Department of Finance | An Roinn Airgeadais

Better Business Cases NI

Additional Guidance for the Economic Case

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1 Introduction

For expenditure and investment decisions, the Business Case (BC) is the accepted vehicle for demonstrating:

1. Strategic fit, supported by a compelling case for change – **The Strategic Case;**
2. Public value to society through the selection of the optimal combination of components, products and related activities - **The Economic Case;**
3. Commercial viability and attractiveness to the supply side – **The Commercial Case;**
4. Affordability and funding over time – **The Financial Case;** and
5. Deliverability (by the organisation and its partners) – **The Management Case.**

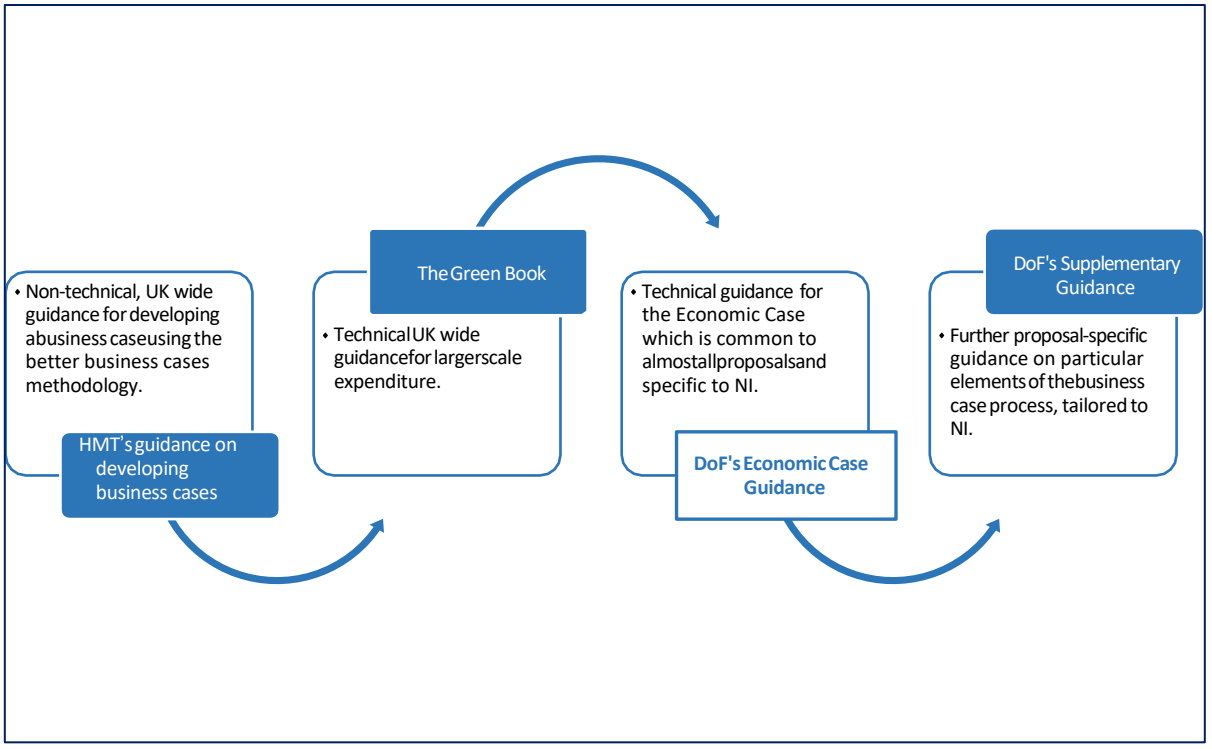
A key aspect of most business cases is the economic appraisal of options, in the Economic Case, to determine the value for money (VfM) in government spending/investment.

However, HMT's guide to developing the project business case, which is the overarching document recommended by DoF for implementing the Better Business Cases methodology, lacks detail on some of the technical information needed to complete the Economic Case. Whilst additional technical information can be found in HMT's Green Book (referred to throughout the rest of this document simply as the Green Book), this guidance has been written with large expenditures in mind and can be considered disproportionate for many of the expenditure decision levels under consideration in NI. Therefore, as shown on Figure 1 overleaf, the purpose of this guidance is to provide advice on common technical aspects of the Economic Case that are not covered in existing guidance and clarify elements of guidance for NI use.

It is important to note that this guidance is not intended to act as a substitute for HMT's Business Case Guidance or the Green Book, which should be read in conjunction with this guidance as required.

As with all business case guidance, this should be applied proportionately. For example, it is likely that those larger spend/ risker proposals will require more detail than smaller scale straight forward/ routine expenditure. The Department of Finance's (DoF) note on proportionate effort may be useful when deciding how much effort and detail is appropriate.

Figure 1: The purpose of this guidance document



2 Options Framework

The Options Framework (OF) provides a structured approach to identifying a long-list of options, before using the objectives and Critical Success Factors (CSFs) to shortlist options for appraisal.

Within the OF it is recommended that appraisers consider five key dimensions when identifying the long-list of options – scope, solution, delivery, implementation, and funding. These are to be considered in sequence and filtered into a more manageable short-list for further analysis.

The OF has been developed in this way to avoid the potential for an unmanageable number of combinations of options being considered at the long-list stage.

However, when reviewing the roll-out of the Five Case Model in NI, DoF observed that the OF was either not being used, being used incorrectly, or being used disproportionately with bulky filtering exercises adding noticeably to the length of a BC. Therefore, the points below should be considered when developing options.

- The amount of effort applied should reflect the level and nature of expenditure. For major/complex projects it is expected that a full OF be undertaken but for lower-level expenditure, straightforward decisions or where options are limited, developing a full OF as laid out in UKG guidance is likely to be nugatory and disproportionate work.

- There is some flexibility in terms of exploring options, given not all key dimensions will be applicable for every project. In those instances, appraisers should still consider each of the key dimensions, identify if there are any realistic alternatives worth considering, explain why any have been dismissed and conclude on any shortlisted alternatives. In other words, indicate that the key dimensions of the OF have at least been considered, even if these have not been used to develop options.

- As noted, for lower-level expenditure it is unlikely to be necessary to undertake a full OF. In those instances, appraisers should still give consideration to the key dimensions if developing a long-list, which should be

practicable/manageable to reflect the scale of expenditure and conclude on at least one 'do something' option alongside the baseline/Business as Usual (BAU). The thought process here should revolve around an option you believe is a preferred way forward, long-listed alongside one or two realistic variations of scale, location, timing/phasing and/or funding.

- A robust OF will shortlist options by concluding on how well these meet the objectives identified in the Strategic Case and the Critical Success Factors identified earlier in the Economic Case. Unless there is difficulty deciding between options to carry forward or reject, there is generally no need to complete and document an additional SWOT analysis. Assessing options against the objectives and CSFs should generally give enough justification for shortlisting.

- Appraisers should aim to streamline how option shortlisting is presented in the BC, potentially using appendices to present the more detailed filtering exercise if necessary. To aid this process, DoF has produced two Excel templates to use when developing an OF. These templates, along with two completed examples, for a generic capital project and a service contract can be found on the Better Business Cases NI website. A summary of the capital build example can also be found at Appendix 1.

3 Monetising costs and benefits

When monetising costs and benefits, it is important to follow several general principles and to understand the different types of impacts that appraisers should consider.

3.1 Principles of Monetary Cost and Benefit Measurement

3.1.1 Social CBA and Social Cost-Effectiveness

Generally, Social Cost Benefit Analysis (CBA) is the recommended approach for detailed comparison of the shortlist of options. This is where all relevant costs and benefits are valued with a reasonable level of robustness in monetary terms unless it is not cost effective, proportionate or possible to do so.

Appraisers should apply equal importance to monetising both relevant costs and benefits. However, it is recognised this is not always possible or proportionate and when this is the case, there should be a clear explanation of this in the business case alongside an alternative method of appraising impacts that are not monetised (see section 4 below).

Social Cost-Effectiveness Analysis (CEA) is a variant of Social CBA which compares the social costs of alternative ways of producing the same or similar outputs. At the most fundamental level, social CBA and social CEA are centered on two different questions. While social CBA asks whether the benefits outweigh the costs of a given project, programme or policy, social CEA is focused on the question of how much it costs to get a certain amount of output.

Cost-benefit = Benefits / Costs (the "cost benefit ratio")

Cost-effectiveness = Costs / Output

Social CEA is likely to be more appropriate for decisions linked to policy objectives, where the desired outcome is known and there is a requirement to conclude on the most cost-effective course of action e.g., a specific reduction in emissions or number of hospital patients or road casualties. The key difference being it is not necessary to monetise/quantify all benefits, as required in a CBA.

For more information on CBA and CEA see section 6.4 of the Green Book.

3.1.2 Cost and Benefit Assumptions

All costs and benefits used in the appraisal of options should be based on informed evidence from reliable and credible sources - the most common error is that appraisers do not explain the assumptions used to estimate costs and benefits. This can slow down the review process, leading to increased staff time inputs and result in longer approval time frames. DoF have now added an assumptions summary tab to their Net Present Social Value/ Cost (NPSV/C) spreadsheet to help appraisers with this process. Appraisers should take the time to ensure that this sheet is fully completed. Whilst assumptions need to be clearly explained, it is also important to be concise.

Cost and benefits estimation can often be difficult and could involve input from accountants, economists, quantity surveyors and other specialists, depending on the type of proposal. The appraiser needs to understand and clearly communicate the scope of the appraisal to ensure that specialists provide relevant and proportionate input.

3.1.3 Appraisal Time Period

It is important to ensure that all options within a business case are appraised over the same time-period to ensure a like-for-like comparison. The appraisal period should normally cover the expected useful lifetime of the assets or lifetime of an intervention, and should be long enough to capture the main impacts of an option, in terms of both ongoing costs and benefits, to ensure a fair comparison of options. The time period to be appraised will differ depending on the type of proposal in question.

For example, a new build is generally appraised over 25-30 years whilst an IT project is around 5-10 years.

In some cases, up to 60 years may be suitable, for example for buildings and infrastructure where it might be necessary when assessing net/nearly zero options to consider longer-term energy use and/or emissions. However, the high level of uncertainty beyond 30 years should be recognised, and discounting (see 3.1.4 below) may mean the influence of impacts that far into the future on the choice of preferred option often become negligible.

Economists in departments can provide further advice on this.

3.1.4 Discount Rate

In line with the Green Book supplementary guidance on discounting, it is generally recommended that appraisers apply the real terms 3.0% social discount rate when comparing the costs and benefits of different options over time to calculate their net present social value/ cost (NPSV/C). As outlined in the Green Book, a lower discount rate should be used when assessing impacts over a period longer than 30 years (2.5% from year 31 to 75, and, 2.25% from year 76 to 125). Furthermore, the Green Book no longer recommends the use of the health discount rate of 1.50%. Instead, the value of future real health effects should be uprated by 2% per annum over time. This leads to mathematically equivalent appraisals of health effects.

When calculating the NPSV/C of a proposal which is linked to commercial activities, notably in a commercial appraisal for assistance to the private sector, it may be appropriate to use a discount rate which differs from the social discount rate. If a higher rate is used, there should be evidence supporting its use (using weighted average cost of capital and Internal Rate of Return to estimate for example). Alternatively, where a given discount rate has been used historically, it should be sense-checked and updated periodically. In these instances, DoF requests that the standard discount rate (3.0%) is tested as part of the sensitivity analysis (however for general scenarios this is not required to test how an assumption of pure time preference of zero might affect the results of an appraisal).

A template for calculating discounted costs and benefits using the standard 3.0% rate can be found on the Better Business Cases NI website.

3.1.5 Total versus Incremental Impacts

Costs and benefits should be measured by reference to a common baseline, to enable fair comparison of options. There are two aims in view here: to clarify the differences between the options; and to ensure that all the resources used in the project are accounted for. The approach that addresses both these aims best is to include the total resource consequences of all options, including the Business as Usual (BAU) option. DoF generally requires this approach to be adopted.

However, the project boundary should be sensibly defined. For example, if a new management information system is to be introduced to a department, then, regarding staff costs, it should be sufficient to cost only the staff time directly affected by the new system, not the cost of all the department's staff. Large blocks of cost that are common to all options do not need to be appraised in detail, although they should generally be indicated.

An alternative incremental approach is to set the baseline for cost/benefit measurement equal to those of current provision so that only the costs and benefits over and above this are included for the alternative options. This incremental resource approach is less informative than the total resource method, provides poorer accountability by distracting attention from the totality of the resources devoted to a proposal, and can pose problems for the Financial Case affordability considerations and post implementation evaluation. For these reasons, the total cost approach is generally required.

However, if estimating the total resource consequences of options proves difficult, for example, because of serious data limitations, some flexibility may be needed; and an economist in the relevant department should be consulted to help determine the most suitable modified approach.

It is important that the same approach is taken for measuring costs and benefits. For example, it would be misleading to apply an incremental approach to costs and a total approach to benefits. This could have the potential to lead to an overestimation of the benefit to cost ratio.

Mutually dependent expenditures must be appraised together. Where one expenditure clearly gives rise to another, they should not be appraised separately.

For example, an appraisal concerning the construction of a building must take account of all the associated costs arising such as land purchase, infrastructure and works services, fitting out with equipment, security, staffing, maintenance, lifetime energy costs and other operational costs. It would be incorrect to appraise any of these costs separately in piecemeal fashion. They are interdependent and must be appraised together.

3.1.6 Double Counting

Care should be taken not to double count impacts. For example, if one option leads to a reduction in costs compared to the BAU, this can be shown as either a reduction in costs through time or as a saving in the benefits, but it should never be shown as both and doing so would overestimate the impact.

It is also important to maintain a level of consistency across options to make the business case as clear as possible. For instance, in the example above, if the impact has been recorded as a cost saving in one option, then this should be recorded as a cost saving across all other options (where applicable).

3.1.7 Treatment of Taxes and Subsidies

In practice, it is rarely worthwhile to adjust market prices for taxes or subsidies. However, in some circumstances it will be appropriate to consider adjustments. For instance, adjustment may be necessary where land is subsidised.

The need to make adjustment arises primarily where the tax structures of options differ substantially in nature, such that failure to allow for differing tax treatment could distort the choice of best option.

It is important to adjust for any tax differences between options arising from different contractual arrangements, such as in-house supply versus buying-in, or lease versus purchase. For example, when considering contracting out a service that was previously provided in-house, at least a part of the tax payable by the contractors and their funders would not have been paid under a 'do minimum' option of continued in-house provision.

It is common practice to remove VAT from costs. This is important where the adjustment may make a material difference, for example where different options attract different VAT conventions (such as when comparing new build with refurbishment). In other cases, adjusting for VAT is less important.

Where VAT or any other tax or subsidy is excluded from an appraisal of options, this fact should be noted in the business case. In such cases, the excluded tax or subsidy should be accounted for appropriately in the Financial Case.

3.1.8 Treatment of Transfer Payments

A transfer payment is one for which no good or service is obtained in return. Social security payments are an example. They may change the distribution of income, but they do not of themselves represent direct economic costs, except for any associated costs of administration or compliance. Transfer payments should be excluded from the costs and benefits in an appraisal but recorded separately and accounted for in analysis of public expenditure or exchequer costs in the Financial Case.

3.1.9 Treatment of Inflation

The effects of general inflation should be excluded from the Economic Case. Essentially, this means that cost and benefits should have the same base year for all of the options at the outset of the appraisal and no adjustments should be made for general inflation in later years (unlike in the Financial Case). This allows for a like-for-like comparison of impacts across the options. However, there are some exceptions to this rule, not least if there is an impact on the options where the movement of a specific price index differs from general inflation e.g., energy or wages. Furthermore, at times of abnormal inflation the appraiser should consider if other inflation adjustments need to be made. DoF's Supplementary Guidance for "Dealing with the Impact of Inflation in Business Cases" provides further advice on this.

3.1.10 Adjusting for Displacement, Deadweight, Leakage and Substitution Effects

Consideration should be given to displacement, deadweight, leakage, and substitution effects to identify a proposal's net impact on the economy. DoF's Distributional Analysis Supplementary Guidance provides more information on how to account for each of these effects.

3.1.11 Multiplier Effects

It's mostly sufficient to cost direct or 'first round' expenditure and employment effects only. Multiplier or 'second round' effects should normally be excluded on the grounds that the alternative uses to which the resources would otherwise be put would also generate multiplier effects; and differences in such effects are often difficult to distinguish with confidence or without disproportionate effort. Also, to include them in some appraisals but not in others would distort project comparisons.

However, where appropriate, employment multipliers can be applied following the adjustment for leakage, displacement, and substitution. For more information on how to calculate this see Chapter 7 of the Green Book. "Experimental" employment multipliers specific to NI can also be found on NISRA's website.

3.1.12 Environmental and Climate Impacts

It is important that all appraisers consider the impact that a proposal is likely to have on the environment and climate. When proposals are expected to have a notable impact on the environment and climate (as determined via the screening exercise conducted as part of the Strategic Case), this should be accounted for in the cost benefit analysis. DoF's Guidance on "Incorporating Environmental and Climate Considerations into Business Cases" provides more information on how to account for this.

3.1.13 Social Value Impacts

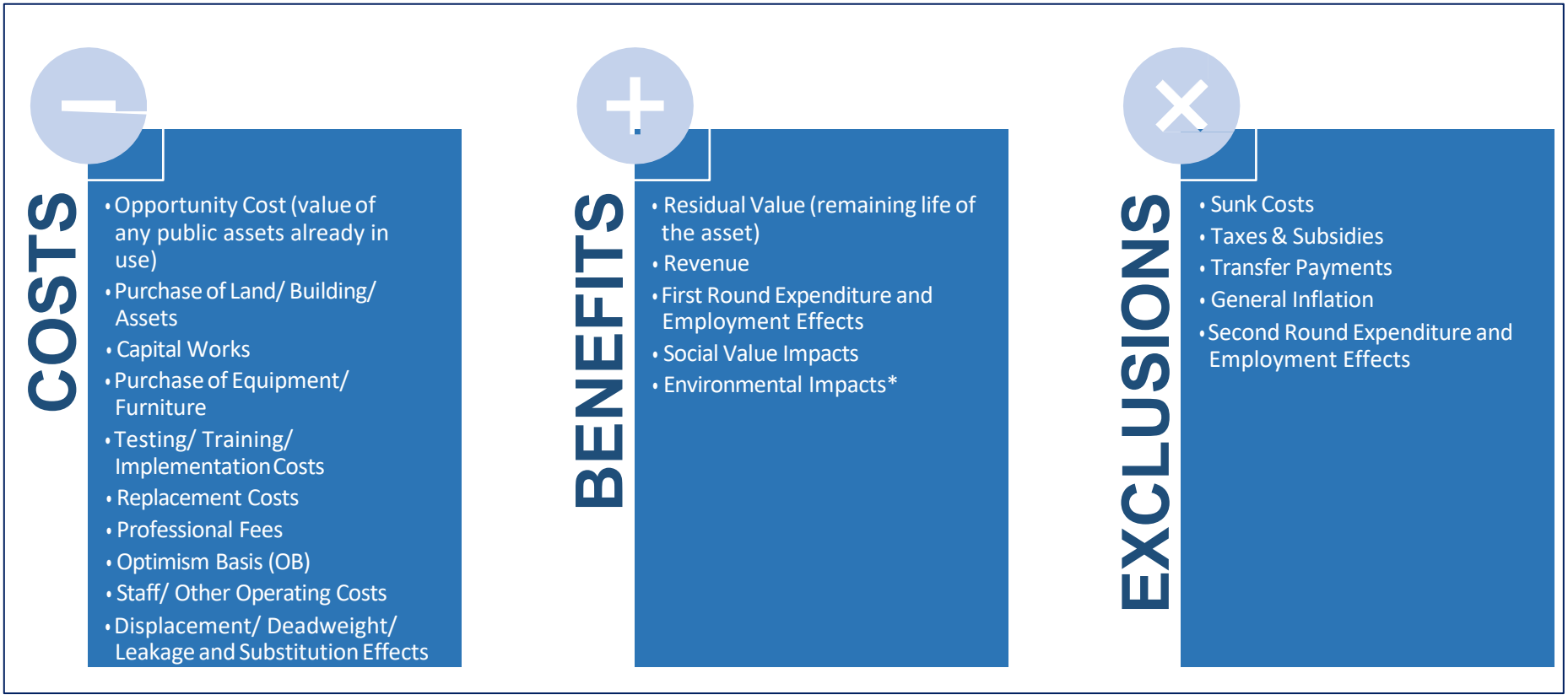
Social value refers to wider financial and non-financial impacts on the wellbeing of individuals, communities, and the environment. It is important that, where possible and proportionate, appraisers monetise the impact that a proposal is likely to have on wider social value. DoF's Incorporating Social Value into Business Cases Supplementary Guidance provides advice on how to do account for this in the Economic Case.

3.2 Types of Cost and Benefits

Figure 2 overleaf illustrates the various types of cost and benefits that need to be considered as part of the Economic Case. Not all these impacts will be relevant to all proposals, however it is the responsibility of the appraiser to consider each and decide if they are applicable.

Pages 48-49 of HMTs Guidance on developing business cases for projects and programmes and Chapter 6 of the Green Book both provide overviews of what these costs and benefits are and why they are important.

Figure 2: Monetary impact checklist for the Economic Case



*This could be a cost or a benefit depending on the proposal

4 Appraising Non-Monetary Costs and Benefits

As outlined in the previous section, it is important that appraisers seek to monetise costs and benefits where possible. However, it is not always cost-effective or practical to monetise impacts and, as is the case throughout the business case process, the principle of proportionate effort should be applied.

However, when it is not practical or cost effective to monetise identified impacts, these must still be considered and, for the purposes of determining value for money, should not be regarded as any less important than those that are monetised.

4.1 Principles of Non-Monetary Cost and Benefit Measurement

4.1.1 Quantifying Non-Monetary Impacts

All non-monetary impacts should be quantified in suitable units where possible. Research may be needed to determine the best units of measurement.

Where it is disproportionate to quantify impacts, appraisers should take steps to ensure that the rationale for what is being assumed is clear and where possible, supported by reliable and creditable qualitative evidence.

4.1.2 Comparing the Qualitative Impacts of Options

For qualitative impacts where quantification may involve research that is disproportionate to the scale or complexity of the proposal, appraisers may wish to consider if the use of Multi-Criteria Analysis (MCA) is more appropriate for option comparison.

MCA consists of comparative assessments of the extent of the impact across each option. Examples of MCA techniques include:

- **Impact assessment**: this method tabulates the impact of each option upon each non-monetary factor in an impact statement or performance matrix.
- **The weighted scoring method**: this involves assigning numerical weights to each factor/impact to reflect its comparative importance; scoring the

performance of each option against each factor on a numerical scale; and calculating a 'weighted score' for each option.

Both techniques are usually presented in tabular form with an accompanying commentary explaining the rationale for all assumptions (including an explanation of what the impacts are and why they differ across options). Failure to fully explain assumptions is likely to result in a delayed approval process.

The available techniques should be considered carefully before choosing the method most appropriate to the case in hand. **It is good practice to cover all non-monetary factors by either the impact statement method or the weighted scoring method. It is not helpful to cover some factors in a weighted scoring calculation and others in an impact statement. This can cause confusion and invalidate the rankings emerging from this section.** Economists in departments can advise on the design of suitable approaches. A worked example for both methods can be found in Appendix 2.

4.1.3 Measurable Outcomes

All non-monetary impacts, regardless of whether they are quantitative or qualitative, should result in measurable outcomes which must be recorded **for the preferred option** in the Management Case as part of the Benefits Realisation Plan (BPR). For example, even when impacts are qualitative, the level of impact could still be measured via surveys conducted before (baseline data) and after the project. A key point is, if the level of impact achieved cannot be measured/quantified in the BRP, then it should not be claimed as part of the proposal.

4.1.4 Stakeholder Engagement

Non-monetary impacts tend to be subjective in nature - what is deemed as important to one person may not be as important to another.

Involving key stakeholders from different organisations, business areas, users and or client groups in the development of a proposal’s non-monetary impacts should

ensure that a wide range of possible impacts are considered, thereby reducing subjectivity.

Appraisers should clearly explain why each of the non-monetary impacts outlined in the business case have been selected. From this, it should be clear why these impacts are considered an important part of the decision-making process. It is important to get stakeholder agreement on this part of the analysis.

There are many ways to consult with stakeholders, however Better Business Cases NI recommends a workshop approach. A large formal workshop with several key stakeholders may not be required for less complex projects or lower-level expenditures, where a meeting of core stakeholders could suffice – a common sense approach to this should be applied.

Note that for more complex projects the Green Book recommends MCA workshops should be facilitated by someone accredited to foundation level of the Five Case Model.

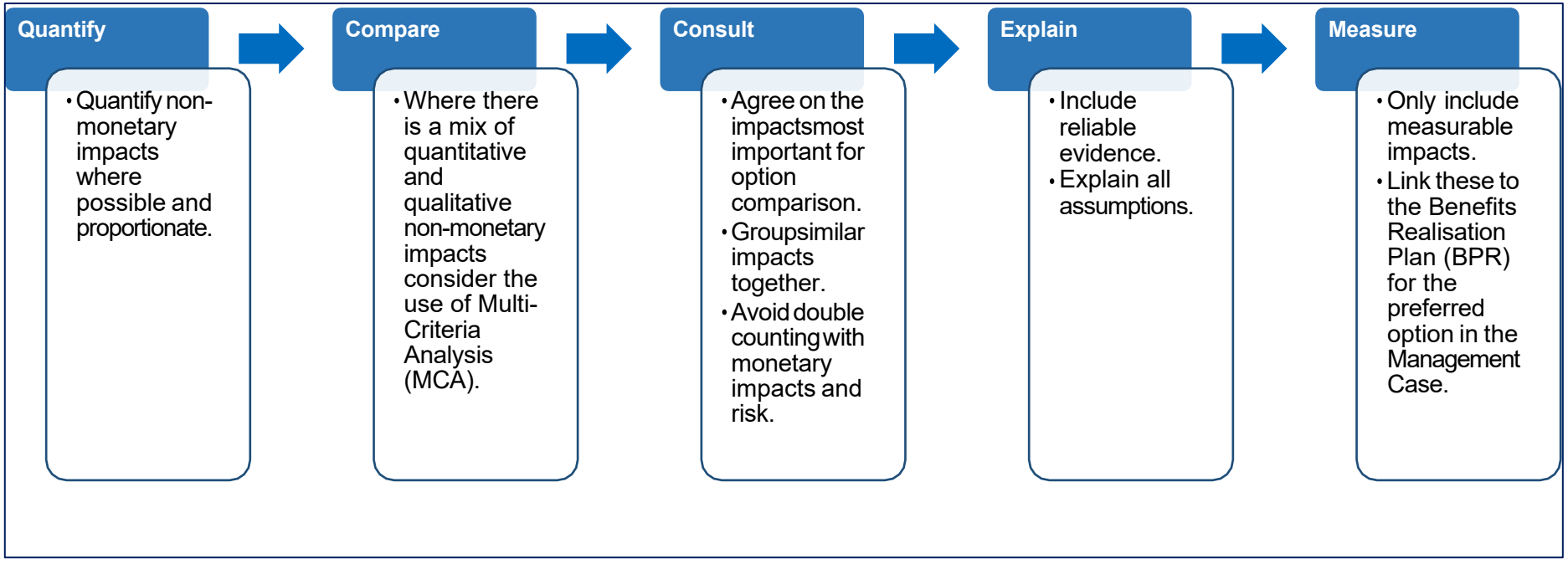
Details of this workshop should be recorded and made available on request. Please see page 15 HMT's Guidance on developing business cases for projects and programmes for more detail.

4.1.5 Double Counting

Appraisers should take care not to double-count non-monetary impacts. For example, there should be a clear distinction between each non-monetary impact and where impacts are particularly similar, appraisers may want to consider grouping these together as one impact rather than appraising them individually. This will reduce the risk of over-inflating impacts.

Similarly, appraisers should ensure that what is counted as a non-monetary impact in this section of the Economic Case, is not also included as a monetary impact (see 3.1.6 above). This is double counting and is a common error in economic appraisals. However, it is important to note that whilst the level of impact is assessed for an option in the non-monetary section, the risk section can look at the risk to that being achieved.

Figure 3: **Checklist for measuring non-monetary impacts**



5 Risks, Optimism Bias and Uncertainties

5.1 Risk Identification

Most public sector proposals will have two types of risk, unknown risk and known risk. It is important to account for both in the appraisal of options.

5.1.1 Unknown Risk

Unknown risk is accounted for by applying an adjustment for optimism bias (OB)[1]. More information on this can be found in Chapter 6 of the Green Book and pages 50-51 of HMT's guide to developing business cases for projects and programmes.

Where possible, OB adjustments should be empirically based. *Construction and Procurement Delivery* (CPD) or their equivalent are often able to provide advice on this (depending on the nature of the project). Where sufficient data is not available, the reason for this should be explained in the business case and a calculator for estimating generic optimism bias adjustment values should be used in its place. These calculators can be found on the Better Business Cases NI website.

Departmental guidance may also be available and should be referred to at this stage.

5.1.2 Known Risk

Pages 59-60 of HMT's Guidance on developing business cases for projects and programmes provides detailed information on the type of known risks common to public sector proposals and how to quantify them.

As a proposal progresses, the extent of risk in the design, build and operational phases of the project will become clearer. **Once these risks are known, their costs should be estimated and built into the project. As the cost of known risk rises, the cost of unknown risk (OB) should fall (i.e., double counting of risk**

[1] Optimism bias is the tendency to overestimate the likelihood of positive events and underestimate the likelihood of negative events, or in monetary assessments the tendency to overestimate benefits and underestimate costs and timescales.

allowances, by including both an OB adjustment and a contingency allowance to cover the same risk, should be avoided).

Once all known risks have been identified, and where possible monetised, it is good practice to then carry out a high-level risk analysis on those risks that cannot be monetised (i.e., a comparison of risk across options). Care should be taken to avoid double counting known risks that have already been monetised with known risks that cannot be monetised. Appendix 3 below incudes a worked example of the two most common types of risk matrix used for this purpose.

5.1.3 Sensitivity Analysis

However well risks are identified and analysed, it is likely that an element of uncertainty[2] remains and it is important to test how vulnerable options are to these uncertainties. This is known as sensitivity analysis, which essentially provides further assurance on the robustness of the ranking of the options. For more information on how to carry out sensitivity analysis please see page 52 of HMT's Guidance on developing business cases for projects and programmes.

'Switching values' is an important part of sensitivity analysis and should not be overlooked. A common error often seen in appraisals is the use of unmeaningful sensitivity analysis. For example, where appraisers adjust all options by the same parameters. This generally is not going to change the preferred option and in almost all cases is unhelpful. If carried out correctly, switching analysis is much more useful and should provide answers to key questions such as:

- By how much can we allow benefits to fall short of expectations, if the proposal is to remain worthwhile? How likely is this to happen?
- By how much can operating costs increase if the proposal is to remain worthwhile? How likely is this to happen?
- What will be the impact on benefits if operating costs are constrained?

[2] Risk considers the consequences of a particular event occurring. The impact of this can be measured or quantified. However, there will always be uncertainty around future events, this cannot be measured or quantified, but the options vulnerability to such events can be tested via changes in key assumptions.

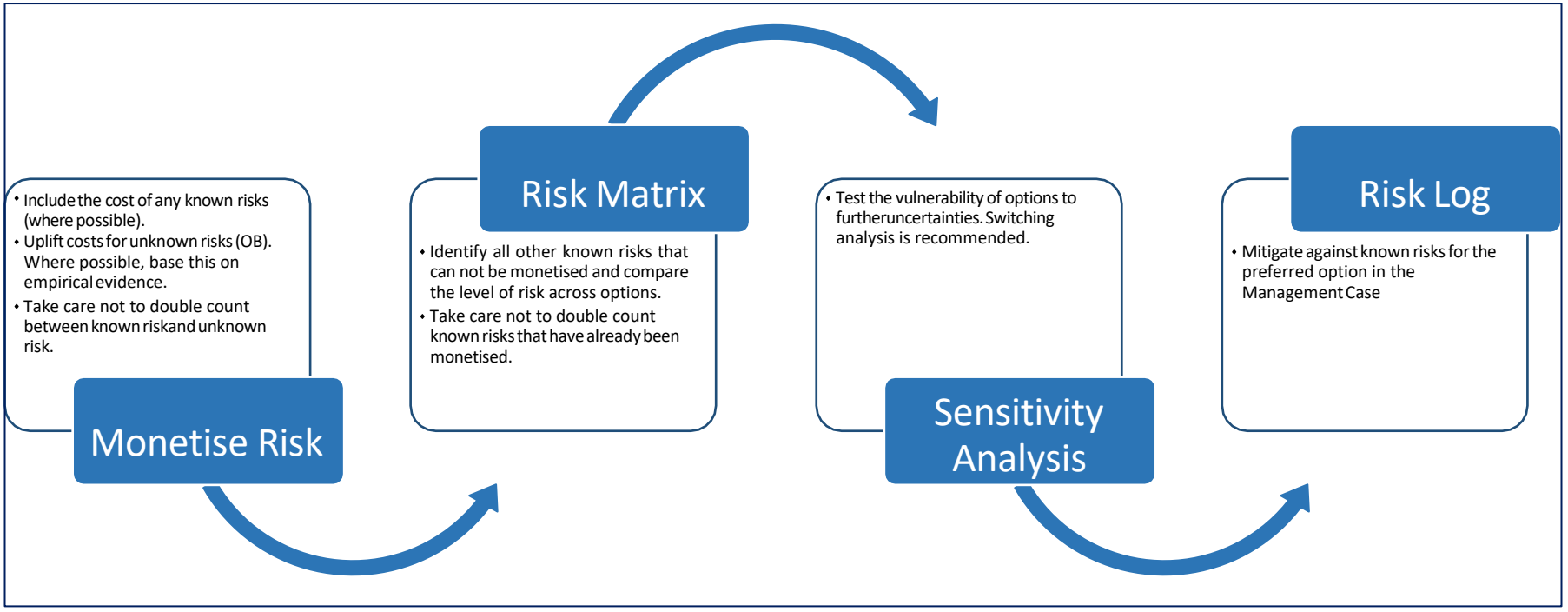
5.1.4 Risk Management and Risk Reduction Strategies

It is essential that appraisers adopt strategies to prevent and mitigate risks and uncertainties. DoF recommends that risks are managed via a risk log (completed for the preferred option as part of the Management Case).

It is important to be transparent about the potential impact of risks and biases in proposals.

Pages 71-72 of HMT's Guidance on developing business cases for projects and programmes provide detailed guidance on how to develop effective risk management and risk reduction strategies.

Figure 3: Checklist for measuring risk



6 Other Proposal-specific Principles

The sections above focus on general appraisal principles that should be applied to most proposals, regardless of their type. However, readers should also be aware that, depending on the type of proposal, there may be other basic principles to follow in the Economic Case. The table below provides an overview of other supplementary guidance. If your proposal is related to any of the following areas, then it will be important to read the relevant supplementary guidance in conjunction with this document.

Table 1: Other proposal-specific principles for the Economic Case

Type of Proposal	Proposal Specific Supplementary Guidance Related to the Economic Case	Summary of Guidance Content
Accommodation	Appraisal of Accommodation Projects	Includes an overview of the responsibilities and procedures for accommodation projects and the dispersal of civil service functions. It also includes specific guidance for appraising office accommodation leases; land, buildings and other assets; and acquisition and disposal of assets.
A change in management and / or ownership of land or buildings, from public bodies to communities	Community Asset Transfer	Includes advice on the general principles of community asset transfer and the business case process for this type of proposal.

Type of Proposal	Proposal Specific Supplementary Guidance Related to the Economic Case	Summary of Guidance Content
Grants	Appraising Assistance to the Private, Voluntary & Community Sectors	Focuses on key areas of importance in each of the five cases when appraising assistance to the private, voluntary and community sectors.
Targeted Intervention (for example, a particular location or group of people)	Appraising interventions with distributional objectives or consequences	Provides advice on how to account for distributional analysis in terms of employment & productivity and by income group. It also includes additional information on Deadweight, Displacement, Substitution and Leakage.
Professional Services	Use of Professional Services including External Consultants	Provides information on the process for appraising the use of professional services including professional consultants as well as other general advice on the approval and procurement process.

The full suite of DoF Supplementary Guidance (relevant to all of the five cases) can be found on the Better Business Cases NI website.

7 Concluding on a Preferred Option

DOF recommends that a summary of the costs, benefits and risks of all shortlisted options is captured in a table, such as the one below. Appraisers should then use this summary information to decide on the preferred option.

Table 2: Summary of Costs, Benefits and Risk

Summary of Costs, Benefits and Risks				
	Option 1: BAU	Option 2: Do Minimum	Option 3: XX	Etc.
Short Description				
NPSC or NPSV				
Monetised Benefit-cost Ratio[3] (if applicable)				
NPSC/V Options Rank				
Non- Monetary Impacts Score				
NM Impact Options Rank				
Risk Score				
Risk Assessment Options Rank				
Overall Rank				

[3] A BCR should only be calculated for monetised costs and benefits (I.e., it is not appropriate to include non-monetary impacts in this calculation).

To optimise VfM, the preferred option should be the one which provides the best balance of cost, benefit, and risk.

It is important to note that affordability must be taken into consideration when selecting the preferred option. The preferred option may not be affordable or within budget at this time and so if this is the case, it is best practise to revert to the next best alternative if VfM remains reasonable.

It is also important that the Economic Case remains transparent and records the justification for the decision.

The remaining cases (the commercial, financial and management cases) should be based on the preferred option only.

8 Appendix 1: Options Framework Example

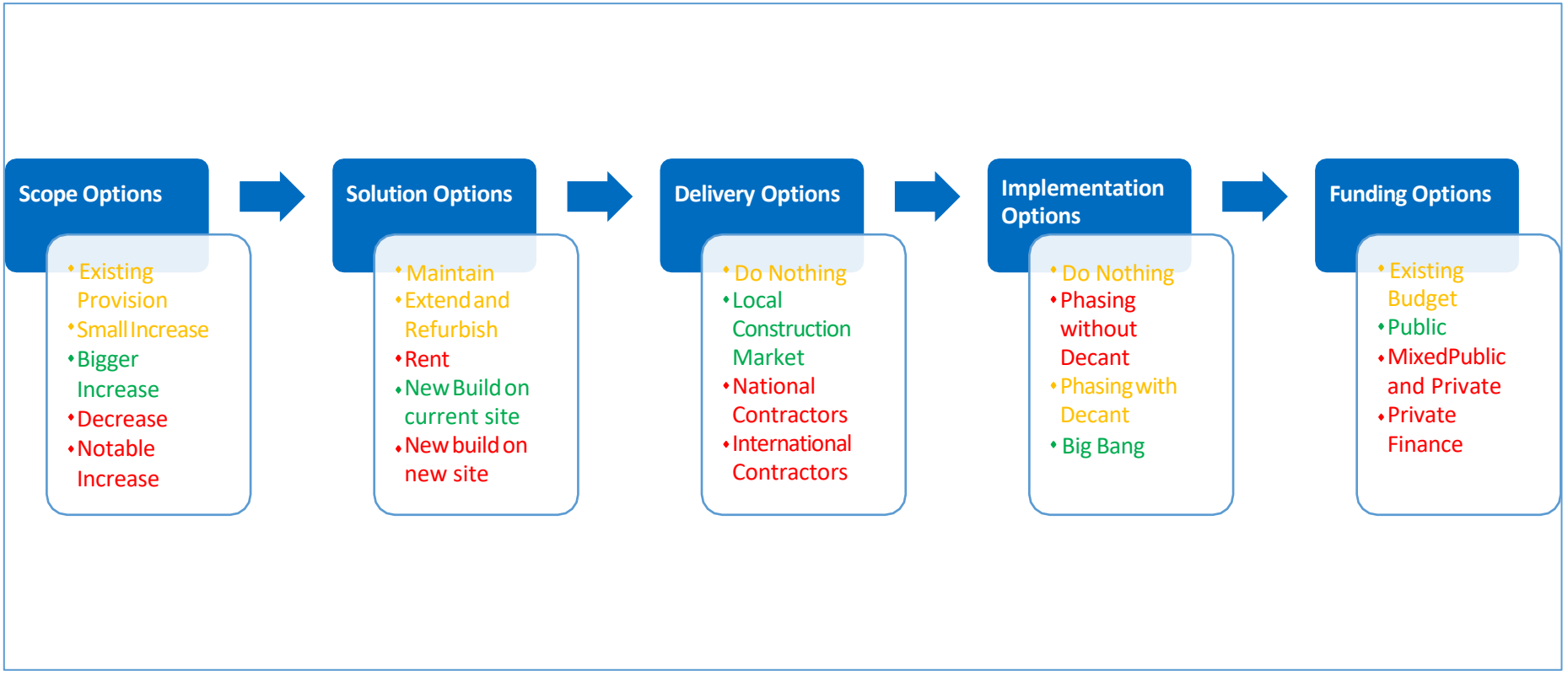
Two completed options framework examples, for a standard capital build project and an existing service contract which is due to expire, can be found on the Better Business Cases NI website.

Figure 5 overleaf, illustrates the range of options considered in sequence for the capital build example. These options were then filtered into a shortlist based on their ability to meet the proposals spending objectives and critical success factors. The four options shortlisted in this example include:

1. Business as Usual (BAU)- existing service provision from current building.
2. Do Minimum- slight increase in provision to match current increase in demand, extend and refurb existing building.
3. The Preferred Way Forward- bigger increase in provision to meet future demand, new build on current site, big bang approach.
4. Option 4- bigger increase in provision to meet future demand, new build on current site with phased implementation including decant.

Please note that the non-monetary and risk examples found in Appendix 2 and 3 below have been developed with these options in mind.

Figure 5: Summary of Options Framework example- standard capital build project



Key:
Carried Forward, Preferred Way Forward, Discount

9 Appendix 2: MCA Examples- Non-Monetary Impacts

The table below outlines the expected project benefits for the shortlisted options identified via the options framework example above (Appendix 1).

Table 3: Project Benefits

Benefit Category	Benefit	Explanation- i.e., why is this important for options appraisal?	Where in Economic Case should it be considered?
Cash Releasing	Reduced operatingcosts	There is potential to make some operating savings in terms of ongoing utility and maintenance charges. The amount of savings made is dependent on the level of works carried out.	NPSV
Non-Cash Releasing- Quantifiable	Improved service provision	The current building is not capable of meeting the growing/changing needs of the service users. The level and quality of provision able to be delivered is dependent on the level of works carried out.	Non-monetary benefits
	Improved productivity	The layout of the building is not ideal with many teams split across floors/ blocks. This is thought to add unnecessary time to the processing of important business as usual work.	
	Compliance with industry standards	The current building was constructed many years ago and as such does not comply with current standards, leaving the Department open to potential legal claims. The level of compliance depends on the level of works carried out.	
Non-Cash Releasing- Qualitative	Improved Staff Morale	Recently there has been some negative press in relation to this service provision which has put a lot of stress on staff and resulted in staff shortages as many staff are now on long term sick leave. Any increase in the level or quality of provision is expected to have a positive effect on the Department's reputation and in turn improve staff morale.	

Where there is a range of quantitative and qualitative non-monetary benefits, DOF recommends carrying out an impact assessment like either of the ones below. Where quantification is possible, this should be used to inform the scoring and clearly explained in the explanation box below.

Example 1: Basic Impact Assessment

Table 4: Key for Measuring Non-Monetary Impacts

0	1	2	3	4	5
No Impact	Very Low Positive Impact	Low Positive Impact	Moderate Positive Impact	High Positive Impact	Very High Positive Impact

Table 5: Non- Monetary Impact Assessment (Example 1)

Benefit	Option 1: BAU	Option2: Do Minimum	Option 3: PreferredWay Forward	Option 4: Intermediate option	Rationale for Scoring
Improved service provision	0	2	5	4	➢ Option 1 represents the BAU option and will not lead to any changes in service provision, thus this option has scored 0. (Quantification: Service provision under this option would be x users). ➢ Option 2 involves a small increase in scope to match the current increase in usage. However, this option does not cater for any projected increases in future demand, hence it scores more than the BAU, but slightly less than the other do something options. (Quantification: Service provision under this option would be x users max). ➢ Options 3 and 4 both involve an increase in scope to match a projected increase in usage. However, option 3 scores slightly better because the service provision under this option will be available quicker (i.e., the phased approach under option 4 will take x extra weeks). (Quantification: Service provision under both options would be x users by x date for option 3 and x date for option 4)
Improved productivity	0	3	5	5	➢ Option 1 represents the BAU option. No works would be carried out under this option and the inefficient layout of the building would not be improved. It therefore scores 0. ➢ The extension and refurbishment works under option 2 would enable the x team to sit together as oppose to across different floors and blocks of the building. This would lead to some productivity savings. (Quantification: X daily service users need to be personally escorted from block A to Block B (and back again) for security purposes. Placing these services together in the one block would eliminate this requirement and allow the work of 2 FTE AOs to be reprioritised). ➢ All other do something options involve a new build on the existing site. This would enable a much more efficient layout across the entire building which would lead to the productivity savings under option 2 plus admin processing savings for teams y and z. (Quantification: option 2 plus BAU work for teams y and z involves each team member (10 EO's) printing out on average 5 forms a day- with each one being processed at different times throughout the day. Space constraints mean the 2 teams are in one block and the printer room in another. It takes about 5 minutes to get to the printing room and 5 minutes to get back. Having the printer room in the same space would save

Benefit	Option 1: BAU	Option2: Do Minimum	Option 3: PreferredWay Forward	Option 4: Intermediate option	Rationale for Scoring
					0.8 hours for each EO daily (total daily savings 50 forms a day x 10 mins for each form= total of 8.3 lost hours a day).
Compliance with industry standards	0	3	5	5	➢ Option 1 represents the BAU option. No works would be carried out under this option and the standard of the building would not be improved. It therefore scores 0. (Quantification: w, x, y and z all below industry standard). ➢ Option 2 represents the Do minimum option which essentially involves extending and refurbishing the existing building. Under this option the standard of the building would be improved greatly, however it would be impossible to bring everything up to standard given the current design and layout of the building. (Quantification: w and x brought up to standard, but no improvement under y and z) ➢ Options 3 and 4 score the same because they both involve a new building on the existing site. This would allow the entire building to be brought up to current standards. It was noted that Option 4 would take longer for this to occur, but stakeholders agreed that the length of time taken wasn't enough to impact the scoring in this instance. (Quantification: entire building built to standard)
Improved Staff Morale	0	2	3	4	➢ Option 1 (BAU) would not lead to any change in service provision, nor would it improve the quality of the existing building or service being delivered. Users would continue to become more disgruntled, leading to further bad press. Staff morale would remain low and it is unlikely that those staff on long term sick leave would feel ready to come back to work. ➢ Under option 2, there would be some improvement, but parts of the existing building would still be below standard and some of the current issues would not be addressed. ➢ Option 3 would be an improvement on options 1 and 2, because it would address all current issues with the building and increased service provision would be in place quickly. However, option 4 scores slightly better under this option because staff have indicated that they would prefer to stay in their existing building for as long as possible, even if it meant the works would take longer. The phased decant option would enable this to happen and therefore scores slightly higher for staff morale. ➢ (Qualitative: the research required to quantify this benefit for option appraisal is thought to be disproportionate thus stakeholders have agreed scoring based on their knowledge of the existing service and the common issues service users and staff are raising. Whilst this is difficult to quantify for the purposes of options appraisal, this benefit will be still be measured for the preferred option via the completion of a survey before and after implementation please see BRP for more detail on measurement).
Score	**0**	**10**	**18**	**18**	
Rank	**3**	**2**	**1=**	**1=**	

To Note:

The main difference between this Impact approach and the scoring and weighting approach below is that this approach essentially assumes that all benefits are of equal importance.

It is worth noting that, despite scores being the same in both examples, because the benefits have been weighted in terms of their importance in the example below, the overall result/ranking of options is different. Thus, it is important to take time to consider which impact statement is most suitable for your proposal as this can influence the result.

All other requirements are the same for both examples (i.e., benefits should be agreed with key stakeholders and there should be a clear explanation for why the benefit is thought to be important in terms of options appraisal as well as a clear rationale for scoring across options).

Example 2: Weighted and Scoring Impact Assessment

Table 6: Key for Measuring Non-Monetary Impacts

0	1	2	3	4	5
No Impact	Very Low Positive Impact	Low Positive Impact	Moderate Positive Impact	High Positive Impact	Very High Positive Impact

Table 7: Non- Monetary Impact Assessment (Example 2)

Benefit	Weight (W) Should sum to 100	Explanation for weighting	Option 1: BAU		Option2: Do Minimum		Option 3: Preferred Way Forward		Option 4: Intermediate Option		Rationale for Scoring
			Score (S)	NMB (W*S)	Score (S)	NMB (W*S)	Score (S)	NMB (W*S)	Score (S)	NMB (W*S)	
Improved service provision	**35%**	Stakeholders agreed at a workshop held on (date) that this was the most important of the non-monetary benefits. Current service provision is not capable of dealing with growing/changing demand and there is a risk that some users are at a disadvantage because all their needs are not being met.	**0**	**0**	**2**	**70**	**5**	**175**	**4**	**140**	See write up in the impact example above. The explanation for scoring would be the same for both examples, the only difference would be that the benefits would be weighted in terms of importance. Note: applying a weighting to benefits has changed the overall ranking of options in this example.
Improved productivity	**17.5%**	Given the current economic climate and the growing pressure on public sector budgets, stakeholders agreed that the potential to make productivity savings and reprioritise work was important (joint with compliance with industry standards).	**0**	**0**	**3**	**52.5**	**5**	**87.5**	**5**	**87.5**	
Compliance with industry standards	**17.5%**	It was agreed that this benefit was ranked joint third in terms of importance because the building is currently below standard, which is leaving the Department open to potential legal claims.	**0**	**0**	**3**	**52.5**	**5**	**87.5**	**5**	**87.5**	
Improved StaffMorale	**30%**	Stakeholders agreed that improving staff morale was the second most important because the service has received a lot of negative scrutiny in the media recently. This has resulted in staff shortages as many staff are now off on long term sick leave due to work related stress. If staff morale does not improve then it will be impossible to deliver the proposed increase in service provision.	**0**	**0**	**2**	**60**	**3**	**90**	**4**	**120**	
Total NMB Score			**0**		**235**		**440**		**435**		
Rank			**4**		**3**		**1**		**2**		

10Appendix 3: Risk Impact Example

The table below outlines the potential risks for each of the shortlisted options identified via the options framework example above (Appendix 1) These risk and scoring were agreed at a stakeholder workshop held on (date).

Table 8: Project Risks

Risk Category	Risk Description	Project Risk	Project Risk Description
Business Risks	These risks remain with the organisation (100%), cannot be transferred by the organisation. These include political and reputational risks.	Business Risk and Failure to meet Project Objectives	The risk that the implementation of the project will result in the organisation failing to deliver its commitments and therefore is unable to meet its business objectives. For example, the risk that the project overruns in terms of time could delay the delivery of the full service and lead to possible cost overruns.
Service Risks	These associated risks fall within the design, build, financing and operational phases of the project and may be shared with others from outside of the organisation.	Planning Approval	The risk that the implementation of the project fails to adhere to the terms of the planning permission, or that detailed planning cannot be obtained; or, if obtained, can only be implemented at costs greater than in the original budget.
		Failure to Secure Adequate Funding	The risk that the availability of funding leads to delays and reductions in scope as a result of reduced monies.
		Failure to Continue with Current Service Provision	The risk that that current services cannot continue to be provided. For example, the works affect BAU activities/ service delivery.
		Failure to Recruit Appropriate Staff	The risk that a larger service delivery will require additional skilled staff which may not be available/ easily recruited.
External Risks	These non-systemic risks affect all society and are not connected directly with the proposal. They are inherently unpredictable and random in nature. They include technological disruption, legislation, general inflation and catastrophic risks.	Catastrophe risks	These unpredictable risks, which may be related to changes in economic growth, are allowed for in the social discount rate and do not have to be costed separately e.g. technological disruption, natural disasters, unexpected policy changes and other unforeseeable occurrences. Other unknow risks not accounted for in the discount rate are generally captured in the level of Optimism Bias. Therefore, this type of risk has not been included in the risk assessment to avoid the likelihood of double counting.

Example 1: Basic Impact Assessment

Table 9: Key for Measuring Risk

L	M	H
Low Risk	Medium Risk	High Risk

Table 10: Risk Impact Assessment (Example 1)

Risk	Option 1: BAU	Option2: Do Minimum	Option 3: Preferred Way Forward	Option 4: Intermediate Option	Rationale for Scoring
Business Risk and Failure to Meet Project Objectives	N/A	L	M	M	Option 1 involves no work, so this risk is not applicable for this option. Option 2 is do minimum refurb option and extension, which is more straightforward than a new build and so carries a lower risk of running over in timing or costs. Options 3 and 4 involve a new build on the existing site, so more work is required resulting in a higher chance of overrunning on time and costs if not managed appropriately. However, the new building will be a standard building and the project will follow good project management structures, thus the level of risk is only thought to be medium for both options.
Planning Approval	N/A	L	M	M	Option 1 represents the BAU option, which involves maintaining the current building to current standards, meaning that no planning approval is required. Option 2 involves refurbishing and slightly extending the current building. There is a very low risk with this option that planning approval will not be granted. Options 3 and 4 include new builds on the current site, however these options are the same size as the current building and so carry a medium level of risk.
Failure to Secure Adequate Funding	N/A	L	M	M	Option 1 represents the BAU option and requires no additional funding. Option 2 requires the lowest amount of funding of all of the do something options as it involves a minimum amount of work. Options 3 and 4 require more additional funding. Whilst option 4 is expected to be more costly than option 3 because of the phased implementation, the difference is not material enough to influence the overall risk score, thus both options have a medium level of risk.
Failure to Continue with Current Service Provision	N/A	M	H	H	There will be no works with option one so there will be no disruption to service delivery. Option 2 only involves a small level of work and therefore the potential for service disruption will be less under this option. Options 3 and 4 both have the potential to cause a degree of disruption if not managed appropriately and therefore have a high-risk score. Whilst the phased implementation will take longer to complete, and therefore could disrupt service delivery for longer, the difference is not thought to be enough to influence the overall risk scores.
Failure to Recruit Appropriate Staff	N/A	L	M	M	No additional staff will be required for option 1 as there will be no additional services provided. Option 2 only involves a small increase in provision to match current usage so the risk of not being able to recruit additional staff is low under this option. Options 3 and 4 involve the same level of service provision/ require the same number of staff. For these options, there is a medium level of risk that the resources will not be available to recruit.
Score	N/A	Low-Medium	Medium- High	Medium – High	
Rank	1	2	3=	3=	

To Note:

The main difference between this risk impact approach and the one below is that this approach uses high level risk scores, however, the approach below quantifies more. The second approach can be useful for ranking purposes, when options are thought to have a similar level of risk. This is shown in the example below, despite the high-level scores being the same in both examples, because the example below has quantified more, the overall result/ranking of options is different. Thus, it is important to take time to consider which impact statement is most suitable for your proposal as this can influence the result.

All other requirements are the same for both examples (i.e., risks should be agreed with key stakeholders and there should be a clear explanation for why the risk is thought to be important in terms of options appraisal as well as a clear rationale for scoring across options).

Example 2: Likelihood and Impact Matrix

In this example, the impact of the risk materialising is assessed along with the likelihood of it happening. A scoring matrix is used to assign a score to each option for each risk.

Table 11: Key for Measuring Risk

		Impact (I)				
		Very Low (1)	Low (2)	Medium (3)	High (4)	Very High (5)
Likelihood (L)	Very High (5)	5	10	15	20	25
	High (4)	4	8	12	16	20
	Medium (3)	3	6	9	12	15
	Low (2)	2	4	6	8	10
	Very Low (1)	1	2	3	4	5

Table 12: Risk Impact Assessment (Example 2)

	Option 1: BAU			Option 2: Do Minimum			Option 3: Preferred Way Forward			Option 4: Intermediate Option			I = Level of Impact L = Likelihood of occurrence
Risk	**I**	**L**	**IL**	**I**	**L**	**IL**	**I**	**L**	**IL**	**I**	**L**	**IL**	**Rationale for scores**
Business Risk and Failure to Meet Project Objectives	N/A	N/A	N/A	1	1	1	3	3	9	3	3	9	See example above for rationale
Planning Approval	N/A	N/A	N/A	1	1	1	3	3	9	3	3	9	See example above for rationale
Failure to Secure Adequate Funding	N/A	N/A	N/A	1	1	1	3	3	9	3	4	12	As per the rationale in the example above, Options 3 and 4 both require an additional amount of funding. The phased implementation under option 3 is expected to cost more, but this wasn't enough to change it to a high-risk score. In this example, both options still have a medium level of risk, but the slight difference between the options has now been quantified.
Failure to Continue with Current Service Provision	N/A	N/A	N/A	3	3	9	4	4	16	4	5	20	As per the rationale in the example above, the level of work under Options 3 and 4 has a high potential to disrupt service delivery if not managed appropriately. The phased implementation under option 3 is expected to take longer than option 3, but this was not thought to be enough to influence the overall risk score. In this example, the level of risk is still high, but the slight difference between the options has now been quantified.
Failure to Recruit Appropriate Staff	N/A	N/A	N/A	1	1	1	3	3	9	3	3	9	See example above for rationale
Totals	**N/A**			**13**			**52**			**59**			
Rank	**1**			**2**			**3**			**4**			

Economists in Departments should be able to advise on specific appraisal queries. Any questions or comments about this guidance should be sent to DoF at the email address below.

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