Ex-post evaluation at the UK Department for Transport

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Ex-post evaluation at the DfT

1. Background to ex-post evaluation at DfT
2. Some challenges
3. Some existing solutions – roads and local projects
4. Some new solutions – our monitoring and evaluation strategy and work for rail projects
DfT supports the transport network that helps the UK’s businesses and gets people and goods travelling around the country. We plan and invest in transport infrastructure to keep the UK on the move.

The DfT has a strong reputation for its analysis, mainly due to its ex-ante evaluation (appraisal).

There is recognition that ex-post evaluation needs more development.

There are challenges we need to meet.
Challenge: it is difficult to follow the standard policy cycle for transport infrastructure projects

The ‘ROAMEF’ Cycle from UK Treasury Green Book guidance

Why it is difficult to follow this standard policy cycle:

- Stakeholders are mainly focused on ex-ante appraisal for the investment decision;
- Long development times mean there is a big gap between appraisal and evaluation;
- Personnel, organisations and systems change in that time;
- It also takes a long time for full impacts to be seen (appraisal period may cover up to 60 years);
- So we need long-term commitments, a strong culture of evaluation and effective governance.
Challenge: there is a growing demand for ex-post evaluation in transport

- **From Government scrutiny:**
  - UK Parliament Public Accounts Committee and National Audit Office (NAO) have criticised DfT for lack of ex-post evaluation, especially for rail projects

- **Due to the increase in major investment projects:**
  - Major projects (e.g. High Speed 2) raise the profile of transport issues and stakeholder demand for evidence
  - Increased professionalism in major project delivery (e.g. Major Projects Authority) further increases demand for analysis

- **From the What Works Network:**
  - New independent centres set up by Government “to test and trial approaches and assess what works in major social policy areas”.
  - They call for more rigorous impact evaluation which can establish causal impact by considering the counterfactual
Challenge: robustly measuring impact against a counterfactual

- The **counterfactual**: what would have happened if the project had not happened or had taken a different form.
- Experimental approaches (e.g. Randomised Control Trials) are generally not feasible (or desirable) for transport.
- **Quasi-experimental approaches** are next best – using comparisons, controlling for characteristics of treatment versus comparison and analysing differences in outcome, e.g:

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Before  | After
---------|---------
Treatment|         
T1       | T2      
C1       | C2      
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- But this is difficult. Only a handful of studies in the world have successfully delivered this approach matched with

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Change in outcome for treatment
compared with
Change in outcome for comparison
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Existing solutions 1: Roads

- Highways England’s Post Opening Project Evaluations (POPE)

- These are well established - used for all major road schemes

- Three stage process:
  - Collection of pre-scheme baseline data
  - ‘1 year after’ evaluation
  - ‘5 years after’ evaluation

- Compares ex-ante forecast with ex-post result for objectives, e.g.:
  - Journey times, congestion, journey time reliability
  - Environment, air quality, noise
  - Safety
Existing solutions 1: Roads

- Studies are carried out consistently by single contractor, so allowing meta-analysis.

- For example, a 2013 meta-analysis report looked at 75 major schemes which opened between 2002 and 2010:
  - What proportion of scheme objectives were met?
  - How did the resulting benefits-cost ratio (BCR) compare with forecast?
  - What was the relative performance of different types of schemes?
Locally-delivered projects with central funding require a distinct approach.

The NAO’s recommended approach:
- Provide guidance on how evaluation should be conducted;
- Incentivise local stakeholders to carry out evaluation;
- Have effective arrangements for learning lessons from evaluations.

DfT follows this approach on local projects

Example: Local Major Schemes
- Investment in local transport schemes costing more than £5m
- Local Authorities responsible for scheme design and delivery as well as evaluation
- Framework sets out a proportionate approach by establishing standard and enhanced monitoring requirements and systematically prioritising schemes for fuller evaluation
- Meta Evaluation of 23 schemes was published in 2014
Existing solutions 2: Local Frameworks


Three-tier approach to evaluation

- 4 Selected local authorities undertake in-depth case studies
- 12 large projects (over £5 million) undertake outcomes monitoring
- All 96 projects receiving funding do annual outputs reporting
New solutions: DfT’s Strategy

Monitoring and Evaluation Strategy, 2013:
- “Goal is to enhance the generation of good quality monitoring and evaluation evidence – for greater accountability and a strong evidence base for future decision making.”
- Building a culture which incentivises good quality evaluation
- Developing governance and assurance mechanisms

Some good practice already in place:
- We have published the Strategy and a Programme of planned work, which is updated annually
- We have dedicated resources in central unit (Evaluation Centre of Excellence) and the main directorates (Local, Rail, Roads)
### New solutions: DfT’s Monitoring and Evaluation Programme (from 2013)

Covers a wide range of projects including:

| Roads          | Major roads projects e.g. Roads Investment Strategy,  
                    | Road safety policy evaluations: Drug Driving policy, 20 miles per hour speed limits,  
                    | Heavy good vehicle policies, Smart Ticketing projects |
|-----------------|--------------------------------------------------------|
| Local           | Local roads e.g. Local Authority Major Schemes,  
                    | Sustainable transport e.g. Local Sustainable Transport Fund,  
                    | Cycling projects e.g. Cycling City Ambition programme |
| Rail            | High Speed Rail lines e.g. High Speed 1, High Speed 2,  
                    | Other major rail projects e.g. Rail Investment Strategy  
                    | New or enhanced services in London e.g. Crossrail, Thameslink |
| Others          | Office for Low Emission Vehicles  
                    | UK Search and rescue Helicopter Service  
                    | Coastguard Reform |
In some cases where experimental approaches are not feasible we are using theory-based impact evaluation.

This assesses impact by testing causal pathways of an intervention, often expressed in a logic model (see below).

It combines process and impact evaluation methods to assess what works, why, for whom and in what contexts.

We are currently using this approach to evaluate the impact of local 20 miles per hour speed limits.

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**Context**

The issue that is addressed and the context in which it is located

**Input**

What is invested, e.g. money, skills people, activities

**Output**

What has been produced?

**Outcomes**

Short and medium-term results

**Impact**

Long-term outcomes
New solutions: Rail

- Completing an evaluation of High Speed 1 (Channel Tunnel Rail Link)
- Preparing evaluation plans for:
  - London’s Crossrail (new east-west line opens 2019) – see below
  - High Speed 2 (Phase 1 London to Birmingham due to be built 2017-26)
  - Rail Investment Strategy (a portfolio of projects for 2014-19)
- Linking ex-post evaluation with new Rail Benefits Management Framework
- Planning new study to measure wider economic impacts of transport for major rail projects in terms of local economic growth and regeneration impacts
Summary

- There is increased attention to ex-post evaluation at DfT, to meet increasing demand for it
- However, it is challenging to get robust evidence
- We have some existing solutions – for roads and local projects
- We have established a strategy to increase ex-post evaluation
- We are developing evaluations for rail projects
- It will take a lot of time to get this right and to build an evidence base

Thank you