Why Is Total Cost Of Ownership (TCO) Important?

If you want to know where your money goes, get ready to master the concept of TCO.

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When companies make decisions about their IT investments, one of the most common problems they encounter is the seemingly simple issue of how much does it cost? Most of the time, it is easy to calculate the purchase price of the hardware or the license fees for the vendor’s software. IT projects typically include the costs of conversion to the new hardware or software. But when the analysis stops at that point, companies find themselves wondering why, even after successful project implementations, their IT operations, support and software maintenance costs keep going up.

The reason, of course, is that there are many hidden and ongoing costs that frequently are not considered when a project is originally proposed. Because this issue is so pervasive, a discipline and methodology has been developed called total cost of ownership (TCO) that is designed to properly state the costs of an IT investment.

What Is TCO?

TCO was originally developed in the late 1980s by the research firm Gartner to determine the cost of owning and deploying personal computers. Their initial findings, that PCs cost an enterprise nearly $10,000 per year, caused quite a stir in the technology community and among CFOs. Their methodology was carefully examined and, over the ensuing years, has been accepted as a standard way to evaluate total costs.

Simply stated, TCO consists of the costs, direct and indirect, incurred throughout the life cycle of an asset, including acquisition, deployment, operation, support and retirement.

How Is TCO Calculated?

The Gartner TCO model utilizes two major categories to organize costs:

I. Direct costs: These costs generally cover the visible IT- and support-related investments and expenses, and include:

   o Hardware and software. This typically includes the initial purchase or lease costs. Divide those costs by the expected life of the asset to get an annual figure. The costs of associated hardware (storage, network equipment, etc.) would be also included. Next add maintenance contracts from vendors, spare systems and spare parts as well as the annual costs of all supplies and materials.

   o Operations. This includes all labor costs for technical operations and support as well as the help desk. If personnel such as database administrators or software maintenance staff are required, include their costs. All labor costs should be at rates loaded for all fringe benefits. Operations costs include the fully loaded facilities costs for the appropriate share of the floor space used and furniture purchased specifically for the project. Network costs also fall into this category.

   o Administration. This includes an appropriate allocation of finance, HR, administration and procurement department costs. Sometimes IT planning costs are included here, however a significant portion of
this category is the training costs required for both the IT and the end user staff.

In order to calculate direct costs, one must have accurate inventory, purchase, vendor and personnel records. All of the above costs are included even if they are not organizationally part of the IT budget.

2. **Indirect costs:** These costs are less visible and usually are dispersed across the business operations organizations and are comprised of:
   - *End user operations.* Frequently, an IT investment requires ongoing end user support within the organization. These costs are identified as part of the project or investment and are easily tracked and computed. But there is also a more subtle category of end user costs. These are the costs incurred when individuals gradually evolve to become part of the support structure. They usually do this on a part-time basis in addition to their "regular" job. A shadow support group starts to emerge, consuming considerable time and resources in an unplanned way. This most often manifests itself when self-nominated individuals step up to handle personal computer assistance within a work group. In order to properly calculate TCO, costs of this nature must be identified and captured, a task that is sometimes quite difficult.
   - *Downtime.* This occurs when the end users are interrupted from their regular work when things break or something goes wrong with the system. Regular maintenance can also cause downtime when, for example, a software update takes 30 minutes, resulting in 30 minutes of lost productivity.

All of the direct and indirect costs are compiled, computed on an annual basis and then totaled to provide the total cost of ownership. This exercise can produce some stunning results as studies regularly show that, even in today's world of PCs costing less than $1,000, the TCO of a PC continues to average over $5,000 per year. A $200 printer could easily have an annual cost of over $1,000 when all the supplies and maintenance costs are included. For organizations that want to determine their TCO for a specific area of IT, there are numerous consultants and vendors who will assist in the task.

**What Is the Value of Using TCO?**

Over the years, TCO has developed into a valuable tool for companies to use in their management of IT spending.

- **TCO provides a framework for good financial analysis of IT investments.** Not only will the true financial costs of an investment be properly computed, but it also allows solid comparisons of similar alternatives. For example, a Gartner study of the costs of "fat" vs. "thin" clients showed that the annual cost of a thin client was $5,160 versus $5,360 for a fat "managed" PC. If the initial purchase price differences of the hardware (roughly $500 for each thin client versus $1,200 for a business-class PC) were all that was considered, a company might incorrectly conclude that a thin client was significantly less costly. The Gartner study shows that initial hardware costs are, in reality, a relatively small portion of total costs.
- **TCO sets a baseline for IT costs.** Since TCO is now an accepted industry measurement, IT organizations can determine their TCO of various operating environments. They then can benchmark themselves against other companies and determine areas where they can improve. TCO
should typically show up on an IT organization's balanced scorecard and targets should be set for regular improvement.

- **TCO generates a widespread understanding that first cost isn't total cost.** As the concept of TCO becomes ingrained in the organization, proposals for IT projects become more realistic. When vendors propose some hardware or software solution, there will be less temptation for the end user to come to IT with the demand to "just put it in" without the careful understanding of how that product could impact the total cost structure.

Like other tools, TCO does not solve all problems. For example, because TCO is a long-term measure, reducing TCO only reduces costs over time. So it is hard to capture a TCO reduction as a specific benefit when budgets need to be cut. Also, TCO does not assess risk or help align technology investments with strategic goals. Nevertheless, TCO is an important tool for the analysis of IT costs and for the management of those costs in an IT organization. With a good understanding of TCO, companies can make proper IT investment decisions and develop solid improvement plans for their overall IT costs.