

TfN Analytical Framework

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Contents

What is the
Analytical
Framework for?

Supporting decision-making with
data analysis, scenario modelling &
economic appraisal.

What does the
Analytical
Framework include?

Data, modelling tools and appraisal
tools.

What next for the
Analytical
Framework?

TfN programmes, Sharing with
partners and Publication.

TfN Vision

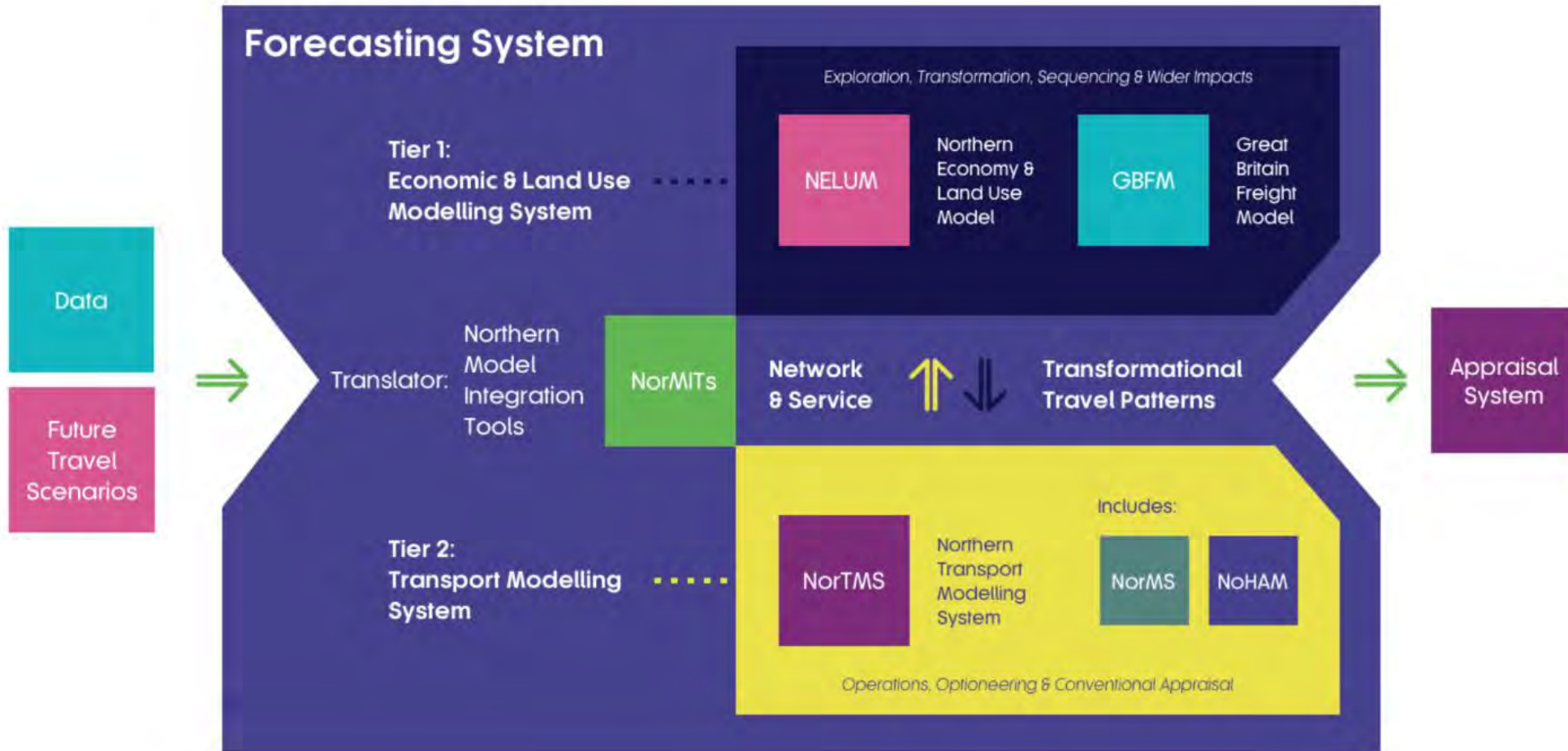
“A thriving North, where world class transport supports sustainable economic growth, excellent quality of life and improved opportunities for all.”

How do we decide if the interventions in the STP are going to achieve this?



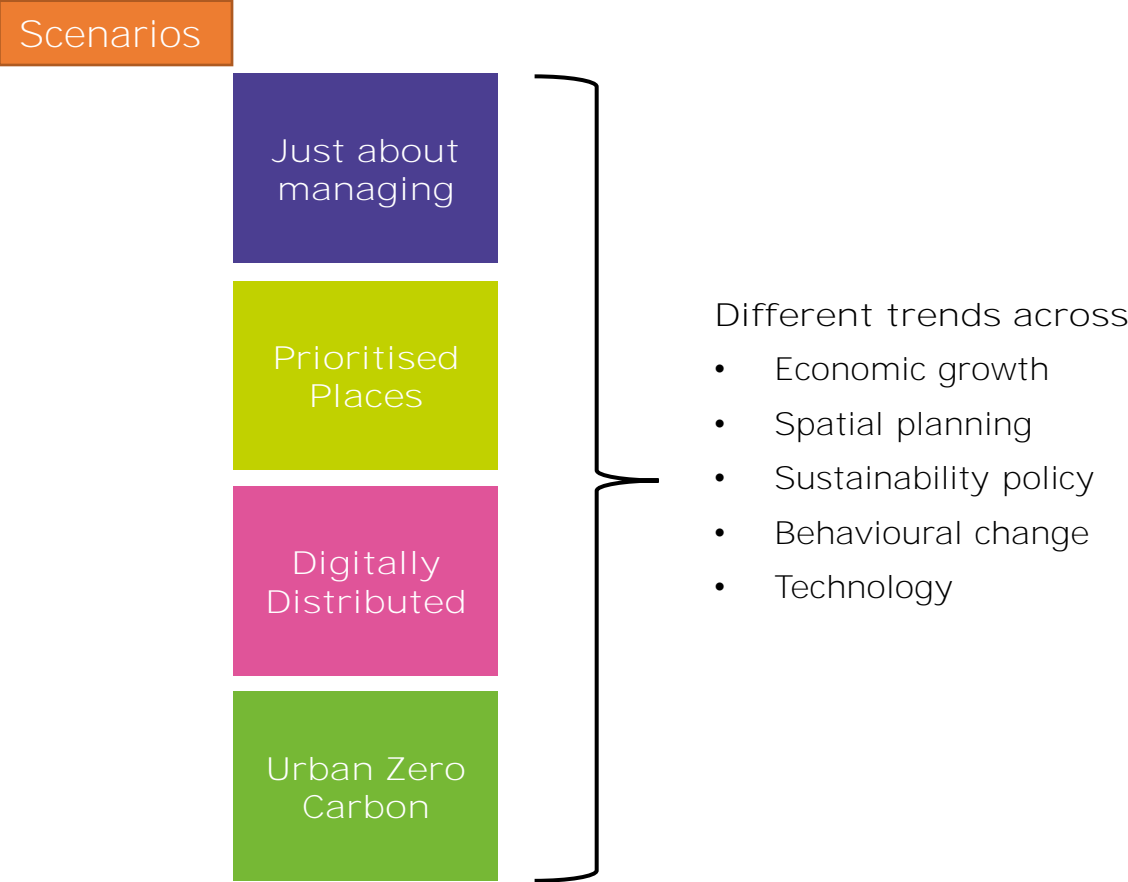
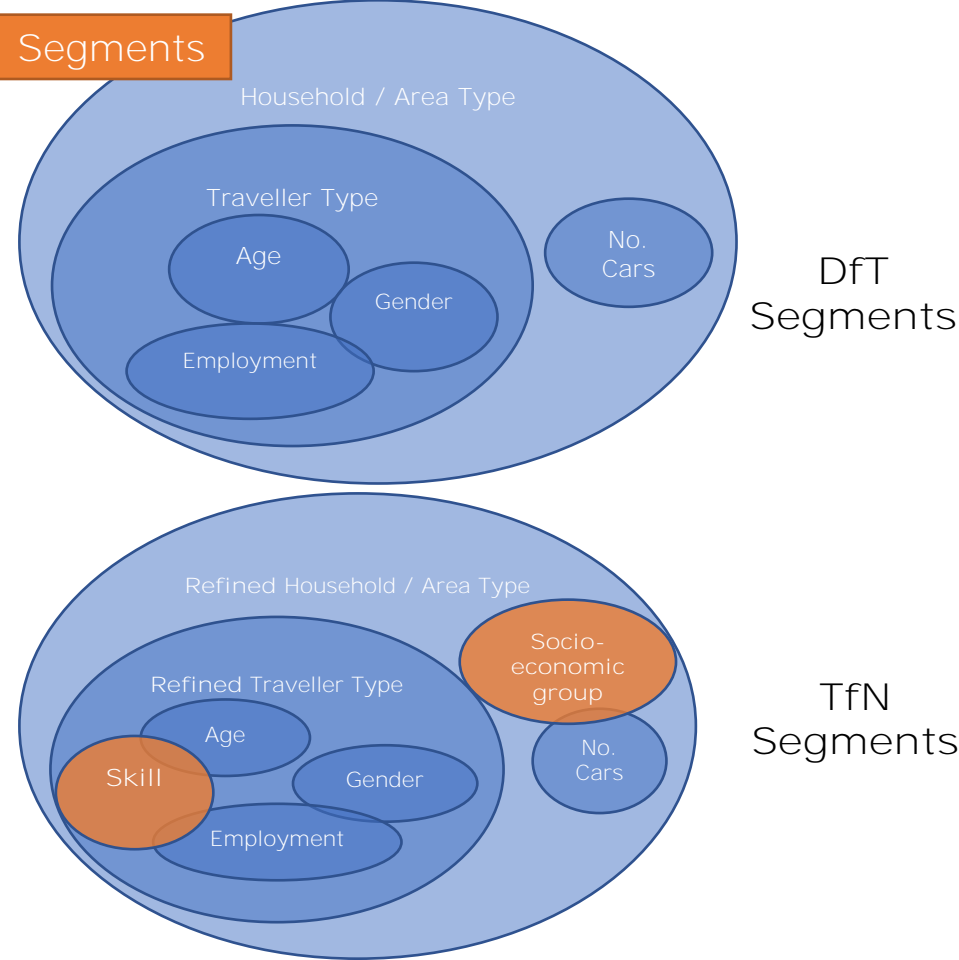
TfN Analytical Framework

a consistent approach to data, modelling and appraisal across travel modes and regions of the North



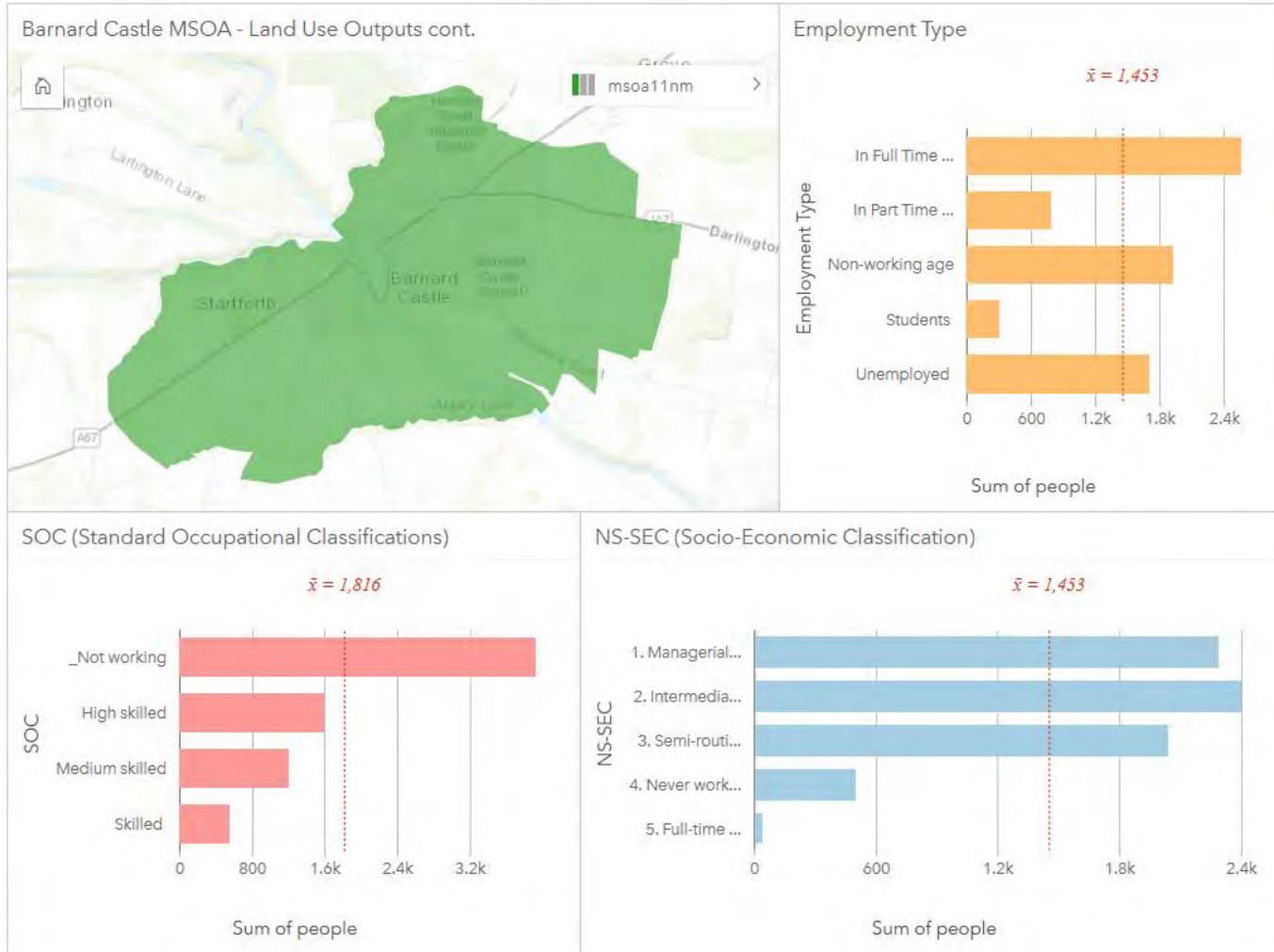
TfN Segments & Scenarios

A refined way of looking at current & future patterns of demand



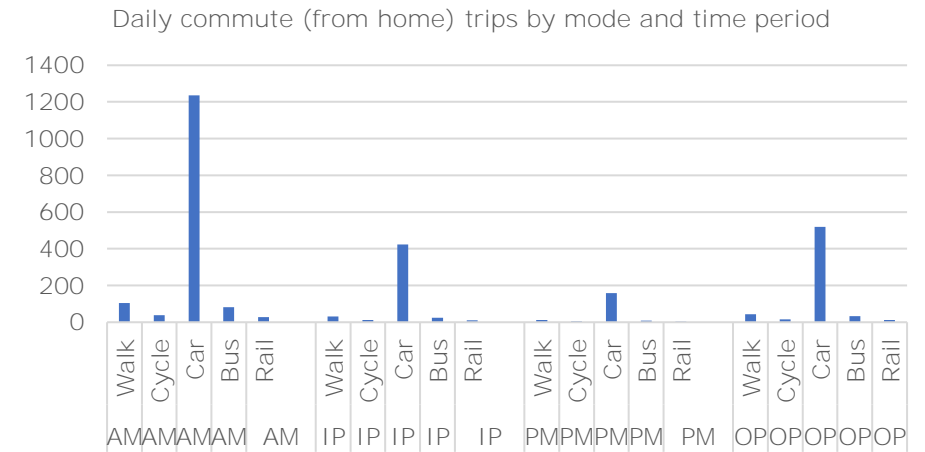
NorMI Ts land-use and demand tools

Land-Use

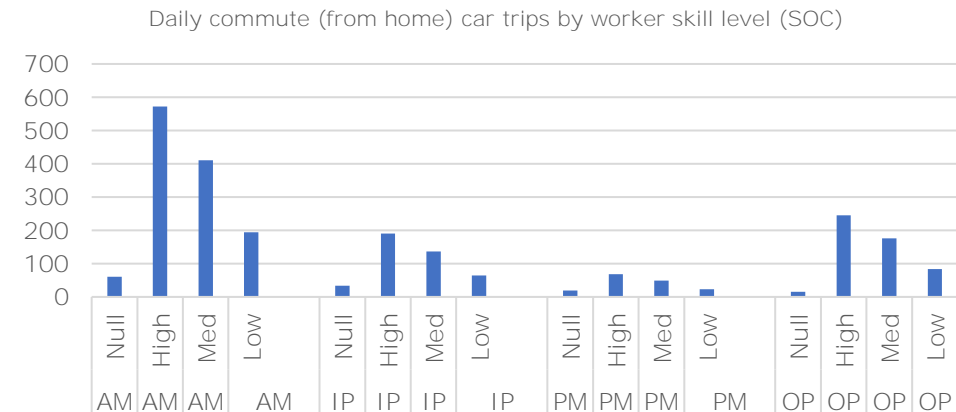


Demand

Mode / purpose totals

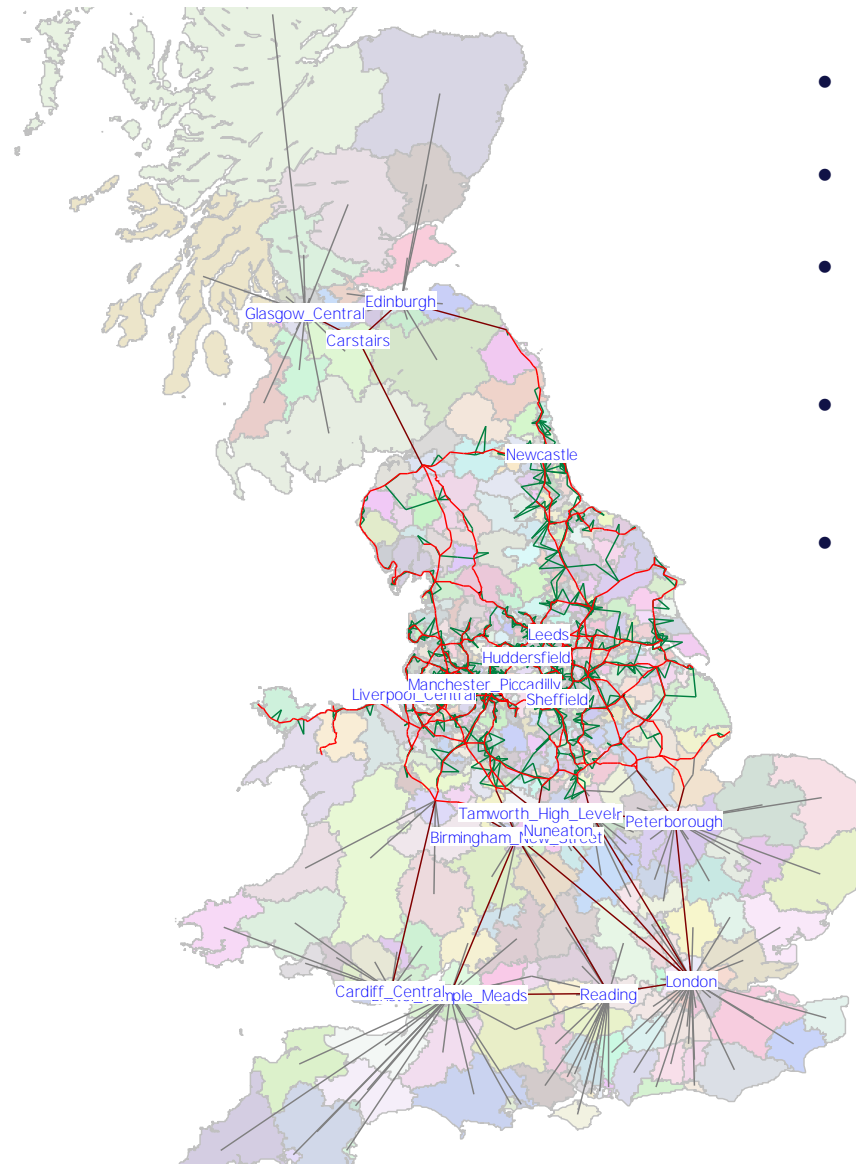


Skill level totals



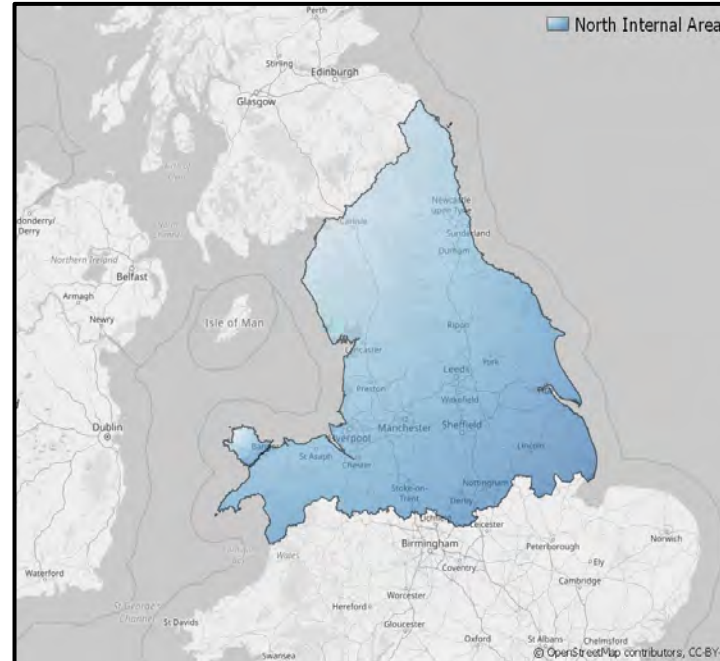
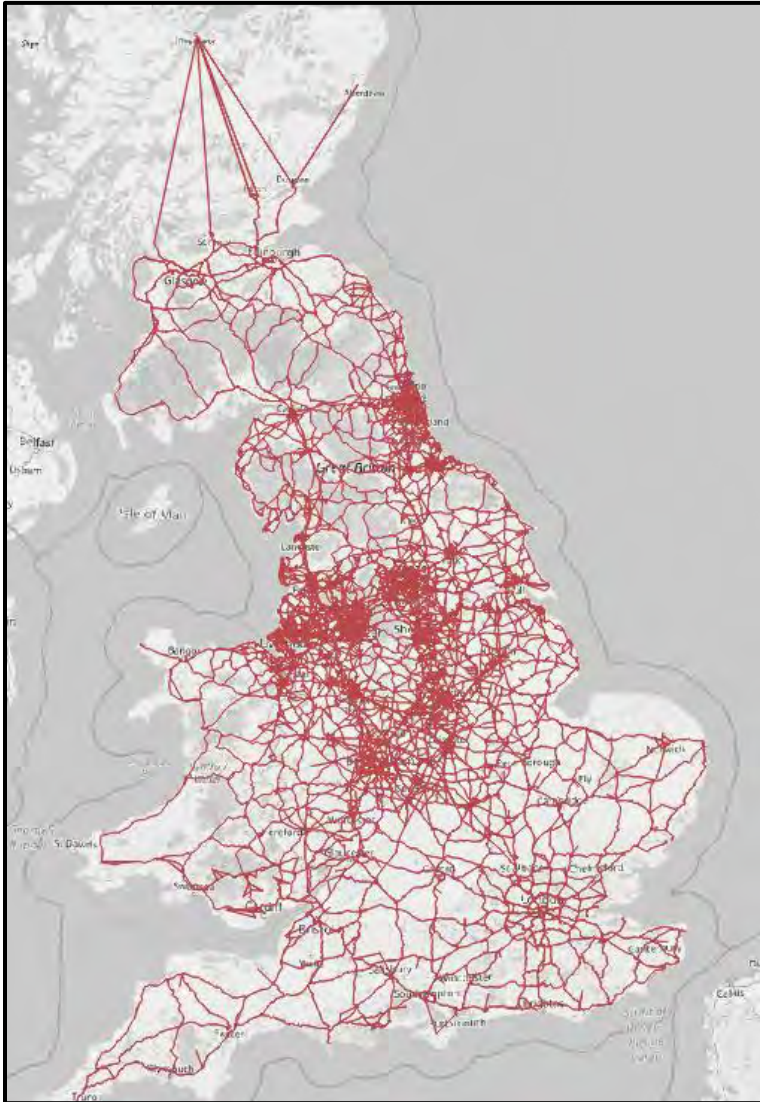
- *Car ownership model* is a key development planned for this year

Northern Rail Modelling System (NoRMS)



- Mode choice
- 4 Time-Period
- Land-Use based (zone-to-zone)
- Headway-based timetable
- Variable assignment with crowding

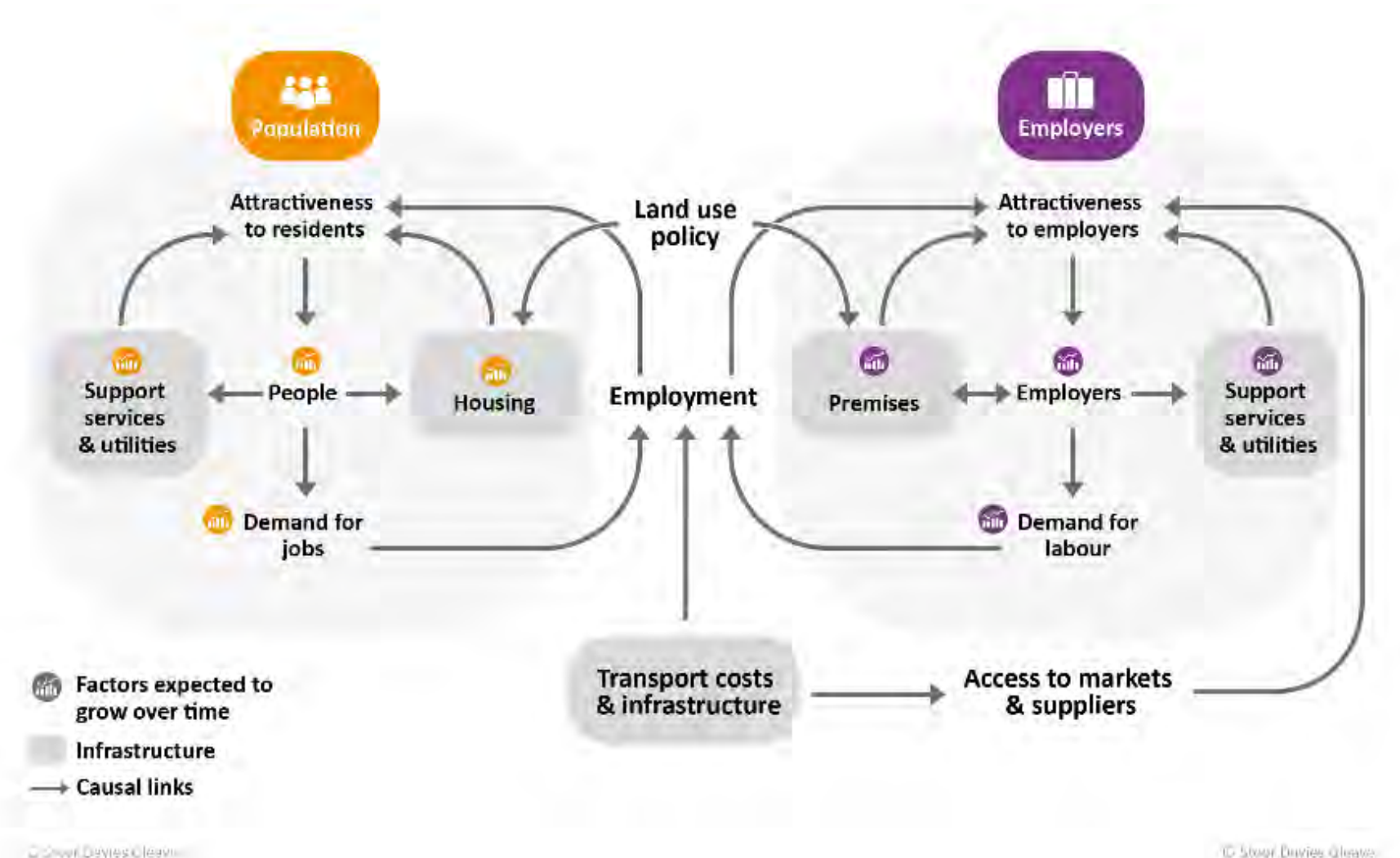
Northern Highway Assignment Model (NoHAM)



- Difficulties applying 3 existing Highways England models in parallel.
- Identified a need to move to a single, regional solution.

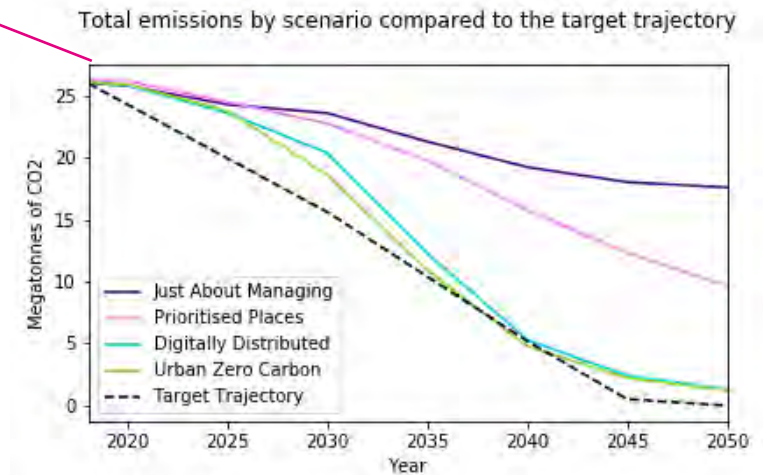
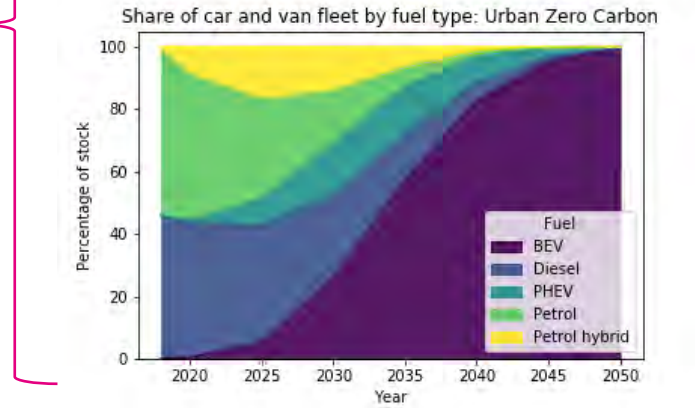
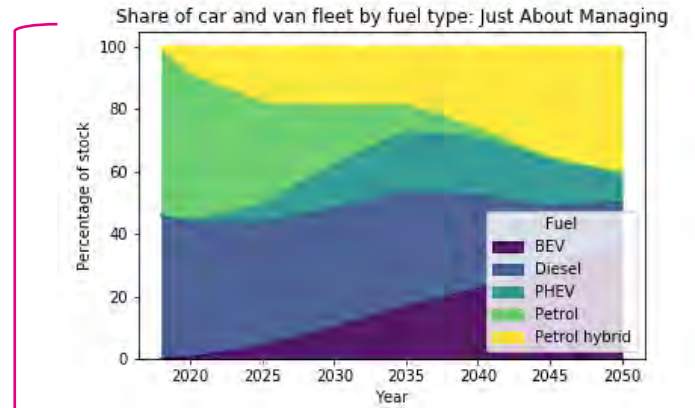
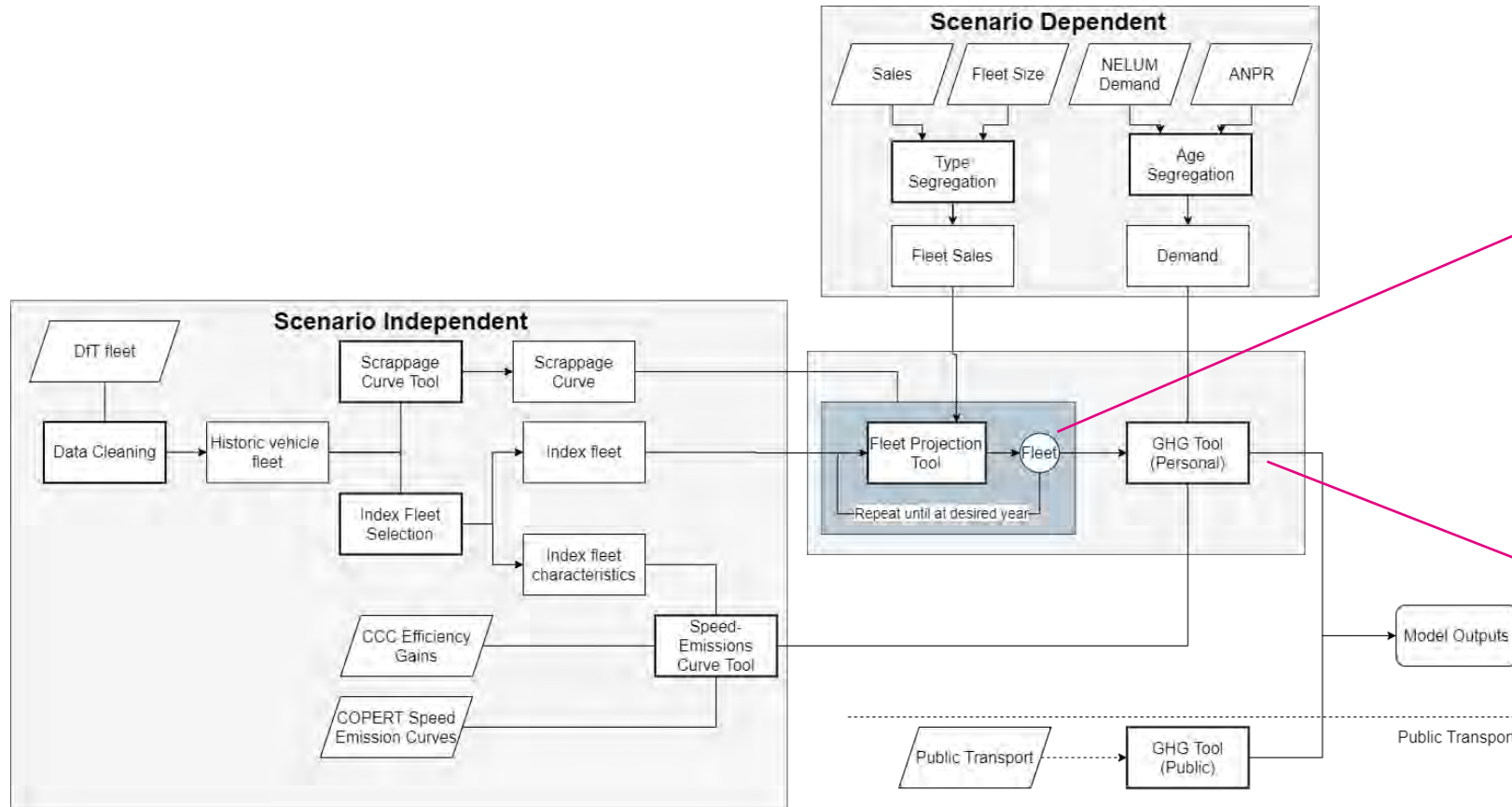
- Involves collaboration with DfT to base regional models on Core England Topography (NTMv5 and ITN), which paves way for other STB highway models. Also resource for Local Authority Partners.
- **Flexible 'network builder' tool** also allows application on minor and major schemes.

Northern Economy and Land-Use Model (NELUM)



- Simulates labour markets and land markets
- Integrated transport model calibrated to TfN transport model
- Used for strategic scenario analysis and dynamic Wider Impacts
- Includes relocation and displacement, as well as net effects.
- Linked to new Wider Impacts Calculator appraisal tool

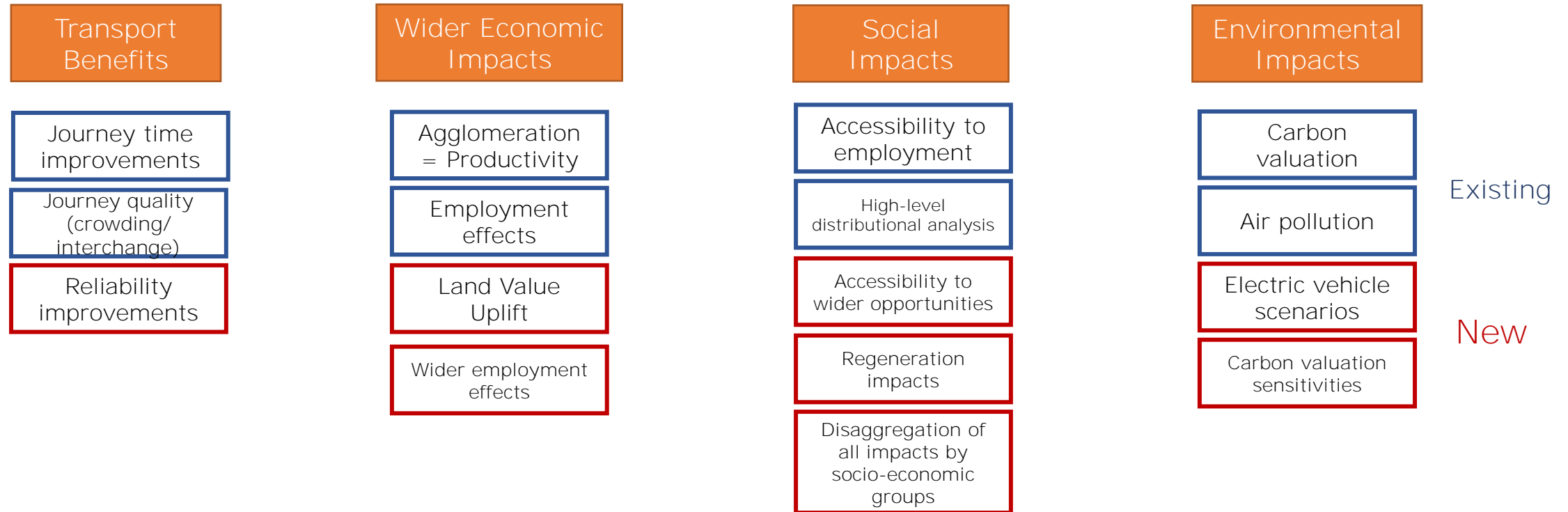
Northern Carbon tool (NoCarb)



Appraisal System

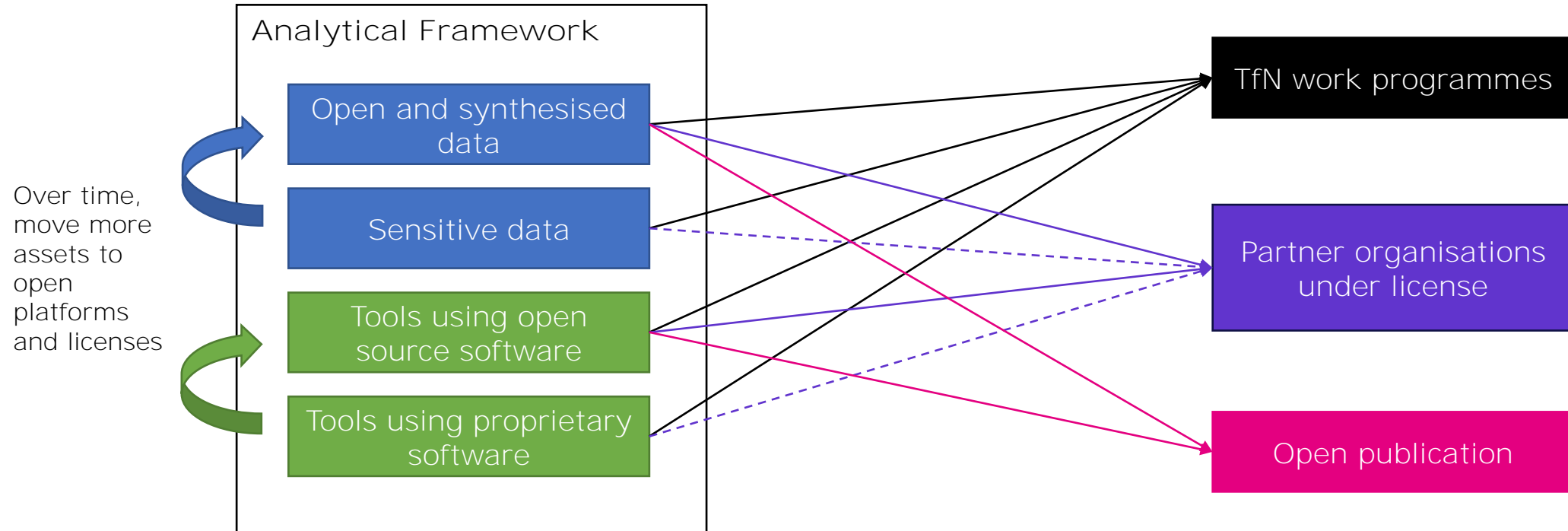
Valuing the impacts of TfN schemes against our objectives

Multi-Criteria Appraisal Framework



Application, sharing and publication

How we aim to maximise the value of TfN investment in Analytical Framework assets



- Near-term publication/sharing plans:
 - Land-use data
 - Base year travel matrices
 - Future Travel Scenarios
 - Wider Impacts Calculator

Thank You

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