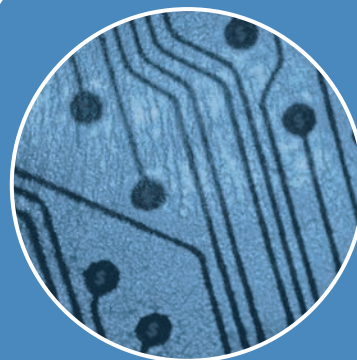


Smart Budgeting with Total Cost of Ownership



Backgrounder Brief

At the advent of the 21st century, schools are devoting more and more financial and staff resources to incorporating technology into the classroom to support teaching, learning and the management of school business. But as schools purchase computers and link them together in local and wide-area networks, totaling the dollars spent on hardware is merely the beginning of the total dollars needed for the effective use of the technology purchases. And it is but one small part of the expenses schools can expect in subsequent years if they are going to effectively use those technology-based resources.

School leaders need to be able to estimate the *total* cost involved when they build a network of computers and wire classrooms to the Internet—a concept known in the business world as Total Cost of Ownership (TCO). For schools, as is true for businesses, calculating and assessing TCO should be an ongoing initiative.

Total Cost of Ownership is a discipline that helps organizations make intelligent purchasing decisions for products that require installation, training and support. TCO includes all costs involved in operating networks and computers. It is traditionally used by businesses to help control costs and make strategic decisions. TCO traditionally also includes calculations of costs that may not

turn up in a budget but that can still impact operations. An example of this in the school environment would be computers sitting idle because they need to be repaired or teachers wasting teaching time because they are required to troubleshoot their own computer problems.

In this regard, a district's technology budget is no different from its transportation budget. When a school district buys a new bus, the expense doesn't stop with the cost of the vehicle. There is gasoline to keep it running, maintenance to keep it well tuned, repair bills when it breaks down, increases in insurance premiums and the salary of an additional driver—expenses that all must be covered year after year.



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School leaders need to be cognizant of and factor in the major expenses and technology decisions required to prepare for *beyond* the cost of the hardware:

Support Costs

Has your district adequately budgeted for staff to maintain the network and other hardware and to help others solve their software and hardware problems? One of the thorniest issues schools face is how to provide adequate support for their networks. This generally comes in two forms: the staff and tools to keep computers and networks operating and additional dedicated staff to help teachers learn how to integrate technology into the classroom.

Professional Development Costs

Has your district budgeted an adequate amount for staff training, including the cost of trainers, materials and substitutes if training is conducted during school hours? The budget item that arguably is most critical to a school district's ability to achieve its technology goals is staff development. If teachers and other staff members do not understand how to use new technologies and incorporate them into the classroom, a district's technological investment will not achieve its desired results. Inadequate staff training will lead to under-utilization of computers—and a loss of return on a district's investment in technology.

Software Costs

Has your district adequately budgeted for network management software, computer-based curriculum materials, applications and productivity software and the software needed to adapt technology to the special needs of users? Many calculations of the costs of networking schools provide only for basic application software and not the costs of software that could be considered more purely instructional or part of the budget for curriculum materials. The shift to digital learning requires schools to be committed to true integration and creating new learning models to improve academic performance. Requisite for that shift is an inventory of digital content clearly linked to specific performance standards and a well-managed deployment of software across a district.

Replacement Costs

Has your district adequately budgeted to cover the costs of replacing computers and other peripherals? When a school district has just installed dozens of new multimedia computers or a robust network, it's easy to forget that the day will come when hardware will need to be replaced. Computers, servers, networking equipment and peripherals have a life cycle of three to five years, depending on the equipment and how it is used. Planning for these life cycles should begin with the initial purchase and installation.

Connectivity Costs

Has your district adequately budgeted to cover costs involved with connecting schools to each other and to the Internet? School districts may decide they can afford to purchase only a certain level of connectivity. However, there will be a tradeoff in terms of the speed with which students and staff can communicate, connect to the Internet, and download graphic and video-intensive files. This, in turn, could have an impact on how staff members and students spend their available time.

Retrofitting Costs

When your district is ready to build a network, has it adequately budgeted to upgrade electrical capacity, improve heating, cooling and ventilation systems, beef up security systems and remove asbestos and lead found in older buildings? It is hard to predict a formula to help determine how much you will have to spend to wire existing buildings. The best time to wire a school is obviously when it is under construction, or in the case of an existing building, when it is being renovated or expanded. Retrofitting is not traditionally part of Total Cost of Ownership analysis, but it is a cost that schools frequently face and sometimes fail to anticipate.

Understanding the full range of costs associated with technology investments will assist school leaders in planning for the future. A TCO analysis can become an important part of ongoing technology and budget planning. Under the No Child Left Behind Act of 2001, states and local districts are now in the process of reviewing their technology plans with an eye to demonstrating the impact that technology improvements have had on academic achievement.

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Gartner, Inc., a consulting business that helps companies analyze their computing costs and a leading business authority on Total Cost of Ownership, initiated discussion of TCO in the business community around 1990. Gartner and The Consortium for School Networking (CoSN), a national non-profit organization that serves as the premier voice in education technology leadership, have partnered to provide a Web-based TCO Tool designed to help schools and school districts make sound budgetary decisions, conduct technology planning in an organized way, establish a baseline for future analysis and maximize benefits from their investments in technology. This smart budgeting tool, funded by the U.S. Department of Education and sponsored by the North Central Regional Technology in Education Consortium (NCRTEC) at the North Central Regional Educational Laboratory (NCREL), presents a framework for looking at TCO issues in the school setting.

The online tool is a vendor-neutral, free resource available to help schools and districts manage their computer networks in a cost-effective way. Gartner created the tool by refining the distributed computing TCO model used in the business world from 1,800 data points to approximately 100. School leaders can prepare by reviewing documentation online to learn more about TCO in education. They are then asked to gather the data that will form the basis for their TCO analysis.

When school leaders input their data, the TCO Tool performs some calculations automatically. The resulting metrics can then be evaluated. While there is no one “right” set of numbers for TCO, the TCO Tool allows a district to evaluate its own decisions over time.

It took many years for businesses to learn the language of Total Cost of Ownership; now school administrators have the opportunity to build on that experience to suit the requirements of their own environment. Once administrators better understand the true costs—all of the costs—associated with introducing technology, they will have new tools with which to plan their budgets for the 21st century. They will be better equipped to protect their district’s significant investment in technology. But most importantly, they will be able to evaluate whether the technology is truly serving their district’s educational goals.

TCO cannot and should not be evaluated in a vacuum. Successful technology initiatives will ultimately be measured by whether educational goals have been met, but schools do need to be able to clearly articulate their educational goals as well as describe how technology will support those goals—something a TCO analysis can help with. *The business of schools is education.*

Where is your district with TCO? Where should it be?

This Backgrounder Brief is an executive summary of *Taking TCO To the Classroom*, a component of CoSN’s Essential Leadership Skills series. CoSN, a national non-profit organization, is the premier voice in education technology leadership. CoSN’s mission is to advance the K-12 education community’s capacity to effectively use technology to improve teaching and learning through advocacy, policy and leadership development.

For information about the CoSN Essential Leadership Skills series or to purchase components of it, see <https://my.cosn.org/mycosn/store/>. For additional information regarding the series, contact Elizabeth Weaver Engel, CAE, Vice President, Marketing, CoSN, at elizabeth@cosn.org or 866-267-8747, x120.