Network Procurement: The Journey from CAPEX through TCO to Business Value

As more sophisticated products with lengthened lifecycles enter the IT environment, TCO may be a better procurement yardstick than CAPEX.

The procurement process for enterprise network technologies can be difficult. Although procurement teams have excellent financial backgrounds, they may lack the technical expertise to assess the value that networking innovations can bring to the business. Thus, initial capital expenditure (CAPEX)—a simple and quantifiable number—tends to be given disproportionate weight when evaluating equipment purchases. To be sure, total cost of ownership (TCO) analyses are frequently undertaken, but even here CAPEX can dominate the conversation. And further lost in the debate is the original intent of the purchase—to provide unique value to the business operation. As a consequence, the network runs the risk of being considered a commodity.

This approach gained some attention during the last few years while IT budgets were flat or reduced, and much of the world was experiencing a recession. After all, who doesn’t want to save money when resources are scarce? But the recession didn’t put technological advances on hold. Mobility, virtualization and cloud computing have evolved during this time period, with the promise of increasing productivity, agility and cost savings. It seems as if, almost overnight, the purpose of the network is no longer solely to connect user desktops to IT resources. Not only has the computing model evolved, but the network itself has evolved along with it.

As a result, the network can no longer be considered as simply “plumbing”; nor is it the commodity purchase many organizations might think it to be. That means a procurement process that relies too heavily on capital expenditures is a danger to both the procurement and IT teams. Here’s why: Implementing a least-cost network now will cost you sooner rather than later. The IT organization will be unable to accommodate advances in current computing trends, denying the company the business value that they bring. Essentially, the company trades a low CAPEX for strategic business opportunities. If push comes to shove, the only means of accommodating these strategic technologies is to refresh the network outside of the standard refresh cycle. That is a much more expensive proposition than spending more on initial CAPEX.
A Better Approach to Procurement: Total Cost of Ownership

The reality is, when building an IT network, about 20% of the budget goes to acquiring the hardware and 80% goes to operating costs. But saving money on that 20% up front can be more than offset by increases in the 80% if, for example, there are higher integration costs, more downtime or serious security breaches. The network that you considered “good enough” to handle your current business requirements may not be “good enough” to handle your future ones.

A more strategic way to approach the procurement of networking technologies is to calculate the solution’s TCO. TCO takes into account hard costs beyond network equipment acquisition, including hardware and software service and support, deployment costs, and billable IT costs related to ongoing IT operations. It can also include financial benefits that procurement teams may hesitate to incorporate because they are more difficult to calculate: employee productivity, IT agility, security, new business capabilities enabled by the network, and so on.

Calculating TCO requires IT organizations and their procurement teams to think beyond the price tag of things like warranty, service and support. When it comes to these items, you get what you pay for. Some vendors bundle support into their product offerings, but it may be support restricted to business hours or only for initial setup issues. Hardware replacement may be available, but not on a schedule that aligns to your business needs. A TCO approach requires the business to consider the implications of these offerings beyond their price tag.

Another pitfall of a CAPEX-weighted approach is that it tends to leave your IT department with an assortment of vendors providing the network infrastructure. End-to-end network capabilities are restricted to the lowest common denominator of all the vendors. In addition, costs of sparing, maintaining multiple service contracts and integrating the different vendors should be considered. Another cost that is often overlooked is recruiting or training for the specialist expertise to manage and operate equipment from multiple vendors.

Even in these times of rapid technological change, some industry pundits are encouraging IT organizations and their procurement teams to make network purchasing decisions based on CAPEX alone. They also encourage the multivendor network that can result from such procurement practices. But a multivendor network shifts the IT organization’s focus away from driving strategic value. Instead of planning how to enable the business, the IT organization becomes consumed with network operations—integration, management, security, etc. Thus, a multivendor network inherently increases operating expenses (OPEX) while decreasing return on investment and business value.

When calculating the TCO, procurement teams and the CFO should be careful not to underestimate the business value to be gained from strategic opportunities. With the implementation of a low-CAPEX network, IT organizations risk having to say “no” to new technologies or business ventures because the network is not capable of supporting them. That means “no” to bring-your-own-device policies; “no” to expanding virtualization efforts to mission-critical business applications; “no” to cloud services; “no” to rich media. All of the cost savings, competitive advantage, productivity and agility benefits are lost because of a few dollars saved on the network. However, these same benefits can offset the total cost of a premium, next-generation enterprise network, enabling the business to say “yes.”

1 Sparing is the practice of keeping equipment in reserve so that it can be deployed in the case of component failure. Like is replaced with like. In a single-vendor environment with standardized platforms, sparing costs are N:1. In a multivendor environment, sparing costs can be as high as 1:1.
As previously mentioned, some networking vendors are still encouraging CFOs and their procurement teams to view the enterprise network as a commodity. This, of course, works to their benefit when they have an offering with a low CAPEX. But they seldom provide a TCO comparison. So Cisco commissioned a third-party business consulting firm to evaluate the business impact and TCO of a Cisco network, and compare them to the TCO of a competitive network designed with the same physical and logical design requirements.

The firm’s findings revealed that, on average, up-front investments for Cisco hardware and software were higher than competing solutions. However, when comparing network TCO—which includes the lifetime costs for labor, service and energy—Cisco offered up to a 13% TCO advantage.

But, as a next-generation network, Cisco delivers far more capability than competitors. These capabilities can result in improved uptime, more robust security and increased employee productivity, as well as the economic and productivity benefits that come from today’s strategic opportunities.

Part of this TCO advantage is derived from the extended lifespan that many Cisco customers identify from their Cisco network. On average, Cisco customers claim a complete network lifecycle of 6 to 8 years, compared with a 4- to 5-year lifecycle for comparable competing products.

Soft cost savings, resulting from improved network uptime, higher user and IT productivity, lower threat of security breach, and comprehensive professional and technical services have the potential to drive TCO even lower.

When CFOs calculate how much they can save by lengthening the network refresh cycle and enabling the IT organization to say "yes" to strategic opportunities, the cost of Cisco’s hardware premium versus competitors’ quickly dwindles.

What is a Next-Generation Network?

A next-generation network provides a lower TCO because it is strategically developed to optimize for requirements today and in the future. It accommodates unanticipated technology disruptions and provides investment protection. In other words, a next-generation network is a dynamic network that supports trends around mobility, cloud computing and the changing threat landscape. It also transforms the network into a service-delivery mechanism that enables CIOs and their IT organizations to say "yes" to strategic revenue-enhancing business opportunities.

Let’s take a closer look and contrast how a least-cost or good-enough network differs from a next-generation, business-enabling network:

- **Purpose of the network:** A next-generation network unifies access and control. Thus, not only are you getting more value for your network dollar, but also, because the network serves multiple purposes, you avoid the cost of additional equipment to provide those services.

- **Security:** In a good-enough network security is bolted on. In other words, security consists of point products that don’t necessarily integrate very well. A next-generation network integrates security capabilities. Your IT team spends less time on initial integration and trying to keep disparate security systems coordinated, lowering your operations costs.

- **Application intelligence:** A good-enough network is application- and endpoint-ignorant. It operates on the notion that data is just data. A next-generation network is application- and device-aware. Applications are the lifeblood of most businesses. What are the financial implications of having them work slowly or not at all?
• **Quality of Service:** Today’s good-enough network is built to support video as the exception. If you expect video to be pervasive across the organization, then the network needs to support that model. The cost to retrofit your network to support video will far exceed that of a network that was built with video in mind.

• **Standards:** A good-enough network is standards based without concern for the future. A next-generation network not only supports current standards but features innovations that drive future standards. Many of these newer standards implementations can be deployed at incremental (and sometimes no additional) cost.

• **Warranty:** Good-enough networks come with a form of limited support for maintenance and a warranty statement. Next-generation network providers offer a warranty, plus intelligent services with integrated management that reduce IT time and headcount impact of each new project.

• **Acquisition cost:** Saving money on CAPEX can be more than offset by increases in OPEX if there are higher integration costs, more downtime or serious security breaches. While good-enough network vendors downplay these costs, next-generation network vendors promote a systems approach that not only reduces networking costs related to OPEX but also drives IT services improvements and new business opportunities, thereby increasing ROI.

The Cisco Borderless Network Architecture
Cisco has positioned a framework for the next-generation network called the Borderless Network Architecture. This defines how the Cisco long-term vision is mapped out to deliver a new set of network services, to support the demands of the business and end users. These services enhance the ability of the organization to meet the demands of users and IT. Intelligent network services are fundamental to driving down TCO and increasing IT’s ability to deliver new business capabilities.

At the end of the day, many CFOs want to transform IT into a strategic services organization. The ability to grow IT capacity without adding headcount requires efficiencies in IT systems management processes. Cisco’s Borderless Networks architectural approach is the foundation for delivering those efficiencies, enabling IT to meet changing end-user demands and maintain control of cost and complexity in the business.

**Conclusion**
With CAPEX accounting for only 20% of the cost of a network, it is important to look beyond initial expenditures and consider TCO and the business value a network can provide. A third-party TCO comparison of a Cisco network versus other vendors illustrates that Cisco can deliver a 13% better TCO even before business benefits such as network uptime and employee productivity are considered. Further, the Cisco Borderless Network Architecture acts as a platform for service delivery, allowing your IT organization to say “yes” to business and revenue-enhancing opportunities.

If you would like to learn more about the total cost of owning a Cisco network and how it compares with your current network, go to [www.cisco.com/go/enterprise](http://www.cisco.com/go/enterprise).