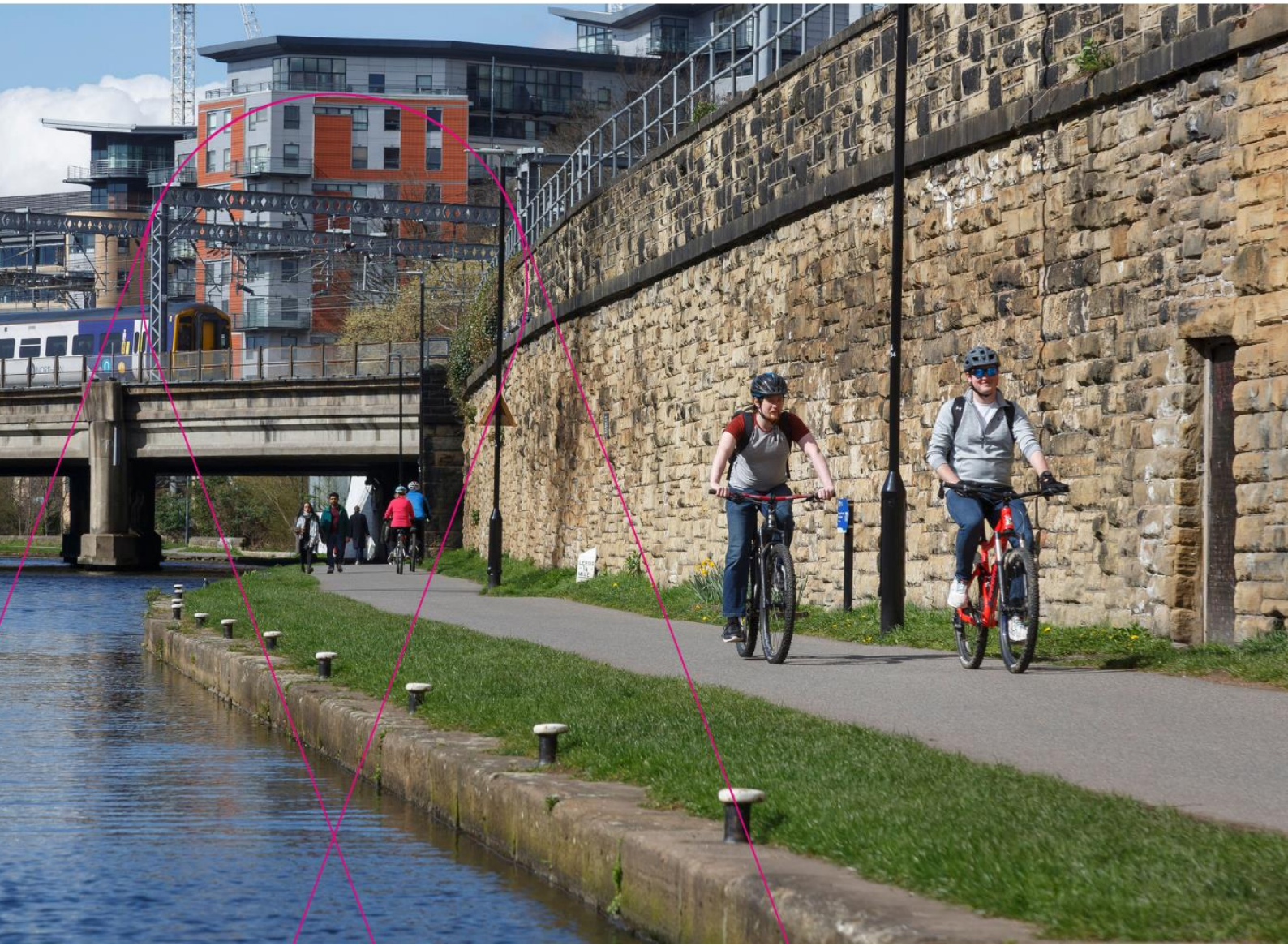
Monitoring and Evaluation Strategy

March 2024



TRANSPORT FOR THE NORTH

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1. Executive Summary

Transport for the North's (TfN) Monitoring and Evaluation Strategy is a key component of Transport for the North's second Strategic Transport Plan (STP). In this document we set out Monitoring and Evaluation (M&E) processes in the context of TfN and the STP.

The Strategic Transport Plan sets out a common vision, strategic ambitions, and a set of objectives for the transformation of the North's transport system. A robust, Green Book compliant approach to Monitoring and Evaluation ensures that the implementation of the STP remains evidence based and outcome focussed.

The purpose of the M&E Strategy is to monitor the North's progress towards the ambitions of the STP. In addition, it is intended to provide evidence on the progress TfN is making towards achieving its ambitions.

The approach set out in this strategy recognises that the delivery of these ambitions is a collective effort involving national government, local transport authorities, delivery agencies and the private sector.

Monitoring and Evaluation Framework

TfN's Monitoring and Evaluation Framework consists of a series of headline, core, and supplementary metrics developed in collaboration with partners that can be used to monitor the STP. To ensure transparency and consistency TfN will publish a dashboard to present the STP's headline metrics and allow TfN to track progress towards the strategic ambitions, objectives, and associated targets set out in the plan, over time.

The headline metrics are of the highest strategic importance and define the vision of the STP, with medium-term and long-term targets. Core and supplementary metrics do not have defined medium or long term targets but will provide additional intelligence on progress and challenges across the North's transport network.

TfN Annual Report

The metrics in the M&E Framework will help to inform annual reporting which will include an assessment of progress made towards the STP pan-northern targets, as demonstrated in the STP M&E dashboard. This process will take place each autumn where there will also be a review of progress made, against the previous year's portfolio of work. The metrics will also be used to look ahead to the following year and will form part of our annual business planning process, the

Business Plan will clearly set out what TfN will do as an organisation to support delivery of our collective vision.

The M&E dashboard, which presents the headline metrics from the framework will be used annually (each autumn) to show progress against the key metrics and identify where further actions or policies may be necessary to support the STP trajectory. These outcomes will inform TfN's annual business plan. Core and supplementary metrics will provide additional intelligence on progress and challenges across the North's transport network. These annual processes, alongside M&E across TfN at a project level, will allow TfN to monitor progress of its own programme of work in a proportionate way, given the challenges of quantifying TfN's own contribution towards the STP strategic ambitions, as a Strategic Transport Body.

Internal Review Processes

Robust and proportionate internal processes are in place at a project and organisational level to understand the contribution of individual projects to TfN's strategic ambitions, and the contribution of TfN's work to the collective objectives for transforming the North, as set out in the STP. These will ensure a flow of information between levels and a golden thread throughout everything TfN does, in accordance with Green Book guidance. TfN has developed a suite of project management processes which are implemented at a project level, it includes a monitoring and evaluation plan to help link the outcomes of individual projects to TfN's strategic objectives and operating model.

External collaboration

This strategy also sets out some of the challenges partner organisations have reported facing to achieve effective M&E and proposes some ways in which TfN can help promote collaboration across the North to address these issues.

2. Monitoring and Evaluation in a TfN context

The aim of this strategy is to embed the ROAMEF (rationale, objectives, appraisal, monitoring, evaluation, and feedback) cycle of evidence based policy making across all of TfN's work, as set out in the HM Treasury Green Book[1]. Taking this approach will ensure that monitoring data and intelligence - both on the progress towards desired outcomes for the North as set out in the STP, and the contribution of TfN's activities towards that - is considered within future policy design and implementation. This will help embed a culture of learning both at a strategic level and in project delivery.

It is also clear that many of the approaches applied elsewhere to M&E in transport need to be modified to suit a sub-national transport body such as TfN. This strategy therefore sets out a bespoke approach developed specifically for TfN.

[1] https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-governent/the-green-book-2020

2.1 Monitoring

"Monitoring seeks to check progress against planned targets and can be defined as the formal reporting and evidencing that spend and outputs are successfully delivered, and milestones met" (Department for Transport, 2013[2]).

For TfN, monitoring relates to the assessment of progress towards the targets and milestones set out in the TfN Business Plan and the STP.

2.2 Evaluation

"Evaluation is a systematic assessment of the design, implementation, and outcomes of an intervention. It involves understanding how an intervention is being, or has been, implemented and what effects it has, for whom and why." (HM Treasury, 2020: 15).

> Evaluation at TfN is about embedding a culture of learning in the way that projects, strategies, and policies are designed and reviewed. This will ensure that outcomes and learning from individual projects will feed into the development of TfN's strategies and business planning, to maximise impact towards achieving our collective STP ambitions.

2.3 The challenges of monitoring and evaluation for TfN

TfN faces several challenges and constraints in rigorously monitoring and evaluating its activities and impacts, which have shaped the development of the approach set out in this document.

[2] https://assets.publishing.service.gov.uk/media/5a7afb9140f0b66a2fc043b3/monitoring-evaluation-strategy.pdf

Challenge	Response
TfN's current remit: TfN has a unique status as a statutory sub-national transport body in the UK context with few comparators internationally. Consequently, much of the growing methodological literature and best practice on M&E in the transport sector is not directly transferable to TfN.	TfN has developed a bespoke approach to M&E which applies the spirit of existing national guidance, rather than applying approaches that have been developed within a very different context.
Scope of TfN's work: TfN's role covers areas around strategy, policy and research that are not conventionally subject to monitoring and evaluation in transport.	TfN's role in monitoring and evaluation is proportionate to TfN's strategic scope. TfN is not proposing to take a lead role in evaluating transport interventions led by delivery bodies and will instead focus on monitoring the delivery of the Strategic Transport Plan agreed collectively by the North's leaders and activities undertaken to support its delivery.
Potential future changes to TfN's scope: There may be further changes to TfN scope and the strategic direction of transport in the North that affects that impacts that need to be measured.	TfNs approach to business planning and annual reporting is flexible enough to respond to change; each year it will recognise what is practical in the short term while laying foundations for future investment and reform of the system in the long term.
Attribution: The attribution of change to the specific activities undertaken by an organisation is a key challenge of evaluation, and one which is particularly present in the case of TfN given its status as a sub-national transport body.	Rather than seeking to directly quantify the scale of TfN's impacts on STP objectives, TfN has used logic mapping to identify impact pathways. This approach provides TfN with a more realistic assessment of how it contributes to its stated objectives.
Complex impact pathways: As well as improvements to the transport system, the three strategic ambitions set out in TfN's Strategic Transport Plan span the economic, environmental and societal domains. The aspects of the STP objectives which occur in these domains have multiple and complex determinants.	TfN has sought to capture complex determinants even where change attribution is challenging. In areas such as social exclusion, Health and Wellbeing and decarbonisation, TfN has undertaken research and analysis to strengthen understanding in these areas.

3. Development of the TfN Monitoring and Evaluation Strategy

TfN has undertaken several phases of work to inform the proposed approach to Monitoring and Evaluation presented in this Strategy. All phases of development were shaped by internal and external input from TfN's partners.

3.1 Development phases 1,2 and 3

Phases 1, 2 and 3 focussed on the development of the TfN Monitoring and Evaluation Framework, which is a set of metrics for monitoring progress towards STP objectives. The impacts are areas that Transport for the North can expect to influence through the interventions and policies that it promotes.

This development was framed around the strategic ambitions of the TfN's Strategic Transport Plan (STP). For STP2 (2024) these ambitions were as follows:

- Rapid decarbonisation of surface transport
- Reducing transport related social exclusion
- Transforming economic performance

The metrics identified to measure progress towards achieving the STP strategic ambitions have been split into three groups to provide an appropriate balance between strategic clarity on the North's collective ambitions (headline metrics, which have clear medium-term and long-term targets) and more detailed monitoring (core metrics and supplementary metrics).

3.2 Development phase 4

Phase 4 consisted of:

- Benefits mapping workshops with officers from across TfN, identifying where TfN's work contributes to the STP impacts identified in Phase 1.
- A review of best practice across monitoring and evaluation in transport, including initial discussions with other sub-national transport bodies.
- A set of recommendations on how to operationalise monitoring and evaluation across TfN, informing the approach proposed in this strategy.

3.3 Development phase 5

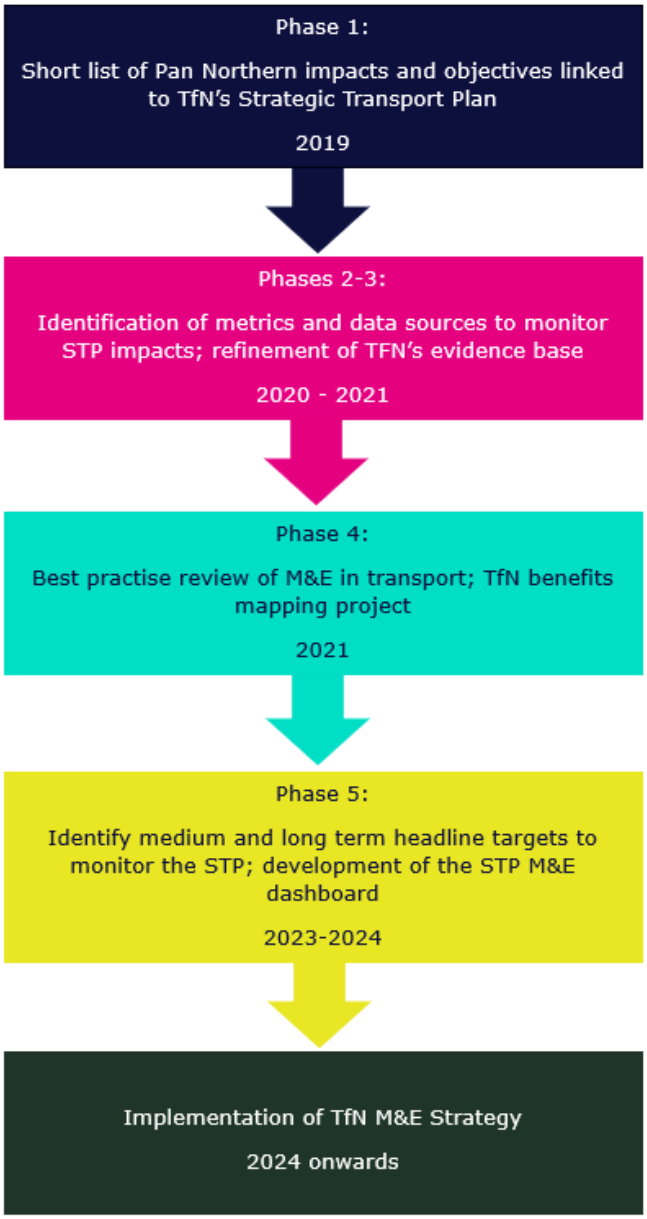
Phase 5 consisted of:

- Identifying medium-term and long-term targets for the set of headline metrics, as part of the development of TfN's second Strategic Transport Plan
- Development of STP Monitoring and Evaluation dashboard

3.4 Implementation

The implementation of the M&E Strategy will be an iterative process and informed by prior experience.

The diagram below presents the development of TfN's M&E work programme.



4. Objectives and Principles

These objectives and principles reflect the context and challenges set out in Section 2 and should inform the implementation of the processes set out in Section 6.

Objectives

- Rigorously measure progress towards the objectives of the TfN's Strategic Transport Plan, taking a multi-modal and cross-cutting approach.
- Enable outcome-focussed, evidence based decision making at TfN across project level and organisational level based on the 'ROAMEF' cycle with a high level of coherence between these levels.

Principle	Explanation
Adaptability	TfN's approach to M&E should be driven by these principles and objectives rather than rigid processes. This will ensure TfN can identify new opportunities to collaborate, scale up and evolve along with TfN's organisational evolution.
Transparency	Any findings should be transparent to TfN's partners, to stakeholders, and to the public to the maximum extent possible given commercial and legal restrictions.
Collaboration	TfN's M&E approach should draw on relevant expertise outside of the organisation and should be open to external input and review.
Methodological rigour	TfN's approach to M&E should reflect best practice in evaluating transport interventions and comparable sub-national transport bodies and should evolve with developments in this evidence base in the UK and elsewhere.
Proportionality	TfN's Monitoring and Evaluation activity should be proportionate to the resources available, seeking both to add value and demonstrate value by providing new insights.

5. Monitoring and Evaluation Framework metrics

The objectives and metrics in the Monitoring and Evaluation Framework are each associated with one of the strategic ambitions.

- Rapid decarbonisation of surface transport
- Reducing transport related social exclusion.
- Transforming economic performance

Many of the metrics are complemented by sub-metrics. For example, "Mode shift of trips from car to sustainable modes" is associated with a series of sub-metrics (number of trips for each transport mode and number of trips as a proportion of total trips).

These metrics are intended to complement and inform KPIs of delivery bodies such as National Highways and Network Rail and Local Transport Plan objectives. For example, the National Highways KPI to "decrease the number of people killed or seriously injured on the SRN by at least 50% by the end of 2025" can support Vision Zero by 2040.

The metrics in the Monitoring and Evaluation Framework are divided into the following categories:

Headline metrics	These are the high-level, long term strategic objectives linked to concrete targets and trajectories which define the vision of the STP, with strong theory of change linking to TfN-promoted interventions and policies
Core metrics	These metrics provide the key evidence required to monitor the North's transport system in the short to medium term and will form a fundamental part of monitoring the STP. They must be methodologically robust, allowing TfN to track the data. However, a 'good is up/down' target may be sufficient, targeting sustained improvement in all areas, rather than specific targets and trajectories.
Supplementary metrics	These metrics provide supporting evidence to understand the wider context of the transport system. The Theory of Change between TfN's own work and these metrics is not as robust and monitoring these is a lower strategic priority.

Reporting

Reporting on these metrics at a high level will be undertaken as part of the Annual Report. This will include a summary of data linked to the headline metrics, and a breakdown of which core metrics are moving in a positive or negative direction compared to the base year.

	Headline objectives	Core metrics	Core sub-metrics
Decarbonising the North's transport system	6	18	66
Transforming the North's economy	5	15	24
Reducing transport related social exclusion	8	25	79
Total	19	60	169

Base years

Each of the metrics in the M&E Framework is associated with a base year, providing a baseline data point. Each of the metrics will be presented as a time series. The base year of choice depends on two considerations.

- **Data availability.** Often the most recently available data is used, but this data is from up to 4-5 years ago. This applies to outputs that use TfN modelling and TfN's Transport Related Social Exclusion (TRSE) analysis.
- **The impact of the COVID-19 pandemic.** In some cases, the impact of the pandemic on travel demand has meant that the most recently available data is misleading, so a pre-COVID-19 baseline has been selected. This includes travel modal share and air pollution.

  In other cases, such as the roll-out of electric vehicles, electric vehicle charging points, or infrastructure related metrics, more recent data was used.

The table below provides a summary of which base years were used for each set of metrics.

Base year	Headline	Core
2017	0	1
2018,19,20	17	36
2021,22	2	23

6. TfN's approach to M&E

6.1 Project Level Actions

Action 1: Project-level M&E Review

At a project level, TfN will:

- Ensure that project objectives are SMART (Specific, Measurable, Achievable, Realistic and Time-bound) and that success can be reviewed.
- Link project objectives to TfN's operating model and STP Strategic Ambitions

All project objectives will be linked to one or more of TfN's STP strategic ambitions, and one or more of the pillars of TfN's Operating Model, as set out in TfN's second Strategic Transport Plan, to strengthen TfN's 'golden thread':

- A **centre of technical excellence** for the North – holding and collating information and analytical tools that are available to all partners.
- A **source of trusted information** – one that is available to all our partners locally, regionally, and nationally as a foundation on which to develop solutions.
- A **strategic thought leader** and champion of strategic transport planning – one that ensures the linkages between transport, digital and energy systems are reflected in decision making.
- An **enabler of accelerated delivery** – applying our capability and capacity in support of our partners as they bring forward solutions for implementation.
- A **trusted collaborator** – working with partners (nationally and across the North) to maximise the leverage of its own activity to the benefit of our communities and businesses.

TfN has developed a suite of documents to support project management. Included in this is a 'mini monitoring plan' and logic map, to help guide M&E at a project level and to help link projects to STP strategic ambitions and TfN's operating model objectives.

6.2 Partner Support - TfN Offer

TfN Offer allows TfN to use its capability and evidence base to support local partners in developing their local transport plans; the data, evidence, tools, and advice prepared by TfN, is available to support local transport plan (LTP) development and implementation.

As a part of TfN's commitment to monitor and evaluate at a project level, TfN has developed a series of outcomes and indicators to help measure value and success in offering support to partners as they develop transport strategies and potential solutions. TfN will monitor requests that are submitted, survey partners, and build case studies around TfN Offer requests to create an evidence base that demonstrates the impact of the support that is available to Local Partners.

6.3. Organisational Level Actions

Action 2: utilise evidence from Monitoring and Evaluation to inform Business Planning

Each Autumn, TfN will undertake a review of the M&E dashboard alongside existing workstreams and projects to inform prioritisation in the following financial year. This should encompass a review of the links between TfN's current work programme, and the golden thread set in the STP and Business Plan. This will inform internal planning activities and should be framed around the following questions:

Key question	**Explanation**
How has the existing work plan progressed to date? What new activities need to be in scope?	Light touch review of KPIs in the Business Plan, plus any additional BAU (Business as Usual) activities
How do existing and emerging activities link to the TfN golden thread?	Ensuring robust links to the TfN golden thread and the STP and the Business Plan
What were the key barriers to progress on key outcomes and how can these be overcome?	This provides an opportunity to reflect on key lessons learnt
Were there any major unplanned successes over the past year?	An opportunity to highlight any unexpected successes and innovations that may not be captured elsewhere, focussing on the concrete, external impact of TfN's work

Action 3: Monitoring and Evaluation Framework

The Monitoring and Evaluation Framework contains the key metrics required to monitor progress towards STP objectives. **Action 3** recognises the ongoing work required to keep the Monitoring and Evaluation Framework up to date and ensure it is actively utilised.

The M&E Officer will undertake a light-touch review of the M&E Framework every year to ensure it reflects the latest data available to TfN and continues to reflect TfN's strategic priorities.

This will include:

- Ensuring the dashboard is populated with the latest available data for all headline metrics.
- Resolving any issues with data availability and prioritise within TfN's analytical work programme. If resources prove to be a constraint, headline metrics should take the highest priority.
- Adapting any changes in the scope of TfN's work or user feedback.
- Responding to improvements in data quality and availability.

Any changes will need to meet the following criteria:

Forward consistency	Metrics can be monitored continuously, with a reliable (and ideally annual) data release schedule.
Backward consistency	Data points are available that are comparable to existing baselines for other metrics.
Transparency	If possible, metrics will be developed using data that can be shared externally.
Strategic alignment	Any new metrics are clearly aligned to TfN's STP objectives.
Proportionality	New metrics increase the overall coherence of the M&E Framework.

TfN will continue to collaborate with Partners to strengthen alignment where this is appropriate and remains consistent with the level of ambition of the Strategic Transport Plan.

Action 4: Monitoring and Evaluation Dashboard

The headline metrics from the TfN Monitoring and Evaluation Framework will be displayed in an online, publicly available dashboard. The aim of the dashboard is to present the 19 headline metrics, show a time series and progress towards the 2030 and 2050 targets and strategic ambitions set out in the Strategic Transport Plan.

The future scope for the dashboard will be to present some of the core metrics from the TfN Monitoring and Evaluation Framework and to include more local metrics below the level of the North, to help support local authority partners by providing trusted analysis of northern travel data.

Action 5: Annual Report

Our annual business planning process will clearly set out what TfN will do as an organisation to support delivery of our collective vision.

As part of annual reporting, we will reflect on progress made against our business plan each year, alongside reviewing the performance against the headline and core STP metrics at a pan-Northern level, as demonstrated in the STP monitoring and evaluation dashboard.

6.4. Wider Knowledge-sharing

During Monitoring and Evaluation Phase 4, TfN made links with other Sub-National Transport Bodies and Local Transport Authorities to discuss challenges and opportunities around Monitoring and Evaluation. The Department for Transport's (DfT) Local Major Scheme Meta-Evaluation (June 2022)[3] also highlights some of these challenges. Key examples are listed in the table below:

<table>
<tr><th>Local Transport Authority challenges</th><th>Sub-National Transport Body challenges</th></tr>
<tr><td colspan="2">Limited internal resource, knowledge, and capacity</td></tr>
<tr><td colspan="2">Challenges raising the profile of M&E and ensuring it is considered at an early stage in project and strategy development.</td></tr>
<tr><td colspan="2">Monitoring and Evaluation processes need to be flexible and proportionate in response to organisational evolution but consistent enough to build understanding and capacity</td></tr>
<tr><td>Challenges accessing data required to monitor and evaluate schemes, and timing data collection with scheme milestones.</td><td>Novel approaches to M&E are required that correspond to remit and scope of work.</td></tr>
<tr><td colspan="2">Methodological challenges monitoring and evaluating schemes, particularly attribution of change, including:
Using forecasts
Counterfactuals and comparators
Setting consistent scheme objectives
Applying Theory of Change
Capturing wider economic impacts and CO2 impacts</td></tr>
</table>

[3] https://assets.publishing.service.gov.uk/media/6399c5938fa8f50dd7bd43e8/local-authority-major-schemes-meta-evaluation-2011-to-2016.pdf

Where possible, TfN will seek opportunities to collaborate with partners to help overcome these challenges. Key areas of potential highlighted in the Monitoring and Evaluation Phase 4 report are:

Opportunities for TfN to add value	
Applying the principles of DfT guidance on Theory of Change logic mapping	This is an area that continues to present practical and methodological challenges for partners. As TfN and partners both develop their own approaches to logic mapping, there may be further opportunities to share lessons learnt.
Resolving shared challenges around data collection and analysis	The continued development of the M&E Framework is likely to highlight additional areas where: i) TfN tools can be shared with Local Transport Authorities to support their own work monitoring local transport networks or in building business cases. ii) TfN can work with Local Transport Authorities to build the case for more data sharing or data collection at a national level. Where these opportunities emerge, TfN will facilitate discussion through existing governance groups, particularly the Analytical Advisory Group (AAG).
Collaboration on future DfT guidance updates	Where DfT undertakes future consultations on Monitoring and Evaluation guidance updates, Transport for the North could raise the profile of these among Local Transport Authorities and facilitate discussion to generate high quality feedback for consideration by DfT.
Sharing best practice and lessons learned	Prior engagement with partner officers involved in M&E highlighted interest in learning from successes in other authorities. So far this has been facilitated through existing channels, such as the TfN Rural Mobility Working Group and the Northern Evidence Academic Forum but could be expanded.

7. Annex: Monitoring and Evaluation Framework

7.1 Headline Metrics

STP Ambition	Medium term pan-Northern target (2030)	Long term pan-Northern target (2050)	Baseline (year)	Explanation
Transforming economic performance	Begin to close the productivity gap between the North and the average for the rest of England excluding London	Close the productivity gap between the North and the average for the rest of England excluding London by 2050	11% (2019) (GVA, Regional gross value added (balanced) per head and income components, ONS 2022 release)	Gross Value Added (GVA) is a productivity measure that looks at the amount of goods and services a local economy produces. Closing the productivity gap between the North and the rest of England was a key component of the vision behind TfNs first strategic Transport Plan (STP1, 2019) and the case for Northern Powerhouse Rail (NPR). GVA per capita data shows that the gap between the North and other regions outside London has barely changed since the original NPIER was published in 2016 and stood at 11% in 2019 (10.6% in 2020). Closing the productivity gap will improve long-term living standards in the North therefore remains a core ambition of STP2.
		37% of the North's population can access 500,000 jobs by rail within 60 minutes by 2050	27% (2018) (TfN Analytical Framework NoRMS, 2022)	This objective has long been a fundamental part of the case for Northern Powerhouse Rail (NPR). Reducing the effective density of the North's labour market has the potential to bring about significant agglomeration and therefore benefits to productivity. Increases in the number of jobs and changing distribution of jobs means that even in a 'do minimum' scenario there will be an improvement in employment accessibility, but this would be increased significantly by the full NPR network.

STP Ambition	Medium term pan-Northern target (2030)	Long term pan-Northern target (2050)	Baseline (year)	Explanation
Transforming economic performance	68% of the North's population can access an employment centre with at least 5,000 jobs by public transport within 30 minutes by 2030	75% of the North's population can access an employment centre with at least 5,000 jobs by public transport within 30 minutes by 2050	63% (2019) (DfT Journey Time Statistics 2021/22)	This target is monitored using the DfT's journey time data and looks to monitor employment opportunities for those in the north; employment along with income, education and health are used as measures of deprivation in the UK. Levels of deprivation are highly correlated to areas which are at high risk of Transport Related Social Exclusion (TRSE) and setting this target would help to monitor access to employment and economic performance in the North.
	Improve overall journey time reliability compared to 2019 levels; primarily achieved through a strong emphasis on encouraging modal shift to public transport, rail, and active travel.	Reduce the proportion of the Strategic and Major Road Network experiencing excessively unreliable journey times during the weekday peak to 2050.	35.4% morning peak, 33.2% evening peak (annual average) (2019) BT & Atkins Mobile device data 2019; TfN TAME Congestion and Efficiency model)	This is based on the proportion of SRN and MRN paths that experience average peak congestion for at least one morning peak hourly period (07:00 – 09:00) or afternoon peak hourly period (16:00 – 18:00), or for at least one hour across the weekend. Poor journey time reliability has significant adverse consequences for people, the economy and movement of freight. There have been numerous estimates of the cost of congestion to the UK economy, most of which are on the order of billions of pounds. These costs can be alleviated through intelligent demand management measures and by promoting mode shift to active travel and public transport as well as investment in targeted local interventions to improve journey time reliability.

STP Ambition	Medium term pan-Northern target (2030)	Long term pan-Northern target (2050)	Baseline (year)	Explanation
Transforming economic performance	Improve overall journey time reliability compared to 2019 levels; primarily achieved through a strong emphasis on encouraging modal shift to public transport, rail and active travel.	Reduce the proportion of the Strategic and Major Road Network experiencing excessively unreliable journey times during the weekend to 2050[161]	83% of paths experienced at least an hour of highly poor journey time reliability (annual average) (2019) (BT & Atkins Mobile device data 2019; TfN TAME Congestion and Efficiency model)	This is based on the proportion of SRN and MRN paths that experience average peak congestion for at least one morning peak (07:00 – 09:00) or afternoon peak (16:00 – 18:00) hourly period, or for at least one hour across the weekend. Poor journey time reliability has significant adverse consequences for people, the economy and movement of freight. There have been numerous estimates of the cost of congestion to the UK economy, most of which are on the order of billions of pounds. Costs can be alleviated through intelligent demand management measures and by promoting mode shift to active travel and public transport as well as investment in targeted local interventions to improve journey time reliability. It is clear from evaluation evidence that building new roads can lead to induced demand and very limited improvements in congestion in the medium to long term.

STP Ambition	Medium term pan-Northern target (2030)	Long term pan-Northern target (2050)	Baseline (year)	Explanation
Decarbonising Surface Transport	56% reduction, to 11 million tonnes by 2030	Reduce total northern surface transport CO2 emissions to near zero by 2045	25 million tonnes (2018) (TfN Analytical Framework, NoCarb Model 2021)	Transport for the North have suggested a target of halving surface emissions by 2030, this target is outlined in further detail in the TfN Decarbonisation strategy (TfN Decarbonisation Strategy , 2021). The target will be monitored at five year intervals using TfN's NoCarb model (Decarbonisation Strategy, Annex B: NoCarb Development Report, 2021). The gap to reaching near zero surface emissions shows local variance, place type will be a variable that is considered in future iterations of the analysis to understand the gap in reaching near zero at a more local level. Long-term carbon reduction targets are typically set across the whole economy of a nation or region rather than for individual sectors like transport. The typical approach taken for economy-wide analysis is to illustrate alternative pathways in which sectors like transport are required to reduce their emissions by different amounts, depending on the level of success in other more challenging sectors. As TfN is not able to carry out analysis for other sectors, we have taken the cautious approach of assuming that in most scenarios surface transport will need to reduce its emissions close to zero before 2050.

STP Ambition	Medium term pan-Northern target (2030)	Long term pan-Northern target (2050)	Baseline (year)	Explanation
Decarbonising Surface Transport	Share of trips made by sustainable modes to increase to 43%	Share of trips made by sustainable modes to increase to 51%	Sustainable modes: 36% Rail 1.5%, bus, and coach: 5.5% (2018 and 2019 average); Active modes: 29% (2018 and 2019 average, National Travel Survey, 2022)	TfN's work on Future Travel scenarios (TfN Future travel Scenarios, 2020) have helped inform the 'right share' target. The target also addresses social inequalities that exist due to car centric society and insufficient access or investment in public transport or facilitation of active travel modes. This leads to social exclusion issues with many unable to access key services or opportunities. TfN have also published a decarbonisation strategy (TfN Decarbonisation Strategy, 2021). This strategy along with work on Future Travel scenarios acknowledges that Technological solutions alone, are insufficient in reaching near zero surface emissions by 2045. Modal shift is largely dictated by journey type and length, this means increasing the proportion of active travel trips for shorter journeys, increasing the proportion of trips made by public transport for medium length trips and for rail usage to increase, for journeys over 100 miles.

STP Ambition	Medium term pan-Northern target (2030)	Long term pan-Northern target (2050)	Baseline (year)	Explanation
Decarbonising Surface Transport	Zero overall regional increase in car and taxi vehicle mileage on the North's Road network to 2030	Zero overall regional increase in car and taxi vehicle mileage on the North's Road network to 2045 compared to 2019[162]	Car and Taxi vehicle mileage: 98.3 billion km, 61.1 billion miles (2019) (DfT Road Traffic Statistics, Motor vehicle traffic (vehicle miles) by road class and region and country in Great Britain, 2022)	TfN's Decarbonisation Strategy states that demand management will be critical to meeting the carbon reductions needed by 2030. If modal shift occurs in parallel to a significant increase in travel demand, this could still entail a large increase in car trips. The ambition to reduce vehicle milage increases to zero by 2045 reflects the need to go further and faster to ensure the North stays within our carbon budget. This target also considers other health, wellbeing and inclusion impacts related to constrained travel choices and a car-dominated transport system.

STP Ambition	Medium term pan-Northern target (2030)	Long term pan-Northern target (2050)	Baseline (year)	Explanation
Decarbonising Surface Transport	Overall increase in rail freight mode share.	Trebble rail's share of freight carried to 25.5 % by 2050, measured as tonne km	8.5% (2018) Great Britain Freight Model, TfN future Travel Scenarios, 2022)	Transport for the North are proposing a target of trebling the modal share of rail freight carried to 25.5% by 2050. This target is informed by Transport for the Norths Future Travel Scenarios (TfN Future Travel Scenarios, 2020) and Freight and Logistics Strategy (TfN Freight & Logistics Strategy, 2022), alongside the ambitions of our partners and Board to go further in this space. Currently there are barriers to reaching this target which include insufficient capacity on the rail network, inappropriate gauge clearance on Key nodes and routes, line speed and a lack of freight terminal capacity. These barriers would need to be addressed to reach the mode share target. This target does not include trains that are fuelled alternatively, though there is scope to include supplementary targets.

STP Ambition	Medium term pan-Northern target (2030)	Long term pan-Northern target (2050)	Baseline (year)	Explanation
Decarbonising Surface Transport	Uptake of public EV charging points at scale and pace across the North to support TfN's regional decarbonisation trajectory to 2045, increasing to at least 123,500 by 2030	Uptake of public EV charging points at scale and pace across the North to support TfN's regional decarbonisation trajectory to 2045, increasing to at least 141,000 by 2050	6,400 (2022) (TfN Electric Vehicle Charging Infrastructure Framework, 2022)	TfN's Electric Vehicle Charging Infrastructure Framework (EVCI) models future demand for several types of electric vehicle charging (workplace, residential, HGV depot, public, rapid, conventional) under TfN's four Future Travel Scenarios. It accounts for several inputs from the TfN modelling suite (NoHAM and NELUM). We propose that STP2 Vision and Objectives should focus on public EV charging points because this is an area where Local Transport Authorities have the greatest influence on investment decisions. Rapid roll-out of charging points is required to minimise the extent to which charging point availability acts as a barrier to the roll-out of electric vehicles. Although uptake has increased in recent years, electric vehicles still only represent 2.2% of total cars on UK roads in early 2022. Evidence also indicates that the North of England is seeing a slower uptake rate of EVs, compared to the national Average. It is therefore important to remove any barriers to the uptake of electric vehicles in the North, so that we can keep within our carbon budget, as laid out by the transport decarbonisation trajectory (EVCIF 2022). In the future we will look to monitor this target at a local level.

STP Ambition	Medium term pan-Northern target (2030)	Long term pan-Northern target (2050)	Baseline (year)	Explanation
Decarbonising Surface Transport	All new major transport infrastructure development to aid local nature recovery by achieving 10% biodiversity net gain, for projects gaining approval from 2025 (in line with the Environment Act 2021)	All new major transport infrastructure development to aid local nature recovery by achieving 10% biodiversity net gain, for projects gaining approval from 2025 (in line with the Environment Act 2021)		Although it is outside our remit and capacity of TfN to undertake our own biodiversity monitoring, we can seek to use our existing relationships with delivery bodies to collate information about major projects across modes to give confidence that the North's biodiversity is not being adversely impacted by the development the transport schemes. This should involve using a form of the following metrics, meaning TfN would collate information as far as possible based on data collected by the relevant bodies: - Percentage of major transport developments generating overall biodiversity enhancement. - Number of transport planning approvals that generated any adverse impacts on sites of acknowledged biodiversity importance.

STP Ambition	Medium term pan-Northern target (2030)	Long term pan-Northern target (2050)	Baseline (year)	Explanation
Enhancing social inclusion and health	Public Performance Measure (PPM) of at least 91.2% (MAA, at year end) for both TransPennine Express and Northern by 2028, returning to levels last seen prior to 2018.		TransPennine Express: 87.2% (July - September 2022 annual moving average) (Passenger rail performance July to September 2022, Office of Rail and Road)	PPM is an aggregate score calculated through a combination of punctuality and cancellations scores. The DfT agrees specific performance targets for punctuality and cancellations for each train operator. This ambition recognises the need to look beyond the next few months towards the medium-term and look at areas of improvement required to bring back passenger confidence in the railway following several years of disrupted service prior to and including the COVID-19 pandemic. Our target is based on an annual average to remove the effects of seasonal variation caused by weather conditions; performance tends to be significantly worse in Autumn than in Spring. The target has been decided on, based on the average for each operator for all years where performance of over 90% was achieved (three years for TPE, seven for Northern). It is recognised that achieving ambitious performance targets means alleviating widely acknowledged capacity constraints around key hubs, including Leeds, Manchester, and Sheffield, which are all among the worst bottlenecks in the country.
			Northern: 84.0% (July - September 2022 annual moving average) (Passenger rail performance July to September 2022, Office of Rail and Road)	

STP Ambition	Medium term pan-Northern target (2030)	Long term pan-Northern target (2050)	Baseline (year)	Explanation
Enhancing social inclusion and health	Reduce the number of people in the North living in areas with a 'high' risk of TRSE by 200,000 by 2030	Reduce the number of people in the North living in areas with a 'high' risk of TRSE by 1,000,000 by 2050	3.31 million (2019) (TfN TRSE tool, 2022)	21.3% of people in the North live in areas with a high risk of TRSE, compared with 16% of the population of the rest of England. The long-term target, set out in the Connecting Communities Strategy, is to eliminate this gap, and account for differences in area type between each. This requires progress across all area types, but particularly in coastal communities, rural towns, and urban fringes, where the difference in risk is largest. The higher levels of risk of TRSE in the North are driven by higher levels high poverty and deprivation, poorer access to key destinations through the public transport network, and higher levels of car dependency and forced car ownership. Highly localised breakdowns of this (by Local Authority and LSOA) are available alongside this through TfN's TRSE Tool.

STP Ambition	Medium term pan-Northern target (2030)	Long term pan-Northern target (2050)	Baseline (year)	Explanation
Enhancing social inclusion and health	Reduce the number of people in the North living in areas with a 'highest' risk of TRSE by 74,000 by 2030	Reduce the number of people in the North living in areas with a 'highest' risk of TRSE by 370,000 by 2050	0.81 million (2019) (TfN TRSE tool, 2022)	21.3% of people in the North live in areas with a high risk of TRSE, compared with 16% of the population of the rest of England. The long-term target, set out in the Connecting Communities Strategy, is to eliminate this gap, while accounting for differences in area type between each. This requires progress across all area types, but particularly in coastal communities, rural towns, and urban fringes, where the difference in risk is largest. The higher levels of risk of TRSE in the North are driven by higher levels high poverty and deprivation, poorer access to key destinations through the public transport network, and higher levels of car dependency and forced car ownership. Highly localised breakdowns of this (by Local Authority and LSOA) are available alongside this through TfN's TRSE Tool.

STP Ambition	Medium term pan-Northern target (2030)	Long term pan-Northern target (2050)	Baseline (year)	Explanation
Enhancing social inclusion and health	Local and national road investment continues to deliver road safety improvements, including through the Safer Roads Fund, and supported by targets such as National Highways target reduction of at least 50% by the end of 2025 against the 2005-09 average baseline.	Vision zero: reduce the number of people killed and seriously injured in traffic incidents to zero by 2040	6,429 (2018/2019 average) (DfT Road Traffic Statistics 2022)	Vision Zero has been adopted by transport authorities across the world, including Transport for London (TfL Vision Zero), which has an ambition to eliminate traffic deaths and serious injuries by 2041 and has published a Vision Zero action plan. This approach starts with the assumption that traffic deaths are preventable and that saving lives is not expensive. Moreover, despite increases in traffic volumes, the number of people killed and seriously injured in traffic incidents has decreased since 2012, due to a combination of new traffic calming measures such as 20mph speed limits on residential streets and improved vehicle technology.

STP Ambition	Medium term pan-Northern target (2030)	Long term pan-Northern target (2050)	Baseline (year)	Explanation
Enhancing social inclusion and health	Physical station improvements continue to be delivered as part of Network Rail's Access for All programme. By 2030, there is a plan in place to deliver the step change in physical station accessibility the North needs to meet 2050 targets.	All rail stations in the North to meet TfN's desired accessibility standards by 2050	54% (2021) (Bespoke analysis for TfN: accessibility audit)	In May 2022, Strategic Rail finalised its Northern England Station Enhancements Programme SOBC. This packages together multiple station facilities improvements into three sets of standards: minimum, acceptable, and desired. The quality of facilities deemed to be required by each station under each set of standards depends on station category and passenger levels. Categories for the work included improvement such as CCTV, ramps for trains, step free access, lighting, and seats among others. Across the North, baseline progress towards the Desirable Standards is 54%, Acceptable Standards 64% and Minimum Standards 72%. Access for all is important in addressing issues such as transport related exclusion.

STP Ambition	Medium term pan-Northern target (2030)	Long term pan-Northern target (2050)	Baseline (year)	Explanation
Enhancing social inclusion and health	Reduction in AQMAs in the North through improved air pollution levels.	Eliminate the need for Air Quality Management Areas in the North announced due to NO2 or PM10 to zero by 2045 by bringing air quality within legal limits	AQMAs in the North due to NO2 or PM10: 132 (2022) (DEFRA UK Air information resource, accessed 2022)	TfN's Transport and Health and Wellbeing research found that the proportion of the population of the North at high risk of mortality due to Nitrogen Dioxide is 37.9%, and the proportion is similar for other pollutants. This highlights the need for the North. The impacts are also unevenly distributed, with 30% of those people living in areas at the lowest IMD (Indices of Multiple Deprivation) decile. This highlights the urgent need to redouble efforts to tackle air pollution. Air quality management areas are areas where local authorities have acknowledged that further interventions are needed to meet government air pollution targets. Local authorities are required by Government to develop action plans to improve air pollution in each of these areas. Setting a target to eliminate these by improving air pollution recognises the need for combined efforts by local authorities across the North to ensure that decarbonisation of transport brings the significant improvements in levels in air pollution required to minimise harmful impacts on health and wellbeing.

STP Ambition	Medium term pan-Northern target (2030)	Long term pan-Northern target (2050)	Baseline (year)	Explanation
Enhancing social inclusion and health	Reduction in Nitrogen Dioxide exposure across the MRN network1 in the North.	Reduce to zero the number of paths on the North's Major Road Network that exceed WHO Nitrogen Dioxide exposure limits (currently 76% of paths) by 2045	76% (2019) (ONS output area population estimates, 2020; DEFRA UK-AIR, km grid square modelled outputs, 2019)	Currently, the best data available to TfN to measure this is DEFRA open source modelled data. World Health Organisation (WHO) limits are used to benchmark, in recognition that statutory targets are still much higher than levels that are recognised as harmful in current scientific evidence. If the right complementary actions are taken Government's plans to phase out the internal combustion engine should provide a realistic opportunity to meet these targets.

7.2 Supplementary metrics

7.2.1 Transforming Economic Performance

STP Ambition	Metric	Baseline (year)	Indicator direction
Transforming Economic Performance	Increased resilience of the road network	total full or partial road closure events on the SRN: 18,496 (2019)	Decrease
		total events leading to full closure of at least one carriageway or slipway on the SRN: 707 (2019)	Decrease
	Increased resilience of the road network	reasons for full road / carriageway closure on the SRN Road closure (52.5%); Suicide/ attempted suicide (15%); Breakdown (14.6 %) (2019)	Neutral

STP Ambition	Metric	Baseline (year)	Indicator direction
Transforming Economic Performance	Increased overall reported road user satisfaction (on the SRN)	Overall satisfaction: 70%; Journey time: 67%; Management of roadworks :45%; Feeling safe: 79%; Information (permanent signs): 80%; Information (electronic signs: 70%; Surface quality: 71% (April 2021 – April 2022)	Increase
			Increase
			Increase

STP Ambition	Metric	Baseline (year)	Indicator direction
Transforming Economic Performance	Proportion of residents able to access at least 2 or more airports within 90 minutes by rail	14.5% (2018)	Increase
	Proportion of residents able to access 16+ key visitor attractions by rail	29.8% (2018)	Increase
	Proportion of residents within 90 minutes of a National Park by rail	46.5% (2018)	Increase

STP Ambition	Metric	Baseline (year)	Indicator direction
Transforming Economic Performance	Proportion of businesses able to access 10,000 other businesses within 60 minutes travel time by rail	51.2% (2018)	Increase
	Increased proportion of the North's eligible rail network (by track length) served by at least 2tph in	71.6% (May 2022 timetable)	Increase
	Increased proportion of stations on eligible lines in the North served by a minimum of 2tph in each direction	41.2% (May 2022 timetable)	Increase

STP Ambition	Metric	Baseline (year)	Indicator direction
Transforming Economic Performance	Increased proportion of stations on eligible lines in the North served by at least 1tph in each direction	76.7% (May 2022 timetable)	Increase
	Increase rail passenger numbers	Rail journeys within the north: 170.7 million journeys (2019/20)	above pre-COVID 19 levels and continue to increase. Range of 287 million - 472 million depending on Future Travel Scenario by 2050.

STP Ambition	Metric	Baseline (year)	Indicator direction
Transforming Economic Performance	Increase rail passenger numbers across the network	Entries and exits at least busy half of northern stations (289 stations): 16.2 million (2019/20)	Increase above pre-COVID 19 levels and continue to increase
	Increase rail passenger numbers	Rail journeys between the north and other regions: 49.9 million journeys (2019/20)	Increase

STP Ambition	Metric	Baseline (year)	Indicator direction
Transforming Economic Performance	Increase rail passenger at the busiest rail hubs	top 10 stations for entries and exits: all operators :148.0 million. (2019/20)	Increase above pre-COVID 19 levels and continue to increase
	Increased line speeds	Proportion of long-distance services achieving average journey speeds of at least 80mph: 26% (May 2022 timetable)	Increase towards desirable minimum standards
	Increased line speeds	Proportion of local services achieving journey times of at least 40mph: 9% (May 2022 timetable)	Increase towards desirable minimum standards
Transforming Economic Performance	The five major ports (Grimsby and Immingham, Hull, Port of Tyne, Teesport, Port of Liverpool) to be served by rail with W12 gauge clearance	Immingham, Grimsby and Teesport are already served by W12 clearance (NR Freight Network Study) (2022)	Increase - upgrades to include Port of Tyne and Port of Liverpool
	Increased line speeds	Proportion of inter-urban services achieving journey times of at least 60 mph :22% (May 2022 timetable)	Increase towards desirable minimum standards
	Increase bus passenger numbers	Total journeys: 805 million total concessionary journeys: 297 million	Increase

STP Ambition	Metric	Baseline (year)	Indicator direction	STP Ambition	Metric	Baseline (year)	Indicator direction
Transforming Economic Performance	Improved digital connectivity	% of premises able to receive gigabit-capable broadband: 66% (March 2022)	Increase to 100%				
		% outdoor 4G coverage to all operators: 92.60% (March 2022)	Increase, and level up rural areas				

7.2.2 Decarbonising surface transport

STP Ambition	Metric	Baseline (year)	Indicator direction
Decarbonising surface transport	Increase the share of rail network that is electrified in the North.	35.3% (2022)	Increase
	Reduced rail cancellations due to severe weather	TPE and Northern - percentage of cancellations 10.3% (2021/22)	Decrease
		TPE and Northern - total 3,697 (2021/22)	
	Increased vehicle occupancy	Average 1.53 (2018/19)	Increase
		Commuter Trips: 1.15(2018/19)	
	Population in the North at a high risk of mortality due to pollutants linked to transport.	NO2 5,880,000 (2019)	

STP Ambition	Metric	Baseline (year)	Indicator direction
Decarbonising surface transport	Population in the North at a high risk of mortality due to pollutants linked to transport	PM2.5 5,640,000 (2019)	Decrease
		PM 10 5,858,000 (2019)	Decrease
	Proportion of paths on the Major Road network (SRN plus local major roads) exposed to pollutant levels above WHO recommended levels	NO2: 75.4% (2019)	Decrease
		PM 2.5: 97.8% (2019)	Decrease

STP Ambition	Metric	Baseline (year)	Indicator direction
Decarbonising surface transport	Accelerated uptake of electric vehicles	% of licensed cars and vans that are battery electric in the North: 1.5% (Q3 2022)	Increase
		Number of battery electric vehicles in the North: 125,720 (Q3 2022)	Neutral
		% of licensed cars and vans that are ultra-low emission in the North: 2.5% (Q3 2022)	Increase
	Accelerated uptake of EV charging points	Number of en-route public rapid charge points: 1450 (2022)	Increase to 26,00 by 2025
Decarbonising surface transport	Accelerated uptake of EV charging points	Number of public non-rapid charge points: 4950 (2022)	Increase to 48,000 by 2025
	Mode shift of trips from car to public transport and active travel	Ratio of car trips to trips of any other modes 1.7 (2018/19 Average)	Decrease
		Average number of annual trips per person by car (driver):424 (2018/19 Average)	
		Average proportion of annual trips taken by car (driver): 41.6% (2018/19 Average)	

STP Ambition	Metric	Baseline (year)	Indicator direction
Decarbonising surface transport	Mode shift of trips from car to public transport and active travel	Average number of annual trips per person by car: passenger 224 (2018/19 Average)	Decrease
		Average number of annual trips per person by rail: 16 (2018/19 Average)	Increase
		Average proportion of trips per person by rail: 1.5% (2018/19 Average)	Increase

STP Ambition	Metric	Baseline (year)	Indicator direction
Decarbonising surface transport	Mode shift of trips from car to public transport and active travel	Average number of annual trips per person by bus & coach 56 (2018/19 Average)	Increase
		Average proportion of annual trips per person by bus & coach 5.5% (2018/19 Average)	Increase
		Average number of annual trips per person: walking 284 (2018/19 Average)	Increase

STP Ambition	Metric	Baseline (year)	Indicator direction	STP Ambition	Metric	Baseline (year)	Indicator direction
Decarbonising surface transport	Mode shift of trips from car to public transport and active travel	Average proportion of annual trips per person: walking 27.9% (2018/19 Average)	Increase	Decarbonising Surface transport	Share of trips made by public transport to increase to 10% by 2030 (rail to 2%; bus to 8%)	Public transport 7%: Rail 1.5%; Bus and Coach %5% (2018/19)	Increase
		Average number of annual trips per person by cycle :15 (2018/19 Average)	Increase		Share of trips made by active travel to increase to 33% by 2030	Active modes: 29% (2018/19)	Increase
		Average proportion of annual trips per person by cycle 1.5% (2018/19 Average)	Increase		Share of trips made by public transport to increase to 15% by 2050 (rail to 3%, bus to 12%)	Public transport 7%: Rail 1.5%; Bus and Coach 5% (2018/19)	Increase
					Share of trips made by active travel to increase to 36% by 2050.	Active modes: 29% (2018/19)	

STP Ambition	Metric	Baseline (year)	Indicator direction
Decarbonising surface transport	Mode shift of commuting trip from car to public transport and active travel	Proportion of commuters who use the car as their main mode of commuting :75.7% (2018/19 Average)	Decrease
		Proportion of commuters who use rail (trains and light rail) as their main mode of commuting: 3.8% (2018/19 Average)	Increase
	Mode shift of commuting trip from car to public transport and active travel	Proportion of commuters who use buses and coaches as their main mode of commuting: 7.0% (2018/19 Average)	Increase
Decarbonising surface transport	Mode shift of commuting trip from car to public transport and active travel	Proportion of commuters who use walking as their main mode of commuting: 9.4% (2018/19 Average)	Increase
		Proportion of commuters who use cycling (including e-bikes) as their main mode of commuting. 2.5% (2018/19 Average)	Increase
	Mode shift of travel miles from car to public transport and active travel	Ratio of car miles to miles of all other modes 5.2 (2018/19 Average)	Decrease

STP Ambition	Metric	Baseline (year)	Indicator direction
Decarbonising surface transport	Mode shift of travel miles from car to public transport and active travel	Average number of annual miles per person by car: driver: 3131 (2018/19 Average)	Decrease
		Average proportion of annual miles per person by car: driver 54.9% (2018/19 Average)	Decrease
	Mode shift of travel miles from car to public transport and active travel	Average number of annual miles per person by car: passenger 1659.2: (2018/19 Average)	Decrease

STP Ambition	Metric	Baseline (year)	Indicator direction
Decarbonising surface transport	Mode shift of travel miles from car to public transport and active travel	Average proportion of annual miles per person by car: passenger 29.1% (2018/19 Average)	Decrease
		Average number of miles per person by rail: 456.0 (2018/19 Average)	Increase
	Mode shift of travel miles from car to public transport and active travel	Average proportion of annual miles per person by rail: 8.0% (2018/19 Average)	increase

STP Ambition	Metric	Baseline (year)	Indicator direction
Decarbonising surface transport	Mode shift of travel miles from car to public transport and active travel	Average number of annual miles per person by bus & coach 239.2 (2018/19 Average)	Increase
		Average proportion of annual miles per person by bus & coach 4.2% (2018/19 Average)	Increase
	Mode shift of travel miles from car to public transport and active travel	Average number of annual miles per person by walk 173.5. (2018/19 Average)	Increase
		Average proportion of annual miles per person by walk 3% (2018/19 Average)	
Decarbonising surface transport	Mode shift of travel miles from car to public transport and active travel	Average number of annual miles per person by cycle 45.4 (2018/19 Average)	Increase
		Average proportion of annual miles per person by cycle 0.8% (2018/19 Average)	Increase
	Reduced vehicle kms on minor roads	Total vehicle kms on minor roads 26.5 billion (2019)	Decrease
		% of vehicle kms on minor roads 33.9% (2019)	Decrease

STP Ambition	Metric	Baseline (year)	Indicator direction
Decarbonising surface transport	Modal shift from road to rail	Total HGV tonnage carried within the North 301 Mt (2019)	Neutral
		total HGV tonnage carried within and through the North 488 Mt (2019)	
	Modal shift from road to rail	Percentage of GB HGV tonnage carried at least partially within the North 32.0% (2019)	Neutral
	Proportion of adults using active modes for travel at least three days per week	Walking for travel 19.7% (2018/19)	Increase
		Cycling for travel 2.1 % (2018/19)	
	Reduced greenhouse gas emissions by mode	Car 14.46 Mt (2018)	Decrease

STP Ambition	Metric	Baseline (year)	Indicator direction
Decarbonising surface transport	Reduced greenhouse gas emissions by mode	HGVs 7.21 Mt (2018)	Decrease
	Reduced greenhouse gas emissions by mode	LGVs 2.71 Mt (2018)	Decrease
		Bus 0.63 Mt (2018)	Decrease
		Rail 0.77 Mt (2018)	Decrease
	Reduced greenhouse gas emissions by vehicle segment	Large, SUVs, executive 4.91Mt (2018)	Decrease
		Medium 5.01 Mt (2018)	

STP Ambition	Metric	Baseline (year)	Indicator direction
Decarbonising surface transport	Modal shift from road to rail	Percentage of GB HGV tonnage carried at least partially within the North 32.0% (2019)	Decrease
	Proportion of adults using active modes for travel at least three days per week	Walking for travel 19.7% (2018/19)	Increase
		Cycling for travel 2.1 % (2018/19)	
	Reduced greenhouse gas emissions by mode	Car 14.46 Mt (2018)	Decrease
		HGVs 7.21 Mt (2018)	

STP Ambition	Metric	Baseline (year)	Indicator direction
Decarbonising surface transport	Reduced greenhouse gas emissions by mode	LGVs 2.71 Mt (2018)	Decrease
		Bus 0.63 Mt (2018)	Decrease
		Rail 0.77 Mt (2018)	Decrease
	Reduced greenhouse gas emissions by vehicle segment	Large, SUVs, executive 4.91Mt (2018)	Decrease
		Medium 5.01 Mt (2018)	

STP Ambition	Metric	Baseline (year)	Indicator direction
Decarbonising surface transport	Reduced greenhouse gas emissions by vehicle segment	Small and mini 4.54 Mt (2018)	Decrease
	Reduced greenhouse gas emissions by area type	Rural 6.86 Mt (2018)	Decrease
		Suburban 14.26 Mt (2018)	
		Urban 3.26 Mt (2018)	
	Reduced transport greenhouse gas emissions per capita	1.62 tonnes / year (2018)	Decrease
	Reduced greenhouse gas emissions per km	Car: 141.70 g/km (2018)	Decrease
		HGV: 662.48 g/km (2018)	Decrease

STP Ambition	Metric	Baseline (year)	Indicator direction
Decarbonising surface transport	Reduced greenhouse gas emissions per km	LGV: 212.92 g /km (2018)	Decrease

7.2.3 Enhancing social inclusion and health

STP Ambition	Metric	Baseline (year)	Indicator direction	STP Ambition	Metric	Baseline (year)	Indicator direction
Enhancing social inclusion and health	Percentage of postcodes within 700m of a public transport access point	90.40% (2022)	Increase	Enhancing social inclusion and health	Improved accessibility to employment by public transport	Proportion of users within 45 minutes of at least 7 medium employment centres: 34.4% (2019)	Increase
	Percentage of postcodes within 2km of a railway station	43.50% (2022)	Increase			Proportion of the population that can access an employment centre with at least 5,000 jobs by public transport within 30 minutes: 63.4% (2019)	Increase
	Improved accessibility to employment by public transport	Average travel time to nearest employment centre: 29.3 minutes (2019)	Decrease		Improved connectivity to hospitals by public transport / walk	Proportion within 30 minutes of a hospital by public transport: 37.5% (2019)	Increase

STP Ambition	Metric	Baseline (year)	Indicator direction
Enhancing social inclusion and health	Improved connectivity to hospitals by public transport / walk	Average journey time to the nearest hospital by public transport: 36.9 minutes (2019)	Decrease
	Improved connectivity to education facilities by public transport	Proportion within 30 minutes of an FE college by public transport: 84.90% (2019)	Increase
		Proportion within 15 minutes of a secondary school by public transport: 41.80% (2019)	Increase
Enhancing social inclusion and health	Improved connectivity to education facilities by public transport	Average journey time to an FE college by public transport: 21.7 minutes (2019)	Increase
	Improved connectivity to basic services by public transport	Average travel time to nearest town centre by public transport: 20.6 minutes (2019)	Increase
	Affordable Transport	Bus and coach fares - RPI change over 12 months, ONS (whole of UK): 8.6% (2021)	Neutral

STP Ambition	Metric	Baseline (year)	Indicator direction
Enhancing social inclusion and health	Affordable Transport	Rail fares - RPI change over 12 month, ONS (whole of UK): 2.7% (2021)	Neutral
		Petrol and diesel - RPI change over 12 months, ONS (whole of UK): 14.5% (2021)	Neutral
		Electricity - RPI change over 12 months, ONS (whole of UK): 6.6% (2021)	Neutral

STP Ambition	Metric	Baseline (year)	Indicator direction
Enhancing social inclusion and health	Reduced noise pollution from transport	% of population in urban areas exposed to daytime road noise of 65dB or more: 6.6% (2017)	Decrease
		% of population in urban areas exposed to nighttime road noise of 55dB or more: 7.9% (2017)	Decrease
		The % of population in urban areas exposed to daytime rail noise of 65dB or more: 0.4% (2017)	Decrease

STP Ambition	Metric	Baseline (year)	Indicator direction
Enhancing social inclusion and health	Reduced noise pollution from transport	The % of population in urban areas exposed to night-time rail noise of 55dB or more 0.6% (2017)	Decrease
	Overall satisfaction	Northern: 85% (April – Sept 2022)	Increase
		TPE: 86% (April – Sept 2022)	Increase
	Satisfaction with punctuality / reliability	Northern: 82% (July – Dec 2022)	Increase
		TPE: 76% (July – Dec 2022)	Increase
	Satisfaction with value for money	Northern: 76% (July – Dec 2022)	Increase

STP Ambition	Metric	Baseline (year)	Indicator direction
Enhancing social inclusion and health	Satisfaction with value for money	TPE: 65% (July – Dec 2022)	Increase
	Satisfaction with cleanliness	Northern: 61% (July – Dec 2022)	Increase
		TPE: 60% (July – Dec 2022)	Increase
	Satisfaction with frequency of services	Northern: 76% (July – Dec 2022)	Increase
		TPE: 77% (July – Dec 2022)	Increase
	Satisfaction with information during the journey	Northern: 61% (July – Dec 2022)	Increase

STP Ambition	Metric	Baseline (year)	Indicator direction
Enhancing social inclusion and health	Satisfaction with information during the journey	TPE: 64% (July – Dec 2022)	Increase
	Satisfaction with level of crowding	Northern: 72% (July – Dec 2022)	Increase
		TPE 67% (July- Dec 2022)	Increase

STP Ambition	Metric	Baseline (year)	Indicator direction
Enhancing social inclusion and health	Reduced overcrowding on the rail network	Proportion of passengers standing at key northern rail hubs (Leeds, Liverpool, Manchester, Newcastle, Sheffield): AM peak hour: 16% (2019)	Minimise compared to pre-COVID baseline
		Proportion of passengers standing at key northern rail hubs, PM peak hour: 11.8% (2019)	Minimise compared to pre-COVID baseline
		Passengers in excess of capacity (PiXC) at key northern rail hubs - AM peak hour: 2.4% (2019)	Minimise compared to pre-COVID baseline

STP Ambition	Metric	Baseline (year)	Indicator direction
Enhancing social inclusion and health	Reduced overcrowding on the rail network	Passengers in excess of capacity (PiXC) at key northern rail hubs PM peak hour: 1.4% (2019)	Decrease
	Improved rail punctuality (within 59 seconds) - passenger	Northern 76.2% (2019/20)	Increase
		TPE: 62.2% (2019/20)	Increase
		Avanti West Coast 39.6% (2019/20)	Increase
		Cross Country 47.0% (2019/20)	Increase
		LNER 45.2% (2019/20)	Increase
		Hull 41.6% (2019/20)	Increase
Enhancing social inclusion and health	Improved rail punctuality (time to 3 minutes) - passenger	Northern: 76.2% (2019/20)	Increase
		TPE: 62.2% (2019/20)	Increase
		Avanti West Coast: 60.7% (2019/20)	Increase
		Cross Country: 69.0% (2019/20)	Increase
		LNER: 63.4% (2019/20)	Increase
		Hull Trains 65.1% (2019/20)	Increase

STP Ambition	Metric	Baseline (year)	Indicator direction
Enhancing social inclusion and health	Reduced rail reduced cancellations (cancellation score)	Northern: 4.1% (2019/20)	Decrease
		TPE: 7.8% (2019/20)	Decrease
		Avanti West Coast 2.9% (2019/20)	Decrease
		Cross Country: 3.6% (2019/20)	Decrease
		LNER: 3.1% (2019/20)	Decrease
Enhancing social inclusion and health	Reduced rail reduced cancellations (cancellation score)	Hull Trains: 2.1% (2019/20)	Decrease
	Proportion of services arriving in economic centres prior to 7am on weekdays and 9 am on Sundays	before 7am on weekdays 78.5% (May 2022 timetable)	Increase
		before 9am on Sundays 53.9% (May 2022 timetable)	Increase
	Improved station facilities	Progress towards TfN acceptable standards 54.0%	Increase

STP Ambition	Metric	Baseline (year)	Indicator direction
Enhancing social inclusion and health	Improved station facilities	Progress towards TfN minimum standards 64.0%	Increase
		Progress towards desirable standards on step free access 72.0%	Increase
	Reduction in population affected by transport related social exclusion	Proportion of the North's population at high risk of TRSE 21.3% (2019)	Decrease
		Proportion of the North's population at very high risk of TRSE 5.2% (2019)	Decrease
Enhancing social inclusion and health	Reduction in population affected by transport related social exclusion	Proportion of the North's population at high risk of health TRSE 19.7% (2019)	Decrease
		Excess population at high risk of health TRSE, accounting for different area types 614,734 (2019)	Decrease
		Proportion of the North's population at high risk of employment TRSE 22.4% (2019)	Decrease

STP Ambition	Metric	Baseline (year)	Indicator direction
Enhancing social inclusion and health	Reduction in population affected by transport related social exclusion	Excess population vulnerable to employment TRSE, accounting for different area types 616,103 (2019)	Decrease
		Proportion of the North's population at high risk of education TRSE 22.1% (2019)	Decrease
		Excess population vulnerable to education TRSE, accounting for different area types 1,469,374 (2019)	Decrease
		Proportion of the North's population at high risk of services TRSE 28.9% (2019)	Decrease
	Reduction in road collisions and casualties	Number of cyclists killed and seriously injured, North. (868) (2018/19 average)	Decrease
Enhancing social inclusion and health	Reduction in population affected by transport related social exclusion	Excess population vulnerable to services TRSE, accounting for different area types 1,578,220 (2019)	Decrease
	Reduction in road collisions and casualties	Fatal and serious incidents, North (unadjusted)5,791 (2018/19 average)	Decrease
		Total 'minor' road incidents, North 20,252 (2018/19 average)	Decrease

STP Ambition	Metric	Baseline (year)	Indicator direction	STP Ambition	Metric	Baseline (year)	Indicator direction
Enhancing social inclusion and health	Reduction in road collisions and casualties	Number of pedestrians killed and seriously injured, North. 1,622 (2018/19 average)	Decrease				
		Number of minor road casualties in the North 28,366 (2018/19 average)	Decrease				
	Reduce population exposure to air pollution from transport	Reduce to zero the number of paths on the North's Major Road Network that exceed WHO Nitrogen Dioxide exposure limits by 2045	Decrease				

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