



Total Cost of Ownership and Benefits Model

General Instructions for Agency Use

Overview

The Total Cost of Ownership and Benefits Model (the Model) has been developed as a standard tool for public sector agencies to outline the total cost of ownership and expected benefits of ICT projects or products throughout their lifecycle.

The Department of Treasury and Finance (DTF) has also developed a Frequently Asked Questions document to provide further strategic context and guidance on the Model. Agencies are encouraged to review this document prior to completing the Model. In line with the Strategic Asset Management Framework, agencies are encouraged to engage with DTF early in the development of proposed projects.

The Model has been structured as follows:

- **Light blue cells** represent **input cells**, which agencies are to populate or edit. All other cells have been locked for editing.
- Only **Costs Option 1, 2, 3, 4, 5, and 6** tabs and **Benefits Option 1, 2, 3, 4, 5, and 6** tabs are for input. Costs and benefits tabs should be understood as pairs for individual project options. For example, **Cost Option 1** and **Benefits Option 1** outline the costs and benefits, respectively, for Option 1 in the business case. As a general rule, Option 1 refers to the base case or 'do nothing' option. Subsequent options (that is, Options 2 and onwards) represent modernisation proposals for Government consideration.
- All other tabs in this spreadsheet (including 'Costs Dashboard', 'Benefits Dashboard' and 'Cost Benefit Analysis') are output tabs and **do not need to be manually populated**.
- The Model allows for the costs and benefits of up to six options to be input and compared. Agencies should populate the Model with the costs and benefits for **all short-listed options** presented in the business case for government consideration, which may be fewer than six.

Instructions for Input Tabs

Cost Option 1 tab

Costs tabs in the Model should be populated in adherence to the ICT Expenditure Financial Guidelines. In particular, agencies should refer to the ICT Expenditure Framework, which outlines the Technology Business Management (TBM) taxonomy that should be adopted for identifying and categorising project cost items. Both the ICT view (resource towers) and finance view (cost pools) are relevant for completion of this Model. The 'cost sub-pool' may optionally be specified.

In the Costs Option 1 tab, agencies are to input and analyse Option 1 costs.

Agencies are requested to outline project costs as comprehensively as possible, including both implementation and ongoing. Costs should be outlined under the year in which it is expected to be incurred.

While the Model provides columns for up to 10 years of project costs, not all columns need to be populated. Agencies are requested to capture all material costs across the lifecycle of the project, which may be less than 10 years.

The data included in this tab is reflected in the **Costs Dashboard** tab and **CBA Calculations** tab.

Service Tower	Cost Pool	Cost Sub-Pool (OPTIONAL)	Description/Notes	Capex / Opex	Unit Price	Quantity	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total Spend
Option 5 - Annual Costs							\$ 200,000.00	\$ 210,000.00	\$ 220,000.00	\$ 220,000.00	\$ 2,200,000.00	\$ 2,200,000.00	\$ 2,200,000.00	\$ 2,200,000.00	\$ 2,200,000.00	\$ 2,200,000.00	\$ 14,050,000.00
Option 5 - Cumulative Costs							\$ 200,000.00	\$ 410,000.00	\$ 630,000.00	\$ 850,000.00	\$ 3,050,000.00	\$ 5,250,000.00	\$ 7,450,000.00	\$ 9,650,000.00	\$ 11,850,000.00	\$ 14,050,000.00	\$ 14,050,000.00
Option 5 - CAPEX Costs							\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Option 5 - OPEX Costs							\$ 200,000.00	\$ 210,000.00	\$ 220,000.00	\$ 220,000.00	\$ 2,200,000.00	\$ 2,200,000.00	\$ 2,200,000.00	\$ 2,200,000.00	\$ 2,200,000.00	\$ 2,200,000.00	\$ 14,050,000.00
Data Center	Staffing	Internal Labor	Employee Wages	OPEX		2 FTE	\$ 200,000.00	\$ 210,000.00	\$ 220,000.00	\$ 220,000.00	\$ 2,200,000.00	\$ 2,200,000.00	\$ 2,200,000.00	\$ 2,200,000.00	\$ 2,200,000.00	\$ 2,200,000.00	\$ 14,050,000.00
																	\$ -
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The following table describes how data is to be input in the **light blue cells** under each column (see example pictured above).

Column Heading	Description
Resource Tower	Choose applicable 'Resource Tower' from drop-down menu (refer to the ICT Expenditure Financial Guidelines for more details on the 'Resource Tower' Taxonomy).
Cost Pool	Choose applicable Cost Pool from drop-down menu (refer to the ICT Expenditure Financial Guidelines for more details on the 'Cost Pool' Taxonomy).
Cost Sub-Pool (optional)	Choose applicable Cost Sub-pool from drop-down menu. The Cost Sub-pool selected should correspond to the Cost Pool selected in the previous column.
Description/Notes	Provide further details on the cost item.
Capex/Opex	Select as appropriate.
Unit Price	Populate cost per unit.
Quantity	Populate the quantity of units and specify for which years this quantity applies. (e.g. 3 from years 1 to 3).
Year 1 to Year 10	Populate the costs for years 1 to 10. All cost values are to be expressed in real, undiscounted terms in base year dollars. Cost figures should not be adjusted for inflation.

Once light blue cells are populated as per the above, the remainder of the Model will update automatically. Note that the "Option 1 – Annual Costs" row (row 11) at the top sums the total CAPEX and OPEX expenditure per year and is reflected in the **CBA Calculations** tab.

Repeat the above steps for Cost Options 2, 3, 4, 5, and 6. As noted above, these tabs should correspond to the short-listed options presented for government consideration in the business case.

Benefits Option 1 tab

Benefits tabs are intended for agencies to outline the specific benefits of ICT project options.

As per the Strategic Asset Management Framework Business Case Guidelines, benefits are the *direct advantage secured as a result of undertaking a particular investment to address the identified problem*.

Agencies should value (that is, assign a dollar figure) to individual benefits, which are apportioned to the year(s) in which it is expected to be realised. Data in these tabs is reflected in the **Benefits Dashboard** (as well as in the **CBA calculations** tab).

Agencies should refer to the ICT Modernisation Benefits Realisation Framework, which represents the standardised approach for the identification and categorisation of ICT project benefits. Benefits tabs in the Model have been structured according to the tiers outlined under the Benefits Realisation Framework:

- Tier 1: Cash-Releasing Benefits.
- Tier 2: Non-Cash Releasing Benefits.
- Tier 2: Wider Economic, Social and Environmental Benefits.

Like the cost tabs, agencies may populate up to 10 years of project benefits. Agencies are asked to outline all major benefits of the option over the life of the project.

Attribute	Description / Value	Assumption / Source	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total Benefits
Option 1 - Annual Benefits			\$ 170,000.00	\$ 170,000.00	\$ 100,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 440,000.00
Option 1 - Cumulative Benefits			\$ 170,000.00	\$ 340,000.00	\$ 440,000.00	\$ 440,000.00	\$ 440,000.00	\$ 440,000.00	\$ 440,000.00	\$ 440,000.00	\$ 440,000.00	\$ 440,000.00	\$ 440,000.00
Tier 1: Cash-Releasing													
Sales of Surplus Assets	Profit from selling underused assets, contributing to reinvestment or cost reduction.		\$ 100,000.00	\$ 100,000.00	\$ 100,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 300,000.00
Reduced Technical / Maintenance Costs	Savings from selling, exiting, or decommissioning physical facilities and hardware assets		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Reduced Staffing Requirements	Reduction in the FTE expenditure as a result of migration of applications to cloud		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Reduced capital/operational requirements	Reduction in need for investment in infrastructure and resources due to streamlined processes and improved efficiency.		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Reduced cost of services delivered	Lower expenses in providing services due to process optimisation, automation, or economies of scale		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Reduced price of services received	Lower costs for external services due to negotiated discounts, improved vendor contracts, or more efficient service delivery		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Benefit 1			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Benefit 2			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Benefit 3			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Benefit 4			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Benefit 5			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Additional Cash-Releasing benefits to be added here (as required)			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Cash-Releasing benefits expected as part of maintaining as is			\$ 100,000.00	\$ 100,000.00	\$ 100,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 300,000.00

The above provides an example of populating benefits under Tier 1.

The following table describes how data is to be input in the *light blue cells* under each column.

Column Heading	Description
Attribute	List the specific benefits of the project option in cells under the appropriate tier. Suggested benefits have been pre-populated under each tier as a guide only. These may be retained if applicable or refined/amended as necessary. To retain these benefits, agencies are to populate the value(s) of the benefit under the appropriate year. Further benefits may be added under each tier if there are insufficient rows available in the Model. To add further benefits, rows should be manually added under the relevant tier. Adding further benefits rows under any tier will require updates to other formulae: • sum of Tier 1 Benefits (row beneath Tier 1); • sum of Tier 2 Benefits (row beneath Tier 2); • sum of Tier 3 Benefits (row beneath Tier 3); and • Annual Benefits and Cumulative Benefits formulae (rows 11 and 12). Other formulae in the Benefits Option 1 tab will automatically update to include the additional benefits (new benefits will also automatically be reflected in the CBA Calculations tab, and in the 'Key Numbers' formulae in the Benefit Dashboard tab).
Description/Value	Provide as much qualitative information as possible about the benefit. A key detail is making the direct link between the benefit and the investment option (for example, <i>employees' time is saved owing to the digital solution's automation of a previously manual process</i>).
Assumption/Source	Describe the assumption/source to substantiate the expectation of this benefit, including how the dollar-figure has been calculated or estimated.
Year 1 to Year 10	Populate the benefits for years 1 to 10. All benefit values are to be expressed in real, undiscounted terms in base year dollars. Benefit values should not be adjusted for inflation.

Benefits that cannot be reliably assigned a dollar-value should be outlined in the table below the main benefits table (pictured below). For these benefits, agencies are asked to **describe in qualitative terms** what the expected benefit or positive impact will be, including supporting evidence and metrics.

Benefits where a cash (\$) value cannot be accurately estimated		
Attribute	Qualitative Impact	Assumption / Source
Tier 1: Cash-Releasing Benefits		
Tier 2: Non-Cash-Releasing Benefits		
Tier 3: Wider Economic, Social, and Environmental Benefits		

Repeat the above steps for Benefits Option 2, 3, 4, 5, and 6 tabs.

Output Tabs

Costs Dashboard

This tab provides a cost comparison of all options over 10 years and reflects data in the **Costs Option 1, 2, 3, 4, 5, and 6** tabs.

Please note this is an output tab – do not manually populate/edit any cells.

Benefits Dashboard

This tab provides a benefits comparison (Tier 1, 2, and 3 Benefits) of all options over 10 years and reflects data from the **Benefits Option 1, 2, 3, 4, 5, and 6** tabs.

Please note this is an output tab – do not manually populate/edit any cells.

Cost Benefit Analysis

This tab provides a comparison of cost benefit analyses of all options over 10 years and reflects data in the **CBA Calculations** tab.

Please note this is an output tab – do not manually populate/edit any cells.

CBA Calculations

This tab calculates a 10-year cost benefit analysis for each option which is reflected in the **Cost Benefit Analysis** tab.

Please note this is an output tab – do not manually populate/edit any cells.

Assumptions

This tab is intended to be utilised to document any assumptions used within the cost or benefit modelling. You should update the existing assumptions (as relevant) and populate the table with additional assumptions agreed or referenced.

Definitions

Please refer to DTF's ICT Expenditure Financial Guidelines published on the Strategic Asset Management Framework. The Definitions are based on the TBM Taxonomy (version 5.0.1).