

# Spend Wisely On New Equipment

With The Right Strategies, It's Possible To Purchase Equipment Without Breaking Your Budget

**SOMETIMES, THE NEWEST, sleekest, fastest equipment comes with a price tag that's sigh-inducing. With unlimited funds, some IT managers might think, it would be easy to create a data center that meets every need automatically. But that daydream isn't as far-fetched as many might think, even without the unlimited funds. By spending money wisely and making savvy purchases, data centers can sport new equipment that makes them more automated and efficient. Here are some tips on purchasing equipment the right way.**

## Key Points

- Look at existing power usage in the data center to identify equipment that might not be working as efficiently as possible.
- Consider larger business goals in terms of projected growth in revenues or employees.
- Implement standardization as much as is feasible; this will reduce the amount of interoperability issues and could give you a pricing break.

## Look At Power & Cooling Usage First

Upgrades and changes to the equipment mix will likely cause changes to power usage levels, and sometimes, these differences can significantly reduce the financial benefits that were projected by an equipment purchase.

Before buying new equipment, evaluate the existing power usage data, advises Brandon Siri, senior marketing service representative at Server Technology ([www.servertech.com](http://www.servertech.com)). Measurement can be obtained at several levels, from overall facility usage down to the outlet level.

By getting a handle on how power is used throughout the center, an IT manager can determine areas where new equipment purchases would make the most sense. For example, a server that's not due to be replaced may be drawing far more power than necessary, creating inefficiencies. In that case, the data center would want to find a more efficient server to purchase in order to save money over time.

Similarly, looking at cooling trends in the data center can help to determine where new equipment will be placed and whether existing equipment is doing its job or needs to be moved. Jon-Louis Heimerl, director of strategic security at Solutionary ([www.solutionary.com](http://www.solutionary.com)), suggests that a data center manager evaluate cooling strategies such as containment through subdividing areas and using in-rack cooling more often. Understanding power, cooling, and airflow will help to make more informed equipment buying decisions.

## Think About Business Objectives

Creating a more efficient, powerful data center can be an end result in itself, but more likely, new equipment purchases should be done in order to sync up with larger business goals, notes Kris Domich, principal consultant at Dimension Data.

Before buying equipment, meet with other company executives and dig deep into their business goals and plans for the coming year and beyond. Often, these discussions are lacking in specificity in terms of hiring, revenue goals, application usage, potential downsizing, and other factors, but such information is vital for IT so that they can plan appropriately.

This will prevent over-purchasing in some cases, or could spark conversation about doing more purchasing than anticipated. To get company buy-in, create an equipment buying plan that articulates how the new equipment will affect other operations, and why the purchase is necessary. For example, if the sales team intends to increase its ranks by five staff members in the next year,

possible. The benefits to this approach can include more purchasing power—buying in bulk, to some degree—as well as better support functionality, fewer conflicts among equipment types, stronger infrastructure overall, and development of a single vendor relationship instead of many.

Domich notes that with standardization implemented in processes and procedures, as well, efficiency can be boosted and upgrade schedules streamlined. Future purchasing plans can be timed with product innovation from selected vendors, giving IT managers a chance to build standardized procedures around purchasing, maintenance, and contract negotiations. With just a couple vendors in the data center, those vendors will get to know the goals and specifics of the center and will be able to make suggestions about operational tweaks or other improvements.

## Understand Maintenance & Upgrade Schedules

When comparing equipment types, one factor that tends to get overlooked is the maintenance required for a specific piece of equipment. Domich recommends that IT managers do their homework in terms of understanding the amount of time that will be necessary for upgrading and maintaining equipment.

In addition to asking for these types of schedules from a vendor, it's helpful to ask other data center managers about their experiences, particularly if the data center is a similar size and supports about the same number of users. Although every data center is unique in terms of setup, especially when it comes to power and cooling, these ballpark estimations will be useful in determining if a new piece of equipment will cost less than another but may be more costly in terms of staff time. ■

## Implement Standardization Practices

Although most data centers have a mix of vendors, it can be useful to gravitate toward utilizing just a few brands, if

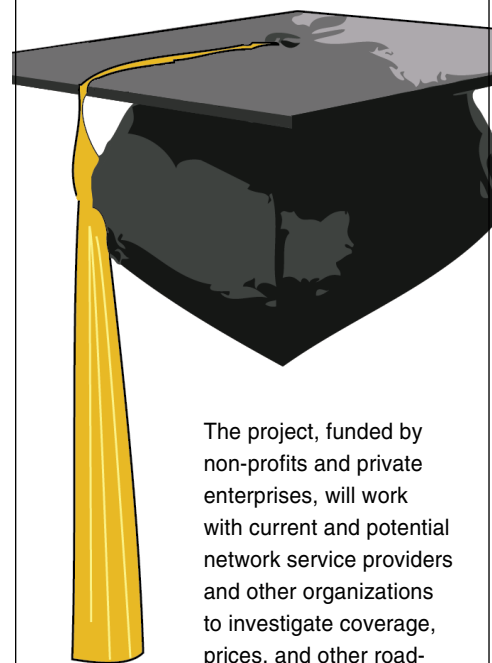
## Best Tip: Include Power Monitoring In Your Purchasing

According to Brandon Siri, senior marketing service representative at Server Technology ([www.servertech.com](http://www.servertech.com)), data center and IT managers need to start planning power monitoring early in their design cycle. "Waiting until the last minute can result in rush decisions and compromises to the infrastructure," he says. "Getting the right cabinet PDU installed ensures that you are using all the available power [and] have the correct outlet types and gives you the intelligence features that your design requires for optimization."

He cautions against skimping on monitoring during purchasing rounds, as well. Inexpensive components and basic cabinet PDUs work, he notes, but they don't give data center managers the monitoring and outlet control functions of more intelligent versions. "The cost of the cabinet PDU intelligence can be justified with a positive ROI after a few months, once you realize that they can help you save on overall power consumption," Siri says.

## Gig.U Project Aims To Speed Up Broadband & Spur Innovation

In an effort to spur economic development and promote cooperation among their respective schools and communities, 29 leading research universities across the United States have banded together to form the University Community Next Generation Innovation Project, otherwise known as Gig.U. The goal is to develop ultra-high-speed networks in each of the research communities to drive economic growth, attract sought-after faculty and students, and promote a new generation of innovation to address critical needs, such as education and health care.



The project, funded by non-profits and private enterprises, will work with current and potential network service providers and other organizations to investigate coverage, prices, and other roadblocks to ultra-high-speed

network deployment on campuses and their surrounding communities.

## Keeping Up With Innovation

For many of the participating institutions, 10Mbps, 100Mbps, and even 1Gbps connection speeds are common. Increasingly, however, rates have grown dissatisfied with these rates of access and are pushing for 10Gbps. Only then do they feel that the United States will be able to maintain its current position as a leader in addressing the increasingly complex problems inherent in the worldwide community. Blair Levin, a fellow at the Aspen Institute's Communications and Society program and former executive director of the FCC's national broadband plan, sees far-reaching implications in it all. Through the Gig.U project, he feels the United States will move "toward leadership in the next generation of applications for economic development, small business services, health care, education, public safety, and a number of other essential services." Leading research universities will be strengthened—universities that are "our most important asset in the global information economy of the 21st century."

There will be hurdles, of course. Many communities are not convinced of the value of the project, and investment dollars might be difficult to attract. Gig.U is looking to appease those fears by convincing business leaders that a little effort will pay off in huge returns for the businesses and schools involved. This in turn will lead to other communities nationwide starting their own collaborations.

Development of workable ultra-high-speed networks will be key to the Gig.U project. With those platforms developed, Levin says, "we will improve U.S. competitiveness around the world, not just in broadband services, but also in all the sectors that rely on that platform."