

Whole of Life Costs

Purpose of this metric

- 1 In this circular, reference to whole of life costs (WOLC) is used as a metric for assigning decision rights over particular investments. This metric requires the agency to consider the initial economic costs as well as the downstream economic costs of the investment proposal.

Definition

- 2 The WOLC is defined as:

The present value of total cash costs of the investment over its life cycle, calculated using the relevant Public Sector Discount Rate¹

- 3 For the purpose of the WOLC calculation , “cash costs” include:

- Up-front costs, e.g., the purchase of a new asset or use of existing capital resources (such as land) that could otherwise be disposed of or used for another purpose;
- Other resources used to develop and implement the investment proposal;
- Costs incurred to operate the new service or capability or asset so that it remains fit for purpose over its life cycle (examples include as-a-service payments, rental and other lease payments, the cost of operating, maintaining and supporting an asset (including personnel costs where they would otherwise not be incurred));
- Expenditure required during the expected life cycle of the investment to upgrade or refurbish an asset (which may result in an extension of the life cycle); and
- End of life decommissioning, disposal or other exit payments net of any proceeds from the sale of any asset.

- 4 For the purposes of the WOLC calculation, “cash costs” exclude:

- Depreciation (this is an accounting allocation of capital costs over the life cycle of the asset). Including depreciation in the calculation would double count those capital costs;
- Capital charge (the opportunity cost of capital is taken into account in the discount rate used in the present value calculation);
- Costs that will be incurred regardless of the investment made or option selected, e.g., corporate overheads;

¹ The Public Sector Discount Rate is published by the Treasury. See <http://www.treasury.govt.nz/publications/guidance/planning/costbenefitanalysis/discountrates>

- Inflation over the investment life cycle (cash flows and the discount rate are to be in real, not nominal, terms); and
 - Goods and services tax.
- 5 For WOLC purposes, “life cycle” means the lesser of:
- Operational life: the period over which the capability is able to meet the service requirements;
 - Supportable life: the period over which the capability is able to be supported by the capability provider, vendor or wider market;
 - Physical/technical life: the period over which the capability is able to be operated without irretrievably wearing out or failing; or
 - Economic life: the period over which the capability is the most economical option for delivering the required level of service.²
- 6 These definitions are consistent with the economic analysis set out in the Treasury’s business case and cost benefit analysis guidance.

Interpretation

- 7 In practice the estimates of WOLC will change over time as the proposal is developed and as new information emerges in the lead up to the substantive investment decision to proceed. Agencies must ensure that the investment decision is made by the party with the correct delegated authority according to Annex 1 of the Cabinet Office circular CO(15)5³ which sets out general approval thresholds for investments (subject to changes in thresholds approved by Investment Ministers).
- 8 Agencies should ensure that the cost estimates and life cycle assumptions used in the WOLC calculation are evidence-based and documented.
- 9 Cash costs represent the costs to be incurred, on an ongoing and/or periodic basis over the life cycle to enable an asset or service to be maintained so that it meets the required level of service.
- 10 Where there is doubt over what the life cycle is for WOLC purposes, the final determination will be made by the Treasury in consultation with the agency. In all cases the guidance for determining life cycle outlined in paragraph 5 above will be used.

² The period of any contract including as-a-service contract or lease is not treated as a “life” in its own right as such contract periods are expected to be based on operational, support, physical, technical and/or economic life considerations.

³ Add footnote to CO(15)5 on DPMC website.

- 11 The following simple examples illustrate how the WOLC would operate in practice, assuming the thresholds in Annex 1 of the circular have not been modified by Investment Ministers in response to changes in the agency's investor confidence rating:
- 11.1 A department proposes an ICT infrastructure as-a-service deal costing \$5 million per annum over a life cycle of five years, i.e. the contract value is \$25 million. There are no other costs to the department. Given a public sector discount rate for ICT investments of 9% p.a., this investment has a WOLC of \$20.3 million. According to the thresholds in Annex 1 of the circular the responsible Minister has authority to approve this investment.
 - 11.2 A department has a building construction deal costing \$50 million initial build, four \$5 million refits in years 10, 20, 30 and 40, maintenance and operating costs (e.g., rates, insurance) of \$1 million per annum, over a life cycle of 50 years. The total cost is \$120 million and the WOLC is \$72.1 million (based on a public sector discount rate for building investments of 6% p.a.). At this level, Cabinet approval is required even if the investment can be funded from departmental baselines.
 - 11.3 Government wants a department to establish an important new service expected to require initial capital injection of \$10 million and staffing costs of \$1 million every year for 10 years, funded by third party fees. This has a total cost of \$20 million and a WOLC of \$17 million (based on the default public sector discount rate of 8% p.a.). The scale of the investment falls within the authority of the responsible Minister. Note however that Cabinet approval may be required for this policy change in accordance with the Cabinet Manual.