



CabinetOffice


Home Office

Total Cost of Ownership

**Things to Consider
V1.0**

Total Cost of Ownership

There is a widely held belief that government is missing an opportunity for benefit and lower cost by failing to use more open source solutions.

The HMG ICT strategy published in March 2011, restates Government's aim to create a level playing field for the consideration of open source and proprietary software solutions.

Government Policy states that 'Procurement decisions will be made on the basis on the **best value for money solution to the business requirement, taking account of total lifetime cost of ownership of the solution**, including exit and transition costs, after ensuring that solutions fulfil minimum and essential capability, security, scalability, transferability, support and manageability requirements'.

Total Cost of Ownership (TCO) allows departments to look at both the short and long term costs of any particular solution. Although full life costs are often calculated for business cases this is seldom the same thing as TCO. Traditionally cost has been associated with the purchase price alone or purchase price plus support costs, however the initial procurement cost is typically only a relatively small percentage of the total cost of owning and operating most IT products.

This is often expressed using the example of a puppy. Whilst a rescued puppy itself may be free, the cost of keeping that puppy for its whole lifetime most certainly will not be. The puppy will require many things such as food, shelter, and vaccinations and these things all have a cost. In caring for the animal over its lifetime you will have spent a substantial amount of money, despite it costing you nothing to actually acquire the puppy at the outset.

TCO models were initially developed by Gartner in 1987 and are now widely used to assist decision making relating to the selection or procurement of an Information Technology product. TCO looks at the complete cost from purchase to disposal and is a way of thinking about cost when attempting to fairly assess the merits of open source vs. proprietary.

It is often difficult to predict accurately what the lifetime costs of a solution will be, particularly in relation to change so carrying out a Total Cost of Ownership (TCO) assessment provides an opportunity to identify, explore and challenge any assumptions and biases. Calculating Total Cost of Ownership (TCO) is necessary to quantify and compare costs of all software options, and applies equally to proprietary and open source. A TCO assessment of open source software suitability should be no more difficult than assessment of closed commercial software.

This document provides a list of some cost items which can be calculated in order to reach a figure for Total Cost of Ownership. Work in this area is still ongoing and a future version of this document will give guidance in greater depth. In the meantime this list can be considered as a checklist for TCO

Areas to consider which go to make up an assessment of TCO,

Acquisition and procurement

- selection
- upfront evaluation
- purchase price
- licenses,
- hardware
- integration

Operation and Management

- migration (data and users)
- use
- maintenance
- upgrades
- support services
- training
- software scaling
- cost of customisation (change)
- development, modification
- Carbon footprint

End of Life Management

- Retirement
- disposal
- migration (data and users)

Additional indirect costs may include:

- costs incurred with another party to ensure the ability to meet Service Level Agreement targets for business critical solutions)
- Unplanned costs, for example the possibility of unanticipated expenditure through compliance auditing and under-licensing.

It may not be possible to calculate exact figures for all of the items on the list and an assessment of high, medium or low may be more realistic. This should not pose too much of a problem so long as the same criteria are used to evaluate all options within a procurement.

Thinking in terms of TCO educates and raises awareness of full costs of IT. TCO establishes a standardised way to compare (and possibly track) IT costs overtime,

evaluating all costs both direct and indirect costs incurred throughout the lifecycle an IT asset, product or system.

An assessment of TCO which looks at much more than just the cost of acquisition is a critical component when ensuring value is obtained from any proposed IT solution. However, whilst TCO should form an important part of assessing proposed solutions it is important to remember that TCO is only concerned with the **financial cost** of any solution independent of any other benefits.

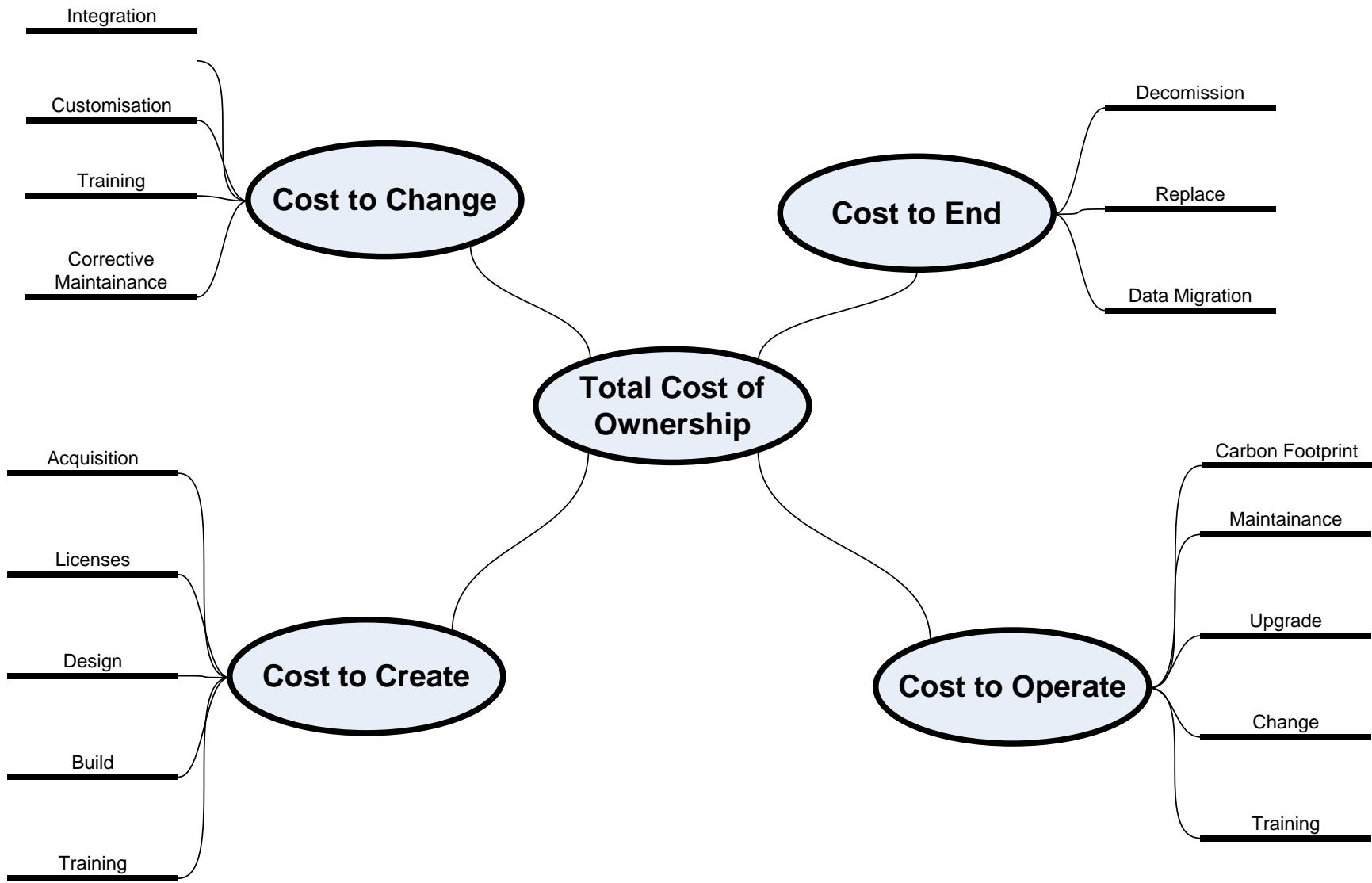
TCO modelling does not

- assess how well the solution meets requirements not involving VfM
- assess risk or how well a particular technology fits with an organisation's strategic goals or needs.
- necessarily track environmental or social costs and benefits

Whilst Total Cost of Ownership (modelling) is critical it should form a part of a bigger options analysis exercise which evaluates the proposed solutions based on more than just cost i.e. suitability, reliability, support, appropriateness.

Value for Money is not solely concerned with the financial cost (especially not just the cost of acquisition) of a solution, e.g. if software is cheaper but does not actually do everything you require it too forcing you to go back out to market at a later date and incurring new costs. The cheaper option is not always the better option.

It is not the be all and end all in evaluating solutions, much more consideration must be given to the suitability of a proposed solution. Due diligence and assurance is still always required.



CHANGE HISTORY

Version No.	Date	Details of Changes included in Update	Author(s)
0.1	12/9/11	Initial Draft	Cheryl Burr
0.2	15/09/11	Diagram added	Niki Barrows
0.3	10/10/11	Diagram Updated	Niki Barrows
0.4	12/10/11	Minor changes following review	Niki Barrows
1.0	27/10/11	Version for publication	Niki Barrows