

Cost savings and efficiencies through smart practices

TECHNOLOGY LIFECYCLE MANAGEMENT REFERENCE GUIDE



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TECHNOLOGY LIFECYCLE MANAGEMENT REFERENCE GUIDE

TABLE OF CONTENTS CHAPTER

01	Leveraging Lifecycle Management.....	3
	Saint Louis University boosts productivity and reduces costs	
02	Technology Lifecycle Management 101	13
	Gain savings and efficiencies through smart lifecycle management practices	

WHAT IS A CDW•G REFERENCE GUIDE?

At CDW•G, we're committed to getting you everything you need to make the right purchasing decisions — from products and services to information about the latest technology. Our Reference Guides are designed to provide you with an in-depth look at topics that relate directly to the IT challenges you face. Consider them an extension of your account manager's knowledge and expertise. We hope you find this guide to be a useful resource.

LEVERAGING LIFECYCLE MANAGEMENT

SAINT LOUIS UNIVERSITY BOOSTS PRODUCTIVITY AND REDUCES COSTS



CHAPTER 1:

Mapping a Strategy

Establishing a Partnership

Benefits Abound

Staying Ahead of the Curve

It only takes a minute for a Saint Louis University (SLU) end user to communicate the OS and hardware details of his/her computer to help desk staff. What's a minute of time worth to SLU? Plenty, since it has approximately 7,000 PCs and notebooks spread across the campus.

An extra minute on the help-desk line for each of those computers is 7,000 minutes — nearly three full weeks of an IT person's time per year. With today's budget constraints, any place where efficiencies can be squeezed out is worth taking a look at.

While reducing help-desk call time has been a good side benefit, it was not the primary reason that SLU pursued a technology lifecycle management (TLM) strategy.

In conjunction with adopting Information Technology Infrastructure Library (ITIL) best practices, SLU wanted to get a handle on the sprawling device landscape on its campus and wring out whatever efficiencies it could across its desktop purchasing, deployment and support programs. Centralizing and streamlining its approach to TLM helped the university achieve these goals.

As is the case with many higher education institutions, SLU's approach to purchasing and supporting desktop computing has developed over time. "Our model for purchasing and supporting desktop computing evolved as a distributed function," notes Ed Wichmann, director of SLU's ITS customer services.

"Colleges and departments are responsible for purchasing, and some also support their systems. Central ITS has provided umbrella support, without involvement in college or departmental purchasing."

As a result, heterogeneous systems became the norm, making for a cumbersome support situation. "Although we had standardized on certain makes and models, there was configuration and application flexibility," explains Pat Thibodeau, business manager for ITS. "This created complexity for support technicians [who had to] service multiple types of hardware and software configurations."

This setup eventually began to affect the IT department's productivity. In addition, technology refreshes were inefficient. "We knew what was purchased, but we didn't always know whether it was still in use, by whom or how it had been modified," says Wichmann. "At the end of our four-year refresh cycle, we couldn't accurately determine what people really needed."

MAPPING A STRATEGY

While the day-to-day computing support will remain distributed, SLU is improving controls by implementing an enterprise asset management system as a centralized information repository. To support its new repository, SLU began a desktop procurement and lifecycle management initiative in late 2008.

First, purchasing standards were refined to reduce complexity and encourage compliance. Then SLU decided to seek a reseller partner to supply desktops, notebooks and two key lifecycle management services: barcode tagging and hard disk imaging.

Tagged assets were desirable for accurately populating SLU's new asset management database and, in turn, speeding up deployment. "Tagged assets permit us to put equipment into the field faster, while minimizing data entry errors," says Wichmann.



CRAIG WILLIAMS
Multimedia Services Manager

PAT THIBODEAU
ITS Business Manager

TAMMI MOORE ROBINSON
ITS Contract Manager

ED WICHMANN
Director of ITS Customer Services

Saint Louis University
Saint Louis, Mo.

Receiving hard disks preimaged also offered efficiencies.

"With our distributed support system, there are dozens of ways a machine can be configured to integrate with our network," Wichmann explains. "With hard drives already imaged, consistency is ensured. Then we can push out updates and upgrades over the network to keep systems current. The result is improved control throughout device lifecycles."

In addition, imaged hard disks contribute to organizational productivity. For example, "Help desk staff are able to access a system's basic install data at the start of a phone call," Wichmann says. "This not only removes delays and frustration caused by preliminary questions, it means a faster resolution that puts employees back to work."

ESTABLISHING A PARTNERSHIP

In January 2009, SLU issued a multivariable RFP for the desired products and lifecycle management services. Since its distributed support model would continue, SLU opened the RFP process to all.

"We made the RFP process as inclusive as possible," says Tammi Moore Robinson, ITS contract manager for SLU. "Representatives from across campus attended every RFP presentation, spoke to prospective vendors, test-drove equipment models and provided feedback to us directly or via written surveys."

In the end, CDW•G's combination of HP equipment and extensive

lifecycle management services stood out. "The CDW•G/HP solution was head and shoulders above everyone else," Robinson asserts.

With the university's choices of equipment, it gained control while still providing users with flexibility. Desktop users can select either a small form factor or minitower version of the HP 6000. Notebook choices include the HP 6530B, HP 6730B, HP 2730P Tablet and HP Mini 5105.

For lifecycle management services, SLU received more than asset tagging and disk imaging. The array of additional services begins with testing each piece of equipment in one of CDW•G's ISO 9000-certified labs to ensure only reliable units are shipped.

SLU also has its own CDW•G support team. "With one person to call, we have someone who already knows our specific needs and policies," says Thibodeau. "This removes us as the middle man for answering questions, and we're confident users receive appropriate information for making purchasing choices."

Furthermore, SLU-approved hardware and software is aggregated onto a password-protected subsite of CDWG.com. The customized subsite only displays university-standard hardware and other approved equipment, from document cameras to printers. Using an SLU-issued procurement card, faculty and staff may order supported items directly, bypassing paper-based procurement procedures.

In contrast, those interested in purchasing nonstandard hardware must follow a traditional multilayered approval process, which can take more than a week (and can bog down anywhere along the way).

BENEFITS ABOUND

When the CDW•G contract officially began in August 2009, benefits quickly piled up. "Fulfillment has been super fast," notes Robinson. "From the time a department places an order for supported equipment, arrival is about two days."

Consequently, standards compliance has soared. "Getting machines so quickly and efficiently is proving to be an excellent incentive for purchasing our standard devices," Thibodeau asserts. "The partnership with CDW•G is a win-win way for gaining equipment and configuration compliance. It's also contributing significantly to reducing procurement overhead."

The open RFP process has also played a role in the initiative's success. "It really helped achieve organizational buy-in for the standard equipment and reseller we selected," says Robinson.

Improvements are also palpable for the classroom technical support staff, which is responsible for 600 computers spread across 311 classrooms.

"Prior to partnering with CDW•G for tagging and imaging, it required a couple of hours to replace a single classroom machine," says Craig Williams, manager for multimedia services at SLU. "To outfit a lab, it would take eight to 10 hours. Now that computers arrive ready to go, swapping out a single machine takes only about 15 minutes. And for an entire lab, it's down to only an hour or two."

As a result, the five-person team spends more time on mission-critical tasks. "Since we're not concentrating on swapping out computers, we're free to do preventive maintenance," continues Williams. This reduces overall costs and ensures equipment is operational when students and faculty arrive for a class.

STAYING AHEAD OF THE CURVE

Once SLU's asset management system is fully deployed, configuration and imaging details for tagged assets will be automatically downloaded from CDW•G on an established schedule. However, shipped asset details will continue to be available in CDW•G's web-enabled database, which SLU staff may access for information and troubleshooting at any time.

As the technology ages, CDW•G will assist SLU with staying ahead of the obsolescence curve. "Our CDW•G reps keep us informed about models going end-of-life and help us make the transition before manufacturer support ends," Robinson says. "They

introduce us to new technologies, permit us to test them in our environment and assist with other preparations, such as creating new hard disk images."

Overall, the improved controls have reduced organizational risks and positioned SLU for the future, Williams points out. "Now we can tell people who want to buy something that doesn't appear on our CDW•G subsite that they are on their own," he says. "They may purchase unsupported equipment, but they do so at their own risk." This reduces burdens placed on SLU as a whole.

Over the long term, SLU intends to apply lessons learned to improve asset acquisition and lifecycle management. For example, "A reseller that is attempting to meet specific RFP requirements may not have the flexibility to offer you something that is better for your long-range goals," Thibodeau says. "For our next negotiation cycle, we're considering offering a set of specifications and asking partners and prospective vendors to make suggestions."

Tips for Lifecycle Management Success

Improving technology lifecycle management is a hot trend in higher education, say the experts. "Asset management is becoming a much bigger player in IT financial and service management," asserts Lisa Erickson-Harris, a research director for Enterprise Management Associates.

"By adopting ITIL best practices and improving your lifecycle management strategies, you have better control over your assets and more insights into spending patterns," continues Erickson-Harris. "This is even more important in higher education, where budgets and staff are typically more constrained."

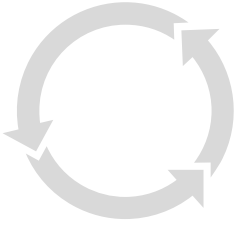
However, this doesn't mean it's an all-or-nothing strategy. "What gets organizations closer to their end game is making ITIL bite-size," emphasizes Erickson-Harris. "Use only the pieces most needed by your organization."

Even then, it's best to take a measured approach. "Deploy lifecycle management in phases," Erickson-Harris suggests. "And break it down into measurable stages to ensure results and successes can be demonstrated throughout the process."

Finally, encourage the IT and procurement teams to work in partnership. "IT lends insights into asset feature, function and performance needs," Erickson-Harris says. "Procurement supplies contracting expertise and plugs asset information back into an institution's financial systems."

TECHNOLOGY

LIFECYCLE MANAGEMENT 101



GAIN SAVINGS AND EFFICIENCIES THROUGH SMART LIFECYCLE MANAGEMENT PRACTICES

CHAPTER 2:	Imaging Efficiencies
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Taking Stock	Protect Your Investments
.....
Assessing Infrastructure	Align Licenses
.....
Setting Policies	Training Benefits
.....
Deploying TLM	Retiring Equipment
.....

To squeeze out greater efficiencies, IT organizations are turning to formal technology lifecycle management strategies using Information Technology Infrastructure Library (ITIL) best practices as a foundation. Technology lifecycle management (TLM) strategies eliminate a wealth of mundane chores, freeing IT staff to take on more mission-critical tasks.

Although an effective TLM initiative will reap rewards whenever it's implemented, some organizations leverage a previously scheduled technology refresh to get started. Not surprisingly, undertaking TLM when equipment is already near its end of life can reduce numerous organizational barriers to adoption.

But no matter when you begin, pursuing a TLM project is like any other IT initiative and contains two basic phases: planning and deployment.

Because TLM will have organization-wide effects, immediately engage an executive manager as a champion for this project. Beyond budgetary approval, executive-level support facilitates the inherent adjustments to processes and procedures that a new TLM strategy requires.

Likewise, include procurement staff on your project team. While the IT department typically drives TLM initiatives, procurement's vital expertise in developing and managing technology asset contracts will play a major role in a successful outcome.

Also consider which of your technology suppliers may prove to be valuable team members, even during the planning phases. Suppliers have insights and assessment tools that can help you see

around corners and position your institution to fully benefit from a TLM effort.

TAKING STOCK

With your team in place, start taking inventory. Many universities know what they've purchased, but few have a deep knowledge of which assets are still being used, what applications reside on them, who is using them and for what purposes.

Begin by breaking down your existing assets into major categories: desktops, notebooks, workstations, tablets, mobile devices and thin clients. Categorize further by including component configurations, operating systems, existing applications and the age of each device.

In addition, survey users about their application needs. During the deployment phase, this will ensure that hardware and software purchases can be tightly matched to end-user requirements.

Place all of the information you gather into a centralized asset management repository, which forms the foundation underlying all TLM processes. A repository can be developed in-house, purchased as an application or contracted from a vendor as a service.

ASSESSING INFRASTRUCTURE

Next, assess your infrastructure including wired and wireless networks. Because desktop devices don't operate in a vacuum, perform a gap analysis to determine whether existing

infrastructure will support the needs uncovered during the inventory phase.

For instance, if more faculty and staff will be going mobile, it may be time to upgrade to the latest 802.11n wireless standard and add access nodes to provide adequate bandwidth and performance. Likewise, if your institution will be transitioning to VoIP telephony or investing in video-related technologies, review connectivity, routing and other infrastructure to ensure smooth traffic flow.

Naturally, a security assessment is also important. Review security applications and appliances and resolve any measures found to be insufficient.

SETTING POLICIES

Once you've gathered information, use it to assist with formulating lifecycle policies. Start with asset lifespan. Desktop device lifespan is open to interpretation, with many manufacturers continuing to promote the traditional three- to four-year refresh cycle. However, performance advances and budget constraints can lead organizations to extend some hardware lifecycles to seven or eight years.

One option is developing refresh policies based on the type of computing device. This is where your procurement department's expertise can assist with determining whether an elongated refresh cycle will be more cost effective than simply negotiating a bulk purchase price on new equipment.

Although your TLM team will likely identify additional policy needs, another notable policy area is standardization. Generally, standardization around a set of devices provides sufficient efficiency gains because it reduces complexity, while still giving users flexibility.

Some may argue that standardization increases security vulnerabilities because many systems could contain the same deficiency. On the contrary, standardization can actually reduce risks by reducing heterogeneity. With standardization, security patches and updates can be efficiently applied, significantly increasing the likelihood that all assets will be in compliance.

DEPLOYING TLM

Of course, the deployment of your TLM strategy is where you really see its value. So take the results of the planning phase and start managing assets more efficiently.

A common TLM best practice is grouping users into categories. In general, standard users need low-end computers, mobile users require portables and power users need high-performance devices for graphics or processor-intensive applications.

By categorizing users, you can work with procurement to develop bulk hardware and software purchasing strategies. This includes upgrades, such as proactively adding more RAM to provide for new software application requirements.

For some users, low-power consumption devices, such as thin clients or blade PCs, may be more appropriate than a traditional desktop system. Lowering overall power consumption is a simple and effective way to green your institution while simultaneously reducing costs.

IMAGING EFFICIENCIES

Next up is disk imaging. Having standardized hardware purchases, you can apply the same base installation of operating system and applications to many computers. This is known as disk imaging.

Disk imaging benefits are numerous. First, imaging speeds the initial deployment of computers in the field. Frequently, the time frame for setting up an individual machine drops from hours to minutes.

In addition, consistent imaging streamlines maintenance because you'll know exactly which machines require patches, updates or upgrades. Plus, updates can be automatically pushed out over the network to the correct machine, eliminating manual intervention.

Help-desk call durations also typically plummet. Instead of asking callers for operating system and version details, help desk staff can consult your asset management repository for the basics. Because your help desk can address the caller's issue more quickly, users can return to work faster.

Disk imaging can be done by your college's internal technical support. Or, prior to shipment, a vendor can image computers to your specifications, making systems completely plug-and-play when they arrive.

PROTECT YOUR INVESTMENTS

With most manufacturers still offering one-year new equipment warranties, your TLM strategy will need to bridge the divide between the manufacturer's warranty expiration and the length of your refresh cycle.

Extended warranties, which are also known as maintenance agreements, come with many options, allowing you to select the best fit. For example, mission-critical desktops may need same-day, onsite service. This can be particularly important when such systems are located in branch campuses or for certain types of mobile staff.

On the other hand, mail-in warranty repair may be sufficient for standard worker machines, such as thin clients, where swapping out a system can be done quickly and efficiently.

Even when budgets are tight, careful selection of maintenance agreements for each type of asset can ensure that a university's resources are used most effectively. For instance, if your entire institution is operating lean, then productivity is a premium. The benefits of keeping staff and students up and running may quickly outweigh the cost of purchasing an extended warranty agreement.

Regardless, before you elect to forgo extended warranties, review your in-house expertise to ensure you can perform necessary repairs. And calculate the total cost of obtaining replacement parts, including losses to productivity while awaiting replacement components, the cost of administering parts orders and tracking warranties on parts should a replacement fail.

ALIGN LICENSES

To wring out additional savings through TLM, align your software licenses. By monitoring software usage for four to six months, you may discover inefficiencies, such as purchasing 5,000 site licenses for Microsoft Access when you only have 500 users.

Or the opposite may also be true — not enough licenses. If so, this creates compliance risks with serious financial consequences should an audit occur. Plus, support hassles will mount as users seek upgrades, updates or troubleshooting assistance with unlicensed applications.

Besides the obvious cost implications, aligning licenses gives you leverage during license renewal negotiations. Among other things, certain combinations of software licenses are eligible for specified discounts the first year and lesser discounts in subsequent years.

More importantly, getting a handle on software usage provides you with a tool for streamlining the next cycle of hardware purchases. For example, faster disk access speeds may be more important than greater hard drive capacity.

TRAINING BENEFITS

While it's frequently unnecessary to teach staff and students application basics, training to maximize features and functions remains a critical component of TLM. When staff are properly trained, help desk calls are minimized and productivity is improved.

In addition to task-related training, teaching staff about your security and acceptable use policies reduces security risks and prevents malware intrusions. The costs of avoidable security breaches are steep, both for IT support staff and in lost productivity.

Training can be delivered by in-house staff or a vendor partner. Self-paced online learning, personalized one-on-one sessions

and traditional classroom settings are joined by live webinar-type options, which can be an effective way to involve remote or distributed user populations.

RETIRING EQUIPMENT

No TLM strategy is complete without a disposition process. Recycling, donating to charity and reselling equipment are all viable and environmentally responsible options.

Many institutions establish a staff purchasing program that allows staff to buy retiring equipment, serving as an employment benefit as well as a disposal mechanism. Online auctions are also becoming popular for disposition, wherein an auction agent purchases your retiring equipment in bulk and resells it individually.

Regardless, it's critical to have disk sanitation policies and procedures. Simply deleting information doesn't destroy it, even when it's been overwritten by new files. Whether you sanitize disk drives in-house or rely on a third party, ensure that the methodology complies with NIST SP 800-88 and provides a compliant audit trail.

Tagging Your Assets

Since the purpose of TLM is tracking equipment from deployment through disposition, you'll need a way to identify individual devices. Many institutions affix a barcode tag to all assets and use scanners to efficiently input the codes into their asset management repository.

While some colleges tag assets themselves, others turn to their vendors for the job. Similar to disk imaging, receiving assets pretagged speeds up field deployment. When evaluating a vendor, consider whether the partnership will include access to its database of assets shipped to you. Having an offsite database, separate from your asset repository, improves your data security position.

Furthermore, look for a partner with a database capable of supplying a broad range of information about each asset. In addition to makes, models and configurations, the database should capture information on disk images, warranties, support agreements and other details that you specify.

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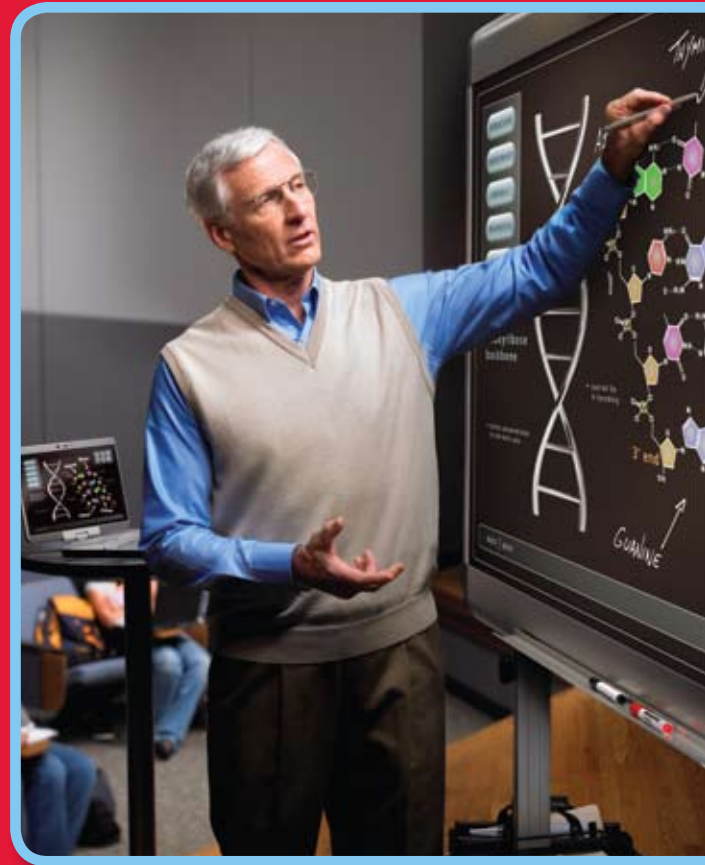
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