



Department  
for Transport

# Transport Analysis Guidance

## Spending Objective Analysis

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Department for Transport

Transport Analysis Guidance (TAG)

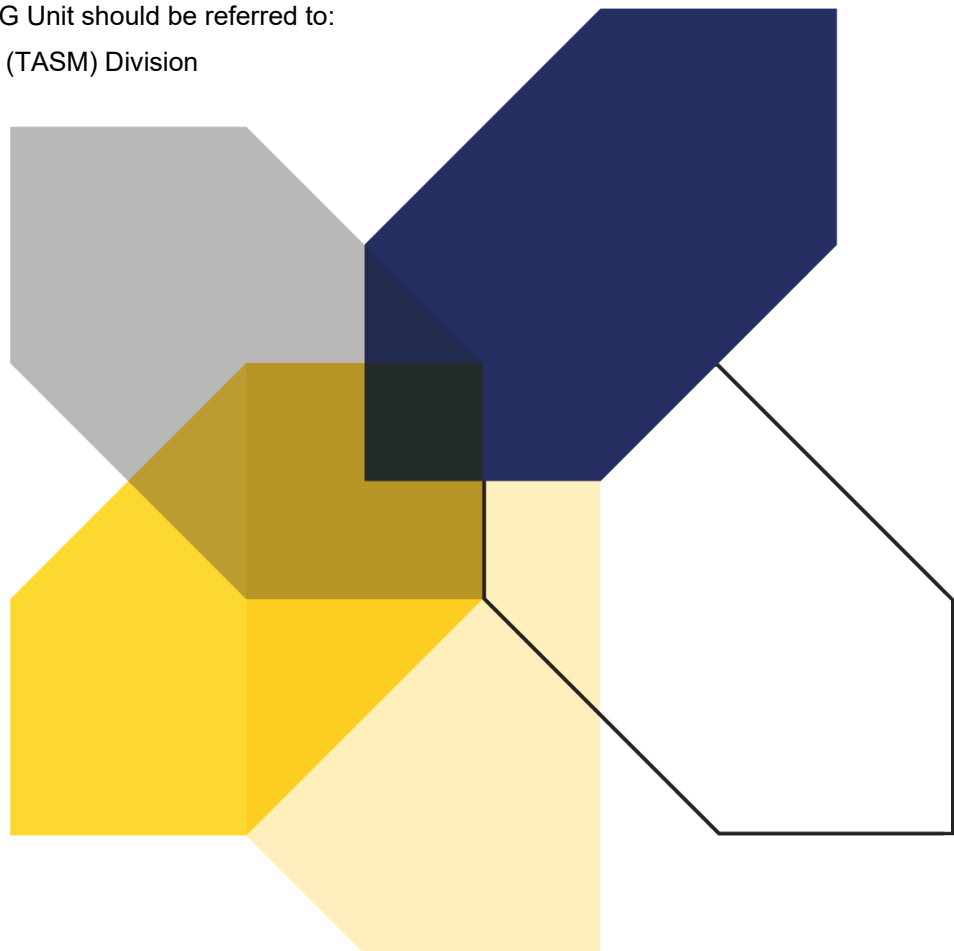
<https://www.gov.uk/transport-analysis-guidance-tag>

This TAG Unit is guidance for the **Technical Project Manager**

Technical queries and comments on this TAG Unit should be referred to:

Transport Appraisal and Strategic Modelling (TASM) Division

Department for Transport  
Zone 2/25 Great Minster House  
33 Horseferry Road  
London  
SW1P 4DR  
[tasm@dft.gov.uk](mailto:tasm@dft.gov.uk)



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# 1. Transport appraisal and value for money assessment

- 1.1.1 DfT's Transport Analysis Guidance (TAG) sets out methodologies and values for capturing a wide range of impacts in appraisal, covering social, environmental, and economic impacts.
- 1.1.2 The DfT Value for Money Framework explains how scheme promoters should consider both monetised and non-monetised impacts, as well as uncertainty, to arrive at an overall Value for Money rating for the appraised scheme.
- 1.1.3 The UK-level social cost benefit analysis upon which the Value for Money (VfM) rating is founded captures the full range of costs, benefits and disbenefits to society of the proposed investment, expressed in social welfare terms. As such it is fundamentally important to transport appraisal.

# 2. Purpose of the guidance

- 2.1.1 Alongside the standard consideration of social welfare impacts, the HM Treasury [Green Book](#) (2022) recommends that the economic dimension of the business case should be informed by the spending objectives identified in the strategic case. This builds on the findings of the [Green Book Review](#) (2020)<sup>1</sup> and helps ensure that economic analysis engages with the strategic context of the appraised scheme.
- 2.1.2 This guidance introduces the concept of 'spending objective analysis' This is defined as analysis which assesses options in terms of relative and absolute performance against spending objectives. This analysis complements the overall social welfare assessment for a scheme, as reflected in the VfM rating. Decision-makers should consider spending objective impacts, alongside value for money, when appraising the investment case for a proposal.
- 2.1.3 This guidance will help business case authors to systematically connect the economic and strategic dimensions of the business case, allowing a more structured and consistent presentation of evidence across the two dimensions. Firstly, this allows consistency with the [Green Book](#) (2022) including [the supplementary guidance on value for money \(2022\)](#) which sets out the principle

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<sup>1</sup> <https://www.gov.uk/government/publications/green-book-supplementary-guidance-value-for-money>.

that business cases should engage properly with the strategic context, as reflected in the scheme's spending objectives.

- 2.1.4 Secondly, the guidance promotes alignment between the economic and strategic dimensions of transport business cases. This will help to ensure that the strategic dimension is analytically informed, evidence-based and robust. This should reduce the risk of overly optimistic claims being made in the strategic dimension regarding the benefits of the proposal.

## 3. Spending objective analysis at the long list stage

- 3.1.1 As set out in DfT's [Transport Business Case guidance](#) ('Contents of the Strategic Dimension' section), the strategic dimension should provide SMART (specific, measurable, achievable, relevant and time-bound) spending objectives. Objectives should be established in advance of the long list appraisal to avoid post hoc rationalisation. They should align to the strategic priorities identified and provide clear measures of success. There should be appropriate links to benefit management.
- 3.1.2 Spending objective analysis at the long list stage should be consistent with Transport Analysis Guidance and HM Treasury Green Book guidance, using methodological approaches such as DfT East Tool and the HMT Option Framework-Filter to assess performance against objectives.
- 3.1.3 The default approach is that options which do not achieve spending objectives should be ruled out at the long list appraisal stage. In exceptional instances it may be appropriate to shortlist a scheme which does not meet spending objectives. In such cases balanced and credible justification for shortlisting the option based on the importance of the overall spending objectives should be provided. Alongside this, planned mitigation activities to reduce adverse impacts in terms of this particular objective should be clearly explained.

## 4. Spending objective analysis at the short list stage

- 4.1.1 At the short-list stage, the economic dimension of the business case should incorporate proportionate spending objective analysis, which should then be referenced in the strategic dimension. This analysis should be conducted at each stage of the business case development process. At Strategic Outline Business Case stage, a qualitative assessment of impacts on spending

objectives would be acceptable. Quantitative analysis would be expected at Outline Business Case and Full Business Case stages. Scheme promoters should establish appropriate quantitative or qualitative success measures for assessing spending objective impacts. Potential approaches for doing so are set out below:

- 4.1.2 *Disaggregating TAG impacts.* Whilst reporting a benefit-cost ratio (BCR) provides a useful summary of the overall social value of a proposal, it does not provide decision-makers with sufficient information to judge whether the sources of that value are directly in support of the strategic dimension. An important aspect of spending objective analysis is understanding the composition of the benefits and costs within a BCR and how they link to the objectives of the appraised scheme. In many cases, spending objectives are likely to map across to single TAG impacts in terms of success measures, either the TAG monetised values or a qualitative assessment against the TAG Seven Point Scale for non-monetised impacts.
- 4.1.3 For example, if a key spending objective is to deliver increased safety through reduced accidents, then it is straightforward to observe the monetised impact of this from the appraisal outputs. Conversely, if for instance transport user benefits are not of primary concern regarding the strategic aims of the proposal, these benefits should not be considered when assessing spending objective impact.

**Table 1: Examples of spending objectives mapped to TAG impacts.**

<i>Broad categories of strategic objective</i>	<i>Menu of potential TAG impacts to evidence spending objective impacts</i>
Improving the user experience	<ul style="list-style-type: none"> <li>• Transport User Benefits</li> <li>• Reliability</li> <li>• Journey quality</li> <li>• Accidents</li> <li>• Option and Non-use value</li> </ul>
Economic growth	<ul style="list-style-type: none"> <li>• Business User Benefits</li> <li>• Static Agglomeration</li> <li>• Output Change in Imperfectly Competitive markets</li> <li>• Increase in Labour Supply</li> <li>• Dynamic Agglomeration</li> <li>• Dependent Development</li> <li>• Move to More or Less Productive Jobs</li> </ul>

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- |               |   |
|---------------|---|
| Environmental | <ul style="list-style-type: none"> <li>• Noise</li> <li>• Air quality</li> <li>• Greenhouse Gases</li> <li>• Landscape</li> <li>• Biodiversity</li> <li>• Water Biodiversity</li> </ul> |
|---------------|---|

- |                                     |  |
|-------------------------------------|--|
| Urban realm<br>and active<br>travel | <ul style="list-style-type: none"> <li>• Townscape and Historical Environment</li> <li>• Severance</li> <li>• Security</li> <li>• Physical Activity</li> </ul> |
|-------------------------------------|--|

4.1.4 However, in other situations, the mapping would be less straightforward. This could occur where spending objectives relate to multiple TAG impacts (e.g. a number of wider economic impacts) or part of an impact (e.g., the quantity of new housing developments rather than the monetised Dependant Development impact). Also, sometimes spending objectives may be supported impacts relating to ‘supplementary analysis’ (as defined below) or by other novel impacts. In these instances, an alternative success measure (which could be quantitative or qualitative) should be developed to assess the spending objective impact. This may be a composite measure which considers several factors. The measure should fulfil the criteria below, with justification for the selected approach provided in the economic dimension and key analytical limitations transparently presented.

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**Box 1: Criteria for establishing robust composite measures.**

- **Understandable:** Easy to comprehend by business case authors, decision-makers and other stakeholders.
- **Practical:** Easy and not time-consuming to develop and apply.
- **Valid:** Measures what it's intended to.
- **Representative:** Covers all relevant characteristics of the aspect being measured.
- **Differentiable:** Differentiates between different levels of quality or performance
- **Balanced:** Avoids biases, not overly focused on negatives or positives.

- 4.1.5 The following types of 'supplementary analysis' might be useful in understanding the proposal's impact on the corresponding spending objectives.
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#### Box 2: Types of supplementary analysis

- **Distributional analysis.** Proposal aims to achieve positive outcomes for vulnerable social groups or avoid disproportionately negative outcomes.
  - **Place-based analysis.** Proposal supports the economic development of a specific locality. This could include a strategic aspiration to reduce geographical disparities or to capitalise on the potential economic strengths of an area.
  - **Individualised impact analysis.** Aim of the proposal is to deliver certain outcomes which may be particularly salient from the perspective of individual (e.g., journey time savings in minutes per person per trip) rather than in terms of aggregate UK-level monetised social welfare impacts (e.g., £m time saving benefits over the appraisal period).
  - **Programme level and transformational impact analysis.** Where the proposed investment is an integral part of a programme of measures, which together unlock a range of benefits. For instance, where a proposal is part of an overarching transport investment strategy, or where it is a component of an integrated programme of economic development (e.g., transport investment alongside business investment, skills policies, housing developments etc). Please refer to the [HMT Green Book](#) for more guidance including Annex A7 on Transformation, Systems and Dynamic Change.
- 4.1.6 The various methods of supplementary analysis described above may be useful in presenting enhanced evidence on spending objective impacts. This should not be interpreted as an exhaustive taxonomy of potential applications of supplementary analysis. Business case authors may also wish to adopt alternative innovative and novel approaches where this is feasible and proportionate.

## 5. Reporting of spending objective analysis evidence

- 5.1.1 Transport business cases already include a Value for Money (VfM) Statement which considers both monetised and non-monetised impacts, and the potential impacts of uncertainties, to arrive at a Value for Money rating for the proposal. This is based on a comprehensive summary of all the estimated social welfare impacts set out in the economic dimension. Please refer to the [DfT Value for Money Framework](#) for further detail.

- 5.1.2 Correspondingly, spending objective analysis should be summarised in a 'Spending Objective Analysis Statement' (SOAS) alongside the standard VfM Statement. The recommended elements to include in the SOAS are set out below.
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### **Box 3: Elements of a Spending Objective Analysis Statement**

- **Initial presentation of spending objective impacts.** This should include assessing both relative rankings in terms of performance against spending objectives and the absolute magnitude of impacts. It is recommended that this analysis is presented in tabular form. Table 2 below (see Section 1.5.3) provides an example structure but alternative approaches are also permissible. For instance, at later business case stages such as Full Business Case it could be the case that only one option is assessed in the short list analysis, which would mean an alternative table format could be appropriate.
  - **Assessing key uncertainties** to understand how they might impact on relative and absolute performance of options.
  - **Summarising the spending objective impact** of the options in an evidence-based narrative based on the two elements above. At the minimum, this should set out trade-offs between options. It can also include an overall ordering of options based on some form of decision-rule but this is not mandatory.
- 5.1.3 *Initial presentation of spending objective impacts.* The SOAS should provide an assessment each of the options against each of the spending objectives, using the success measures set out in Section 1.4. This will inform a ranking of options against each objective, with a higher ranking indicating a more beneficial spending objective impact. The absolute scale of the impact is also provided, which would inform an assessment of whether an option achieves that particular spending objective. Furthermore, this assessment of scale will also help inform an assessment of alignment between economic and strategic dimensions through directly comparing evidence referenced in the economic dimension with outcomes asserted in the strategic dimensions=. See row three in the table below- 'Summary of benefits referenced in the strategic dimension'.



**Table 2: Matrix assessing spending objective impact performance**

Business case stage	OBC		
Objective	1	2	3
<b>Name</b>	<b>Objective 1: Decarbonise</b>	<b>Objective 2: Protect historical Environment</b>	<b>Objective 3: Regenerate place</b>
<b>Measurement</b>	Monetised TAG Greenhouse Gases impact (£)	TAG seven-point scale for Historical Environment impact	Composite Measure including TAG Wider Economic Impacts and bespoke analysis on urban realm
<b>Summary of benefits referenced in the strategic dimension</b>	Asserts that scheme is decarbonising with Option B the strongest	Asserts positive impact on historical environment	Asserts regeneration impacts of £2bn but limited evidence provided
<b>Option A</b>	3rd (£100m) saving	1st (Large Beneficial)	1st Score of 85 on composite measure (3000 extra jobs, 2000 new developments, Large Beneficial impact on Urban realm)
<b>Option B</b>	2nd (£200m saving)	3rd (Slight Adverse)	2nd Score of 70 on composite measure (2000 extra jobs, 3000 new developments, Moderate Beneficial impact on Urban Realm)
<b>Option C</b>	1st (£800M saving)	2nd (Moderate Beneficial)	3rd Score of 45 on composite measure (1000 extra jobs, 2000 new developments, Slight Adverse impact on urban realm)

5.1.4 The DfT Business Case Guidance states that spending objectives should be SMART. However, in some instances, due to deficiencies in the strategic dimension, spending objectives may be poorly developed. This can present challenges in providing appropriate success measures. Here business case authors should apply judgement regarding reasonable measures to use. A balanced justification for the choice of measure selected should be provided in the economic dimension.

5.1.5 In some instances, it might not be possible to providing a comprehensive ranking of options due to a complete or partial lack of evidence of performance of options against these success measures in the business case. In these instances, a ranking of 'not applicable (N/A) should be indicated for those options in the SOAS table, with a brief explanation of the evidence gaps in the supporting narrative.

5.1.6 Business case authors should adopt a proportionate approach to presenting the SOAS, with a rule of thumb being that it should be around two pages in length. It should present key evidence clearly, whilst avoiding unnecessary duplication of information already presented in the economic and strategic dimension. To

ensure that the SOAS is concise, signposting to evidence elsewhere in the business case and annexing more detailed analysis may be appropriate.

- 5.1.7 Where proposals have a large number of strategic objectives or a large number of options, then the most relevant objectives and options should be incorporated in the main body of the SOAS analysis, whilst the less relevant ones may be annexed or grouped together.
- 5.1.8 Assessing uncertainties. The next element of the SOAS involves considering uncertainties which could potentially influence the spending objective impacts in terms of relative and/or absolute performance. Some potential sources of uncertainty are set out below. [Please see the DfT Uncertainty Toolkit](#) for more information.
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**Box 4: Types of uncertainty which should be considered in appraisal.**

- National level uncertainties relating to economic conditions, social and technological change.
  - Estimated housing and population growth in the vicinity of the appraised scheme.
  - Transport and non-transport investment in the local area.
  - Uncertainties around the scope or timing of the scheme.
  - Appraisal and modelling uncertainties.
- 5.1.9 This assessment is likely to primarily involve signposting to existing evidence rather than providing detailed explanations of modelling and appraisal results. Again, it may not be proportionate to explore all potential sources of uncertainty, it is recommended that the assessment focuses on the most important elements.
- 5.1.10 Business case authors should then draw overall conclusions on the likely spending objective impact of options in a short narrative. This would include the core estimates presented in Table 2 as well as an assessment against uncertainties. At the minimum this should explore the performance of each option in an absolute and relative sense and include an assessment of potential trade-offs between options in terms of performance against spending objectives.
- 5.1.11 Business case authors may also wish to provide an overall single ranking of options in terms of spending objective impact, across the entire set of objectives. Multi-Criteria Decision Analysis can be used to inform such a ranking. The inferior form of multi criteria analysis or MCA is not suitable for Green Book consistent appraisal such as spending objective analysis. More guidance on swing weighted MCDA is given in the [HMT Green Book Annex 1](#) and the referenced [supplementary Green Book guidance](#). Justification should

be provided in the economic dimension for any decision-rule used and key limitations identified. The guiding principle is that decision-rules should be transparent, balanced and objective.

- 5.1.12 The SOAS provides decision-makers with important contextual information to complement the VfM Statement in determining the investment case for the proposal. In presenting this information to decision-makers, it is important to avoid (either explicitly or implicitly) double-counting impacts given that spending objective analysis will incorporate impacts already included in the VfM category. Therefore, these elements should not be treated as additive.

## 6. Incorporating spending objective analysis in evaluation

- 6.1.1 When conducting impact evaluation, scheme promoters should ensure that evaluation plans incorporate ex-post measures relating to spending objective impact, alongside ex-post value for money measures such as benefit-cost ratios and VfM categories. This will help evaluate the extent to which the proposal supports spending objectives, drawing on real world data. Please refer to the HMT Magenta Book and TAG Unit E1 for general guidance on evaluating transport schemes.