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<https://www.treasury.govt.nz/information-and-services/state-sector-leadership/investment-management/investment-planning/treasurys-cbax-tool>

The Treasury's CBAX Tool

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The CBAX tool is a spreadsheet model that contains a database of values to help agencies monetise impacts and do cost benefit analysis

The Treasury first released CBAX, a cost benefit analysis tool, in October 2015. The CBAX version for Budget 2024 was released in December 2023. Key changes for this version are summarised below.

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Using CBAX to inform decision-making

The Treasury encourages important public sector decisions to be informed by cost benefit analysis (CBA). This helps decision-makers to compare different options. The CBAX tool helps people to do in-house

<https://www.treasury.govt.nz/information-and-services/state-sector-leadership/investment-management/decision-making/cbax-tool>

CBAX tool is a spreadsheet model that helps agencies to:

- take a consistent approach across government to cost benefit analysis, including common values and assumptions
- take a long-term and broad view of societal impacts, costs and benefits
- rigorously assess these by monetising and discounting impacts, where possible, and
- be transparent about the assumptions and evidence base.

Many factors are considered in the decision-making process. Initiatives are not evaluated on CBAX results alone. CBAX results together with unmonetised impacts, evidence base and assumptions inform value for money advice. Value for money includes strategic alignment with Government priorities and implementation risks, and value for money is considered alongside other factors such as fiscal constraints.

In the budget context, the CBAX analysis is used primarily by the Treasury vote team in assessing the wellbeing impacts for New Zealand and developing value for money advice.

How to use the CBAX tool

The CBAX tool has been designed specifically with social sector agencies in mind, but can be used to help calculate present values for many initiatives.

The Treasury's CBAX tool:

- **[CBAX Spreadsheet Model \(/publications/guide/cbax-spreadsheet-model\)](#)**

The Treasury's guidance on using CBAX:

- **[CBAX Tool User Guidance \(/publications/guide/cbax-tool-user-guidance\)](#)**
- CBAX Tool Supporting Information:
 - **[Undertaking a CBAX: Answers and Tips to Frequently Asked Questions \(/publications/guide/cbax-tool-answers-tips-frequently-asked-questions\)](#)**
 - **[Assessing climate change and environmental impacts in the CBAX tool \(/publications/guide/cbax-tool-assessing-climate-change-environmental-impacts\)](#)**

Guidance on undertaking a cost benefit analysis:

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[state-sector-to-use-the-cbax-tool-organisations-need-to-quantify-impacts](#)

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Guide to Social Cost Benefit Analysis (/node/2713)

We recognise that there will always be limitations to a tool like CBAX. To

state sector to use the CBAX tool, organisations need to quantify impacts

and success rates, for example the number of people expected to gain

employment based on the best available data and evidence about the

relevant impacts of an initiative. There will be gaps in the evidence for

how effective an initiative might be, for example when trying something

new.

The advantage of the CBAX tool is that it makes assumptions explicit,

and values different types of costs and benefits in a consistent way.

This provides the basis for more informed choices between different

options. Discussions should consider all impacts including unmonetised

impacts, as well as those impacts able to be monetised using the CBAX

tool.

CBAX impact values database

CBAX contains a database of New Zealand specific publicly available

data that you can use to value impacts. An impact value provides a

numerical value in relation to one or more impacts of an initiative. In

some situations a value may be a cost, in others it could be a benefit or

a saving. Examples include the costs of an emergency department visit,

the cost of the Jobseeker Support benefit and increased income for

individuals. Agencies have derived the values using a variety of non-

market valuation methodologies. The values are adjusted to reflect a

common time period. The CBAX tool also allows you to add your own

values for impacts into the model.

The Treasury purchased a licence for the **Australian Social Value Bank (<https://asvb.com.au/>)** in 2017. This significantly extends the wellbeing values available to use in CBAX. If a New Zealand government agency would like to purchase a sub-licence and use New Zealand applicable values in CBAX modelling, then please contact **cbax@treasury.govt.nz**.

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These agencies have started to use the methodology to develop subjective wellbeing values based on New Zealand data such as the General Social Survey. The CBAX model includes subjective wellbeing values developed by Kāinga Ora and Sport New Zealand. CBAX includes a WELLBY [1]. Given their newness and our limited experience with these estimates, users should apply subjective wellbeing values

What has changed? Recent improvements to the CBAX tool

The CBAX tool remains familiar and has no structural changes. It retains the Living Standards Framework domains and the focus on the initial cost benefit analysis steps that provide input to the CBAX model. This is to support fit-for-purpose application.

Key changes to the CBAX tool and its use are:

- Updating the CBAX database to reflect underlying data updates.
- Updating the information tabs for easier navigation.
- Creating an overall Summary tab with supporting charts and tables. This is a printable A3.

The discount rates of 5%, and an alternative rate of 2%, are unchanged, consistent with the Treasury rates.

The **CBAX Tool User Guidance** (<https://www.treasury.govt.nz/node/11225>) has been simplified to focus on using the CBAX tool and a

worked example. Supporting Information can now be found on [answers and tips \(/publications/guide/cbax-tool-answers-tips-frequently-asked-questions\)](#) to FAQs (including using frameworks) and [climate change / environmental impacts \(/publications/guide/cbax-tool-assessing-climate-change-environmental-impacts\)](#) advice.

While there are capability and resourcing issues with completing and assessing CBAX, it has led to more robust analysis including intervention logic and the initial steps of identifying and quantifying impacts. Agency use of the CBAX tool improves the quality of cost benefit analysis in budget initiatives.

Applied examples of CBAX are available as part of the Budget 2016 and Budget 2017 Information Release.

- **[Review of CBA advice to support budget initiatives \(/publications/guide/cbax-tool-review-cba-advice-to-support-budget-initiatives\)](#)**

[The Treasury's CBAX tool](#) review shows improved quality of cost benefit analysis advice

- **[Applied Examples of CBAX - Budget 2016 Information Release \(/publications/guide/cbax-tool-applied-examples-budget-2016-information-release\)](#)**

[The Treasury's CBAX tool](#)

- **[Applied Examples of CBAX - Budget 2017 Information Release \(/publications/guide/cbax-tool-applied-examples-budget-2017-information-release\)](#)**

[The Treasury's CBAX tool](#)

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The Treasury welcomes suggestions on the CBAX tool and would like to learn from practical experiences of applying CBAX. Over time, the Treasury will improve and update the tool. We welcome feedback and insights from people within and outside the public sector. Please contact CBAX@treasury.govt.nz with comments and suggestions.

Note

[1] WELLBY equates to a one-point change in life satisfaction on a 0-10 scale, per person per year. This is based on [UK guidance \(https://www.gov.uk/government/publications/green-book-supplementary-guidance-wellbeing\)](https://www.gov.uk/government/publications/green-book-supplementary-guidance-wellbeing).

Related content

Related information:

[CBAX Spreadsheet Model \(/publications/guide/cbax-spreadsheet-model\)](#)

[Wellbeing Impacts Template \(/publications/template/wellbeing-impacts-template\)](#)

[CBAX Tool User Guidance \(/publications/guide/cbax-tool-user-guidance\)](/publications/guide/cbax-tool-user-guidance)

[CBAX Tool Supporting Information: Undertaking a CBAX: Answers](/publications/guide/cbax-tool-supporting-information-undertaking-a-cbax-answers-and-tips-to-frequently-asked-questions)

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[CBAX Tool Supporting Information: Assessing climate change and](/publications/guide/cbax-tool-supporting-information-assessing-climate-change-and-environmental-impacts-in-the-cbax-tool)

[environmental impacts in the CBAX tool \(/publications/guide/cbax-](/publications/guide/cbax-tool-supporting-information-assessing-climate-change-and-environmental-impacts-in-the-cbax-tool)

[tool-assessing-climate-change-environmental-impacts\)](/publications/guide/cbax-tool-supporting-information-assessing-climate-change-and-environmental-impacts-in-the-cbax-tool)

[CBAX Model - Illustrative Example Lurgi \(/publications/guide/cbax-](/publications/guide/cbax-model-illustrative-example-lurgi)

[model-illustrative-example-lurgi\)](/publications/guide/cbax-model-illustrative-example-lurgi)

[Blog - What is the value of a policy proposal? \(/publications/research-](/publications/research-and-commentary/rangitaki-blog/what-value-policy-proposal)

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[CBAX transforming cost benefit analysis practice \(/publications/](/publications/guide/cbax-transforming-cost-benefit-analysis-practice)

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[Treasury launches tool to aid investment decisions \(/publications/](/publications/media-statement/treasury-launches-tool-aid-investment-decisions)

[media-statement/treasury-launches-tool-aid-investment-decisions\)](/publications/media-statement/treasury-launches-tool-aid-investment-decisions)

[Guide to Social Cost Benefit Analysis \(/publications/guide/guide-](/publications/guide/guide-social-cost-benefit-analysis)

[social-cost-benefit-analysis\)](/publications/guide/guide-social-cost-benefit-analysis)

[Archive of CBAX material \(/publications/guide/archive-cbax-material\)](/publications/guide/archive-cbax-material)

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