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Update from the Department Transport Appraisal and Strategic Modelling

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Thursday, 27th of November 2014

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Update from the DfT

- Analytical Strategy
- Revisiting the new WebTAG
- National Trip End Model update
- Trip Rates Research Review
- NTM Futures
- Uncertainty

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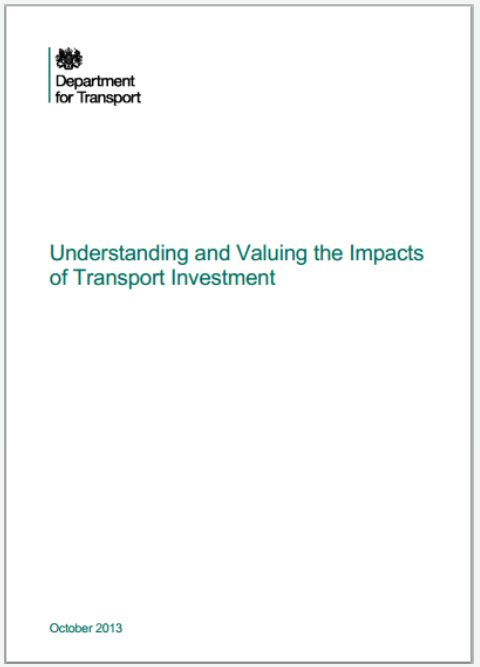
Analytical Strategy

- Set out in “Understanding and Valuing the Impact of Transport Investment”
- How TASM are taking forward analysis, largely in response to Laidlaw
- Split across seven work streams :
  - Economic Growth
  - Uncertainty and Risk
  - Forecasting Trends
  - Valuing Journey Improvements
  - Evaluation
  - Big Data
  - Environment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Understanding and Valuing the Impacts of Transport Investment

October 2013

Transport appraisal in investment decisions: A3 summary leaflet

PDF, 909KB, 2 pages

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Analytical Strategy – Work streams

Description	Objectives
Economic Growth	Provide a richer picture of the economic impacts of transport investments
Uncertainty and Risk	Developing a consistent approach across various transport scenarios and present uncertainty to allow better decision making
Forecasting Trends	Exploring patterns, updating forecasts and guidance about trips people make
Valuing Journey Improvements	Focusing on new, willingness-to-pay-based values of time for business and non-work travel
Evaluation	Linking up appraisal and evaluation
Big Data	We have access to massive volumes of structures & unstructured data
Environment	Work with other government departments to maintain our environmental toolkit.

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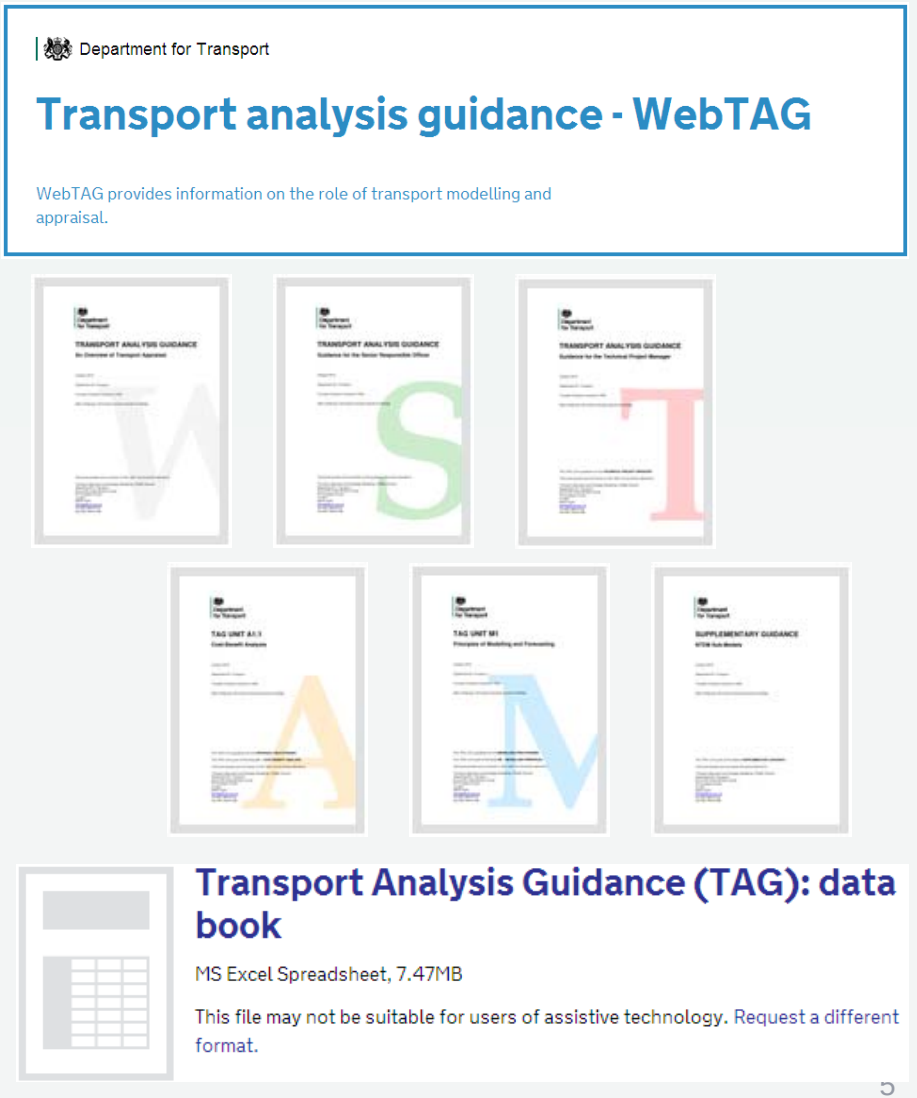
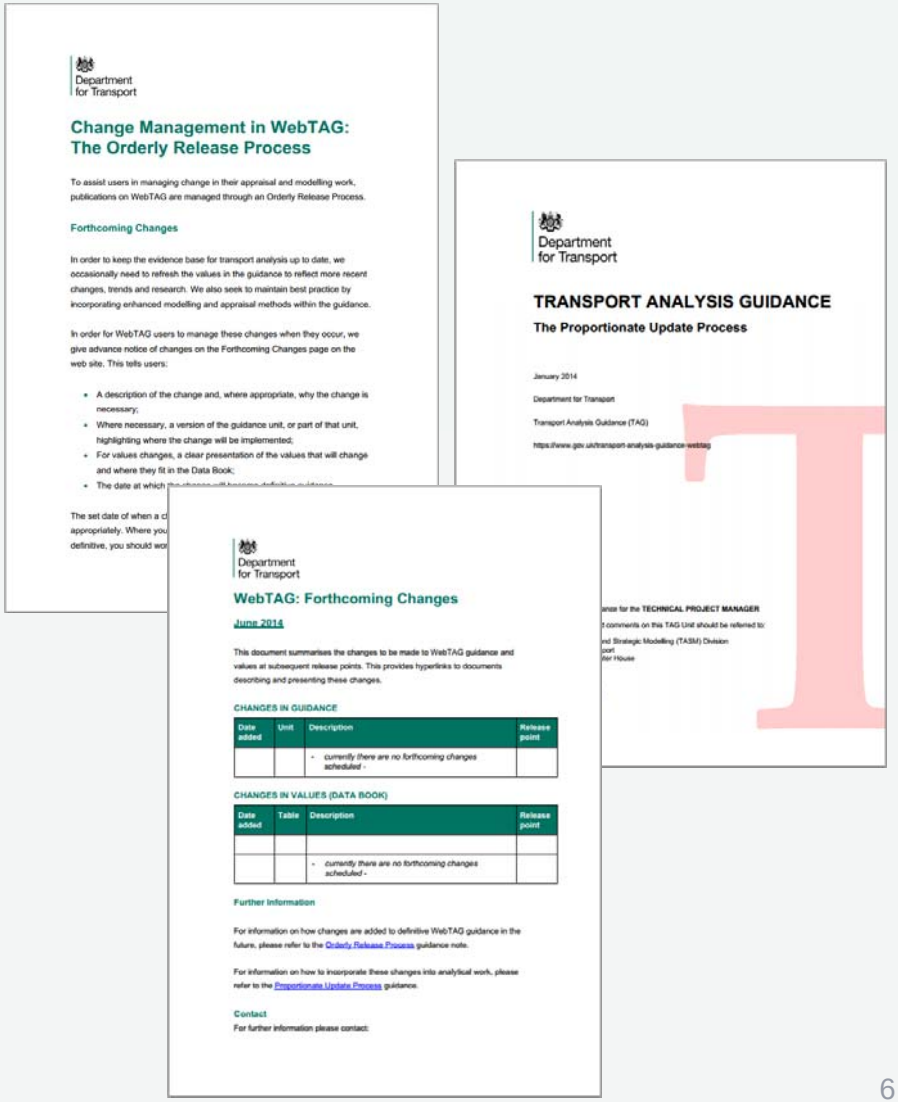
Revisiting the new WebTAG

- 1,800+ pages to 900 pages
- Higher-level guidance for promoters and managers
- Split into modelling and appraisal units for the practitioner
- Much fewer units – structured into topic manuals
- Data Book hosts all values in TAG in a spreadsheet
- Some updates made in November 2014



Proportionality and a new release process

- We've changed the way we update the guidance
- Proportionality – clearer advice on when and why to update after TAG changes
- Publish changes to which we are committed well in advance so people can prepare
- Consultation documents now separate from the release process
- Two releases per year – Spring and Autumn
- Mostly positive feedback



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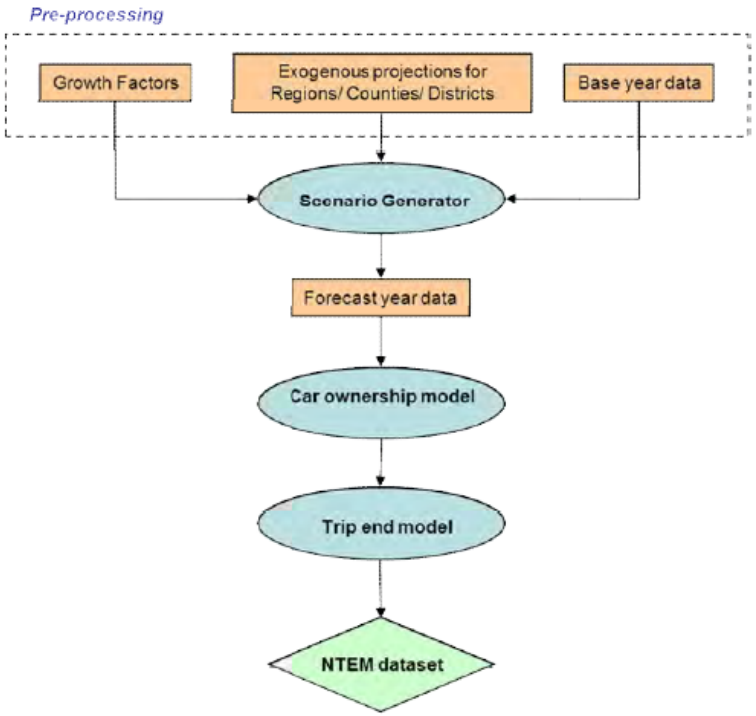
National Trip End Dataset Update

- The next update to TEMPRO is on the way, probably for Autumn 2015
- Data update to include 2011 Census and new forecasting data
- A thorough review of the current methodology and enhancement of the whole modelling system expected
- Interfaces with the NTM; zoning likely to become more detailed
- The system will continue to be free of charge for all to use.



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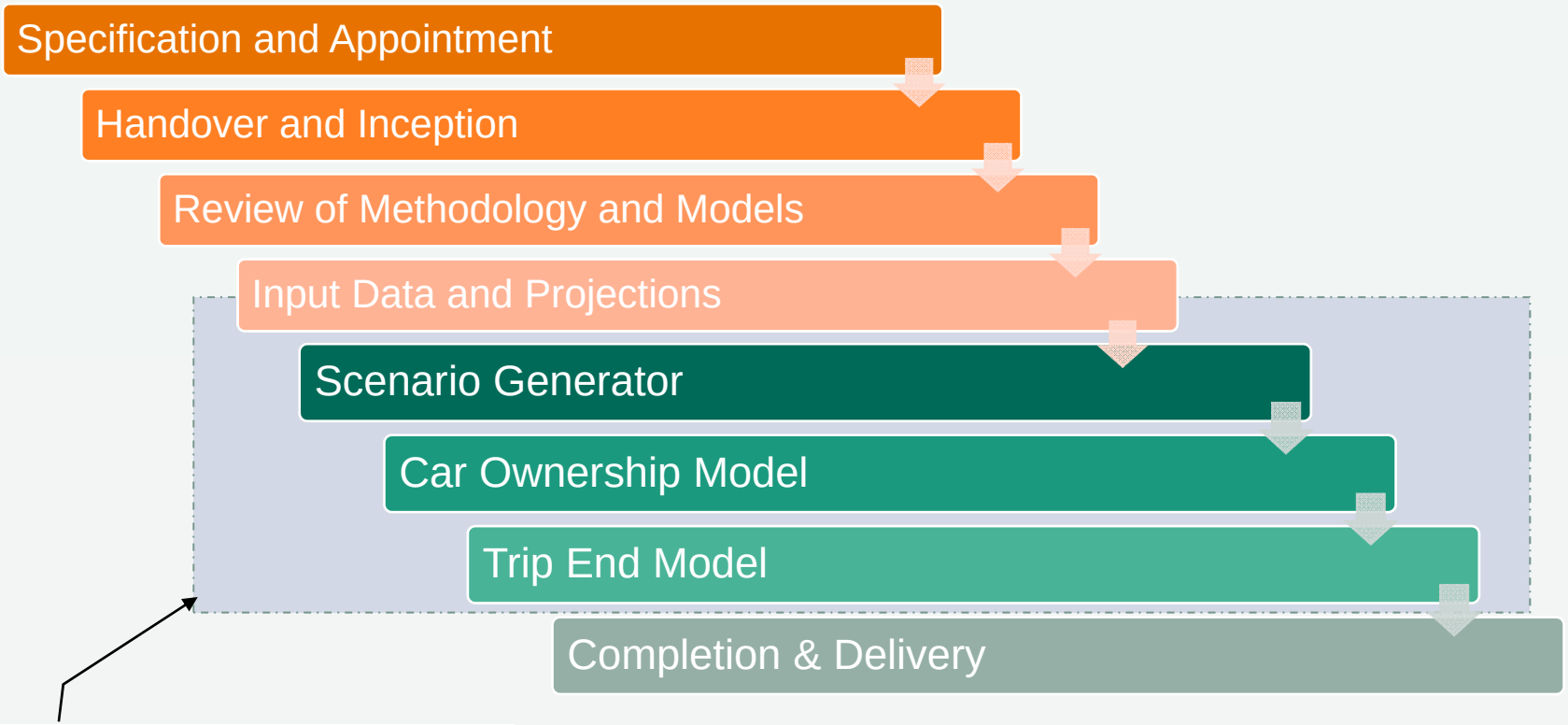
National Trip End Model Update - Timeline



Modelling stages to include Planning, Development, Execution, Testing and QA.

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Trip Rates Research

- This project will update our evidence about the number and pattern of trips that individuals make
- Phase 1 : Re-estimate trip rates using more recent National Travel Survey data (1998-2010)
- Phase 2 : Using the trends from first phase, identify the drivers of recent travel trends and potentially develop a model with capability of forecasting these trends for future years
- Outputs from both phases to feed into development of the NTEM.

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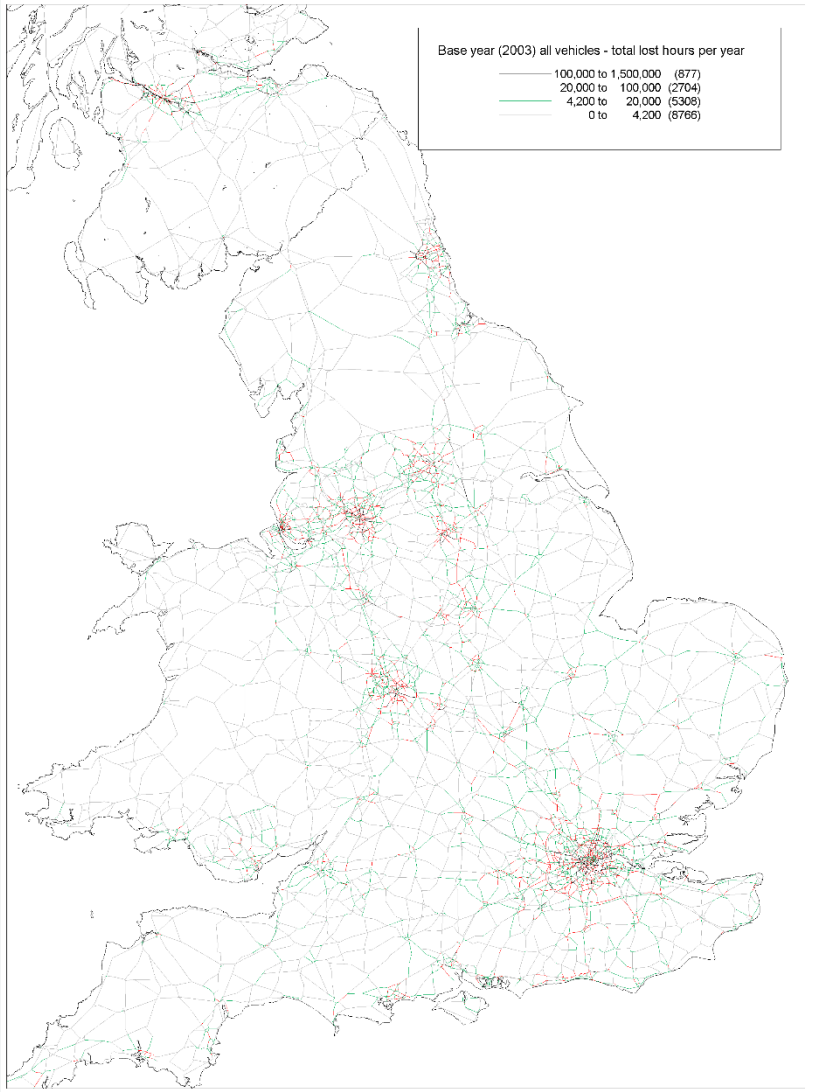
The National Transport Model

- Currently planning a new version of the NTM
- Needs:
  - National forecasts
  - Policy testing
  - Limitations:
  - Computing power
  - Resources
  - The NTM needs to be a model we can:
  - continue to run and develop over the next 10 years
  - adapt to a wide range of policy / network changes…
  - maintain in a fast paced environment



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NTM Futures

- At present, everything on the table:
  - Model structure
  - Spatial detail for demand and supply
  - Segmentation requirements
  - Validation standards
  - Input data (eg mobile phone)
  - “Quick” versus “Long” run-time versions
  - Innovative methods (e.g. adaptive zone sampling techniques)
  - Representation of rail, bus and active modes

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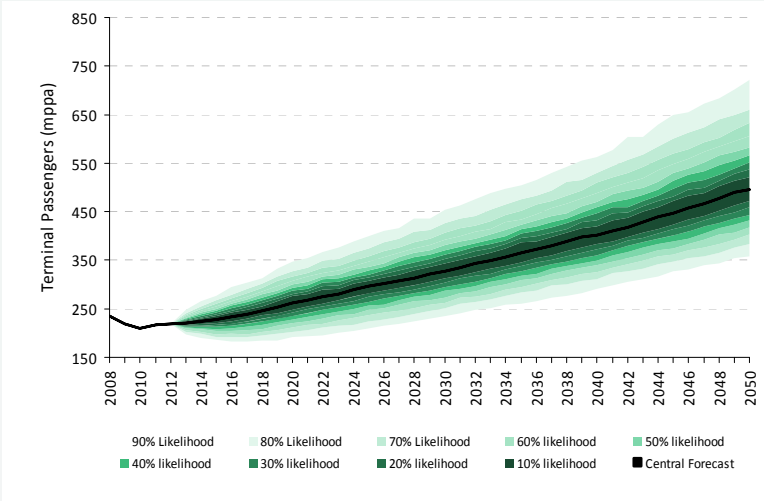
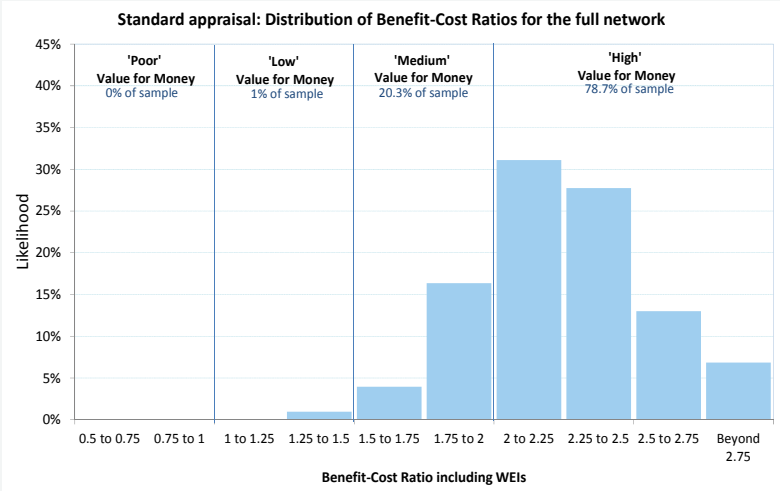
Uncertainty

- Thought and research into how to treat uncertainty in modelling and appraisal
- Wide project scope so far
- Use of ranges when presenting results
- Benefits extrapolation and interpolation
- Understanding uncertainty around core inputs
- Scenario building - strengthen guidance
- Presentational options – fancy charts
- Innovations – e.g. Monte Carlo techniques





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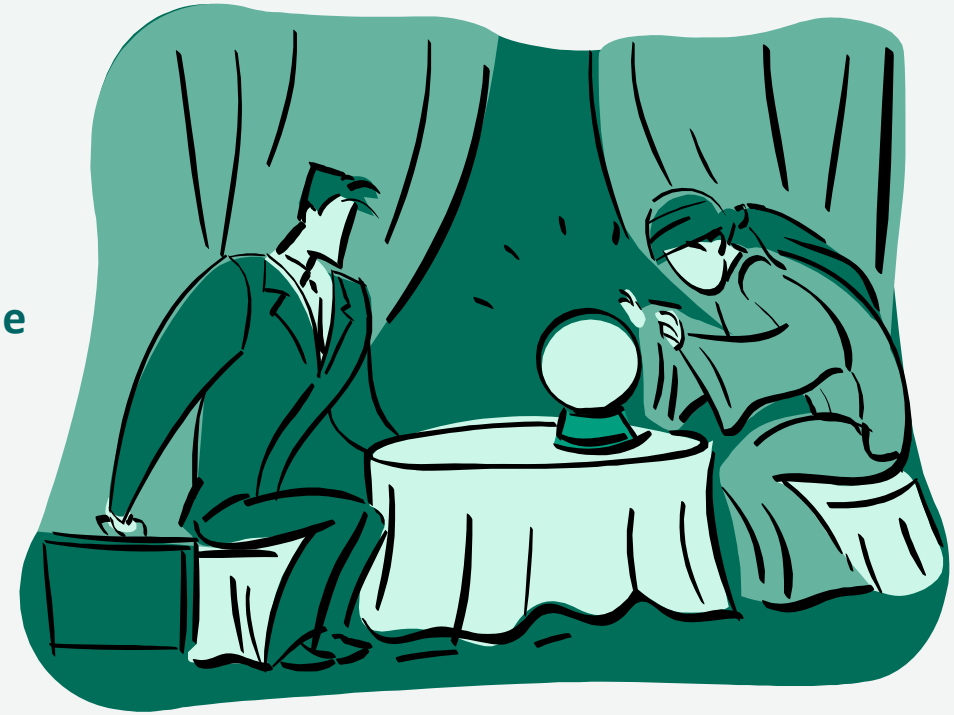
What else?

- **Incorporating DMRB guidance into WebTAG**
- **Developing matrix building guidance**
- **Incorporate guidance on appraisal in the case of large cost changes and new modes**
- **Please provide feedback – tasm@dft.gsi.gov.uk**
- **Dharmender.Tathgur@dft.gsi.gov.uk**