

75% of your IT costs are associated with **Service Management** rather than acquisition and commissioning – Shouldn't you **know** what they are?

Total Cost of Ownership – An Axios white paper
by Sharon Taylor and Ivor Macfarlane.

Introduction

Back in the late 1980s, at the beginning of the ITIL® project, the phrase 'Total Cost of Ownership' was much used as a reason behind the guiding principles of ITIL. The concern was to understand what would be the Cost to the owner over the entire life of an IT service.

Definition

What we refer to in this paper as Total Cost of Ownership is a set of methodologies, models and tools that help organisations measure, manage and reduce costs of the lifecycle of IT assets and improve overall value of IT investment.

ITIL

ITIL is a consistent set of guidance for IT Service Management which have become accepted Best Practice for professionals working in the area.

There was a concern then, not wholly absent today that IT was a black hole within which funds disappeared with only minimal justification and little understanding of the return in benefit to the business. Certainly, there was no direct understanding of how each service might be of financial benefit to an organisation.

At that stage TCO was merely an idea - literally recognising all the costs associated with a service. Subsequently TCO became formalised as a concept or a set of techniques to identify costs and measure them over time to enable better IS management and decision-making.

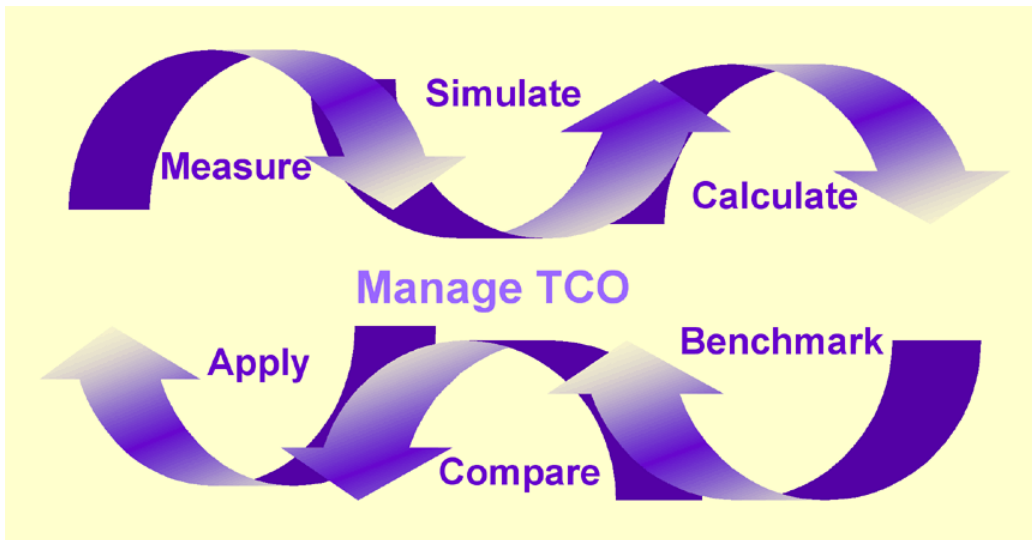
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A useful analogy might be to imagine the cost justification of a cruise liner. Initial planning will account for all the anticipated costs, not just the development. Before proceeding with the project, the plans must demonstrate that the total anticipated revenue would more than cover the total anticipated costs. These costs would include maintenance and operating costs over the expected lifetime of the vessel. There is no reason why any less rigorous approach should apply to justification of IT services, or why IT costing and financial justification should stop at go-live.

A specific TCO approach and method has in fact been around for some time, certainly longer than ITIL. Developed in the late 1980's the first TCO models were created to quantify the true costs of PC's as they became common workplace technologies. In 1993, a LAN based TCO was developed for much the same reason. The true costs of computing were beginning to come to light.

Soon after, large IT corporations in the hardware, network and software industries co-sponsored the development of a new generation TCO methodology to reflect the changes in the workplace computing environment, and to make use of this knowledge for business advantage. Hence, TCO was re-born and packaged for the average corporate IT consumer market.

TCO Events Cycle



Overview

This white paper describes the basic elements of an industry-generic TCO model and illustrates how TCO helps measure the benefits of ITIL.

The initial adoption of ITIL was within Europe, where much of the justification rested upon the 'softer' issues of improved service, staff attitudes and improved support to users, rather than hard measures of money. The introduction of best practice across North America focused more on the benefits being financially justified. Now, worldwide the view of ITIL benefits includes both those of service improvements and financial measures.

Successive TCO measures demonstrate how introducing best practices influence both cost and service levels. Therefore TCO can both measure and justify changes in working practice.

Often ITIL and TCO are catalysts for each other. TCO can demonstrate the need to adopt an ITIL framework and ITIL can spur the use of TCO to quantify ITIL's benefits.

This symbiotic relationship is derived from very simple needs. Customers demand improvements in IT services to meet business demands. Business demands that IT costs are justified and manageable. In this way, TCO supports ITIL benefits by quantifying their costs and projecting service improvement effects on IT budgets. But be aware - there are common myths about TCO that must be understood and avoided to gain the best benefit from undertaking it.

So what is TCO like now?

The increased complexity of IT environments has driven the basic TCO model to one that addresses the IT environments of distributed computing, service desk, application solutions, data networks, voice telecom, operations centre, e-commerce etc.

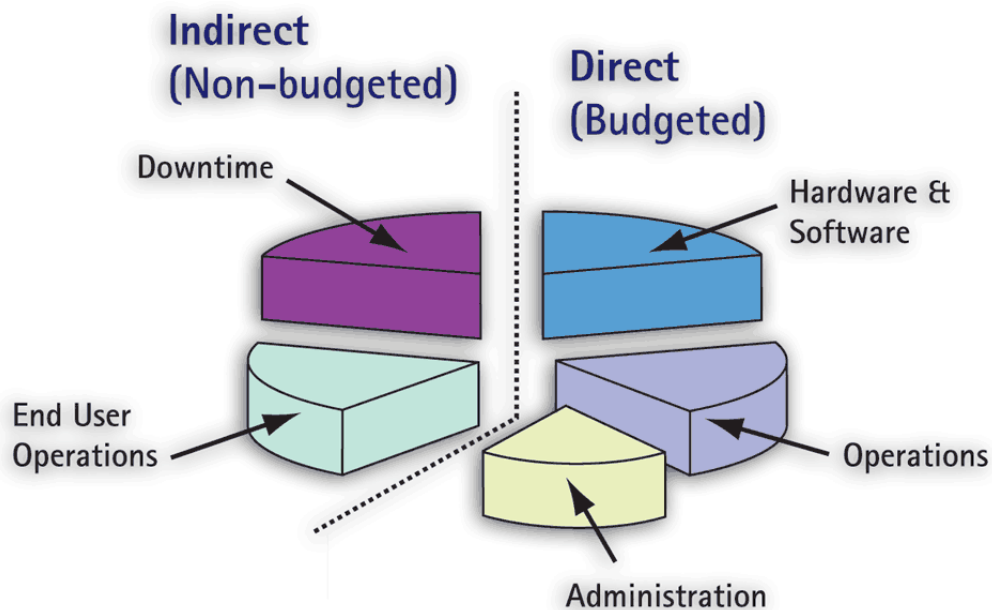
TCO measures other factors beyond equipment costs. IT staffing ratios, staff costs for specific activities, IS performance metrics and end user satisfaction surveys can usefully be included in TCO benchmarks. Not only do these metrics support fiscal management, but they also serve to justify and measure other service quality related improvements targets.

TCO Models

Most TCO models have the same basic high-level elements of measurement categories:

- Direct Costs - those identified in traditional IT budgets
 - Hardware & software
 - Operations
 - Administration
- Indirect Costs - those costs generated from IT users
 - Downtime
 - End-user operations

Carrying out a TCO exercise typically demonstrates that the true costs of IT, specifically the desktop are, on average, five times more than the costs of acquisition. Most of this cost is attributed, not to technology, but to ongoing service management processes.



¹Category illustration only - Proportions are not representative

¹ Based on a Gartner TCO distributed computing TCO model

A TCO measurement produces a monetary figure that relates to an organisation's costs in the accounting categories referred to above. Many organisations will wish to view their cost profile against that of other comparable organisations. The numbers do not have value until they are seen in context, i.e. considered against other TCO benchmarked organisations, or against previous measurements of the same organisation to establish progress (or regression).

Contextual information

The context requires information about the organisation's profile, complexity and relative comparators.

An effective and meaningful profile will contain **four** key components.

- Company Profile
- Current Assets
- Current Best Practices
- Complexity

Company Profile:

The company profile defines the landscape of an organisation. Basic information on the company size, industry type, geographic location and the types of users are typical of data gathered to establish this profile.

Current Assets:

The IT assets mix within the organisation may include production IS, desktop and mobile clients, peripherals, network and server assets.

Best Practices:

These include policies, procedures and/or tools that improve returns and the degree to which they are in use.

Complexity:

Complexity includes information about the end user community, the types and quantities of varied technologies in use and how IT is managed.

The financial information for direct and indirect costs is combined with the organisational complexity to determine a final TCO value.

TCO Myths and Realities

Myths, simplifications and exaggerations have evolved about TCO over the years, many of these diverge significantly from common sense. If TCO is to be valuable to an organisation, then the reality beneath these perceptions needs to be identified, understood and exploited. The common myths include the following.

“TCO is about Technology”

Technology is an enabler, not an endpoint. TCO is more about philosophy and best practices. For example, vendors may claim that their platforms have the lowest TCO. Implementing any new platform without also enabling the inherent features that manage the costs of ongoing operations, may in fact increase TCO.

Cost must always be balanced with the potential Return on Investment (ROI). Management philosophies, the organisational realities and best practices must complement the technology for realising optimal TCO. Bear in mind that any new approach, technology or methodology will offer new and extra facilities or features, but these will bring overheads that may outweigh the benefits, or at least will need to be factored into the net benefit.

“Peer TCO comparisons should be our target TCO”

While the comparison with organisations of like size and complexity will provide a basis for general assumptions about your TCO number, it serves only as a starting point. No two organisations are exact twins, and there is a need to be realistic about what contributes to any specific TCO exercise.

“The lowest TCO is always the best choice.”

The best TCO is the one that maximises your ROI. Lowering TCO is easy. Paying the tradeoff is not always well advised or profitable in the long term. If your key business drivers are rapid time to market, then a higher than average industry TCO might be optimal to balance the technology intensive environment and associated costs with your bottom line. It follows that identifying the relevant TCO parameters for an organisation is not possible without informed input from the business customers.

The ITIL/TCO Connection - A diagnosis for checks and balances

The Symptom:

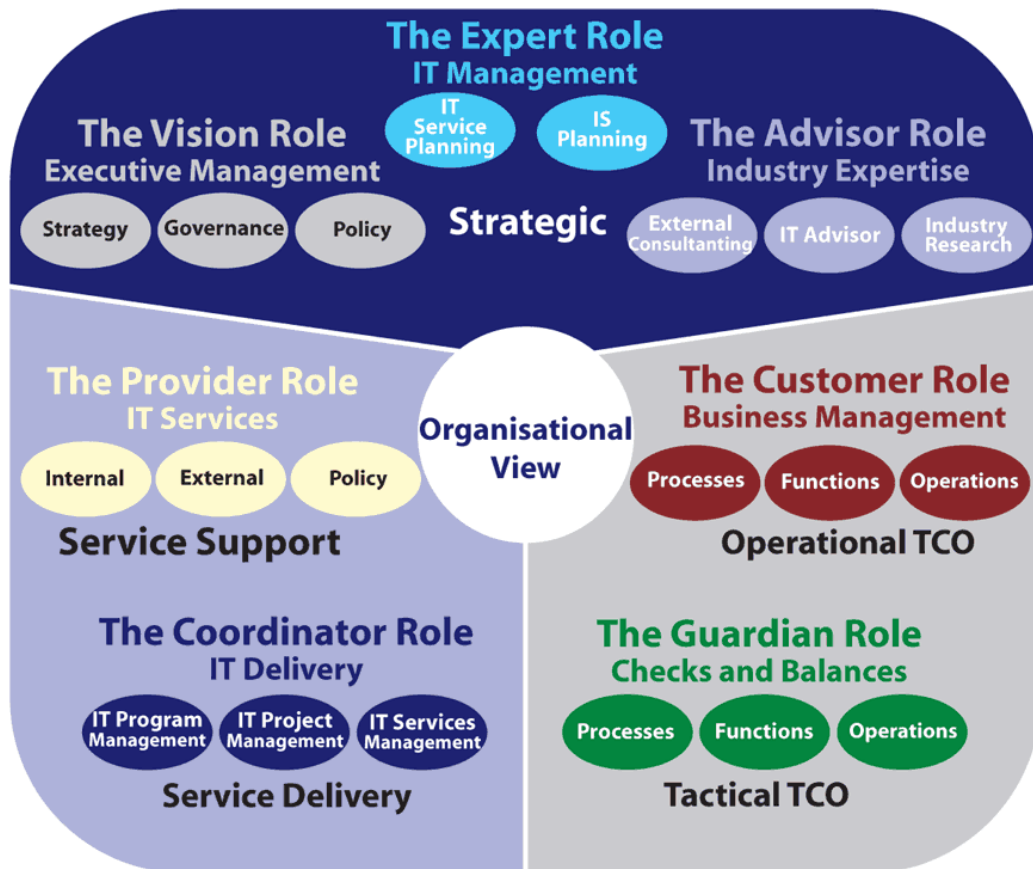
The IS organisation knows that customer demands for better, faster, more reliable solutions are increasing at every turn. They also know their ability to deliver is diminishing without seemingly endless infusions of investment in technologies.

At the same time, corporate executives are imposing budgetary constraints on IS and demanding strategies to meet business needs with shrinking IT budgets.

IS Executives know that investment in new technologies and service quality improvements, like reducing silo IT operations, can meet growing business needs. But how the cost of the improvements can actually demonstrate a Return On Investment is difficult to demonstrate in the language of business - money.

The Diagnosis:

These symptoms are most often quoted as the reason for looking to service improvement initiatives. The key to aligning the ITIL and TCO measures is to understand where each fits in the IT enterprise equation.



This diagram takes a typical organisational view of IT and illustrates the roles that are relevant to both TCO and ITIL and how they fit together.

Applying TCO Measures to ITIL Practices

We give below some examples of how the TCO approach fits onto ITIL Processes. Remember though, that in practice all the ITIL processes have overlaps and interfaces with each other and external processes and costs are likely therefore to relate to more than one process.

Incident Management

Any organisation needs to be aware of the actual and potential cost to them of incidents. An incident is, by definition, an unplanned event and so represents an unplanned and unnecessary cost. The potential benefits of preventing incidents and of putting in place measures to speed up their resolution must rest upon the current costs that incidents incur. Factors which would build into a TCO calculation include:

- Lost user time
 - Initial retrying and 'first-aid'
 - Discussion with colleagues
 - Call to Service Desk
 - Disruption from repair/resolution
 - Rework and discussions
- Lost sales, perhaps from an on-line sales programme
- Service Desk time: customer contact time, call logging, statistics preparation, review
- Support engineers effort and materials

When the full potential cost is known, preventative measures, including Availability management techniques such as duplication and redundancy, are capable of cost justification, whilst beforehand they may have seemed expensive luxuries.

Taking proper account of all levels of support that are required to resolve an incident can help with a correct target for first time fixes. These take account of the costs of increasing the relevant skill levels of first line staff against the alternative - costs of involving second or third line. An example is the investment in training and tools to provide successful and repeatable first line resolution of lower level fixes such as password reset.

Finance Management for IT Services

ITIL Finance Accounting targets establish the cost of each service in terms of meaningful business measures. This is precisely what is required to enable TCO. More traditional organisational accounting is not likely to be focused on individual services, but to cost centres. Conversely, TCO metrics can be a 'litmus test' to ensure that adequate financial data is being gathered, both in terms of accuracy, granularity and relevance, on a service-by-service basis, driven from information contained within the service catalogue.

Capacity Management

TCO calculations will provide information on the costs associated to downtime, often related to the need for improved or additional capacity. These figures will provide primary justification for the purchasing recommendations contained in the capacity plan. TCO information supports the simulation of alternative solution scenarios.

Aids to TCO comparisons

As mentioned earlier, TCO benefits rely on the comparability of measurements, either between sufficiently similar organisations or by multiple measurements of the same organisation over a period of time. There are some aspects that help to identify and establish commonality for comparison of aspects of an organisation

BS15000

Where an organisation follows the requirements laid out in the British Standard for IT Service Management (BS15000: 2002), this can indicate the increased likelihood of meaningful comparison with other organisation which can also demonstrate their adherence to the requirements.

Common tools/processes

Where organisations make use of the same underpinning software and processes, this will also indicate useful areas of comparison. The 'common language' of the tools can serve as an aid to the comparison process but care must be taken that such comparisons are meaningful.

Conclusions and further reading

This white paper has been developed to provide an introduction and a high level background to TCO. The information included touches briefly on the inter-relatedness of ITIL and TCO.

Considerable further guidance is available on TCO, in publications, on the internet and as advice from TCO practitioners. We hope that introduction will provide a basis for making use of the concept.

About the Authors

Sharon Taylor is an ITIL and TCO practitioner in North America and has helped many organisations adopt and implement IT Service management and TCO benchmarking practices.

Ivor Macfarlane has been involved with ITIL since its earliest days, and is now well known as a trainer and consultant as well as an author having authored both ITIL and BSI's IT Service management products.

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