

USER INSIGHT PHASE 3

FINAL REPORT



TRANSPORT FOR THE NORTH

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EXECUTIVE SUMMARY

Introduction

Transport for the North (TfN) has been established as an organisation to demonstrate the ‘transformational’ economic impact that transport investment can have. In practice, this means undertaking analysis and research that recognises the potential for significant changes in economic growth and transport accessibility which could change the economic geography of the North, and potentially the rest of the UK.

In a national 2019 survey of 1,200 UK business leaders, 35% of respondents felt that the overall transport network fails to meet the needs of customers, suppliers and employees (British Chambers of Commerce (BCC), 2019). Likewise, 60% of businesses had experienced delays, resulting in client dissatisfaction, increased travel costs, or loss of business.

Following the findings of this research, BCC called upon Government to prioritise investment in road and rail capacity, including HS2 and Northern Powerhouse Rail, to ensure the future needs of businesses across the UK are met.

TfN’s Strategic Transport Plan for the North of England incorporates a series of transport investment programmes, focusing on Strategic Rail, Northern Powerhouse Rail, the Major Road Network, and Freight and Logistics. These interventions will provide individuals and businesses with access to a wider range of economic opportunities, which will, in turn, stimulate the Northern economy by increasing businesses’ access to skilled employees; improving connectivity to suppliers, customers and clients; improving business efficiency, and increasing employment.

TfN is building business cases to strengthen the case for the planned transport investments. To develop a robust supporting evidence base, TfN has established a programme of research known as User Insight into Pan-Northern Travel. Three phases of research have been commissioned to date. This report provides the findings from Phase 3.

Objectives and approach

The specific research objectives for this study are to:

- Determine the transport-related needs, behaviours, policies and attitudes of businesses;
- Explore the current and potential future impact of the Covid-19 pandemic on businesses’ transport behaviours and attitudes;
- Develop a typology of businesses’ transport-related behaviours and attitudes that also reflects different businesses’ ability to benefit from transport interventions – in terms of increased efficiency, productivity or business growth; and
- Establish the extent to which different types of businesses are likely to benefit from TfN’s programme of transport interventions, by exploring its potential impacts.

The approach adopted for this research involved:

- A literature review and secondary data analysis focussing on trends in business-related transport in the North of England;
- A quantitative telephone survey with 1,000 Northern businesses across different sectors;

- The development of a business typology (from the survey data) reflecting transport-related behaviours and attitudes and ability to benefit from transport interventions; and
- A series of qualitative online focus groups and in-depth interviews with business representatives across different sectors.

Summary of key findings

Transport related needs, behaviours, policies and attitudes

Commuting journeys

The quantitative survey undertaken as part of this research suggests that around four in five employees in the North of England live within 15 miles of their place of work.

Three quarters of employees were estimated to be commuting to work using a private car or van pre-pandemic, and almost three quarters of businesses anticipate that there will be no change in the level of employees' use of private modes of transport for commuting in 2-3 years' time compared to pre-pandemic.

Two thirds of businesses had no initiatives in place to support the use of public transport, car sharing, or cycling for employees' commuting journeys. Of those which did have initiatives in place, the most commonly cited were facilities for cyclists, and to a much lesser extent, travel plans for employees and incentives to reduce car use.

Many participants suggested that business initiatives alone could not tackle car dependency, and believed that without improved public transport or other incentives, car dominance would be unlikely to change. Suggestions from businesses as to how TfN could encourage modal shift away from private cars for commuting journeys included:

- Creating an integrated public transport network;
- Ensuring easy access to public transport via car, for example through increasing capacity at park and ride facilities;
- Making public transport more affordable, especially train journeys;
- Improvements to public transport, in particular increasing capacity, reducing journey times, improving reliability and increasing frequency of buses/trains (especially in rural areas).

Home-working has increased significantly during the Covid-19 pandemic (almost three times the time spent working from home compared to before the pandemic); and although levels of home-working are forecast to fall slightly post-pandemic, they are estimated to remain above pre-Covid levels. Employers report that many employees would like to adopt a hybrid (part at home, part on-site/at office) model to working. Businesses within more 'goods-intensive' sectors (those which are typically more reliant on transport of physical goods as part of their business operations) were generally less likely to anticipate spending a large share of their week working from home post-pandemic; with some sectors in particular likely to have a continued strong demand for commuting journeys. These include mining and quarrying, manufacturing, construction, wholesale and retail trade and repair of motor vehicles and motorcycles, transportation and storage, and human health and social work activities.

Business journeys (for example to meetings)

Travelling by car is forecast to remain the dominant mode for future trips on employers' business (e.g. to meetings). However, as the distance of the journey increases, so does propensity to use public

transport (just 10% of business journeys of less than 15 miles were made by public transport, compared to 30% for journeys reaching outside the North).

Reasons provided by businesses for not travelling by public transport as much as they could for business journeys included:

- Long journey times by train;
- Prohibitive cost of train tickets and parking combined, relative to other modes;
- A lack of reliability in the rail network (prone to disruption);
- Lack of rail connectivity to required destinations; and
- The need to transport goods whilst travelling, e.g. travelling with equipment.

Many businesses indicated that, in the future, longer journeys to meetings were less likely to be made. The growth and reliance on remote meetings, in particular during the pandemic, was suggested to be a key contributor to this trend. However, some types of businesses suggested that their demand for future business travel (e.g. to meetings) may stay the same, or increase in the future, namely:

- More goods-intensive businesses (those in sectors A-I in SIC 2007¹);
- ‘Younger’ businesses (those who had been based at their main site for five years or less); and
- Medium/large businesses, specifically for journeys to outside the north of England.

Transport of Goods

Of those businesses for whom transport of goods constitutes a significant proportion of their overall business travel needs, almost half **receive goods** deliveries from suppliers directly. Two-thirds of these suppliers are based more than 15 miles away from businesses’ main site, or outside the North.

The majority of businesses did not experience any changes in supplier locations during the pandemic, nor do they anticipate changes over the next 2-3 years. Just over half of these businesses anticipated receiving more deliveries in 2-3 years’ time, compared to during the pandemic.

Of those businesses for whom transport of goods constitutes a significant proportion of their overall business travel needs, almost half **deliver goods** on a daily basis using their own vehicles. Almost half of deliveries made by company vehicles are to customers within 15 miles of the business’ main site. By contrast, deliveries made by couriers were more likely for goods being transported over longer distances, with around three quarters of deliveries using couriers being for journeys of 15 miles or more from the main business site, or outside the North of England.

The majority of businesses anticipated no change in customer locations over the next 2-3 years. Whilst for many businesses, frequency of deliveries despatched decreased during the pandemic, just over half anticipate sending an increased number of deliveries in the next 2-3 years, whilst two in five predict no change. Therefore, compared to pre-pandemic conditions, many businesses anticipate experiencing at least a return to their previous level of operations, while some are anticipating a degree of expansion, indicating potential future growth in demand for transport of goods.

¹ A full list of SIC 2007 industry sectors can be found within Appendix B, Table 1 ‘Main sector or activity’

Challenges and constraints to travel

A heavy reliance on car as the dominant mode for commuting contributes to issues of reliability and congestion on the road network at peak times, affecting all kinds of road travel for businesses.

A lack of access and provision of high-quality public transport that can meet the dynamic needs of businesses creates a further challenge for travelling. In particular, the unreliability, cost, and lack of convenience of rail and bus travel relative to other modes was cited as a constraint to using public transport more frequently.

Attitudes to low carbon transport solutions

The proportion of company vehicles that are electric or hybrid was low, with around half of businesses suggesting that they faced barriers to upgrading their vehicle fleets to electric/hybrid vehicles. Frequently cited barriers included:

- The high cost of purchasing electric/hybrid vehicles;
- The need for ongoing vehicle maintenance;
- The lack of vehicle charging infrastructure; and
- Range anxiety regarding the distance for which vehicles can run.

Despite the existing barriers, there is nonetheless the appetite from businesses to upgrade their fleets to electric/hybrid vehicles, provided they can meet the needs of their operations.

Low-carbon delivery methods such as cargo bikes, portering, urban consolidation centres and urban last mile delivery are generally viewed positively by those working in freight and logistics.

Anticipated behaviour changes as a result of transport improvements

Journey time reliability by road and rail was considered by many as a significant issue which impacts the efficiency and profitability of businesses in the North.

When considering what the important factors are for business location, 1 in 5 businesses suggested that access to better road connections and a faster road network were important factors in considering where their business is located. However, public transport considerations (e.g. reliability, speed and connectivity) were still important for some sectors (primarily those within service-based sectors (industry sectors J-S in SIC 2007)).

Businesses responded positively to the suggestion of TfN's planned road investments (to improve trip times and reliability on the major roads in the North), and rail investments (to increase the capacity, frequency, speed, and quality of the rail network, linking the North's largest cities with each other and with the rest of the North). Businesses were asked to assess the likelihood of these transport investments resulting in a range of different types of benefits that their business may enjoy. The likelihood of anticipating different types of benefits varied by different types of businesses:

- **Improved productivity due to faster travel times** was more likely to be anticipated by medium and large businesses, and organisations that had been located at their site for five years or less.
- **Reduced business costs due to more predictable journey times** was more likely to be anticipated by businesses within SIC 2007 industry sectors A-I, medium and large organisations, and organisations that had been located at their site for five years or less.

- **Improved access to skilled workers from further afield** was more likely to be anticipated by medium and large businesses.
- **Improved access to suppliers from further afield** was more likely to be anticipated by businesses within SIC 2007 industry sectors A-I, and micro businesses.
- **New business opportunities in other regions of the UK** was more likely to be anticipated by micro businesses, and those who had been located at their site for five years or less.

Following the proposed road improvements:

- Around 1 in 5 businesses suggested they would make more business journeys (e.g. to meetings), and around 1 in 3 suggested they would travel to new places for business journeys.
- Of those with a significant share of their business travel needs being the transport of goods, around 1 in 6 suggested they would make more deliveries using company vehicles and the same proportion would do so using couriers. Around 1 in 5 suggested they would deliver to new places using company vehicles and around 1 in 6 would deliver to new places using couriers.

Following the proposed rail improvements, approximately 1 in 5 businesses stated that their employees would make more business trips by rail, and a similar proportion would travel to new places for business by rail.

When considering potential changes in future transport demand, it is also important to recognise the changing trends within the freight and logistics sector. Rapid increases in overall delivery demand, e-commerce retail growth, demand for same/next day delivery, and decarbonisation challenges could all impact the transport modes, types of vehicles, and business models used within the sector, and the overall demand experienced.

Business typology

Four business types were formed following a Two-Step Cluster Analysis of survey data gathered as part of this study . The four types describe different categories of businesses, which are distinct from each other in terms of their business transport-related behaviours and attitudes which reflected their ability to benefit from transport improvements. The types were named and summarised as follows:

Agile Growing Businesses: Smaller businesses which are increasing in their scale, that anticipate a small to moderate degree of benefit as a result of transport improvements.

Established Big Business: Larger corporations with a sizeable footprint in the North, who anticipate a small to moderate degree of benefit as a result of transport improvements.

Business As Usual: Organisations that intend to continue operating as they do currently, regardless of pandemic-related restrictions, or potential transport improvements.

Optimistic Sole Traders: Individuals who anticipate that significant benefits will arise as a result of transport improvements , which would allow their business to flourish.

Organisations categorised as ‘Optimistic Sole Traders’ were most likely to state that factors relating to transport and access were important considerations when considering their location, and organisations categorised as ‘Business as Usual’ were least likely to do so.

Organisations categorised as ‘Business as Usual’ were least likely to expect benefits to arise as a result of the proposed interventions, in particular increased access to new business opportunities. Those categorised as ‘Optimistic Sole Traders’ were most likely to anticipate benefits, especially new business opportunities and improved access to suppliers and workers from further afield.

The impact of TfN’s interventions was most likely to lead to an increase in the number of trips made for business purposes (e.g. to meetings, transport of goods), and an increase in the types of places travelled to for different purposes, by organisations categorised as ‘Agile Growing Businesses’ and ‘Established Big Businesses’.

The geographic distribution of the business types was found to have some variation, suggesting that consideration should be provided as to how transport interventions are targeted to different types of places. For instance:

- **Agile Growing Businesses** have a slightly higher than expected prevalence in the North West;
- **Established Big Businesses** have a slightly lower than expected prevalence in the North West, but a slightly higher than expected prevalence in the North East. They also have a slightly higher prevalence than expected in ‘Industrial Places’²;
- **Businesses classified as Business As Usual** have a slightly higher prevalence than expected in Yorkshire and The Humber; and
- **Optimistic Sole Traders** have a slightly higher prevalence than expected in ‘Other Urban’ areas and ‘Visitor Centres’. However, they have a significantly lower than expected prevalence in Large Conurbations.

Conclusions

This programme of research provides a library of data, which (along with the other previous findings in the User Insight programme) can be called upon by TfN to obtain key metrics to inform business case and strategy development; thereby ensuring that proposals for transport interventions are built upon a wide and robust evidence base. In particular, this report provides a clear indication about how different types of businesses anticipate benefitting from transport interventions. This information will help demonstrate the potential positive impacts of improved transport provision for different types of businesses across the region.

Businesses generally view TfN’s proposed programme of transport interventions positively. Potential benefits presented to businesses were each considered to be ‘somewhat likely’ to occur. There were however some differences between different types of businesses, and the types of benefits anticipated.

- ‘Optimistic Sole Traders’ are more likely than other ‘types’ of businesses to anticipate improvements relating to **efficiency, profitability and growth**
- Businesses classed as ‘Agile Growing Businesses’ and ‘Established Big Businesses’ (and medium/large businesses more generally) are more likely than other ‘types’ of business to say that improvements would improve **efficiency and profitability**.
- By contrast, businesses which tend to be ‘younger’, or have fewer employees, appear to be more likely to anticipate **growth** of business operations as a result of transport interventions.

² ‘Industrial Places’ are one of the ‘Place typologies’ derived from previous research undertaken by Steer regarding Strategic Development Corridors (Steer, 2020). The full list of Place typologies are outlined on pages 17 and 18 of this report.

How businesses might benefit, and the types of interventions that will benefit them most, is likely to vary between those in urban and rural locations. Within urban locations, interventions which promote increased reliability and efficiency of operations are likely to provide the most benefit for businesses; whereas in rural areas, interventions which prioritise improved accessibility, improved speed of travel to destinations, and enhanced provision of infrastructure are likely to be most beneficial.

Whilst this research indicates that a sizeable proportion of businesses anticipate benefits arising from TfN's proposed investments in the transport network, this sentiment is not unanimous. There is therefore potential for TfN to undertake further engagement with the business community, perhaps through Local Enterprise Partnerships (LEP's), to articulate, raise awareness and promote the potential benefits of transport improvements for businesses across the North.

Further, by understanding how different types of businesses are likely to benefit from future transport interventions, such measures can be targeted and customised to meet the needs of businesses of different sectors, regions, sizes, and types. This in turn maximises the likelihood of economic growth, particularly through enhancements to business efficiency, profitability, and expansion.

A significant element of TfN's current strategic focus is to improve connectivity between the major cities of the North of England. However, this research indicates that many of the businesses who anticipate benefits arising from TfN's proposed interventions are small and micro businesses. Many smaller businesses are located outside dense urban areas in the North, and as such, transport strategies should continue to consider these factors, to ensure that pan-regional strategic infrastructure improvements are well integrated with more localised transport networks, particularly in sub-urban, rural and coastal areas of the North, to maximise the potential for businesses across the whole region to benefit from the interventions. The research has also outlined the increased propensity of employees in 'service-based' sectors to work from home (for at least some proportion of their working week), and to conduct meetings remotely, rather than face-to-face. Whether these trends will translate into long-term behaviour change is unknown, however. Continued monitoring of commuting and business travel demand is required, to ensure there is sufficient network capacity to cater for a return to (or even an increased demand relative to) pre-pandemic conditions.

Conversely, more 'goods-intensive' industry sectors suggest they will have a continued demand for transport; and for many businesses with freight and logistics needs, demand is anticipated to increase in the coming years. The growth of the e-commerce sector and on-demand delivery in particular raise a number of interesting questions; most notably, whether a trade-off or tipping point will come between speed of delivery and implementing 'greener' modes of delivery which are potentially less time-efficient. This point is especially pertinent given that many businesses experience barriers to upgrading their fleets to electric and hybrid vehicles. The continued consideration of such items within TfN's Decarbonisation Strategy is therefore imperative.

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1. INTRODUCTION

1.1 Research Context

1.1.1 In June 2016, Transport for the North (TfN) published the Northern Powerhouse Independent Economic Review (NPIER), which established:

- A detailed understanding of the causes of the North’s ‘productivity gap’ compared to the rest of the UK;
- The North’s economic and sectoral strengths, and areas of competitive advantage; and
- The future prospects and opportunities for growth in the North.

1.1.2 Overall, the NPIER demonstrated the potential for the Northern economy to become more productive, with £97bn in additional gross value added (GVA) and 850,000 additional jobs by 2050, compared to a ‘business as usual’ approach, subject to investment in skills, innovation and transport connectivity.

1.1.3 Such a ‘transformed’ future for the North would be expected to lead to far-reaching changes in transport demand and travel patterns. TfN’s Strategic Transport Plan (STP) for the North of England, published in 2019, identifies how improved transport connectivity can contribute to the ambitions set out in the NPIER, by promoting economic growth, improvement of productivity, and harnessing the competitive advantages of the North. The STP incorporates a series of transport investment programmes, focusing on Strategic Rail, Northern Powerhouse Rail, Major Road Network, and Freight and Logistics, with the goal of supporting and facilitating the transformational growth ambitions outlined in the NPIER.

1.1.4 TfN’s transport interventions intend to promote modal shift towards rail, through enhanced connectivity, increased number of trains, more direct services/ fewer interchanges, increased capacity / number of carriages, improved punctuality, and greater value for money. Improvements in the Major Road Network are also planned for the region, improving the Major Road Network’s efficiency and resilience; as well as journey reliability and quality.

1.1.5 The programme of transport interventions proposed by TfN will provide individuals and businesses with access to a wider range of economic opportunities. This in turn will stimulate the Northern economy by increasing businesses’ access to skilled employees; improving connectivity to suppliers, customers and clients; improving business efficiency, and increasing employment.

1.1.6 TfN’s business cases need to identify the wider factors that influence travel behaviours to clearly articulate the impact transport interventions can have on economic growth through agglomeration. TfN is building an evidence base of transport-related attitudes and behaviours of transport users in the North (including residents in different socio-economic groups, and different types of businesses) in order to develop a more comprehensive understanding of the relationships between transport connectivity, economic and social opportunities, and economic growth, and to strengthen the case for the planned transport investments. To develop this evidence base, TfN established a programme of research known as User Insight into Pan-Northern Travel (“User Insight”). Three phases of research have been commissioned. This report provides the findings from Phase 3.

1.2 Previous User Insight Research (Phase 1 and 2)

1.2.1 TfN have previously undertaken two phases of User Insight research, as follows:

- **Phase 1 (2018)** provided insights into how travel demand in the North of England has changed over the last few decades, as well as the travel behaviour and motivations of different socio-economic groups across the North. Insights were based on analysis of National Travel Survey data and a review of literature.
 - Nine distinct user segments, defined by age, life-stage, working-status, urban/rural-ness, and level of car/public transport use, were identified from this research.
 - The report observed that user segmentation forms a powerful tool to better understand the behaviours and motivations of specific groups of people, in order to inform transport policy and target transport interventions and policy more effectively.
 - A requirement was identified for further research to explore motivations to change travel behaviour by resident segment.
- **Phase 2 (2019)** used a mixed methods empirical research approach to further develop TfN's understanding of transport users in the North, identifying the factors that motivate travel behaviour of individuals and businesses, and exploring the propensity to change travel behaviour as a result of transport improvements outlined within the TfN STP. The research included an online survey with over 3,000 residents and 150 businesses across the North, followed by 11 qualitative focus groups to help TfN gain an in-depth insight into travel behaviour of different transport users in the North.
 - A sizeable proportion of residents reported being constrained in their travel behaviour, including number of trips, number of places visited, and distance travelled.
 - The research found that transport improvements could influence where people travel, their choice of residence location, and their decisions on whether or not to own a car.
 - The report also contained details of travel-related behaviours from a small sample of Northern businesses, regarding the location of their staff, frequency of trips for business purposes, frequency of deliveries/receiving supplies, and indications of constraints to business-related travel.
 - A requirement was identified for further primary research with a larger sample of the North's businesses, to explore how business transport needs vary between different types of businesses, and to understand how different types of businesses may benefit from transport improvements.

1.3 Current User Insight Research (Phase 3) - Objectives

1.3.1 Phase 3 of the User Insight research provides more in-depth information on the current and potential future transport-related behaviours of businesses in the North.

1.3.2 The research builds on the Phase 2 results by obtaining findings from a much larger sample of businesses, enabling in-depth analysis by different types and characteristics of businesses.

1.3.3 The specific **research objectives** for Phase 3 are as follows:

- Determine the transport-related needs, behaviours, policies and attitudes of businesses, including:
 - Travel to work and remote working patterns of employees;
 - Trips on employers' business, e.g. to meetings;
 - The delivery of goods, from and within the business;
 - Challenges and constraints to travel, and extent to which current transport constraints adversely affect business efficiency/productivity; and
 - Attitudes to low carbon transport solutions.
- Explore the current and potential future impact of the Covid-19 pandemic on businesses' transport behaviours and attitudes.
- Develop a typology of businesses' transport-related behaviours and attitudes that also reflects different businesses' ability to benefit from transport interventions – in terms of increased efficiency, productivity or business growth.
- Establish the extent to which different types of businesses are likely to benefit from TfN's programme of transport interventions, by exploring its potential impacts on:
 - Number of trips undertaken for different business purposes;
 - Range of locations accessed; and
 - Access to workers, suppliers and clients/customers.

1.3.4 By building a more robust picture of the transport needs and practices of businesses in the North of England, this study will enable TfN to better understand the most likely potential beneficiaries of TfN programmes. This will, in turn, help to improve the evidence base for TfN's modelling and appraisal processes and business case development.

1.3.5 The evidence from this study will inform the development of TfN's business cases, which need to identify the wider factors that influence travel behaviours, and the processes by which transport interventions stimulate economic growth. The findings will also provide evidence to support the implementation of TfN's Decarbonisation Strategy and Freight and Logistics Strategy.

1.4 Current User Insight Research (Phase 3) – Approach

Literature review and secondary data analysis

1.4.1 The first stage of the research programme was a literature review and secondary data analysis, focussing on trends in business-related transport in the North of England. The review provided a pre-Covid-19 pandemic baseline, and identified post-pandemic trends where possible. This initial stage ensured that the primary research which followed, complemented and built upon existing knowledge.

1.4.2 Key secondary data sources for this stage of the research were identified by SYSTRA and TfN during the inception phase of the project. The full list of sources reviewed, which are referenced throughout the report, is provided in Appendix A.

- 1.4.3 In outlining the key trends regarding business-related transport in the North of England, a thematic analysis approach was adopted. Data from the different sources was synthesised so that core themes, grounded in the data, were clustered together to generate themes and sub-themes.

Primary Quantitative Research

- 1.4.4 A telephone survey was undertaken with 1,000 Northern businesses, with quotas set on region, business size and industry sector, based on the Business Population Estimates (2019) dataset from ONS. Medium and large businesses were oversampled to enable segmentation of results, and a targeted booster was undertaken for businesses in Sectors A to I (excluding F&G), as these sectors were deemed to be more reliant on transport. The full breakdown of the quantitative survey sample can be found within Appendix B.
- 1.4.5 The questionnaire used for quantitative primary research with businesses as part of User Insight Phase 2 was used as a basis from which to build upon when designing the questionnaire for Phase 3. A range of additions and amendments were made to the survey to ensure that each of the research objectives was being suitably addressed. SYSTRA and TfN worked in close collaboration to develop and refine the questionnaire over several iterations.
- 1.4.6 To aid the development of new questions on the current and potential future impacts of Covid-19, five in-depth qualitative interviews were conducted with businesses. The key themes arising from the in-depth interviews are provided in Appendix C. In addition, five cognitive interviews were undertaken with businesses. The key insights obtained from the cognitive testing are provided in Appendix D. Following this in-house testing, a pilot survey with 50 businesses was undertaken, prior to the survey being rolled out to the wider sample. The key insights from the pilot survey are provided in Appendix E, and the final questionnaire which was used in the full survey is provided in Appendix F.
- 1.4.7 All data was cleaned and analysed in SPSS (Version 27) using syntax files to provide a clear, auditable record of analysis undertaken. Following a robust data checking and cleaning process (e.g. checks of routing, any duplicate responses), frequencies for each question and the segmented analysis through crosstabulations were run. The full set of data tables (including the final profile of the sample) is included as a separate appendix in a Microsoft Excel document in Appendix H.
- 1.4.8 To identify differences between transport needs and behaviours of different types of business sectors, in some instances industry SIC codes A-I have been grouped into one category, and industry SIC codes J-S into another category for the purposes of analysis and comparison. This grouping is based on a qualitative assessment of the extent to which each of these industry sectors are reliant on the transport of goods for their day-to-day business operations, with sectors A-I classified as being more reliant on receiving or delivering goods than sectors J-S.
- 1.4.9 An additional variable added to the dataset for the purposes of segmenting the results was 'Place typology' – derived from previous research undertaken by Steer regarding Strategic Development Corridors (Steer, 2020). The place types identified within this programme of research were as follows:

- **Large Conurbations:** Typically city-regions, characterised by high employment and population density, and a more youthful population.

- **Commuting Towns:** Typically smaller towns and suburbs which neighbour Large Conurbations, with strong economic and commuting linkages to these large cities.
- **Visitor Destinations:** Rural ‘destinations’ that attract large numbers of tourists each year. They tend to be within and surrounding National Parks and Areas of Outstanding Natural, or areas of historical significance, but also include some coastal resorts.
- **Transformational Places:** Have a wide geographic spread across the North. They can be characterised as particularly dynamic and successful local economies, with productivity and employment growth above the national average.
- **Industrial Places:** Areas where employment is focused around ‘traditional’ industries, with typically lower levels of productivity and higher levels of economic inactivity and unemployment. They are typically located surrounding Large Conurbations, together with other large urban areas.
- **Former Metropolitan Counties:** Share characteristics with Large Conurbations and Industrial Places. They have high percentages of people commuting to combined authorities, but low population density and below average population growth.
- **Other Urban:** Have similarities with Industrial Places and Former Metropolitan Counties and are found near or within smaller cities and larger towns. Other Urban areas have the second highest population density of all the place types, but low population growth.
- **Rural Town and Fringe:** Rural areas that are not classed as Visitor Destinations, but are within closer proximity to nearby towns and cities. These areas rely less on the tourism sector for employment, with a broader mix across sectors.
- **Rural Village and Dispersed:** Geographically isolated from cities and towns. They have a slightly higher than average percentage of employment in tourism, manufacturing and traditional industries’ and above average numbers of people commuting over 20km to work and over double the average percentage of people working from home.

1.4.10 The sample from our primary quantitative research, from which the detailed analysis and segmentation was conducted (including the creation of the business types) is representative of Northern businesses by region. However, for the purposes of this research, medium and large businesses, and more ‘goods-intensive’ industry sectors (SIC 2007 codes A-I) were over-sampled, to provide large enough base sizes for segmentation. Therefore, as with all samples, caution should be exercised when extrapolating these findings to the wider overall business population.

Primary Qualitative Research

1.4.11 Following the quantitative survey, a series of online focus groups and in-depth interviews with business representatives was conducted. These were undertaken to supplement the quantitative findings, and provide additional detail regarding the underlying rationale for potential trends and/or explanations behind discrepancies in findings.

1.4.12 Businesses that had indicated they were interested in taking part in follow-up research at the end of the quantitative survey were in scope for the qualitative research.

1.4.13 In total, 20 business representatives were consulted during the qualitative stage. An online approach using Microsoft Teams was adopted to take account of Covid-19 restrictions. The qualitative research programme was as follows:

- 1 online focus group and a series of in-depth interviews with businesses from sectors A-I (excluding H). These sectors were considered more heavily-reliant on transport for their business needs;
- 2 online focus groups with businesses from sectors J-S. These sectors were considered less heavily-reliant on transport for business needs;
- 1 online focus group with businesses undertaking freight and logistics-related activities (primarily comprising businesses in sector H);
- A programme of one-to-one in-depth interviews with business representatives from sectors A-I (excluding H); and
- 1 in-depth interview with a representative from The Federation of Small Businesses (FSB).

1.4.14 Discussion guides and show materials were designed for the qualitative research collaboratively by TfN and SYSTRA. These materials were tailored to the different types of businesses engaged, and are provided in Appendix G.

1.4.15 All focus groups and interviews were audio recorded, and write-ups were produced by the lead moderator, summarising the key themes that arose during the groups, as well as direct quotes from participants. These write-ups were analysed using a thematic approach, wherein SYSTRA researchers manually read, reviewed and identified the core and fringe themes emerging from the sessions.

1.4.16 As with all qualitative research, the following should be considered when interpreting the qualitative findings:

- The sample is not statistically representative, but rather provides a cross section of businesses from a range of industry sectors across the North; and
- The views and opinions reported are the perceptions of businesses, and are not necessarily factually correct.

1.5 Report Structure

1.5.1 The following chapters provide the key findings from User Insight Phase 3 research.

- Chapter 2 focuses on findings related to the transport-related needs, behaviours, policies and attitudes of businesses, including how trends may have been, and continue to be impacted by the Covid-19 pandemic;
- Chapter 3 focuses on findings related to potential behaviour change as a result of TfN's programme of transport interventions; and
- Chapter 4 outlines a typology of businesses' transport-related behaviours and attitudes.

1.5.2 Within Chapters 2 and 3, we draw upon the evidence from both the primary and secondary research stages of the project in order to answer each specific research question.

1.5.3 In the final chapter we summarise the key findings from this programme of research, and provide conclusions and recommendations.

2. TRANSPORT-RELATED NEEDS, BEHAVIOURS, POLICIES & ATTITUDES

2.1 Introduction

2.1.1 This chapter explores the transport related needs, behaviours, policies and attitudes of businesses.

- Section 2.2 examines **travel to work and remote working patterns of employees**, specifically focussing on:
 - Commuting times, distances and speeds;
 - Commuting modes and modal shift; and
 - The Impact of Covid-19 on commuting patterns (specifically trends in working from home and changes in workforce structure).
- Section 2.3 examines **trips on employers' business**, specifically focussing on:
 - Overall levels of business journeys;
 - Mode of transport used for trips on employers' business; and
 - Anticipated changes in frequency and distance travelled.
- Section 2.4 examines trips including the **delivery of goods**, specifically focussing on:
 - Goods received by businesses;
 - Location of suppliers;
 - Vehicle fleet and deliveries sent by businesses;
 - Location of customers; and
 - Future prospects for e-commerce retail.
- Section 2.5 examines **challenges and constraints to travel**, specifically focussing on:
 - Challenges for commuters (including reliability of journeys made by car and challenges of public transport); and
 - Challenges for non-commuting journeys (including transport of goods, trips on employers' business).
- Section 2.6 examines **attitudes to low carbon transport solutions**, specifically focussing on attitudes towards:
 - Decarbonisation;
 - Electric/hybrid vehicles;
 - Low-carbon delivery solutions generally; and
 - Low-carbon delivery solutions for the freight and logistics sector.

2.2 Travel to work and remote working patterns of employees

Commuting times

- 2.2.1 The secondary data analysis and literature review undertaken as part of this study suggest that commuters in the North of England generally spend less time commuting per year, compared to the national average.
- 2.2.2 The average individual from the North of England spends fewer hours per year commuting than the average person in England overall (including London) (DfT, 2020a). Compared to the national average for England (including London) of 73 hours of commuting per person, per year, the average number of hours spent commuting per year by North of England region is as follows:
- North East – an average of 58 hours per person;
 - North West – an average of 66 hours per person; and
 - Yorkshire and The Humber – an average of 60 hours per person.
- 2.2.3 Furthermore, the North East (58 hours per person), and Yorkshire and The Humber (60 hours per person), still have fewer average hours spent commuting even when London is excluded from the national average (64 hours) (DfT, 2020a).
- 2.2.4 These lower number of hours spent commuting compared to the national average could suggest that many people’s place of employment is in closer proximity to their home in the North than in the country as a whole, and/or that many people in the North are more likely to travel to work on a part-time basis (whether this be due to an element of home-working in their role(s), or due to part-time hours).
- 2.2.5 Alternatively, this trend may be explained by some areas of the North being identified as areas of ‘transport poverty’ (Accent-PJM, 2019). Previous research has indicated that the proportion of people who are unemployed (including those who are unemployed and have never worked), and part-time workers are higher than average in areas with transport poverty (Accent-PJM, 2019).
- 2.2.6 Poor transport connectivity may also constrain commuting choices for many residents. For instance, they may choose to travel further to work to take advantage of more employment opportunities if journeys were faster and more reliable.
- Jahanshahi et al. (2015) found that workers in manual occupations, and with low income brackets, commute shorter distances than white-collar clerical workers.
 - Furthermore, Wang (2003) and Ong and Miller (2005) found that while proximity to employment opportunities tended to be similar amongst different social groups, low-income workers were more reliant on public transport; meaning they were unable to access many jobs which higher-income brackets were able to.
- 2.2.7 ONS data suggests that the majority of commuters in the North of England travel less than 30 minutes to reach their normal place of work. (ONS, 2018b). This data suggests that those residing within the North East have a higher percentage of commutes with journeys of 30 minutes or less (79%) than those residing in the North West (75%) and Yorkshire and The Humber (75%). Steer (2020) suggest these statistics for individual commuting journeys are

broadly in line with the UK average, where approximately 80% of the national working population resides within a 45 minute commute from a major employment centre.

Commuting distances and speeds

- 2.2.8 The secondary data analysis and literature review undertaken as part of this study suggest that commuters in the North of England generally commute shorter distances per year, compared to the national average.
- 2.2.9 The average individual from the North of England completes fewer commuting miles than the average person in England overall (DfT, 2020a). Compared to the national average for England (including London) of 1,276 miles of commuting per person, per year, the average annual distance travelled in the North of England region is as follows:
- North East – an average of 1,219 miles per person;
 - North West – an average of 1,153 miles per person; and
 - Yorkshire and The Humber – an average of 1,047 miles per person.
- 2.2.10 Once London is excluded from the analysis, the difference between the North of England and the national average is slightly more profound (national average excluding London is 1,282 miles per person) (DfT, 2020a).
- 2.2.11 The average speed of travel (total number of miles, divided by number of hours travelled, across all modes) for those commuting in the North of England (barring the North East, where average speeds are a little higher) appears to be broadly in line with the national average (including London). Compared to the national average for England (including London) of 17.5mph, the average speed of commuting travel in the North of England region is as follows:
- North East – an average of 21.1mph;
 - North West – an average of 17.5mph; and
 - Yorkshire and The Humber – an average of 17.5mph.
- 2.2.12 The data above relating to average speed, in combination with the previous insights (DfT, 202a) regarding average time and distances spent travelling each year, suggests that those in the North East spend less time than other regions of the North commuting, but travel further distances, and at a higher average speed. By contrast, commuting journeys in the North West are comparatively ‘slower’, indicated by a greater time spent commuting, but lower average distance travelled each year.
- 2.2.13 With regards to rail travel specifically, data from the Northern Rail Modelling System (NoRMS, 2018) indicates that across the North of England as a whole:
- Demand on the average weekday between 7am-7pm for commuting travel was 202,584 trips;
 - Over 6.24 million kilometres were travelled by rail for commuting purposes on the average weekday between 7am-7pm; and
 - The average distance travelled by rail for individual commuting purposes was 30.8km.
- 2.2.14 Data from the Northern Highway Assignment Model (NOHAM, 2018) confirms that the majority of road commuters in the North of England (81%) make commuting journeys that

start and end within the same county. This share of intra-county demand is highest for Cumbria (95%) and lowest for County Durham (66%).

2.2.15 Figure 1 below outlines how the counties within the North of England have been segmented for the purposes of the analysis of NoRMS and NOHAM data.



Figure 1. Counties of Northern England

2.2.16 Other data also shows that individual commuting trips are shorter by distance in the North compared to the South of England. On average across all modes, London workers living outside London commute 62km per trip, compared to 28km for Manchester and 32km for Leeds (Arup, 2018). Across the North as a whole, this figure is 31km (NoRMS, 2018).

- Further still, between the Manchester and Leeds City Regions, commuting is approximately 40% lower than for other equivalent pairs of cities in England, given the

characteristics of the cities, and the physical distance between them (TfGM, 2021a; TfN 2019a).

- The largest driver of the low levels of inter-city travel across the North of England is cost of travel (TfN, 2019a).

2.2.17 This disparity in commuting distance travelled by different regions can partially be explained by the fact that although rail use in Northern metropolitan areas is comparable with the rest of the country (SDG, 2018), a smaller percentage of the Northern population as a whole commutes by rail compared to other areas of England, particularly London and the South East (TfN, 2019a).

2.2.18 Within the quantitative survey undertaken as part of this study, businesses were asked to report the share of employees in their organisation who live a specified distance from their main site of work³. Figure 2 shows that businesses reported, on average, that the vast majority of employees (95%) lived within 50 miles of the main site, and four in five lived within 15 miles.

Average distance of employees' homes from main business site

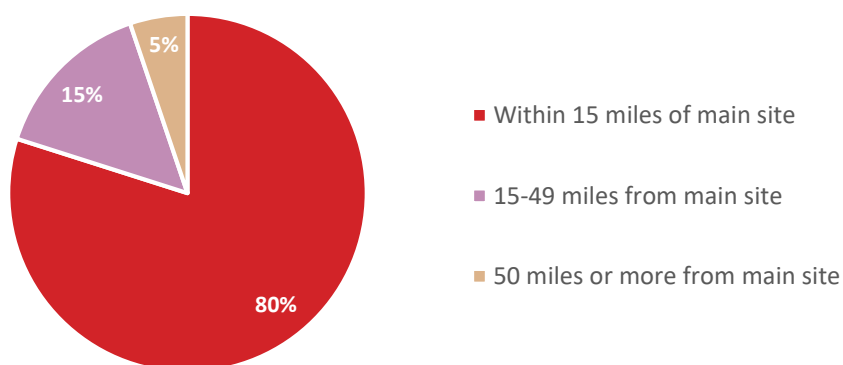


Figure 2. Approximately, what percentage of your organisation’s employees live... (n=769)

2.2.19 The secondary data analysis and literature review undertaken as part of this study indicates that the average distance travelled by commuters in the North of England varies significantly by industry sector.

2.2.20 Data from the National Travel Survey (NTS, 2019) demonstrates that across different industry sectors, the total number of kilometres travelled (and average distance) varies greatly. In particular, the sectors which exhibit high levels of demand for commuting are:

- **Manufacturing** – with a high proportion of commuting demand and distance travelled, particularly in the North East, where this sector contributes to a fifth of commuting demand and a quarter of commuting distance travelled in the region. This reflects a

³ Business representatives who were not confident in providing an approximation had the option to skip this question by answering ‘Don’t know’. Therefore, the approximated figures have been obtained from those with at least some degree of confidence in their estimations.

disproportionately high commuting demand for the manufacturing sector, relative to the sectors share of overall employment volume in the North.

- **Wholesale and retail** – contributing to approximately 10% of distance travelled across the North of England as a whole, and about one sixth of total demand in the North West and Yorkshire and The Humber; broadly in line with the employment volumes for this sector.
- **Health and social work** – contributing to around 9-16% of commuting demand and distance travelled in the North; broadly in line with the employment volumes for this sector.

2.2.21 There are also some large variations between different geographic regions and the distance travelled for employees within the same industry sector:

- **Electricity, gas, steam and air con supply** – where average distance per trip is significantly higher in the North West (20.7km) than other regions.
- **Water supply / waste** – where average distance per trip is significantly higher for the North West (15.9km) than other regions.
- **Information and communication** – where average distance per trip is significantly higher in the North West (18.4km) than other regions.

2.2.22 On average, 96% of commuting trips are made entirely within the North of England (both start and end within the region), ranging from 89% to 100%, dependent on industry sector.

2.2.23 The quantitative survey for this study offers mixed evidence, in some cases supporting, and in others contradicting the trends outlined in the secondary data review. Table 1 demonstrates that the following sectors from the quantitative sample for this study have a notably different average commuting distances compared to the sample overall.

- **Electricity, gas, steam and air con supply** – where only 37% of employees live within 15 miles of their main site, and 29% live 50 miles or more away.
- **Agriculture, forestry and fishing** – where 15% of employees live 50 miles or more from their main site.
- **Information and communication** and **Financial and insurance** – where 11% and 10% respectively live 50 miles or more from their main site.

Table 1. Average commuting distance to main site of work, by Industry Sector (n=769)

INDUSTRY SECTOR	WITHIN 15 MILES	15-49 MILES	50 MILES OR MORE
A - Agriculture, forestry and fishing	72%	13%	15%
B - Mining and quarrying	75%	17%	8%
C - Manufacturing	81%	16%	3%
D - Electricity, gas, steam and air con supply	37%	34%	29%
E - Water supply; sewerage, waste management and remediation activities	86%	11%	3%

INDUSTRY SECTOR	WITHIN 15 MILES	15-49 MILES	50 MILES OR MORE
F - Construction	76%	19%	5%
G - Wholesale and retail trade; repair of motor vehicles and motorcycles	87%	11%	2%
H - Transportation and storage	84%	12%	4%
I - Accommodation and food service	91%	7%	2%
J - Information and communication	71%	19%	11%
K - Financial and insurance activities	70%	20%	10%
L - Real estate activities	75%	21%	5%
M - Professional, scientific and technical	71%	20%	9%
N - Admin and support service activities	77%	16%	6%
P - Education	84%	12%	4%
Q - Human health and social work activities	84%	12%	4%
R - Arts, entertainment and recreation	82%	15%	3%
S - Other service activities	83%	14%	3%
Overall Average	80%	15%	5%

Commuting modes

- 2.2.24 The findings of our literature review and secondary data analysis suggest that commuters in the North of England are heavily dependent on private modes of transport (e.g., their own cars) to access employment opportunities.
- 2.2.25 The Office for National Statistics (ONS) (2018a) estimates that approximately three quarters of those working in the North of England are reliant on their own car or other forms of private transport in order to travel to work. Broken down by region, the percentage of workers who commute to work by private car is as follows:
- North East – 75.0%
 - North West – 73.7%
 - Yorkshire and The Humber – 74.8%.
- 2.2.26 These ONS estimates, which suggest a heavy dependence of the Northern workforce on private transport for commuting, are echoed by several other sources:

- As many as 82% of commuting trips in the North use the road network (TfN, 2019a; SDG, 2018), which is slightly higher than the rest of England (excluding London) average of 74-79%.
- Over 45,000 people a day commute between Bradford and Leeds, but due to poor rail reliability between the cities, 74% choose to make their journeys by private car (TfN, 2019a).
- Accent-PJM (2019) found that 43% of residents without a car suggested they would consider changing where they currently work, or search for new work, if they gained access to one.
 - Additionally, between 38% and 44% would consider changing where to work following public transport improvements (Accent-PJM, 2019).

2.2.27 The North of England is also home to a significant proportion of ‘hinterland towns’ (settlements in relatively rural areas which often have lower levels of public transport provision). Almost a quarter (22%) of residents in ‘hinterland’ towns in the North commute into cities (Arup, 2019). Local Authorities with the largest proportions of ‘hinterland’ commuters include:

- Rossendale, Lancashire (95%);
- Ribble Valley, Lancashire (93%);
- Staffordshire Moorlands, Staffordshire (93%) (outside TfN’s immediate geographical area, but with a significant proportion of this population travelling to Manchester); and
- Derbyshire Dales, Derbyshire (91%) (outside TfN’s immediate geographical area, but with a significant proportion of this population travelling to Manchester).

2.2.28 However, some areas within the North of England are less dependent on cars or private transport for commuting, with the dependency on cars being less profound for those residing in larger urban conurbations. For instance, of all commuting trips starting in Manchester, 42% are made by car or van, 24% are made by public transport, and 31% are made by walking and cycling (Transport for Greater Manchester (TfGM, 2021a).

2.2.29 The dependence on cars and private transport for commuting varies by industry sector. Data from the National Travel Survey (Department for Transport (DfT), 2020f) indicates that the sectors most reliant on private cars / vans for commuting are those most likely to be located away from urban areas:

- Agriculture, forestry and fishing (100%);
- Mining and quarrying (100%); and
- Electricity, gas, steam and air conditioning supply (99%).

2.2.30 Sectors for which travel by public transport (e.g. surface rail, local bus services) for commuting journeys are highest are:

- Professional, scientific and technical activities (38%);
- Financial and insurance activities (29%); and
- Accommodation and food service activities (28%).

2.2.31 Sectors for which travel by active modes (e.g. walking and cycling) for commuting journeys are highest are:

- Water supply / waste management services (31%);
- Professional, scientific and technical activities (26%); and
- Accommodation and food service activities (25%).

2.2.32 The high proportion of commuting journeys being made by car evident in the secondary data review was also apparent in the results to the quantitative survey for this study. As illustrated in Figure 3, businesses estimated that around three quarters (74%) of employees’ main mode for commuting to work is car or van, whilst around one in ten (11%) travel by public transport, and a similar proportion commutes via active travel (9%). Around one in twenty (6%) do not commute at all.

2.2.33 Businesses that participated in the qualitative research for this study generally felt that the study’s quantitative survey findings were in line with their expectations, as they considered many employees in the North rely on private cars due to lack of access to public transport and a lack of reliable public transport options. These were considered to be significant issues for those working in rural areas in particular.

Employees' main mode of transport

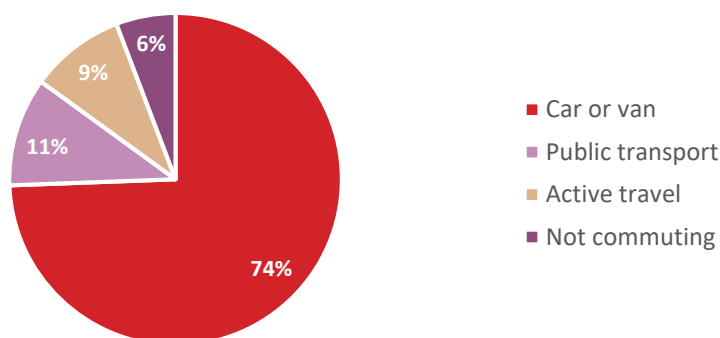


Figure 3. Approximately, what percentage of your organisation’s employees used the following transport options as their main mode of travel to work, before the Covid-19 pandemic (before March 2020)? (n=814)

2.2.34 Some validation of the secondary data review findings was provided by the quantitative survey for this study when the findings were segmented by industry sector. Public transport usage was highest amongst representatives from the following sectors: Arts, entertainment and recreation (34%), Financial and insurance (20%), Education (20%), and Accommodation and food services (17%).

2.2.35 However, use of private car/van in the quantitative survey sample was lower than suggested by the NTS Data (DfT, 2020f). Modal share of private vehicles was much lower for Agriculture, forestry and fishing (72%), Mining and quarrying (69%) and Electricity, gas, steam and air con supply (68%) than was suggested in the secondary data review.

Table 2. Proportion of employees commuting using each mode (Pre-Covid), by Industry Sector (n=814)

INDUSTRY SECTOR	CAR/ VAN	PUBLIC TRANSPORT	ACTIVE TRAVEL	NONE
A - Agriculture, forestry and fishing	72%	8%	15%	5%
B - Mining and quarrying	69%	15%	11%	5%
C - Manufacturing	84%	6%	7%	2%
D - Electricity, gas, steam and air con supply	68%	7%	18%	6%
E - Water supply; sewerage, waste management and remediation activities	88%	6%	5%	1%
F - Construction	90%	5%	3%	1%
G - Wholesale and retail trade; repair of motor vehicles and motorcycles	81%	8%	10%	1%
H - Transportation and storage	80%	7%	9%	4%
I - Accommodation and food service	47%	17%	19%	18%
J - Information and communication	66%	15%	5%	13%
K - Financial and insurance activities	63%	20%	6%	11%
L - Real estate activities	84%	11%	4%	2%
M - Professional, scientific and technical	67%	15%	9%	10%
N - Admin and support service activities	70%	10%	5%	16%
P - Education	66%	20%	10%	4%
Q - Human health and social work activities	64%	16%	16%	4%
R - Arts, entertainment and recreation	46%	34%	20%	0%
S - Other service activities	79%	8%	12%	1%
Overall Average	74%	11%	9%	6%

Modal shift

2.2.36 The quantitative survey also explored whether businesses had any initiatives in place to support the use of public transport, car sharing, or cycling for employees' commuting journeys. Figure 4 shows that two thirds of businesses (66%) did not have any initiatives in place. Of those which did, the most commonly cited initiatives were facilities for cyclists, such

as cycle parking or showers on-site (23%), incentives to reduce car use (7%) and a travel plan for employees (7%).

2.2.37 The qualitative research for this study uncovered similar initiatives. Whilst some businesses had introduced measures such as showers and cycle storage, or locating their main sites close to public transport to encourage use of alternative modes, others generally felt that it would not be possible for businesses to reduce car usage without viable alternatives in place.

2.2.38 The qualitative research participants had mixed views on the role of businesses in tackling car dependency. Across all sectors, many felt that the responsibility for tackling car dependency should not fall on businesses. Rather, the Government or authorities responsible for delivering transport improvements should introduce incentives and improve public transport.

“Again, I think you need to lower the prices of public transport – buses and trains. I don’t think it’s a case of what businesses can do, it’s more what TfN can do.”
 (Sector J-S, Micro/Small business, Yorkshire and The Humber, 5 years or less at main site)

Initiatives for supporting use of public transport, car sharing or cycling

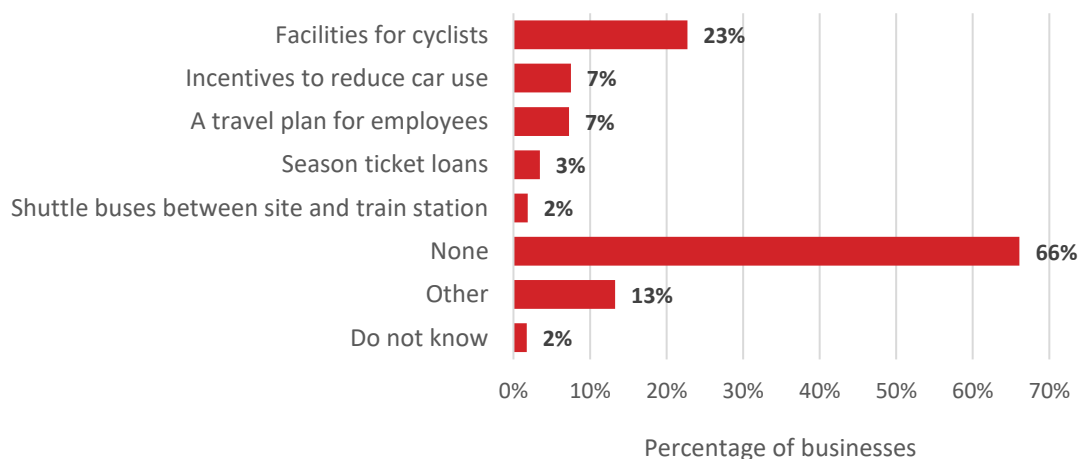


Figure 4. Does your organisation have any initiatives for supporting the use of public transport, car sharing, or cycling for employees? (n=814)

2.2.39 Examples provided by some businesses within the quantitative sample for this study of other initiatives to reduce use of private car for commuting journeys, not listed, included:

- Locating their sites of work near public transport interchanges;
- Encouraging walking to work by offering incentives; and
- Offering remote working where possible.

2.2.40 The types of initiatives which businesses had in place for supporting the use of public transport, car sharing or cycling varied significantly by:

- **Sector:** Businesses in Sectors J-S were more likely to have at least one initiative in place to support the use of public transport, car sharing or cycling (35%) than businesses in

sectors A-I (26%). Those in sectors J-S were also more likely to have facilities for cyclists (27%) than those in sectors A-I (20%). Although there were no statistically significant variations by individual industry sectors, a number of notable differences were apparent:

- Many businesses in Electricity, gas, steam, and air conditioning supply had a travel plan for employees (38%);
 - Many businesses in the Arts, entertainment and recreation sector had facilities for cyclists (54%) and incentives to reduce car usage (15%); and
 - A large proportion of businesses in the water supply, sewerage, waste management and remediation activities sector had no initiatives in place (83%).
- **Business size:** Medium and large businesses were more likely to have facilities for cyclists (47%), a travel plan for employees (17%), and season ticket loans (13%) than those in micro or small businesses (15%, 4% and 0% respectively).
 - **Length of time at main site:** Businesses that had been located at their main site for more than five years were more likely to have facilities for cyclists (27%) than those who had been at their main site for up to five years (18%).

2.2.41 Participants in the qualitative research also offered suggestions as to how TfN could encourage modal shift away from private cars, which included:

- Creating an integrated public transport network;
- Ensuring easy access to public transport via car, for example through increasing capacity at park and ride facilities;
- Making public transport more affordable, especially train journeys;
- Increasing capacity on public transport;
- Reducing journey times on public transport;
- Increasing frequency of buses/trains, especially in rural areas; and
- Improving reliability of public transport.

“There’s this view that we need to get out of our cars and onto public transport, but I think that is unrealistic without dramatically changing public transport.”
(FSB)

2.2.42 Figure 5 shows that almost three quarters of businesses (72%) predicted that the number of employees using private modes of transport for commuting journeys will not change in 2-3 years’ time. Over 50% more businesses thought the number of employees using private transport would increase (15%) than thought it would decrease (9%).

Anticipated change in employees use of private modes of transport in 2 to 3 years' time, compared to now?

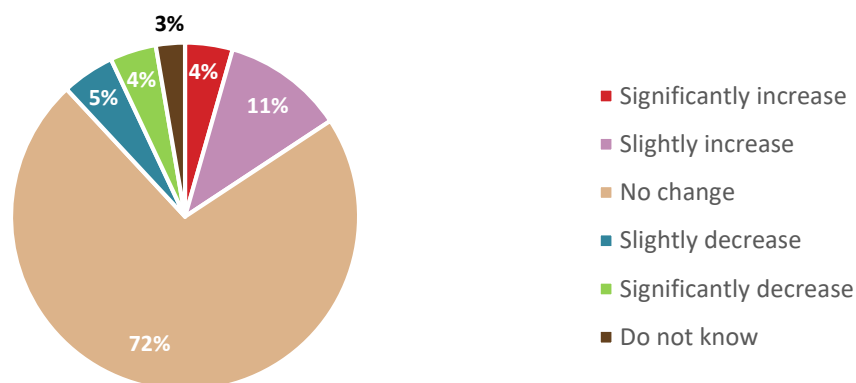


Figure 5. Do you think your employees use of private modes of transport will increase, decrease, or stay the same in 2 to 3 years' time? (n=814)

2.2.43 Anticipated changes to employees' use of private modes varied significantly by:

- **Sector:** Businesses in Sectors J-S were more likely to anticipate a decrease in employees' use of private modes (14%) than those in sectors A-I (6%);
 - Although anticipated use of private modes in two to three years' time did not vary significantly by individual sector, a notably higher proportion of businesses in the Electricity, gas, steam, and air conditioning supply sector anticipated an increase (36%) in private modes in the years to come.
 - Conversely, a notably high proportion of businesses in the Arts, entertainment, and recreation sector anticipated a decrease in their use of private modes of transport in the next 2-3 years' (31%).
- **Business size:** Medium and large businesses were more likely to anticipate a decrease in employees' use of private modes (12%) than micro or small businesses (8%); and
- **Length of time at main site:** Those that had been at their main site for five years or less were more likely to predict an increase in employees' use of private modes (19%) than those who had been at their main site six years or more (13%).

2.2.44 Broadly aligned with the primary research findings for this study, previous research undertaken by SYSTRA (2020b) suggests that 60% of those who commuted by train, and 58% of those who commuted by bus, pre-pandemic, intend to use public transport less for commuting journeys post-pandemic. This indicates that businesses and transport authorities may face challenges in encouraging employees to return to sustainable modes of travel. However, 37% of those predicting a decline to their public transport use would return to their pre-pandemic levels following vaccination (SYSTRA, 2020b).

Impact of Covid-19 on commuting patterns

2.2.45 The secondary data analysis and literature review undertaken as part of this study suggests that trends towards an increase in home-working may have been accelerated by the pandemic.

- 2.2.46 The most recently available statistics from ONS indicate that between the 5th to 15th November 2020, around 1 in 3 employed adults over the age of 16 in the North of England were working from home (ONS, 2020). Compared to an average for England of 38%, the breakdown of the workforce working from home by region was as follows:
- North East – 35%;
 - North West – 33%; and
 - Yorkshire and The Humber – 37%.
- 2.2.47 A recent survey indicated that 80% of businesses expect to increase, or maintain their mobile-network usage over the next 12 months, suggesting that businesses are preparing for greater home-working capacity. Likewise, 59% stated that enhanced network coverage would be vital in enabling firms to adapt to the ‘new-normal’ post-pandemic (BCC, 2020c).
- 2.2.48 Similarly, improvements to broadband reliability will be crucial in ensuring that those working from home can do so efficiently. A recent survey (Earnst and Young (EY), 2021) found that reliability is the most highly prioritised need for broadband for those working at home, and consistent performance is critical for confidence that work can be fulfilled from home.
- 2.2.49 Additionally, as part of encouraging more efficient use of the transport network, home working is being actively promoted within some transport strategies, such as the Greater Manchester Transport Strategy 2040 (TfGM, 2021a); noting that such changes will also contribute towards decarbonisation and climate change objectives. This suggests that trends towards increased home-working may continue, and even be encouraged, in the future.
- 2.2.50 Previous research by SYSTRA (2020a) suggests that in April 2020, 17% of working people said they think they will be working from home more post-pandemic, and 67% of those who take part in business meetings thought virtual meetings will replace some, but not all face-to-face trips/meetings.
- 2.2.51 Further still, a repeat phase of primary research regarding post-Covid-19 travel trends, SYSTRA (2020b) found that in June 2020, for UK employees who spend any period of time in the office, there is a clear trend towards working less from the office.
- 29% of office workers, expecting to stay in the same or similar role, no longer want to spend any time working from the office;
 - 55% of UK workers would like to work more flexibly, compared with before Covid-19;
 - Of those who want to make changes, most (59%) think it is likely their employer will allow them to change their working location or pattern; and
 - Two in five (40%) believe it is likely they would change jobs to achieve the working pattern or location they want.
- 2.2.52 These findings were broadly mirrored in the quantitative survey findings for this research, in which businesses estimated the percentage of the working week their employees worked remotely before and during the Covid-19 pandemic, and predicted the percentage of the working week their employees will work remotely in 2-3 years’ time.
- 2.2.53 Figure 6 shows that businesses estimated, on average, that before Covid-19 employees worked remotely for 13% of the week. During the pandemic, this nearly tripled, to 36%. Although this percentage is predicted to decrease post-pandemic, it is still forecast to remain above pre-Covid levels, at 19%.

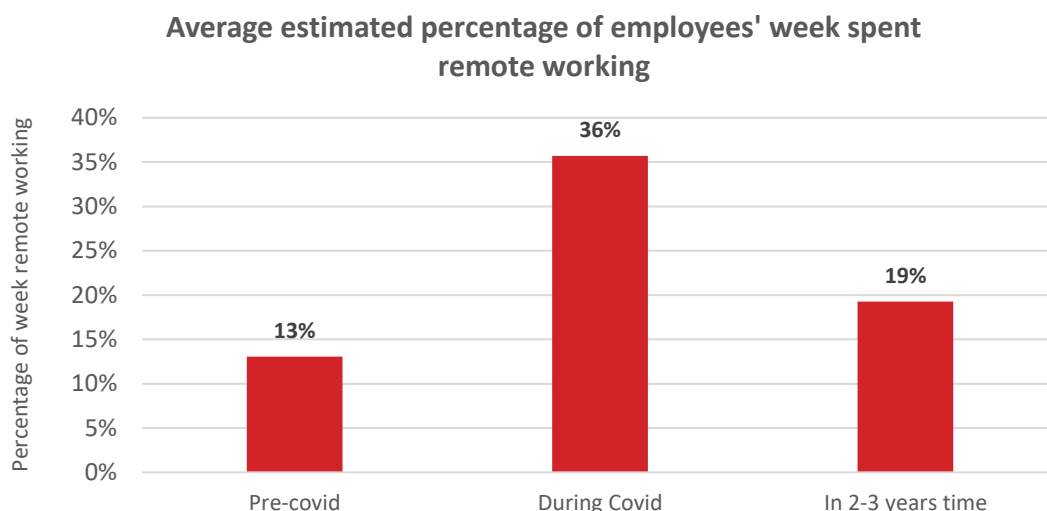


Figure 6. What percentage of the working week [did/have/will] your employees [work/worked/work] remotely, or from home (n=814)?

2.2.54 The findings from the quantitative survey indicate that businesses within sectors J-S only had a marginally higher percentage of employees working weeks' spent working remotely before the pandemic (15%) than sectors A-I (11%).

2.2.55 However, the difference between these groups was far greater during the pandemic, in which 49% of employees working weeks were spent working remotely for sectors J-S, compared to 26% for sectors A-I. Furthermore, when thinking ahead to 2-3 years' time, sectors J-S anticipate employees continuing to spend far more time working remotely (27%) than sectors A-I (14%).

2.2.56 Table 3 shows that the sectors with the greatest share of the week spent working from home during the pandemic (and anticipated in 2-3 years' time) are:

- Information and communication;
- Financial and insurance activities;
- Real estate activities; and
- Professional, scientific and technical.

2.2.57 Businesses within more 'goods-intensive' sectors were generally less likely to anticipate spending a large share of their week working from home post-pandemic; with the following sectors in particular likely to have a continued strong demand for commuting journeys:

- Mining and quarrying;
- Manufacturing;
- Construction;
- Wholesale and retail trade, repair of motor vehicles and motorcycles;
- Transportation and storage; and
- Human health and social work activities.

Table 3. Share of week spent working from home by Industry Sector (n=814)

INDUSTRY SECTOR	BEFORE PANDEMIC	DURING PANDEMIC	2-3 YEARS' TIME
A - Agriculture, forestry and fishing	28%	37%	31%
B - Mining and quarrying	11%	9%	10%
C - Manufacturing	11%	30%	10%
D - Electricity, gas, steam and air con supply	24%	32%	19%
E - Water supply; sewerage, waste management and remediation activities	15%	5%	16%
F - Construction	10%	29%	14%
G - Wholesale and retail trade; repair of motor vehicles and motorcycles	7%	32%	11%
H - Transportation and storage	8%	21%	12%
I - Accommodation and food service	17%	18%	16%
J - Information and communication	30%	69%	48%
K - Financial and insurance activities	14%	59%	37%
L - Real estate activities	21%	60%	43%
M - Professional, scientific and technical	19%	65%	37%
N - Admin and support service activities	14%	55%	24%
P - Education	18%	46%	22%
Q - Human health and social work activities	11%	21%	15%
R - Arts, entertainment and recreation	2%	42%	20%
S - Other service activities	11%	35%	16%
Overall Average	13%	36%	19%

2.2.58 During the qualitative research, it was also evident that those businesses that were able to conduct work remotely had been doing so during the Covid-19 pandemic. Generally, participants felt that employees would like to continue working from home or adopt hybrid working practices (some part of the week at home, some part of the week at their office/main work site) where possible.

Key Points Summary – Commuting

Four in five employees live within 15 miles of their place of work.

Home-working has increased significantly during the Covid-19 pandemic, and is forecast to remain above pre-Covid-levels post-pandemic. Businesses estimate that many employees would like to adopt a hybrid model to working in the future (part at home, part on-site/at office) where their role permits.

Most employees commuted to work using a private car/van pre-pandemic, but less than a third of businesses have initiatives in place to support the use of public transport, car sharing, or cycling for employees' commuting journeys.

Most businesses predict that the proportion of employees using private modes will not change in 2-3 years' time compared to pre-pandemic. Suggestions from participants for how TfN could encourage modal shift away from private cars for commuting journeys, included:

- Creating an integrated public transport network;
- Ensuring easy access to public transport via car, for example through increasing capacity at park and ride facilities;
- Making public transport more affordable, especially train journeys; and
- Improving public transport, in particular by increasing capacity, reducing journey times, improving reliability and increasing frequency.

2.3 Business journeys (e.g. to meetings)

Overall levels of business journeys (e.g. to meetings with clients, suppliers and customers)

- 2.3.1 The findings from the secondary data analysis and literature review undertaken as part of this study indicate that during and prior to 2020, there was generally less business travel in the North of England (in terms of distance and time travelled per year) compared to the national average.
- 2.3.2 Business mileage by company car across England decreased by 40% between 1995 and 2007. This trend was largely attributable to reduced company vehicle ownership: from 29 cars per 1,000 people in 1995/7 to 23 cars per 1,000 people in 2005/7 (SDG, 2018).
- 2.3.3 The average individual from the North of England spends fewer hours per year travelling for business purposes than the national average (DfT, 2020a). Compared to the national average (regardless of whether London is included or excluded) of 20 hours of business travel per person, per year, the average number of hours spent travelling per person for business purposes by North of England region is as follows:
- North East – 16 hours;
 - North West – 19 hours; and
 - Yorkshire and The Humber – 17 hours.
- 2.3.4 Furthermore, the average individual from the North of England completes fewer miles of business travel than the national average (DfT, 2020a). Compared to the national average

(including London) of 561 miles of business travel per person, per year, the distance travelled for business purposes per person per year by North of England region is as follows:

- North East – 529 miles;
- North West – 538 miles; and
- Yorkshire and The Humber – 530 miles.

2.3.5 Once London is excluded from the analysis, the difference between the North of England and the national average is even more profound, as the national average excluding London is 597 miles per person (DfT, 2020a).

2.3.6 With regards to rail travel specifically, data from the Northern Rail Modelling System (NoRMS, 2018) indicates that across the North of England as a whole:

- Demand for business travel (average weekday between 7am-7pm) was 41,649 trips;
- Over 1.92 million kilometres were travelled by rail for business purposes on the average weekday between 7am-7pm; and
- The average distance travelled by rail for individual business purposes was 46.2km.

2.3.7 In the quantitative survey for this study, businesses were asked to predict how the number of business trips they will make in two to three years’ time (excluding deliveries of goods) will compare to the number of business trips they made pre-Covid (before March 2020). Just under half (44%) anticipate making the same number of journeys in 2-3 years’ time as they did pre-Covid, one third anticipate an increase in their number of business trips, and almost a quarter (23%) anticipate a decrease.

Table 4. Anticipated change in the number of business journeys in 2-3 years’ time, compared to pre-Covid (n=484)

SENTIMENT	%
Significantly increase	10%
Slightly increase	23%
Stay the same	44%
Slightly decrease	14%
Significantly decrease	9%
Total	100%

2.3.8 The anticipated change in the number of business journeys in 2-3 years’ time, compared to pre-Covid, varied significantly by:

- **Business sector:** Businesses within sectors J-S (less transport-intensive businesses) were more likely to anticipate a decrease in their business journeys (29.2%) than businesses in sectors A-I (17.7%).

- **Length of time at main site:** Businesses which have been at their main site for 5 years or less were more likely to anticipate an increase in their business journeys (39.3%) than those who had been at their main site for 6 years or more (25.8%).

2.3.9 In addition, the survey indicated that around one in five businesses (22%) anticipated their employees making daily business-related trips (excluding deliveries) of up to 15 miles in two to three years' time, compared to one in ten anticipating daily trips of 15 to 49 miles. Nearly half (45%) anticipated never making business trips outside the North of England. The findings are summarised in Figure 7 below.

Anticipated frequency of business travel in two to three years' time by distance

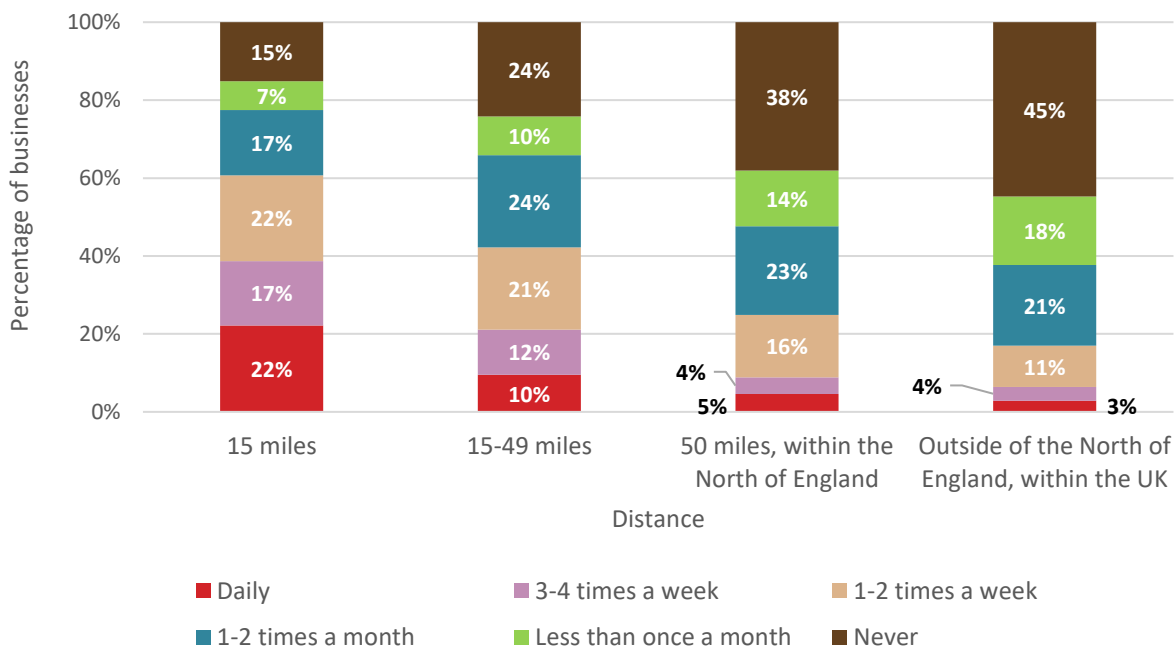


Figure 7. Anticipated frequency of business travel in 2-3 years' time, by journey distance (n=483)

2.3.10 The frequency with which employees are anticipated to travel outside the North of England, but within the UK for business purposes, varied significantly by:

- **Business size:** Employees from medium and large businesses were more likely to anticipate their employees will travel outside the North of England but within the UK at least once a month (51%) than those from micro or small businesses (34%).

2.3.11 The results from the quantitative survey broadly align with the findings of the secondary data review. Accent-PJM (2019) found that the proportion of senior staff travelling once per week on business decreases greatly as the distance required for travel increases, as follows:

- 60% of senior staff travel once a week for 'local' journeys (less than 15 miles);
- 42% travel once a week for journeys of between 15-50 miles; and
- 30% travel once a week for journeys greater than 50 miles.

- 2.3.12 The quantitative survey for this study indicated that no significant difference existed between more transport-intensive sectors (Industry SIC Sectors A-I) and less transport-intensive sectors (Industry SIC sectors J-S) with regards to their anticipated short (less than 15 miles) and long (50+ miles) business journeys in 2-3 years' time. However, Sectors A-I were more likely to anticipate making more trips on employers' business of 15-49 miles in two to three years' time, than businesses in Sectors J-S.
- 2.3.13 These findings (from the quantitative survey for this study), which suggest that no significant differences exist between industry sectors A-I and J-S in terms of their anticipated frequency of shorter and longer business journeys, differ from the findings of the secondary data analysis and literature review, which suggested that more service-based sectors would travel less frequently than more goods-intensive sectors. This perhaps reflects the changing business world-post Covid, compared to pre-Covid conditions, where remote and virtual meetings are becoming increasingly prevalent across many sectors of business.
- 2.3.14 Data from the National Travel Survey (NTS, 2019) demonstrates that across different industry sectors, the total number of kilometres travelled (and average distance) varies greatly. In particular, the sectors which exhibit high levels of demand for business travel are:
- **Health and social work** – contributing significantly to the demand (defined as individual journeys) for business travel, but less so in terms of the distance travelled (i.e., a greater number of shorter business journeys than other sectors).
 - **Manufacturing** – with a small proportion of business demand, but a higher proportion of distance travelled, particularly in the North East.
 - **Construction** – contributing to around 11% of business travel across the North overall in terms of demand, and around 13% in terms of distance travelled.
- 2.3.15 There are also some large variations between different geographic regions and business travel for employees within the same industry sector (NTS, 2019):
- **Health and social work** – contributing to 55% of business journey demand (defined as individual journeys) in the North East, compared to 30% in the North West, and 9% for Yorkshire and The Humber. The high proportion of demand for this sector may be characteristic of the nature of the work in this industry, with a large number of individual journeys being undertaken over short distances (NTS, 2019).
 - **Financial and insurance** – with a distance travelled for business purposes significantly higher in The North East than other regions.
 - **Manufacturing** – with a distance travelled for business purposes significantly higher in the North East than other regions the North East than other regions.
- 2.3.16 A potential explanation for these trends may be due to large sections of the North East being more remote from cities or centres of employment, relative to the North West, and Yorkshire and The Humber.

Mode of transport used for trips on employers' business

- 2.3.17 Data from the Northern Highway Assignment Model (NOHAM, 2018) demonstrates that the majority of road business journeys in the North of England (73%) are characterised by journeys starting and ending within the same county. Likewise, NoRMS (2018) suggests that the majority of rail business travel in the North of England (56%) is for journeys that are characterised by journeys starting and ending within the same county.

2.3.18 Senior staff embarking on business-related travel are less likely to use public transport for shorter business journeys within the North, but display an increased propensity to use public transport for longer business journeys which stretch into other regions (Accent-PJM, 2019). These findings are summarised in Figure 8 and the bullets below:

- 11% of senior staff travel by public transport for ‘local’ journeys (less than 15 miles);
- 14% use public transport for journeys of between 15-50 miles;
- 18% use public transport for journeys of more than 50 miles within the North; and
- 36% use public transport for journeys of more than 50 miles stretching beyond the North.

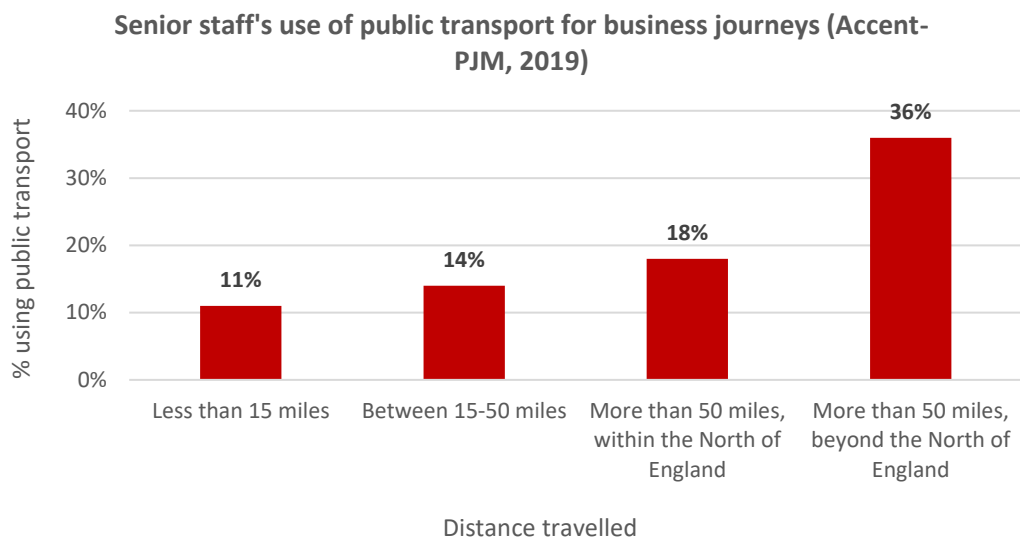


Figure 8. Senior staff's use of public transport for business journeys (Source: Accent-PJM, 2019)

2.3.19 Consequently, the reliance on the road network for business-related travel is high. Data from the Northern Highway Assignment Model (NOHAM, 2018) indicates that for business journeys by road, which take place to, from and within the North:

- Average daily demand (between 7am-7pm for the average weekday) for business travel by road was 1,194,272 trips;
- Over 32.4 million kilometres were travelled by road for business purposes between 7am-7pm for the average weekday in 2018; and
- Average distance travelled by road for individual business purposes was 27.1km

2.3.20 Overall, 85% of all business trips made take place entirely within the North of England (both starting and ending within the region) (NTS, 2019). This percentage share is lower than for commuting journeys (98%), suggesting that business travel tends to be for journeys of a greater distance than commuting.

2.3.21 These findings from the secondary data analysis and literature review are supported by the results of the primary research undertaken for this study, in which businesses were asked to indicate which modes of transport they anticipated using for business trips in 2-3 years' time for journeys of different distances.

2.3.22 The majority anticipated employees travelling by private or company car for business travel of all distances in two to three years’ time. Based on our review of secondary data, the inference here is that car is forecast to remain the dominant mode of choice for business travel. However, as the distance of the journeys increased, so did the propensity to use public transport. For instance, only 1 in 10 businesses anticipate using public transport for journeys of less than 15 miles, compared to 30% for journeys to locations outside the North of England. These findings are summarised in Figure 9.

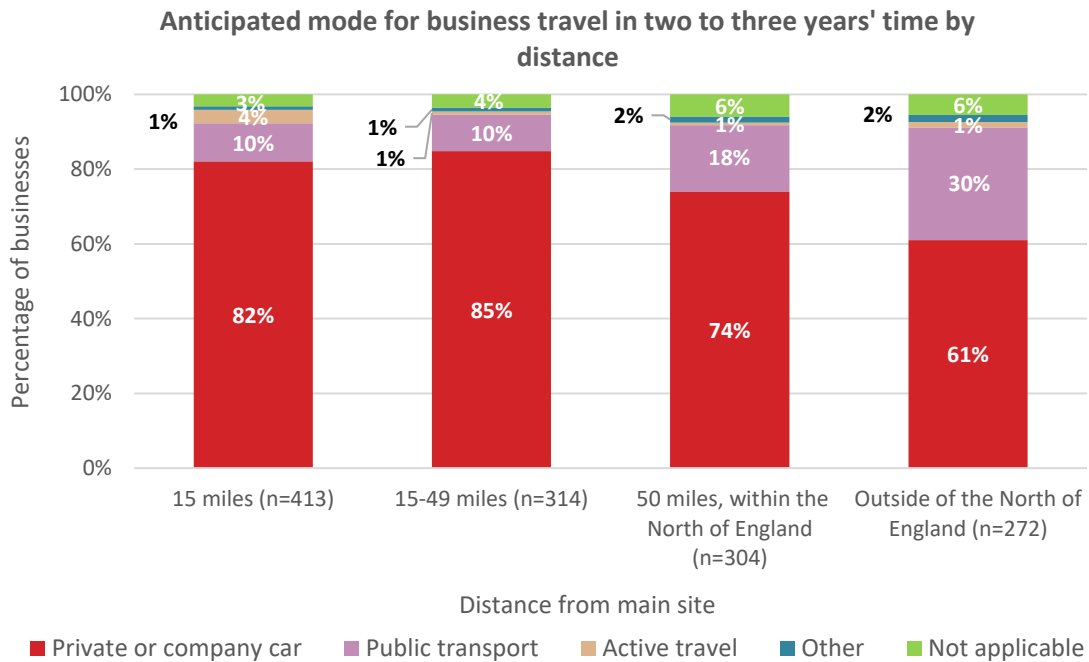


Figure 9. What mode will employees use to travel [distance] for business purposes, in 2-3 years’ time (n=413 to 272 range)

2.3.23 The modes of transport anticipated to undertake business journeys for each of the stated distances in 2-3 years’ time did not differ significantly by number of employees, region or place type. Although the results indicated that Industry Sectors A-I displayed a slightly greater propensity to travel using a private car or van on employers’ business than Industry Sectors J-S, and Industry Sectors J-S were slightly more likely to anticipate using public transport than Industry Sectors A-I, these differences were not statistically significant.

2.3.24 However, whilst anticipated mode for business travel in two to three years’ time were not statistically significantly different by industry sector, some notable differences included:

- A high proportion of the Construction sector anticipated travelling via private or company car for distances under 15 miles (92%) and 15-49 miles (95%);
- A high proportion of the Manufacturing sector anticipated travelling via private or company car for distances of 15-49 miles (96%), and journeys outside of the North of England (75%); and
- A low proportion of the Human health and social work activities sector anticipated travelling via private or company car for all distances (53%, 40%, 29%, 29%).

- The Human health and social work activities sector also had a notably higher proportion of businesses who anticipated travelling via active transport for distances under 15 miles (12%) and 15-49 miles (7%), as well as using public transport for journeys over 50 miles, within the North of England (57%).

2.3.25 Within both the qualitative and quantitative phases of this research, businesses provided several reasons as to why they are unable to use public transport as much as they would like for their business journeys:

- Long journey times by train (e.g., taking much longer to travel to destinations by train relative to other modes);
- Prohibitive cost of train tickets and parking combined, relative to other modes;
- A lack of reliability in the rail network (prone to disruption);
- Lack of rail connectivity to required destinations; and
- The need to transport goods whilst travelling, e.g. travelling with equipment.

2.3.26 The secondary data analysis and literature review, however, did suggest that mode of transport used for trips for employers' business in the North of England differs significantly by industry sector. Data from the National Travel Survey (NTS, 2019) indicates that several sectors are almost entirely reliant on private cars or vans for business travel. These sectors are:

- A - Agriculture, forestry and fishing
- B - Mining and quarrying
- C - Manufacturing
- D - Electricity, gas, steam and air con supply
- E - Water supply; sewerage, waste management and remediation
- J - Information and communication
- T - Activities of households

2.3.27 Sectors which travel more by public transport (e.g., surface rail, local bus services) for business purposes are (NTS, 2019):

- I - Accommodation and food service activities (30%)
- S - Other service activities (25%)

2.3.28 Sectors which travel more by active modes (e.g., walking and cycling) for their business journeys are (NTS, 2019):

- Q - Human health and social work activities (15%)
- P - Education (10%)

Anticipated changes in frequency and distance travelled

2.3.29 The quantitative survey for this study has provided data on whether businesses anticipate making an increased number of trips on employers' business in 2-3 years' time and whether they anticipate travelling greater distances than they do currently.

2.3.30 2.3.29 shows that almost three in five (57%) businesses consider their organisation will not need to travel more frequently for business purposes in two to three years' time compared to now, while almost two in five (38%) consider they will have to do so.

2.3.31 Anticipated change in frequency of business travel in two to three years' time compared to now varied significantly by:

- **Length of time at main site:** Those whose businesses had been at their main site for up to five years were more likely to anticipate employees travelling more frequently for business travel compared to now (48%) than those who had been at their main site for more than five years (27%).

Do you anticipate an increase in your frequency of business travel in 2-3 years' time, compared to now?

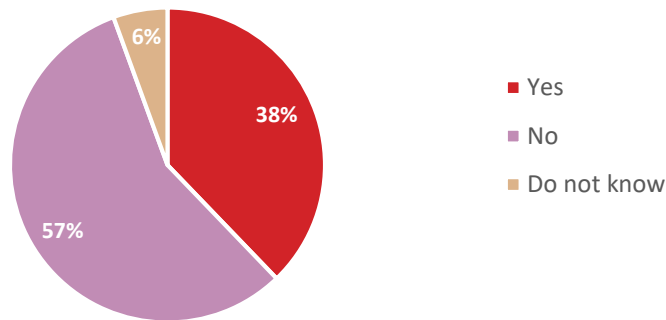


Figure 10. In 2-3 years', time, do you anticipate your organisation will need to travel for other business purposes more frequently compared to now? (n=484)

- 2.3.32 Although anticipated change to frequency of business travel for other purposes did not vary significantly by industry sector, a notably high proportion of businesses in the Wholesale and retail trade and repair of motor vehicles and motorcycles sector (53%) and Administrative and support service activities sector (51%) anticipated an increase in business travel for other business purposes, compared to other sectors.
- 2.3.33 Figure 11 shows that almost two thirds (65%) of businesses did not anticipate needing to travel further distances for business travel in two to three years' time. By contrast, three in ten (30%) anticipated needing to travel greater distances.

Anticipated increase in distance travelled for other business purposes in 2-3 years' time compared to now

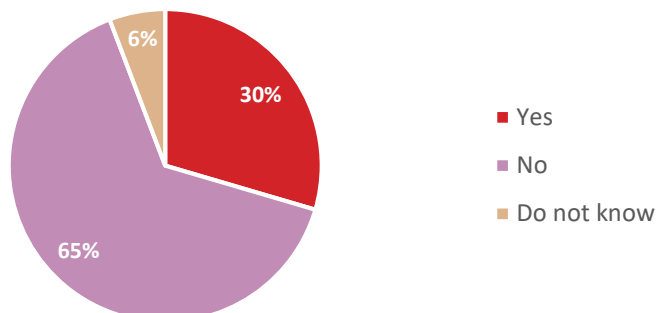


Figure 11. In 2-3 years', time, do you anticipate your organisation will need to travel for other business purposes across greater distances compared to now? (n=484)

2.3.34 Anticipated change in distance travelled for business travel in two to three years' time compared to now varied significantly by:

- **Length of time at main site:** Those whose businesses had been at their main site for up to five years were more likely to anticipate employees travelling further distances for business purposes in two to three years' time compared to now (35%) than those who had been at their main site for more than five years (24%).

2.3.35 Although anticipated change to distance of business travel for other purposes did not vary significantly by industry sector, a notably high proportion of businesses in the Manufacturing sector anticipated an increase in distance travelled for other business purposes (55%), compared to other sectors.

2.3.36 The most commonly cited reasons provided by survey respondents for not anticipating an increased demand for future travel on employers' business were as follows:

- The majority of clients/customers/suppliers are based within the local area, meaning there is little requirement for increased travel;
- An increasing shift towards online meetings, reducing the need for travel; and
- The presence of company policies which aim to reduce business travel.

2.3.37 These sentiments were shared in part by participants in the qualitative research, some of whom felt that their long-term business travel requirements would not increase. Many supported the use of remote meetings, rather than face-to-face, due to the reduced need for travel, as well as the safety benefits during the Covid-19 pandemic. They felt they would be likely to continue to meet remotely for many of their meetings, including:

- Instances where they would otherwise have to travel a long distance;
- Meetings involving only a small number of people;
- Meetings which are shorter in duration (e.g., less than 30 mins, less than 1 hour); and
- Meetings that would not involve the presentation of a physical product.

“As we’ve started to re-open, our demand for meeting rooms is actually very low. If anything, people seem to be spending their money meeting in a larger space, to fit more people, on the basis that they don’t need to do smaller meetings anymore.”

(Sector J-S, Medium/Large business, Yorkshire and The Humber, 6 years+ at main site)

“Remote meetings are easier now, and our expectations of what is possible have changed, and what we think is acceptable has changed.”

(FSB)

Trips on employers’ business – Key points summary

Travelling by car is expected to remain the dominant mode for future trips on employers’ business (e.g. to meetings).

Whilst for many businesses, demand for trips on employers business (in terms of frequency and distance) will remain the same, or decrease; there is a significant minority for which demand is anticipated to increase over the next 2-3 years’.

As the distance travelled for the trip on employers' business increases, so does propensity to use public transport.

Reasons provided by businesses for not travelling by public transport as much as they could for business journeys included:

- Long journey times by train;
- Prohibitive cost of train tickets and parking combined, relative to other modes;
- A lack of reliability in the rail network (prone to disruption);
- Lack of rail connectivity to required destinations; and
- The need to transport goods whilst travelling, e.g. travelling with equipment.

As the distance required to travel for business journeys increases, the likelihood of these trips being made in the future decreases.

The growth and reliance on remote meetings in particular during the pandemic was suggested to be a key contributor to this trend.

2.4 Trips including the delivery of goods

Overview of freight movements

- 2.4.1 The secondary data analysis and literature review confirmed that the North of England is home to a sizeable freight sector.
- 2.4.2 Looking at the overall travel by light goods vehicles (LGVs) and heavy goods vehicles (HGVs), data from the Northern Highways Assignment Model (NOHAM, 2018) suggests that the majority of movements for these vehicle types are for journeys which take place entirely within the North (i.e., do not cross into another region): 95% of trips for LGVs, 87% for HGVs.
- 2.4.3 A further source of data, the Great Britain Freight Model (GBFM) supports the notion that the majority of freight movements within the North of England are for journeys which take place entirely within the region.
- 2.4.4 Despite a marked difference in the raw counts of movements for LGVs when compared with NOHAM, GBFM suggests the same share of intra-regional movement for LGVs (96%). Counts of movements for HGVs overall match more closely between GBFM and NOHAM. GBFM suggests a slightly smaller percentage of HGV journeys crossing the regional boundary (around 9%), with this share being higher for Artic HGVs (14%) than Rigid HGVs (4%) (GBFM).
- 2.4.5 With regards to the transport of goods to and from the ports of the North, data from the Department for Transport (DfT, 2020e) shows that freight traffic has remained fairly stable for ports in Lancashire and Cumbria, and the Humber ports over the past 20 years. However, freight traffic has decreased considerably for the North East ports between 2000 and 2019.
- 2.4.6 Part of the reason for this trend may be because a large volume of rail freight in the North East relates to movements of coal between deep water ports on the Humber, Tees and Tyne and inland coal-fired power stations. These volumes are now falling as the UK switches to lower carbon electricity generation (Transport North East, 2020).
- 2.4.7 Within our quantitative survey, a sub-set of the overall sample, for whom the physical transport of goods comprised a significant proportion of their overall business travel needs (30% of their overall travel needs, or more), were asked a series of questions regarding their trips which included the receipt and delivery of goods.
- 2.4.8 The specific breakdown of business sectors who answered these specific questions regarding the transport of goods is outlined in Table 5. The majority of businesses for whom transport of goods comprised a significant proportion of their overall business travel needs belonged to SIC Industry Sectors A to I (72%).

Table 5. Business sectors answering transport of goods related questions

INDUSTRY SECTOR	COUNT	PERCENT
A - Agriculture, forestry and fishing	12	3%
B - Mining and quarrying	4	1%
C - Manufacturing	70	15%

INDUSTRY SECTOR	COUNT	PERCENT
D - Electricity, gas, steam and air con supply	8	2%
E - Water supply; sewerage, waste management and remediation activities	15	3%
F - Construction	86	18%
G - Wholesale and retail trade; repair of motor vehicles and motorcycles	55	12%
H - Transportation and storage	66	14%
I - Accommodation and food service	23	5%
J - Information and communication	10	2%
K - Financial and insurance activities	7	1%
L - Real estate activities	1	0%
M - Professional, scientific and technical	27	6%
N - Admin and support service activities	22	5%
P - Education	10	2%
Q - Human health and social work activities	15	3%
R - Arts, entertainment and recreation	10	2%
S - Other service activities	31	7%
Base	472	100%

2.4.9 The quantitative survey for this study explored the extent to which businesses for whom a sizeable proportion of their activity is the physical transport of goods are involved in international exports or imports. Figure 12 shows that two thirds (66%) of businesses surveyed do not import or export any goods internationally, compared to one quarter (28%) who import goods, and a slightly smaller proportion (24%) who export goods..

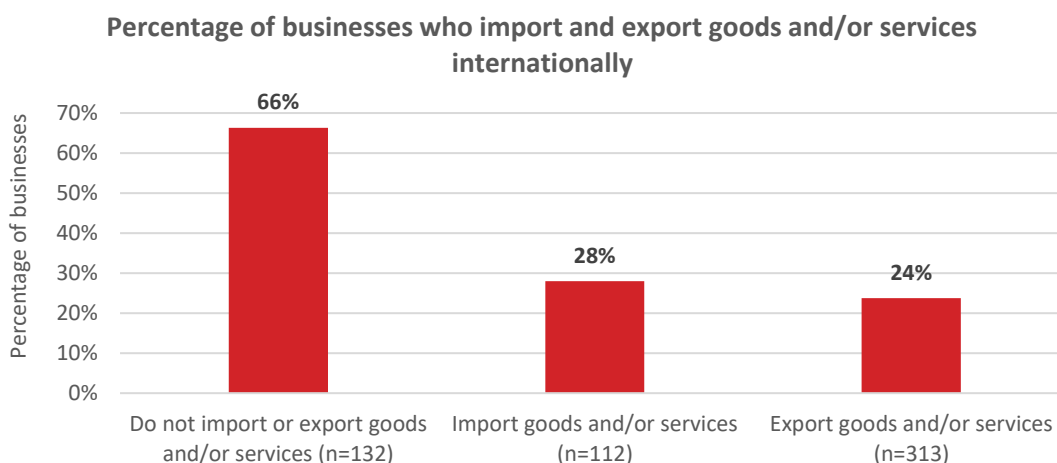


Figure 12. Does your business import, or export any goods or services internationally? (n=313 to 112 range)

2.4.10 The likelihood that a business reported that they are involved in international imports or exports of goods varied significantly by:

- **Size of business:** Medium and large businesses were more likely to report importing (42%) and exporting (39%) goods than those from micro or small businesses (23% and 18% respectively).
- **Place Type:** Businesses based in industrial places (35%) and rural towns and villages (33%) were most likely to import goods. Businesses based in transformational places (35%) and industrial places (30%) were most likely to export goods. Businesses based in former metropolitan counties and commuter towns were most likely to not import or export any goods (92% and 73% respectively).

2.4.11 Although the likelihood of a business reporting that they import or export goods/services internationally did not significantly differ by industry sector, there were some notable variations by industry sector:

- Manufacturing, and Professional, scientific and technical activities sectors were both more likely to import goods than those in other sectors (both 56%).
- These same industry sectors (Manufacturing, and Professional, scientific and technical activities) were also more likely to export goods than those in other sectors (51% and 44% respectively).

Goods received by businesses

2.4.12 The survey for this study asked businesses to estimate the percentage of goods that are delivered to them in different ways. Figure 13 shows that on average, businesses estimated that nearly half (45%) of all goods delivered to them were delivered directly by the supplier, compared to around three in ten which were delivered by a courier/delivery company (31%), and almost a quarter (24%) which were delivered by the business' own vehicles.



Figure 13. Approximately, what percentage of goods are delivered to you... (n=472)

2.4.13 The method by which goods were delivered to businesses varied greatly by Industry Sector. Table 6 demonstrates that:

- The proportion of deliveries received directly from suppliers was notably higher for the following sectors:
 - Real estate activities (90%)
 - Electricity, gas, steam and air con supply (65%);
 - Financial and insurance activities (61%); and
 - Mining and quarrying (58%).

- The proportion of deliveries received via couriers or delivery companies was notably higher for the following sectors:
 - Education (62%)
 - Professional, scientific and technical (51%); and
 - Admin and support service activities (44%).

- The proportion of deliveries received via vehicles owned/leased by their own organisation was notably higher for the following sectors:
 - Water supply; sewerage, waste management and remediation activities (52%);
 - Transportation and storage (45%); and
 - Agriculture, forestry and fishing (38%).

Table 6. Approximately, what percentage of goods are delivered to you... by Industry Sector (n=472)

INDUSTRY SECTOR	DIRECT SUPPLIER	COURIER/ DELIVERY	OWN VEHICLES
A - Agriculture, forestry and fishing	32%	30%	38%
B - Mining and quarrying	58%	23%	20%
C - Manufacturing	51%	37%	12%
D - Electricity, gas, steam and air con supply	65%	19%	16%
E - Water supply; sewerage, waste management and remediation activities	26%	23%	52%
F - Construction	54%	21%	25%
G - Wholesale and retail trade; repair of motor vehicles and motorcycles	50%	32%	19%
H - Transportation and storage	28%	27%	45%
I - Accommodation and food service	51%	22%	28%
J - Information and communication	50%	41%	10%
K - Financial and insurance activities	61%	24%	14%
L - Real estate activities	90%	10%	0%
M - Professional, scientific and technical	36%	51%	13%
N - Admin and support service activities	33%	44%	23%
P - Education	28%	62%	10%
Q - Human health and social work activities	48%	23%	29%
R - Arts, entertainment and recreation	37%	41%	22%
S - Other service activities	50%	32%	18%
Overall Average	45%	31%	24%

2.4.14 Businesses that took part in the survey for this study were also asked to indicate the frequency with which they receive deliveries through different methods. Table 7 shows that approximately two in five businesses received daily deliveries directly from suppliers, and a similar proportion received them via couriers/delivery companies, and via their own vehicles. Delivery by the business' own vehicles was the method most commonly reported as never occurring, by around one in five (21%) businesses.

Table 7. How often does your organisation receive deliveries [x] to any of your sites in the North of England?

FREQUENCY	DIRECTLY FROM SUPPLIERS	VIA COURIERS / DELIVERY COMPANIES	VIA VEHICLES FROM OWN ORGANISATION
Daily	43%	41%	41%
At least once a week	33%	38%	27%
At least once a month	15%	13%	8%
Less than once a month	4%	3%	3%
Never/Unknown	5%	4%	21%
Base	314	246	184

2.4.15 Frequency of deliveries received directly from suppliers varied significantly by:

- **Business size:** Medium and large businesses were more likely to report receiving deliveries directly from suppliers daily (60%) than those from small or micro businesses (34%); and
- **Length of time at main site:** Businesses which had been located at their main site for more than five years were more likely to report receiving deliveries directly from suppliers daily (51%) than those whose businesses had been located at their main site for up to five years (31%).

2.4.16 Whilst the results of the quantitative survey for this study indicated that businesses in Industry Sectors A-I were more likely to receive deliveries through all three modes (direct, via couriers, via company vehicles) on a daily basis than businesses in Industry Sectors J-S, these differences were not identified as being statistically significant.

2.4.17 Although frequency of deliveries received through each mode did not vary significantly by individual industry sector, notable variations could be observed for the following sectors:

- The Manufacturing sector was more likely to receive daily deliveries directly from suppliers (51%) and via courier or delivery services (69%) than other sectors; but less likely than other sectors to receive daily deliveries via their own vehicles (20%);
- The Construction sector was more likely to receive daily deliveries directly from suppliers (51%) than those in other sectors; and
- The Water supply, sewerage, waste management and remediation activities sector were very likely to report receiving daily deliveries using their own vehicles (73%) than those in other sectors.

2.4.18 Figure 14 shows that a similar number of businesses reported a decrease in the number of deliveries they received during the Covid-19 pandemic, compared to before the pandemic (30%), as reported an increase (27%). Almost two in five (38%) reported no change.

2.4.19 A change in number of deliveries during the Covid-19 pandemic, compared to before the pandemic varied significantly by:

- **Business size:** Medium and large businesses were more likely to have experienced a decrease in the number of deliveries received (33%) compared to micro or small businesses (29%); and
- **Length of time at main site:** Those who had been based at their main site for five years or less were more likely to have experienced an increase in deliveries received (30%) than businesses who had been at their main site for six years or more (26%).

Change in the number of deliveries received during the Covid-19 pandemic compared to before the Covid-19 pandemic?

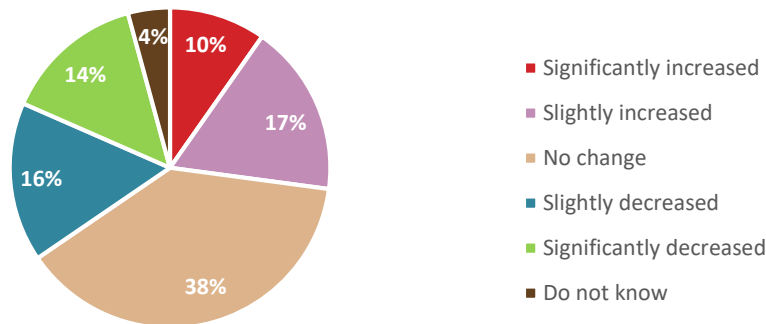


Figure 14. Which of the following options best describes the change in the number of deliveries you have received during the Covid-19 pandemic compared to before the Covid-19 pandemic? (n=472)

2.4.20 Although the change in number of deliveries received during the pandemic did not vary significantly by individual industry sector, notable variations could be observed for the following sectors:

- The Agriculture forestry and fishing sector, Wholesale retail trade, repair of motor vehicles and motorcycles sector, and Other service activities sectors, reported a larger increase (slight or significant) in the number of deliveries received (all 42%) than other sectors; and
- The Professional, scientific and technical activities sector reported a larger decrease (slight or significant) in the number of deliveries received (52%) than other sectors.

2.4.21 When asked to anticipate any changes to the number of deliveries they would receive in two to three years’ time, compared to during the Covid-19 pandemic, around half of businesses (52%) anticipated receiving more deliveries in the future, and only 8% anticipated receiving fewer. One third (35%) of businesses anticipated no changes. These findings are summarised in Figure 15.

2.4.22 Anticipated change in number of deliveries being received in two to three years’ time compared to now varied significantly by:

- **Sector:** Those in sectors J-S were more likely to anticipate a decrease in the number of deliveries they will receive (10%) than those in sectors A-I (6%).
 - The Wholesale retail trade, repair of motor vehicles and motorcycles (73%) and Professional, scientific and technical activities (70%) sectors were more likely to

- anticipate a slight or significant increase in the number of deliveries received; and
 - The Accommodation and food services sector (22%) anticipated were more likely to anticipate a slight or significant decrease in the number of deliveries received.
- **Length of time at main site:** Those who had been based at their main site for five years or less were more likely to anticipate an increase in deliveries received (59%) than businesses who had been at their main site for six years or more (46%).

Change in number of deliveries businesses anticipate receiving in 2 to 3 years' time, compared to during the Covid-19 pandemic?

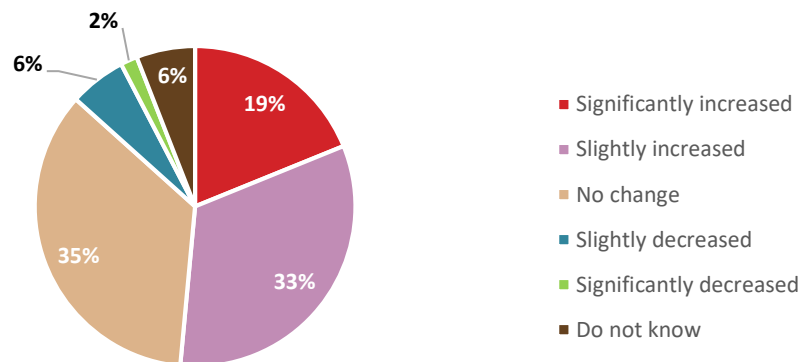


Figure 15. Which of the following options best describes the number of deliveries you anticipate receiving in 2 to 3 years' time, compared to during the Covid-19 pandemic? (n=472)

Location of suppliers

- 2.4.23 The quantitative survey for this study explored the locations of suppliers who deliver directly to the businesses surveyed, relative to the main sites of businesses.
- 2.4.24 Businesses estimated that around one third (34%) of their suppliers are located within 15 miles of their main sites, and a similar proportion (35%) are located more than 15 miles away, but within the North of England. Around three in ten suppliers (30%) were estimated to be outside of the North of England, one third of whom were based internationally. These findings are summarised in Figure 16.

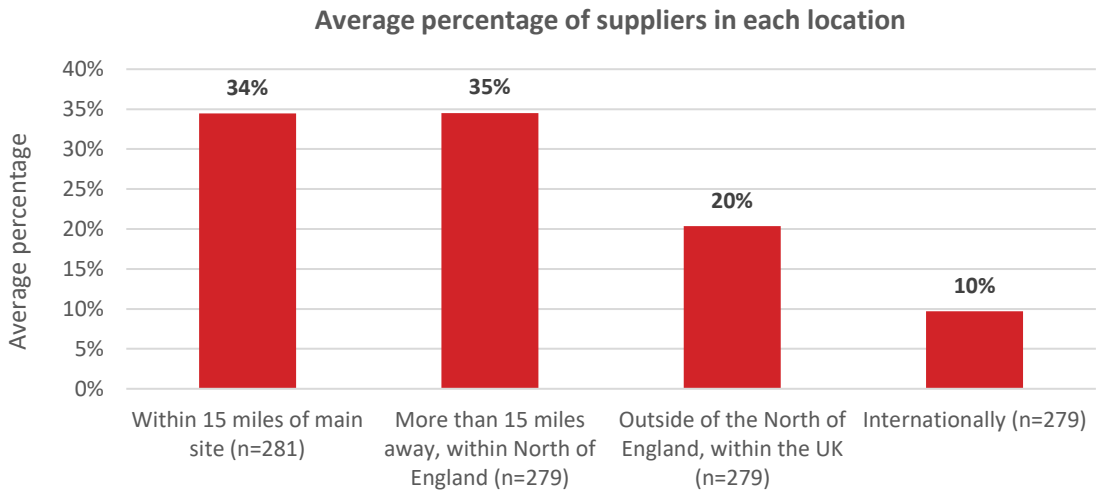


Figure 16. Approximately, what percentage of the suppliers who deliver directly to you currently are based... (n=281 to 279 range)

2.4.25 The approximate percentage of suppliers in each location who deliver directly to businesses varied greatly by Industry Sector. Table 8 demonstrates that:

- The proportion of suppliers located within 15 miles was notably higher for the following sectors:
 - Education (73%);
 - Construction (50%); and
 - Human health and social work activities (50%).
- The proportion of suppliers located more than 15 miles from an organisations main site, within the North of England, was notably higher for the following sectors:
 - Water supply, sewerage, waste management and remediation activities (73%);
 - Mining and quarrying (65%); and
 - Electricity, gas, steam and air conditioning supply (50%).
- The proportion of suppliers located outside of the North of England, within the UK was notably higher for the following sectors:
 - Real estate activities (90%); and
 - Agriculture, Forestry and Fishing (57%).
- The proportion of suppliers located internationally was notably higher for the following sectors:
 - Professional, scientific and technical activities (21%);
 - Wholesale and retail trade, repair of motor vehicles and motorcycles (17%); and
 - Manufacturing (17%)

Table 8. Approximately, what percentage of the suppliers who deliver directly to you currently are based... by Industry Sector (n=277)

INDUSTRY SECTOR	WITHIN 15 MILES	MORE THAN 15 MILES, WITHIN THE NORTH	OUTSIDE THE NORTH, WITHIN UK	INTER-NATIONALLY
A - Agriculture, forestry and fishing	10%	31%	57%	2%
B - Mining and quarrying	5%	65%	30%	0%
C - Manufacturing	21%	37%	25%	17%
D - Electricity, gas, steam and air con supply	23%	50%	19%	8%
E - Water supply; sewerage, waste management and remediation activities	7%	73%	13%	7%
F - Construction	50%	30%	14%	5%
G - Wholesale and retail trade; repair of motor vehicles and motorcycles	30%	33%	17%	17%
H - Transportation and storage	34%	36%	22%	7%
I - Accommodation and food service	40%	32%	27%	2%
J - Information and communication	17%	35%	33%	15%
K - Financial and insurance activities	34%	39%	16%	11%
L - Real estate activities	0%	10%	90%	0%
M - Professional, scientific and technical	30%	29%	20%	21%
N - Admin and support service activities	36%	35%	20%	10%
P - Education	73%	23%	3%	0%
Q - Human health and social work activities	50%	39%	7%	4%
R - Arts, entertainment and recreation	36%	27%	14%	3%
S - Other service activities	32%	37%	28%	1%
Overall Average	34%	35%	20%	10%

2.4.26 With regards to how the Covid-19 pandemic has impacted on the locations of suppliers who deliver goods directly to businesses, the majority (83%) of businesses had not experienced any supplier location changes.

Table 9. Has the location of the suppliers who deliver directly to you currently changed compared to before the Covid-19 pandemic? (Multiple response, n=298)

SENTIMENT	%
No change	83%
Yes, increased percentage of suppliers within 15 miles from main site	6%
Yes, increased percentage of suppliers more than 15 miles from main site, but within the North of England	5%
Yes, increased percentage of international suppliers	2%
Yes, increased percentage of suppliers outside the North of England, but within the UK	2%
Don't know	4%
Total	100%

2.4.27 The types of businesses which experienced supplier location changes during the Covid-19 pandemic varied notably (not statistically significantly due to lower base sizes) by:

- **Sector:** Those in sectors J-S were more likely have experienced an increase in suppliers based within 15 miles of their main site (12%) than those in sectors A-I (4%);
- **Business size:** Medium and large businesses were more likely to have experienced an increase in suppliers based within 15 miles of their main site (9%) than micro or small businesses (2%); and
- **Length of time at main site:** Those who had been located at their main site for up to five years were more likely to have experienced an increase in suppliers based outside the North, but within the UK (5%) than those who had been at their main site for six years or more (1%).

2.4.28 When asked to consider whether the location of suppliers delivering directly to their business might change in 2-3 years' time compared to now, over two-thirds (71%) did not anticipate any changes. However, almost one in five (17%) anticipated some change in location of suppliers, with the most common being an increase in suppliers more than 15 miles from their main site, but still within the North of England (9%).

Table 10. In 2 to 3 years' time, do you think the locations of the suppliers who deliver directly to you will change, compared to now? (Multiple response, n=298)

SENTIMENT	%
No change	71%
Yes, increased percentage of suppliers more than 15 miles from main site, but within the North of England	9%
Yes, increased percentage of suppliers within 15 miles from main site	6%
Yes, increased percentage of suppliers outside the North of England, but within the UK	5%
Yes, increased percentage of international suppliers	3%
Don't know	13%
Total	100%

2.4.29 The types of businesses which anticipated supplier location changes in the next two to three years varied significantly by:

○ **Length of time at main site:**

- Those who had been located at their main site for five years or less were more likely to anticipate an increase in suppliers within 15 miles of their main site than those who had been located at their main site for six years or more (11% vs. 4%).
- 'Younger' businesses were also more likely to anticipate an increase in suppliers more than 15 miles from their main site, but within the North (11% vs. 7%), suppliers outside the North, but within the UK (7% vs. 3%), and internationally (5% vs. 2%).
- Therefore, 'younger' businesses were more likely to anticipate an increase in suppliers across a range of distances.

2.4.30 Although the results were not statistically significant, those in the Wholesale and retail trade and repair of motor vehicles and motorcycles sector (84%) tended to be more likely to anticipate no change in supplier locations in two to three years' time than those in other sectors.

Vehicle fleet and deliveries sent by businesses

2.4.31 The secondary data analysis and literature review examined the number of HGVs licensed across the North of England between 1994 and 2019 (DfT, 2020b), and revealed the following trends:

- The number of HGVs licensed in the North of England has significantly increased in the last 25 years (1994 to 2019).

- The largest percentage increase during this 25 year period has been observed across Yorkshire and The Humber (+23.5%), with an accelerated growth in recent years (+11.5% between 2016 and 2019). This is despite traffic to/from The Humber ports over the past 20 years remaining relatively stable (DfT, 2020e).
- Despite overall growth in the last 25 years, there has been a small decrease in the number of HGVs registered in the North East (-3.1%) and North West (-2.0%) in more recent years (2016 to 2019).

2.4.32 Likewise, the following trends were identified from an analysis of the number of LGVs licensed across the North of England between 1994 and 2019 (DfT, 2020c):

- The number of LGVs licensed in the North of England has significantly increased in the last 25 years (1994 to 2019).
 - The largest percentage increase has been observed across the North East (+146.0%).
 - The trend of an increasing number of LGVs has continued in more recent years too (2016 to 2019), suggesting a consistent growth pattern in LGV licensing in the North.

2.4.33 DfT (2021b) suggest that between 2004 and 2019, the tonnes of goods lifted⁴, and the tonnes of goods moved⁵ within the North of England have decreased significantly over the past 15 years, as outlined below:

Tonnes of goods lifted by region (in millions of tonnes), DfT (2021b):

○ North East:	2004: 76	2019: 53	Change: -30.3%
○ North West:	2004: 200	2019: 162	Change: -19.0%
○ Yorkshire and The Humber:	2004: 220	2019: 167	Change: -24.1%

Tonnes of goods moved by region (in millions of tonne kilometres), DfT (2021b):

○ North East:	2004: 6,206	2019: 5,831	Change: -6.0%
○ North West:	2004: 19,759	2019: 18,831	Change: -4.7%
○ Yorkshire and The Humber:	2004: 19,348	2019: 18,454	Change: -4.6%

2.4.34 This notion of an increased proportion of LGVs being used to carry goods is supported by TfGM (2021a). An increased demand for e-commerce has impacted the locations of warehouses and goods handling facilities, and therefore has changed the way goods are distributed. Increased deliveries to homes and collection points have contributed to the rise of light commercial vehicles, as opposed to HGVs, which favour more traditional deliveries to retail outlets.

2.4.35 The trends towards LGVs and smaller vehicles carrying-out a greater proportion of deliveries is likely to continue, especially in cities such as Manchester. TfGM (2021b) are seeking to use a greater number of micro-consolidation centres for urban deliveries, with last-mile deliveries being made by smaller, greener vehicles.

⁴ Goods lifted: the weight of goods carried, measured in tonnes.

⁵ Goods moved: the weight of goods carried, multiplied by the distance hauled, measured in tonne kilometres.

2.4.36 These findings from the secondary data analysis and literature review were supported by the evidence collected in the quantitative survey for this study. Sixty eight percent of businesses within the overall sample owned or leased at least one company vehicle. The most common type of vehicles owned by businesses were cars (46%), followed by vans (40%). The majority of businesses that owned or leased a company vehicle had just a single vehicle registered to their company.

2.4.37 Of those businesses that owned vehicles, the vehicle type with the highest average number owned were vans (an average of 28 vans across all businesses that own/lease vans). The second highest average were buses or coaches, with those who own/lease a bus or coach having an average of 20 vehicles.

Table 11. Approximately, how many of each of the following types of vehicle does your organisation own or lease? (n=1,000)

TYPE OF VEHICLE OWNED/LEASED	% OF SAMPLE OWNING TYPE OF VEHICLE	MEAN NUMBER OF VEHICLES OWNED
Cars	46%	12
Van	40%	28
HGV	12%	17
Bus or coach	5%	20
Taxi or PHV	3%	14
Motorcycles, including cargo bikes	3%	10

2.4.38 Table 12 shows the frequency of deliveries for companies who deliver or transport goods to other organisations or customers from their sites in the North of England. Nearly half (47%) who deliver goods to other organisations/customers in the North of England using their own vehicles do so on a daily basis, and almost a quarter (27%) reported doing so at least weekly. Almost one third (32%) of businesses that deliver goods via courier/delivery companies do so on a daily basis, and around a fifth (21%) do so at least weekly.

Table 12. How often does your organisation deliver or transport goods or services to other organisations or customers from any of your sites in the North of England via...

FREQUENCY	COURIERS / DELIVERY COMPANIES	VEHICLES FROM OWN ORGANISATION
Daily	32%	47%
At least once a week	21%	27%
At least once a month	7%	4%
Less than once a month	11%	2%
Never/Unknown	26%	20%
Base	198	165

2.4.39 Frequency of delivering goods to other organisations or customers using external couriers or delivery services varied significantly by:

- **Business size:** Medium and large businesses were more likely to report using an external company to deliver goods daily (48%) than those from small or micro businesses (24%), whereas small or micro businesses were more likely to never deliver goods in this way (35%) than medium and large businesses (17%).

2.4.40 Whilst the results of the quantitative survey for this study indicated that Industry Sectors A-I displayed a greater propensity deliver or transport goods using their own company vehicles compared to Industry Sectors J-S, these differences were not identified as being statistically significant. However, the following notable variations were observed:

- A higher proportion of businesses in the Transportation and storage sector delivered goods daily using their own vehicles (72%), compared to those in other sectors; and
- A higher proportion of businesses in the Manufacturing sector reported making daily deliveries of goods using a courier or delivery company (53%) compared to those in other sectors.

2.4.41 With regards to the impact of the Covid-19 pandemic on the frequency of deliveries despatched by businesses, Figure 17 shows that around two in five (41%) businesses reported no change during the pandemic, compared to before the pandemic. Similar numbers noted an increase as noted a decrease in the number of deliveries despatched during the pandemic compared to before the pandemic (30% and 28% respectively).

Change in the number of deliveries businesses despatched during the Covid-19 pandemic, compared to before the pandemic

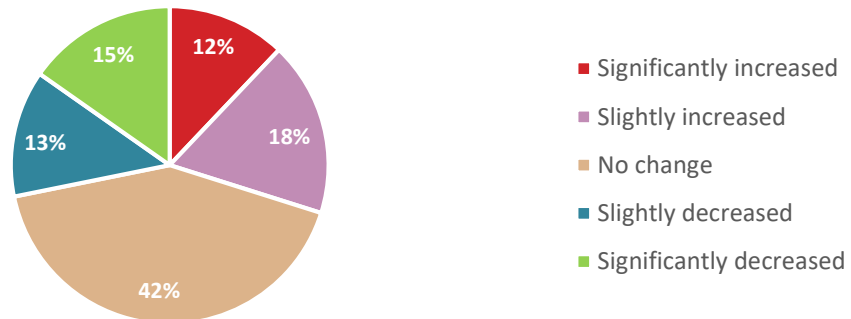


Figure 17. Which of the following options best describes the change in the number of deliveries you have despatched during the Covid-19 pandemic compared to before the pandemic? (n=472)

2.4.42 The change in the number of deliveries despatched by businesses during the Covid-19 pandemic compared to before the Covid-19 pandemic varied significantly by:

- **Length of time at main site:** Businesses which had been located at their main site for more than five years were more likely to report a significant decrease in the number of deliveries despatched (19%) compared to those who had been at their main site for up to five years (11%). Similarly, those who had been at their main site for up to five years were more likely to report a significant increase in the number of deliveries despatched (16%) compared to those who had been at their main site for over five years (9%).

2.4.43 The change in the number of deliveries despatched by businesses during the Covid-19 pandemic compared to before the Covid-19 pandemic did not differ significantly by other primary business characteristics (sector, number of employees, region or place type).

2.4.44 When discussing logistics patterns, participants from the freight and logistics sectors who took part in the qualitative research felt there has been an overall increase in demand for deliveries, with urban areas comprising a greater share of demand relative to rural areas. There was also the suggestion that deliveries are becoming increasingly time-pressured.

2.4.45 In terms of anticipated number of deliveries despatched in 2-3 years' time, 56% of businesses anticipated there will be an increased number of deliveries compared to during the pandemic, and 40% anticipated no change. Only 5% anticipated a decreased number of deliveries in 2-3 years' time. These findings are summarised in Figure 18.

Anticipated change in the number of deliveries despatched in 2-3 years' time, compared to during the Covid-19 pandemic

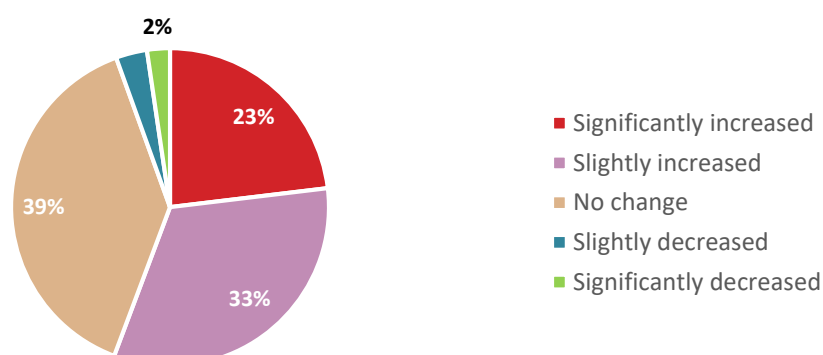


Figure 18. Which of the following options best describes the change in the number of deliveries you anticipate despatching in 2 to 3 years' time, compared to during the pandemic? (n=472)

- 2.4.46 Whilst the anticipated change in the number of deliveries despatched in two to three years' time compared to during the Covid-19 pandemic did not vary significantly by individual industry sectors, a notably higher proportion of businesses in the Professional, scientific and technical activities sector anticipated a significant increase (41%) compared to other sectors.
- 2.4.47 Table 13 outlines the expectations of businesses in their number of deliveries despatched in 2-3 years' time, against their estimations of number of deliveries despatched during Covid, versus pre-Covid. The key trends highlighted are:
- 55% of businesses that say they anticipate a significant increase in deliveries despatched in 2-3 years' time experienced a significant decrease in deliveries despatched during the pandemic – thereby reflecting a return to 'business as usual' for these businesses.
 - 42% of those expecting a slight increase in deliveries despatched in 2-3 years' time experienced an increase in deliveries despatched during the pandemic, reflecting a period of continued growth for these business.
 - Around three quarters (76%) of businesses that anticipated no change in deliveries despatched in 2-3 years' time experienced no changes during the pandemic either.
 - Though the base size for those anticipating a significant decrease in their number of deliveries despatched in 2-3 years' time was lower, over half (55%) had experienced significant increases during the pandemic, reflecting a slowing of a temporary growth pattern. However, around a third (36%) had also experienced a significant decrease in the number of deliveries despatched during the pandemic, meaning some businesses displayed a continued reduction in the scale of their delivery operations.

Table 13. Change in deliveries despatched – 2-3 years’ time vs. During/Pre Covid Matrix (n=472)

CHANGE IN DELIVERIES DESPATCHED DURING COVID VS. PRE-COVID							
CHANGE IN DELIVERIES DESPATCHED IN 2-3 YEARS’ TIME VS. DURING COVID	Sig. increase	Slight increase	No change	Slight decrease	Sig. decrease	Total	Base
Significant increase	15%	14%	17%	17%	38%	100%	109
Slight increase	10%	32%	24%	21%	12%	100%	154
No change	8%	9%	76%	5%	3%	100%	183
Slight decrease	33%	20%	20%	7%	20%	100%	15
Significant decrease	55%	9%	-	-	36%	100%	11
Base	57	84	198	61	72	-	472

2.4.48 Of those businesses who experienced sustained growth during the pandemic (characterised by increases in the number of deliveries despatched during the pandemic, and an anticipated continued increased in the next 2-3 years’), the following characteristics were notable (although not statistically significant):

- **Business sector:** There were a higher proportion of businesses within Transportation and Storage (22%), relative to their share of the overall sample of businesses for whom transport of goods comprises a significant share of their business travel demand (14%).
- By contrast, the Construction sector had a far lower proportion of businesses stating they had experienced a sustained period of growth (5%), relative to their share of the overall sample of businesses for whom transport of goods comprises a significant share of their business travel demand (18%).

Location of customers

2.4.49 Businesses were asked to estimate the percentage of customers which are located at various distances from their main site, to whom they deliver goods. Estimates were obtained for deliveries made using own company vehicles, and for deliveries made using delivery companies or couriers.

2.4.50 Figure 19 shows that deliveries made using company vehicles tend to be for shorter journeys than those made by a courier or delivery service. For instance, 44% of businesses’ deliveries which use company vehicles are for trips of less than 15 miles from the businesses’ main site, whilst a quarter (25%) are for journeys of more than 15 miles, but still within the North of England.

2.4.51 By contrast, deliveries made by courier or delivery service tend to cover greater distances than those made using company vehicles. For instance, 44% of deliveries made using a courier or delivery service are for customers based outside of the North of England (either within the UK, or internationally), whilst 24% are for journeys of less than 15 miles.

Location of customers to whom businesses deliver using company vehicles and using a courier/delivery service

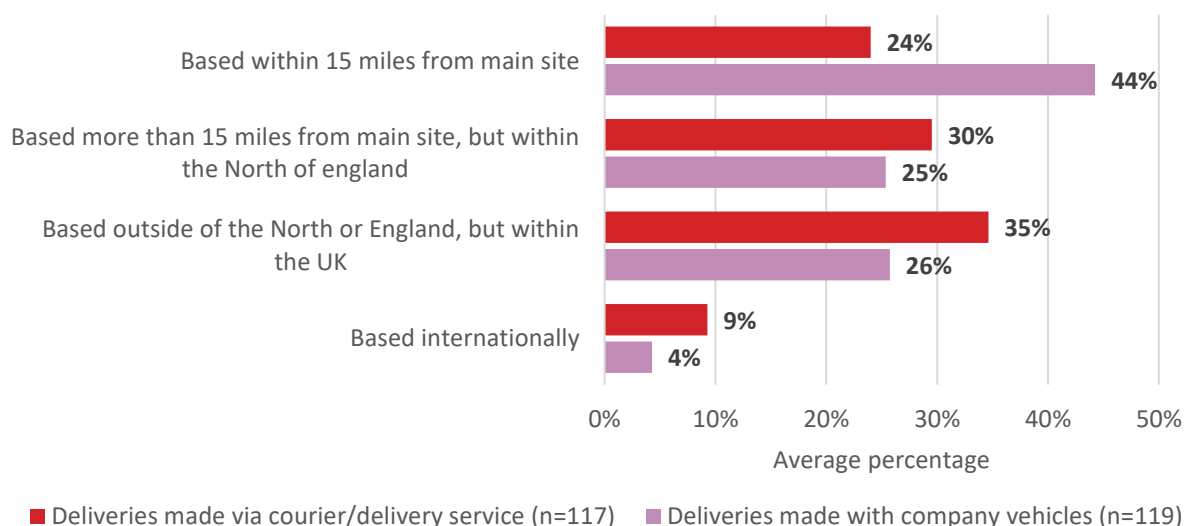


Figure 19. Currently, what percentage of the customers to whom you deliver or transport goods or services using company vehicles are based... (n=119 to 117 range)

2.4.52 Although not statistically significant, the following sectors made a notably higher proportion of deliveries to customers, using their own company vehicles, for each of the following distances from their organisations main site:

- Within 15 miles – Accommodation and food service activities (90%); Administrative and support service activities (70%);
- More than 15 miles of their main site, but within the North of England – Other service activities (62%)
- Outside of the North of England, but within the UK – Transportation and storage (49%);
- Internationally – Financial and insurance activities (50%).

2.4.53 Although not statistically significant, the following sectors made a notably higher proportion of deliveries to customers, using an external courier, for each of the following distances from their organisations main site:

- Within 15 miles – Accommodation and food service activities (100%); Human health and social work activities (65%);
- More than 15 miles of their main site, but within the North of England – Mining and quarrying (80%); Water supply, sewerage, waste management and remediation activities (60%);
- Outside of the North of England, but within the UK – Agriculture, forestry and fishing (65%);

- Internationally – Information and communication sector (35%).

2.4.54 With regards to how the Covid-19 pandemic has impacted on the locations of customers to whom businesses deliver goods, the majority (83%) of businesses had not experienced any customer location changes.

Table 14. Has the location of the customers to whom you deliver changed compared to before the Covid-19 pandemic? (Multiple response, n=472)

SENTIMENT	%
No change	83%
Yes, increased percentage of suppliers within 15 miles from main site	7%
Yes, increased percentage of suppliers more than 15 miles from main site, but within the North of England	6%
Yes, increased percentage of suppliers outside the North of England, but within the UK	4%
Yes, increased percentage of international suppliers	2%
Don't know	5%
Total	100%

2.4.55 The types of businesses which experienced customer location changes during the Covid-19 pandemic varied significantly by:

- **Sector:** Those in sectors J-S were more likely have experienced an increase in customers within 15 miles of their main site (11%) than those in sectors A-I (5%); and
- **Length of time at main site:**
 - Those who had been located at their main site for five years or less were more likely to have experienced an increase in customers within 15 miles of their main site than those who had been located at their main site for six years or more (11% vs. 4%).
 - ‘Younger’ businesses were marginally more likely have experienced an increase in customers more than 15 miles from their main site, but within the North (7% vs. 5%), customers outside the North, but within the UK (7% vs. 4%), and internationally (4% vs. 1%).

2.4.56 Although experiencing customer location change did not vary significantly by individual industry sectors, a notably higher proportion of businesses in the Professional, scientific and technical activities sector reported an increase in customers located more than 15 miles from their main site, within the North of England (15%); as well as an increase in customers outside of the North of England, within the UK (19%), compared to other sectors.

2.4.57 In terms of changes in customer locations to which their business delivers in the next 2-3 years, around 70% of businesses anticipated no change, compared to now. Of those businesses that did anticipate a change, increases in customers more than 15 miles from their

main site, but within the North of England, and increases in customers outside the North but within the UK (both 11%) were most commonly anticipated.

Table 15. In 2 to 3 years' time, do you think the location(s) of the customers to whom you deliver or transport goods or services to will change, compared to now? (Multiple response, n=472)

SENTIMENT	%
No change	70%
Yes, increased percentage of customers more than 15 miles from main site, but within the North of England	11%
Yes, increased percentage of customers outside the North of England, but within the UK	11%
Yes, increased percentage of customers within 15 miles from main site	9%
Yes, increased percentage of international customers	5%
Don't know	9%
Total	100%

2.4.58 The types of businesses which anticipated customer location changes in the next 2-3 years varied significantly by:

○ **Length of time at main site:**

- Those who had been located at their main site for five years or less were more likely to anticipate an increase in customers within 15 miles of their main site than those who had been at their main site for six years or more (14% vs. 6%).
- 'Younger' businesses were also more likely to anticipate an increase in customers more than 15 miles from their main site, but within the North (17% vs. 6%), suppliers outside the North, but within the UK (17% vs. 7%), and internationally (7% vs. 3%).

2.4.59 Whilst anticipated changes to customer locations did not vary significantly by individual industry sectors, a notably higher proportion of businesses in Professional, scientific and technical activities sector anticipated an increase in customers located within 15 miles of their main site (22%), compared to other sectors.

2.4.60 The secondary data analysis and literature review suggested that changes to the workforce structure post-Covid could also have implications for the freight sector over the next 2-3 years. For instance, 42% of firms in the North sought to recruit new employees during the course of the third quarter of 2020 (BCC, 2020a). Across the country, the sectors most likely to be recruiting new staff were the construction (48%) and transport/distribution (44%) sectors.

Future prospects for e-commerce retail

- 2.4.61 Participants in the qualitative research representing businesses within the freight and logistics sector felt that e-commerce retail is going to increase over the next five to ten years, driving a growth in electric LGVs in the near future as larger businesses become more financially able to upgrade their fleets.
- 2.4.62 Freight and logistics representatives also felt that this growth in e-commerce has been accelerated by Covid-19. They did however highlight that e-commerce is currently not suitable for all goods, such as temperature-controlled or dangerous items, though this may be overcome in the future. Additionally, particularly for luxury items, selling direct to customers offers a level of personal service that is valued.

“Speaking as an SME, there’s no personal service online. That’s one of the differentiators I have by going direct and personalising my products. Otherwise, I can’t really see any limit on what’s going to be sold online. You look at the high street and everyone is going online now. With this pandemic, it’s driven business to the keyboard.”
(Freight and Logistics, Micro/Small business, North West, 5 years or less at main site)

“Temperature-control, dangerous items, big bulky cumbersome goods - I don’t think those items are sold so easily online. But it will be interesting to see how those products which are more difficult to sell online are sold, because I think we’ll overcome that no doubt.”
(Freight and Logistics, Micro/Small business, North West, 5 years or less at main site)

Transport of Goods – Key points summary

Around half of businesses where transport of goods constitutes a significant proportion of their overall business travel, receive goods deliveries from suppliers directly.

Around two-thirds of these suppliers are based more than 15 miles away from businesses’ main site, or outside the North.

The large majority of businesses did not experience changes in supplier or customer locations during the pandemic, nor do they anticipate such changes over the next 2-3 years.

Just over half of businesses anticipated receiving more deliveries in 2-3 years’ time, compared to during the pandemic. During the pandemic, two-thirds of businesses had not experienced any changes in deliveries received compared to their normal operations, whilst around 3 in 10 had experienced a decrease.

Half of businesses where transport of goods constitutes a significant proportion of their overall business travel deliver goods on a daily basis using their own vehicles.

Deliveries made by company vehicles tend to be for shorter distances, whereas deliveries made by couriers/delivery companies were more likely for goods being transported over longer distances.

Whilst for many businesses, frequency of deliveries despatched decreased during the pandemic, 56% anticipate sending an increased number of deliveries in the next 2-3 years', and 40% anticipate no change.

2.5 Challenges and constraints to travel

Challenges for commuters

Reliability of journeys made by car

- 2.5.1 The secondary data analysis and literature review highlighted that businesses in the North of England face various challenges and constraints to their travel.
- 2.5.2 Firstly, a heavy reliance on car as the dominant mode for commuting contributes to reliability and congestion problems on the road network at peak times.
- 2.5.3 Data from the Northern Highway Assignment Model (NOHAM, 2018) indicates that for commuting journeys by road, which take place to, from and within the North:
- Demand for road commuting travel was 3,770,713 vehicle trips between 7am-7pm for the average weekday in 2018;
 - Over 52.1 million kilometres were travelled by road for commuting purposes between 7am-7pm on the average weekday; and
 - Average distance travelled by road for individual commuting purposes was 13.8km.
- 2.5.4 Many cities in the North of England have experienced a recent growth in population, which, coupled with a dependence on car as the dominant mode for commuting, has resulted in significant issues regarding poor journey time reliability, and a lack of capacity on the road network (Steer, 2020). These increases in population for some Northern cities are forecast to continue. For example:
- There is forecast to be around 100,000 more jobs in Manchester City Centre by 2040, adding around 68,000 additional commuter trips in the morning peak period into the city (TfGM, 2021a).
- 2.5.5 There are significant economic costs resulting from congestion, such as the loss of productivity. For instance, the economic cost of congestion in Greater Manchester alone has been estimated at £1.3 billion per year (TfGM, 2021a).
- Additionally, there are other environmental issues arising from congestion too, such as high levels of noise and air pollution.
- 2.5.6 A non-exhaustive list of some of the current issues faced by commuters on the road network in the region include:
- Testo's Junction on the A19 (South Tyne and Wear) suffers severe congestion at peak times, with delays of up to four minutes per vehicle (Highways England, 2021b). Around 83,400 vehicles a day are forecast to pass through the junction by 2033.

- A programme of improvements at Testo’s Junction and an increase in road capacity is being delivered to improve journey times by four minutes a day for commuters by 2036 (Highways England, 2021b).
- In Stockport, over 78% of journeys made during the morning peak are made by single occupancy vehicles, with high levels of congestion resulting, as people commute from Cheshire and Derbyshire into Manchester (TfGM 2021b).
 - Consequently, average journey speeds across Stockport decreased by 1mph (to 13mph) during the morning peak, and by 2mph (to 14mph) in the afternoon peak between 2006 and 2017 (TfGM 2021b).
- The A63 at Castle Street (Hull) is used by 47,000 vehicles a day, suffering congestion at peak times, and causing delays for commuting traffic (Highways England, 2021b).
 - A £355 million scheme, delivered by 2024-25, is required to improve access to the port and reduce peak time journey times (Highways England, 2021b).
- The A5036 near the Port of Liverpool is a key commuter route, but currently suffers severe peak time congestion, causing delays and environmental issues such as air pollution (Highways England, 2021a).
 - A new road between Switch Island and Princess Way, alongside a bypass (costing up to £335 million) is required to alleviate congestion and improve access to the port (Highways England, 2021a).

2.5.7 Similar sentiments were expressed by some participants in the qualitative research for this study, who pointed to the congestion and increased journey times they can face when commuting to work by car.

“What is a half an hour journey on a good day, can easily be a two, two-and-a-half-hour journey due to all the traffic heading into North Wales.”
 (Sector J-S, Medium/Large business, North West, 6 years or more at main site)

Challenges of public transport

- 2.5.8 For the average resident, the time taken to reach a major employment centre in the North by public transport is almost double the time it takes to reach by car (Accent-PJM, 2019).
- 2.5.9 Many people within the North of England are somewhat limited by where they can work, and are unable to access as many employment opportunities as they might like. Many areas are further than a ‘reasonable commutable distance’ from economic hubs, and therefore people work more locally than is the case in other areas of the country (Arup, 2018).
- In 2015, 61% of workers in the North lived and worked in the same local authority district (Arup, 2018), compared to a UK average of 54% (TfN, 2019a);
 - Similarly, only 23% of people’s trips outside their local area are for commuting purposes (Accent-PJM, 2019).

- 2.5.10 The rail network in the North of England currently experiences issues regarding capacity and services which are slow and infrequent relative to other areas of the country (TfN, 2019a). Data from TfN (2019a) indicates that since 2010, morning peak rail demand in the North has increased by 8.8%, but capacity has decreased; resulting in over-crowded services for peak-time trains into Leeds, Manchester and Sheffield. Additionally, fewer jobs in the North West of England are accessible by rail compared to London (117,000 compared to 1.7 million) (TfN, 2019a).
- 2.5.11 Data from the Northern Rail Modelling System (NoRMS, 2018) confirms that the majority of (heavy) rail commuters in the North of England (70%) make shorter distance commuting journeys, meaning journeys starting and ending within the same county. Counties for which the number, and share, of intra-county journeys are particularly high during an average weekday between 7am-7pm are outlined in the table below.

Table 16. Counties with high proportion of intra-county commuting rail demand (Source: NoRMS)

COUNTY	TOTAL DEMAND	INTRA-COUNTY DEMAND	INTRA-COUNTY PROPORTION
Merseyside	62,369	54,324	87%
West Yorkshire	46,796	37,253	80%
Greater Manchester	40,483	27,165	67%

- 2.5.12 Furthermore, the declining number of buses and coaches registered in the North of England has reduced the potential for people to commute to work by bus.
- The number of buses/coaches licensed in the North of England has significantly decreased in the last 25 years (1994 to 2019).
 - The largest percentage decrease has been observed across Yorkshire and The Humber (-11.4%).
 - The trend of a decreasing number of buses/coaches has continued in more recent years (2016 to 2019) too, suggesting a consistent pattern of decline in bus/coach licensing in the North.
 - Within England more generally, a cycle of decline for commercial bus services has seen a reduction in the number of services operating on ‘less profitable’ routes or times. Furthermore, as taxpayer subsidisation of non-commercially viable routes has fallen over the past 10 years, the cuts to the number of services have increased (DfT, 2021c).
- 2.5.13 These statistics are crucial with regards to equality of opportunity in accessing employment. A study by Johnson et al. (2014) found that 58% of those who were unemployed had previously relied on buses to travel to work when they were last employed – largely due to a lack of access to a private car.
- 2.5.14 Participants in the qualitative research for this study commented on many of the issues they face in accessing a reliable public transport network; with these comments predominantly relating to a lack of access to reliable, fast, and affordable services.

“We’ve got a local rail station within a quarter of a mile from the offices. Currently it only has 1 train every hour.”

(Sector A-I, Medium/Large business, Yorkshire and The Humber, 6+ years at main site)

“The combined elements of the price of the rail ticket and the car park [...] the cost of the train, particularly if you’re traveling during peak time work hours to Manchester, it just doesn’t work out.”

(Sector A-I, Micro/Small business, Yorkshire and The Humber, 5 years or less at main site)

Challenges for non-commuting journeys (e.g. transport of goods, trips on employers' business)

- 2.5.15 In a national 2019 survey of 1,200 UK business leaders, 35% of respondents felt that the overall transport network fails to meet the needs of customers, suppliers and employees (British Chambers of Commerce (BCC), 2019).
- 2.5.16 Likewise, 60% of businesses had experienced delays, resulting in client dissatisfaction, increased travel costs, or loss of business within the preceding month (BCC, 2019). Following the findings of this research, BCC called upon Government to prioritise investment in road and rail capacity, including HS2 and Northern Powerhouse Rail, to ensure the future needs of businesses across the UK are met.
- 2.5.17 A relatively small proportion of the road and rail network experiences a high concentration of freight activity (Arup, 2018). As a result, key freight links are blighted by congestion, impacting journey time reliability and therefore increasing the cost of importing and exporting goods to and from the North of England (Steer, 2020).
- 2.5.18 There are many challenges currently faced by those travelling for non-commuting business purposes:
- In Northumberland, the A1 sees many people travelling long-distance for work between Newcastle and Edinburgh. However, the single carriageway section from Morpeth and Ellingham significantly increases journey times and reduces reliability (Highways England, 2021b).
 - Across the North of England more generally, the transport links between economic hubs are fragmented, with slow journey times between cities limiting the potential for inter-city business-to-business connectivity (Steer, 2020; TfN 2019a).
 - The A66 is a key national and regional strategic link, providing vital connections for freight and businesses. The A66 carries high levels of freight traffic, of which 25% are HGVs, compared to the national average figure of 12% (Highways England, 2021a).
 - However, the A66 is plagued by reliability issues, and is susceptible to road closures due to bad weather or incidents involving HGVs (Highways England, 2020).
 - The A628 Woodhead Pass is frequently congested and hazardous, as a result of an increased number of HGVs using this route (Highways England, 2021b).

- The A57 and A628 between Manchester and Sheffield suffer from heavy congestion, delaying the delivery of goods to businesses (Highways England, 2021a).
- The M56 junctions 6 to 8 suffer from heavy congestion, delaying the journeys for HGVs travelling into Manchester (Highways England, 2021a).
 - The growing demand for deliveries into Manchester city centre (for retail, residential developments and employment) will only add further to the existing congestion (TfGM, 2021b).
- The A69 is heavily used by hauliers between Newcastle and Carlisle. However, the section between Hexham and Newcastle in particular is congested, causing delays to business deliveries (Highways England, 2021b).
- The M62 near Manchester faces significant issues with congestion (Highways England, 2021a).

2.5.19 Previous research by Accent-PJM (2019) has indicated that businesses often consider that transport infrastructure in the North is ‘below par’, and therefore, it is often considered easier to do business with companies based in London and the South of England. Likewise, Accent-PJM (2019) highlight that the experience of business travel is often considered poor, either by road (due to congestion and unpredictable journey times) or rail (due to unreliable, infrequent and poorly connected services).

2.5.20 Similarly, the qualitative research for this study found that, although some participants found the road network to be reliable, many felt it could be significantly improved. The main concerns from participants were around urban road congestion and road journey time reliability. For those in the freight and logistics sector in particular, urban road congestion hampered efficiency and profitability.

2.5.21 Participants felt that this lack of road journey reliability impacted their businesses through:

- Delays in reaching customers to complete jobs/deliveries;
- Having to use more vehicles for deliveries than would otherwise be necessary;
- Difficulties travelling to meetings; and
- Increased difficulty in making decisions around whether to complete a journey.

“We have a certain number of jobs that we can get done in a day, and obviously the longer it takes us to get to one job... then we have to start ringing and saying we’re going to be late. So yeah it does have its knock-on effects.”

(Sector A-I, Micro/Small business, North West, 6 years or more at main site)

“Without that reliability it becomes, ‘Well it should be alright because I’ve got that half hour or that hour to do it’ but if it then doubles or you don’t know how long it’s going to be, that’s the one that makes the biggest difference You can’t afford to allocate that potential extra time just in case on a regular basis.”

(Sector J-S, Micro/Small business, Yorkshire and The Humber, 5 years or less at main site)

“We have a number of clients to whom we have to deliver before 7am, or after 6pm. These are urban or old industrial sites where there is now a lot of 9 to 5 work activity

around them. To get a 40-foot container in, you need to be in early. If there are congestion issues, or earlier at the ports... you miss that 7am slot, and you have a vehicle on the back of a trailer than can't be unloaded for the next 12 hours."
 (Freight and Logistics, Micro/Small business, North West, 5 years or less at main site)

2.5.22 Participants of the qualitative research tended to feel more negatively towards the rail network than the road network, raising issues such as:

- Unsatisfactory journey times;
- A lack of reliability in the rail network (prone to disruption);
- Infrequent services which do not run at all times of day;
- Capacity issues, meaning services are often over-crowded;
- Cost of travel, particularly when compared to driving; and
- Lack of network coverage, especially in rural areas.

"In theory, I can quite easily get to Manchester or Leeds, but actually I can't because the trains are infrequent, the trains are late. If you do try and get a train that's not been cancelled, there's no guarantee that you'll be able to get onto the train, or that you'll be able to sit down."
 (Sector J-S, Medium/Large business, Yorkshire and The Humber, 6+ years at main site)

2.5.23 In the quantitative survey undertaken for this study, businesses rated the impact of road reliability outside their local area in terms of the extent to which it is an issue. Scores were worst for journeys which involve physical transport of goods (with an average impact rating of 2.9 out of 5, where 1 is not an issue at all and 5 is very much an issue). The impact for other business journeys and commuting journeys were also considered to be somewhat of an issue (both rated 2.4 out of 5).

Table 17. On a scale of 1 to 5, where 1 is 'not at all' and 5 is 'very much so', to what extent is road journey time reliability outside your local area currently an issue for your business-related road journeys?

IMPACT OF ROAD RELIABILITY ON...	IMPACT RATING	BASE
Physical transport of goods	2.9	429
Other business journeys (e.g. meetings)	2.4	416
Commuting journeys	2.4	894
*1 = Not at all an issue; 5 = Very much an issue		

2.5.24 The ratings given to the severity of the issue of road reliability for journeys including the physical movement of materials varied significantly by:

- **Sector:** Those in sectors A-I were more likely to rate the issue as being very severe, indicated by a rating of five out of five (21%) than those in sectors J-S (11%); and
- **Business size:** Micro or small businesses were more likely to rate the issue as being very severe, indicated by a rating of five out of five (21%) than those from medium and large businesses (13%).

- 2.5.25 The ratings given to the severity of the issue of road reliability for other business journeys (e.g. meetings) varied significantly by:
- **Sector:** Those in sectors A-I were more likely to rate the issue as being very severe, indicated by a rating of five out of five (13%) than those in sectors J-S (6%); and
 - **Region:** Businesses located in the North West (10%) and Yorkshire and The Humber (10%) were more likely to rate the issue as being very severe, indicated by a rating of five out of five, than those based in the North East (4%).
- 2.5.26 The ratings given to the severity of the issue of road reliability for commuting journeys varied significantly by:
- **Sector:** Those in sectors A-I were more likely to rate the issue as being very severe, indicated by a rating of five out of five (18%) than those in sectors J-S (9%); and
 - **Business size:** Micro or small businesses were more likely to rate the issue as being very severe, indicated by a rating of five out of five (21%) than those from medium and large businesses (13%).
- 2.5.27 Whilst the reported severity of the impact of road reliability on journeys did not vary significantly by individual industry sector, notable differences included:
- The Mining and quarrying sector rated the impact of road reliability on other business journeys, journeys including the physical movement of goods, and commuting journeys as more severe than many other sectors;
 - The Transportation and storage sector rated the impact of road reliability on journeys including the physical movement of goods as notably more severe than other sectors; and
 - The Electricity, gas, steam and air conditioning supply sector rated impact of road reliability on commuting journeys as notably more severe than other sectors.
- 2.5.28 However, when thinking ahead to 2-3 years' time, the large majority (82%) of businesses did not anticipate difficulties in travelling beyond their local area for other business journeys, such as travel to meetings or on employers' business. Around one in six (16%) anticipated that they would face difficulties. These findings are summarised in Figure 20.

Businesses anticipating difficulties in travelling beyond the local area in 2-3 years' time

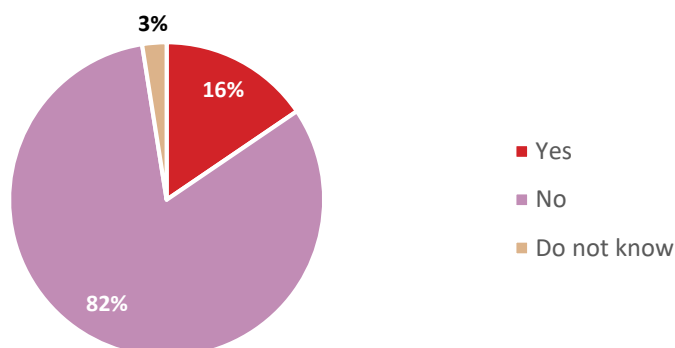


Figure 20. Thinking about your other business related travel in 2-3 years' time, do you anticipate any difficulties in travelling beyond your local area? (n=200)

2.5.29 Those who anticipated difficulties in travelling beyond their local area in 2-3 years' time were asked to indicate (from a list) which difficulties they anticipated. The cost of using public transport was most commonly selected. Other barriers are provided in Table 17.

Table 18. What are these difficulties that you anticipate facing? ((Multiple response, n=31)

SENTIMENT	%
We will find it difficult to cover the costs of using public transport	19%
We will find it difficult to cover the cost of owning or travelling using company vehicles	16%
Travelling by car will be unreliable or will experience delays	16%
Public transport will be unreliable or will experience delays	16%
Public transport will not run frequently enough	16%
Not all relevant staff can drive or will have access to cars	13%
Public transport will be too crowded or uncomfortable	13%
There will be no connections between public transport services	13%
It will take too long to travel to the places we want to go by car	10%
It will take too long to travel to the places we want to go by public transport	10%
Stations or bus stops will be too far from our journey start or end points	6%

SENTIMENT	%
We will want to minimise our exposure to viruses or bacteria	6%
Other	42%
Total	100%

2.5.30 Around two in five businesses anticipated other difficulties that were not listed. Those most commonly specified were:

- Difficulties with parking;
- Future pandemics/lockdowns;
- Weather conditions; and
- General upkeep/state of the road network.

Challenges and constraints to travel – Key points summary

- A heavy reliance on car as the dominant mode for commuting contributes to issues of reliability and congestion on the road network at peak times. This is seen as a significant issue for businesses both for their business related road trips, including transport of goods, and for their employees’ commuting trips.
- A lack of access and provision of high-quality public transport that can meet the dynamic needs of businesses creates a further challenge for travelling.
- In particular, the unreliability, cost, and lack of convenience of rail and bus travel relative to other modes was cited by many participants as a constraint to using public transport more frequently.

2.6 Attitudes to low carbon transport solutions

Attitudes towards decarbonisation

2.6.1 Data published by the Department for Business, Energy and Industrial Strategy (BEIS) (2020) demonstrates the vast quantities of energy consumed by the freight sector in the North of England. Across the North, almost 3.1 million tonnes of oil equivalent were used by the road freight sector alone in 2018.

2.6.2 Consequently, many conurbations across the North of England are seeking to decarbonise freight. For instance:

- TfGM (2021b), through implementation of their 5-Year Environmental Plan, are seeking to promote the development and use of alternative fuels for HGVs, encourage modal shift where possible (from road to rail), and change logistics infrastructure.
- Furthermore, TfGM have also pledged to encourage enrolment onto freight accreditation schemes (e.g. CLOCS, FORS) and develop delivery and servicing plans with organisations to reduce congestion and improve air quality in the city.

- Transport North East (2020) has stated that freight consolidation centres and last mile freight deliveries made using greener vehicles can reduce the impacts of goods being delivered to town and city centres, where congestion is often greatest.

2.6.3 Based on the evidence collated from the secondary data analysis and literature review, the impacts of Covid-19 on the importance businesses place on climate change mitigation and decarbonisation remain unclear.

2.6.4 Some evidence suggests that the pandemic has created significant barriers for businesses in progressing towards their climate change objectives. For instance, a recent survey of 527 businesses, suggested that a third (32%) of businesses faced barriers as a result of the pandemic (BCC, 2020b). The barriers cited often related to financial challenges such as a lack of Government grants, a lack of favourable tax rates or credits, diminished company finances, and the price of low-carbon alternatives.

2.6.5 The evidence regarding businesses' volition to engage in carbon reduction is more mixed. Across the UK fewer businesses were measuring their carbon footprints against targets in October 2020 than in February 2020 (pre-pandemic). However, the same survey found that 68% of business leaders are now 'more environmentally conscious' as a result of lockdown restrictions; whilst 42% felt a reduction in car journeys constituted an effective carbon reduction measure (BCC, 2020b).

Use of and attitudes towards electric and hybrid vehicles

2.6.6 The quantitative survey for this study found that, of businesses which had a vehicle fleet, the percentage of vehicles which were electric/hybrid was low overall. Across all types of vehicles, for those businesses which had a vehicle fleet, the average percentage of electric/hybrid vehicles was 6%.

2.6.7 Table 18 shows that the vehicle type most likely to be electric/hybrid was cars, at 10%. HGVs were the least likely to be electric/hybrid, at just 1% of vehicles. Also within Table 18 is the percentage of Ultra-Low Emissions Vehicles (ULEVs) as a percentage of all vehicles registered within the United Kingdom, as per Q1 2021 (DfT, 2021d; 2021e).

- Despite the seemingly low percentages of vehicles registered as electric/hybrid by businesses within our quantitative sample, these percentages are comparatively high, when contrasted to the overall population of vehicles registered in the UK.

Table 19. Approximately, what percentage of these owned or leased vehicles are electric or hybrid?

TYPE OF VEHICLE OWNED/LEASED	% ULEVs IN THE UK (Q1 2021)	% OF ELECTRIC/HYBRID VEHICLES IN SAMPLE	SAMPLE BASE
Cars	1%	10%	455
Motorcycles, including cargo bikes	<1%	7%	32
Bus or coach	<1%	5%	53
Taxi or PHV	<1%	4%	33
Van	<1%	2%	399
HGV	<1%	1%	123

2.6.8 Figure 21 indicates that almost half (44%) of businesses suggested that they do not face any barriers to increasing the proportion of electric/hybrid vehicles their company owns. Of the potential barriers suggested to respondents, the cost of purchasing or running the vehicle was identified most frequently (16%), followed by the range for which the vehicle can run (14%), and inadequate vehicle charging infrastructure (10%).

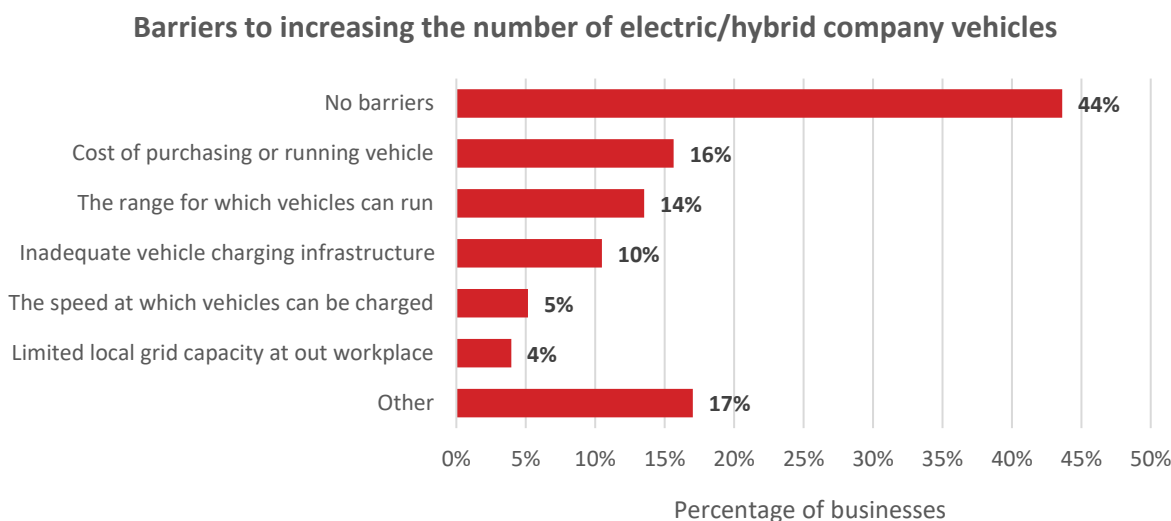


Figure 21. Are there any barriers to your organisation changing more of your vehicle/fleet to electric or hybrid vehicles? (n=658)

2.6.9 Nearly one in five businesses identified ‘other’ barriers that were not listed within the question asked. The most commonly specified were:

- Having little, or no interest in upgrading to electric/hybrid vehicles
- Unspecific comments regarding difficulties they faced (e.g. ‘impossible’); and
- Not knowing what barriers currently exist to them upgrading.

2.6.10 Anticipated barriers to increasing the proportion of electric/hybrid company vehicles varied significantly by:

- **Business size:** Medium and large businesses were more likely to anticipate vehicle range (23%), inadequate charging infrastructure (19%) and charging speeds (15%) being barriers to increasing the proportion of electric/hybrid vehicles than those from micro or small businesses (10%, 8% and 2% respectively); whereas those from micro or small businesses were more likely to anticipate the cost of purchasing or running vehicles as a barrier (19%) than those from medium and large businesses (5%).
- **Length of time at main site:** Those who had been located at their main site for up to five years were more likely to anticipate the cost of purchasing or running vehicles being a barrier to increased uptake of electric/hybrid vehicles (20%) than those who had been located at their main site for more than five years (12%).

2.6.11 Whilst the barriers identified to upgrading vehicles to electric/hybrid models did not differ significantly by individual industry sectors, there were some notable differences observed. A notably higher proportion of businesses in the:

- Professional, scientific and technical activities sector identified vehicle range as a barrier (21%);
- Electricity, gas, steam and air conditioning supply sector identified vehicle charging speed as a barrier (42%);
- Agriculture, Forestry and Fishing sector identified limited local grid capacity as a barrier (25%);
- Wholesale and retail trade and repair of motor vehicles and motorcycles sector identified the cost of vehicles as a barrier (27%); and
- Financial and insurance activities (60%), Water supply, sewerage, waste management and remediation activities (56%) and Accommodation and food service activities (56%) sectors identified no barriers.

2.6.12 The results regarding variations in barriers by business size are in alignment with the results from the secondary data analysis and literature review, in which it was identified that small and medium-size enterprises (SME) face several barriers to reducing their carbon emissions (Ipsos MORI, 2021).

- Carbon emissions are seen as a peripheral issue, as SME's (micro-businesses in particular) are time-poor;
- SME's operate on low margins and are cash-poor, so technologies which are not easily affordable or do not offer a fast return on investment are not viable options;
- There is a lack of understanding that reducing emissions is more than simply having an up-to-date vehicle fleet;
- Engagement with communications relating to carbon emissions is low, unless it relates to compliance issues or is issued by trustworthy channels (e.g. trade associations, Central Government).

2.6.13 Businesses in the survey for this study were asked whether any factors from a list provided would encourage their organisation to change their vehicles or fleet to electric/hybrid vehicles. Figure 22 shows that whilst around a third of businesses (32%) felt that nothing would encourage such a change for their organisation, 62% of businesses who own or lease vehicles felt that at least one factor would encourage them to change to electric/hybrid

vehicles. Nearly a quarter (24%) would be encouraged by financial incentives, one in five (20%) by cheaper operating costs (20%) and 15% by improved charging infrastructure.

2.6.14 Just over one in ten (12%) businesses felt that some ‘other’ factor that was not listed would encourage their organisation to use electric/hybrid vehicles. Most commonly cited examples include:

- Waiting for their vehicles to come up for renewal;
- Promotion of the environmental benefits of electric/hybrid vehicles; and
- Legislation to mandate the use of electric/hybrid vehicles, or forbid the use of vehicles relying on fossil fuels.

Factors to encourage uptake of electric/hybrid vehicles

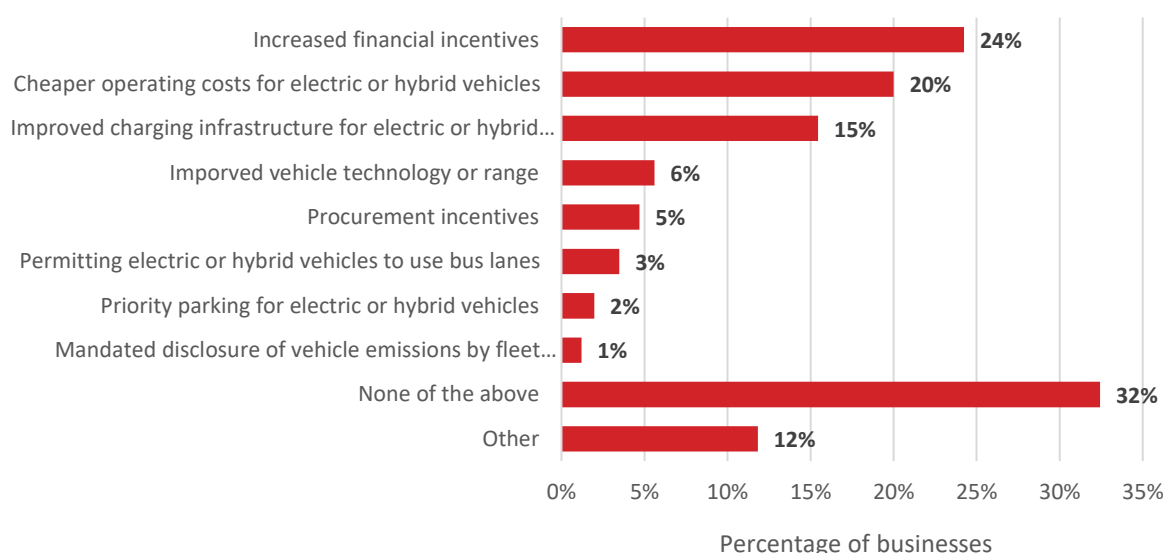


Figure 22. Are there any factors that would encourage your organisation to change your vehicle/fleet to electric or hybrid vehicles? (n=660)

2.6.15 Factors encouraging the uptake of electric/hybrid vehicles varied significantly by:

- **Sector:** Businesses in sectors J-S were more likely to identify improved charging infrastructure as a factor that would encourage their organisation to use electric/hybrid vehicles (21%) than those in sectors A-I (12%); and
- **Business size:** Those working in medium and large businesses were more likely to identify the following factors as encouraging uptake: cheaper operating costs (30%), improved charging infrastructure (24%) and permitting electric/hybrid vehicles to use bus lanes (12%), than those in micro or small businesses (17%, 12% and 1% respectively). However, small or micro businesses were more likely to state that none of the listed factors would encourage uptake of electric/hybrid vehicles (36%) than those from medium and large businesses (23%).

2.6.16 Whilst the factors that would encourage uptake of electric/hybrid vehicles did not differ significantly by individual industry sectors, there were some notable differences observed. A notably higher proportion of businesses in the:

- Electricity, gas, steam and air conditioning supply sector reported that electric/hybrid vehicle priority parking (17%), permitting hybrid/electric vehicles to use bus lanes (33%), improving charging infrastructure (42%) and procurement incentives (25%) would encourage them to upgrade their fleet, compared to other sectors; and
- Professional, scientific and technical activities sector reported that increased financial incentives would encourage uptake (34%), compared to other sectors.

2.6.17 During the qualitative research, some businesses expressed that they were unlikely to purchase electric/hybrid vehicles, due to:

- Having no business need to purchase company vehicles;
- The high cost of purchasing hybrid/electric vehicles;
- The need for ongoing vehicle maintenance;
- The lack of vehicle charging infrastructure; and
- Range anxiety regarding the distance for which vehicles can run.

“I see a few charging points dotted around, but nowhere near the amount required for the majority of people to own an electric vehicle.”

(Sector J-S, Micro/Small business, Yorkshire and The Humber, 5 years or less at main site)

2.6.18 However, some businesses were more optimistic about the future role of electric/hybrid vehicles for Northern businesses. They felt that the appetite for these vehicles exists in businesses in the North. Despite some concerns around the current price and range of vehicles, most felt that over time as prices reduce and infrastructure and range improve, businesses will begin purchasing electric/hybrid vehicles. However, many of these businesses did not own or have the need for business vehicles, so would be unlikely to purchase such vehicles themselves.

“Cost is very important to the business... But I think we’re all getting to the stage now where we’re looking at the green credentials; certainly some of our customers are asking us about our green credentials. I think we’ve just got to wait a little bit longer for the manufacturers to come to the party and be able to deliver those vehicles that will help us to maintain the same levels of demand we have now, but with electric vans.”

(Sector A-I, Medium/Large business, Yorkshire and The Humber, 6+ years at main site)

2.6.19 Those in freight and logistics who attended the qualitative research sessions felt that large businesses must lead the way with BEVs, and incentives will be needed to encourage uptake. Concerns included:

- Vehicles not yet able to meet the demands of the work (e.g., vehicles not being powerful or reliable enough compared to petrol or diesel alternatives);
- The hidden dangers and environmental damage of manufacturing electric vehicles (e.g. the dangers of lithium catching fire, or the carbon footprint of building the vehicle in the first place); and
- Practicalities of charging in rural areas, where there is a lack of infrastructure.

“Some have gone electric now and said, we should have gone the car after, or the next car after that at the earliest. There’s a lot to be done there, but I think it’s here to stay. It would be great to see something as ‘dirty’ as the haulage industry get our heads around it and using electric vehicles to our advantage.”

(Freight and Logistics, Micro/Small business, North West, 5 years or less at main site)

“Our couriers who transport products up towards the central depot in Carlisle, going along the A590 – it’s 30 miles to the nearest motorway, so what would they do to fuel? What happens if they get stuck in a traffic jam?”

(Freight and Logistics, Micro/Small business, North West, 5 years or less at main site)

Attitudes towards low-carbon delivery solutions

- 2.6.20 Participants in the qualitative research for this study were asked to consider a number of low-carbon delivery methods. Participants generally supported the ideas of portering or using cargo bikes, though for those transporting larger goods or operating in rural areas, these were not perceived to be feasible options.

“It’s smart, very practical, very efficient, and works well for urban areas.”

(Freight and Logistics, Micro/Small business, North West, 5 years or less at main site)

“Perhaps they went out of vogue and we needed to be reminded how good they were. If they can be taken on and developed, making use of something that seems old fashioned but has been developed further, then it should bring an over-riding greater benefit.”

(Freight and Logistics, Micro/Small business, North West, 5 years or less at main site)

“I know that in London they use bikes for some smaller deliveries, like if someone was delivered half a keg of beer or something small. That seems quite sensible.”

(FSB)

- 2.6.21 Other qualitative participants suggested more generally that the size of vehicles used to deliver goods could be reduced in some instances, to minimise the environmental impact of deliveries.

“A lot of them are large HGVs or wagons. Some companies bring enormous wagons to drop-off what could’ve been delivered by something much smaller. Some of our goods need to be refrigerated, so possibly that’s a reason why. If they were just delivering to us, I’m sure companies could be using smaller vehicles.”

(Sector A-I, Medium/Large business, North East, 6+ years at main site)

- 2.6.22 Additionally, those in the freight and logistics sector felt positively towards urban consolidation centres due to their environmental impact, although there were some concerns around upfront investment, upfront environmental impacts, safety of items being delivered, and a lack of data around the success of urban consolidation centres.

“It makes sense. You want to have smallest possible vehicle type making as many journeys as you can, as opposed to sending bigger vehicles on partially unnecessary journeys.”

(Freight and Logistics, Micro/Small business, North West, 5 years or less at main site)

“When the data and understanding of this side of logistics really grows, we’ll be more able to drive this as an opportunity... Understanding what the flow of vehicles is, the particular areas being delivered to, will allow centres to be developed so they’re fit for purpose, have space for growth. Just understanding what the usage is likely to be over time, and matching that with the best kind of facility.”

(Freight and Logistics, Micro/Small business, North West, 5 years or less at main site)

2.6.23 Those from the freight and logistics sector also shared a desire for more knowledge sharing around delivery approaches for those serving Low Traffic Neighbourhoods (LTNs) and congestion charging zones, including knowledge of:

- Which cities have LTNs/congestion charging zones;
- The size of these zones;
- The cost of entry to the zones and how these costs could be paid; and
- How couriers overcome the challenges of delivering in these zones.

“A lot of the delivery is quite local if we do it ourselves, but when we have problems getting into cities it is with our courier, who can only pick-up on certain days. I’m assuming it’s because of things like this. If they’re going into a congested area they’re going to want to do 4 or 5 drops at the same time to compensate for the charge.”

(Freight and Logistics, Micro/Small business, North West, 5 years or less at main site)

2.6.24 Those in the freight and logistics sector were less positive about rural last mile delivery than they were for urban last mile delivery, with the suggestion that such an approach in rural areas would be less economically viable than urban areas.

“Some villages don’t even have wi-fi, so I don’t think that it’s likely that we’ll see some rapid last-mile delivery coming to the Lakes. I don’t see that companies will invest in it for no return.”

(Freight and Logistics, Micro/Small business, North West, 5 years or less at main site)

Attitudes towards other low-carbon delivery solutions for the freight and logistics sector

2.6.25 Freight and logistics participants in the qualitative research for this study considered that load/route planning could become more efficient or greener in the future. Yet, some felt that the benefits which could be gained within the UK are somewhat constrained by the types of roads present in the country (winding roads and nucleated settlements) and geography (a relatively small island limits the potential for time efficiencies).

2.6.26 With regards to HGV platooning, participants were aware of this being used by businesses around the world (such as convoys in California). However, there was the concern that such technology would be accessible only to larger businesses that have the financial power to purchase the relevant equipment.

- 2.6.27 When asked about future developments to logistics patterns, those in freight and logistics anticipated a future where consumers might be faced with a trade-off around which solutions are environmentally friendly, and which can meet their demands for speed.

“Amazon have driven this demand for next-day delivery to everywhere, so logistics patterns will have to improve. But there will have to come a time when there’s a realisation that not everything can be delivered next day or on-demand... If we do go down this EV, cargo bike, urban route, there’s a slowness of delivery that will be built into it.”

(Freight and Logistics, Micro/Small business, North West, 5 years or less at main site)

- 2.6.28 When discussing road charging, participants felt that this would be necessary to make up the shortfall from diesel and petrol taxes, as electric and hybrid vehicles become more commonplace. They felt that distance-based charging would be a good idea for city centres, but unfair for those in rural areas. Consequently, a weighting-factor would need to be considered, for instance, where 30 miles driven in a remote rural area is equivalent to 1 mile driven in a densely populated city centre.

“Distance-based charging – it’s lovely plan to have when you drive only a mile or get the tube to work. We’re 35 miles from the motorway, so what would we do?”

(Freight and Logistics, Micro/Small business, North West, 5 years or less at main site)

“The only way it would work is if they would factor in some kind of weighting where a mile in Central London is the same as 30 miles more remote.”

(Freight and Logistics, Micro/Small business, North West, 5 years or less at main site)

Attitudes towards low carbon transport solutions – Key points summary

The proportion of company vehicles that are hybrid or electric was low, with 56% of businesses suggesting that they faced barriers to upgrading their vehicle fleets to electric/hybrid vehicles. Frequently cited barriers included:

- The high cost of purchasing hybrid/electric vehicles;
- The need for ongoing vehicle maintenance;
- The lack of vehicle charging infrastructure; and
- Range anxiety regarding the distance for which vehicles can run.

Despite the existing barriers, there is nonetheless the appetite from businesses to upgrade their fleets to electric/hybrid vehicles, provided they can meet the needs of their operations.

Low-carbon delivery methods such as cargo bikes, portering, urban consolidation centres and urban last mile delivery are generally viewed positively by those working in freight and logistics.

3. ANTICIPATED BEHAVIOUR CHANGES AS A RESULT OF TFN'S TRANSPORT INTERVENTIONS

3.1 Introduction

3.1.1 TfN's Strategic Transport Plan incorporates a series of transport investment programmes, focusing on Strategic Rail, Northern Powerhouse Rail, Major Road Network, and Freight and Logistics. Transport improvements are expected to provide individuals and businesses with access to a wider range of economic opportunities, which in turn will stimulate the Northern economy by increasing businesses' access to skilled employees; improving connectivity to suppliers, customers and clients; improving business efficiency, and increasing employment.

3.1.2 This Chapter focuses on businesses' anticipated behaviour changes as a result of TfN's programme of transport interventions:

- Sections 3.2 and 3.3 report findings from the literature review about proposed improvements to public transport and the road network, and existing evidence of potential benefits from these improvements;
- Sections 3.4, 3.5 and 3.6 examine the findings of the primary research in terms of businesses' anticipated response to proposed improvements in terms of number of journeys they would make for different journey purposes; the places they would access; and access to workers, suppliers, customers and clients.
- Section 3.7 examines the factors that are important to businesses when considering business location; and
- Section 3.8 examines key projects participants in the qualitative research would like prioritised to increase the efficiency and profitability of Northern businesses, and to help businesses to grow.

3.2 Proposed improvements to public transport and anticipated benefits

3.2.1 The literature review undertaken as part of this study reported a number of public transport improvements and their benefits.

3.2.2 The quality of public transport provision heavily influences where people choose to work. Research by Accent-PJM (2019) indicates that between 38-44% of Northern residents would consider changing where they worked following public transport improvements, with increased reliability of public transport the highest valued improvement (44%).

3.2.3 Although intercity travel in the North is currently limited (Arup, 2018), HS2 will increase business-to-business connectivity; both domestically, through enhanced inter-city links with other UK conurbations such as Birmingham and London, and internationally, through improved connections achieved by the HS2 station at Manchester Airport (TfGM, 2021b).

3.2.4 HS2 may well in turn increase the number of business-related journeys made by air, seeing a growth to the 2 million business trips made by air in 2016 (TfN, 2019a). HS2 will also increase the capacity of the existing network, improving reliability of rail journeys during peak and inter-peak periods.

- 3.2.5 The development of Northern Powerhouse Rail (NPR) will also improve the transport connections for the North, making it easier to travel between northern cities. NPR aims to transform the regional jobs market, giving businesses access to skilled workers, supporting greater career development flexibility, and providing new opportunities., (TfN, 2021).
- 3.2.6 In addition, several conurbations are seeking to increase the use of buses on the public transport system for commuting purposes, as well as encouraging an increased uptake of powered two-wheeled vehicles (e.g., electric bikes and scooters) for shorter journeys made in urban areas. These modes can reduce congestion through efficient use of road space and have the added benefit of cutting carbon emissions from commuting.
- TfGM (2021a) intend to increase the number of links between bus services and rail/Metrolink stations, in order to enhance the integration and connectivity between bus routes and other elements of the public transport network.
 - This should help to reduce some of the current inequalities observed in peak time transport, whereby commuters within the top 20% of income brackets travel 330% more distance by rail than the bottom 20% of income bands (TfN, 2019a).
 - The Wheels 2 Work scheme introduced by Tees Valley Combined Authority (TCVA, 2021) will enable people who are without access to a car or bike, who cannot make their journey to work or college by bus or train, to hire an electric motorbike or e-bike.
 - Liverpool City Region Combined Authority (2020) recently launched a new e-scooter trial, in which Swedish e-scooter company Voi have provided 50 carbon neutral scooters to the city. The scooters are available for public hire (£1 to unlock, followed by a fee of 20p per minute), with the intention that these vehicles support the public transport system and provide an alternative low-carbon mode for shorter journeys.

3.3 Proposed improvements to the road network and anticipated benefits

- 3.3.1 From the literature review undertaken as part of this study, it is evident that action is also being undertaken to address the issues of road network reliability and resilience, previously discussed in Chapter 3.
- The A66 Trans-Pennine scheme will provide an alternative link for east/west journeys in the North of England (Highways England, 2020).
 - A programme of improvements at the A628 Woodhead Pass has been delivered in March 2021 at a cost of £5 million, including renewal of retaining walls, drainage and resurfacing works to create safer and more dependable journeys (Highways England, 2021b).
 - During Road Investment Period 3 (2025-30), a series of link roads for the A57 and A628 between Manchester and Sheffield will be created to provide alternative routes for hauliers and other vehicles, to improve reliability and resilience of this section of road (Highways England, 2021a).

- Smart motorway improvements and added capacity on the M56 between junctions 6 and 8 will support freight transportation, and contribute to the growth of other planned developments, such as Airport City (Highways England, 2021a).
- In 2021, a £30 million programme of improvements along the A69 between Hexham and Newcastle, including bridge and roundabout construction will be delivered to reduce congestion at Bridge End (Highways England, 2021b).
- Smart motorway improvements between the M62 junctions 10 and 12, and junctions 20 to 25, are aiming to improve journey time reliability by controlling the flow and speed of traffic, as well as providing additional motorway capacity (Highways England, 2021a).
- Highways England also plan to convert the section of the A1 between Morpeth and Ellingham to dual carriageway to increase the speed of journeys by 2024-25 (Highways England, 2021b).

3.3.2 A further action being taken to increase the resilience of the road transport of goods is to increase the volume of goods transported by rail and water. For instance, in July 2020, Government pledged to provide £600 million of funds to provide additional freight capacity between Manchester and Huddersfield/Leeds (TfGM, 2021b). Furthermore, TfGM are also campaigning to increase the volumes of freight transported via the Manchester Ship Canal from the Port of Liverpool, to minimise road miles (TfGM, 2021b).

3.3.3 Early evidence suggests (perhaps due to initial work undertaken by Highways England and partners as part of Highways England’s Road Investment Strategy 2) that the reliability of the road network in the North of England improved in 2020, relative to 2019 (DfT, 2021a). However, it is likely that the data will have been significantly impacted by the reduced traffic volumes overall, associated with the lockdowns and restrictions on travel enforced during the coronavirus pandemic.

3.4 Impact of improvements on number of trips undertaken

Road improvements

3.4.1 In the quantitative survey for this study, businesses were told that Transport for the North is planning investments that will improve trip times and reliability on the major roads in the North. Respondents were asked what the likely impacts would be on the number of road journeys they made for various purposes.

3.4.2 Figure 23 shows that for all types of road journey, businesses were most likely to anticipate no change in the number of journeys they would make outside their local area if road journey reliability were improved.

3.4.3 Business travel by road (e.g. to meetings) was the journey type which businesses were most likely to anticipate increasing beyond their local area as a result of road journey reliability improvements (19%), followed by deliveries using company transport (15%) and deliveries using couriers (14%).

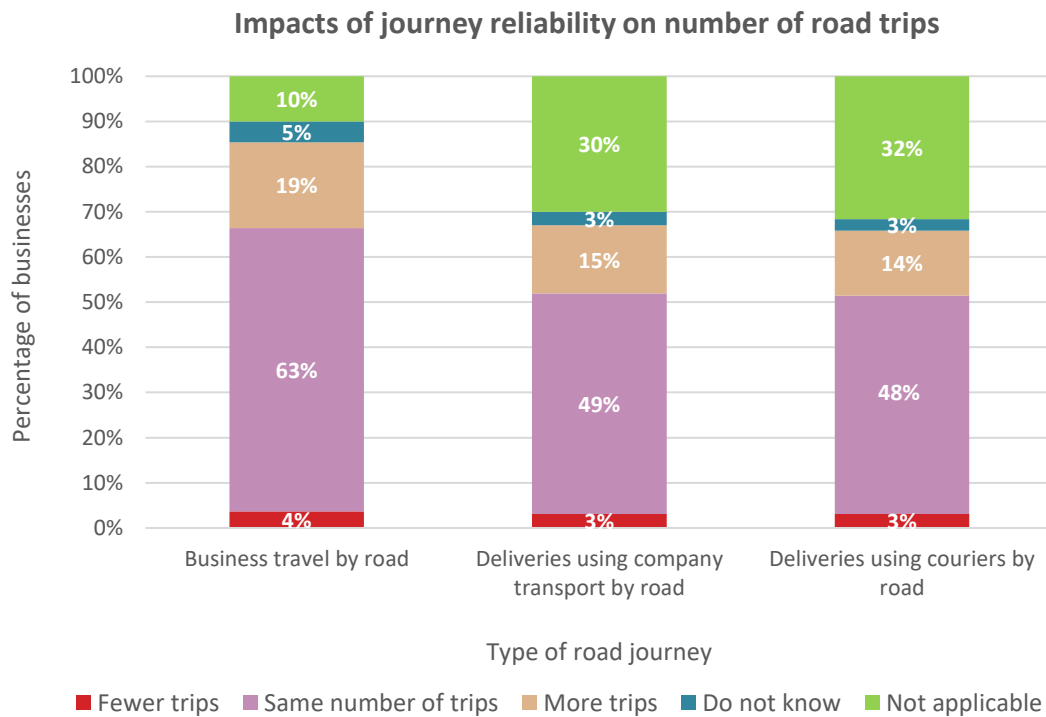


Figure 23. If the reliability of road journey times was improved, would you expect an increase, decrease, or no change to the number of trips you or others in your organisation typically make beyond your local area, for each of the following travel purposes? (n=1,000)

3.4.4 The impacts of road journey reliability on the frequency of business travel by road varied significantly by:

- **Length of time at main site:** Those businesses that had been located at their main site for up to five years were more likely to anticipate making more business trips beyond their local area if road journey reliability was improved (24%) than those who had been at their main site for more than five years (15%).

3.4.5 The impacts of road journey reliability on frequency of deliveries made using company vehicles by road beyond their local area varied significantly by:

- **Sector:** Businesses in sectors A-I were more likely to anticipate making more deliveries using company vehicles beyond their local area if road journey reliability was improved (20%) than those in sectors J-S (8%); and
- **Business size:** Medium and large businesses were more likely to anticipate making more deliveries using company vehicles beyond their local area if road journey reliability was improved (22%) than micro or small businesses (13%).

3.4.6 The impacts of road journey reliability on frequency of deliveries made by couriers by road beyond their local area varied significantly by:

- **Length of time at main site:** Those businesses that had been located at their main site for more than five years were more likely to anticipate making more deliveries using couriers by road beyond their local area if road journey reliability was improved (52%) than those who had been located at their main site for up to five years (44%).

3.4.7 Participants in the qualitative research were asked to identify potential benefits to their businesses as a result of improved road journey reliability. Those who travelled by road for business purposes identified benefits including:

- Increased efficiency when travelling to meetings or to visit clients;
- Ability to reach more customers in a single day, increasing profitability;
- Increased profitability through being able to carry out more deliveries/jobs; and
- Improved access to suppliers, customers and staff.

“That would benefit our business massively, because then we’d be able to deliver more quickly.” (Sector A-I, Micro/Small business, Yorkshire and The Humber, 5 years or less at main site)

“It would improve the efficacy of the network... If you could get between Leeds and Manchester a lot quicker and a lot easier, the Northern Powerhouse would mean something.” (Sector A-I, Medium/Large business, Yorkshire and The Humber, 6+ years at main site)

“Let’s say on an average day, you’ve got 10 vehicles on a job. If we were running more efficiently on those roads and they were less congested, we could probably do it on 8 or 9 vehicles, reducing our running costs and then reducing the amount of traffic we’re putting on.” (Sector J-S, Medium/Large business, North West, 6+ years at main site)

3.4.8 However, there was concern that disruption caused by road improvements could have the opposite impact on business, and lead to reduced reliability and increased journey times.

“The thing is it can take them 6 months or a year to actually do some roadworks. You see some places abroad and they build a whole new carriageway in the space of a month. We have roadworks going on, and 90% of the time when you go past there’s no work actually taking place. Why does it take so long?”
(Sector J-S, Micro/Small business, North East, 6+ years at main site)

3.4.9 A couple of participants were against investing in building and improving roads altogether, as they were concerned about the environmental impacts, and felt money could be better invested elsewhere. Additionally, a few participants who did not travel by road for business purposes felt these improvements would be unlikely to impact their business.

Rail improvements

3.4.10 In the quantitative survey for this study, businesses were also told that Transport for the North is planning investments that will increase the capacity, frequency, speed, and quality of the rail network, linking the North's largest cities with each other and with the rest of the North. Respondents were asked what the likely impacts would be on the number of rail journeys employees would make for business purposes.

3.4.11 Figure 24 shows that businesses made similar predictions around the impacts of rail journey reliability improvements on the number of rail trips employees would make beyond their local area, as they did for road improvements. Whilst nearly half (44%) of businesses anticipated no change in their number of rail journeys beyond their local area, one in five (21%) anticipated making more rail journeys, and only 2% anticipated making fewer.

Impact of rail improvements on number of journeys made by employees travelling via rail for business

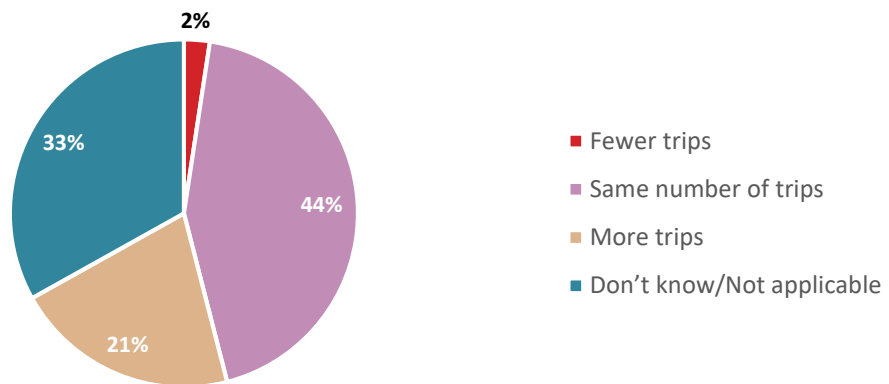


Figure 24. Considering these potential rail improvements, would you expect an increase, decrease, or no change to the number of trips you or others in your organisation typically make beyond your local area, for employees travelling on business by rail? (n=1,000)

3.4.12 Anticipated impact of rail improvements on the number of trips made by organisations varied significantly by:

- **Sector:** Those in sectors J-S were more likely to anticipate making more trips by rail if rail journey reliability improved (27%), compared to those in sectors A-I (17%).
 - However, a high proportion of businesses in the Arts, entertainment and recreation (52%), and Professional, scientific and technical activities (36%) sectors anticipated making more trips, compared to other sectors.

3.4.13 By contrast, in the qualitative research, while many businesses felt that improved rail journey time reliability would positively impact their business, only a few felt that this would translate into making more journeys.

Number of journeys undertaken – Key points summary

Following the proposed road improvements, 1 in 5 businesses suggested they would make more journeys on employers business (e.g. to meetings).

1 in 6 suggested they would make more deliveries using company vehicles by road, or for deliveries using couriers.

Approximately 1 in 5 businesses stated that they would make more journeys via rail as a result of TfN's proposed improvements.

3.5 Impact of improvements on range of locations accessed

Road improvements

3.5.1 Businesses were asked whether improvements to road journey reliability would result in employees visiting new places.

3.5.2 Figure 25 indicates that around three in ten businesses (29%) anticipated visiting new places for business travel (e.g. to meetings) by road if journey times improved, around one in five (19%) anticipated making deliveries using company vehicles to new places, and 15% anticipated deliveries to new destinations by couriers.

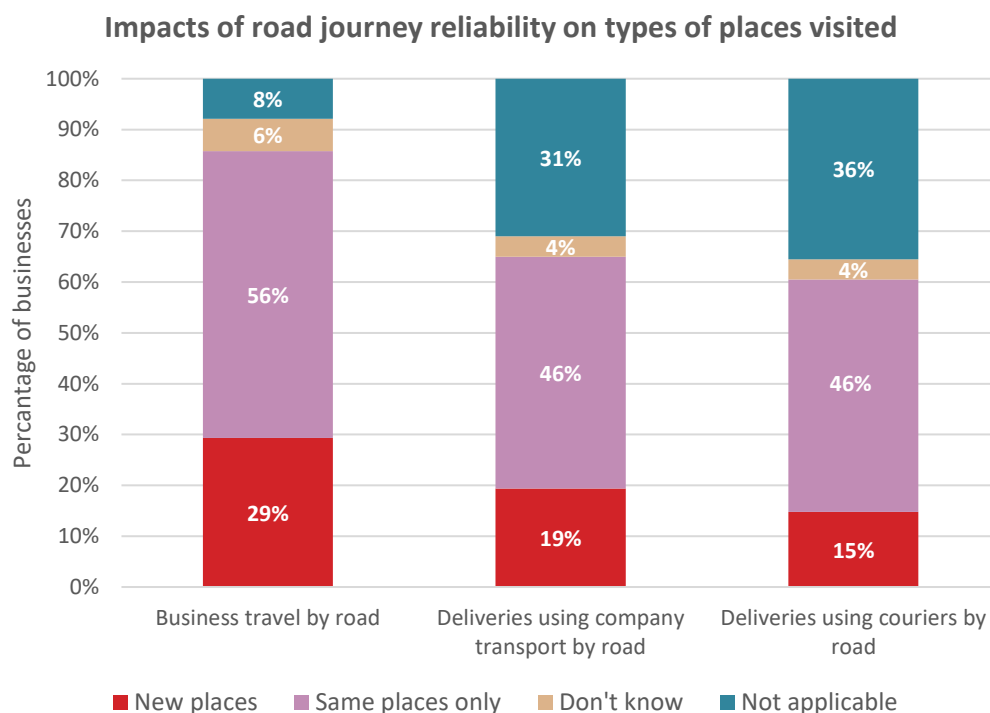


Figure 25. If the reliability of road journey times was improved, would you expect yourself or others in your organisation to sometimes go to new places or just the same places you do currently? (n=1,000)

3.5.3 The impacts of road journey reliability on kinds of places visited for business travel by road varied significantly by:

- **Length of time at main site:** Those businesses that had been located at their main site for up to five years were more likely to anticipate travelling to new places for business travel if road journey reliability improved (36%) than those who had been at their main site for more than five years (24%).

3.5.4 Although the anticipated impacts of road journey reliability on kinds of places visited for business travel by road did not vary significantly by individual industry sector, a notably higher proportion of businesses in Information and communication (42%) and Administrative and support service activities (42%) sectors anticipated travelling to new places.

- Additionally, a notably small proportion of businesses in the Agriculture, forestry and fishing sector (18%) anticipated travelling to new places.

3.5.5 The impacts of road journey reliability on kinds of places visited for deliveries using company vehicles by road varied significantly by:

- **Sector:** Businesses in sectors A-I were more likely to anticipate visiting new places for deliveries using company vehicles if road journey reliability was improved (23%) than those in sectors J-S (15%);
 - In particular, a high proportion of businesses in the Wholesale and retail trade and repair of motor vehicles and motorcycles sector (33%) anticipated travelling to new places.
- **Business size:** Micro or small businesses were more likely to anticipate travelling to new places to make deliveries using company vehicles if road journey reliability was improved (20%) than medium and large businesses (17%); and
- **Length of time at main site:** Those businesses that had been located at their main site for five years or less were more likely to anticipate travelling to new places when making deliveries using company vehicles if road journey reliability was improved (23%) than those who had been located at their main site for six years or more (17%).

3.5.6 The impacts of road journey reliability on types of places visited for deliveries made by couriers by road varied significantly by:

- **Sector:** Businesses in sectors A-I were more likely to anticipate serving new places for deliveries using a courier service if road journey reliability was improved (18%) than those in sectors J-S (11%);
 - In particular, a high proportion of businesses in the Manufacturing sector (27%) anticipated travelling to new places.
- **Business size:** Micro businesses were more likely to anticipate serving new places for deliveries using a courier service if road journey reliability was improved (16%) than small, medium and larger businesses (13%); and
- **Length of time at main site:** Those businesses that had been located at their main site for five years or less were more likely to anticipate making deliveries using couriers by road to new places if road journey reliability was improved (19%) than those who had been located at their main site for six years or more (11%).

Rail improvements

3.5.7 Figure 26 shows that around one in five businesses (22%) anticipated rail journey reliability improvements resulting in employees making rail journeys to new places, whilst around half (47%) anticipated making rail journeys to the same places.

Impact of rail improvements on types of places travelled to by employees travelling via rail for business

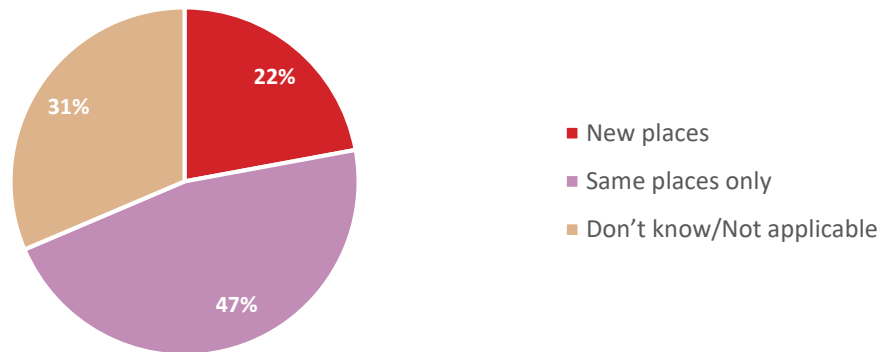


Figure 26. Given the rail improvements just described, would you expect yourself or others in your organisation to sometimes go to new places when travelling on business by rail, or just to the same places you do currently? (n=1,000)

3.5.8 Anticipated impact of rail improvements on the types of places visited by organisations varied significantly by:

- **Sector:** Those in sectors J-S were more likely to anticipate making trips to new places by rail if journey reliability improved (28%) than those in sectors A-I (18%).
 - A high proportion of businesses in the Arts, entertainment and recreation (44%), information and communication (39%), and Professional, scientific and technical activities (38%) sectors anticipated travelling to new places.
- **Length of time at main site:** Those businesses that had been located at their main site for up to five years were more likely to anticipate making rail journeys to new places if rail journey reliability improved (27%) than those who had been located at their main site for more than five years (18%).
- **Place Type:** Businesses based in transformational places (37%), large conurbations (26%) and industrial places (25%) were most likely to anticipate visiting new places if rail journey reliability improved.

Types of places visited – Key points summary

Around 3 in 10 businesses stated they would travel to new places for employers business (e.g. to meetings) as a result of road improvements.

19% suggested they would deliver to new places using company vehicles and 15% said they would deliver to new places using couriers, as a result of road improvements.

Around 1 in 5 suggested they would travel to new places for business by rail as a result of improvements to rail reliability.

3.6 Impact of improvements on other factors affecting businesses including access to workers, suppliers and clients/customers

3.6.1 Businesses were asked to consider the benefits to their businesses that may emerge as a result of improvements to the rail and road networks in the North of England; rating the likelihood of each benefit from a list provided on a scale from one to five, for which one was 'very unlikely', and five was 'very likely'.

3.6.2 Table 19 outlines the findings, which suggest that each of the expected benefits are anticipated to be somewhat likely, with only a marginal difference between them.

Table 20. On a scale of 1 to 5, where 1 is very unlikely, and 5 is very likely, to what extent would you expect the following benefits to your organisation to emerge as a result of improvements to the rail and road networks in the North of England?

EXPECTED BENEFITS	LIKELIHOOD	BASE
Improved productivity due to faster travel times	2.9	850
New business opportunities in other regions of the UK	2.9	805
Reduced business costs through more predictable journey times	2.8	832
Improved access to skilled workers from further afield	2.8	789
Improved access to suppliers from further afield	2.7	784
*1 = Very unlikely; 5 = Very likely		

3.6.3 Some businesses provided other examples of expected benefits, which were not part of the pre-set list presented to them. Examples of other expected benefits stated included:

- Reduced congestion on the road network;
- Increased number of, and accessibility to, customers; and
- Environmental benefits from reduced travel times.

3.6.4 Expectation of improved productivity due to faster travel times varied significantly by:

- **Business size:** Medium and large businesses were more likely to rate the likelihood of improved productivity as very likely (21%) than micro or small businesses (18%); and
- **Length of time at main site:** Organisations that had been located at their main site for five years or less were more likely to rate the likelihood of improved productivity as very likely (23%) compared to those that had been located at their main site for six years or more (15%).

3.6.5 Expectation of reduced business costs due to more predictable journey times varied significantly by:

- **Sector:** Those in sectors A-I were more likely to rate the likelihood of reduced business costs as very likely (18%) than those in sectors J-S (13%).

- **Business size:** Medium and large organisations were more likely to rate the likelihood of reduced business costs as likely or very likely (41%) than micro or small businesses (29%); and
- **Length of time at main site:** Organisations that had been located at their main site for five years or less were more likely to rate the likelihood of reduced business costs as very likely (19%) than those that had been at their main site for six years or more (13%).

3.6.6 Expectation of improved access to skilled workers from further afield varied significantly by:

- **Business size:** Medium and large organisations were more likely to rate the likelihood of improved access to skilled workers as likely or very likely (40%) than micro or small businesses (25%).

3.6.7 Expectation of improved access to suppliers from further afield varied significantly by:

- **Sector:** Those in sectors A-I were more likely to rate the likelihood of improved access to suppliers from further afield as very likely (16%) than sectors J-S (10%).
- **Business size:** Micro businesses were more likely to rate the likelihood of improved access to suppliers from further afield as very likely (15%) than small, medium and large businesses (12%).

3.6.8 Expectation of new business opportunities in other regions of the UK varied significantly by:

- **Business size:** Micro businesses were more likely to rate the likelihood of new business opportunities in other regions of the UK as very likely (20%) than small, medium or large businesses (16%); and
- **Length of time at main site:** Organisations that had been located at their main site for five years or less were more likely to rate the likelihood of new business opportunities in other regions of the UK as very likely (23%) than those that had been located at their main site for six years or more (15%).

3.6.9 With regards to specific benefits anticipated by individual industry sectors, the following sectors were notably more likely to consider each of the potential benefits listed below as being 'very likely' to occur as a result of transport interventions:

- **Improved productivity due to faster travel times:** Agriculture, forestry and fishing (29%); Construction (29%).
- **Reduced business costs due to more predictable journey times:** Electricity, gas, steam and air conditioning supply (43%); Construction (25%).
- **Improved access to skilled workers from further afield:** Electricity, gas, steam and air conditioning supply (36%); Information and communication (31%); Agriculture, forestry and fishing (29%).
- **Improved access to suppliers from further afield:** Electricity, gas, steam and air conditioning supply (43%).
- **New business opportunities in other regions of the UK:** Electricity, gas, steam and air conditioning supply (43%); Information and communication (35%).

3.6.10 In the qualitative research undertaken as part of this study, participants in sectors A-I that had the option of travelling by rail generally felt that improvements to rail journey reliability would bring about benefits such as:

- Improved access for staff (widening their talent pool) and customers (providing new business opportunities); and
- More efficient journeys to meetings (driving business efficiency and profitability).

“More frequent trains would help more people to reach us. It would help employees get into work, and also give customers the option to come on the train.”

(Sector A-I, Medium/Large business, Yorkshire and The Humber, 6+ years at main site)

“Rural communities would absolutely benefit from an extension of the rail network and increased services.”

(Sector A-I, Medium/Large business, Yorkshire and The Humber, 6+ years at main site)

“If you made it quicker to get to and from Newcastle, like more of the fast trains from London to Newcastle... We could potentially have more of a footfall of national visitors.”

(Sector A-I, Medium/Large business, North East, 6+ years at main site)

3.6.11 Those in sectors A-I who did not anticipate benefits to their business as a result of rail improvements were often unable to travel via rail due to a need to transport goods or materials. However, some felt that these improvements would offer benefits outside of work, such as increased ease of travel for leisure, and increased spending at other businesses.

“I don’t think it would vastly increase efficiency for my personal work. But I would use it in my leisure time to have a weekend break to places like Liverpool, Manchester and other northern towns and cities. That would benefit other business as I’d be bringing my money to spend.”

(Sector J-S, Micro/Small business, Yorkshire and The Humber, 5 years or less at main site)

3.6.12 Participants in sectors J-S also had mixed views as to whether rail journey reliability improvements would benefit their businesses. Benefits identified by these participants included:

- Improved access to suppliers;
- Increased ability to conduct in-person meetings when required;
- Access to a wider talent pool;
- Improved employee morale due to fewer delays (more pleasant journeys); and
- Improved staff punctuality due to fewer delays to services.

“For my small businesses, it would benefit them massively. We’ve got a lot of digital companies in our building, and it would mean they could employ people not only from the local area, but also from other cities. It would be feasible for them to then attract and employ the best.”

(Sector J-S, Medium/Large business, Yorkshire and The Humber, 6+ years at main site)

“I think it would open up the talent pool a bit more. We get so many people applying for roles who don’t want to do the travelling. We want to employ people from London but they don’t want to travel to Leeds every day, they say it’s unreliable, you can’t get a seat.”

(Sector J-S, Micro/Small business, Yorkshire and The Humber, 5 years or less at main site)

3.6.13 Those in sectors J-S who did not anticipate benefits from rail improvements were small businesses that prefer not to use rail, or those unable to travel via rail due to a need to transport materials and goods.

3.6.14 Generally, participants felt that the most important improvement to rail would be reducing the cost of rail journeys (including the cost of tickets, and parking). Other key improvements included:

- Increased frequency of rail services;
- Improved rail connectivity with other modes; and
- Increasing the number of rail lines (network coverage).

Other anticipated impacts on businesses as a result of interventions – Key points summary

Businesses suggested that each of the following improvements were ‘somewhat likely’ as a result of TfN’s proposed transport interventions:

- Improved productivity due to faster travel times;
- New business opportunities in other regions of the UK;
- Reduced business costs through more predictable journey times;
- Improved access to skilled workers from further afield; and
- Improved access to suppliers from further afield.

Other anticipated benefits arising from both road and rail interventions included:

- Increased efficiency when travelling to meetings or to visit clients
- Improved access for staff (widening their talent pool)
- Improved access to customers and suppliers (providing new business opportunities)

Other anticipated benefits arising from proposed road interventions included:

- Ability to reach more customers in a single day, increasing profitability
- Being able to carry out more deliveries/jobs per day, increasing profitability

Other benefits of the proposed rail interventions included:

- Improved staff morale due to fewer delayed services/more pleasant journeys
- Improved staff punctuality due to fewer delays

3.7 Factors considered important when considering business location

3.7.1 Businesses were asked to select from a list the factors which are important to them when thinking about where to locate their business in the medium and long term.

3.7.2 Table 20 shows that the most commonly cited factors (referenced by around 1 in 5 respondents) were access to better road connections, and access to a faster road network. Access to reliable and faster public transport were each selected by around one in ten respondents.

Table 21. What factors are important to you when thinking about where to locate your business in the medium or long-term? (Multiple response; n=965)

FACTOR	%
Access to better road connections	22%
Access to a faster road network	19%
Access to a broad customer base	15%
Access to reliable public transport	13%
Access to faster public transport	9%
Access to the amenities of a city or large town	8%
Access to relevant suppliers	7%
Access to more locations through public transport	6%
Access to other businesses in your own industry	5%
Access to more comfortable public transport	4%
Other (please specify)	27%
Don't know	25%
Total	100%

3.7.3 'Other' factors cited by businesses tended to relate to sentiments not directly relevant to the wider transport context. For example:

- Feeling affinity towards their local area, or having been based in their local area for a long time;
- Business rates being low/cost effective; and
- Unspecific reasons (e.g., 'location' or 'convenience').

3.7.4 Factors viewed as important when thinking about where to locate a business in the medium or long term varied significantly by:

- **Sector:** Those in sectors J-S were more likely to view access to reliable public transport (17%) and faster public transport (11%) as important compared to sectors A-I (10% and 7% respectively). By contrast, those from industry sectors A-I were more likely to cite access to a faster road network (21%) and better road connections (24%) as important than those from sectors J-S (17% and 19% respectively).
 - The following features were likely to be valued notably more by some industry sectors, compared to others:
 - **Access to relevant suppliers:** Electricity, gas, steam and air conditioning supply (36%).
 - **Access to a broad customer base:** Real estate activities (33%); Arts, entertainment and recreation (27%).
 - **Access to other businesses in your own industry:** Agriculture, Forestry and Fishing (18%); Financial and insurance activities (15%).
 - **Access to the amenities of a city or large town:** Real estate activities (25%); Agriculture, Forestry and Fishing (24%).
 - **Access to reliable public transport:** Arts, entertainment and recreation (32%); Financial and insurance activities (26%).
 - **Access to faster public transport:** Agriculture, Forestry and Fishing (24%); Arts, entertainment and recreation (18%); Education (17%).
 - **Access to more locations through using public transport:** Electricity, gas, steam and air conditioning supply (14%); Arts, entertainment and recreation (14%).
 - **Access to more comfortable public transport:** Electricity, gas, steam and air conditioning supply (14%); Arts, entertainment and recreation (14%).
 - **Access to a faster road network:** Wholesale and retail trade and repair of motor vehicles and motorcycles (30%); Electricity, gas, steam and air conditioning supply (29%).
 - **Access to better road connections:** Agriculture, Forestry and Fishing (41%); Wholesale and retail trade and repair of motor vehicles and motorcycles (30%).
- **Business size:** Medium and large businesses were more likely to view access to reliable public transport (23%) and access to a broad customer base (26%) as important in deciding where to locate a business than small or micro businesses (10% and 12% respectively).

3.7.5 Some participants in the qualitative research felt that the views provided in the quantitative survey were in line their own individual outlook. However, some mentioned that they personally place greater emphasis on public transport access over road connections.

3.7.6 Other considerations mentioned by qualitative research participants regarding where they choose to locate their business included:

- The cost of renting;
- The size of office / storage units available;
- Road user charging in local area;
- Surrounding environment, for example being surrounded by green space to improve employee wellbeing;

- Being located near to major roads, to cut down on delivery times;
- Broadband speeds; and
- Access to car parking.

“We have main business who will only use our office space if we can match the connectivity they can achieve in the cities – i.e. the broadband speeds.”
(Sector J-S, Medium/Large business, Yorkshire and The Humber, 6+ years at main site)

“One thing that isn’t mentioned there is parking. Quite often it can be a nightmare, and I’ve seen some businesses destroyed where the Council has decided to remove parking or create a ‘No Parking Zone’. No one’s going to come to me if they have to park half a mile away and then walk to us.”
(Sector J-S, Micro/Small business, North East, 6+ years at main site)

Factors considered when locating business – Key points summary

1 in 5 businesses suggested that access to better road connections and access to a faster road network are important factors in considering where their business is located.

Public transport considerations (e.g., reliability, speed and connectivity) were still important for some sectors (primarily those within industry sectors J-S), and emerged as highly desirable features amongst the qualitative sample.

3.8 Key projects for consideration

3.8.1 Participants in the qualitative research were asked to suggest key projects they would like to see prioritised, which they felt could increase the efficiency and profitability of Northern businesses, or help businesses to grow.

3.8.2 A wide range of projects were suggested by participants, which are summarised below.

- **Public transport improvements, such as:**
 - Reducing the cost of rail, to incentivise increased use of rail;
 - Improving parking facilities and capacity at train stations, including reducing the cost of parking (to incentivise increased use of rail travel);
 - Improving East-West connectivity by rail to reduce journey times;
 - Increasing the number of rail stations, services, and connections to other modes of travel, in order to reconnect rural communities and encourage modal shift;
 - Increasing rail journey speed, capacity and comfort;
 - Creating an integrated and simplified public transport ticketing system, to promote multi-modal travel;
 - Increasing the quality of rail rolling stock relative to the price paid, to offer better value for money;
 - Reducing the cost of bus services to incentivise use for shorter journeys; and
 - Increasing provisions for those with disabilities to make public transport more accessible to all users.

“You’ve got a host of different train companies, and a host of different bus companies. I tried to get a refund from Hull train station the other week and the person at the desk said, “we can’t help you, that ticket’s only valid for Northern Rail”... You go to places like France, Spain, and the moment you land at the airport, you can buy a ticket... It’ll be one company or Government owned, and you know it’s going to be on-time, at a reasonable price; whereas everything here is all over the shop... There’s all these different ticket options and it’s just so complicated and not joined-up.”

(Sector J-S, Micro/Small business, Yorkshire and The Humber, 5 years or less at main site)

“My team and our clients are concerned with the lack of provision for those with disabilities. Trains, stations, buses are still not equipped to properly handle wheelchairs, there are not enough designated changing rooms. There is also not enough disabled parking or changing rooms in town centres.”

(Sector J-S, Medium/Large business, Yorkshire and The Humber, 6+ years at main site)

“If customers wanted to go into town, we’d call them a taxi, which is a shame as the Metro is at the top of the street. But the Metro is about £2.50 for a journey of 2-3 miles, so if there’s 2-3 of you going into town, it’s cheaper to get a Taxi.”

(Sector A-I, Medium/Large business, North East, 6+ years at main site)

○ Road improvements:

- Improving East-West connectivity by road to reduce journey times;
- Improving the quality of road repairs (e.g., potholes), and their longevity to reduce damage to vehicles / costs of vehicle maintenance;
- Conducting a review of areas in the North experiencing high levels of congestion, followed by road building to ease this;
- Addition of HGV-only roads across the North to increase safety and reduce congestion.

“We did a National Survey on potholes... Our members do get quite concerned about that. It’s the damage to their cars they cause.”

(FSB)

○ Technology improvements:

- Investing in the electrification of HGVs, or seeking alternative fuel sources for these vehicles to reduce business carbon footprints and make vehicles financially more efficient to run in the long-term;
- Reducing the cost of broadband, to enable more internet access for smaller businesses; and
- Investment in ultra-high-speed broadband, to enable faster download speeds and internet connectivity, and offer greater capacity for home-working.

○ Planning / administrative improvements:

- Putting in place a public agency to assess and advise on businesses’ carbon footprints, making Northern businesses more environmentally friendly, with financial incentives offered for ‘greener’ businesses;

- Introducing more flood defences, and other environmental protections to improve the reliability and resilience of the transport network, especially in a time of climate change and more extreme weather events; and
- Improving planning regulations, to ensure new homes are not being built in already congested areas.

Key projects for consideration – Key Points Summary

A wide range of projects were suggested which were considered to have the potential to increase the efficiency and profitability of Northern businesses, or help them to grow. These were categorised into projects providing improvements in public transport, roads, technology, and planning and administrative.

4. BUSINESS TYPOLOGY

4.1 Introduction

- 4.1.1 Phase 1 of TfN's User Insight into Pan-Northern Travel research programme (Steer Davies Gleave, 2018) observed that segmentation can form a powerful tool to better understand the transport behaviours and motivations of specific groups. This in turn can inform transport policy, and enable interventions to be targeted more effectively.
- 4.1.2 Therefore, to complement the segmented analysis undertaken on the quantitative survey data for this study, a business typology was formed following a Two-Step Cluster Analysis. The typology describes different categories of businesses, which are distinct from each other in terms of their business transport-related behaviours.
- 4.1.3 The typology has been used to understand further the types of businesses which are likely to benefit from TfN's proposed transport interventions.
- 4.1.4 The remainder of this chapter is structured as follows:
- Section 4.2 describes the process for creating the business types;
 - Section 4.3 provides an overview of each of the four types developed;
 - Section 4.4 provides a more detailed description of each of the types;
 - Section 4.5 provides a high-level summary of how each business type might be impacted by TfN's proposed programme of transport interventions.
 - Section 4.6 provides a semi-fictional persona for each type to help bring the descriptions in the previous sections to life; and
 - Section 4.7 provides a geographical breakdown for each type, to offer an overview of how the four types are spread across different regions and types of places within the North.

4.2 Process for creating the typology

- 4.2.1 A series of business types were generated using a Two-Step Cluster Analysis in SPSS, to identify commonalities in businesses' transport-related behaviours and attitudes, including the anticipated change in behaviours in response to proposed transport improvements.
- 4.2.2 A Two-Step Cluster Analysis approach was selected due to:
- The presence of both categorical and continuous variables in the data file; and
 - The model can automatically determine the optimal number of business types.
- 4.2.3 The variables relating to business background were inputted into the model, alongside each of the questions in the survey which provided information on businesses' transport-related behaviours, and attitudes which reflected their anticipated behaviour change in response to transport interventions.
- 4.2.4 To improve the quality of the clustering, the individual variables within each section of the survey were subsequently grouped into a series of 'dimensions'. For example, each of the questions relating to commuting behaviour were grouped into a 'Commuting' dimension; and each of the variables relating to the current and anticipated future impacts of the

pandemic were grouped into a 'Covid-19' dimension, etc. This grouping process was undertaken using Multiple Correspondence Analysis.

4.2.5 The rationale behind this approach was that by combining individual variables (many of which were correlated), the amount of 'background noise' in the model is reduced. The quality of clustering is therefore improved due to the reduced overlap between dimensions.

4.2.6 The number of dimensions included within the model was tested and refined across iterations, until a final 'best fit' model was identified.

4.3 Overview of types

4.3.1 A total of 4 business types were identified from the analysis. Following inspection of the relative importance of each dimension (and their individual components) for each type, names were attributed to each in order to succinctly capture their key features.

4.3.2 It should be noted that these types are designed to complement, not supersede, the detailed segmented analysis and results outlined in Chapters 2 and 3.

4.3.3 A headline summary of the four emerging business types is as follows:

○ Agile Growing Businesses – 29% of the sample

- Typically 'younger' businesses with fewer than 50 employees;
- Less reliant on private car for commuting, and greater use of public transport;
- Likely to use private car for travel to future business meetings;
- Unlikely to anticipate difficulties in future business travel;
- On average, anticipate a small to moderate increase in journey frequencies and types of destinations for road and rail travel as a result of interventions;
- On average, anticipate benefitting somewhat as a result of TfN's interventions – small to moderate improvements in productivity, opportunities, cost reductions and access to skilled workers and suppliers;
- Significant increase in home working during and post-pandemic; and
- Experienced growth in suppliers and customers during the pandemic, with an increased number of suppliers anticipated post-pandemic (within and outside the North).

○ Established Big Business – 19% of the sample

- Typically 'older' businesses with more than 50 employees;
- A range of transport modes are used for commuting;
- Frequently receive goods from suppliers directly and from couriers, but unlikely to receive goods from own company vehicles;
- Frequently deliver goods using couriers, but less so using own company vehicles;
- More likely to have suppliers and customers located in a range of locations, within and outside the North, and internationally;
- More likely to experience barriers to upgrading company vehicles to electric / hybrid models, and likely to support a range of initiatives to increase uptake;
- More likely to anticipate difficulties in travelling for other business reasons in 2-3 years' time;

- On average, anticipate a small to moderate increase in journey frequencies and types of destinations for road and rail travel as a result of interventions;
- On average, anticipate benefitting somewhat as a result of TfN's interventions – small to moderate improvements in productivity, opportunities, cost reductions and access to skilled workers and suppliers;
- Significant increase in home working during and post-pandemic; and
- No change in supplier or customer locations during the pandemic, but anticipate increase in customers within and outside of the North in 2-3 years' time.

○ **Business As Usual – 33% of the sample**

- Typically smaller businesses with a mix of locations and sectors;
- Largely dependent on private car as mode for commuting;
- More likely to anticipate difficulties in travelling for other business reasons in 2-3 years' time;
- Unlikely to change their frequency of business travel, or the types of places they travel to in the next 2-3 years';
- Less likely compared to other businesses to anticipate benefits from TfN's proposed transport interventions, in particular, less likely than others to anticipate increased access to new business opportunities;
- No change in home working during and post-pandemic (remaining low); and
- No change in supplier or customer locations during the pandemic, but anticipate increase in customers within and outside of the North in 2-3 years' time.

○ **Optimistic Sole Traders – 19% of the sample**

- Sole traders, with a mix of locations and sectors;
- Occasionally receive goods from/deliver goods using couriers;
- More likely to have suppliers within 15 miles of main site;
- More likely to have customers from a wide range of locations (i.e. both locally and further afield within the North, as well as outside the North, across the UK);
- More likely to travel to new places, or undertake more journeys as a result of TfN's proposed interventions;
- Anticipate benefitting significantly as a result of TfN's interventions, in particular more likely than other types of businesses to anticipate improved access to new business opportunities, and improved access to suppliers and workers from further afield; and
- Experienced growth in suppliers and customers during the pandemic, with an increased number of suppliers anticipated post-pandemic.

4.4 Detailed description of types

4.4.1 The detailed features for each of the four types are outlined in the following tables.

Table 22. Characteristics of Agile Smaller Businesses

AGILE SMALLER BUSINESSES	
Business Background	<ul style="list-style-type: none"> ○ Typically smaller businesses (2-49 employees) in Sectors J-S ○ Higher incidence in the North West, lower in the North East ○ 56% of businesses based at their site for 5 years or less
Commuting	<ul style="list-style-type: none"> ○ Employees more likely to live 15 miles or more from their main site compared to other businesses ○ Less likely than other businesses to commute to work by private car / van ○ More likely to commute by public transport than other businesses, and a small number by active travel ○ More likely to have initiatives to reduce reliance on car for commuting, namely shuttle buses from train stations to offices, and season ticket loans
Transport of Goods	<ul style="list-style-type: none"> ○ Receipt of goods: No distinct patterns ○ Delivery of goods: No distinct patterns ○ Customer/supplier locations: No distinct patterns
Vehicle Fleet	<ul style="list-style-type: none"> ○ Barriers to changing to electric/hybrid vehicles, or the factors which could incentivise electric/hybrid vehicle use in line with views of overall sample
Other Business Journeys	<ul style="list-style-type: none"> ○ Likely that employees will opt to use private car for other business journeys for all types of business travel ○ Less likely than other types of business to anticipate difficulties in travelling for other business purposes in 2-3 years' time; uncertain of whether their overall travel requirements will change in next 2-3 years
Anticipated behaviour change as a result of interventions	<ul style="list-style-type: none"> ○ Anticipated changes in journey frequencies and types of destinations for road and rail travel as a result of interventions broadly aligned with overall sample average (around 1 in 5 making more trips/travelling to new places) ○ On average, anticipate benefitting somewhat as a result of TfN's interventions – small to moderate improvements in productivity, opportunities, cost reductions and access to skilled workers and suppliers ○ Factors considered important when locating their business aligned with the overall sample findings
Impacts of Covid-19	<ul style="list-style-type: none"> ○ Home working: Employees were more likely to work from home before the pandemic compared to other businesses. Home working increased significantly during the pandemic, and post-Covid, working from home is likely to remain above pre-pandemic levels ○ Supplier location: Experienced an increase in suppliers located within 15 miles of their main site, and more than 15 miles from main site, but within the North, as well as an increase in suppliers outside the North but in UK, and internationally during the pandemic. Anticipate a continued increase in suppliers within 15 miles of main site, more than 15 miles from main

AGILE SMALLER BUSINESSES

site, but within the North, and outside the North but in UK in next 2-3 years.

- **Customer location:** Also experienced an increase in customers located within 15 miles of main site, more than 15 miles from main site but within the North, outside the North but in UK, and internationally during the pandemic. No changes anticipated in terms of their customer locations anticipated in the next 2-3 years' time

Table 23. Characteristics of Established Big Businesses

ESTABLISHED BIG BUSINESSES

Business Background

- Typically larger businesses (50+ employees) in Sectors A-I
- Higher incidence in the North East, lower in Yorkshire and The Humber
- 71% of businesses based at their site for 10 years or more

Commuting

- Employees more likely to live 15 miles or more from their main site compared to other businesses
- Mix of transport modes used by employees for commuting
- More likely to have initiatives to reduce reliance on car for commuting

Transport of Goods

- **Receipt of goods:** More likely to receive goods deliveries directly from suppliers and from couriers frequently (daily/once a week), less likely to receive goods deliveries from own company vehicles
- **Delivery of goods:** More likely to deliver goods using couriers at least once a month, or more frequently, less likely to deliver goods using own company vehicles
- **Supplier locations:** More likely to have a range of suppliers - based within 15 miles of main site, more than 15 miles from main site but within the North, outside the North but in UK, and internationally
- **Customer locations:** For those who deliver using company vehicles - customers are most likely to be international, for those using couriers - customers based within 15 miles of main site, more than 15 miles from main site but within the North, outside the North but in UK and internationally

Vehicle Fleet

- More likely to cite speed at which vehicles can be charged and limited grid capacity at workplace as barriers to upgrading to electric/hybrid company vehicles
- More likely to cite priority parking for electric or hybrid vehicles, permitting electric or hybrid vehicles to use bus lanes, and mandated disclosure of vehicle emissions by fleet operators as initiatives to increase electric/hybrid uptake

Other Business Journeys

- More likely to anticipate difficulties in travelling for other business reasons in 2-3 years' time; Uncertain of whether their overall travel requirements will change in next 2-3 years'

ESTABLISHED BIG BUSINESSES	
Anticipated behaviour change as a result of interventions	<ul style="list-style-type: none"> ○ Anticipated changes in journey frequencies and types of destinations for road and rail travel as a result of interventions broadly aligned with overall sample average (around 1 in 5 making more trips/travelling to new places) ○ On average, anticipate benefitting somewhat as a result of TfN's interventions – small to moderate improvements in productivity, opportunities, cost reductions and access to skilled workers and suppliers ○ Factors considered important when locating their business aligned with the overall sample findings
Impacts of Covid-19	<ul style="list-style-type: none"> ○ Home working: Small number of employees working from home before the pandemic compared to other businesses. Home working increased significantly during the pandemic, and post-Covid, working from home is likely to remain above pre-pandemic levels ○ Supplier location: No change in supplier location during pandemic, nor are changes anticipated in the next 2-3 years' ○ Customer location: No change in customer location during pandemic, but anticipate an increase in customers located within 15 miles of main site, more than 15 miles from main site but within the North, outside the North but in UK, and internationally in the next 2-3 years

Table 24. Characteristics of Business As Usual

BUSINESS AS USUAL	
Business Background	<ul style="list-style-type: none"> ○ Typically smaller businesses (2-49 employees) in Sectors A-I ○ Found across a range of regions in the North ○ A range of business ages within this business type
Commuting	<ul style="list-style-type: none"> ○ Employees more likely to live within 15 miles of their main site compared to other businesses ○ More likely than other businesses to commute to work by private car / van ○ Less likely to commute than other businesses by public transport or active travel ○ Less likely to have initiatives to reduce reliance on car for commuting
Transport of Goods	<ul style="list-style-type: none"> ○ Receipt of goods: No distinct patterns ○ Delivery of goods: No distinct patterns ○ Customer/supplier locations: No distinct patterns
Vehicle Fleet	<ul style="list-style-type: none"> ○ Barriers to changing to electric/hybrid vehicles, or the factors which could incentivise electric/hybrid vehicle use in line with views of overall sample
Other Business Journeys	<ul style="list-style-type: none"> ○ Uncertain of whether their overall business travel requirements will change in next 2-3 years

BUSINESS AS USUAL	
Anticipated behaviour change as a result of interventions	<ul style="list-style-type: none"> ○ More likely compared to other businesses to continue to make the same number of trips, to the same types of places as before, for all forms of business travel by road and rail ○ Less likely compared to other businesses to anticipate benefits from TfN's proposed transport interventions, in particular, less likely than others to anticipate increased access to new business opportunities ○ Less likely compared to other businesses to state that the listed factors are important to where they choose to locate their business
Impacts of Covid-19	<ul style="list-style-type: none"> ○ Home working: Employees were less likely to work from home before the pandemic compared to other businesses, with home working remaining low during the pandemic, and for the foreseeable future ○ Supplier location: No change in supplier location during pandemic, nor are changes anticipated in the next 2-3 years ○ Customer location: No change in customer location during pandemic, but anticipate an increase in customers located within 15 miles of main site, more than 15 miles from main site but within the North, outside the North but in UK, and internationally in the next 2-3 years

Table 25. Characteristics of Optimistic Sole Traders

OPTIMISTIC SOLE TRADERS	
Business Background	<ul style="list-style-type: none"> ○ A mix of business sectors ○ Found across a range of regions in the North ○ A range of business ages within this business type
Commuting	<ul style="list-style-type: none"> ○ No distinct patterns for distance travelled to work or commuting modes
Transport of Goods	<ul style="list-style-type: none"> ○ Receipt of goods: Unlikely to receive goods deliveries directly or own company vehicles, more likely to receive goods by couriers once a month, or less frequently ○ Delivery of goods: More likely to deliver goods using couriers once a month, or less frequently, less likely to deliver using own company vehicles ○ Supplier locations: More likely to have suppliers based within 15 miles of main site ○ Customer locations: For those who deliver using company vehicles - customers are most likely to be based within the North; For those using couriers - customers more than 15 miles from main site but within the North, and outside the North but in UK
Vehicle Fleet	<ul style="list-style-type: none"> ○ Barriers to changing to electric/hybrid vehicles, or the factors which could incentivise electric/hybrid vehicle use in line with views of overall sample
Other Business Journeys	<ul style="list-style-type: none"> ○ Uncertain of whether their overall business travel requirements will change in next 2-3 years

OPTIMISTIC SOLE TRADERS

Anticipated behaviour change as a result of interventions

- Uncertain of whether they will make the same number of trips, or whether they will travel to different places as before, for all forms of business travel by road and rail
- Anticipate benefitting significantly as a result of TfN’s interventions; in particular, more likely than other types of businesses to anticipate improved access to new business opportunities, and improved access to suppliers and workers from further afield
- More likely compared to other businesses to state that the listed factors are important to where they choose to locate their business

Impacts of Covid-19

- **Home working:** No distinct patterns
- **Supplier location:** Experienced an increase in suppliers located within 15 miles of their main site and more than 15 miles from main site, but within the North, as well as an increase in suppliers outside the North but in UK and internationally during the pandemic. Anticipate a continued increase in suppliers within 15 miles of main site, more than 15 miles from main site but within the North, outside the North but in UK in next 2-3 years.
- **Customer location:** Also experienced an increase in customers located within 15 miles of main site, more than 15 miles from main site but within the North, outside the North but in UK, and internationally during the pandemic. No changes anticipated in terms of their customer locations anticipated in the next 2-3 years’ time

4.5 Summary of the impacts of TfN’s interventions by business type

4.5.1 The impact of TfN’s proposed interventions on the number of journeys made for different purposes by each of the business types can be summarised as follows:

- | | |
|----------------------------|---|
| ○ Agile Growing Businesses | Small to moderate increase |
| ○ Established Big Business | Small to moderate increase |
| ○ Business As Usual | No change in the number of journeys made |
| ○ Optimistic Sole Traders | Uncertainty regarding change in number of journeys made |

4.5.2 The impact of TfN’s proposed interventions on whether each business type would travel to new places or not can be summarised as follows:

- | | |
|----------------------------|--|
| ○ Agile Growing Businesses | Some new places |
| ○ Established Big Business | Some new places |
| ○ Business As Usual | Unlikely to travel to new places |
| ○ Optimistic Sole Traders | Uncertainty over whether businesses will travel to new places or not will change |

4.5.3 The types of benefits anticipated by each of the business types as a result of TfN’s proposed interventions can be summarised as follows:

- Agile Growing Businesses Anticipate that each of the benefits listed in Table 19 are somewhat likely

- Established Big Business Anticipate that each of the benefits listed in Table 19 are somewhat likely
- Business As Usual Generally less likely than other types to expect benefits to arise as a result of the proposed interventions
- Optimistic Sole Traders Generally more likely than other types to expect benefits to arise as a result of the proposed interventions

4.5.4 With regards to specific benefits anticipated by each of the business types, the following business types were more likely to consider each of the potential benefits listed below as being 'very likely' to occur as a result of transport interventions:

- Improved productivity due to faster travel times:
Established Big Business; Optimistic Sole Traders
- Reduced business costs due to more predictable journey times:
Established Big Business; Optimistic Sole Traders
- Improved access to skilled workers from further afield:
Agile Growing Businesses; Established Big Business
- Improved access to suppliers from further afield:
Established Big Business; Business As Usual
- New business opportunities in other regions of the UK:
Agile Growing Businesses; Optimistic Sole Traders

4.5.5 The types of factors considered important for business locations by each of the business types can be summarised as follows:

- Agile Growing Businesses Broadly reflects the sample overall (roughly aligned with Table 20)
- Established Big Business Broadly reflects the sample overall (roughly aligned with Table 20)
- Business As Usual Generally less likely to state that the factors in Table 20 are important in deciding where to locate their business
- Optimistic Sole Traders Generally more likely to state that the factors in Table 20 are important in deciding where to locate their business

4.6 Business Personas

- 4.6.1 To help bring the descriptions of each of the types to life, we have developed a business 'persona' for each.
- 4.6.2 These personas are a semi-fictional descriptions of the key characteristics of each business type, and are partly based on actual (anonymised) data from the quantitative survey.

Marcus – Owner of an art dealership; an example of an 'Agile Growing Business'

I set up my shop in Crewe around four years ago, and business has grown steadily since. I employ six other staff, some of which live nearby, and others who live further away in neighbouring towns and villages.

I used to allow my staff to work from home occasionally when they weren't required in the shop, but the pandemic saw our levels of home-working increase significantly. Going forward, I'll continue to offer the option to work from home to my staff.

A few of my employees live outside Crewe, and they commute using the train. We don't have an on-site car park, so I offer season ticket loans to staff, to help cover their up-front travel costs. We do have one company car however, and sometimes we might need to meet multiple clients in one day, so I'd like to keep this vehicle to maintain that flexibility of travel.

During the pandemic, our portfolio of customers has expanded. Not only have we had more local clients, but we've gained an increased share of clients across the North, within the UK, and internationally too. We've also seen a change in the locations of our suppliers, both locally and further afield, and anticipate this continuing over the next 2-3 years.



TfN's proposed transport interventions are likely to help my business, with the most likely benefits being improved productivity due to faster travel times and new business opportunities in other regions of the UK. As a result of the interventions, I'll likely travel slightly more frequently, and to a few new places too.

Claire – Director of a waste management firm; an example of ‘Established Big Business’

Our main site has been based near Gateshead for over 20 years, and employs around 400 staff. Our staff travel from far and wide to work here, using a range of transport modes; though we do try and encourage our employees to reduce their car usage for commuting journeys wherever possible. Home working increased dramatically for us during the pandemic, and many of our employees who are able to work from home in some capacity want to continue doing so.



We receive goods deliveries to our site every day. Some of our deliveries are transported to us by our suppliers directly, with these coming from within the North, across the UK, and internationally too. Likewise, we receive daily deliveries from couriers too. This stayed pretty stable during the pandemic, and we don’t anticipate many changes here in the next 2-3 years.

We deliver goods to our customers about once a week, for which we mainly use couriers. These deliveries are sent to customers across the UK (within and outside of the North of England), and overseas. Over the next 2-3 years’ we anticipate steady growth in our local customer base, as well as customers based within and outside the north, and internationally.



Some of our deliveries are made using our own company vehicles. Our fleet is primarily reliant on diesel or petrol as a fuel source. We are willing to increase the proportion of our fleet which is electric or hybrid, but the speed at which vehicles can be charged, and limited grid capacity at our workplace are barriers to doing so. Compared to other businesses, greater priority for parking electric/hybrid vehicles, prioritisation of road space for these types of vehicles, and mandated disclosure of our emissions would be more of an incentive for us to upgrade our vehicle fleet.

We anticipate a few difficulties in travelling for other business journeys in the next 2-3 years, so TfN’s proposed transport interventions will help address these concerns somewhat. We’ll likely travel slightly more frequently, and to a few new places too as a result.

Jason, CEO of a local plumbing business; an example of 'Business As Usual'

I employ around 20 plumbers in the Hull region. All my staff live locally to our main company HQ, and given that many of them have to travel for callouts most days, pretty much everyone commutes using their car or van. Consequently, home working isn't an option for my staff, pre, during, or post-pandemic.

We currently operate within the city and the surrounding neighbourhoods only, so I don't envisage that our number of trips made in the future, or the types of place we visit, will change much over the coming years compared to now. Our business operates fine how it is – so compared to other types of businesses, I'm not sure we'd gain much ourselves as a result of TfN's proposed road and rail improvements.

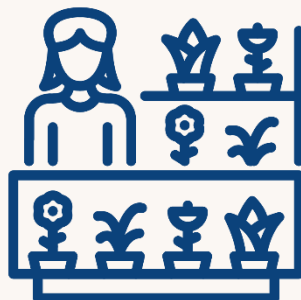


Our suppliers have remained the same during the pandemic, and should remain the same in the coming years. Our customer base has also stayed the same during the pandemic, and although we could see an increase in customers based further afield in the future, that'll be the exception rather than the rule.

Angela, a Florist; an example of an 'Optimistic Sole Trader'

My shop was set up around 4 years ago, and is based on the high street in York. I receive deliveries occasionally by couriers, and sometimes use couriers to make my deliveries. However, at present, I tend grow my own flowers, and customers come to the shop to collect their orders, so my travel demands aren't too intensive right now.

The location of my business is really important to me. I need to be based somewhere with good footfall, that is readily accessible for my customers and suppliers. TfN's proposed transport interventions would really benefit me. If my customers, suppliers and couriers are able to move around the North more freely by road and rail, they'll be able to access my shop more easily. Furthermore, I'll be able to deliver to a wider pool of customers with less worry about whether my time-sensitive deliveries are delayed.



Over the past year, business has grown. I now have suppliers all around the North, across the UK, and even have some international shipments too; and I anticipate all these continuing to grow over the coming years. Likewise, my customer portfolio has grown too in the last 18 months or so, but this is likely to slow in the coming years, in the absence of interventions.

4.7 Geographic segmentation of business types

4.7.1 To provide a broad assessment of how each of the four types of business may be distributed across the North of England, a further level of segmentation has been undertaken. The aim of this analysis is to identify whether any of the business types are particularly prevalent within any of the three major regions of the North, and whether there is any type of place where they tend to cluster.

4.7.2 Figure 27 below demonstrates the distribution of the four business types across each region of the North of England. From this segmentation, it can be seen that there are no large variations in business types across the regions, although it is notable that:

- **Agile Growing Businesses** have a slightly higher prevalence in the North West (55%) than would be expected on average (51%).
- **Established Big Businesses** have a slightly lower prevalence in the North West (47%) than would be expected on average; but a higher prevalence in the North East (22%) than would be expected on average (14%).
- **Business As Usual** have a slightly higher prevalence in Yorkshire and The Humber (40%) than would be expected on average (36%).
- The proportion of **Optimistic Sole Traders** in each region is in line with the overall sample proportions for each region.

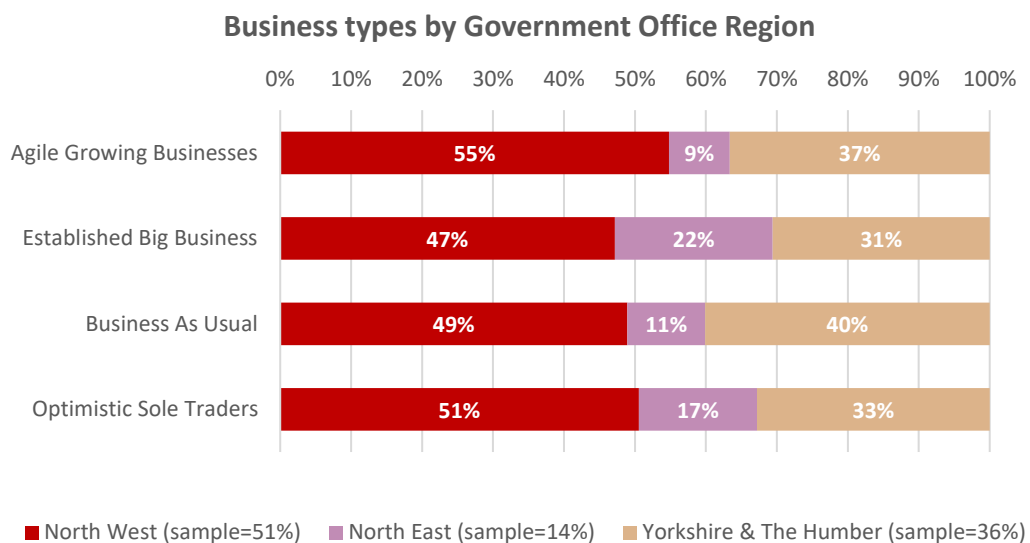


Figure 27. Business types by Government Office Region

4.7.3 Figure 28 below demonstrates the distribution of the four business types across each of the place types in the North of England. From this segmentation, it can be seen that there are no large variations in business types across place types, other than for sole traders. However it is notable that:

- **Established Big Businesses** have a slightly higher prevalence in 'Industrial Places' (12%) than would be expected on average (9%); and
- **Optimistic Sole Traders** have a slightly higher prevalence in 'Other Urban' areas (15%) than would be expected on average (11%), as well as a higher prevalence in 'Visitor Centres' (12%) than would be expected on average (8%).

- However, Optimistic Sole Traders have a significantly lower prevalence in Large Conurbations (35%) than would be expected on average (47%).

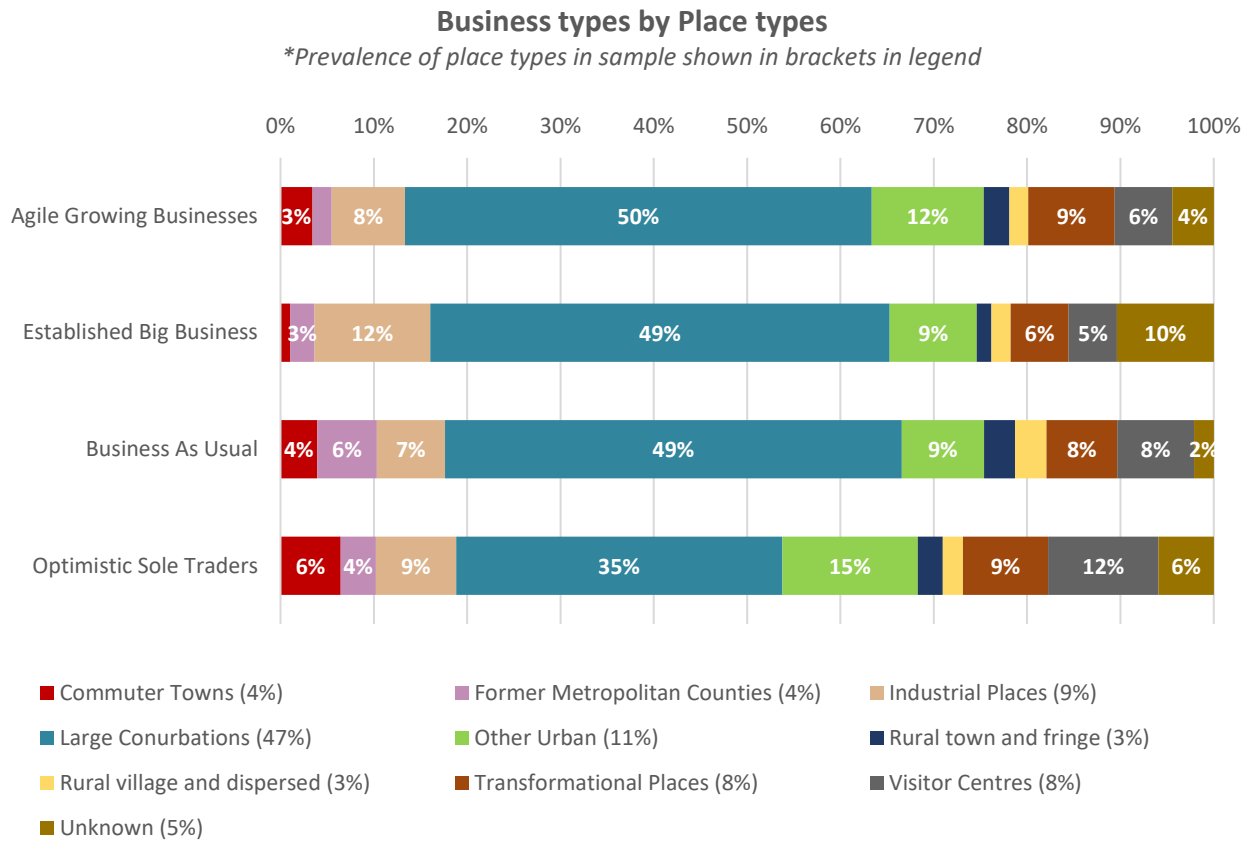


Figure 28. Business types by Place types

4.7.4 Whilst these findings indicate only minor variation in the prevalence of each type of business across regions, and most place types, some consideration should be considered as to how transport interventions are targeted, or tailored to different types of places, and potentially smaller geographic areas if further work is done to understand prevalence of business types in, for example, different local authority areas.

5. CONCLUSIONS

5.1 Introduction

5.1.1 This study provides further evidence from existing literature and data, as well as new primary quantitative and qualitative research with businesses in the North, to help TfN build a robust evidence base to support the case for a series of planned road and rail transport investments.

5.2 Understanding transport-related needs, behaviours, policies and attitudes of businesses

5.2.1 This study has provided a wealth of data to add to the body of evidence about transport related needs, behaviours, policies, and attitudes of businesses in the North.

5.2.2 For commuting journeys, the research has highlighted the prevalence of employees who live within 15 miles of their place of work, and who travel to work by private transport, as well as the small numbers of businesses that have initiatives in place to support the use of public transport, car sharing, or cycling for employees' commuting journeys.

5.2.3 There is a heavy reliance on the car as the dominant mode for commuting, which contributes to issues of reliability and congestion on the road network at peak times. A lack of access and provision of high-quality public transport that can meet the dynamic needs of businesses creates a further challenge for travelling. In particular, the unreliability, cost, and lack of convenience of rail and bus travel relative to other modes was cited as a constraint to using public transport more frequently.

5.2.4 For business journeys, this research has highlighted that travelling by car is forecast to remain the dominant mode for future trips on employers' business (e.g., to meetings), particularly for shorter journeys, primarily due to perceived shortcomings of the public transport provision. It has also highlighted the growth in and increased reliance on remote meetings.

5.2.5 Of those businesses for whom transport of goods constitutes a significant proportion of their overall business travel needs, the research revealed:

- Almost half receive goods deliveries from suppliers directly, and the majority did not experience any changes in supplier locations during the pandemic, nor do they anticipate changes over the next 2-3 years. Just over half of these businesses anticipated receiving more deliveries in 2-3 years' time, compared to during the pandemic.
- Almost half of deliveries made by company vehicles are to customers within 15 miles of the business' main site. By contrast, deliveries made by couriers were more likely for goods being transported over longer distances, with around three quarters of deliveries using couriers being for journeys of 15 miles or more from the main business site, or outside the North of England.

5.2.6 The proportion of company vehicles that are electric or hybrid is low, with around half of businesses suggesting that they faced barriers to upgrading their vehicle fleets to electric/hybrid vehicles. Despite the existing barriers, there is nonetheless the appetite from businesses to upgrade their fleets to electric/hybrid vehicles, provided they can meet the needs of their operations.

5.3 The impact of the Covid-19 pandemic on businesses' transport behaviours and attitudes

5.3.1 The research suggests that the pandemic, over time, is likely to have minimal impact on modal choice for commuters, and minimal impact on number and location of deliveries. However, it is likely to have a greater impact on propensity to work from home and to do more business meetings online. The research suggests:

- Over time, the pandemic is likely to have only a small impact on modal choice for commuting journeys - almost three quarters of businesses anticipated that there would be no change in the number of employees using private modes in 2-3 years' time compared to pre-pandemic, and slightly more thought it would increase than decrease.
- Over time, the pandemic is unlikely to have a major impact on the number and location of deliveries made by businesses. Whilst for many businesses, frequency of deliveries despatched decreased during the pandemic, just over half anticipate sending an increased number of deliveries in the next 2-3 years, whilst two in five predict no change. The majority of businesses anticipated no change in customer locations over the next 2-3 years.
- Home-working has increased significantly during the Covid-19 pandemic (almost three times the time spent working from home compared to before the pandemic); and although levels of home-working are forecast to fall slightly post-pandemic, they are estimated to remain above pre-Covid levels. Businesses anticipate that many employees would like to adopt a hybrid (part at home, part on-site/at office) model to working.
- Businesses indicated that, generally, the longer the business journey, the less likely it is that that journey would be made in future. The growth and reliance on remote meetings, in particular during the pandemic, was suggested to be a key contributor to this trend.

5.4 The extent to which different types of businesses are likely to benefit from TfN's programme of transport interventions

The ways in which different businesses use the transport network

5.4.1 This research has contributed to a body of evidence highlighting how vital a reliable and efficient transport network is to businesses in the North; with businesses reliant on transport in order for their staff to commute to work, travel to business meetings, and to ensure the efficient receipt and delivery of goods. Good accessibility to transport plays a vital role in determining businesses' decisions regarding location, and in aiding their efficiency, profitability and smooth business operation.

5.4.2 The findings of this phase of research have indicated that the ways in which businesses use transport to fulfil their needs differ greatly.

- Businesses within more 'goods-intensive' sectors (SIC industry sectors A-I) which have comparatively greater need for receiving and delivering physical goods are generally more reliant on the road network for their transport needs. These types of businesses tend to display greater freight and logistics needs, are more likely to own vehicle fleets

to facilitate deliveries, and have a larger proportion of staff who travel for business purposes by car.

- This reliance on road access is also reflected by the features of business location which those in sectors A-I considered important, relative to other types of business, namely access to a faster road network and better road connections.
 - These 'goods-intensive' sectors are also more likely to display a continued demand for commuting journeys and business travel in the future too, given the limited potential for many of the roles in these sectors to accommodate remote working.
- Conversely, businesses in 'service-based' sectors (SIC industry sectors J-S) have a greater tendency to use public transport as part of their business travel, often as a result of their employees' roles, but also a product of where their businesses are located.
- This reliance on public transport access is also reflected by the features of business location which those in sectors J-S considered important, relative to other types of business, namely access to reliable public transport, and faster public transport. These features regarding public transport reliability and access were also valued highly by many medium/large businesses, relative to small or micro businesses.
 - Additionally, in contrast to those working in sectors A-I, those working within 'service-based' sectors demonstrate a greater propensity to work from home/remotely, both now, and in the future.

Potential changes in demand

5.4.3 A significant minority of businesses consider that they would make more journeys, and travel to new places, as a result of TfN's planned road investments (to improve trip times and reliability on the major roads in the North), and rail investments (to increase the capacity, frequency, speed, and quality of the rail network, linking the North's largest cities with each other and with the rest of the North):

- 1 in 5 businesses anticipated making more journeys for business meetings following road improvements; whilst 1 in 3 predicted that they would travel to new places by road;
- 1 in 5 businesses anticipate making more journeys for business meetings following rail improvements, with the same proportion of businesses predicting they will travel to new places by rail;
- Amongst businesses which have significant demand for deliveries using company vehicles, 1 in 6 forecast that they would make more deliveries following road improvements; whilst 1 in 5 thought they would deliver to new places using their own company vehicles; and
- Amongst businesses which have significant demand for deliveries using couriers, 1 in 6 suggested that they would make more deliveries following road improvements; whilst 1 in 6 stated they would deliver to new places using couriers.

5.4.4 The anticipated changes in demand for transport as a result of transport improvements varies between different types of businesses, most notably:

- 'Agile Growing Businesses' and 'Established Big Businesses' appear more likely to travel to new places, and make a greater number of journeys for all types of business travel, by both road and rail.
- 'Younger' businesses appear more likely to make more trips for business travel by road, make more deliveries via couriers, and visit new places by road and rail.
- Business sectors A-I appear more likely to make increased deliveries using company vehicles, deliver to new places (using company vehicles and couriers); and less likely to work remotely in the future (i.e. suggest a continued demand for commuting).
- Business sectors J-S appear more likely to make more journeys by rail, and travel to new places by rail for other business purposes (e.g. for meetings).
- Medium/large businesses appear more likely to anticipate making an increased number of deliveries using own company vehicles.
- Micro/small businesses appear more likely to anticipate making deliveries to new places (using company vehicles and couriers).
- Businesses within Transformational Places, Large Conurbations and Industrial Places appear more likely to travel to new places by rail for other business purposes (e.g. for meetings).

5.4.5 When considering potential changes in future transport demand, it is also important to recognise the changing face of the freight and logistics sector specifically. Developments which this sector consider are likely to impact on demand for transport across the region in the coming years are:

- Increasing demand for deliveries, particularly in urban areas;
- Deliveries becoming increasingly time-pressured, with an increasing demand for next-day or same day delivery by consumers;
- Continuing growth in e-commerce retail, with more 'direct-to-door' deliveries;
- Continued concerns around the current viability of electric or hybrid goods vehicles are inhibiting their uptake, in particular relating to current technology limitations (e.g. levels of power, mileage range), inadequate charging infrastructure especially in rural areas, and some concerns about the fire risk and the environmental impacts of constructing such vehicles.
- Increased numbers of congestion charge zones, low emission zones, and Low Traffic Neighbourhoods, are presenting operational challenges for businesses making urban goods deliveries. Nonetheless, urban consolidation centres and low carbon-delivery methods such as cargo bikes and portering are generally considered as promising solutions for reducing the negative environmental impacts of urban deliveries within the sector.

Anticipated benefits from transport interventions

5.4.6 Businesses generally view TfN's proposed programme of transport interventions positively. Potential benefits presented to businesses were each considered to be 'somewhat likely' to occur. There were however some differences between different types of businesses, and the types of benefits anticipated.

- 'Optimistic Sole Traders' are more likely than other 'types' of businesses to anticipate improvements relating to **efficiency, profitability and growth**, including improved productivity due to faster and more efficient travel times, resulting in ability to reach more customers; new business opportunities and access to customers in other regions

of the UK; reduced business costs through more predictable journey times and improved staff punctuality; and improved access to suppliers from further afield.

- 'Agile Growing Businesses' and 'Established Big Businesses' are more likely than other 'types' of business to say that improvements would improve **efficiency and profitability**, including access to workers (including higher skilled workers from further afield), thus widening their talent pool, and improved staff morale due to fewer delayed services/more pleasant journeys.
- Medium and large businesses are more likely to anticipate that they will benefit from increased productivity due to faster journey times, have reduced business costs due to more predictable journey times, and greater access to skilled workers. These types of anticipated benefits suggest that these businesses are likely to anticipate benefits relating to improved **efficiency and profitability** of their operations.
- By contrast, businesses which tend to be 'younger', or have fewer employees, appear to be more likely to anticipate benefits such as gaining improved access to new suppliers from further afield, and opening-up new business opportunities in other areas of the UK. These types of benefits reflect an anticipated **growth** of business operations.

5.4.7 How businesses might benefit, and the types of interventions that will benefit them most, is likely to vary between those in urban and rural locations.

- Businesses in urban locations often cite difficulties they have in negotiating congested networks, or situations where disruptions have impacted business operations. The implication here, therefore, is that within urban locations, interventions which promote increased reliability and efficiency of operations are likely to provide the most benefit for these businesses in urban areas.
- By contrast, businesses in more rural locations often cite difficulties they have in being able to access appropriate transport infrastructure or services, and bemoan a lack of connectivity with other villages, towns or cities. The implication here, therefore, is that interventions which prioritise improved accessibility, improved speed of travel to destinations, and enhanced provision of infrastructure are most likely to benefit these businesses in rural areas.

5.5 Recommendations

Developing TfN's Business Cases

5.5.1 This programme of research provides a library of data, which (along with the other previous findings in the User Insight programme) can be called upon by TfN to obtain key metrics to inform business case and strategy development; thereby ensuring that proposals for transport interventions are built upon a wide and robust evidence base. In particular this report provides a clear indication about how different types of businesses anticipate benefitting from transport interventions. This information will help demonstrate the potential positive impacts of improved transport provision for different types of businesses across the region.

5.5.2 Whilst this research indicates that a sizeable proportion of businesses anticipate benefits arising from TfN's investments in the transport network, this sentiment is not unanimous. There is therefore potential for TfN to undertake further engagement with the business community, perhaps through Local Enterprise Partnerships (LEP's), to articulate, raise awareness and promote the potential benefits of transport improvements for businesses

across the North. This will help to ensure that all businesses are aware of planned improvements and can take them fully into account for their own future business planning.

- 5.5.3 Furthermore, by understanding how different types of businesses are likely to benefit from future transport interventions, such interventions can be targeted and customised to meet the needs of businesses of different sectors, regions, sizes, and types. This in turn maximises the likelihood of economic growth, particularly through enhancements to business efficiency, profitability, and expansion.
- 5.5.4 A significant element of TfN's current strategic focus is to improve connectivity between the major cities of the North of England. Consequently, major infrastructure projects such as High-Speed 2 (HS2) and Northern Powerhouse Rail (NPR) are at the forefront of plans to upgrade the North's transport infrastructure, with inter-urban journeys a key priority.
- 5.5.5 However, this research indicates that many of the businesses who anticipate benefits arising from TfN's proposed interventions are small and micro businesses; thereby indicating that enhancements to the transport network are not solely a priority for larger businesses alone. Many smaller businesses are located outside dense urban areas in the North, and as such, transport strategies should continue to consider these factors, to ensure that policies do not inadvertently exclude some types of businesses, or reduce their ability to benefit from interventions. As one potential example, the benefits of NPR could be maximised for all types of businesses by ensuring that new rail infrastructure is well integrated with local transport networks, particularly extending into sub-urban, rural and coastal areas.
- 5.5.6 The research has also outlined the increased propensity of employees in 'service-based' sectors to work from home (for at least some proportion of their working week), and to conduct many meetings remotely, rather than face-to-face. Whether these short-to-medium term trends will continue, and translate into long-term behaviour change, is unknown, however. Therefore, continued monitoring of commuting and business travel demand is required, to ensure there is sufficient network capacity to cater for a return to (or even an increased demand relative to) pre-pandemic conditions.
- 5.5.7 By contrast, more 'goods-intensive' industry sectors suggest they will have a continued demand for transport; and in many cases for businesses with freight and logistics needs, demand is anticipated to increase markedly in the coming years. The growth of the e-commerce sector and demand for faster deliveries 'direct-to-door' in particular raise a number of interesting questions; most notably, whether a trade-off or tipping point will come, whereby consumers and businesses may have to choose between fast on-demand delivery, or implementing more 'green' modes of delivery which are potentially less time-efficient, at least initially. This point is especially pertinent given that many businesses pointed to barriers which are preventing them from upgrading their fleets to electric and hybrid vehicles. Addressing concerns such as these has implications not just from a carbon emissions perspective, but for the efficiency of business operations more generally. The continued consideration of such items within TfN's Decarbonisation Strategy is therefore imperative.

Potential considerations for future research

- 5.5.8 Within this programme of research, the types of transport interventions which could be introduced by TfN were explored at a high-level, broadly categorised as road and rail improvements. Further research could investigate businesses' anticipated response to more

detailed potential interventions further, to explore and test which specific types of interventions would be prioritised by different types of businesses. Businesses could then consider these individual improvements in isolation, and identify which they view as being more beneficial to their business than others.

- Within rail improvements, several components could be explored, such as increased frequency of services, increased capacity of services, increased coverage of the rail network (in terms of stations/stops), changes to levels of fares and fare structures.
- Within road improvements, businesses could be asked to consider and prioritise various factors, such as expanded capacity on existing road networks, the building of new roads, the types of roads which should be prioritised for improvement (e.g. motorways, A roads, B roads), road user charging, and improvements in specific locations.

5.5.9 Such an exercise would enable TfN to identify specific types of improvement which could bring most value to businesses, and providing a large enough sample was obtained, results could be segmented to identify how preferences differ between various types of businesses.

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Appendix B – Quant Survey Sample Breakdown

Table 1. A) Main sector or activity

SECTOR	FREQUENCY	PERCENT
A - Agriculture, Forestry and Fishing	17	2%
B - Mining and Quarrying	5	1%
C - Manufacturing	100	10%
D - Electricity, gas, steam and air conditioning supply	14	1%
E - Water supply, sewerage, waste management and remediation	20	2%
F - Construction	130	13%
G - Wholesale and retail; repair of motor vehicles and motorcycles	92	9%
H - Transportation and storage	124	12%
I - Accommodation and food service activities	75	8%
J - Information and communication	26	3%
K - Financial and insurance activities	27	3%
L - Real estate activities	12	1%
M - Professional, scientific and technical activities	112	11%
N - Administrative and support service activities	69	7%
P - Education	35	4%
Q - Human health and social work activities	56	6%
R - Arts, entertainment and recreation	23	2%
S - Other service activities	63	6%
Total	1,000	100%

Table 1. B) Comparison of 2007 SIC breakdown – Quant Survey Sample vs. Population

SECTOR	SAMPLE %	POP. %
SIC code – ABDE (Agriculture, Forestry and Fishing; Mining and Quarrying; Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation)	6%	3%
SIC code – C (Manufacturing)	10%	5%
SIC code – F (Construction)	13%	16%
SIC code – G (Wholesale and retail; repair of motor vehicles and motorcycles)	9%	11%
SIC code – H (Transportation and storage)	12%	7%
SIC code – I (Accommodation and food service activities)	8%	4%
SIC code – JKL (Information and communication; Financial and insurance activities; Real estate activities)	7%	8%
SIC code – M (Professional, scientific and technical activities)	11%	14%
SIC code – N (Administrative and support service activities)	7%	9%
SIC code – P (Education)	4%	11%
SIC code – Q (Human health and social work activities)	6%	11%
SIC code – RS (Arts, entertainment and recreation; Other service activities)	8%	3%
Total	100%	100%

Table 2. Main sector or activity (Grouped) – Quant Survey Sample vs. Population

SECTOR GROUP	SAMPLE %	POP. %
Sector group A (A-I)	58%	47%
Sector group B (J-S)	42%	53%
Total	100%	100%

** Note that for Tables 1B and 2, more ‘goods-intensive’ sectors (Industry Sectors A-I) were intentionally over-sampled to ensure at least 50 businesses from each set of sectors were obtained, so segmentation could be undertaken by this demographic.*

Table 3. Number of employees

NUMBER OF EMPLOYEES	FREQUENCY	PERCENT
1 employee	186	19%
2-9 employees	391	39%
10-49 employees	216	22%
50-249 employees	146	15%
250+ employees	61	6%
Total	1,000	100%

Table 4. Number of employees (Grouped) – Quant Survey Sample vs. Population

NUMBER OF EMPLOYEES	SAMPLE %	POP. %
Micro & Small Combined (0-49 employees)	79%	98%
Medium & Large Combined (50+ employees)	21%	2%
Total	100%	100%

** Note that for Tables 3 and 4, medium and large businesses were intentionally over-sampled to ensure segmentation could be undertaken by this demographic.*

Table 5. Region – Quant Survey Sample vs. Population

REGION	SAMPLE %	POP. %
North West	51%	51%
North East	14%	14%
Yorkshire & the Humber	36%	36%
Total	100%	100%

** Note that for Table 5, a natural fallout of businesses across each region was targeted.*

Table 6. Place typology

PLACE TYPOLOGY	PHASE 3 SAMPLE %	PHASE 2 SAMPLE %
Commuter Towns	4%	4%
Former Metropolitan Counties	4%	6%
Industrial Places	9%	6%
Large Conurbations	47%	51%
Other Urban	11%	16%
Rural town and fringe	3%	3%
Rural village and dispersed	3%	1%
Transformational Places	8%	6%
Visitor Centres	8%	6%
Unknown	5%	0%
Total	100%	100%

** Note that for Table 6, no quotas were set. Data shown is for comparison only between the natural fallout of place typologies from User Insight Phase 2, and Phase 3 (this phase).*

Table 7. Length of time based at main site

LENGTH OF TIME AT MAIN SITE	FREQUENCY	PERCENT
Less than a year	103	10%
1 to 2 years	154	15%
3 to 5 years	207	21%
6 to 10 years	189	19%
More than 10 years	334	33%
Do not know	13	1%
Total	1,000	100%

Appendix C – Key findings from Qualitative Interviews

- Each interview lasted up to 30 minutes, with a range of topics explored, including:
 - **Organisation background** – Business activities, Number of employees, etc, for context;
 - **Commuting patterns** – Pre-Covid commuting behaviours of employees, and how current and anticipated future commuting might differ to these pre-Covid patterns;
 - **Transport of Goods** – How the pandemic may, or may not, have influenced the broad locations of customers/suppliers, and the frequency of goods delivered/received;
 - **Other business travel** – Changes to the frequency, location and modes of travel used by employees to travel to meetings as a result of Covid-19, and whether these changes might be sustained post-Covid; and
 - **Other thoughts** on how Covid-19 might impact upon future business travel.

Organisation Background:

- Mix of organisations spoken to

INTERVIEWEE	REGION	SIZE	SECTOR
1	North East	250+ employees	N - Administrative and support services
2	North East	2-9 employees	S - Other service activities
3	Yorkshire & The Humber	2-9 employees	M - Professional, scientific and technical activities
4	North West	2-9 employees	R - Arts, entertainment and recreation
5	Yorkshire & The Humber	2-9 employees	P - Education

Commuting:

- Pre-Covid – Mix of commuting behaviours: some were almost entirely office based or travelling to customers’ homes; others worked from home full-time
 - Commuting patterns tended to be one or the other (always office, or always at home), with very little/no ‘hybrid’ commuting pattern
 - All those who commuted were reliant, at least in part, on a private car or van
 - Lack of suitable PT available to them; Enjoy the flexibility of having their own car
 - Congestion a major challenge (city road networks; school rush hours)
- During Covid – significant reduction in traffic volumes in first lockdown

- Businesses were still running – although some at limited capacity due to lower business orders, or staff furlough/shielding
- One business was running as normal as they were classed as essential workers
- Increase in home working for all but one interviewee (essential worker)
- Post-Covid – Mixed views on whether people would return to their pre-Covid commuting patterns.
 - Those who anticipate a return to pre-Covid commuting trends were more dependent on offices/visits to customers to deliver their day-to-day work
 - Those who were less likely to return to their pre-Covid patterns were able to carry out a larger proportion of their role from home
 - Some feel that PT patronage will be lower due to fear of infection
 - Still a reliance on car, with congestion existing issues possibly worsening due to roadworks (A1079) or road closures / network changes in city centres

Transport of goods/services:

Interviewees interpreted 'Transport of goods/services' as the movement of items from one place to another – the purpose is to deliver/receive goods

- Pre -Covid – Reliance on road transport for delivering and receiving goods
 - Most use couriers (DHL, DPD) for their deliveries
 - Those using couriers find these services very reliable, but could be more efficient (e.g. multiple deliveries from the same courier in one day)
 - The interviewee who delivers and transports goods themselves directly from suppliers leaves a significant amount of contingency time for delays (aims to arrive 30 mins early)
 - Most used large/international suppliers, so significant distances travelled by goods. Only one interviewee used local suppliers only
- During Covid – The majority were still transporting goods as normal (helped by the use of couriers and online services)
 - One business had significantly reduced transport of goods, due to a reduction in overall business.
- Post-Covid – All anticipate a return to pre-Covid patterns (no long-term changes anticipated).

Other business travel:

Interviewees interpreted 'Business travel' as people travelling to meet customers/suppliers – the purpose is for people to meet

- Pre-Covid – Some travelled long distance for meetings with customers/clients
 - The longer the journey (e.g. to London/the South), the more likely the use of PT; whereas shorter journeys tended to be made by private car
 - One interviewee has difficulties using PT for business travel (accessibility of station facilities; capacity on services; ramps to board/alight trains)
 - One interviewee who lives in a rural area has very limited public transport accessible to them for their business travel, as they live rurally
- During Covid – Business travel significantly reduced; affected far more than commuting and transport of goods/services

- Virtual meetings have become the norm
- For those who have met face to face for essential purposes, they have needed to use private transport, even though this has significantly increased journey times
- Post-Covid – Reduced business travel expected long-term, due to rise in virtual meetings (reduced costs of travel, reduced time spent travelling)
 - But some journeys still anticipated – business travel not eliminated entirely (some clients prefer face-to-face; some businesses want to retain a degree of ‘normality’)
 - One interviewee with disabilities considered that reduced staff at train stations post-Covid will mean that issues accessing station facilities / travelling by train will worsen

Considerations / learnings for quant survey:

- Our Covid-related questions in the survey appear to be covering the key themes arising from the qualitative data.
 - As commuting patterns and other business-related travel have changed significantly during the pandemic for most businesses (and may well continue to change in the future), Covid-19 related questions on these forms of travel seem essential.

Given the minimal impacts on the deliveries of goods and services anticipated in the long-term (and for many interviews, their limited impacts during the pandemic too), the removal of the 4 Covid-19 questions in relation to transport of goods and services could be a potential option to reduce the survey length should this be required.

Appendix D – Key findings from Cognitive Testing

- The testing was undertaken through a telephone interviewing methodology (to reflect the environment in which the survey will be conducted during main fieldwork), with participants offered a small cash incentive as a thank you for their time.
- The purpose of the cognitive testing was to ensure that all questions were clearly understood by businesses to minimise any ambiguity in question wording, and to check that the list of answer options provided was as complete as possible. This process allowed SYSTRA to:
 - Provide TfN with early insight on how questions were interpreted by businesses;
 - Flag any initial concerns regarding survey administration; and
 - Make amendments to the survey prior to piloting.

Sections 2 & 3 Scoping/Organisation Background:

QUESTION	COMMENTS	ACTION TO BE TAKEN
2a	○	○
2b	○ All interviews – did not know what a SIC code was.	○ Only ask 2b to Transportation and Storage sector. No need to screen out if respondent does not know their SIC code.
3	○ All interviews – provided an answer before categories read	○ No need for Teamsearch interviewer to read the categories – just categorise response accordingly.
4	○ Interview 4 – Registered office is outside North of England, but majority of operations run within North.	○ Revise wording to ‘In which region of the North of England is your main site based?’ Can then remove additional text following question.
5	○ Interview 4 – ‘Other sites’ are home addresses of employees.	○ Add ‘approximately’ to the question wording to reduce the time spent by respondents thinking about the exact number in this instance.
6	○	○
7	○ Interview 2 – business is based from their home address (was also the case pre-Covid).	○ Additional text provided at Q5 to ensure that businesses based from a home address are covered.

QUESTION	COMMENTS	ACTION TO BE TAKEN
8	<ul style="list-style-type: none"> ○ All Interviews – answered before options were read out. 	<ul style="list-style-type: none"> ○ Amend answer options so they do not overlap, but no need for interviewer to read options aloud.
9a	<ul style="list-style-type: none"> ○ All interviews – Q9a worked fine, but could reduce survey length by just asking Q9b and routing from this. 	<ul style="list-style-type: none"> ○ Remove Q9a and go straight into Q9b. Logic check for Q9b – must equal either 0% or 100%.
9b	<ul style="list-style-type: none"> ○ 	<ul style="list-style-type: none"> ○
10	<ul style="list-style-type: none"> ○ Interview 1 – was unsure how if they would be asked about ‘low skilled’ occupations too, when they were asked about ‘medium skilled’ – affected their estimate. ○ Interview 3 – wording clear, but considered these to be quite formal descriptions of grade. 	<ul style="list-style-type: none"> ○ Teamsearch interviewer to read out all 3 categories before the interviewee provides their estimates. ○ SYSTRA to soften wording to fit into conversational flow of a CATI.

Section 4 – Travel and Transport

QUESTION	COMMENTS	ACTION TO BE TAKEN
Current travel patterns of staff		
11	<ul style="list-style-type: none"> ○ Interview 1 – happy with open percentage, but took a while to answer. Suggested that we need to ask people ‘to the nearest 5 percent’, otherwise they might take a long time to answer. ○ Interview 4 – took a while to answer this question. 5 different options to consider. 	<ul style="list-style-type: none"> ○ Suggest reducing number of categories to reduce respondent burden – less than 15 miles; 15-49 miles; 50+ miles. ○ All interviewees suggested that the majority of their employees live within 15 miles of their main site. Suggest having this broken out first, which should then make parts B to D a little easier for the respondent to answer.

QUESTION	COMMENTS	ACTION TO BE TAKEN
12a	○ All interviews – delivery of Q12a to Q12d felt a little clunky	○ Slight amendments in word ordering to aid the flow of questions 12a-d.
12b	○ As Q12a.	○ As Q12a.
12c	○ As Q12a.	○ As Q12a.
12d	○ As Q12a.	○ As Q12a.
13a	○ All interviews – delivery of Q13a to Q13f felt a little clunky	○ Slight amendments in word ordering / structure to aid the flow of questions 13a-f.
	○ Interview 2 – travels alone by private car in all instances.	○ No action – could potentially make this question more efficient in some cases for Teamsearch.
	○ Interview 3 – staff have been furloughed during Covid, was unsure how to answer.	○ Additional option to be added for ‘None – staff have been furloughed’.
13b	○ As Q13a.	○ As Q13a.
13c	○ Interview 1 – Had included company car/van in their estimate at Q13a.	○ Place greater emphasis on private car/van at Q13a.
13d	○ As Q13a.	○ As Q13a.
13e	○ As Q13a.	○ As Q13a.
13f	○ As Q13a.	○ As Q13a.
Staff commuting journeys		
14	○ Interview 2 – company of 2; so none of the options applied.	○ ‘None of the above’ to be added as an answer option.
15	○ All interviews – initially unaware of what MaaS is. Took a little while to explain MaaS to the respondent, and even then, they didn’t entirely come to grips with it.	○ Suggest deletion of both questions on MaaS. Can explore in more detail during the qualitative phase.

QUESTION	COMMENTS	ACTION TO BE TAKEN
16a	○	○
16b	○ Interview 1 – didn't understand the term 'rescinding'	○ Replace 'rescinding' with 'returning'.
16c	○	○
Deliveries and transport of goods		
17	○ Interview 3 – felt that by asking about goods and services separately it made the question more difficult to understand (unable to distinguish between 'goods' and 'services'). Added time to the interview as they considered these separately.	○ Suggested that we reduce to 3 answer options by combining the separate codes for 'goods' and 'services' into one.
18	○ Interview 3 – answer may differ as situations regarding Brexit develop.	○ Question wording made clearer that we are asking about their business situation currently.
19	○ Interview 3 – Found it hard to provide an exact percentage.	○ Other interviewees didn't find this question too difficult, so recommend it remains as it is.
20	○	○
21	○	○
22	○	○
23	○ Interview 3 – found the question a little wordy, suggesting it could have been worded more simply. ○ Multiple interviews – thought this was an open question where we were asking for specific details of how/why frequency had changed.	○ Wording to be amended to 'Which of the following options best describes the change in frequency of deliveries you receive, compared to before the Covid-19 pandemic?'
24	○ As for Q23.	○ As for Q23.
25	○ Interview 3 – Found it hard to provide an exact percentage.	○ Noted that the respondent can provide an approximate percentage figure.

QUESTION	COMMENTS	ACTION TO BE TAKEN
26	<ul style="list-style-type: none"> ○ Interview 3 – found the question a little wordy, suggesting it could have been worded more simply. 	<ul style="list-style-type: none"> ○ Wording to be amended to ‘Has the location of the suppliers who deliver directly to you changed compared to before the Covid-19 pandemic?’
27	○	○
28	<ul style="list-style-type: none"> ○ Interview 2 – only receives small Amazon deliveries, so options didn’t feel relevant to them. ○ Interview 3 – suggested that quality of customer service is an option to be added 	<ul style="list-style-type: none"> ○ ‘Not applicable’ to be added as an answer option. ○ To add quality of customer service as an answer option.
29	<ul style="list-style-type: none"> ○ Interview 2 – only receives small Amazon deliveries, so options didn’t feel relevant to them 	<ul style="list-style-type: none"> ○ ‘Not applicable’ to be added as an answer option.
Organisation vehicle fleet		
30	○	○
31	○	○
32	○	○
33	○	○
34	○	○
35	○	○
36	○ As for Q23.	○ As for Q23.
37	○ As for Q23.	○ As for Q23.
38	○	○
39	○	○
40	○	○
41	○	○
Other business travel		

QUESTION	COMMENTS	ACTION TO BE TAKEN
42	<ul style="list-style-type: none"> ○ Multiple interviews – provided a figure, but found tricky / took some time to answer. 	<ul style="list-style-type: none"> ○ Suggest replacing with 2 fixed response questions to reduce interview time and alleviate respondent burden.
43	<ul style="list-style-type: none"> ○ As Q42. 	<ul style="list-style-type: none"> ○ As Q42.
44	<ul style="list-style-type: none"> ○ As Q42. 	<ul style="list-style-type: none"> ○ As Q42.
45	<ul style="list-style-type: none"> ○ Interview 4 & 5 – Unsure whether this question related to before or during Covid-19 pandemic. 	<ul style="list-style-type: none"> ○ TfN to confirm – are we wanting to know what organisations did prior to Covid-19, or what they are currently doing?
46	<ul style="list-style-type: none"> ○ Interview 1 – Mentioned ‘air travel’ as an option. ○ Interview 4 & 5 – Unsure whether this question related to before or during Covid-19 pandemic. 	<ul style="list-style-type: none"> ○ Recommend no action – would be captured by ‘other, please specify’. ○ TfN to confirm – are we wanting to know what organisations did prior to Covid-19, or what they are currently doing?
47	<ul style="list-style-type: none"> ○ Multiple interviews – Found parts A, B and C quite wordy, making the question harder to understand. Suggested using ‘would prefer to’ for parts B and C. ○ Interview 4 – Unsure whether this question related to before or during Covid-19 pandemic. 	<ul style="list-style-type: none"> ○ Wording to be adapted in line with suggestions received from respondents. ○ TfN to confirm – are we wanting to know what organisations did prior to Covid-19, or what they are currently doing?
48a	<ul style="list-style-type: none"> ○ 	<ul style="list-style-type: none"> ○
48b	<ul style="list-style-type: none"> ○ 	<ul style="list-style-type: none"> ○
49a	<ul style="list-style-type: none"> ○ 	<ul style="list-style-type: none"> ○
49b	<ul style="list-style-type: none"> ○ 	<ul style="list-style-type: none"> ○

QUESTION	COMMENTS	ACTION TO BE TAKEN
50a	○	○
50b	○	○
51	○ As Q15	○ As Q15

Other Section 4 thoughts:

- **Interview 1** – Useful to re-iterate the reasons why TfN are asking the questions in this section (e.g. to fully understand the current and potential future picture of business-related transport in the North of England)?

Section 5 – Improvements to Transport in the North

QUESTION	COMMENTS	ACTION TO BE TAKEN
Road improvements		
52a	○ Interview 2 – Introductory text for 5.1 a little confusing for the respondent, and they didn't feel it was relevant to Q52 & Q53.	○ Remove introductory text for 5.1? Would also have the added benefit of shortening the interview slightly.
	○ Overall – wording for Q52 feels leading.	○ Q52 to be amended to make less leading.
	○ Overall – 'outside your local area' wasn't coming in to respondents consideration – they were just thinking at an overall level (especially for commuting journeys which were often less than 15 miles).	○ Remove introductory text for 5.1?
52b	○	○
52c	○	○
53	○ Interview 1 – May be difficult to answer as they leave 1 hour for pretty much all types of journey.	○ Consider asking as a scale question, ranging from 'no contingency time at all, to a significant amount of contingency time' to reduce respondent burden.
	○ Interview 2 – Short journeys only, so contingency time is larger as a % of their journey.	

QUESTION	COMMENTS	ACTION TO BE TAKEN
	<ul style="list-style-type: none"> ○ Interview 3 – Struggled to calculate contingency time as a percentage – provided an answer in minutes only. Took a while to obtain an estimate. 	
54a	<ul style="list-style-type: none"> ○ Interview 1 – Introductory text before Q54 is quite wordy. 	<ul style="list-style-type: none"> ○ Transferred to top of section 5.1, replacing the introductory text.
54b	<ul style="list-style-type: none"> ○ 	<ul style="list-style-type: none"> ○
54c	<ul style="list-style-type: none"> ○ 	<ul style="list-style-type: none"> ○
54d	<ul style="list-style-type: none"> ○ 	<ul style="list-style-type: none"> ○
54e	<ul style="list-style-type: none"> ○ 	<ul style="list-style-type: none"> ○
54f	<ul style="list-style-type: none"> ○ 	<ul style="list-style-type: none"> ○
Rail improvements		
55a	<ul style="list-style-type: none"> ○ Interviews 3 & 4– Questions not applicable to them as they don't take any journeys by train. 	<ul style="list-style-type: none"> ○ Add an option for 'not applicable'.
55b	<ul style="list-style-type: none"> ○ Interview 1 – Need to add 'reduction of travel time to stations' as well? Otherwise the improvements would make no difference to them. ○ Interview 3 – Questions not applicable to them as they don't take any journeys by train. 	<ul style="list-style-type: none"> ○ TfN to advised 'reduction of travel time to stations' should not be added as it falls outside their remit. ○ Add an option for 'not applicable'.
55c	<ul style="list-style-type: none"> ○ 	<ul style="list-style-type: none"> ○
55d	<ul style="list-style-type: none"> ○ Interview 1 – Need to add 'reduction of travel time to stations' as well? Otherwise the improvements would make no difference to them. 	<ul style="list-style-type: none"> ○ TfN to advised 'reduction of travel time to stations' should not be added as it falls outside their remit.
56a	<ul style="list-style-type: none"> ○ 	<ul style="list-style-type: none"> ○
56b	<ul style="list-style-type: none"> ○ 	<ul style="list-style-type: none"> ○
56c	<ul style="list-style-type: none"> ○ 	<ul style="list-style-type: none"> ○

QUESTION	COMMENTS	ACTION TO BE TAKEN
56d	<input type="radio"/>	<input type="radio"/>
57	<input type="radio"/> Interview 2 – Wanted to add ‘Improvements to quality of stations’ and ‘Parking at stations’ as answer options. <input type="radio"/> Interview 4 – wanted to select all options.	<input type="radio"/> Suggest adding as answer options – TfN to advise. <input type="radio"/> Need stronger emphasis on the fact they can select a maximum of 3 options.
Integrated and smart travel		
58a	<input type="radio"/>	<input type="radio"/>
58b	<input type="radio"/>	<input type="radio"/>
58c	<input type="radio"/>	<input type="radio"/>
58d	<input type="radio"/>	<input type="radio"/>
59a	<input type="radio"/>	<input type="radio"/>
59b	<input type="radio"/>	<input type="radio"/>
59c	<input type="radio"/>	<input type="radio"/>
59d	<input type="radio"/>	<input type="radio"/>
Longer term impacts		
60	<input type="radio"/>	<input type="radio"/>
61	<input type="radio"/> Interview 3 – Found questions repetitive as road and rail asked separately. <input type="radio"/> All interviews – all recognise the value of the improvements – but wouldn’t move business location as a result.	<input type="radio"/> Suggest combining roads / questions to streamline the section and reduce respondent burden. <input type="radio"/> Suggest merging the relocation of business question with the ‘importance of individual factors’ question.
62	<input type="radio"/> Interview 4 – Suggested adding ‘access to public transport	<input type="radio"/> To be added.

QUESTION	COMMENTS	ACTION TO BE TAKEN
63	○	○

Final thoughts - Respondents:

- Question wording is mostly clear, but a few requests for clarification of context and some suggestions for answer options provided.
- Some of the introductory paragraphs / context setting could be shortened and make clearer. This is particularly an issue for Section 5, which needs more tidying than Section 4 to aid the flow of the survey.

Appendix E – Key findings from Piloting

1. PILOT SURVEY

The pilot survey of 50 respondents was undertaken by Teamsearch between Friday 23rd April and Wednesday 28th April 2021.

By conducting the survey in full with a pilot sample, the research team could have greater confidence that questions were clearly understood by businesses, and that the mechanics of the survey (e.g. routing to ensure businesses are asked all the questions they should be and none that they should not be) were in order.

The pilot survey was administered under same environment as the full launch, with Teamsearch being careful to ensure they obtained businesses in line with the set quotas outlined by SYSTRA and TfN. This meant that all feedback Teamsearch provided was as reflective of the main survey conditions as possible.

Chapters 2 and 3 of this short note outline the feedback received from Teamsearch from the Pilot. Chapter 4 summarises SYSTRA's initial suggestions for questions with TfN could consider removing from the survey, without compromising the research objectives.

Overall, the piloting revealed that the survey was well understood by businesses, and the questions followed a logical order. However, the length of interview was longer than anticipated. Consequently, some reductions to the questions were made ahead of the full launch of the survey.

2. SURVEY SCRIPTING

Overall, the interviews flowed well, with the questions clearly understood by respondents, and answer options generally being sufficient for respondents.

A few minor points were raised by the interviewers, as follows:

- **Q8** – Recommended by Teamsearch that a don't know option is added.
 - SYSTRA agrees with this suggestion.
- **Q11** – several respondents did not know the percentage of employees who travel each distance for their commuting journeys.
 - We suggest adding a single select 'Don't know' option to the survey, in order to prevent respondents from either being lost from the survey, or guessing from an uninformed position.
- **Q14** – Confirmed by SYSTRA that this is a multi-response question.
- **Q16/Q24/Q25/Q26/Q36/Q37/Q38** – Clarified that 'No' or 'Don't know' codes should be single select, exclusive answer codes.

In addition, Teamsearch reported that the quotas on business size, SIC code and geographic region were falling out as planned.

QUOTA	N	%
SIC code – ABDE (Agriculture, Forestry and Fishing; Mining and Quarrying; Electricity, gas, steam and air conditioning supply; Water supply, sewerage, waste management and remediation)	7	14%
SIC code – C (Manufacturing)	5	10%
SIC code – F (Construction)	2	4%
SIC code – G (Wholesale and retail; repair of motor vehicles and motorcycles)	6	12%
SIC code – H (Transportation and storage)	3	6%
SIC code – I (Accommodation and food service activities)	1	2%
SIC code – JKL (Information and communication; Financial and insurance activities; Real estate activities)	6	12%
SIC code – M (Professional, scientific and technical activities)	2	4%
SIC code – N (Administrative and support service activities)	2	4%
SIC code – P (Education)	0	0%
SIC code – Q (Human health and social work activities)	4	8%
SIC code – RS (Arts, entertainment and recreation; Other service activities)	12	24%
Business Size - Micro/Small Combined	38	76%
Business Size - Medium/Large Combined	12	24%
Region: North West	22	44%
Region: North East	12	24%
Region: Yorkshire & The Humber	16	32%

3. LENGTH OF INTERVIEW

Despite the smooth flow of the survey, the duration of interviews remains a concern. The average interview length from the pilot stage was 30.2 minutes, with the average length by route as follows:

ROUTE	N	AVG. INTERVIEW LENGTH (MINS)
Commuter	8 (16%)	23.0

ROUTE	N	AVG. INTERVIEW LENGTH (MINS)
Commuters + Transport of Goods	10 (20%)	25.3
Commuters + Transport of Goods + Other Business	21 (42%)	36.9
Commuters + Other Business	11 (22%)	26.9
All (Weighted average of N x mins))	100%	30.2

Also apparent was the fact that the longest route of the survey (Commuters + Transport of Goods + Other Business) was by far the most common route taken, seen by 42% of respondents. However, even the shorter routers (e.g. Commuters only) were taking in excess of 20 minutes.

4. RECOMMENDATIONS

As a result of the outcomes from the piloting, we recommend a two-fold approach to reducing average interview duration:

- A) Reduce/be more selective in the number of people who are going through the longer routes of the survey
- Currently, sections 4.2/4.3/4.4 are presented to any respondent to transports goods / does other business journeys (even if just 1% of their travel)
 - By increasing the threshold to 30%, the number of respondents who are presented with every route in the survey will be reduced).
 - This approach also has the added benefit of needing to cut fewer questions than if we kept the thresholds the same.
- B) In addition to A, reduce the number of questions overall to bring down LOI for all routes
- SYSTRA have reviewed the analysis specification, draft report structure, and considered the core objectives of the Phase 3 research.
 - By putting together an analysis spec / reviewing the key questions for the typologies, we have identified which questions are key in in achieving the research objectives, and which may be more peripheral to the objectives/less essential.
 - We have highlighted less essential questions in yellow in the survey, for TfN to consider as candidates for questions to be removed to reduce survey length.

SYSTRA estimates that approximately 5 minutes of content will need to be removed from the survey in order to achieve a 20 minute average interview duration.

If desired by TfN, we can investigate the increase in cost for a 25 minute duration, though this may increase the fieldwork timescales, and subsequently analysis and reporting of the quant survey.

Suggestions for questions that could be removed:

QUESTIONS	RATIONALE
Q5/Q6/Q7	The scoping questions are taking a while for Teamsearch to get through, which is then squeezing their time for the main interview questions. This is the only point at which we ask about 'other' sites, it doesn't appear to link to

QUESTIONS	RATIONALE
	any of the research objectives, and it seems unlikely that we would segment by businesses with different numbers of sites? Removal of these questions would help create time for more of the core questions.
Q10	The scoping questions are taking a while for Teamsearch to get through, which is then squeezing their time for the main interview questions. We understand that there might have been a desire to segment by employee level of skill, but seems like a more peripheral objective, and removal of this question would help create time for more of the core questions.
Q12A	We collect detailed information at Q12B, so could perhaps do without Q12A?
Q14	Relationship of Q14 to Objective 1a (Travel to work and remote working patterns of employees) seems a bit looser than the other questions. A candidate to be removed which would really help with time savings?
Q17	We already capture companies who do imports/exports in Q16. Is this additional information that we could scale back on?
Q28	Could capture those who don't face any barriers by including an answer option in the question (Q29) 'No barriers – all our vehicles are electric or hybrid' instead. Would still capture information on barriers to upgrading to electric/hybrid without the need for the additional question. Q29 & Q30 would be presented to any respondent who says they have vehicles at Q27.
Q39	We know from qual interviews, cog testing and piloting that other business travel has decreased significantly during Covid as a result of lockdowns/travel restrictions for non-essential purposes – worth removing?
Q47	Could be removed as the answer options don't provide a huge amount of insight, and we capture challenges/constraints to travel in more targeted detail in other questions. For instance, we'll already know if reliability is an issue from the results to Q46.
Q48 context, 2 nd sentence	Respondent still provided context if second sentence is removed. Would reduce interview time without needing to cut question.
Q50 context, 2 nd paragraph	Respondent still provided context if second paragraph is removed. Would reduce interview time without needing to cut question.

Appendix F – Finalised Questionnaire

INTRODUCTION

Thank you very much for agreeing to complete this survey.

SYSTRA have been appointed by Transport for the North to conduct research to gain a better understanding of the current and future transport use, and transport requirements, of different types of businesses in the North of England. I work for Teamsearch who SYSTRA have appointed to conduct the survey.

The survey will take about 20 minutes. All answers you provide will be treated in confidence, in accordance with Market Research Society Codes of Conduct and the General Data Protection Regulation. If you would like more information on how we treat your data, we can email you SYSTRA's privacy policy for this research.

[\[IF RESPONDENT WOULD LIKE TO SEE THE PRIVACY POLICY, THEN PLEASE EMAIL TO THEM\]](#)

Before we begin, we will just need to ask you a couple of questions to check that you are eligible to take part in this research.

SCOPING QUESTIONS

For the purposes of administering the survey, and for analysis, we may collect demographic information. You do not have to answer any questions that you do not wish to, and if you do, you can withdraw your consent for us to process this information at any time.

Any personal data collected over the course of this interview will be held securely and will not be shared with any third party unless you give permission (or unless we are legally required to do so).

1. Do you agree to proceeding with the interview on this basis?

- Yes
- No [\[THANK AND CLOSE\]](#)

2. A) What is the main sector, or activity, that your organisation operates within?

[\[CHECK THE BUSINESS SECTOR IS IN QUOTA\]](#)

- A - Agriculture, Forestry and Fishing
- B - Mining and Quarrying
- C - Manufacturing
- D - Electricity, gas, steam and air conditioning supply
- E - Water supply, sewerage, waste management and remediation activities
- F - Construction
- G - Wholesale and retail trade; repair of motor vehicles and motorcycles
- H - Transportation and storage
- I - Accommodation and food service activities
- J - Information and communication
- K - Financial and insurance activities
- L - Real estate activities
- M - Professional, scientific and technical activities
- N - Administrative and support service activities
- O - Public administration and defence; compulsory social security
- P - Education

- Q - Human health and social work activities
- R - Arts, entertainment and recreation
- S - Other service activities

[ASK Q2B ONLY IF Q2A = H – TRANSPORTATION AND STORAGE]

B) Do you know your organisation's SIC (2007) code?

- <Enter SIC (2007) code>
- Don't know <Interviewee provides broad category instead>

3. Including yourself, approximately how many employees are there currently in your organisation?

[NO NEED TO READ OPTIONS; CHECK THE BUSINESS SIZE IS IN QUOTA]

- 1 employee (i.e. sole trader or self-employed)
- 2-9 employees
- 10-49 employees
- 50-249 employees
- 250+ employees

4. A) In which region of the North of England is your main site based? If your organisation has more than one site, please answer for where the majority of your employees are based. If your business is entirely based from home, this will be your home address.

[CHECK THE REGION IS IN QUOTA]

- North West
- North East
- Yorkshire & The Humber

B) What is the business postcode of your main site?

This information will remain confidential and will only be used to classify the type of area your business is located within. It will not be reported to TfN.

- < Postcode >
- Don't know
- Prefer not to say

[WHEN INTERVIEWER IS HAPPY THAT RESPONDENT IS IN QUOTA]

Thank you, we will now proceed with the main survey questions..

YOUR ORGANISATION

5. Approximately, how long has your organisation been based at your main site?

[NO NEED TO READ OPTIONS]

- Less than a year
- 1 to 2 years
- 3 to 5 years
- 6 to 10 years
- More than 10 years
- Don't know

6. Excluding commuting, what percentage of your organisations' overall transport needs are:

[LOGIC CHECK, SUM OF Q6A AND Q6B MUST EQUAL EITHER 0% OR 100%]

[INTERVIEWER TO READ PART A AND B BEFORE RESPONDENT PROVIDES ANSWER]

- a) Journeys that include the physical movement of materials from one place to another (e.g. transferring stock between facilities, or transporting materials as part of a service your organisation is delivering or receiving) <FREE TEXT %>
- B) Other business journeys (e.g. to meet customers or suppliers) which do not include the transport of physical materials? <FREE TEXT> %

TRAVEL AND TRANSPORT IN YOUR ORGANISATION

Staff commuting journeys

[IF Q3 = CODES 2 TO 5, ASK Q7 TO Q10. OTHERWISE, SKIP TO Q11/Q21 DEPENDING ON ROUTE]

- 7. Approximately, what percentage of your organisation's employees live...**
 [LOGIC CHECK, SUM OF PERCENTAGE VALUES FROM Q7A TO C MUST ADD TO 100%]
 [INTERVIEWER TO READ ALL PARTS (A, B, C) BEFORE RESPONDENT PROVIDES ANSWER]
- Within 15 miles from your main site <FREE TEXT> %
 - Between 15-49 miles from your main site <FREE TEXT> %
 - 50 miles or more from your main site <FREE TEXT> %
 - Don't know [SINGLE SELECT]
- 8. What percentage of the working week [did/have/will] your employees [work/worked/work] remotely, or from home:**
 [INTERVIEWER TO READ ALL PARTS (A, B, C) BEFORE RESPONDENT PROVIDES ANSWER]
- Before the Covid-19 pandemic (before March 2020)? <FREE TEXT> %
 - During the Covid-19 pandemic (April 2020 to present)? <FREE TEXT> %
 - In 2 to 3 years' time? <FREE TEXT> %
- 9. A) Approximately, what percentage of your organisation's employees used the following transport options as their main mode of travel to work, before the Covid-19 pandemic (before March 2020)?**
 [LOGIC CHECK, VALUES TO ADD TO 100%]
 [INTERVIEWER TO READ ALL OPTIONS BEFORE RESPONDENT PROVIDES ANSWER]
- Private or company car or van <FREE TEXT> %
 - Public transport (e.g. bus, rail, tram) <FREE TEXT> %
 - Active travel (e.g. cycling, walking, scooting) <FREE TEXT> %
 - None – employees working mainly from home <FREE TEXT> %
- B) Do you think your employees use of private modes of transport will increase, decrease, or stay the same in 2 to 3 years' time?**
 [LOGIC CHECK, VALUES TO ADD TO 100%]
- a) Significantly increase
 - b) Slightly increase
 - c) No change – will stay the same
 - d) Slightly decrease
 - e) Significantly decrease
 - f) Don't know
- 10. Does your organisation have any initiatives for supporting the use of public transport, car sharing, or cycling for employees?**
 [NO NEED TO READ OUT OPTIONS; MULTI-SELECT]
- a) A travel plan for employees

- b) Facilities for cyclists (e.g. bike storage, showers)
- c) Provision of shuttle buses between site(s) and train station
- d) Bus or rail season ticket loan facility
- e) Incentives to reduce car use (please specify)
- f) Other (please specify)
- g) None [EXCLUSIVE]

[ASK SECTION 4.2 ONLY IF Q6A GREATER THAN OR EQUAL TO 30%]

Transport of goods

11. Does your organisation import, or export, goods or services internationally?

[MULTI-SELECT]

- a) Yes, we import goods and/or services
- b) Yes, we export goods and/or services
- c) No, we do not import or export any goods or services [EXCLUSIVE]

12. Approximately, what percentage of goods are delivered to you...

[LOGIC CHECK, VALUES THE THREE ANSWERS COMBINED TO ADD TO 100%]

[INTERVIEWER TO READ OPTIONS A, B, C BEFORE RESPONDENT PROVIDES ANSWER]

- a) Directly from suppliers <FREE TEXT> %
- b) By couriers/delivery companies <FREE TEXT> %
- c) By vehicles from your own organisation <FREE TEXT> %

[ASK Q13 ONLY IF Q12A GREATER THAN OR EQUAL TO 20%]

13. How often does your organisation receive deliveries directly from suppliers to any of your sites in the North of England?

[NO NEED TO READ OUT OPTIONS]

- a) Daily
- b) At least once a week, but less than daily
- c) At least once a month, but less than weekly
- d) Less than once a month
- e) Never/Don't know

[ASK Q14 ONLY IF Q12B GREATER THAN OR EQUAL TO 20%]

14. How often does your organisation receive deliveries via couriers/delivery companies to any of your sites in the North of England?

[NO NEED TO READ OUT OPTIONS]

- a) Daily
- b) At least once a week, but less than daily
- c) At least once a month, but less than weekly
- d) Less than once a month
- e) Never/Don't know

[ASK Q15 ONLY IF Q12C GREATER THAN OR EQUAL TO 20%]

15. How often does your organisation receive deliveries by vehicles from your own organisation to any of your sites in the North of England?

[NO NEED TO READ OUT OPTIONS]

- a) Daily
- b) At least once a week, but less than daily
- c) At least once a month, but less than weekly
- d) Less than once a month

e) Never/Don't know

16. Which of the following options best describes the change in the number of deliveries you have received during the Covid-19 pandemic (April 2020 to present) compared to before the Covid-19 pandemic (before March 2020)?

- a) Significantly increased
- b) Slightly increased
- c) No change – stayed the same
- d) Slightly decreased
- e) Significantly decreased
- f) Don't know

17. Which of the following options best describes the change in the number of deliveries you anticipate receiving in 2 to 3 years' time, compared to during the Covid-19 pandemic (April 2020 to present)?

- a) Significantly increase
- b) Slightly increase
- c) No change – will stay the same
- d) Slightly decrease
- e) Significantly decrease
- f) Don't know

[ASK Q18 TO Q20 ONLY IF Q13 = CODES 1-4]

18. Approximately, what percentage of the suppliers who deliver directly to you currently are based...

[LOGIC CHECK, VALUES TO ADD TO 100%]

[INTERVIEWER TO READ ALL OPTIONS BEFORE RESPONDENT PROVIDES ANSWER]

- Within 15 miles of your organisation's main site <FREE TEXT> %
- More than 15 miles from your organisation's main site, but within the North of England <FREE TEXT> %
- Outside of the North of England, but within the UK <FREE TEXT> %
- Internationally <FREE TEXT> %
- Don't know [EXCLUSIVE]

19. Has the location of the suppliers who deliver directly to you currently changed compared to before the Covid-19 pandemic (before March 2020)?

[MULTI-SELECT; PROMPTS FOR CODES B TO E ONLY GIVEN IF RESPONDENT SAYS YES]

- a) No change [EXCLUSIVE]
- b) Yes, an increased percentage of suppliers within 15 miles of our main site
- c) Yes, an increased percentage of suppliers more than 15 miles from our main site, but still within the North of England
- d) Yes, an increased percentage of suppliers outside of the North, but within the UK
- e) Yes, an increased percentage of international suppliers
- f) Don't know [EXCLUSIVE]

20. In 2 to 3 years' time, do you think the location(s) of the suppliers who deliver directly to you will change, compared to now?

[MULTI-SELECT; PROMPTS FOR CODES B TO E ONLY GIVEN IF RESPONDENT SAYS YES]

- a) No change [EXCLUSIVE]
- b) Yes, an increased percentage of suppliers within 15 miles of our main site
- c) Yes, an increased percentage of suppliers more than 15 miles from our main site, but still within the North of England

- d) Yes, an increased percentage of suppliers outside of the North, but within the UK
- e) Yes, an increased percentage of international suppliers
- f) Don't know [EXCLUSIVE]

Organisation vehicle fleet

[ASK Q21 TO ALL]

21. Approximately, how many of each of the following types of vehicle does your organisation own or lease?

- a) Motorcycles, including cargo bikes <FREE TEXT> [ENTER NUMBER]
- b) Cars <FREE TEXT> [ENTER NUMBER]
- c) Buses/Coaches <FREE TEXT> [ENTER NUMBER]
- d) Taxis/Private Hire Vehicles <FREE TEXT> [ENTER NUMBER]
- e) Vans <FREE TEXT> [ENTER NUMBER]
- f) HGVs <FREE TEXT> [ENTER NUMBER]

[IF ALL OPTIONS AT Q21=0, SKIP TO Q26/33/39 AS APPROPRIATE]

[FOR Q22, SHOW TYPES OF VEHICLE WHERE Q21 VALUE IS GREATER OR EQUAL TO 1]

22. Approximately, what percentage of these owned or leased vehicles are electric or hybrid?

- a) Motorcycles, including cargo bikes <FREE TEXT> %
- b) Cars <FREE TEXT> %
- c) Buses/Coaches <FREE TEXT> %
- d) Taxis/Private Hire Vehicles <FREE TEXT> %
- e) Vans <FREE TEXT> %
- f) HGVs <FREE TEXT> %

[ASK Q23 UNLESS EACH VEHICLE PRESENTED AT Q22 = 100%]

23. Are there any barriers to your organisation changing more of your vehicle/fleet to electric or hybrid vehicles?

[NO NEED TO READ OUT OPTIONS; MULTI-SELECT]

- a) The range (mileage) for which vehicles can run
- b) The speed at which vehicles can be charged
- c) Inadequate vehicle charging infrastructure
- d) Limited local grid capacity (power/energy supply) at our workplace
- e) Other (please specify)

[ASK Q24 UNLESS ALL VEHICLES PRESENTED AT Q22 = 100%]

24. Are there any factors that would encourage your organisation to change your vehicle/fleet to electric or hybrid vehicles?

[NO NEED TO READ OUT OPTIONS; MULTI-SELECT]

- a) Priority parking for electric/hybrid vehicles
- b) Permitting electric/hybrid vehicles to use bus lanes
- c) Cheaper operating costs for electric/hybrid vehicles
- d) Improved charging infrastructure for electric/hybrid vehicles
- e) Increased financial incentives (e.g. Tax and VED incentives, favourable credit options for businesses buying EVs on credit).
- f) Procurement incentives (i.e. public sector procurement awarding additional points to organisation with green fleets)

- g) Mandated disclosure of vehicle emissions by fleet operators
- h) Other (please specify)
- i) None of the above

[ASK Q25 ONLY IF Q12C GREATER THAN OR EQUAL TO 20%]

- 25. How often does your organisation deliver or transport goods or services to other organisations or customers from any of your sites in the North of England using your own company vehicles (rather than external couriers/transport companies)?**

[NO NEED TO READ OUT OPTIONS]

- a) Daily
- b) At least once a week, but less than daily
- c) At least once a month, but less than weekly
- d) Less than once a month
- e) Never

[ASK SECTION 4.4 ONLY IF Q6A GREATER THAN OR EQUAL TO 30%]

Deliveries

[ASK Q26 ONLY IF Q12B GREATER THAN OR EQUAL TO 20%]

- 26. How often does your organisation deliver or transport goods or services to other organisations or customers from any of your sites in the North of England using external couriers or transport companies?**

[NO NEED TO READ OUT OPTIONS]

- a) Daily
- b) At least once a week, but less than daily
- c) At least once a month, but less than weekly
- d) Less than once a month
- e) Never

- 27. Which of the following options best describes the change in the number of deliveries you have despatched during the Covid-19 pandemic (April 2020 to present) compared to before the Covid-19 pandemic (before March 2020)?**

- a) Significantly increased
- b) Slightly increased
- c) Stayed the same
- d) Slightly decreased
- e) Significantly decreased

- 28. Which of the following options best describes the change in the number of deliveries you anticipate despatching in 2 to 3 years' time, compared to during the Covid-19 pandemic (April 2020 to present)?**

- a) Significantly increase
- b) Slightly increase
- c) Stay the same
- d) Slightly decrease
- e) Significantly decrease

[ASK Q29 IF Q25 = CODES 1 TO 4]

- 29. Currently, what percentage of the customers to whom you deliver or transport goods or services using company vehicles are based...**

[LOGIC CHECK, VALUES TO ADD TO 100%]

[INTERVIEWER TO READ ALL OPTIONS BEFORE RESPONDENT PROVIDES ANSWER]

- Within 15 miles of your organisation's main site <FREE TEXT> %
- More than 15 miles from your organisation's main site, but within the North of England <FREE TEXT> %
- Outside of the North of England, but within the UK <FREE TEXT> %
- Internationally <FREE TEXT> %
- Don't know [EXCLUSIVE]

[ASK Q30 IF Q26 = CODES 1 TO 4]

30. Currently, what percentage of the customers to whom you deliver or transport goods or services using external couriers or transport companies are based...

[LOGIC CHECK, VALUES TO ADD TO 100%]

[INTERVIEWER TO READ ALL OPTIONS BEFORE RESPONDENT PROVIDES ANSWER]

- Within 15 miles of your organisation's main site <FREE TEXT> %
- More than 15 miles from your organisation's main site, but within the North of England <FREE TEXT> %
- Outside of the North of England, but within the UK <FREE TEXT> %
- Internationally <FREE TEXT> %
- Don't know [EXCLUSIVE]

31. Has the location of the customers to whom you deliver to currently changed compared to before the Covid-19 pandemic (before March 2020)?

[MULTI-SELECT; PROMPTS FOR CODES B TO E ONLY GIVEN IF RESPONDENT SAYS YES]

- a) No change [EXCLUSIVE]
- b) Yes, an increased percentage of customers within 15 miles of our main site
- c) Yes, an increased percentage of customers more than 15 miles from our main site, but still within the North of England
- d) Yes, an increased percentage of customers outside of the North, but within the UK
- e) Yes, an increased percentage of international customers
- f) Don't know [EXCLUSIVE]

32. In 2 to 3 years' time, do you think the location(s) of the customers to whom you deliver or transport goods or services to will change, compared to now?

[MULTI-SELECT; PROMPTS FOR CODES B TO E ONLY GIVEN IF RESPONDENT SAYS YES]

- a) No change [EXCLUSIVE]
- b) Yes, an increased percentage of customers within 15 miles of our main site
- c) Yes, an increased percentage of customers more than 15 miles from our main site, but still within the North of England
- d) Yes, an increased percentage of customers outside of the North, but within the UK
- e) Yes, an increased percentage of international customers
- f) Don't know [EXCLUSIVE]

[ASK SECTION 4.5 IF Q6B GREATER THAN OR EQUAL TO 30%]

Other business travel

The next few questions are about other business journeys i.e. journeys for meetings with customers or suppliers etc, and do not include journeys to transport physical goods or materials.

33. Which of the following options best describes the change in the number of other business journeys which anticipate making in 2 to 3 years' time, compared to before the Covid-19 pandemic (before March 2020)?

- a) Significantly increase
- b) Slightly increase
- c) Stay the same
- d) Slightly decrease
- e) Significantly decrease

34. In 2-3 years' time, how often do you think employees in your organisation will travel each of the following distances for other business-related purposes?

[SELECT FREQUENCY FOR EACH DISTANCE; NO NEED TO READ OUT COLUMN OPTIONS]

(Q34) BUSINESS TRAVEL DISTANCE	DAILY	3-4 TIMES A WEEK	1-2 TIMES A WEEK	1-2 TIMES A MONTH	LESS THAN ONCE A MONTH	NEVER
Less than 15 miles from the address they start from	[]	[]	[]	[]	[]	[]
15-49 miles from the address they start from	[]	[]	[]	[]	[]	[]
More than 50 miles from the address they start from, but within the North of England	[]	[]	[]	[]	[]	[]
Within the UK but outside the North of England	[]	[]	[]	[]	[]	[]

[ASK Q35 IF CODES 1-5 SELECTED AT Q34 – I.E. IF ANY BUSINESS TRAVEL MADE]

35. In 2-3 years' time, which modes of transport do you think employees in your organisation will use to travel each of the following distances for other business-related purposes?

[SELECT ONE MODE FOR EACH DISTANCE; NO NEED TO READ OUT COLUMN OPTIONS]

(Q35) BUSINESS TRAVEL MODE	PRIVATE OR COMPANY CAR OR VAN	PUBLIC TRANSPORT (BUS, RAIL, TRAM)	ACTIVE TRAVEL (CYCLING, WALKING, SCOOTING)	OTHER (PLEASE SPECIFY)	NA
Less than 15 miles from the address they start from	[]	[]	[]	[]	[]
15-49 miles from the address they start from	[]	[]	[]	[]	[]

(Q35) BUSINESS TRAVEL MODE	PRIVATE OR COMPANY CAR OR VAN	PUBLIC TRANSPORT (BUS, RAIL, TRAM)	ACTIVE TRAVEL (CYCLING, WALKING, SCOOTING)	OTHER (PLEASE SPECIFY)	NA
More than 50 miles from the address they start from, but within the North of England	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Within the UK but outside the North of England	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

36. In 2-3 years' time, for other business-related purposes, do you anticipate that your organisation will need to travel:

(Q36) FUTURE BUSINESS TRAVEL	YES	NO	DON'T KNOW
a) More frequently, compared to now?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Across greater distances, compared to now?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[IF Q36A AND Q36B = DON'T KNOW, SKIP TO SECTION 5]

[IF Q36A AND Q36B = NO, ASK Q37]

37. Why do you not anticipate that your organisation will need to travel more frequently, or across greater distances, for other business related purposes in 2-3 years' time, compared to now?

- <OPEN RESPONSE>
- Don't know

[IF Q36A OR Q36B = YES, ASK Q38]

38. A) Thinking about your other business related travel by public and private transport in 2-3 years' time, do you anticipate any difficulties in travelling beyond your local area?

- Yes [\[ASK Q38B\]](#)
- No [\[SKIP TO SECTION 5\]](#)
- Don't know [\[SKIP TO SECTION 5\]](#)

B) What are these difficulties that you anticipate facing?

[\[DO NOT READ OUT; MULTI-SELECT\]](#)

- a) We will find it difficult to cover the cost of owning/travelling using company vehicles
- b) We will find it difficult to cover the costs of using public transport
- c) Not all relevant staff can drive/will have access to cars
- d) Travelling by car will be unreliable/will experience delays
- e) Public transport will be unreliable/will experience delays
- f) Public transport will be too crowded/uncomfortable
- g) Stations/bus stops will be too far from our journey start/end points
- h) It will take too long to travel to the places we want to go by car
- i) It will take too long to travel to the places we want to go by public transport

- j) Public transport will not run frequently enough
- k) There will be no connections between public transport services
- l) We will want to minimise our exposure to viruses/bacteria
- m) Other, please specify <FREE TEXT>
- n) Don't know [SINGLE CODE]
- o) Would rather not say [SINGLE CODE]

IMPROVEMENTS TO TRANSPORT IN THE NORTH

Road improvements

- 39.** On a scale of 1 to 5, where 1 is 'not at all' and 5 is 'very much so', to what extent is road journey time reliability outside your local area currently an issue for your business-related road journeys?

(Q39) ROAD RELIABILITY	1	2	3	4	5	N/A
Commuting journeys	[]	[]	[]	[]	[]	[]
[ASK ONLY IF Q6A GREATER THAN OR EQUAL TO 30%]						
Journeys that include the physical movement of materials from one place to another	[]	[]	[]	[]	[]	[]
[ASK ONLY IF Q6B GREATER THAN OR EQUAL TO 30%]						
Other business journeys which do not include the transport of physical materials	[]	[]	[]	[]	[]	[]

Transport for the North is planning investments that will improve trip times and reliability on the major roads in the North.

- 40.** If the reliability of road journey times was improved, would you expect an increase, decrease, or no change to the number of trips you or others in your organisation typically make beyond your local area, for each of the following travel purposes?

[DROP DOWN MENUS FOR EACH CELL – 'FEWER TRIPS', 'SAME NUMBER OF TRIPS', 'MORE TRIPS', 'DON'T KNOW', 'NOT APPLICABLE']

- Travelling on business by road?
- Deliveries of goods/services using company transport?
- Deliveries using couriers/transport companies?

- 41.** If the reliability of road journey times was improved, would you expect yourself or others in your organisation to sometimes go to new places or just the same places you do currently when?

[DROP DOWN MENUS FOR EACH CELL – 'NEW PLACES', 'SAME PLACES ONLY', 'DON'T KNOW', 'NOT APPLICABLE']

- Travelling on business by road?
- Delivering goods/services using company transport?
- Delivering goods/services using couriers/transport companies?

Rail improvements

Transport for the North is also planning investments that will increase the capacity, frequency, speed, and quality of the rail network, linking the North's largest cities with each other and with the rest of the North.

42. Considering these potential rail improvements, would you expect an increase, decrease, or no change to the number of trips you or others in your organisation typically make beyond your local area, for employees travelling on business by rail?

- Fewer trips
- Same number of trips
- More trips
- Don't know/Not applicable

43. Given the rail improvements just described, would you expect yourself or others in your organisation to sometimes go to new places when travelling on business by rail, or just to the same places you do currently?

- New places
- Same places only
- Don't know/Not applicable

Longer-term impacts

44. On a scale of 1 to 5, where 1 is very unlikely, and 5 is very likely, to what extent would you expect the following benefits to your organisation to emerge as a result of improvements to the rail and road networks in the North of England?

[RESPONDENTS TO PROVIDE 1 ANSWER PER ROW]

(Q44) LONGER TERM BENEFITS	1	2	3	4	5	DON'T KNOW	NA
Improved productivity due to faster travel times	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reduced business costs through more predictable journey times	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improved access to skilled workers from further afield	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improved access to suppliers from further afield	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
New business opportunities in other regions of the UK	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please specify) <FREE TEXT>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

45. A) What factors are important to you when thinking about where to locate your business in the medium or long-term?

[DO NOT READ OUT; MULTI-SELECT]

- a) Access to suitably skilled workers
- b) Access to relevant suppliers
- c) Access to a broad customer base
- d) Access to other businesses in your own industry
- e) Access to the amenities of a city or large town
- f) Access to reliable public transport
- g) Access to faster public transport
- h) Access to more locations through using public transport
- i) Access to more comfortable public transport
- j) Access to a faster road network
- k) Access to better road connections
- l) Other, please specify [<FREE TEXT>](#)
- m) Don't know [\[SINGLE CODE\]](#)

CLOSE OF SURVEY

In July this year, SYSTRA will be undertaking a series of online focus groups to discuss some of the themes emerging from these survey findings in more detail. We would provide a shopping voucher to the value of £70 as a thank you for your participation.

46. Would you be interested in attending one of these online focus groups?

In order to do so, we would need to share your first name, email address, telephone number and industry sector with SYSTRA. This information is purely for the purposes of inviting you to the research, and ensuring a good mix of organisations attend the focus groups. Your information will not be shared with any other third parties.

- [<FIRST NAME>](#)
- [<EMAIL ADDRESS>](#)
- [<TELEPHONE NUMBER>](#)
- [<INDUSTRY SECTOR>](#)
- I am not interested in participating in any further research [\[SINGLE SELECT\]](#)

47. Finally, would you be willing to be contacted again if we need to clarify any of the answers you provided us with today?

- Yes
- No

Appendix G – Discussion Guides and Showcards used for Qualitative Research (Focus groups & Interviews)

SECTORS A-I (EXCLUDING H)

WELCOME & INTRODUCTIONS [5 MINS]

Explanation of research purpose

Lead moderator to introduce themselves and SYSTRA – an independent consultancy specialising in research within the transport sector.

Showcard 1

Thank you for coming - You're all here today as you took part in a telephone interview for TfN with our partners Teamsearch. Today, we'd like to go beyond the findings of the survey which you participated in, and understand in more detail about your current and anticipated future business-related travel in the North of England.

We are really interested to hear you views on:

- Shifts in home-working trends;
- The potential for modal shift in business travel, i.e. shifts to using different types of transport to those used currently;
- Attitudes towards decarbonisation;
- Attitudes and perceptions of TfN's proposed transport interventions.

The feedback you provide will provide evidence to inform and actively support the development of TfN's Transport Interventions, Decarbonisation Strategy and Freight Strategy.

Explanation of session

Showcard 2

The session today will last for a total of 75 minutes.

We will begin with a short introduction from Transport for the North, before starting our discussions.

The session today will be recorded. The recording will only be listened to by the SYSTRA project team to assist interview write ups, and will be deleted at the end of the project. Everything you say will be reported anonymously.

Just to emphasise:

- There are no right or wrong answers;
- You may leave at any point if you no longer wish to take part; and
- You are not obliged to answer any question you don't want to.

Your feedback will be included in a report to Transport for the North, where SYSTRA will outline the points raised during this session, as well as the other sessions we are running.

INTRODUCTION [5 MINS]

Content of Presentation

Slides 5 and 6 presented to participants.

DETAILED DISCUSSIONS [60 MINS]

Introductions [5 mins]

Before we dive into the discussion topics, I'd just like to go around the group so everyone can give themselves a quick introduction. Please can you all share your:

- Name
- The region(s) in which your business operates
- Type of industry sector you work in
- Details of types of goods which your business transports and receives, if any
- Details of your vehicle fleet (if your company has one) – e.g. number and type of vehicles owned/leased

I must point out that there is quite a lot for us to get through today. There may be a few points where I'll need to move the conversation along. I hope this won't feel as though as I'm cutting you off, I just want to make sure that we get a chance to cover all of the topics.

Current perceptions of the transport network in the North [5 mins]

Showcard 3

To start with, I'd just like to get an idea of how you currently perceive the transport network as a whole within the North of England. This includes the road network, as well as rail and tram networks too.

What are your current perceptions of the transport network in the North?

- Would you say that the network overall is 'reliable', or not?
- Does this vary for different types of transport?
- Does this vary for different times of day?
- Does it vary by anything else?

Delivery methods [5 mins]

Showcard 4

What types of goods are you transporting?

- How often are you transporting these goods?
- Are you transporting these goods using own means, or buying in relevant services?
- What modes/types of vehicles do you use to transport goods? Road, rail, water or any other modes?
- What about deliveries received?

What are your views on the use of cargo bikes in urban areas?

What are your views on portering in urban areas?

**Portering is where freight vehicles hand over multiple consignments (pre-sorted) to delivery staff at designated drop-off points, either close to the urban centre or a low traffic residential neighbourhood. Deliveries are then completed on-foot using a variety of equipment such as carry-bags, sack-trucks or battery-electric powered trollies).*

- Can they play a significant role in reducing environmental impact of urban deliveries?
- Would you consider using such services?

Do you currently deliver into Low Traffic Neighbourhoods (LTNs)?

- If so, where?
- What delivery methods have you adopted to overcome restrictions?
- What are the key problems or issues with LTNs?
- If managed properly, can they balance needs of local residents for low vehicle traffic and support efficient freight deliveries?

Promoting modal shift [10 mins]

Showcard 5

Thinking longer term, do you think there will be changes to the way people work (remotely or at office/on site)?

- Will your staff be returning to your office(s) or site(s) on a full-time basis, part-time basis, or work entirely from home in the future?

How do your employees typically travel to meetings (private cars, public transport?)

- Do you anticipate the modes of transport that your employees use for business meetings to be the same in 2-3 years' time, or different?
 - If so, what will these differences be? Why?
 - Will this be related to distance? Type of meeting? Anything else?

What could be done to reduce dependence on private car for travel to business meetings?

- Are there any initiatives / incentives which could be provided?
 - Financial?
 - Car sharing?
 - WPL?
 - New technologies?
- Would you be likely or unlikely to embrace these initiatives?
- Are there any examples of schemes that businesses have which you think work well, or not so well?

Does your business own any vehicles which employees can use to travel to meetings?

- For business travel where employees are dependent on private car as their mode of transport, is there scope for electric/hybrid vehicles to be used?

- If yes, are your employees/organisation planning to use electric/hybrid vehicles?
- If not, why not?
- Do any barriers exist to your employees/organisation using electric/hybrid vehicles?
- If yes, what can be done to overcome these barriers?

Decarbonisation [5 mins]

Showcard 6

For those of you whose businesses have a commercial vehicle fleet, roughly what percentage of your fleet is HGVs, MGVs or LGVs?

a) LGVs

Thinking about your LGVs, what is your current percentage split between diesel / petrol and BEVs?

- Are BEVs the expected decarbonisation solution for LGVs? If no, what other solutions are expected to emerge?

What do you think are the barriers that could prevent greater take-up of BEV LGVs over next 5-10 years?

b) MGVs / HGVs

Thinking about your MGVs and HGVs, what do you think is the expected fuel solution for decarbonisation going forward?

- Hydrogen fuel cells?
- BEVs?
- Overhead wires/BEV combination?
- Something else?

Do you think multiple solutions will emerge, but deployed on different types of operations (e.g. overhead wires for long distance trucking, fuel cells for delivery to rural areas, BEVs for urban deliveries?)

Do you think hydrogen re-filling will be undertaken at depots/roadside filling points (like diesel today)?

Influence of TfN's Interventions [30 mins]

Showcard 7A (7.5 mins)

For the next 30 minutes or so, we're going to be considering a couple of broad interventions that TfN are planning, which aim to improve the experience of business-related travel in the North and support increased business efficiency and business growth through improved journey times and improved accessibility to workers, customers and suppliers.

The first of these is investments that will improve journey times and reliability on the major roads in the North.

To what extent would journey time reductions and improved reliability of road journeys be of benefit to your business?

- What would the key benefits be? [USE PROMPTS IF NECESSARY AND GET AS MUCH DETAIL IN THIS PART OF THE DISCUSSION AS POSSIBLE]
 - Increased efficiency of journeys?
 - Decreased journey times?
 - Travel to new places / new business opportunities?
 - Access to a wider pool of workers/customers/suppliers?
 - Increased frequency of travel?
 - Impact on transport of goods?
 - What type of goods does your business receive?
 - What types of goods does your business deliver?
 - How important is the transport of goods to the overall operation of your business?
 - Does your business rely on receiving or delivering any physical goods in a timely manner? (e.g. 'Just in time' deliveries)
- Which of these benefits we have discussed are most important to you? [FACILITATOR POPULATE SLIDE]
 - What difference will it make to your business?
 - Will any of these benefits translate into greater:
 - Efficiency?
 - Profitability?
 - Growth?
 - Are there any specific examples you can provide of how your business efficiency / profitability / growth would be benefitted?
- Which of these benefits we have discussed do you feel is most likely? Why?
- Which of these benefits we have discussed do you feel is least likely? Why?
- If no benefits are expected, why not?

Showcard 7B (7.5 mins)

Transport for the North is also planning investments that will increase the capacity, frequency, speed, and quality of the rail network, linking the North's largest cities with each other and with the rest of the North. This would involve the creation of new rail lines, and the reduction of travel time and increase in the number of services on the existing lines.

To what extent would these proposed rail improvements be of benefit to your business?

- What would the key benefits be? [USE PROMPTS IF NECESSARY AND GET AS MUCH DETAIL IN THIS PART OF THE DISCUSSION AS POSSIBLE]
 - Increased efficiency of journeys?
 - Decreased journey times?
 - Travel to new places / new business opportunities?

- Increased frequency of travel?
- Which of these benefits we have discussed are most important to you?
[FACILITATOR POPULATE SLIDE]
 - What difference will it make to your business?
 - Will any of these benefits translate into greater:
 - Efficiency?
 - Profitability?
 - Growth?
 - Are there any specific examples you can provide of how your business efficiency / profitability / growth would be benefitted?
- Which of these benefits we have discussed do you feel is most likely? Why?
- Which of these benefits we have discussed do you feel is least likely? Why?
- If no benefits are expected, why not?

Showcard 7C (10 mins)

I'd like to you imagine for a moment that you work for Transport for the North, and it is your responsibility to identify key transport projects that should be taken forward in the short, medium, and long term, that will be of benefit to Northern businesses.

Please feel free to consider both large-scale infrastructure projects, as well as more local transport improvements too.

Are there any projects that you see as a priority?

[FACILITATOR POPULATE SLIDE]

- Why are these a priority?
- How would these projects benefit your business?
- How would these projects benefit other businesses?
- Of these projects we have discussed, which is most important?
- Of these projects we have discussed, which least important?

Are there any projects that should be reconsidered, or fast-tracked, in light of the coronavirus pandemic?

- Why should these projects be reconsidered, or fast-tracked?

Showcard 7D (5 mins)

Moderator to show and summarise the results from the quantitative survey on screen so participants can see the factors when considering business location from the full N=1,000 sample.

Our survey suggested that the following factors are important for businesses in deciding where they locate to.

- Are the results from our quant survey in line with what you'd expect, or do they surprise you at all?
- Is this order of importance from our overall sample the same for your business, or different?

- What factors are more or less important to you personally, and why?
- Are there any factors which you feel are missing from this list?

PLENARY & REFLECTIONS [5 MINS]

Showcard 8

Thank you all for your contributions so far. This is now the final part of the session, where we will now reflect on our thoughts overall.

Moderator to work with the group to summarise approx. 5 key takeaway points from the session as a whole. Facilitator will type out the key points onto Showcard 7 as they are discussed by the group.

Is there anything which we haven't discussed today that you thought we might have covered as part of this session?

Are there any further thoughts which anyone would like to add regarding their current, or anticipated future business-related travel?

WRAP-UP [1 MIN]

Showcard 9

Thank you all for sparing the time to take part in today's session, we very much appreciate your contributions.

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If you have any further questions about the research – please email me/my colleague at the address on the slide

TfN User Insight Phase 3

Online Focus Groups

July 2021



Overview of Session

Aims of the session:

- To understand more about your current and anticipated future business travel in the North of England, building upon the findings of our quantitative survey which you participated in.

We are really interested to hear your views on:

- Shifts in home-working trends;
- The potential for modal shift and decarbonisation of business travel; and
- Attitudes and perceptions of TfN's proposed transport interventions.

How your feedback will be used:

- To inform and actively support the development of TfN's Transport Interventions, Decarbonisation Strategy and Freight Strategy.

Session format

Session plan:

- The session will last for 75 minutes.
- Following a short presentation by Transport for the North, we'll then move on to the main discussions.
- The session today will be audio recorded. Everything you say will be reported anonymously.
 - There are no right or wrong answers;
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- Please avoid the temptation to talk over each other, we want to hear everyone's views.
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1

Welcome from
TfN



Previous User Insight Research

- Phase 1 – Secondary analysis of NTS data and literature review.
 - Study trends in trip patterns by residents.
 - Understand behaviours and motivations of specific groups, to inform and target transport interventions and policy more effectively.
 - Further research required to obtain information on motivations to change travel behaviour.
- Phase 2 – Primary data: A questionnaire completed by 3,017 residents and 151 businesses.
 - A sizeable proportion of residents reported being constrained in their travel behaviour.
 - Transport improvements found to influence where people travel, choice of residence location, and decisions on whether or not to own a car.
 - However, **limited conclusions were reported in relation to businesses**, and no insights were provided on how TfN's interventions would improve business efficiency, access to skilled-staff, and increased production.

Phase 3 User Insight Research (Current Commission)

- **Overview of approach:**
 - Literature review and secondary data analysis – NTS data, NOHAM, NoRMS, GBFM, ONS, Census, DfT statistical datasets – to provide context of current picture and trends in business related-travel in the North of England.
 - A telephone survey with 1,000 businesses in the North of England was conducted.
 - 5 online focus groups with business representatives.
- **Aim:**
 - Build on Phase 2: a **larger sample** size for quant survey, analysing by different business types and characteristics.
- **Specific research objectives** for Phase 3 are as follows:
 - Determine the **transport-related needs**, behaviours, policies and attitudes of businesses.
 - Establish the extent to which different businesses might benefit from TfN's **transport interventions**.
 - Develop a **typology** of businesses' transport-related behaviours and attitudes that reflect businesses' ability to benefit from the interventions.
 - Explore current and potential future impacts of **Covid-19** on businesses' transport behaviours and attitudes.
- The evidence will be used inform the development of TfN's business cases and support the development and implementation of TfN's Decarbonisation and Freight Strategies, and TfN's Analytical Framework.

A busy train platform with people walking. Overhead signs indicate platforms 4a and 4b, 5a, 5b, and 5c. A large white circle with a red border is overlaid on the left side of the image.

2

Main discussions

Introductions

- Name
- The region(s) in which your business operates
- Type of industry sector you work in
- Details of types of goods which your business transports and receives, if any
- Your vehicle fleet (if your company has one) – e.g. number/type of vehicles owned/leased

Current perceptions of the transport network

- What are your current perceptions of the transport network in the North of England?
- Would you say that the network overall is 'reliable', or not?
 - Does this vary for different types of modes of transport?
 - Does this vary for different times of day?

Delivery methods

- What types of goods are you transporting?
- What are your views on the use of cargo bikes in urban areas?
- What are your views on the use portering* in urban areas?

**Portering is where freight vehicles hand over multiple consignments (pre-sorted) to delivery staff at designated drop-off points, either close to the urban centre or a low traffic residential neighbourhood. Deliveries are then completed on-foot using a variety of equipment such as carry-bags, sack-trucks or battery-electric powered trollies.*

- Do you currently deliver into Low Traffic Neighbourhoods (LTNs)?
 - What delivery methods have you adopted to overcome restrictions?

Potential for Modal shift?

- Thinking longer term, do you think there will be changes to the way people work?
 - Remotely, or at an office / on site?
- How do your employees typically travel to meetings?
- Do you anticipate the modes of transport that your employees use for business meetings to be the same in 2-3 years' time, or different?
- What could be to reduce dependence on private car for travel to business meetings? Is there potential to use more sustainable modes?
- Is there scope for electric/hybrid vehicles to be used?

Freight vehicle fleet composition

- Roughly what percentage of your fleet is HGVs, MGVs or LGVs?

LGVs:

- Current % split between diesel/petrol and BEVs?
- Are BEVs the solution to decarbonisation?
- Expected barriers that could prevent greater take-up of BEV LGVs over next 5-10 years?

MGVs/HGVs:

- Expected fuel solution for decarbonisation?
 - Will multiple solutions emerge, deployed on different types of operations?
- Will there be a requirement for fast charging point infrastructure for BEVs away from depots?
- Will hydrogen re-filling be undertaken at depots/roadside filling points (like diesel today)?

Impact of transport interventions from TfN (I)

Transport for the North is planning investments that will improve journey times and reliability on the major roads in the North.

- To what extent would journey time reductions and improved reliability of road journeys be of benefit to your business?
- What would the key benefits be? How likely is it that these benefits will occur?
- Would these interventions make a difference to your business efficiency, profitability or growth?



Most important benefit?

Least important benefit?

Impact of transport interventions from TfN (II)

Transport for the North is also planning investments that will increase the capacity, frequency, speed, and quality of the rail network, linking the North's largest cities with each other and with the rest of the North.

This would involve the creation of new rail lines, and the reduction of travel time and increase in the number of services on the existing lines.

- To what extent would these proposed rail improvements be of benefit to your business?
- What would the key benefits be? How likely is it that these benefits will occur?
- Would these interventions make a difference to your business efficiency, profitability or growth?



Most important benefit?

Least important benefit?

Your opinions – Key projects to prioritise

Project	Anticipated benefits to your / other businesses

Factors influencing business location

- Are the results from our quant survey in line with what you'd expect, or do they surprise you at all?
- Is this order of importance from our overall sample the same for you personally, or different?
- Are there any factors which you feel are missing from this list?

Important factors when considering business location	%
Access to better road connections	22%
Access to a faster road network	19%
Access to a broad customer base	15%
Access to reliable public transport	13%
Access to faster public transport	9%
Access to the amenities of a city or large town	8%
Access to relevant suppliers	7%
Access to more locations through public transport	6%
Access to other businesses in your own industry	5%
Access to more comfortable public transport	4%
Other (please specify)	27%
Don't know	25%
Base	965

Plenary / Reflections

Key points raised	
1	
2	
3	
4	
5	

- Is there anything which we haven't discussed today that you thought we might have covered as part of this session?
- Does anyone have anything further to add before we finish?

Close of session

- Thank you for coming!
- SYSTRA will report your feedback anonymously to TfN, who will use these findings to support the development of their Transport Interventions, Decarbonisation Strategy and Freight Strategy.
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- If you have any further questions about the research – please email bgoodsell@systra.com.



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CONFIDENCE MOVES THE WORLD

SECTORS J-S

WELCOME & INTRODUCTIONS [5 MINS]

Explanation of research purpose

Lead moderator to introduce themselves and SYSTRA – an independent consultancy specialising in research within the transport sector.

Showcard 1

Thank you for coming - You're all here today as you took part in a telephone interview for TfN with our partners Teamsearch. Today, we'd like to go beyond the findings of the survey which you participated in, and understand in more detail about your current and anticipated future business-related travel in the North of England.

We are really interested to hear you views on:

- Shifts in home-working trends;
- The potential for modal shift in business travel, i.e. shifts to using different types of transport to those used currently;
- Attitudes towards decarbonisation;
- Attitudes and perceptions of TfN's proposed transport interventions.

The feedback you provide will provide evidence to inform and actively support the development of TfN's Transport Interventions, Decarbonisation Strategy and Freight Strategy.

Explanation of session

Showcard 2

The session today will last for a total of 75 minutes.

We will begin with a short introduction from Transport for the North, before starting our discussions.

The session today will be recorded. The recording will only be listened to by the SYSTRA project team to assist interview write ups, and will be deleted at the end of the project. Everything you say will be reported anonymously.

Just to emphasise:

- There are no right or wrong answers;
- You may leave at any point if you no longer wish to take part; and
- You are not obliged to answer any question you don't want to.

Your feedback will be included in a report to Transport for the North, where SYSTRA will outline the points raised during this session, as well as the other sessions we are running.

INTRODUCTION [5 MINS]

Content of Presentation

Slides 5 and 6 presented to participants.

DETAILED DISCUSSIONS [60 MINS]

Introductions [5 mins]

Before we dive into the discussion topics, I'd just like to go around the group so everyone can give themselves a quick introduction. Please can you all share your:

- Name
- The region(s) in which your business operates
- Type of industry sector you work in
- Number of employees in your business

I must point out that there is quite a lot for us to get through today. There may be a few points where I'll need to move the conversation along. I hope this won't feel as though as I'm cutting you off, I just want to make sure that we get a chance to cover all of the topics.

Current perceptions of the transport network in the North [5 mins]

Showcard 3

To start with, I'd just like to get an idea of how you currently perceive the transport network as a whole within the North of England. This includes the road network, as well as rail and tram networks too.

What are your current perceptions of the transport network in the North?

- Would you say that the network overall is 'reliable', or not?
- Does this vary for different types of transport?
- Does this vary for different times of day?
- Does it vary by anything else?

Remote working and meetings [10 mins]

Showcard 4

For the next 10 minutes or so, we're going to be discussing recent trends in remote working patterns.

What percentage of employees in your organisation can undertake at least part of their role from home?

- Has this changed during the Covid-19 pandemic, compared to pre-pandemic?
 - What has changed/how has it changed?
 - Attitudes of staff?
 - Attitudes of the business?
 - Technological improvements?

Thinking longer term, do you think there will be changes to the way people work (remotely or at office/on site)?

- Will your staff be returning to your office(s) or site(s) on a full-time basis, part-time basis, or work entirely from home in the future?

Moderator to show the results from the quantitative survey on screen so participants can see the anticipated trends in future home working from the full N=1,000 sample.

Given what we have just discussed, are the results from our quant survey in line with what you'd expect, or do they surprise you at all?

What about business meetings? [MODERATOR TO EXPLORE AS FULLY AS POSSIBLE]

- How likely are you to meet face-to-face with clients/customers/suppliers in the future, compared to undertaking remote meetings (e.g. Teams, Skype).
- Thinking of 2-3 years' time, will you travel for business meetings more, or less than you do currently?
 - If travelling more/less often than now:
 - Why?
 - Will the change from now be for specific journey types, distances, or meeting types, compared to those which won't change?
 - Are there any instances where face-to-face meetings are still important / can't be moved online (e.g. site visits; shorter journeys)?
 - What is it about these types of meeting that require face-to-face interactions?

Do you face any barriers to conducting online meetings in the future?

- Can these barriers you face to conducting online meetings be overcome?

Promoting modal shift and decarbonisation [10 mins]

Showcard 5

For the next 10 minutes or so, we're going to be considering the modes of transport that employees' typically use for commuting and business journeys.

Moderator to show the results from the quantitative survey on screen so participants can see the anticipated trends in private vehicle usage from the full N=1,000 sample.

In summary – three quarters of survey respondents told us that commuting journeys by their employees were undertaken by private vehicle pre-pandemic. 72% predicted no change in the use of private transport for commuting in 2-3 years compared to now; whilst 15% anticipate an increase, and 9% anticipate a decrease.

Are the results from our survey in line with what you'd expect, or do they surprise you at all?

- How does it compare to your expectations for your own employees (in terms of future modal shift for commuting)?

What could be done by businesses to reduce dependence on private car for commuting purposes?

- Are there any initiatives / incentives which could be provided?

- Financial?
 - Car sharing?
 - WPL?
 - New technologies
- Overall, would you be likely or unlikely to embrace these initiatives?
 - Are there any examples of schemes that businesses have which you think work well, or not so well?

Would you consider incentivising employees to use a Mobility as a Service (MaaS) provider for their commuting journeys? *[PROMPT IF NEEDED: MaaS brings together a network of local transport service providers (e.g. public transport, taxis, car clubs, car leasing) to integrate journey planning, timetabling, ticketing and payment services within a single online platform].*

What could be done by TfN or Local Transport Authorities to reduce dependence on private car for commuting purposes?

- Are there any initiatives / incentives which could be provided?

Our survey also revealed similar results for business journeys (rather than commuting journey) in the future (e.g. travel to meetings with clients, customers, suppliers). (i.e. a trend towards more journeys being made by car in the future)?

- Are different types of initiative required to incentivise the use of active and sustainable modes of transport for other business journeys?
- What are these?

How do your employees typically travel to meetings (private cars, public transport?)

- Do you anticipate the modes of transport that your employees use for business meetings to be the same in 2-3 years' time, or different?
 - If so, what will these differences be? Why?
 - Will this be related to distance? Type of meeting? Anything else?

[If employees predominantly travel to meetings using cars]

- Does your business own any vehicles which employees can use to travel to meetings?
- For business travel where employees are dependent on private car as their mode of transport, is there scope for electric/hybrid vehicles to be used?
 - If yes, are your employees/organisation planning to use electric/hybrid vehicles?
 - If not, why not?
 - Do any barriers exist to your employees/organisation using electric/hybrid vehicles?
 - If yes, what can be done to overcome these barriers?

Influence of TfN's Interventions [30 mins]

Showcard 6A (7.5 mins)

For the next 30 minutes or so, we're going to be considering a couple of broad interventions that TfN are planning, which aim to improve the experience of business-related travel in the North and support increased business efficiency and business growth through improved journey times and improved accessibility to workers, customers and suppliers.

The first of these is investments that will improve journey times and reliability on the major roads in the North.

To what extent would journey time reductions and improved reliability of road journeys be of benefit to your business?

- What would the key benefits be? [USE PROMPTS IF NECESSARY AND GET AS MUCH DETAIL IN THIS PART OF THE DISCUSSION AS POSSIBLE]
 - Increased efficiency of journeys?
 - Decreased journey times?
 - Travel to new places / new business opportunities?
 - Access to a wider pool of workers/customers/suppliers?
 - Increased frequency of travel?
 - Impact on transport of goods?
 - What type of goods does your business receive?
 - What types of goods does your business deliver?
 - How important is the transport of goods to the overall operation of your business?
 - Does your business rely on receiving or delivering any physical goods in a timely manner? (e.g. 'Just in time' deliveries)
- Which of these benefits we have discussed are most important to you? [FACILITATOR POPULATE SLIDE]
 - What difference will it make to your business?
 - Will any of these benefits translate into greater:
 - Efficiency?
 - Profitability?
 - Growth?
 - Are there any specific examples you can provide of how your business efficiency / profitability / growth would be benefitted? (prompt for details)
- Which of these benefits we have discussed do you feel is most likely? Why?
- Which of these benefits we have discussed do you feel is least likely? Why?
- If no benefits are expected, why not?

Showcard 6B (7.5 mins)

Transport for the North is also planning investments that will increase the capacity, frequency, speed, and quality of the rail network, linking the North's largest cities with each other and with the rest of the North. This would involve the creation of new rail lines, and the reduction of travel time and increase in the number of services on the existing lines.

To what extent would these proposed rail improvements be of benefit to your business?

- What would the key benefits be? [USE PROMPTS IF NECESSARY AND GET AS MUCH DETAIL IN THIS PART OF THE DISCUSSION AS POSSIBLE]
 - Increased efficiency of journeys?
 - Decreased journey times?
 - Travel to new places / new business opportunities?
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- Which of these benefits we have discussed are most important to you? [FACILITATOR POPULATE SLIDE]
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Showcard 6C (10 mins)

I'd like you to imagine for a moment that you work for Transport for the North, and it is your responsibility to identify key transport projects that should be taken forward in the short, medium, and long term, that will be of benefit to Northern businesses.

Please feel free to consider both large-scale infrastructure projects, as well as more local transport improvements too.

Are there any projects that you see as a priority?

[FACILITATOR POPULATE SLIDE]

- Why are these a priority?
- How would these projects benefit your business?
- How would these projects benefit other businesses?
- Of these projects we have discussed, which is most important?
- Of these projects we have discussed, which least important?

Are there any projects that should be reconsidered, or fast-tracked, in light of the coronavirus pandemic?

- Why should these projects be reconsidered, or fast-tracked?

Showcard 6D (5 mins)

Moderator to show and summarise the results from the quantitative survey on screen so participants can see the factors when considering business location from the full N=1,000 sample.

Our survey suggested that the following factors are important for businesses in deciding where they locate to.

- Are the results from our quant survey in line with what you'd expect, or do they surprise you at all?
- Is this order of importance from our overall sample the same for your business, or different?
 - What factors are more or less important to you personally, and why?
 - Are there any factors which you feel are missing from this list?

PLENARY & REFLECTIONS [5 MINS]

Showcard 7

Thank you all for your contributions so far. This is now the final part of the session, where we will now reflect on our thoughts overall.

Moderator to work with the group to summarise approx. 5 key takeaway points from the session as a whole. Facilitator will type out the key points onto Showcard 7 as they are discussed by the group.

Is there anything which we haven't discussed today that you thought we might have covered as part of this session?

Are there any further thoughts which anyone would like to add regarding their current, or anticipated future business-related travel?

WRAP-UP [1 MIN]

Showcard 8

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July 2021



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 - Develop a **typology** of businesses' transport-related behaviours and attitudes that reflect businesses' ability to benefit from the interventions.
 - Explore current and potential future impacts of **Covid-19** on businesses' transport behaviours and attitudes.
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2

Main discussions

Introductions

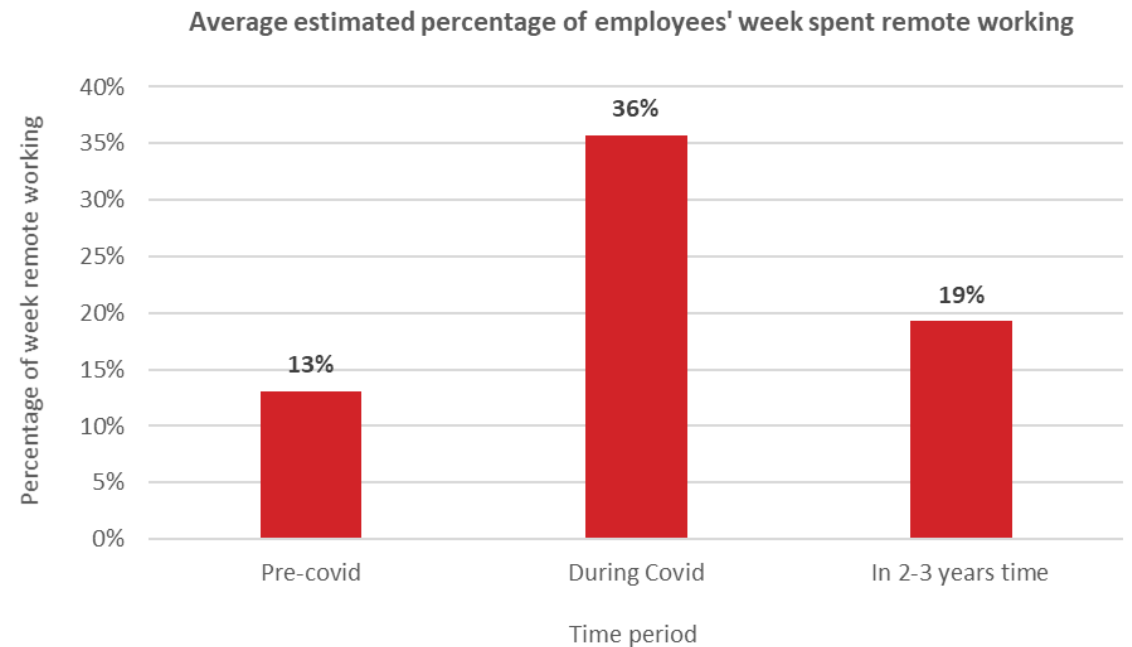
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- The region(s) in which your business operates
- Type of industry sector you work in
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Current perceptions of the transport network

- What are your current perceptions of the transport network in the North of England?
- Would you say that the network overall is 'reliable', or not?
 - Does this vary for different types of modes of transport?
 - Does this vary for different times of day?

Trends in remote working

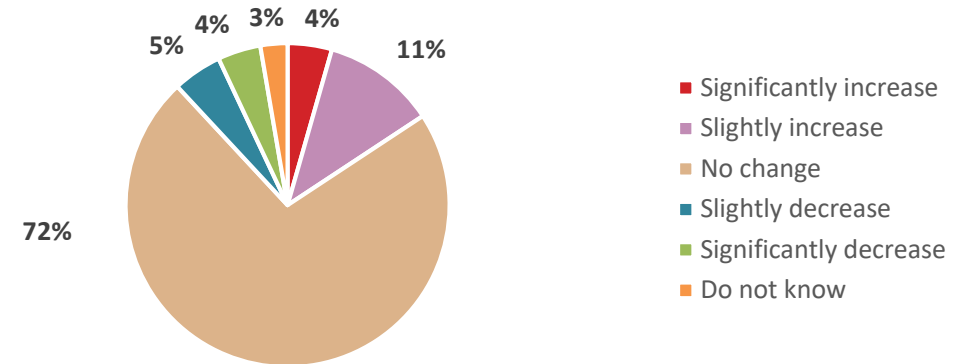
- What percentage of employees in your organisation can undertake at least part of their role from home?
- Thinking longer term, do you think there will be changes to the way people work?
- Are the results from our quant survey in line with what you'd expect, or do they surprise you at all?
- What about business meetings? How likely are you to meet-face-to-face in the future?
- Do you face any barriers to conducting online business meetings in the future?



Potential for Modal shift?

Commuting mode (Pre-Pandemic)	%
Private car/van	74%
Public transport (e.g. bus, rail, tram)	11%
Active travel (e.g. walk, cycle, scoot)	9%
Not commuting	6%
Base	814

Anticipated changes to employees use of private transport in 2-3 years, compared to now



- Are the results from our quant survey in line with what you'd expect, or do they surprise you at all?
- What could be done by businesses to reduce dependence on private car for commuting purposes?
- What could be done by TfN to reduce dependence on private car for commuting purposes?
- What about other business journeys (e.g. travel to meetings)?
- How do your employees typically travel to meetings? Is there potential to use more sustainable modes?

Impact of transport interventions from TfN (I)

Transport for the North is planning investments that will improve journey times and reliability on the major roads in the North.

- To what extent would journey time reductions and improved reliability of road journeys be of benefit to your business?
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Most important benefit?

Least important benefit?

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Most important benefit?

Least important benefit?

Your opinions – Key projects to prioritise

Project	Anticipated benefits to your / other businesses

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Access to the amenities of a city or large town	8%
Access to relevant suppliers	7%
Access to more locations through public transport	6%
Access to other businesses in your own industry	5%
Access to more comfortable public transport	4%
Other (please specify)	27%
Don't know	25%
Base	965

Plenary / Reflections

Key points raised	
1	
2	
3	
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5	

- Is there anything which we haven't discussed today that you thought we might have covered as part of this session?
- Does anyone have anything further to add before we finish?

Close of session

- Thank you for coming!
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CONFIDENCE MOVES THE WORLD

FREIGHT & LOGISTICS

WELCOME & INTRODUCTIONS [5 MINS]

Explanation of research purpose

Lead moderator to introduce themselves and SYSTRA – an independent consultancy specialising in research within the transport sector.

Showcard 1

We are really interested to hear your views on:

- Future prospects for e-commerce retail;
- Delivery methods;
- Urban consolidation centres and delivery franchises;
- Emerging technologies; and
- Decarbonisation.

The feedback you provide will provide evidence to inform and actively support the development of TfN's Transport Interventions, Decarbonisation Strategy and Freight Strategy.

Explanation of session

Showcard 2

The session today will last for a total of 75 minutes.

We will begin with a short introduction from Transport for the North, before starting our discussions.

The session today will be recorded. The recording will only be listened to by the SYSTRA project team to assist interview write ups, and will be deleted at the end of the project. Everything you say will be reported anonymously.

Just to emphasise:

- There are no right or wrong answers;
- You may leave at any point if you no longer wish to take part; and
- You are not obliged to answer any question you don't want to.

Your feedback will be included in a report to Transport for the North, where SYSTRA will outline the points raised during this session, as well as the other sessions we are running.

INTRODUCTION [5 MINS]

Content of Presentation

Slides 5 and 6 to be presented to participants.

DETAILED DISCUSSIONS [60 MINS]

Introductions [5 mins]

Before we dive into the discussion topics, I'd just like to go round the group so everyone can give themselves a quick introduction. Please can you all share your:

- Name
- The region(s) in which your business operates (local, national, international?)
- Details of types of goods which your business transports and receives, if any
 - How often are you transporting these goods?
 - What modes/types of vehicles do you use to transport goods? (E.g. Road, rail, water or any other modes?)
 - What about deliveries received?
- Details of your vehicle fleet (if your company has one) – e.g. number and type of vehicles owned/leased

I must point out that there is quite a lot for us to get through today. There may be a few points where I'll need to move the conversation along. I hope this won't feel as though as I'm cutting you off, I just want to make sure that we get a chance to cover all of the topics.

Urban and Rural Freight and Logistics [20 mins]

Future prospects for e-commerce retail (5 mins)

Showcard 3

To your knowledge, what are the key types of goods currently being sold online (e.g. via e-commerce platforms)?

- What growth rates do you think we can expect over the next 5-10 years?
- What do you think the e-commerce market share will be in 5 and 10 years' time relative to now?
- For which types of goods (commodities) do you think we can expect significant growth?

Will future growth, in terms of volumes and types of goods (commodities) sold will have an impact on the type/size of delivery vehicles used?

- More MGVs rather than LGVs?

How might post-Covid-19 working patterns might impact on e-commerce growth rates? How?

Will 'on demand' e-commerce will reach significantly beyond take-away deliveries in the coming years?

- In which areas might we may see growth (e.g. same day grocery deliveries)?

Delivery methods (5 mins)

Showcard 4

What are your views on the use of cargo bikes in urban areas?

What are your views on portering in urban areas?

**Portering is where freight vehicles hand over multiple consignments (pre-sorted) to delivery staff at designated drop-off points, either close to the urban centre or a low traffic residential neighbourhood. Deliveries are then completed on-foot using a variety of equipment such as carry-bags, sack-trucks or battery-electric powered trollies).*

- Can they play a significant role in reducing environmental impact of urban deliveries?
- Would you consider using such services?

Do you currently deliver into Low Traffic Neighbourhoods (LTNs)?

- If so, where?
- What delivery methods have you adopted to overcome restrictions?
- What are the key problems or issues with LTNs?
- If managed properly, can they balance needs of local residents for low vehicle traffic and support efficient freight deliveries?

Urban consolidation centres (5 mins)

Showcard 5

Can urban consolidation centres can play a significant role in reducing the environmental impact of urban deliveries?

**Urban consolidation centres are warehouses used for collecting freight into one centralised location before it is transitioned for last-mile delivery.*

- Do you utilise urban consolidation centres?
- If so, where?

[FACILITATOR TO FILL OUT TABLE ON SHOWCARD 5 AS POINTS ARE DISCUSSED]

- What are the advantages of using consolidation centres, as opposed to direct deliveries?
- What are the disadvantages of using consolidation, as opposed to direct deliveries?

Other Issues (5 mins)

Showcard 6

How much of an issue is congestion on roads in urban areas for your business?

- To what extent are your delivery operations delayed due to congestion?
- Do you think we need to prioritise use of roads in urban areas for freight and public transport ahead of private car use?
- What are your views on urban road charging?

Do you envisage a more rapid growth in the last mile of delivery in rural areas?

**Last mile delivery - the final step of the process / the point at which the package arrives at the buyer's door. It is both the most expensive and time-consuming part of the shipping process.*

Do you envisage any changes in logistics patterns due to the Covid-19 pandemic?

- Overall levels of demand?
- Distribution of demand (e.g. urban vs. rural)?
- Increased or decreased seasonality impacts (e.g. time of day/month/year)?
- Increased or decreased time pressures from same-day/on demand delivery?

Technology [15 mins]

Showcard 7

What, if any, technologies do you currently use to plan and route loads?

- What software packages do you use?
- What new technology could improve efficiency of urban freight planning and deliveries?

In the next 5-10 years, how do you think the following might develop?

- Driver aid and safety systems?
- Autonomous vehicles?
- Load planning and routing systems?
- Vehicle diagnostics?

What do you think about the prospects for HGV platooning – is this a realistic development?

**Platooning is a system whereby two or more vehicles operate very close together and are 'connected' with some form of wireless vehicle to-vehicle communication, allowing them to effectively operate as a single unit. The lead vehicle would control the platoon, the technology ensuring the following HGVs always follow at a constant set distance.*

- What do you think the benefits of this might be?

Decarbonisation [20 mins]

Freight vehicle fleet composition

Showcard 8

For those of you whose businesses have a commercial vehicle fleet, roughly what percentage of your fleet is HGVs, MGVs or LGVs?

a) LGVs

Thinking about your LGVs, what is your current percentage split between diesel / petrol and BEVs?

- In your opinion, are BEVs the solution for LGVs, or not?
- If not, what other solutions are expected to emerge?

For those of you operating BEVs currently [*LIGHT TOUCH FOR THESE QUESTIONS*]

- What is your current average range being achieved (km)?
- What are the expected range improvements in 5 and 10 years' time?
- Do you have fast charging points at your depot?
 - Do you require fast charging point infrastructure away from depots?
 - Can LGVs complete delivery rounds on a single charge?
- What are the expected barriers that could prevent greater take-up of BEV LGVs over next 5-10 years?

b) MGVs / HGVs

Thinking about your MGVs and HGVs, what do you think is the expected fuel solution for decarbonisation going forward?

- Hydrogen fuel cells?
- BEVs?
- Overhead wires/BEV combination?
- Something else?

Do you think that multiple solutions could emerge, deployed on different types of operations (e.g. overhead wires for long distance trunking, fuel cells for delivery to rural areas, BEVs for urban deliveries?)

- Or do you envisage a different future?

Will there likely be a requirement for fast charging point infrastructure for BEVs away from depots?

How do you think hydrogen refuelling might take place?

- Could there be re-filling stations at depots and roadside filling points (as per diesel today)?

c) Road charging

Showcard 9

What are your thoughts on whether fuel duty and vehicle excise duty systems will have to change as decarbonisation advances?

- If so, how?
- If not, why not?

In your opinion, will distance based road charging be the way forward?

- If so, will the distance based charge alter by: time of day, type of road, size of vehicle?
- If not, why not?

PLENARY & REFLECTIONS [5 MINS]

Showcard 10

Thank you all for your contributions so far. This is now the final part of the session, where we will now reflect on our thoughts overall.

Moderator to work with the group to summarise approx. 5 key takeaway points from the session as a whole. Facilitator will type out the key points onto Showcard 7 as they are discussed by the group.

Is there anything which we haven't discussed today that you thought we might have covered as part of this session?

Are there any further thoughts which anyone would like to add regarding their current, or anticipated future business-related travel?

WRAP-UP [1 MIN]

Showcard 11

Thank you all for sparing the time to take part in today's session, we very much appreciate your contributions.

As a reminder, SYSTRA will report your feedback anonymously to Transport for the North in our final reporting. TfN will then use these findings to support the development of their Transport Interventions, Decarbonisation Strategy and Freight Strategy.

In the next day or so you will receive a link from SYSTRA where you'll be able to indicate which retailer you would like to claim your £70 shopping vouchers for, which we are providing as a thank you for your contributions.

If you have any further questions about the research – please email me/my colleague at the address on the slide.

TfN User Insight Phase 3

Online Focus Groups

July 2021



Overview of Session

Aims of the session:

- To understand more about your current and anticipated future business travel in the North of England, building upon the findings of our quantitative survey.

We are really interested to hear your views on:

- Future prospects for e-commerce retail;
- Delivery methods;
- Urban consolidation centres and delivery franchises;
- Developing and emerging technologies; and
- Decarbonisation.

How your feedback will be used:

- To inform and actively support the development of TfN's Transport Interventions, Decarbonisation Strategy and Freight Strategy.

Session format

Session plan:

- The session will last for 75 minutes.
- Following a short presentation by Transport for the North, we'll then move on to the main discussions.
- The session today will be audio recorded. Everything you say will be reported anonymously.
 - There are no right or wrong answers;
 - You may leave at any point if you no longer wish to take part; and
 - You are not obliged to answer any questions you don't want to.
- Please avoid the temptation to talk over each other, we want to hear everyone's views.
- Your feedback will be included anonymously in a report to Transport for the North, where SYSTRA will outline the points raised during this session, as well as the other sessions we are running.



1

Welcome from
TfN



Previous User Insight Research

- Phase 1 – Secondary analysis of NTS data and literature review.
 - Study trends in trip patterns by residents.
 - Understand behaviours and motivations of specific groups, to inform and target transport interventions and policy more effectively.
 - Further research required to obtain information on motivations to change travel behaviour.
- Phase 2 – Primary data: A questionnaire completed by 3,017 residents and 151 businesses.
 - A sizeable proportion of residents reported being constrained in their travel behaviour.
 - Transport improvements found to influence where people travel, choice of residence location, and decisions on whether or not to own a car.
 - However, **limited conclusions were reported in relation to businesses**, and no insights were provided on how TfN's interventions would improve business efficiency, access to skilled-staff, and increased production.

Phase 3 User Insight Research (Current Commission)

- **Overview of approach:**
 - Literature review and secondary data analysis – NTS data, NOHAM, NoRMS, GBFM, ONS, Census, DfT statistical datasets – to provide context of current picture and trends in business related-travel in the North of England.
 - A telephone survey with 1,000 businesses in the North of England was conducted.
 - 5 online focus groups with business representatives.
- **Aim:**
 - Build on Phase 2: a **larger sample** size for quant survey, analysing by different business types and characteristics.
- **Specific research objectives** for Phase 3 are as follows:
 - Determine the **transport-related needs**, behaviours, policies and attitudes of businesses.
 - Establish the extent to which different businesses might benefit from TfN's **transport interventions**.
 - Develop a **typology** of businesses' transport-related behaviours and attitudes that reflect businesses' ability to benefit from the interventions.
 - Explore current and potential future impacts of **Covid-19** on businesses' transport behaviours and attitudes.
- The evidence will be used inform the development of TfN's business cases and support the development and implementation of TfN's Decarbonisation and Freight Strategies, and TfN's Analytical Framework.

A photograph of a busy train platform. In the foreground, a large white circle with a red border contains the number '2' and the text 'Main discussions'. The background shows a train platform with several people walking. Overhead signs indicate platform directions: 'Platforms 5b and 5a' with an up arrow, 'Platform 5c' with a left arrow, and 'Platforms 4a and 4b' with a right arrow and an up arrow. Further down the platform, signs for '5c', '4', and '5b' are visible. A train is partially visible on the left side of the platform.

2

Main discussions

Introductions

- Name
- The region(s) in which your business operates
- Types of goods which your business transports/receives, if any
 - How often are you transporting these goods?
 - What types of vehicles do you use to transport goods (e.g. road, rail, water?)
- Your vehicle fleet (if your company has one) – e.g. number/type of vehicles owned/leased

Future prospects for e-commerce retail

- What are the key types of goods currently being sold online (via e-commerce platforms)?
- Will future growth, in terms of volumes and types of goods sold impact on the type/size of delivery vehicles used?
- How might post-Covid-19 working patterns impact on e-commerce growth rates?
- What about the prospects for 'on demand' e-commerce – will it reach significantly beyond take-away deliveries in the coming years?

Delivery methods

- What are your views on the use of cargo bikes in urban areas?
- What are your views on the use portering* in urban areas?

**Portering is where freight vehicles hand over multiple consignments (pre-sorted) to delivery staff at designated drop-off points, either close to the urban centre or a low traffic residential neighbourhood. Deliveries are then completed on-foot using a variety of equipment such as carry-bags, sack-trucks or battery-electric powered trollies.*

- Do you currently deliver into Low Traffic Neighbourhoods (LTNs)?
 - What delivery methods have you adopted to overcome restrictions?

Urban consolidation centres

- Can urban consolidation centres play a role in reducing environmental impact of urban deliveries?
- Advantages / disadvantages relative to direct deliveries?

Advantages	Disadvantages

Other freight and logistics issues

- How much of an issue is congestion on urban roads for your business?
- Do you envisage a more rapid growth in rural last mile delivery, or not?
- Do you envisage any changes in logistics patterns due to the Covid-19 pandemic?
 - Overall levels of demand?
 - Distribution of demand (e.g. urban vs. rural)?
 - Increased or decreased seasonality impacts (e.g. time of day/month/year)?
 - Increased or decreased time pressures from same-day/on demand delivery?

Developments in technology

- What, if any, technologies do you current use to plan and route loads?
- In the next 5-10 years, how might the following develop?
 - Driver aid and safety systems?
 - Autonomous vehicles?
 - Load planning and routing systems?
 - Vehicle diagnostics?
- What do you think about the prospects for HGV platooning* – is this a realistic development?

**Platooning is a system whereby two or more vehicles operate very close together and are 'connected' with some form of wireless vehicle to-vehicle communication, allowing them to effectively operate as a single unit. The lead vehicle would control the platoon, the technology ensuring the following HGVs always follow at a constant set distance.*

Freight vehicle fleet composition

- Roughly what percentage of your fleet is HGVs, MGVs or LGVs?

LGVs:

- Current % split between diesel/petrol and BEVs?
- Are BEVs the solution to decarbonisation?
- For those of you operating BEVs currently:
 - Current average range being achieved (km)?
 - Expected range improvements in 5/10 years' time?
 - Do you have fast charging points at your depot?
 - Do you require fast charging point infrastructure away from depots?
 - Can LGVs complete delivery rounds on a single charge?
- Expected barriers that could prevent greater take-up of BEV LGVs over next 5-10 years?

MGVs/HGVs:

- Expected fuel solution for decarbonisation?
 - Will multiple solutions emerge, deployed on different types of operations?
- Will there be a requirement for fast charging point infrastructure for BEVs away from depots?
- Will hydrogen re-filling be undertaken at depots/roadside filling points (like diesel today)?

Road charging

- What are your thoughts on whether fuel duty and vehicle excise duty systems will have to change as decarbonisation advances?
- In your opinion, will distance based road charging be the way forward?

Plenary / Reflections

Key points raised	
1	
2	
3	
4	
5	

- Is there anything which we haven't discussed today that you thought we might have covered as part of this session?
- Does anyone have anything further to add before we finish?

Close of session

- Thank you for coming!
- SYSTRA will report your feedback anonymously to TfN, who will use these findings to support the development of their Transport Interventions, Decarbonisation Strategy and Freight Strategy.
- In the next day or so you will receive a link from SYSTRA where you'll be able to provide your details so we can arrange the payment of your £70 worth of shopping vouchers.
- If you have any further questions about the research – please email bgoodsell@systra.com.



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