



Tertiary Education Commission  
Te Amorangi Mātauranga Matua

# Better Business Cases for Capital Proposals Toolkit: Single Stage Business Case (Tertiary Education Sector)

Based on “Single Stage Business Case”

11 February 2011

### **Treasury Acknowledgements**

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- ÿ The Five Case model is the standard recommended by the UK Office of Government Commerce, HM Treasury, for the preparation of business cases. Refer to 'Making Sense of Public Sector investments' (2001) by Courtney A Smith and Joe Flanagan and the following website: [www.hm-treasury.gov.uk/data\\_greenbook\\_business.htm](http://www.hm-treasury.gov.uk/data_greenbook_business.htm)
- ÿ The State of Victoria Department of Treasury and Finance Investment Management Standard provides a set of tools, including the Investment Logic Map (ILM). Refer to the following website: [www.dtf.vic.gov.au/investmentmanagement](http://www.dtf.vic.gov.au/investmentmanagement). The material is reproduced with permission and that copyright belongs to the State of Victoria. The State of Victoria is released from any liability associated with the subsequent use of the intellectual property associated with the material.

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This document has been contextualised by the Tertiary Education Commission for use specifically within the New Zealand Tertiary Education Sector. The document largely replicates a generic single-stage business case toolkit developed by The Treasury, however the scope and content has been aligned to the needs and situations encountered most often by tertiary education institutions. Specific changes include the removal of references to requests for capital from central government and changes to reflect the governance and management structures found most often within the tertiary education sector. The Tertiary Education Commission wishes to acknowledge the contribution of the New Zealand Treasury and the Tertiary Education Capital Asset Management Sector Reference Group in the development of this document.

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# How to Prepare a Single Stage Business Case

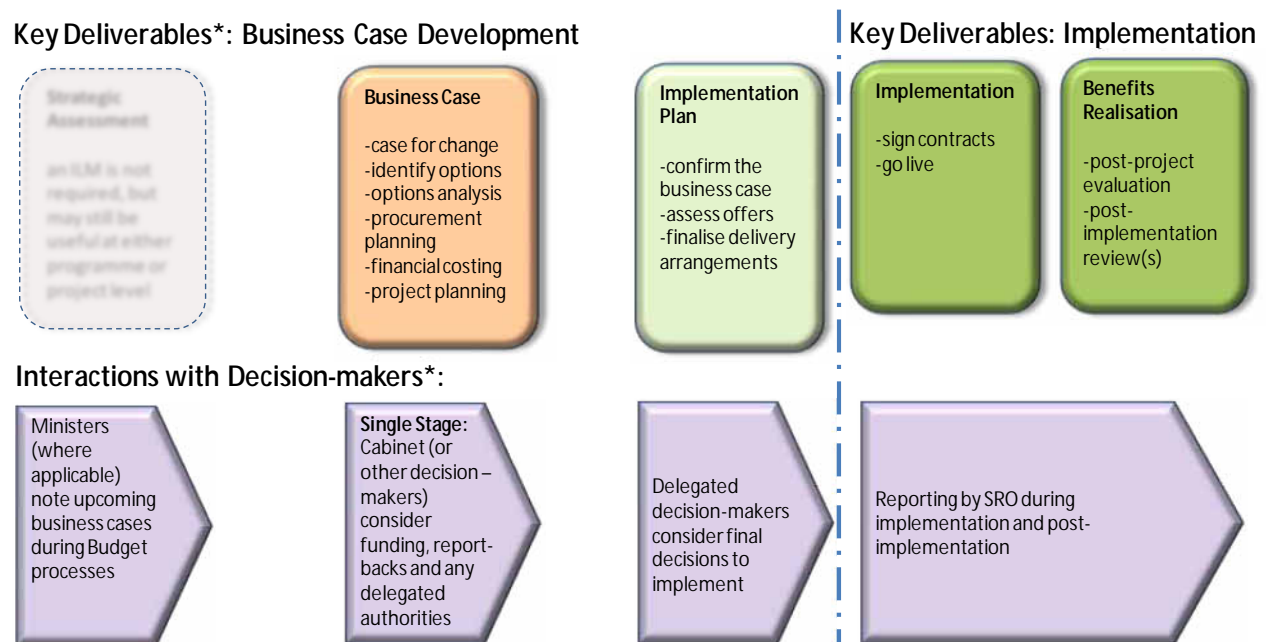
## Purpose

1. The purpose of the business case is to enable ministers, stakeholders, government officials and/or managers to ascertain that an investment proposal:
  - i. is supported by a robust case for change – the ‘**strategic case**’
  - ii. maximises value for money – the ‘**economic case**’
  - iii. is commercially viable – the ‘**commercial case**’
  - iv. is financially affordable – the ‘**financial case**’
  - v. is achievable – the ‘**management case**’.
2. The business case can:
  - confirm the case for change and the need for investment
  - identify the investment option which maximises value for money based on more fully developed costs and benefits
  - prepare the proposal for procurement
  - detail plans for the necessary funding and management arrangements for the successful delivery of the project, and
  - inform a proposal to decision-makers to seek agreement to go to market and finalise the arrangements for successful implementation (in the Implementation Plan). This approval may be subject to delegation and reporting requirements at key milestones or in the event of specified contingent events.
3. The purpose of this guidance document is to provide tertiary education institution (TEI) managers with guidelines on how to prepare single stage business cases which seek support from the Crown for funding, policy or investment plan decisions. This support may be in the form of approval for reinvestment of the net disposal proceeds made available from the disposal of Crown assets, access to borrowing arrangements (whether these are Crown or third-party provided) and merger or capital proposals.
4. The Tertiary Education Commission (TEC) will also use these guidelines in assessing business cases. The business case is to be completed following discussions with the TEC regarding the investment being considered and the alignment with the Tertiary Education Strategy (TES) and the TEI’s strategic goals, as outlined in your current Investment Plan, Strategic Plan, three year financial outlook, annual reports and strategic capital asset management plan.
5. This business case guidance has been drafted to align with the NZ Treasury business case standard for State sector capital investment proposals, released in July 2010.

## When to Prepare a Single Stage Business Case?

6. TEIs are required to apply the Treasury business case standard for any proposals that seek funding support from the Crown. These proposals include where approval is sought for:
  - A Crown capital injection.
  - Reinvestment of a portion of the net proceeds made available from the disposal of Crown assets.
  - Access to borrowing arrangements.
  - Merger proposals.
7. Unless otherwise agreed by the Treasury and TEC, a two-stage approval process must be followed.<sup>1</sup>
8. A single stage approval process is permitted for proposals that seek new Crown funding that are assessed as low risk (as assessed by the SSC Gateway Unit) and small (whole of life costs of less than \$25 million). It is intended that single stage proposals would normally be considered as part of the Budget process. Refer to the scalability matrix<sup>2</sup> and contact your TEC Investment Manager for clarification and guidance on whether or not a two stage approval process is required.
9. Cabinet's expectation is that TEIs will actively seek to integrate Treasury business case guidelines into all internal business cases (CO(10)2 refers). The TEC encourages TEIs to discuss the implications of this expectation on their operations with their TEC Investment Manager.

Figure 1: Example of business case development process for a single stage approval.



\* Requirements for Gateway reviews, ILM, depth of analysis, decision-making authority, central agency monitoring, etc may vary depending on the scalability rules, agency type, sector and/or solution options (eg PPP).

<sup>1</sup> Refer to the Overview booklet and Cabinet Office circular CO(10) 2 for further detail on proposals that require Cabinet approval – see <http://www.infrastructure.govt.nz/publications/betterbusinesscases>

<sup>2</sup> Refer to the Overview booklet.

# ***The Strategic Case – Making the Case for Change***

10. This part of the business case describes the TEI in which the proposed investment will take place and identifies the investment objectives from the key strategic drivers.

## **Action 1: Ascertain Strategic Fit**

11. Undertake an analysis of how the outcomes or objectives proposed in the business case align with other challenges or opportunities being faced by the organisation. This step asks basic questions when shaping and selecting investments:
  - What is the problem?
  - What is the best strategic response to the problem?
  - What benefits does any investment need to deliver?
  - What is the preferred solution?
12. An Investment Logic Map (ILM) can help business case developers and Senior Responsible Owners (SROs) define and validate the business need (the problem) and benefits a solution needs to deliver. It also helps scope likely solutions to the problem.

## **Action 2: Agree Strategic Context**

13. The purpose of this action is to provide an overview of the TEI and the specific impact, outcomes or objectives that the TEI is seeking to achieve or contribute to through its operations. It also should demonstrate alignment of the proposed investment with Government's priorities and goals, the Tertiary Education Strategy (TES), policy decisions, other collaborative multi-agency initiatives (if relevant) and linkages with other parts of the TEI's strategic business plans (including the Investment Plan and the Capital Asset Management plan) or projects.

### **Organisational overview**

14. Provide a brief profile of the TEI, together with a statement of what it is seeking to achieve and the nature and level of resources currently at its disposal.
15. The key areas of interest include:
  - what the main outcomes and objectives that the TEI is trying to achieve and why?
  - the nature and scope of the TEI's activities and services (outputs), key stakeholders and learners
  - available resources, including existing financial and funding arrangements, organisational structure and staff, and how it intends to manage this capability over time, and
  - the current environment in which the TEI operates, how it intends to respond to changes and possible risks.

16. It is expected that much of this information will be available from the latest available Investment Plan and annual reports, updated for any recent changes. The expectation is that a brief summary is provided rather than repeating the content of the other existing documents.

### **Existing business strategies**

17. Explain how the proposed investment fits within, supports and promotes the agreed strategy and work programme of which the proposal is an integral part.
18. All relevant strategies should be referenced including those at national, regional and local levels. Alignment of the investment with Government priorities, the TES and relevant policy decisions should be demonstrated. In particular where an investment is intended to contribute to shared outcomes across multiple organisations, or where outcomes contribute to other related projects or programmes, these linkages and inter-dependencies should be clearly demonstrated.
19. How will the proposal help to achieve the business goals, strategic aims and plans of the TEI? The proposed investment should contribute to, and be consistent with strategic business planning.
20. Much of this information should be available from existing documentation and should highlight the high level policy aims (strategic aims) and business goals of the TEI, which can then be used as the basis for determining the specific investment objectives below.

### **Identifying Key Stakeholders**

21. Identifying and consulting with those key stakeholders who are required for the success of the project is important for successfully scoping and delivering all capital proposals.
22. Key stakeholders will differ between proposals and may include council members, senior management, ministers, Government departments and state sector agencies, non-government organisations, community groups, special interest groups, service providers, potential investors and learners.
23. For each stakeholder group, detail:
  - each stakeholder's relationship to the investment proposal
  - their degree of influence over a successful outcome (low/high)
  - their current interest in the proposals success (low/high)
  - consultation already undertaken
  - expected synergies/benefits from the proposal
  - issues and their potential impact on the success of the proposal
  - actions/response needed which may include, for example, addressing specific stakeholder concerns by altering proposal specifications or increased communication
  - timing of any required actions, and

- key responsibility – who will take responsibility for the actions surrounding an individual stakeholder.
24. You should develop a consultation and communication strategy as part of the business case.

### **Action 3: Determine Investment Objectives, Existing Arrangements and Business Needs**

25. A robust case for change requires a thorough understanding of:
- what the TEI is seeking to achieve (the investment objectives)
  - what is currently happening (existing arrangements), and
  - problems in addressing the business gap (business needs).
26. Analysing a proposal in this way helps to provide a more compelling case for investment, as opposed to it simply being 'a good thing to do'.

#### **Setting Investment objectives**

27. This defines the objectives for the proposed investment in terms of the desired outcomes and 'where the TEI wants to be'
28. The investment objectives must clearly relate to the underlying policies, strategies and business plans of the TEI. Investment objectives may be strategic (business related), operational (management related) or job (task) related. They should also be SMART (specific, measurable, achievable, relevant, and time-constrained) to help facilitate the generation of options and provide the foundation for post-implementation review and evaluation.
29. The investment objectives should:
- be outcome-focused and distinguishable from the means of provision
  - focus on what needs to be achieved rather than the potential solution
  - not be so narrowly defined that they preclude important options, and
  - not be so broadly defined that they cause unnecessary work at the options analysis stage.
30. In practice, investment objectives may be to:
- provide future cost savings in the provision of an existing service
  - improve business effectiveness and service quality
  - improve efficiencies in the delivery of services
  - meet statutory requirements and obligations
  - meet policy changes, and/or

- deliver new business and operational targets.

31. Procuring an asset or service is not an investment objective. It is what a TEI is seeking to achieve in terms of measurable returns on the investment that is important. The setting of a robust set of investment objectives is an iterative process. They may need to be revisited as subsequent assessment may alter them.

### Documenting existing arrangements

32. The purpose is to provide a snapshot of where the department or agency is now and consequently forms the basis for the “base case” or “do nothing” option.

33. Within the parameters of the scope determined by the investment objectives, summarise the status quo. That is, describe existing arrangements and explain how services are currently organised,<sup>3</sup> provided and supplied. Include details about stakeholders, customers, turnover, and asset availability, utilisation and condition.

### Specifying business needs

34. Describe the ‘business gap’, the difference between where the TEI wants to be, as described by the investment objectives, and where the TEI is now, described by the existing arrangements for the service. This should highlight any problems, difficulties and inadequacies associated with the status quo.

35. This analysis should take into account existing and future changes in the demand for services. In most cases, it will be necessary to include:

- confirmation of the continued need for business operations, including supporting evidence
- projections of the nature and level of demand for future services (including learner demographics and needs)
- deficiencies in current provision, and
- a summary of requirements, clearly distinguishing between the current and future.

## Action 4: Determine Potential Business Scope and Key Service Requirements

36. Highlight the potential scope of the proposal and the services required to satisfy the identified business needs and gaps.

### Defining potential business scope

37. Ascertain the scope of the proposal from the standpoint of the TEI, in terms of affected business areas and functionality.

38. This is important as it effectively sets out the boundaries, or limitations, of the proposal. Only options within this scope will be assessed within the economic case. If the scope is left open or vague at this stage, this may lead to ‘scope creep,’ and either additional

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<sup>3</sup> This may duplicate some of the TEI level summary in action two.

costs or unintended benefits on implementation. Conversely, if the scope is too narrow, it may limit the consideration of innovative solutions.

## Establishing service requirements

39. Within the above scope, highlight the required services. This forms the basis of the 'statement of needs' (SON) or 'statement of service requirements' (SSR).
40. In practice, it is useful to consider potential scope and the associated service requirements in terms of a continuum of business needs, ranging from a 'core' (minimum requirement) to 'core plus desirable' (intermediate requirement), to 'core plus desirable plus optional' (maximum requirement). 'Core' denotes the 'must haves'. 'Desirable' equates the things that could be considered on a cost/benefit basis. 'Optional' represents the things that may be acceptable if at low marginal cost.

## Action 5: Determine Benefits, Risks, Constraints and Dependencies

41. Assuming that the required services are put in place, identify the key benefits, risks, dependencies and constraints associated with the investment proposal. With the key investment objectives, these aspects provide a basis for the later selection and evaluation of options.

### Developing main benefits criteria

42. The benefits criteria should be developed by the parties most directly affected by the proposal, usually the main stakeholders and users of the proposed services. Benefits can be direct or indirect, monetary or non-monetary and either quantitative or qualitative (or non-quantifiable).<sup>4</sup>

**Table 1:** Examples of different types of benefits<sup>5</sup>

Benefit Types	Example
Direct, monetary and quantitative	Operating cost savings
Non-monetary and quantitative	Lower number of system user complaints, increase in qualification completions, reduction in the number of NZQA approved qualifications
Non-monetary and qualitative	Increase in staff skills, improvements in literacy and numeracy skills
Indirect, quantitative and qualitative	Improvement in education skills and labour outcomes for New Zealanders

43. The benefits, both direct and indirect to the TEI, should be identified for each investment objective against the relevant benefits criteria. This categorisation helps to:

<sup>4</sup> Optimism bias also needs to be allowed for at this stage. Refer to action 12 for more details on allowing for risks and uncertainty.

<sup>5</sup> Refer to the Treasury CBA Primer, Section 2.3.1, at <http://www.treasury.govt.nz/publications/guidance/planning/costbenefitanalysis>

- pin-point the main beneficiaries of the proposal – both those within the TEI (direct) and those elsewhere in the state sector and/or economy (indirect). This recognises that occasionally those investing the most financially might not always be the main beneficiaries, and
- ascertain whether the benefits are monetary, quantifiable but not in monetary terms, or qualitative (ie, non-quantifiable). This categorisation is useful for the later options analysis to be undertaken in actions seven and ten.

### Identifying the main risks

44. The main risks associated with the proposal and risks management strategies should be identified. Identify the sources of risk, areas of impacts, events (including changes in circumstances) and their causes and potential consequences. The aim of this process is to generate a list of risks that might create, enhance, prevent, degrade, accelerate or delay the achievement of the investment objectives of the proposal. The emphasis should be on the 20% of risks which will account for 80% of the total risk.
45. Refer to the joint Australian New Zealand Standard AS/NZS ISO 31000:2009 “Risk management - principles and guidelines”.<sup>6</sup>

### Identifying key constraints

46. The parameters within which the investment must be delivered should be considered. This may include constraints set as part of either Government policy directions or any financial or fiscal affordability constraints. Constraints imposed on the proposal must be managed from the outset.

### Identifying dependencies

47. Any actions or developments required of others should be considered if the ultimate success of the proposal is dependent upon them. This could entail the successful delivery of the outputs associated with other related projects.

**Table 2:** Summary table – for each objective

Investment Objective:	Description <What the TEI is seeking to achieve?>
Existing arrangement	<The status quo?>
Business need	<The problems associated with the status quo?>
Potential scope	<What needs to be put in place to overcome these problems?>
Potential benefits	<The benefits that would accrue as a result?>
Potential risks	<The potential risks which might arise?>
Potential constraints	<The limitations faced?>
Potential dependencies	<The things that must be in place and/or managed elsewhere?>

<sup>6</sup> AS/NZS ISO 31000:2009 “Risk management – principles and guidelines” is available at the Standards NZ web-site at <http://www.standards.co.nz/services/publications/default.htm>.

# Economic Case – Maximising Value for Money

48. Having determined the strategic context for the investment proposal and established a robust case for change, this part of the planning process focuses on the main options available for delivering the required services.

## Action 6: Agree Critical Success Factors

49. Critical success factors are defined as the attributes essential to successful delivery of the proposal. Critical success factors will differ depending on the nature of the proposal, both in content and relative importance. The key point is that they must be crucial (not desirable) and set at a level which does not exclude important options.
50. Each of the available options should be assessed against the critical success factors, the investment objectives and the benefits criteria.

**Table 3:** Critical success factors based on the five case model

Illustrative Key Critical Success Factors	Broad Description
Strategic fit and business needs (strategic case)	How well the option: <ul style="list-style-type: none"> <li>· meets agreed investment objectives, related business needs and service requirements</li> <li>· provides for business continuity of essential services</li> <li>· aligns with other strategies, programmes and projects.</li> </ul>
Potential value for money (economic case)	How well the option: <ul style="list-style-type: none"> <li>· maximises the return on the required investment (benefits optimisation) in terms of economy, efficiency and effectiveness</li> <li>· minimises associated risks.</li> </ul>
Provider capacity and capability (commercial case)	How well the option: <ul style="list-style-type: none"> <li>· matches the ability of the service providers to deliver the required level of services and business functionality</li> <li>· appeals to potential service providers.</li> </ul>
Potential affordability (financial case)	How well the option: <ul style="list-style-type: none"> <li>· meets the sourcing policy of the TEI and likely availability of funding</li> <li>· matches other funding constraints.</li> </ul>
Potential achievability (management case)	How well the option: <ul style="list-style-type: none"> <li>· is likely to be delivered in view of the TEI's ability to assimilate, adapt and respond to the required level of change</li> <li>· matches the level of available skills which are required for successful delivery.</li> </ul>

# Action 7: Identify the Long List Options and Undertake Initial Options Assessment

51. The purpose of this action is to identify as wide a range as possible of options that meet the investment objectives, potential scope and benefits criteria identified above. Each of the long list options is assessed against the investment objectives and critical success factors to determine the preferred way forward and short-list.

## Identifying long list options

52. The TEI needs to consider all realistic options for meeting the service need. A ‘long list’ of up to a dozen options should ideally be considered. This can involve a number of dimensions—physical or non-physical, scale and scope, timing, location, staging and procurement options, and a base case option.

**Table 4:** Dimensions of scope

Dimension	Potential long-list options can be created using all viable combinations of the five dimensions
<i>Scale, scope and location</i>	In relation to the proposal, <b>what</b> levels of coverage are possible? For example, by levels of functionality, geographic coverage, population/user base, TEI, etc.
<i>Service solution</i>	<b>How</b> can services be provided? For example, potential solutions and answers, use of technologies, etc.
<i>Service delivery</i>	<b>Who</b> can deliver the services? For example, in-house, out-sourced, etc.
<i>Timing and staging</i>	<b>When</b> can services be delivered? For example, big bang, phased, modular delivery, etc.
<i>Procurement</i>	<b>How</b> can it be funded? For example, capital or operating, private or public finance (see action 14 for PPPs), Crown funded or fee recovery, etc.

53. A base case option must be included and will act as the baseline for determining relative value for money. This may either be the ‘status quo’, ‘do nothing’ or ‘do minimum’, depending on which is the most realistic option in the circumstances. Refer to action three – existing arrangements.

54. Impractical options may sometimes be ruled out early for valid legal, financial or political reasons (ie, constraints). In such cases, undue time, effort and expense should not be expended on assessing these options.

55. The long-list options can be generated by a facilitated workshop process, comprised of senior managers (for business inputs), stakeholders and customers (for user inputs) and specialists (for technical inputs).

## Conduct an initial assessment of the long list options

56. The next step is to assess the most viable options to meet the identified service need. This assessment should identify the advantages and disadvantages of each option and examine critically the risks and benefits of each of them.

57. Assess how well each of the viable long list options generated above meets the evaluation criteria (investment objectives and critical success factors). Decide if each option should be disregarded immediately or carried forward, either as the preferred option or a possibility for consideration.
58. It is essential to be objective and even-handed when considering long list options.
59. A composite preferred option can be constructed by combining the preferred choices in each of the five dimensions. Refer to the worked example at the end of this guide.

## Action 8: Identify the Short-list Options

60. The results of the initial assessment of the long list may be used to generate the short list options
61. At least three short-listed options should be recommended for further assessment in the business. The short list should include a base case option - either the 'do nothing'/status quo or 'do minimum' option which then provides the benchmark for considering relative value for money. The short list should also include choices of more or less ambitious options, if these are viable options.
62. Indicative costs for each of the above short-listed options should be provided. Importantly, the indicative costs should also make allowance for optimism bias. Refer to further details on allowing for risk and uncertainty in the guidance for action 12.

## Action 9: Not Required

63. This action is not required for a single stage business case.

## Action 10: Economic Assessment of the Short Listed Options

64. The purpose of this action is to estimate the costs and benefits for each of the short listed options and then present the results. Some intangible benefits and costs may not be reliably quantified in monetary values and may need to be assessed separately in action 11.
65. By identifying and quantifying all costs and benefits in monetary terms, it is possible to demonstrate that the expected benefits of a given option exceed the expected costs. That is, to determine if there is a net benefit. Discounting should be applied to determine the benefits (or costs) in today's dollars. These discounted net benefits can then be used to quantitatively rank between a given option and the base case, or between competing options.
66. Decision-makers are provided with a consistent basis for assessing options and are better informed about the implications of using economic resources.

### Choice of Economic Assessment Method

67. Cost benefit analysis (CBA) is part of a suite of economic assessment tools that can be used to assess and rank competing options. Cost benefit analysis is flexible and can

generally be applied to assess most proposals. It is the recommended, first-best, approach.

68. Treasury's expectation is that cost benefit analysis will be undertaken from a national perspective rather than a narrower all-of-government, programme or TEI perspective, wherever possible. This is often termed "economic cost benefit analysis" and is preferred because the actions of one TEI can impose costs or benefits on individuals or the nation as a whole. Put another way, economic cost benefit analysis seeks to capture all benefits and costs regardless of to whom they accrue.
69. One alternative approach to the national perspective is to limit the scope of the analysis of costs and benefits to impacts on an individual TEI. An example of this is a new accounting package or a campus build proposal. This approach may be appropriate for proposals that are TEI-specific and have no or minimal impacts on either other agencies or the wider economy.
70. Similarly, cost benefit analysis has some limitations that mean it is not suitable for assessing every type of proposal. It is often not possible to assign a monetary value to all costs and benefits. Where a nominal monetary value cannot easily be assigned using techniques such as Willingness to Pay or Hedonic Pricing, it may be possible to estimate a range of monetary values for assessment purposes. A range-based approach for selected costs and/or benefits will generally provide a better basis for assessment than not assigning monetary values at all.
71. If there is not a sufficient base from which to conduct a full economic cost benefit analysis, a combination approach using cost benefit analysis for those costs and benefits that can reasonably be assigned monetary values, and Multi-Criteria Analysis (MCA) for the remaining intangible costs and benefits should be considered<sup>7</sup>. This approach is detailed in action 11 below.
72. The extent or depth of the analysis should be tailored to the relative size, impacts, and risks of the proposal. Not all proposals will require a full cost benefit analysis of all costs and benefits.
73. Talk to your TEC Investment Manager for guidance on the scope and depth of analysis required and which assessment process to use.

## The Assessment Process

74. Undertaking a cost benefit analysis involves a series of steps:
  - i. Establish the assumptions and scope underlying the analysis (that is, should a national economic or TEI-specific analysis be undertaken?)
  - ii. Decide an appropriate period for the analysis (sometimes termed the 'appraisal period')
  - iii. Identify all significant benefits and costs (revisit and update action five)
  - iv. Assign monetary values to the benefits and costs wherever possible

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<sup>7</sup> Refer to the Treasury Cost Benefit Analysis Primer at <http://www.treasury.govt.nz/publications/guidance/planning/costbenefitanalysis>

- v. Discount the benefits and costs to present values using the Public Sector Discount Rates specified from time to time by the Treasury<sup>8</sup>
- vi. Consider the effect of any intangible costs and benefits that could not be reliably assigned monetary values (refer to action 11 for guidance on the assessment of intangible costs and benefits)
- vii. Assess risk, and uncertainty (refer to action 12 below), and
- viii. Identify the preferred option and undertake sensitivity analysis (refer to action 13 below).

## Action 11: Assess Intangible Benefits and Costs

- 75. All benefits and costs that can be quantified financially should be included in the economic appraisals and subject to cost benefit analysis. However, some benefits and costs may not be reliably quantified in monetary values. These are termed intangible cost and benefits.
- 76. Intangibles that cannot reasonably be quantified in monetary terms can be excluded from the quantitative cost benefit analysis. However, where these intangible benefits and costs are significant, they can influence the final decision of the preferred option.
- 77. If intangibles are significant they should be explicitly highlighted and explained in the analysis so that decision-makers are aware of the value judgements they are making in pursuing a particular option. This explanation can be quantitative, qualitative, descriptive, or a combination of these.
- 78. One approach is to use decision modelling tools to weight and score the intangible costs and benefits for each option. The preferred form of qualitative analysis for comparing unvalued costs and benefits is multi-criteria analysis (MCA).
- 79. Multi-criteria analysis is a tool for assessing and ranking alternative options against a given set of investment objectives. The alternative options can be assessed and scored (typically by a representative panel of stakeholders) against the criteria. The weighted overall scores provide a ranking of alternative options.
- 80. Multi-criteria analysis can be less rigorous than cost benefit analysis, but is relatively easy to implement and can be used to assess and compare options that involve both monetary and non-monetary impacts. It can aid decision-making by complementing the quantitative cost benefit analysis above.
- 81. The process and the reasoning behind the scores and weightings must be documented clearly to demonstrate that a robust analysis has been carried out. Again, it is important to recognise that the assigned weights and the scores given to options are value judgments. In order to assign weights and scores, negotiation and compromise needs to take place.
- 82. It is the number of people involved in the process and their expertise that lends credibility to these value judgments. It is, therefore, worth spending some time

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<sup>8</sup> Refer to the Public Sector discount rates published on the Treasury web-site at <http://www.treasury.govt.nz/publications/guidance/planning/costbenefitanalysis>

choosing a representative 'benefits team' which should include stakeholders, customers (users), and business and technical representatives. The people involved should be named as part of the recording process. A more robust assessment can be attained by using expert facilitators. Proprietary MCA tools are available and can be used to ensure that the weighting and scoring processes are objective.

83. The extent or depth of the analysis should be tailored to the relative size, impacts, and risks of the proposal. However not all proposals will justify or require a full multi-criteria analysis. If two comparable options have similar benefits and it is demonstrated that a multi-criteria analysis would not add further value to the analysis of intangibles, a cost-effectiveness analysis may provide an adequate low-cost alternative.
84. Talk to your TEC Investment Manager for guidance on which assessment process to use.

## Action 12: Assess Risk and Uncertainty

85. It is recommended that the risks associated with the proposal should be measured and quantified (in monetary terms) as early as possible. Quantitative risk analysis should be used as the first-best basis for appropriations, access to contingency funding, and cash draw-downs.

### Optimism bias<sup>9</sup>

86. The most familiar form of risk to outcomes is that the estimated future costs arising from the given proposal are overly conservative, or the benefits are overly optimistic, or both. That is, the analysis does not fully reflect the possibility of cost-overruns, short-falls in demand or implementation timing delays. There is a demonstrated, systematic, tendency for analysts to exhibit optimism bias when preparing spending proposals.
87. Optimism bias can be reduced by making explicit adjustments to key assumptions and variables to improve estimates, for example by explicit adjustments to increase costs and reduce, or delay, benefits. Both of these approaches assume that the amount of bias and the level of overall risk can be reasonably estimated.
88. Generally, a sensitivity analysis approach is preferred to using optimism bias alone. Sensitivity analysis should also be used to test and demonstrate how the results of the analysis vary as individual assumptions, costs or benefits are changed.

### Risk identification and measurement

89. There is always likely to be some difference between what is expected and what eventually happens, because of biases unwittingly inherent in the assessment, and the risks and uncertainties that materialise during the design, build, and operational phases of a project. As a result, risk management strategies should be adopted for the assessment and implementation of proposals. This is because things can always go better than expected ('upside risk') as well as worse ('downside risk').

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<sup>9</sup> Refer to the Treasury Cost Benefit Analysis Primer at <http://www.treasury.govt.nz/publications/guidance/planning/costbenefitanalysis>

90. It is important to develop a risk register from the very beginning of the proposal (see management case). From then on the risk register should be updated and reviewed regularly and used on a consistent basis as the source for:
- identifying the main business and service risks (in the strategic case)
  - quantifying and appraising the business and service risks (in the economic case)
  - apportioning and transferring service risks (in the commercial case), and
  - mitigating and managing risks over the entire life cycle of the proposal (in the management case).

## Risk assessment

91. Risk assessment is the overall process of risk identification, risk analysis and risk evaluation. Revisit and review the risks identified as part of action five. Refer to the joint Australian New Zealand Standard AS/NZS ISO 31000:2009 “Risk management - principles and guidelines”<sup>10</sup> and ISO/IEC 31010 for further guidance on risk assessment techniques.
92. The extent or depth of the risk analysis should be tailored to the relative size, impacts, and risks of the proposal. Contact your TEC Investment Manager in the first instance if you require guidance on the level of effort required and whether or not a quantitative risk analysis approach is mandatory for the capital proposal.

## Quantitative risk analysis

93. Using quantitative risk analysis makes risks, and the financial impact of those risks, more explicit to decision-makers when considering the business case. Generally a quantitative risk analysis approach is considered to be superior to an approach that solely relies on optimism bias or contingencies. Impacts, other than financial, must also be considered and documented. If the financial impact and likelihood of risks is known, then contingency amounts and access arrangements can be set to allow those risks to be managed. Incorporating risk analysis into the business case also recognises that one single cost figure for the project may not be as useful as a range of likely costs around the expected cost figure.
94. Quantitative risk analysis requires conducting detailed sensitivity analysis and analysing the likely effect of these scenarios on total project costs. This involves assessing each probability and impact and modelling how the total project will turn out based on simulations of each risk. This will produce an estimated probability distribution of likely total costs. The final probability distribution describes the range of outcomes and their relative likelihood. The risk modelling process involves:
- i. building the models
  - ii. including distributions for uncertain inputs
  - iii. simulating outcome distributions
  - iv. generating outcome graphs and tables, and

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<sup>10</sup> AS/NZS ISO 31000:2009 “Risk management – principles and guidelines” is available at the Standards NZ web-site at <http://www.standards.co.nz/services/publications/default.htm>.

- v. reviewing and revision as necessary.
- 95. Using quantitative risk analysis, funding would be on the basis of a probability distribution and based on the most likely cost. If project risks materialise, delegation limits can be set which determine the thresholds at which the TEI needs to seek approvals for additional funding.
- 96. For example, funding approval could be subject to requirements that specify that a project may only draw down costs identified at the 50<sup>th</sup> percentile. Contingency funding may be appropriated between the 50<sup>th</sup> and 85<sup>th</sup> percentiles, but may only be used with approval by TEC. Use of costs over the 85<sup>th</sup> percentile typically may require further ministerial approval.

### Monte Carlo analysis<sup>11</sup>

- 97. Monte Carlo analysis is a risk modelling technique that uses statistical sampling and probability distributions to simulate the effects of uncertain variables on model outcomes. The approach provides a systematic assessment of the combined effects of multiple sources of risk in key variables and can also allow for known correlations between these variables.
- 98. The approach is more suited to proposals where there are several key variables with significant and/or correlated uncertainties, and when simpler sensitivity analysis approaches are unable to adequately describe the resulting variation in net benefits. Monte Carlo can require expert advice to develop the model and interpret the results. The State Services Commission maintains a panel of accredited quantitative risk analysis experts skilled in the use of Monte Carlo.
- 99. The level of effort should be fit for purpose, based on the scale and risk of the proposal. To clarify which approach to use and the level of effort required, contact your TEC Investment Manager for advice.

## Action 13: Identify the Preferred Option and Undertake Sensitivity Analysis

- 100. The purpose of this action is to identify the preferred option and test its robustness using sensitivity analysis.

### Identifying the preferred option

- 101. It is important that the rationale for recommending the preferred option is clear and defensible. Sufficient evidence for the selection should be provided along with a clear audit trail for decision-makers to check the assumptions, evidence and calculations leading up to the selection. Decision-makers should have assurance that the analysis and the selection processes are robust.
- 102. If a full cost benefit analysis has been undertaken, to the extent that all costs, benefits and risks have been quantified and valued robustly, the best option is likely to be the one with the highest, risk adjusted, net present value.

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<sup>11</sup> Refer to the Treasury Cost Benefit Analysis Primer at <http://www.treasury.govt.nz/publications/guidance/planning/costbenefitanalysis>

103. Often a choice will remain between high cost/high benefit options and low cost/low benefit options. In these circumstances, decision-makers must be sufficiently well-informed to enable them to decide how to make these trade-offs.
104. Where the incidence of the benefits and costs for a proposal do not accrue evenly over the appraisal period, it is possible that discounting to a single metric (net present value or a benefit–cost ratio) does not accurately reflect the value of a given proposal or facilitate comparison between options.
105. For example, consider a major pest eradication proposal, where the costs fall in the early part of the appraisal period, but the majority of the benefits do not accrue until the end of the treatment, say after 15 to 20 years. It is preferable to consider the pattern of net benefits year-by-year over the appraisal period and evaluate how these contribute to the net present value.
106. In some cases the preferred option may not have the highest net present value due to some critical intangibles. Where the selection of the preferred option depends on a comparison between net present values and other non-monetary criteria, the multi-criteria approach in action 11 can be applied. Where this is the case, the specific reasons why the quantitative analysis has been overridden need to be made clear.
107. Fully involving stakeholders is very important in making judgments between quantitative and non-quantifiable factors.
108. Using the net present value method is the preferred Treasury approach. Using alternative techniques, such as internal rate of return and pay-back period methods may be desirable in certain cases. Refer to the Treasury Cost Benefit Analysis Primer and talk to your TEC Investment Manager for guidance on which method to use.

**Table 5:** Example of integrating and presenting a combined cost benefit analysis/ multi-criteria analysis with two intangibles, prior to sensitivity testing:

	<b>Option 1: Do Nothing</b>	<b>Option 2: Do Minimum</b>	<b>Option 3: Preferred Minus</b>	<b>Option 4: Preferred</b>	<b>Option 5: Preferred Plus</b>
Appraisal Period (years, maximum 20)	20	20	20	20	20
Capital Costs (\$m)	0.0	2.5	2.4	3.2	4.6
Whole of Life Costs (\$m)	1.4	2.4	5.0	7.1	9.1
<b>Cost-Benefit Analysis (of tangible benefits and costs at 2010 Public Sector Discount Rate 8.0%)</b>					
Net Present Value of Benefits (\$m)	0.2	2.5	7.5	11.3	12.6
Net Present Costs (\$m)	0.7	2.3	4.0	5.3	7.3
<b>Net Present Value (NPV, \$m)</b>	<b>-0.5</b>	<b>1.2</b>	<b>3.5</b>	<b>6.1</b>	<b>5.3</b>
<b>Multi-Criteria Analysis (NPV plus two intangible benefit criteria)</b>					
Criteria 1: Net Present Value from the cost benefit analysis above (weight 60%)	0	19	57	100	87
Criteria 2: Intangible benefit 1 (weight 25%)	21	46	55	68	93
Criteria 3: Intangible benefit 2 (weight 15%)	35	63	87	77	59
<b>Overall Weighted Score (out of 100)</b>	<b>11</b>	<b>33</b>	<b>61</b>	<b>89</b>	<b>85</b>
<b>Preferred option</b>				<b>4</b>	

## Sensitivity analysis – test the robustness of the cost benefit analysis

109. Sensitivity analysis is a form of quantitative analysis that examines how net present values, benefits, costs or other outcomes vary as individual assumptions or variables are changed. This approach can be used to test the robustness of the analysis.

110. Sensitivity analysis can help draw attention to those factors that require especially careful assessment or management. This analysis can address two key questions.

- Would the preferred option still be worthwhile pursuing if some of the key assumptions do not eventuate?
- What actions can be taken to reduce the risks before accepting a particular option?

111. The sensitivity analysis needs to be well designed and clearly presented. The analysis should give a realistic picture of the extent to which the preferred option is still worthwhile pursuing even if there are significant changes in key variables.
112. The decision about which form of sensitivity analysis to undertake and the effort to invest should be made on a case-by-case basis, depending on the scale of the proposal, the degree of future uncertainty around key costs or benefits, and the risk tolerance of stakeholders.
113. In itself, sensitivity analysis may not change the preferred option. However, if small changes in the assumptions alter the ranking, it is an indication that the investment process should proceed cautiously, because it has non-robust elements in it. This means that a more detailed analysis and testing of the costs, benefits and risks of some of the options should be considered, before finalising the business case.
114. Sensitivity analysis should be undertaken using two approaches:
  - i. optimistic and pessimistic scenario analysis; and
  - ii. switching values.

### Scenario analysis – testing “what if”

115. Scenarios are useful in considering how options may be affected by future uncertainty. Scenarios should be chosen to draw attention to the major uncertainties on which the success of the proposal depends.
116. Are there any variables (such as exchange rates, salary costs, demand drivers, timing or assumptions) that materially influence the net benefits? These key variables should be identified using the risk assessment process above. The scenario analysis should then focus on asking “what if” questions and recalculating the expected Net Present Value for several scenarios. For example, what if one or more sensitive/key variables were changed by  $\pm 10\%$  or  $\pm 50\%$  or whatever is a realistic and possible variation. What if related Government policy altered or critical legislation is not passed? If these events occur, should the proposal proceed? Under what circumstances does the preferred option change? A common approach is to test three combinations of key variables:
  - i. pessimistic or conservative scenario;
  - ii. most probable or base scenario; and
  - iii. optimistic scenario.

**Table 6:** Example of offshore procurement of capital assets of \$US2.4 million at an exchange rate of \$NZ0.64 (option 4 in Table 1 above)

	Conservative Scenario	Base Scenario	Optimistic Scenario
Exchange Rate (\$NZ per US\$)	\$0.55	\$0.64	\$0.70
Price discount (NZ\$)	10%	15%	25%
<b>Overall NPV of the preferred option 4 (\$m)</b>	<b>\$5.4</b>	<b>\$6.1</b>	<b>\$6.7</b>

## Switching values

117. This is a “what if” scenario test that highlights how much a given variable (eg an uncertain cost, benefit or key assumption) would have to change to alter the choice of the preferred option. Judgements may be necessary about how likely the change would alter the preferred choice of the preferred option.
118. Examples of variables that are likely to impact on the robustness of the choice of the preferred option may include growth of real wages, forecast revenues, demand, prices, and/or assumptions about the transfer of risk. An understanding of how costs fall into fixed, step, variable and semi-variable categories can also help in understanding the sensitivity of the costs of given options.
119. In Table 6 above, keeping the price discount constant at 10%, a fall in the exchange rate from \$0.64 to \$0.562 is sufficient to change the overall weighted scoring in Table 5 to switch the choice of the preferred option from option 4 to option 5. An exchange rate of \$0.562 therefore represents the ‘switching value’.
120. Switching value analysis is an important input to the decision on whether or not a proposal should proceed. These risks need to be clearly highlighted to decision-makers to enable them to accurately assess the degree of robustness of the preferred option.

## Presenting the preferred option and analysis

121. It is important that the rationale for recommending the preferred option is clear and defensible. Decision-makers should have assurance that the analysis and the selection process are robust.
122. Sufficient evidence for the selection should be provided along with a clear audit trail for decision-makers to check the assumptions, evidence and calculations leading up to the selection. The final presentation should explain:
  - all major assumptions including the scope of the analysis
  - why certain costs and benefits have been included or excluded
  - the valuation methodologies employed to estimate costs and benefits
  - the discount rate employed (typically the Public Sector Discount Rates specified from time to time by the Treasury<sup>12</sup>)
  - any sensitivity analysis undertaken and any significant qualitative or non-monetary impacts identified (including externalities, deadweight losses, and behavioural effects)
  - the justification for the decision criteria employed
  - the final recommendation in a way that its implications and qualifications are easily understood by decision makers, and
  - the biases, limitations and deficiencies of the analysis.

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<sup>12</sup> Refer to the Public Sector discount rates published on the Treasury web-site at <http://www.treasury.govt.nz/publications/guidance/planning/costbenefitanalysis>

## Commercial Case - Preparing for the Potential Deal

123. One of the key aspects of the five case model is to ensure that detailed consideration of the potential deal occurs at an early stage of the business case development process, rather than waiting until after final approval of the business case.

### Action 14: Determine Procurement Strategy

124. The procurement strategy focuses on how best to procure the required services, subject to prevailing rules and regulations that may apply to departments and other agencies.
125. Strategic considerations at this stage include a decision on if the TEI should procure as a stand-alone entity or in collaboration with others, to the method of procurement to be adopted.
126. TEIs should act in compliance with any relevant rules and regulations set by the Ministry of Economic Development (MED)<sup>13</sup> and other agencies such as the Office of Auditor General and the State Services Commission.<sup>14</sup> Note that a reform of State sector procurement policy and practice was announced in June 2009<sup>15</sup>.

### Collaborative procurement (shared services)

127. These strategic and ad hoc arrangements (at international, national, departmental/sector and local level) offer significant flexibility and potential value for money (through economies of scale) and a considerable reduction in procurement costs (through pre-competition). As a result, they should be considered at the outset.
128. A recognised procurement methodology should be used. The following decision tree can be used to test which form of procurement method is appropriate for components of the preferred option.<sup>16</sup>

### Existing or specific assets?

129. If a service can be well-specified, then the next step is to consider whether the service can be purchased from owners of existing assets or whether the market needs to make a specific-purpose investment (also referred to as 'specific assets'). Specific-purpose investments are those which can only be used for a particular client.
130. For example, if someone builds a prison for the Government, if the contract is terminated then the contractor cannot use the facility for other clients. Prisons are specific-purpose investments.

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<sup>13</sup> The MED published the "Mandatory Rules for Procurement by Departments" in 2006

<sup>14</sup> The State Services Commission has released risk management advice for government agencies looking at using offshore ICT providers. Refer to <http://www.e.govt.nz/policy/trust-security/offshore-ICT/>

<sup>15</sup> For an update on the reform of procurement policy, refer to the MED web-site at <http://www.procurement.govt.nz>

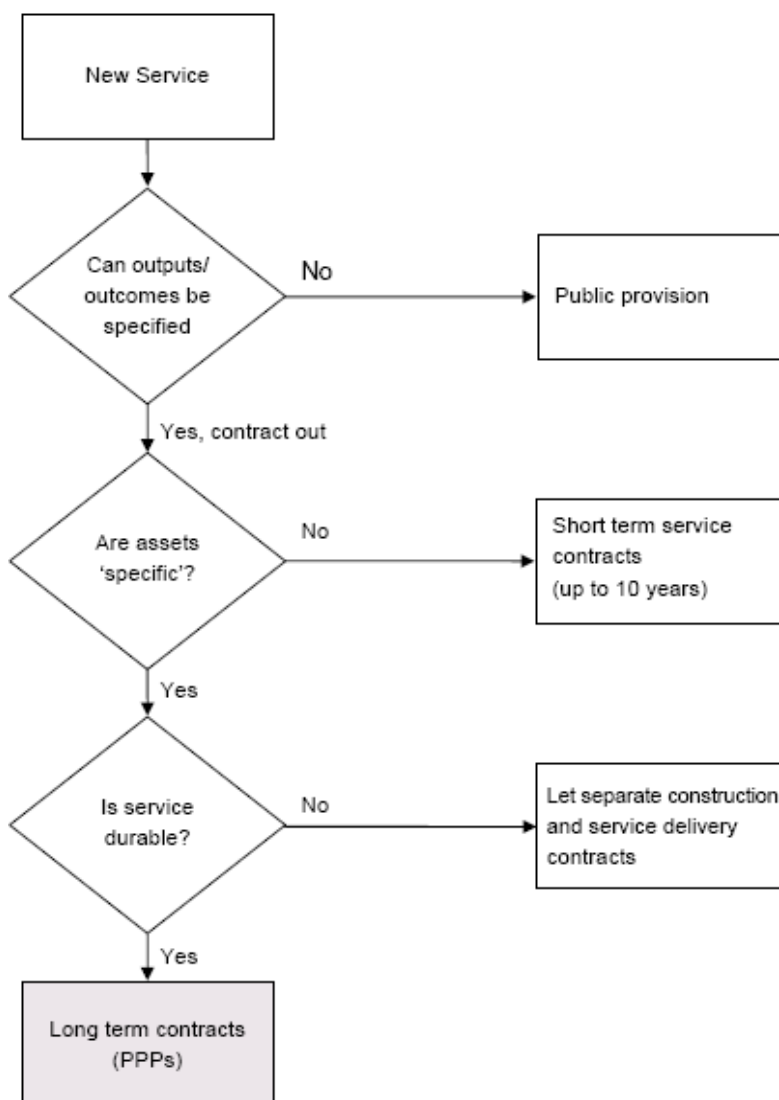
<sup>16</sup> Source: Guidance for Public Private Partnerships (PPPs) in New Zealand, The Treasury, October 2009 at <http://www.infrastructure.govt.nz/publications/pppguidance>

131. If no large specific-purpose investment is required, it is preferable for the department or agency to procure the service from the market without the Government needing to make a capital investment. For example, office accommodation in a major city is typically best rented.

### Selection of a preferred bidder

132. If a preferred bidder is to be selected during the development of the Implementation Plan, then a full explanation of the project should now be provided with the supporting rationale. This should also set out how value for money is to be maximised through continued negotiations with the bidder.

**Figure 2:** Decision flow-chart



**Procurement Plan – proposed implementation timescales**

133. Develop a procurement timetable outlining the implementation of the potential deal.

**Table 7:** Example procurement timetable

Stage	Duration	Planned end-date
GETS notice		
Pre-qualification questionnaire		
Select participants		
Invitation to participate in dialogue		
Dialogue phase (including number of solutions and bidders)		
Final tenders		
Evaluation of tenders (including clarification, specification and fine tuning)		
Selection of preferred bidder and other bidders		
Confirmation of commitment		
Award of contract		
Desired receipt of services – phased as required		

**Evaluation criteria**

134. The evaluation criteria for the various stages of the procurement should also be attached. There is a legal requirement to have agreed these prior to the formal commencement of more significant procurements. Again, this should have been reviewed and approved by legal and procurement experts.

**Action 15: Determine Service Streams and Required Outputs**

135. The purpose of this action is to capture the scope and content of the potential deal. Generally, there are three fundamental principles to bear in mind.

- i. As far as possible, requirements must be specified in terms of the desired outcomes and outputs to be produced. Therefore, the focus should not generally be on the processes which produce them or the inputs and technologies required.
- ii. Specify the quality attributes of the services and outputs required and the performance measures against which they will be assessed.

- iii. The deal must allow scope for the prospective service providers to suggest innovative ways of meeting the service requirements, including proposals which may require rethinking the business processes in place within the procuring TEI.

## Services and required outputs

136. This section should summarise briefly the required services and outputs and the potential implementation timescales required. Consideration should be given to capturing most, if not all, of the following details:

- the business areas affected by the procurement
- the business environment and related activities
- the business objectives relevant to the procurement
- the scope of the procurement
- the required service streams
- the specification of required outputs
- the requirements to be met, including: essential outputs, phases, performance measures, and quality attributes
- the stakeholders and customers for the outputs
- the possibilities for the procurement – including options for variation in the existing and future scope for services, and
- the future – potential developments and further phases required.

## Implementation timescales

137. This section should outline key milestones for delivery of the related services and outputs by the potential service provider. The focus here is on the deal to be negotiated and not on the procurement and project plans per se.

138. Wherever possible, more detailed information about the service level requirements should be attached to the business case. For example, the statement of service requirements and the statement of needs.

## Action 16: Outline Potential Risk Allocation

139. Consider how the service risks (design, build funding and operational) may be apportioned between the public and private sectors. This is especially important when the successful delivery of the project is subject to significant risk, regardless of whether or not a Public Private Partnership (PPP) is being considered. For example, the Crown should not bear all the risks associated with a conventional design and build procurement.

140. The governing principle is that risk should be allocated to the party best able to manage it. The prime objective is the optimal allocation of risk, rather than maximising risk transfer.

141. The principles that should be considered include the following.

- i. The degree to which risk may be transferred depends on the specific proposal under consideration.
- ii. Successful negotiation of risk transfer requires a clear understanding by the procuring TEI of the risks presented by a proposal, the broad impact that these risks may have on the service provider's incentives and financing costs (cost drivers) and the degree to which risk transfer maximises value for money. Hence the need to identify and evaluate individual risks in action 12 above.
- iii. Where the private sector has clear ownership, responsibility and control, it should be encouraged to take all of those risks it can manage more effectively than the procuring department or agency. If the procuring TEI seeks to reserve control, yet still seeks to transfer significant risk, there is a danger that the private sector will increase its prices.
- iv. Appropriate transfer of risk generates incentives for the private sector to supply timely, cost effective and more innovative solutions.

142. As a general rule, consider transferring risk to the private sector whenever the service provider is better able to influence the outcome than the procuring TEI. Reinforce the transfer of risk by negotiating abatements or penalty for late or incomplete delivery.

**Table 8:** Sample risk allocation table

Risk Category	Potential Risk Allocation		
	Public (TEI)	Private	Shared
Design risk	25%	75%	Ü
Construction and development risk	25%	75%	Ü
Transition and implementation risk	60%	40%	Ü
Availability and performance risk	0%	100%	Ü
Operating risk	100%		
Variability of revenue risks	100%		
Termination risks	100%		
Technology and obsolescence risks	50%	50%	Ü
Control risks	100%		
Residual value risks	100%		
Financing risks	100%		
Legislative risks	100%		
Other project risks	100%		

143. A risk allocation table (or 'risk transfer matrix') above should be incorporated. This should illustrate the percentages of risk being borne by each party. If percentages cannot be reliably estimated, use ticks.

## Action 17: Outline Potential Payment Mechanisms

144. Consider and record how payments are intended to be made over the life span of the contract.
145. Consider how the service provider is intended to be 'incentivised' to continue to provide value for money over time, and help deal with the inevitable business and service changes encountered in the longer-term. Explain how the risks identified are to be 'tied down' and allocated in the previous action within the payment mechanism for the potential deal.
146. The payment mechanism is the formula against which payment for the contracted services will be made. The underlying aim of the payment mechanism and pricing structure is to reflect the optimum balance between risk and return in the contract. As a general principle, the approach should be to relate the payment to the delivery of service outputs and the performance of the service provider.
147. If it is properly constructed, the payment mechanism will incentivise the service provider to deliver services in accordance with the business imperatives of the state sector in the following three phases of the service:
- i. Pre-delivery Phase – up to the acceptable delivery of the service and commencement of the payment stream
  - ii. Operational Phase – following acceptable delivery of the service up to the close of the primary contractual period, and
  - iii. Extension Phase – post primary contract period.

### The pre-delivery phase

148. Two types of payment mechanisms are important in the pre-delivery (design and build) phase:
- i. Fixed price/costs: This involves a fixed price for the delivery of 'agreed outputs' within a fixed timetable, with appropriate penalties for delays and cost over-runs.
  - ii. Payment on the delivery of agreed outputs: This links payment to the delivery of key service outputs and does not commence until the contracted services come on stream, as agreed. A revenue stream to the service provider should only commence when an off-setting benefit stream is realised by the state sector. A service that fails to perform could result in termination of all payment streams and, in extreme circumstances, pass the rights to the underlying assets for the service to the state sector.

## The operational phase

149. Six payment mechanisms are relevant in the operational phase.

- i. Availability payment: This links a proportion of the payment stream to the availability of the service. For example, the contract could stipulate that the service must be available for a minimum of 95% of the time between contracted hours.
- ii. Performance payment: This links a proportion of the payment to specified performance targets.
- iii. Transaction/volume payment: This links a proportion of the payment to the achievement of specific business benefits. For example, the number of transactions or volume of business provided. This gives the service provider the incentive to optimise the level of productivity and to invest further in the underlying infrastructure, if increased levels of productivity are required.
- iv. Incentive payment: Payment is linked to potential improvements in the overall performance of the state sector's business processes. This encourages the service provider to deliver new ways of working and additional benefits that can be shared by both parties.
- v. Cost of change: The cost of change can represent a major risk to the state sector and should be mitigated through the contractual obligation to benchmark and market test the contracted services at regular intervals. If it is not possible to agree prices for anticipated future changes, the process for agreeing the cost of change should be established at the outset.
- vi. Third party revenues: This element of the payment mechanism gives the service provider the incentive to develop and exploit alternative revenue streams and new businesses, wherever possible within a state sector context and rules.

## The extension phase

150. Two payment mechanisms are relevant in the extension phase.

- i. Technological obsolescence: Two contractual devices can be employed to encourage the service provider to consistently upgrade core technology. Firstly, various upgrades can be included in the initial price to ensure that the infrastructure underpinning the service is kept up-to-date. Secondly, a proportion of the service provider's initial recoverable investment could be deferred, with prior agreement, until the end of the contractual period.
- ii. Contract currencies: These are variable measures that demonstrate the productivity and performance of contracted services. For example, the number of complaints received, or the proportion of users of the service requiring assistance. . Reduced payments for under performance incentivise service providers to improve, as do enhanced payments for performing in excess of the minimum requirement specified in the contract.

## Action 18: Ascertain Contractual Issues and Accountancy Treatment

151. Outline the contractual arrangements for the procurement.

### Form of contract and key contractual issues

152. The standard form of contract to be used should be stated. Refer to any relevant departmental or agency policies. Contract management arrangements and key contractual issues should be considered and recorded. These will vary from deal to deal, but the principal areas of the contract may include:

- the duration of the contract and any break clauses
- the agreed deliverables
- the respective roles and responsibilities of both the service provider and procuring TEI in relation to the proposed deal
- the payment mechanism, including prices, tariffs and incentive payments
- change control (for new requirements and updated services)
- the procuring TEI's remedies in the event of failure on the part of the service provider to deliver the contracted services on time, to specification and price
- the treatment of intellectual property rights
- compliance with appropriate regulations
- operational and contract administration elements of the terms and conditions of service
- arrangements for the resolution of disputes and disagreements between the parties
- the agreed allocation of risk, and
- any options at the end of the contract.

### Accountancy treatment

153. This section should provide details of the intended accountancy treatment for the potential deal, including the relevant accounting standards.

### Personnel implications

154. TEIs may have requirements to consult staff and external agencies in respect of projects involving considerable internal change. The business case should state explicitly whether there are any personnel implications to the investment proposal. For example there can be Privacy Act implications for information systems that hold or provide personal information.

## **Financial Case – Ascertaining Affordability and Funding Requirements**

155. The purpose of the financial case is to determine, in relation to the other short-listed options, the funding requirements of the preferred option, and to demonstrate that the recommended deal is affordable.
156. In practice, this involves determining the:
- financial profile of each of the short-listed options, and
  - impact of the capital and revenue consequences of the proposed deal on the TEI's financial statements and user charges (for example student fees).

### **Action 19: Prepare the Financial Costing Model**

#### **Financial costing model**

157. The cost benefit analysis approach in the economic case focuses on assessing the relative value for money of alternative options, taking into account resource costs and benefits from a national perspective to consider the impacts of the proposal on the wider economy.
158. In contrast, the financial case focuses on the affordability of the short-listed options evaluated in the economic case, with particular emphasis on the preferred option. The financial costing takes into account any Crown-related cash flows in the earlier economic analysis of the preferred option, plus accounting charges like transfer payments<sup>17</sup>, depreciation, interest and other financing charges. Taxes are generally excluded as these typically impact equally across alternative options. GST is excluded from State sector proposals as Crown funding is expressed in GST exclusive terms.
159. It is expected that specialist accounting capability will be required to complete this analysis. If external advice is required to undertake this work, the assumptions, inputs and model need to be approved by the TEI's Chief Financial Officer. The Chief Financial Officer also needs to be responsible for maintaining the model over time as new and better information becomes available. In addition, any impacts on financial recommendations and other related financial reporting, such as Capital Asset Management intentions reporting and specific Crown fiscal risks will need to be managed.
160. In addition to presenting the results of the financial modelling for the preferred option provide:
- a description of the model and the associated methodology
  - all key assumptions in the model including how these assumptions were derived and agreed (for example, discount rates, inflation, taxation, depreciation, cost savings, etc)
  - a description of the proposed funding arrangements

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<sup>17</sup> Payments for which no goods and services are obtained in return, for example social welfare benefits.

- contingencies for risks and uncertainties, including scenario testing on key assumptions (if required), and
- the financial impacts on the TEI's finances.

## Capital and revenue requirements

161. Detail the capital and revenue requirements for the preferred option. This should set out:

- the capital and operating consequences of the preferred option over the life span of the service and/or contract period, including any third party revenue
- any contingencies (in monetary terms and consistent with previous quantitative risk analysis) necessary to ensure that there is sufficient financial cover for risks and uncertainties
- how this compares with any constraints applied to the proposal, and
- any shortfall in capital and revenue requirements (ie funding sought by this business case).

162. This should demonstrate that all alternative sources of funding have been considered and rejected, including an analysis of why all or part of the funding required cannot be met from existing TEI resources. Consideration should be given on any breakeven affordability requirements that may apply. Some sector policy guidelines may require that the business case is fundable within existing TEI revenue and third party revenue. Highlight to the TEC if the investment proposal is likely to result in additional funding pressures.

163. Provide a funding statement showing which internal branches, partners and external organisations (if any) have agreed to provide the resources required. Where external funding is required, the Commissioner's Statement should include a written statement of support. Where funding is not available from existing TEI resources, demonstrate that the proposal cannot be funded, including identifying higher priority expenditure

## Net effect on fee levels

164. It may also be necessary to assess the implementation impact of the proposed deal on user charges (for example student fees) in respect of services provided by the TEI. The TEI must be confident that revenue projections are robust.

165. TEIs may need to compare and benchmark prices and quality levels of comparable services offered by other education providers.

**Table 9:** Example of a financial costing summary table:

Preferred Option:	\$000s				
	Year 0	Year 1	.....	Year 19	Year 20
Capital Expenditure:					
- Hardware			.....		
- Software					
- Total Capital	(1)				
Operating Expenditure:					
- Employment					
- Consumable					
- Operating expenses			.....		
- Occupancy expenses					
- Depreciation					
- Total Operating	(2)				
<b>Total Expenditure:</b>	<b>(3=1+2)</b>		.....		
Revenue:					
- Government grants					
- Student Fees			.....		
- Other income					
- Total revenue	(4)				
<b>Total Revenue:</b>	<b>(4)</b>		.....		
Total expenditure excluding depreciation <sup>18</sup>	(5= 3 - deprec)		.....		
Net Cash-flows (for NPV):	(4-5)		.....		
<b>Net Present Value:</b>	<b>NPV</b>		.....		
<b>Capital funding required:</b>	<b>(1)</b>				
<b>Operating funding required:</b>	<b>(3-4)</b>				

166. Where a TEI seeks to recover some or all of the costs of service provision from the users or direct beneficiaries of that service, the Government and the public want to be assured that the charges set:

- take proper account of efficiency, equity and fiscal concerns, and
- are not excessive in relation to the costs incurred.

<sup>18</sup> May also include other relevant financing costs.

## Impacts on the financial statements

167. The impacts of the proposal on the TEI's operating statements and balance sheet should be assessed. Both the current position and the likely outcome should be fully recorded in the business case by a qualified accountant who understands the project and the TEI's business.
168. Where significant assets are an integral part of the investment proposal, their accounting treatment will need to be examined. This may require an independent opinion from the TEI's auditors.

## Assessing affordability

169. Affordability issues are one of the main reasons for delay at the point at which business cases are submitted for approval. Assessing affordability requires sound judgement of the TEI's financial sustainability and viability. This requires that the:
  - balance sheet is healthy and has been correctly organised and properly accounts for current assets, current liabilities, long-term liabilities and capital
  - cash flows are sound, and
  - appropriate contingencies have been made for risks and uncertainties.
170. There are a number of risks which could affect the affordability of the project. The business case should summarise the results of the risk contingencies and sensitivity analysis which underpin the financial case.
171. The risks and uncertainties will vary from project to project, but some key questions to consider are:
  - would the project be affordable if capital costs were to be 10% higher than expected?
  - what if the expected savings were to fall by 10%?
  - what circumstances might cause saving targets to be breached?
  - what if income to the TEI were to be reduced by 5% or more?
  - is there a robust strategy in place to guard against these outcomes?

## Closing affordability gaps

172. Affordability problems are most likely to occur in the early phases of the project, prior to realised benefits building up to the point at which they offset the initial costs of the investment. Affordability is more likely to be an issue where the pay-back period<sup>19</sup> is relatively long. Generally, assuming two projects with similar NPVs, the project with shorter pay-back period is likely to be preferred.

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<sup>19</sup> Refer to the Treasury CBA Primer, Section 3.6., at <http://www.treasury.govt.nz/publications/guidance/planning/costbenefitanalysis>,

173. If the affordability analysis reveals the preferred option is unaffordable, potential remedies include<sup>20</sup>:

- phasing the implementation of the preferred option differently
- adopting a different design solution
- altering the scope of the preferred option, for example, its functional content or the quantity and quality of the services offered
- finding additional sources of funding, for example, disposal of surplus assets (if available) or further revenue support from within the TEI
- considering different financing methods permitted within any regulations or constraints, for example, private finance
- negotiating more competitive or flexible prices from service providers
- finding other ways of reducing costs and/or increasing savings, and/or
- allowing the service provider to create additional revenue streams.

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<sup>20</sup> Note that these actions may also disproportionate impacts on the realisation of benefits.

## **Management Case: Planning for Successful Delivery**

174. This part of the management case is concerned with putting in place all the arrangements required to both ensure successful delivery and to manage project risks.

### **Action 20: Project Management Planning**

175. Set out the project management strategy, framework and plans required for successful delivery. A robust project management methodology is required<sup>21</sup> to guide the project through controlled, well managed and visible processes to achieve the desired results and benefits. This should be fit for purpose for more complex projects.

#### **Project management strategy**

176. The strategy for the successful delivery of the preferred option (the “project”) should be based on best practice programme management principles and project methodologies.

177. This guidance is based on the following key principles:

- a project is a finite process with definite start and end dates
- a project always needs to be managed in order to be successful, and
- for genuine commitment to the project, all parties must be clear about why the project is needed, what it is designed to deliver, how the outcomes are to be achieved, and a clear definition of roles and responsibilities.

#### **Project management framework**

178. This section should summarise how the project is organised, including:

- the project’s structure
- reporting arrangements in relation to the over-arching programme
- any other management and governance arrangements
- key roles and responsibilities
- profiles of key appointed personnel, and
- key vacancies and an outline of the intended recruitment process to fill them.

179. Much of the above information should typically be captured in a diagram and reproduced in the Implementation Plan.

180. The project board or steering committee represents three broad interests, including:

- a senior business role to represent TEI interests
- a senior user role to represent the interest of end users or customers, and

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<sup>21</sup> The guidance is based on the PRINCE2 (Projects IN Controlled Environment) project methodology. However this guidance is not intended to preclude the use of alternative project methodologies where these are recognised as best practice.

- a senior supplier to cover any technical aspects.

181. In addition, the interests of relevant stakeholders should also be represented.

## Project plan

182. An up-to-date summary should be included and address the following areas:

- the deliverables (or products) to be produced
- the activities required to deliver them
- the activities required to validate the quality of the deliverables
- the resources and time needed for all activities and any need for people with specific capabilities and competencies
- the dependencies between activities and any associated constraints
- when activities will occur (inclusion of Gantt charts may be useful), and
- the points at which progress will be monitored, controlled and reviewed. This includes key points during the business case development and any health checks.

## Action 21: Change Management Planning

183. Most investment proposals involve some degree of change. This can range from elements of service improvement through to major business process re-engineering. Even where change is not the primary reason for investment, as in the case of a replacement service, opportunities to enhance underlying business processes should be considered where they improve the value for money of the investment.

184. The expected change needs to be managed within the TEI (or across multiple agencies) using:

- a change management strategy linked to benefits realisation
- a change management framework to manage the change, and
- an (outline) change management plan to explain what will be delivered and when in terms of underlying activities.

### Change management strategy

185. The main aim is to assess the potential impact of the proposed change on the culture, systems, processes and people working within the TEI.

186. Various management strategies can be adopted for implementing change, depending on the degree and pace of change required. In terms of degree, the required change may range from the introduction of greater automation, re-configuration of services, or the complete transformation of a business function. In terms of pace, the change may be 'big bang' or incremental depending on the strategic drivers for change and the ability of the TEI to cope.

187. The TEI's choice of change management strategy should be set out in full, together with underlying communications and staff development strategies.

### **Change management framework**

188. Detail the change management framework.

189. In the case of major organisational and business change, the project itself may form part of a larger and longer-term change management programme. If this is the case, describe the organisational structure and personnel required to direct, manage, implement and evaluate the change, together with the main roles and responsibilities of the key personnel, and their relationships to the project steering committee.

### **Change management plans**

190. For significant change management programmes, an outline of the change management plan should be provided, together with the communication and development deliverables (for example, training products) required for the implementation phase. It is important that this indicates how all relevant personnel within the TEI, including human resources and staff representatives, have contributed or been involved to date.

191. Responsibility for delivery of the service change lies with the project steering committee, and is a key sub-set of its activities.

## **Action 22: Benefits Realisation Planning**

192. Detail the management arrangements required to ensure that the expected benefits in the economic case are monitored during delivery and actually realised. Contact your TEC Investment Manager for guidance on the level of monitoring likely to be required.

193. The benefits realisation strategy should set out arrangements for the identification of potential benefits, their planning, modelling and tracking. It should also include a framework that assigns responsibilities for the actual realisation of those benefits throughout the key phases of the project.

194. Outline the management arrangements for benefits realisation in the implementation and operational phases of the project. Note that the ultimate responsibility for the delivery of benefits rests with the senior responsible owner.

### **Benefits register**

195. Construct a benefits register. This register should detail the significant benefits expected as part of the economic case and indicate how each of these benefits are to be realised. For each significant benefit, the register should detail (in quantitative terms wherever possible):

- a description of the benefit
- how project deliverables will result in the expected benefit
- expected benefit level and timing
- risks to the benefits being realised

- actions required to secure the expected benefits, and
- how will we know the benefits have been achieved?

## Action 23: Risk Management Planning

196. Detail arrangements for the on-going management of risk during the key phases of the project.
197. Risk management is a structured approach to identifying, assessing and controlling risks that emerge during the course of the policy, programme or project lifecycle. Its purpose is to support better decision making through understanding the risks inherent in a proposal and their likely impact. Risk mitigation throughout the life span of the project can lower the expected costs or increase the expected benefits.
198. The risk management strategy adopted should be fit for purpose for the active and effective management of risk involve:
- identifying possible risks in advance and putting mechanisms in place to either accept or minimise the likelihood of them materialising with adverse effects
  - having processes in place to monitor risks, and access to reliable, up to date information about risks
  - the right balance of control to mitigate against the adverse consequences of the risks, if they should materialise
  - decision-making processes supported by a framework of risk analysis and evaluation
  - establishing processes for reporting key risks to the project steering committee and escalating risks in dangers of requiring further management, and
  - creation of an issues log.
199. A pragmatic approach to risk management at all levels involves:
- establishing a risk management framework, within which risks are identified and managed
  - senior management support, ownership and leadership of risk management policies
  - clear communication of organisational risk management policies to all staff, and
  - fully embedding risk management into business processes and ensuring it is applied consistently.
200. These actions should help establish an organisational culture that supports well thought out risk taking and innovation.
201. The arrangements for the management of risk should be outlined, together with the respective roles and responsibilities and reporting lines of the people concerned. These should be made clear in relation to the overall project management arrangements.

## Risk register

202. The plans for the management of associated risks should be encapsulated within the risk register for the project, which lists all the identified risks and the results of their analysis and evaluation. Information on the status of the risk is also included.
203. The risk register should be continuously updated and reviewed throughout the course of a project and at this stage in its development cover all phases of the project, with particular focus on the related project management and procurement risks for the project.
204. For additional information on risk management refer to the joint Australian New Zealand Standard AS/NZS ISO 31000:2009 “Risk management - principles and guidelines”.<sup>22</sup>

## Action 24: Post Project Evaluation Planning

205. Many projects in the past have been completed without providing assurance to decision-makers that anticipated benefits had actually been delivered.
206. There are two purposes of post project evaluation.
  - i. To improve project evaluation at all stages of a project from business case development to implementation of the project. This is often referred to as the ‘project evaluation review’.
  - ii. To determine if the project has delivered its anticipated improvements and benefits. This is often referred to as the ‘post implementation review’.
207. Outline the TEI’s strategy for both aspects of post project evaluation. In particular, note if the two aspects are to be undertaken jointly or separately.
208. Outline management arrangements for ensuring that the post project evaluation will take place, bearing in mind that this is a key responsibility of the senior responsible owner.
209. Set out the timing for post project evaluation arrangements. These should be incorporated in the project management plans, with a named individual responsible for their execution.
210. Contact your TEC Investment Manager on the level of monitoring likely to be required.

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<sup>22</sup> AS/NZS ISO 31000:2009 “Risk management – principles and guidelines” is available at the Standards NZ web-site at <http://www.standards.co.nz/services/publications/default.htm>.

## The Commissioner's Statement

211. A commissioner's letter should be provided by an appropriate and senior individual within the TEI (typically the chief executive), be included as an annex to the business case and should:

- demonstrate that the commissioner has been actively involved in developing the investment proposal through its various stages
- confirm acceptance of the strategic aims and investment objectives of the investment proposal, its functional content, size and services
- confirm that the financial costs of the proposal can be contained within the agreed and available budget and a willingness and ability to pay for the services at the specified price level
- state the margins of leeway beyond which support must be revalidated, and
- demonstrate that suitable contingency arrangements are in place to work with the service providers to address any current or unforeseen affordability pressures.

## Appendix: Example long-list option identification and assessment

Reference to	Scoping Options				Service Solution Options				Service Delivery Options				Implementation Options			
	SCO1	SCO2	SCO3	SCO4	SOL1	SOL2	SOL3	SOL4	SDO1	SDO2	SDO3	SDO4	IMP1	IMP2	IMP3	IMP4
Description of option	<i>Do Nothing</i>	<i>Minimum</i>	<i>Intermediate</i>	<i>Maximum</i>	<i>Discrete</i>	<i>Integrated Regionally</i>	<i>Integrated Nationally</i>	<i>Regional and National Network</i>	<i>In house</i>	<i>Partially managed (led by [MINISTRY])</i>	<i>Partially managed (led by commercial supplier)</i>	<i>Fully outsourced to commercial suppliers</i>	<i>Phased nationally by discipline</i>	<i>System phased by site</i>	<i>System phased by region</i>	<i>National implementation</i>
<b>Investment Objectives</b>																
Full supported network MIMS available for implementation by X	No	No	Yes	Yes	No	Partial	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Support improved clinical data and management information flows	No	No	Yes	Yes	No	Partial	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Improve the functionality and flexibility of the Pathology IT system to meet current and future needs	No	Partial	Yes	Yes	No	Partial	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Critical Success Factors</b>																
Business Need	No	No	Yes	Yes	No	Partial	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Strategic Fit	No	No	Yes	Yes	No	Partial	Yes	Yes	Yes	Yes	Yes	Partial	Yes	Yes	Yes	Yes
Benefits Optimisation	No	No	Yes	Yes	No	Partial	Yes	Yes	Yes	Partial	Yes	Partial	Yes	Yes	Yes	Yes
Potential Achievability	Partial	Yes	Yes	Partial	Partial	Yes	Yes	No	Partial	Partial	Yes	Partial	No	Yes	No	No
Supply-side capability and capability	Partial	Yes	Yes	Partial	Yes	Yes	Yes	Partial	Partial	Partial	Yes	Partial	Yes	Yes	Yes	Yes
Potential Affordability	No	No	Yes	Partial	Partial	Yes	Yes	No	No	Yes	Yes	No	Yes	Yes	Yes	Yes
Summary	Continued for VFM	Discounted	Preferred	Possible	Discounted	Possible	Preferred	Discounted	Discounted	Possible	Preferred	Discounted	Discounted	Preferred	Discounted	Discounted
<b>Options progressed to the shortlist</b> <i>As the CSFs are crucial (not desirable) any options that had a CSF scoring a "No" are discounted</i>																
<b>Option Title</b>																
<b>Option 0 Do Nothing</b>	SCO1 Do Nothing															
<b>Option 1 Intermediate Scope - Regional</b>	SCO3 Intermediate				SOL2 Integrated Regionally				SDO3 Partially managed (led by commercial supplier)*				IMP2 Phased by site			
<b>Option 2 Intermediate Scope - National</b>	SCO3 Intermediate				SOL3 Integrated Nationally				SDO3 Partially managed (led by commercial supplier)*				IMP2 Phased by site			
<b>Option 3 Maximum Scope - Regional Integration</b>	SCO4 Maximum				SOL2 Integrated Regionally				SDO3 Partially managed (led by commercial supplier)*				IMP2 Phased by site			
<b>Option 4 Maximum Scope - National Integration</b>	SCO4 Maximum				SOL3 Integrated Nationally				SDO3 Partially managed (led by commercial supplier)*				IMP2 Phased by site			
	* A capability analysis of the [MINISTRY] will be conducted to see if SDO4 Partially managed (led by [MINISTRY]) is a possibility. Based on present incomplete information this does not appear to be a viable option.															