants also indicated that TfWM's mobility hub scheme had benefitted from having the University of Warwick on board. Participants perceived that the university's robust procurement processes helped to ensure that procurement requirements were sufficiently met. Meanwhile, participants from WECA explained that they had expanded their internal procurement team so that they were better able to resource procurement tasks.

Some participants noted that where specialist services were required, it had been more reliable to procure through a network of existing contacts, who were known to be reliable, rather than identifying new suppliers. For example, TfWM's mobility hub prototype comprises 40 complex components. To move this between showcase events, this required an articulated lorry and forklift, and technical knowledge of how to assemble it. After initial difficulties identifying a supplier who could deliver on all of these needs, a TfWM employee identified one through their existing network of contacts.

3.2.4 Risk management

At the scheme level, approaches to risk management included reporting on a set of risks, for example via a risk register and regular meetings with key FTZ staff to discuss any new emergent risks as well as plans for risk mitigation. This section explores risks that emerged at the scheme level and key learning about how those risks are being or might be addressed. Risks were raised in relation to timescales, safety tolerances and staffing.

Timescales

An inability to implement within FTZ funding timescales was noted as a significant risk for schemes that involve the development of new physical infrastructure, especially mobility hubs and bike share. For example, as mentioned in section 3.2.1, Solent have identified prolonged lead-in times for suppliers to secure bike parts and docking infrastructure, meaning that it will be crucial to identify a supplier who can deliver quickly. TfWM have identified a similar risk in relation to their mobility hub scheme and as a result, they are moving as quickly as possible with activities such as procuring suppliers.

Safety

Building in safety tolerances is also crucial for schemes that involve new physical infrastructure. For example, the on-street prototype built by TfWM had to meet strict safety requirements. Minimum safety standards have also been built into the Solent bike share scheme to minimise risk of injury to users. This is being achieved by requiring that all potential suppliers are registered through Solent's DPS(which requires relevant safety accreditation) before they can

submit a bid. The bikes will also be safety tested by a representative sample of users.

Vandalism, for example through bike theft or damage, has proven to be a significant risk to historic bike share schemes in the region. This has implications both for the safety of the product but also how the scheme is perceived. Solent have identified that strong anti-vandalism mechanisms should be built into bike docking stations and the bikes themselves will be fitted with GPS trackers to prevent loss of equipment.

Staffing

Throughout delivery, each scheme will periodically require the involvement of staff beyond the core team. For example, closer to launch, Solent's bike share team will require input from marketing and communications personnel. Similarly, focussed and undivided input from various teams such as IT will be required on WECA's transport data hub scheme, for two or three days at a time in a given month. Both areas have identified risks associated with reliance on local authority corporate functions. First, participants suggested there could be a risk that staff in these teams do not have the capacity when needed. They may also lack the necessary understanding to effectively support scheme implementation. In WECA, it was suggested that this can be mitigated by defining the key staff who should be involved from the beginning. Furthermore, as highlighted in 2.4.3, it is crucial to provide advance warning and regular updates about the support schemes will require to internal teams early on.

4 Lessons learnt and conclusions

This final chapter explores the main successes and key challenges of the FTZ programme and examines lessons learnt, before setting out the next steps for the evaluation.

4.1 Main successes and key challenges

When asked to reflect on successes and challenges, a range of themes were identified by participants, emerging as successes for some areas, but challenges for others. The key themes related to the FTZ programme model, resources, skills and expertise, relationships, and COVID-19.

4.1.1 FTZ programme model

Participants highlighted that the flexible and experimental nature of the FTZ design was a good example of how to test a theory and attempt to modernise services. They believed this had successfully encouraged innovation within transport. This flexibility further enabled schemes to be adaptable and tailored to local contexts. This worked particularly well during COVID-19, where delivery teams were able to reprioritise their efforts and respond to real-world challenges rather than trying to deliver on targets that were no longer achievable or considered important given the wider climate. Although this flexibility was generally viewed as beneficial, some participants occasionally found the fluidity of targets limiting and felt unclear about expectations.

Given that the programme was designed to be a trial, a key challenge that emerged was ensuring sustainability of schemes after the funding ends. In particular, participants raised concerns over how schemes with maintenance costs would continue to be funded, especially if they are not immediately commercially viable. Some participants reported that commercial viability would be difficult to achieve within the funding period.

Participants considered the programme itself to have great potential in delivering tangible outputs and some outcomes, aided by the length of the trial period, which they said provided enough time to embed the programme and realise its benefits.

4.1.2 Resources, skills and expertise

As outlined in Chapter 2, one of the key challenges experienced thus far has been gaining access to resources when required. Recruitment into specific posts and recruiting locally proved difficult, causing delays and hampering progress. This was perceived to be particularly challenging for areas with smaller teams, where it had taken longer to get the programme set up. The COVID-19 pandemic created further resourcing challenges, with the introduction of remote working. Redundancies within corporate services, such

as procurement and legal teams, had also created a reduction in resources available within local authorities.

Despite these initial challenges, recruitment of personnel was generally considered to have been successful. Participants viewed the teams now in place as experienced and qualified, bringing with them high levels of knowledge, expertise, ambition and foresight. Once the right personnel had been recruited, an acceleration in implementation followed, as tasks were shared across the team, rather than falling on a handful of individuals. However, as mentioned in section 2.4.4, in some areas vacant posts remained, causing challenges to programme implementation.

As a result of these resourcing difficulties, one of the main lessons learnt was the importance of having a core team in place from the onset. In some areas it was felt that resourcing could have been more fully scoped at the proposal stage and recruitment needed to start earlier, be faster and more effective in finding qualified and skilled people. Participants suggested that core teams needed to be comprised of key leads, individuals in support functions (such as legal and procurement) and a single point of contact for every aspect of the programme. Suggestions for how to approach future recruitment included: recruiting people based on their expertise delivering traditional transport programmes, then upskilling them in areas where they have limited prior experience, such as project management.

4.1.3 Relationships

Participants discussed the importance of positive working relationships with constituent local authorities and the wider FTZ team (i.e. those in corporate functions such as procurement, legal, marketing and communications and IT departments). Across all areas, they considered that having positive working relationships was important to the success of the programme.

Another lesson learnt, among areas operating from within a combined authority, was the importance of having a key point of contact within the unitary authorities that a programme's scheme covered. This was deemed necessary to ensure efficient communication processes and that appropriate personnel attended meetings. Having multiple officers partially responsible for a scheme, rather than one nominated lead, risked officers not fully engaging with scheme set-up and delivery. It was also important to have a direct contact to allow for the escalation of any emerging risks.

Working collaboratively within the wider local FTZ teams was generally considered to have worked well especially when supported by regular communication. However, a key challenge was capacity, as often scheme leads were delivering on FTZ in addition to full-time, day-to-day roles. There were some challenges around ensuring that objectives were aligned across multiple stakeholders and that the wider FTZ team shared the same vision. These challenges were apparent around the interpretation of the programme. With some emphasising the experimental nature of the FTZ trial (rather than a permanent programme), while others saw FTZ as an opportunity to build a foundation for future work. This tension emerged to different degrees across

areas, introduced risk of less effective collaboration and highlights the importance of ensuring teams have a shared vision for what they are trying to achieve.

It was also noted that strong stakeholder management and setting clear expectations around board engagement were key to successfully navigating governance structures that were multi-level and using a joint committee approach to decision-making.

4.1.4 COVID-19

The COVID-19 pandemic impacted areas to different degrees. Participants highlighted it as one of the key challenges to the programme, impacting various aspects of delivery and causing delays. COVID-19 affected the programme in two main ways: requiring teams to move to remote working and impacting the public's travelling behaviours. The move to remote working made communication and the ability to build relationships between colleagues and teams more difficult. It meant that issues took more time to resolve, compared to if teams were working in-person. In addition to the previously mentioned resourcing difficulties, further challenges were experienced when team members or corporate functions, such as procurement, were required to divert their focus to responding to activities related to the COVID-19 response, such as purchasing personal protective equipment.

COVID-19 resulted in a change in the public's use of transport, which posed a challenge where proposals designed before the pandemic did not align with what was possible to implement in the context of the pandemic. Areas were required to pause or realign some schemes in light of this. This, however, did provide areas with the opportunity to reconsider whether their approach was in line with their intended outcomes. Changes in the wider public transport marketplace also had implications for some project funding streams, as operators were no longer in a position to provide match funding because of reduced revenues as a result of the lower numbers of people travelling.

Having to review and amend the programme because of the pandemic demonstrated to participants the importance of ensuring programmes like FTZ are adaptable to external factors and wider contexts.

4.2 Key lessons learnt

At the end of the interviews participants were asked to reflect on the key learning they took away from the programme, including any suggestions for what could be done differently in the future. In addition to the lessons learnt already discussed, the key learning that participants took away focused on sharing learning, acting early, and ways of working with others.

4.2.1 Sharing learning

The opportunity to share learning in relation to factors that fed into scheme design across areas was considered by some as the best aspect of the FTZ

programme and therefore should be incorporated into future programmes. Participants suggested that joining up with partners working on similar projects and linking delivery was an effective way of doing this.

However, it was not always considered easy to share impactful learning across areas and this led to concerns that work could be duplicated. A range of reasons were given as to why sharing learning was difficult. Some participants reported that finding the time to share and embed learning was a challenge, while others suggested that often problem-solving occurred in the moment, and people do not reflect on and capture the lessons learnt. There was also a perception that FTZ areas had not maximised the opportunity created by TfWM acting as a pathfinder as much as maybe they could. Where similar work packages existed, it was felt there were some missed opportunities to build upon existing work rather than take a fresh stance. This was specifically relevant to the Mobility Credits programme where a co-ordinated programme, building off results from each area may have provided a more valuable set of conclusions.

4.2.2 Acting early

Participants stressed the need to act early, to avoid delays and start delivery quickly. This included getting the groundwork of legal and procurement paperwork underway immediately, as well as immediate engagement of any relevant stakeholders, where possible. For example, getting the landowner's approval and support for mobility hubs early on was considered essential in being able to move forward with the project. Planning evaluation processes from the onset of schemes was also considered crucial for understanding how the scheme is working and assessing long-term impact.

4.2.3 Ways of working

Participants reflected on the best ways of working with others on a programme like FTZ to ensure its success. For teams to work most effectively, it was said that they should:

- **Engage in communication** that embraces regular, effective and (ideally) in-person working. Participants emphasised the importance of effectively communicating on deadlines, targets, timescales, and expectations.
- **Work collaboratively.** Collaborative partnership working with transport authorities and suppliers was considered crucial to successful delivery. Collaborating with internal and external staff from the beginning also avoided "borders" being created, especially when defining objectives. Regular operational check-ins and working in the same space were highlighted as ways to achieve this.
- **Share the same vision**. Participants highlighted that it was important that all involved shared the same vision of what they were trying to achieve. Regular communication was noted as important in achieving this, with suggested weekly 1-2-1 meetings between colleagues.

- **Embrace challenges and setbacks.** The importance of not being afraid of challenges and understanding that some things may not work was considered important in the success of a programme like FTZ.

Endnotes

[a] See the Department for Transport's Future of Mobility: Urban Strategy report for more detail.

[b] Birmingham City Council, Sandwell Metropolitan Borough Council, Solihull Metropolitan Borough Council, Coventry City Council, Walsall Metropolitan Borough Council, Dudley Metropolitan Borough Council, and the City of Wolverhampton Council.

[c] The FTZ area will be referred to as TfWM for the remainder of the report.

[d] Bath and North East Somerset, Bristol and South Gloucestershire.

[e] Southampton, Portsmouth, Isle of Wight (Unitary Authorities) and Hampshire County Council.

[f] The FTZ area will be referred to as Solent for the remainder of the report.

[g] The DfT commissioned a separate evaluation of the e-scooters trial and as a result, e-scooters is out of scope for the FTZ evaluation.

[h] Only one scheme was selected in Derby and Nottingham as the other schemes being rolled out are covered in the MaaS and Data case study.

[i] The Prudential Framework regulates local authority spending. The Prudential Framework is made up of the Prudential Code, the Treasury Management Code and two parts of statutory guidance (the Investments and MRP Guidance). See the Local Government Association Prudential Framework.

[j] See Project Manager's blog on What is PRINCE2?

[k] See Introduction on Agile and Government services

[l] The WMCA's Inclusive Growth Unit has committed to developing 'Inclusive Growth Corridors' throughout the region. This will ensure that the benefits of investment in environmental, social and economic outcomes are felt by all. The four corridors include Wolverhampton to Walsall; Sandwell to Dudley; Perry Barr and the A34; and Greater Icknield to Smethwick.

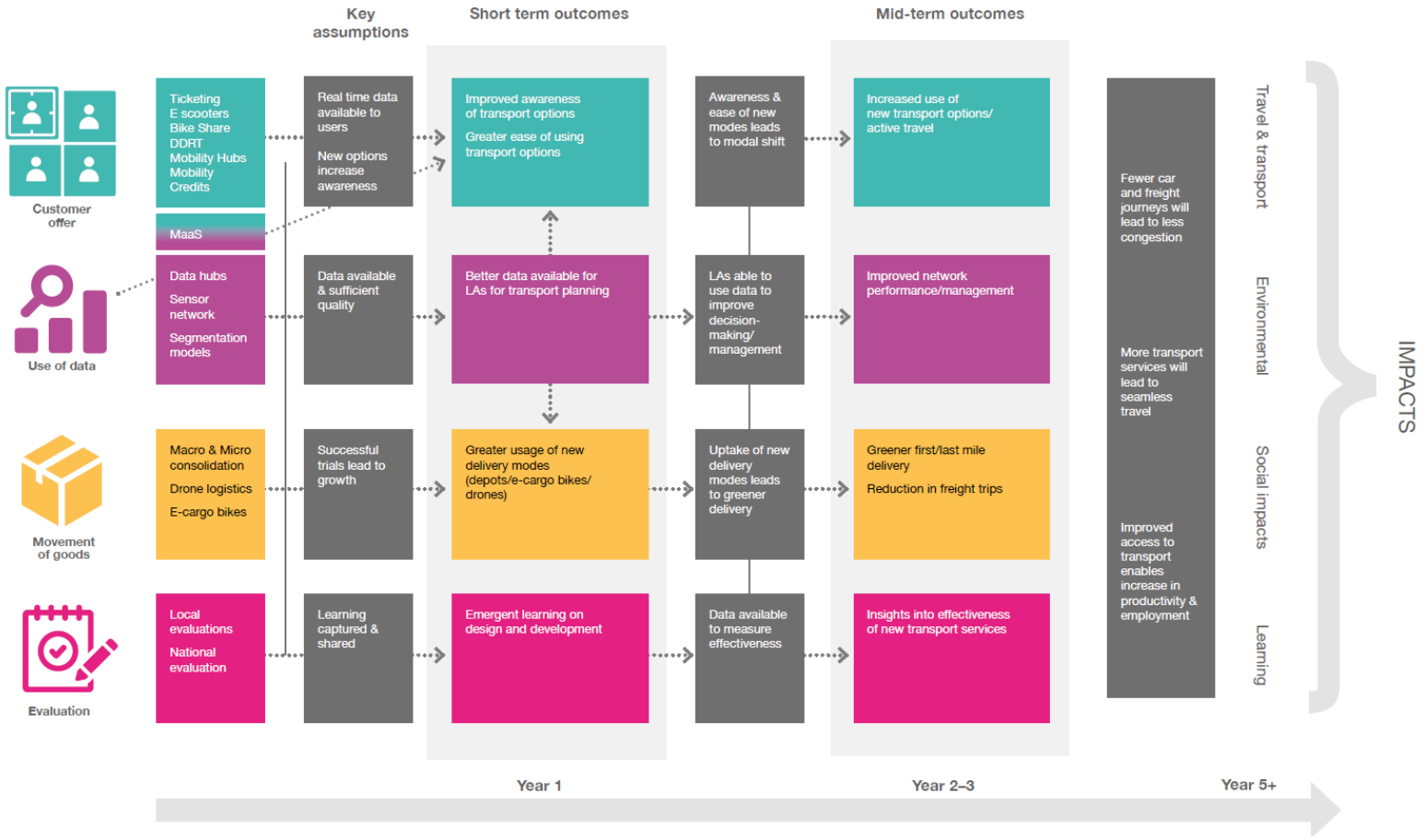
[m] The Northern Arc is an area that comprises North Bristol and a large extent of its border with South Gloucestershire. It encompasses key transport infrastructure from East to West.

[n] These datasets map demographic information according to where people live, providing insight into the lifestyle and habits of customers down to the household level.

[o] Freight consolidation reduces the number of trips made by delivery vehicles within a city.

[p] Geofencing is a virtual geographic boundary defined either by Global Positioning Software (GPS) or Radio Frequency Identification (RFID) technology. Defining an area in this way enables software to trigger a response when a mobile device enters or leaves a particular area.

Appendix A. National Theory of Change



Appendix B. National Evaluation Logic Maps

Customer Offer Logic Map

Areas covered: West Midlands, Solent, Derby and Nottingham, WECA

ACTIVITIES	OUTPUTS	SHORT TERM OUTCOMES	MID TERM OUTCOMES

SCHEMES: Ticketing improvements; e-scooters; bike share; DDRT; mobility hubs; mobility credits; innovation showcases; MaaS
 	
• Pre-procurement research and engagement with stakeholders
• Specification of scheme requirements
• Procurement of scheme options
• Pilots/trials of new transport services
• Wider scheme expansion
• Integration of different systems with MaaS
• Marketing
• Continuous monitoring, review to inform future expansion
• Engagement with customers/travelling public
• Infrastructure for new transport modes built
	• New modes of transport available
	  ○ E-scooters
	  ○ Bike share
	  ○ DDRT
	• Integrated trip planning and payment platforms available (MaaS)
	• Live data available to customers
	• Personalised subscriptions and incentives
	  ○ Better points incentives
	  ○ Incentives & subscriptions through MaaS
	  ○ Mobility credits to target populations
	• Ticketing improvements (SolentGo, account-based charging)
	• Mobility Hubs created
	  ○ Physical integration of modes
	  ○ Public realm improvements
	  ○ Clear wayfinding
	• Secure parking and electric vehicle charging
		• Increased awareness of different mode options (electric travel/active travel/PT)
		• Increased willingness to use new transport modes
		• Planning journeys becomes easier
		• Paying for journeys becomes more convenient (integrated payments, single payment across modes)
		• Increased awareness of costs of car travel (relevant for MaaS)
		• Increased awareness of most cost-effective transport options
		• More transport options accessible to customers
		• Improved equality of access to transport for lower income groups
		• Easier interchanges between modes
		• Easier access to e-vehicles
		• Easier access to secure parking
		• Uptake of new transport services
		• Increased uptake of existing transport services
			• Decrease in car usage
			• Increase in public transport use
			• Increase in active travel
			• Increase in use of e-vehicles (e-scooters/e-bikes)
			• Easier to travel around FTZ area
			• Less spending on travel (subject to confirmation by areas)
			• Greater equality of fares paid by passengers (subject to confirmation by areas)
			• Improved access to employment/training
			• Improved customer satisfaction with journeys
			• Reduced journey times

Key assumptions

- Availability of new options and effective marketing leads to greater awareness of and willingness to use new transport options
- Integrated payment and planning platforms make planning and paying for journeys easier
- Live real time data is effectively deployed to users
- Co-location of new transport services improves ease of interchange.
- Live travel data improves confidence in using public transport
- Improved travel data contributes to improving reliability of public transport
- New services are launched in underserved areas

- An improved customer experience will encourage modal shift
- Better transport systems will reduce reliance on cars
- Integrated and connected travel options will influence modal shift
- Greater visibility of price comparisons leads to greater use of new options
- Ease of payment across modes leads to greater uptake of new options
- Improved planning leads to faster journeys/ greater journey satisfaction

Use of Data Logic Map

Areas covered: West Midlands, Derby & Nottingham, WECA

ACTIVITIES	OUTPUTS	SHORT TERM OUTCOMES	MID TERM OUTCOMES

SCHEMES: Ticketing improvements; e-scooters; bike share; DDRT; mobility hubs; mobility credits; innovation showcases; MaaS
 	
• Pre-procurement research and engagement with stakeholders
• Specification of data requirements
• Procurement of scheme options
• Pilots/trials of new digital capabilities
• Integration of different systems with MaaS
• Iterative testing, refinement and development
• Engagement with data providers (transport operators)
• Build of data infrastructure
	• Data sharing agreements in place
	• Data catalogues
	• Real time data available for different transport options
	  ○ Traffic flow
	  ○ Average journey times
	  ○ Public transport departures/arrivals
	  ○ Locations/usage of parking
	  ○ Locations/usage of assets (e.g. e-scooters)
	• MaaS data available on
	  ○ journey times
	  ○ modes
	  ○ prices
	  ○ reliability
	• Digital twins
	• MROC & segmentation model
	• Live data API available
		• Enhanced simulation (transport modelling) capabilities
		• Better understanding of customers' travel behaviours
		• Digital marketplace for mobility services
		• More data available for research and businesses
			• Better decision-making for local authorities and transport providers
			• Better usage of public transport assets
			• Better use of transport data in land use planning decisions (subject to confirmation by areas)
			• Efficiencies for LAs (cost savings/time efficiencies)
			• Improved network performance
			• Improved network resilience
			• Better/more targeted planning of network improvements
			• More opportunities for innovative new travel services

Key assumptions

- Data is available and of sufficient quality
- Data is made available by partners in a way that can be integrated into planning system
- Greater use of open-source and extensible frameworks for data sharing
- LAs are trained/have capabilities to use data
- LAs have clearly defined usage requirements/specifications
- Having high quality, useable data allows LAs to plan/model transport scenarios

- Enhanced simulation capabilities will lead to better decision making by LAs and improved management.
- Improved management will lead to improved network performance and efficiencies for LAs
- Availability of data will foster innovation by businesses leading to new transport services

More efficient movement of goods

Areas covered: Solent, WECA.

ACTIVITIES	OUTPUTS	SHORT TERM OUTCOMES	MID TERM OUTCOMES

• Pre-procurement research and engagement with stakeholders
• Engagement with logistics providers/suppliers
• Assessment of data to identify scope of schemes
• Specification of scheme requirements
• Procurement & purchasing of equipment and technology (e.g. parking sensors)
• Continuous monitoring, review to inform future expansion
	• Delivery depots to consolidate deliveries
	  ○ Macro consolidation depot expanded and improved
	  ○ Micro consolidation depot(s)
	• New e-cargo bike delivery operators enter the market
		• Improved satisfaction of depot users
		• Increased number of users of consolidation depots
		• More efficient use of square metre areas for consolidated loads
		• Efficiencies in loading and unloading areas
		• More last mile deliveries conducted using e-cargo bikes
		• Better use of parking spaces for dynamically scheduled drop-offs
			• Reduction in number of freight trips
			• More sustainable first/last mile delivery
			• Growth in usage of depots

	• Test flights of drone logistics • New simulation environments for UAVs • 1st Joint Air Traffic Management System • New insights on operating UAVs by logistics providers	• Improved patient care • Reduced patient travel • Reduced road and water transportation • Higher turnover of analysed samples	• Successful delivery of medical products to healthcare settings • Reduction in congestion, improvement in air quality • Improved patient wellbeing • Increased resilience of NHS supply chain • Switch to UAV for medical deliveries

Key assumptions

- Data on how depot is being used is available and usage of space is optimised
- Businesses see commercial advantages of using depots
- Businesses have a good experience using depots
- Better usage of the delivery depot leads to consolidated delivery journeys
- New booking tools for loading bays leads to more efficient usage of loading space
- Better pricing of delivery options to optimise demand on delivery services
- Maturity of market/production of e-cargo bikes and take-up by mainstream logistics firms
- (Assumption for drones to follow)

- Consolidated journeys lead to fewer freight journeys
- Efficient use of depots leads to growth in usage of depots by logistics providers
- Greater use of e-cargo bikes leads to more sustainable first/last mile delivery
- (Assumption for drones to follow)