With the world of technology always advancing, it is critical for business and technology managers to have a solid strategy to handle the unending process of keeping up. With constant advances in hardware, software and techno-business techniques, the challenge is to keep up in a manner that takes advantage of these advances while maintaining business continuity.

This article will address some of the more prevalent technology advances and some strategies and techniques for managing these advances. In particular, we will take a look at the ever-changing world of hardware and software, and suggest some ideas for you to consider.

### Hardware

There are many aspects of hardware technologies that could be addressed, however this will concentrate on the world of business technology. In general, this consists primarily of computer equipment, but these principals can apply to any technology system.

A good rule of thumb to apply for technology equipment is the longer you keep it the more expensive it is to maintain. In particular, keep in mind that once a system is out of warranty, it becomes drastically more expensive to maintain; in terms of replacement parts, technician time, and perhaps more importantly, loss of productivity.

#### Lease Versus Buy

Why is the question of leasing versus purchasing your equipment important in a discussion about keeping up with technology? That’s usually a decision for the accountants to make, isn’t it?

Actually, this decision can provide the basis for, or be the result of a strategic hardware duty cycle policy. By making the decision to take your equipment out of service when it goes out of warranty, you can tailor a leasing plan that in effect forces you to replace your systems on a pre-determined schedule. Join forces with your accounting team to establish a leasing or purchasing policy that complements your technology duty cycle policy.

On the other hand, if you plan on keeping your equipment until it croaks, it may make more sense to purchase your equipment. Keep in mind, however, the cost of disposal of your equipment at the end of its useful life.

#### Desktops

Most major computer manufacturers release new models (not simply faster processors) of business desktop systems every 16 to 24 months. With an average replacement life between three to five years for most organizations, this means that two or three models may be in service in an organization at any given time.

Between the standard manufacturers’ warranty and inexpensive extended warranty offerings, your desktops can be covered for most failures for a period of up to four years. It makes excellent business sense for most organizations to replace desktop systems once they are out of warranty.

#### Servers

Server-class systems have similar release cycles between models that typically range from 18 to 36 months, which is slightly longer than desktops. However, servers can have significantly longer useful lives, depending upon their use. In general, a good practice is to get the longest cost-effective warranty on your servers and maintain them until they are no longer useful.

### Software

In November 2006 Microsoft unveiled one of its most all-inclusive set of software upgrades to volume-license customers. This set of upgrades includes Windows Vista, Office 2007, Exchange 2007 SharePoint Server 2007, Visio 2007, Project 2007 and others. These upgrades should be available to the general public and retail customers by the time you read this.

Should you go out and upgrade immediately? Well, that depends on your strategy. If you don’t have a strategy for software upgrades, you may want to consider the following guidelines:
Never fall behind more than one major version release of the most currently available version of your software products. In other words, don’t get two versions behind.

Identify what your comfort level is for early adoption of new releases. Are you willing to take a chance on an early release in order to be among the first to use the newest cutting-edge technology, or even a beta tester? Or are you among those more conservative users that wait for the first service pack? Only you can make that decision, but general wisdom dictates that a conservative approach is the safest.

Licensing Options
Just about every major software product manufacturer offers various licensing options for your organization. For example, Microsoft has enterprise, open and select volume licensing options. The more a business spends, the deeper it qualifies for discounts. Microsoft offers an option called Software Assurance that allows companies to pay an annual fee (typically around 20 percent of the list value of the software) in order to stay version-current. They also recently introduced license subscriptions, which allow companies to subscribe to software licenses instead of purchasing them. Read more at http://www.microsoft.com/licensing/resources/default.mspx.

When you consider that major software releases come around roughly every three years, software assurance or subscription licensing makes sense if you plan on staying reasonably version-current.

Alternatively, you can typically take advantage of special upgrade pricing for a limited timeframe after a new version of software is released. The downside to this option is that the manufacturers will typically not inform you in advance regarding the pricing that they will charge.

Network Operating Systems
In many respects, a stable network operating system environment is much more important than the latest features and gadgets. Therefore, you may not want to be as much of a hurry to upgrade your network OS as you may be for your desktops or productivity software.

However, be cognizant of the end of support, or sunsetting, of the software on which you run your network. Without support from the manufacturer, you may find yourself in a bad position with little or no warning. You will find that other software products, such as your backup and virus software, may stop supporting older OS versions before the OS is sunsetted.

Therefore, you will want to adopt a strategy that allows you to maintain stability without putting you in danger of being sunsetted.

Desktop Operating Systems
Microsoft Windows comprises the vast majority of desktop operating systems in business today, and Microsoft always introduces each new version of Windows with fanfare and excitement that is contagious. The recent introduction of Windows had an unprecedented participation of some two million beta testers, indicating that a large number of people are willing to suffer some potential flakiness in exchange for an early look at the next new thing.

Beta testing or early adoption is fine
in a limited, controlled environment, but don’t bet your business on the reputation of Microsoft (or any other company) to introduce a bug-free new release. It is better to let others find the bugs the hard way and simply wait until the industry at large agrees that the version has reached an acceptable level of stability.

Check the online blogs and discussion forums until you are satisfied that it is ready for you—or that you are ready for it.

Desktop Productivity

Much like desktop operating systems, you will want to establish a strategy of timing your Microsoft or Corel Office upgrades to best suit your organization’s needs. Keep in mind that you will make the upgrade—it is a matter of when, not if.

Server-based Systems (e-mail, database)

Follow the same general rules for your e-mail and database systems as you do for your network OS. While you can operate fairly well on systems that are two or three versions old, you will undoubtedly want to take advantage of the new features that are introduced including performance enhancements, security improvements and industry trend responses.

And most importantly, don’t forget about the impact on your end users.

Training

Be sure to incorporate training into your upgrade planning. This training must include both technical as well as usability concepts. Get your technicians trained on the new systems they will be implementing and supporting, and establish a training program for your end users.

A good practice to follow is to set up a formal mini-certification process that end users must complete before they receive their upgrade. In some cases you will not be able to upgrade individual users, so work it out so that entire groups receive their training before you implement the upgrade.

Change Management

The decision as to how and when you perform specific upgrades should in large part be driven by the users of the systems. They are the ones that will be primarily affected, so get them involved in the planning process.

In order to make an informed decision about an upgrade, the users first need to have an idea about the impact it will have on them, both negative and positive. What new features will this upgrade bring to them? How much will it cost? How long will it take? How much pain will there be?

Getting participation and buy-in is an essential step in the process, and the more excited you can get the users, the easier it will be to engage your end users as partners in the effort.

Staying current with technology is an ongoing process, and upgrades are just a fact of life. Establish strategies that fit your organization, plan your upgrades, and partner with the end users. Employ leasing and licensing programs that compliment your strategy, and try to remain relatively current in both hardware and software. If you follow these guidelines, you should be able to face the inevitable process with success.

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