

# Green Book supplementary guidance: Value for Money



© Crown copyright 2022

This publication is licensed under the terms of the Open Government Licence v3.0 except where otherwise stated. To view this licence, visit [nationalarchives.gov.uk/doc/open-government-licence/version/3](https://nationalarchives.gov.uk/doc/open-government-licence/version/3).

Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.

This publication is available at: [www.gov.uk/official-documents](https://www.gov.uk/official-documents).

Any enquiries regarding this publication should be sent to us at [public.enquiries@hmtreasury.gov.uk](mailto:public.enquiries@hmtreasury.gov.uk)

# Making a value for money judgement

- 1.1 Value for Money (VfM) is balanced judgement about finding the best way to use public resources to deliver policy objectives. Comparing the social VfM of alternative options requires use of the Green Book methodology, in particular the five case model, as well as its associated analytical tools.
- 1.2 This note provides some illustrated examples for application of the Green Book, but it is not to be used as a substitute for the Green Book. It explains with hypothetical examples the appraisal process and five case model as summarised in [Box 18](#), which defines VfM.<sup>1</sup> The Green Book method is about optimising the value to society when implementing policy objectives<sup>2</sup>, and the five dimensions of the business case always interact to deliver this.
- 1.3 For appraisal to be effective, objectives must be SMART.<sup>3</sup> The SMART objectives in the strategic dimension of the business case directly drive the rest of the process in the application of the model. Only options that deliver these SMART objectives can be considered VfM, therefore VfM is not just about a Benefit Cost Ratio (BCR).
- 1.4 Figure 1 below provides a summary diagram of the process shown in boxes 7, 8, 11 and 17 of the Green Book. It starts with the rationale informing the setting of SMART objectives. Longlist appraisal can only be conducted once the objectives are set, which should use the Options Framework-Filter.
- 1.5 The Options Framework-Filter considers a number of option choices from the point of view of the service required by the SMART objectives. It does so using the five critical success factors detailed in the Green Book and in this note. This enables a structured consideration of all the relevant factors and also supports the requisite consultation with stakeholders and experts in a workshop setting. A shortlist of viable options can then be created.
- 1.6 The shortlist is then compared using Cost Benefit Analysis (CBA) or Cost Effectiveness Analysis (CEA), taking into consideration the risks, any relevant policy objectives and unmonetisable factors. CEA is used in any instance where wider social costs or benefits will remain broadly unchanged, for example the delivery of a public good such as defence.
- 1.7 Only by following these steps in sequence can the preferred option then be identified at the end of this process as having the best VfM. It is important to note that it can often be an iterative process with certain parts of the process, like the SMART objectives, being reworked at later stages of the process if new information comes to light. For example, if the appraisal process began to identify that one of the objectives was not achievable within the parameters of the programme or project, then it would be perfectly acceptable to reconsider that objective.

---

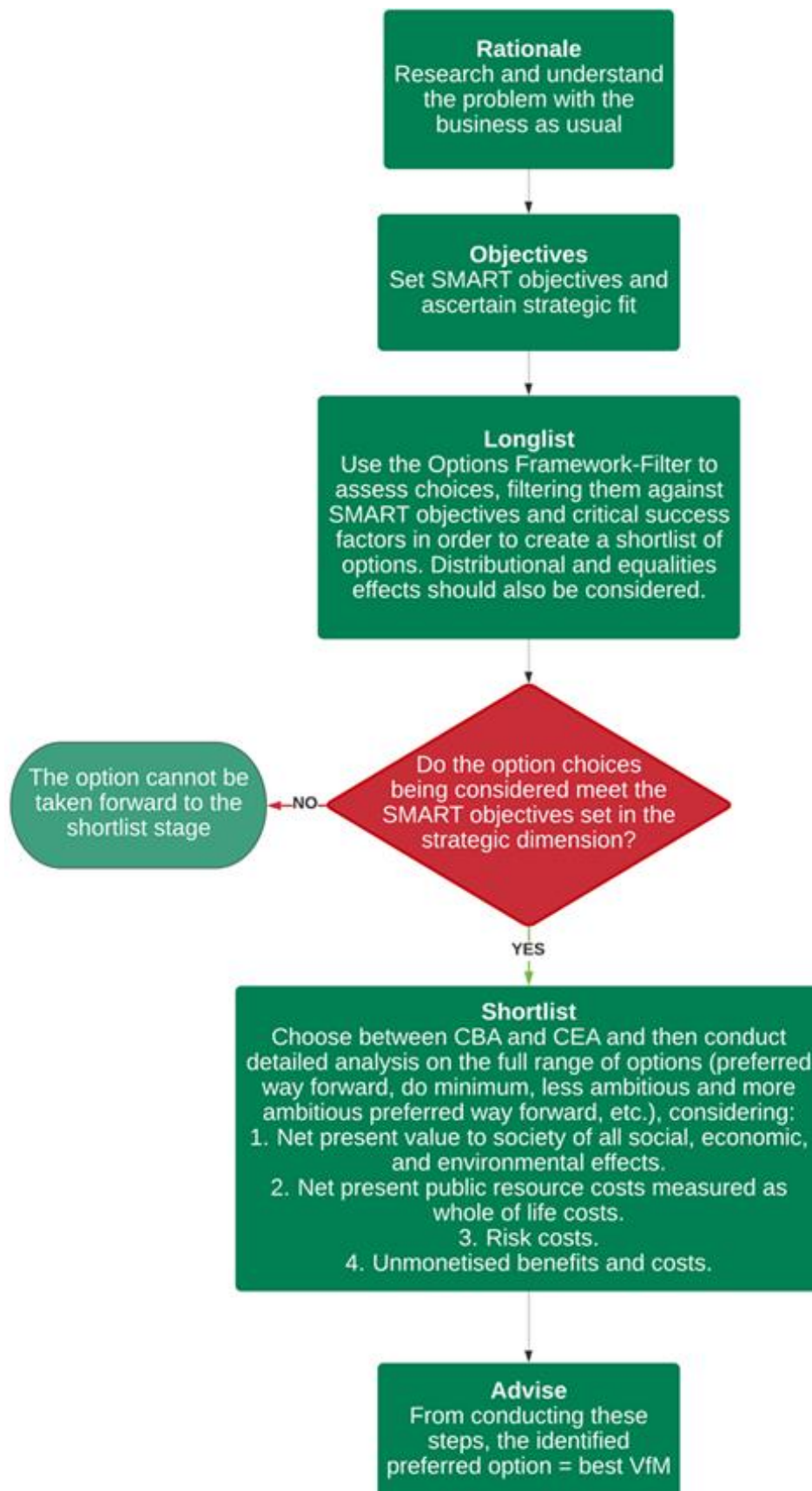
<sup>1</sup> [The Green Book](#), HM Treasury, 2022

<sup>2</sup> [The Green Book Review 2020](#), HM Treasury, 2022

Refer to this document for the wider context of the Green Book guidance.

<sup>3</sup> Specific, Measurable, Achievable, Realistic, Time limited, see paragraph 3.2 in the Green Book.

Figure 1: A flowchart demonstrating Box 18 of the Green Book – A Definition of Value for Money<sup>4</sup>

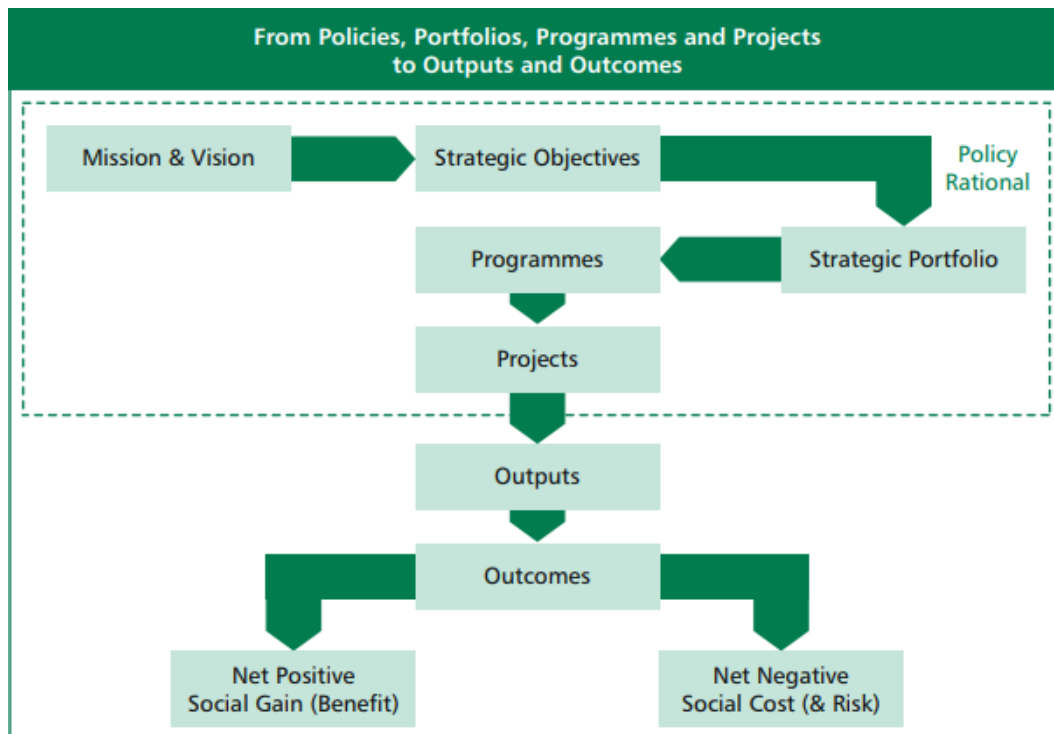


<sup>4</sup> [The Green Book](#), HM Treasury, 2022 p52

# Strategic dimension

- 1.8 There are two key steps in preparing the strategic dimension (where business case development starts) – all steps are outlined in the Project Business Cases Guidance and summarised in [Annex D](#).<sup>5</sup> There are 10 steps for projects and 7 for programmes.
- 1.9 **Step 1** requires **determination of the strategic context**. This includes an understanding of strategic fit by assessing how the proposal fits with related projects and programmes, through a golden thread of cause and effect in support of strategic objectives as well as with wider public policy.

**Figure 2: From policies to outcomes**



- 1.10 **Step 2** concerns **the case for change**. This is where, in a workshop setting, the SMART objectives are identified. These must then drive the rest of the process across all dimensions of the five case model, as explained throughout the Green Book. Tied into this must be an understanding of the current situation, what the Business As Usual (BAU) looks like, as well as identifying the business needs in terms of the changes that need to be made to bridge the gap from BAU to attainment of the SMART objectives.
- 1.11 Below in **Box 1.A** we describe how to approach the strategic dimension using the example of a project that improves the transport links between two spatial areas.

<sup>5</sup> ['Guide to developing the Project Business Case'](#), HM Treasury, 2018

### Box 1.A: Strategic dimension case study

Winnton is a small commuter town serving the large city of Highton. The geographical proximity to Highton means it's well placed to support economic growth in the wider region; however, it is thought this has been prevented by poor transport links between the two geographical areas. Currently, a single carriageway is the only road route between them, alongside an infrequent rail service with poor reliability. This, along with an estimated 30% increase in passenger numbers over the past decade has meant journey times and reliability have been severely impacted for both road and rail travel.

A general research phase has identified that an improvement in transport links between the two areas could alleviate these problems and increase the scale and proximity of economic activity in these two places.

The local authority held [Workshop 1](#), where the SMART objectives for intervention were set with relevant stakeholders in attendance. Other relevant departments in government also attended, so that consideration could also be given to other interventions, detailing how they might interact with related programmes to ensure best value. The objectives of the project also align with several other central government initiatives from which funding may be sought.

To support the programme level objectives of improving the economic output of the towns within 10 years, with wider interventions made on housing and commercial development, the **SMART objectives** set at the workshop for this project were:

- Reduce average journey times by 20% between these towns within 5 years.
- Improve air quality by 10% in the two towns within 10 years.

External dependencies were also worked through and identified so they can be considered further at the longlist appraisal stage. For example, the local planning authority will need to play a role in supporting the objective to achieve growth in housing and commercial development as part of the overall programme.

# Economic dimension

- 1.12** Preparing the economic dimension involves taking forward the SMART objectives outlined in the strategic case and conducting the options appraisal to find the most efficient way of meeting them. Efficient in this context means delivering on the SMART objectives in a way that maximises net improvements in social welfare.
- 1.13** It is important to understand that appraisal is a two stage, iterative and sequential process. Practitioners sometimes make the mistake of jumping straight into the options appraisal without being clear on the strategic objectives and therefore effective appraisal is significantly undermined.
- 1.14** The economic dimension, like the strategic, is carried out in two steps. This starts in **Step 3** of the business case process by using the Options Framework-Filter, shown in Chapter 4 of the Green Book.<sup>6</sup> The framework supports the breaking down of options into a series of component choices concerning service scope, service solution, service delivery, service implementation, and service funding. These choices are assessed against 5 set critical success factors, based on the 5 case model and the SMART objectives, which are:
- Strategic fit and meets business needs
  - Potential Value for Money
  - Supplier capacity and capability
  - Potential affordability
  - Potential achievability
- 1.15** In some cases additional critical success factors may be appropriate, but never more than 1-2. By completing the analysis in this way, rather than jumping to a predetermined solution, otherwise hidden and implicit assumptions are revealed.
- 1.16** Additional features with benefits which are not readily or credibly quantifiable or monetisable, but which are considered decisively important enough to be taken into account, must also be dealt with at the longlisting stage. If they are regarded as essential to the provision of the objectives then they are a constraint and must be incorporated into all of the options.
- 1.17** Except from the BAU, any option choice which is unlikely to support the SMART objectives are discarded at this stage and the others are taken forward to be tested against the remaining Critical Success Factors above.
- 1.18** From the results of the above analysis and workshops, a viable shortlist is created. This includes the preferred way forward (PWF) - the option that appears most likely to deliver the SMART objectives.

---

<sup>6</sup> The Green Book, HM Treasury, 2022, [Figures 7](#) and [Figure 8](#)

**1.19 Step 4 follows in** the shortlist appraisal, where Cost Benefit Analysis or Cost Effectiveness Analysis is conducted, taking into consideration the risks and unmonetisable costs & benefits. The detailed analysis at the shortlist appraisal stage informs the identification of the preferred option, with the chosen option providing the best balance of costs, benefits, risks and unmonetisable factors, thus optimising value for money. To present the results of cost benefit analysis in business cases, standardised appraisal summary tables are available on the Green Book page and should be used<sup>7</sup>.

**1.20** The shortlist options (along with a BAU) must include a:

- Do Minimum option (that just meets the needs required by the SMART objectives)
- Preferred Way Forward (that may or may not be the Do Minimum)
- A more ambitious preferred way forward (this may be more expensive, deliver more value, but at higher costs with increased risks)
- A less ambitious preferred way forward – unless the preferred option is a do minimum (this option may take longer, deliver less value but cost less and / or carry less risk, for example)

**1.21 Box 1.B** below shows a continuation of the project example.

---

<sup>7</sup> [The Green Book: Templates and support material](#)



## Box 1.B: Economic dimension case study

[Workshop 2](#) was conducted at the **longlist** stage, where a number of option choices were assessed, filtered and then assembled into options using the Options Framework-Filter by considering choices that meet the SMART objectives against the Critical Success Factors. The business case detailed the reasons particular choices were discounted or taken forward.

The analysis and workshops led to the preferred way forward being to connect the two areas by upgrading the existing rail link, with cycle parking and new bus links, through investments to increase reliability and train frequencies.

The workshop considered assembling a do minimum option at longlist stage by building a new road route between Highton and Winnton. This was because it was cheaper than other options, would deliver journey time improvements and thought to have a higher BCR than other options. However, it was highly unlikely to meet the SMART objective for improving air quality so was discounted at longlist stage, regardless of the higher BCR. An alternative do minimum that met the SMART objectives was assembled for the shortlist instead.

At the **shortlist** appraisal, by conducting [Workshop 3](#), all 4 options met the SMART objectives as required by the Green Book and so were assessed using Cost Benefit Analysis. The preferred way forward looked to deliver the best balance of benefits, costs and risks, so was therefore recommended to decision makers. This option was to upgrade the existing rail link over 4 years with cycle parking and new bus links.

Decision makers were also interested in upgrading the existing train station at Highton, solely to support amenity value and improve its design quality, the benefits of which were difficult to quantify robustly in this case. An alternative version of the preferred option was therefore presented by including these increased costs in the BCR - reducing it – but along with a qualitative description of the benefits that would be achieved, along with the estimated range of benefits that could be quantified. The decision maker can then use this information to make a judgement as to whether this expected benefit and additional cost is a price worth paying.

# Judging value for money

**1.22** Benefit Cost Ratios (BCRs) are important for providing an indication of the benefits and costs of a proposal, but Value for Money is always a judgement that is wider than any BCR. In summary, this is because:

- VfM depends on the wider application of the Green Book method and five case model, by conducting objective options appraisal through longlisting and shortlisting. All of this is underpinned by the effective setting of SMART objectives at the outset of policy development and joint working across all relevant professions, stakeholders, and experts. This is shown through the examples given in this note.
- VfM considers the context. For example, where an enabling project is necessary to support a programme of which it is part of, but where improvements in social value are only delivered by the programme being delivered as whole.
- The assessment of VfM needs to take into consideration both the monetised and unmonetisable benefits and costs. For unmonetisable benefits, **Box 1.B** shows how these challenges can be addressed in appraisal.

**1.23** In the illustration, options that did not meet the SMART objectives were discounted at the longlist stage even if they might have had higher BCRs. This also helps shortlist analysis focus on the best way to deliver strategic goals, as all options that are being compared should deliver them. Moreover, where options will deliver additional benefits that cannot be monetised, it is perfectly acceptable to recommend that option to decision makers by including the cost of achieving those benefits so they can decide if it is a price worth paying (even if the BCR appears lower). Appraisal is about objective advice.

**1.24** Options can either 'achieve' value for money or not based on a holistic view of benefits and costs as summarised in Box 18, but can never be 'good' or 'bad' value for money based solely on quantified costs and benefits separate from considering the SMART objectives. Value for money is primarily a relative concept to compare options (including BAU) in a properly constructed appraisal process that seeks to meet policy objectives and maximise benefits relative to costs (also considering those which are not quantifiable).

**1.25** Practitioners can also use **Table 1** below as a helpful prompt when summarising advice to decision makers on value for money. Table 1 does not replace the appraisal summary tables required and outlined in the Green Book, along with its supporting templates and guidance. These should be reviewed as part of the approvals process, for example by investment committees and in the [Treasury Approval Process](#).

**Table 1: A summary of applying Box 18 after the shortlist stage of appraisal**

Summary of proposal	Transport improvements between Winnton and Highton. The preferred way forward is to deliver an upgrade to the existing rail link over a 4 year period.
SMART Objectives	<ol style="list-style-type: none"> <li>1. Reduce average journey times by 20% between these towns within 5 years.</li> <li>2. Improve air quality by 10% in the two towns within 10 years.</li> </ol>
Social benefits and costs over the 60 year appraisal period (22/23 prices and values), with ranges	<p>BCR: Central = 1.2, Range = 1.0 – 1.4</p> <p>Benefits</p> <ul style="list-style-type: none"> <li>• Benefits to transport users= £40m.</li> <li>• Agglomeration impacts = £12m.</li> <li>• Air quality improvements = £5.6m.</li> </ul> <p>Costs</p> <ul style="list-style-type: none"> <li>• Investment costs = £44m.</li> <li>• Operational costs = £4m.</li> </ul> <p>The upgrade to the existing rail link is expected to reduce journey times by the targeted 20% after completion in Year 4, relative to a counterfactual with no rail improvements. This benefit is reflected in the estimated benefits to transport users (increased journey reliability, reduced commuting times) of £40m.</p> <p>The upgrade is also expected to improve air quality to the targeted levels as a result of the expected mode shift from road travel (primarily cars) to rail.</p>
Whole life costs of preferred option (£ nominal)	<p>22/23 = £15m          23/24 = £10m          24/25 = £5m          25/26 = £5m          26/27 onwards = £13m over 60 year appraisal period</p>
Risks and their likely impacts	<p>The risk costs have been quantified and are included in the costs outlined above. A risk register is available.</p> <p>Some unquantified risks were identified, including the possibility of a lower mode shift than expected. This would lead to fewer benefits from reducing congestion.</p> <p>Sensitivity analysis suggests the VfM is resilient to the worst case scenarios. There is good confidence in achieving a mode shift which is considered realistic based on available evidence.</p>
Value for money judgement (why is this option being chosen over others)	<p>The recommend option achieves VfM with good confidence over alternatives and is the most efficient way of meeting the SMART objectives. This option’s rail link, along with cycle and bus parking, will have the biggest influence on supporting the shift to more sustainable travel modes.</p> <p>An alternative of this option could include a further £5m of spend to improve Highton train station’s design quality and amenity value. It is expected that the additional monetary cost will lead to a small decrease in the BCR, from 1.2 to 1.1, however there are additional benefits to the local area and passengers that are not possible to quantify, such as increased journey quality. Given this and the small change in the BCR, the analysis demonstrates a decision either way is unlikely to materially affect the value for money. The additional £5m financial cost is affordable within the wider programme’s budget.</p> <p>A do minimum option (new road route) was likely to have a higher BCR (c.1.6) but was discounted at the longlist stage as it did not meet all the SMART objectives.</p>

## HM Treasury contacts

This document can be downloaded from [www.gov.uk](http://www.gov.uk)

If you require this information in an alternative format or have general enquiries about HM Treasury and its work, contact:

Correspondence Team  
HM Treasury  
1 Horse Guards Road  
London  
SW1A 2HQ

Tel: 020 7270 5000

Email: [public.enquiries@hmtreasury.gov.uk](mailto:public.enquiries@hmtreasury.gov.uk)