



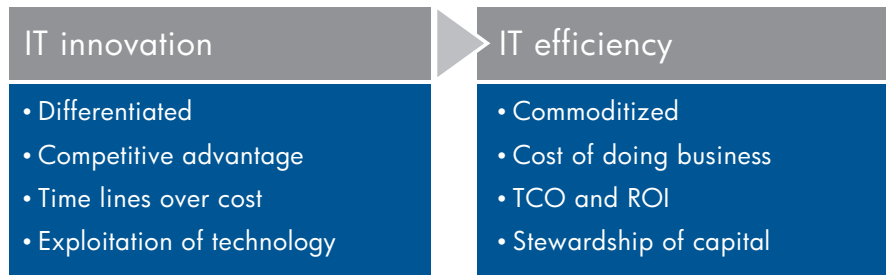
Software asset management:  
the new frontier for “commoditized” IT



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Figure 1. Commoditization of IT



## Introduction: the “commoditizing” of IT

As technology continues to mature in the enterprise, IT is undergoing a fundamental shift from an innovation-focused marketplace differentiator to a results-focused driver of overall business performance.

When new technology is introduced, early adopters deploy it quickly and creatively to gain competitive advantage—cost and return on investment (ROI) are generally secondary issues. But as the technology becomes more widespread, what was once a competitive advantage becomes just another cost of doing business. Companies buy the same technologies from the same vendors to accomplish the same basic objectives.

In today’s IT environment, this “commoditizing” has happened not just once, but with almost every imaginable piece of technology. On such a level playing field, the real advantages come from using IT more efficiently—reducing total cost of ownership and increasing ROI in order to improve overall bottom-line performance.

To be sure, not all IT is commoditized. There are still areas where technology can be used as a differentiator to gain competitive advantage. And just because a certain technology is called a “commodity” does not mean it is unimportant or easy to implement and manage. But if the IT organization is to evolve and play the key business role it has grown into, it must move away from an emphasis on exploiting IT, and instead focus on better stewardship of the capital invested in IT.

The purpose of this paper is to identify and discuss two key areas of this stewardship: IT asset management and software asset management.

## Software asset management: the key to demonstrating IT value

The commoditizing of IT has made delivering value a paramount concern to the IT organization. More than ever, corporate employees, processes and transactions are dependent upon technology resources. This means that IT is among the biggest areas of capital spending in the enterprise. But executive management wants to make sure that its IT investment is paying off, because if it isn’t, there are plenty of other places where the money could be spent.

Demonstrating this value can be a challenge for IT, since many decision-makers have only a limited understanding of the technology itself. IT can’t demonstrate value simply by pointing to the hardware and software that was purchased. Instead, that value demonstration must come when people use IT products and services to accomplish business objectives that benefit the organization. This fact has generated much interest in service management products and practices, including service catalog and service level agreements.

While hardware is the foundation upon which all IT services rest, it is software that provides the greatest value for business users, and which enables IT to prove its value to the business. So if IT is to deliver (and demonstrate) increased value to the organization, software should be a primary focus. And the practice of software asset management has emerged as an effective tool to meet this objective.

## IT asset management is about controlling the entire asset lifecycle.

One of the greatest challenges IT faces in software asset management is helping people understand what software is. The IT organization must manage all logic that is consumed by end users. Some of that logic is in traditional software installed on end-user machines and servers owned by the organization. But increasingly, that logic is running on hardware owned by someone else and accessed over the Internet through a subscription. That subscription has associated costs, rights and responsibilities, just like a traditional software license agreement.

Executing logic on external hardware usually means that data is also stored externally. This adds another level of complexity, since the issues of adequate backup, access to the data after termination of the subscription and security, among others, must be addressed. Thus, a best-practices software asset management program includes all software, no matter where that software is located.

## The bigger picture: IT asset management

Software asset management does not exist in a vacuum; it is an important component in a larger practice: IT asset management.

IT asset management is a set of disciplines designed to control costs, manage inventory and improve IT asset utilization across the enterprise. The goal of IT asset management is to control the asset lifecycle from request and procurement through to retirement.

Here are some fundamental IT asset management practices that are particularly applicable to software asset management:

### **Just because it can be managed, doesn't mean it should be managed.**

Entering every last asset into the IT asset management repository isn't necessarily a good idea. Before deciding to track an asset in the repository, weigh the benefit of tracking with the cost of tracking.

### **Do not manage all assets to the same level of detail.**

Once an asset has been entered into the repository, there is a temptation to track as much detail as possible. Once again, a cost-versus-benefit analysis can determine the appropriate level of detail. Assets will fall generally into the following levels of detail:

- Do not track at all
- Track procurement at an aggregate level
- Track procurement and disposal
- Track procurement, movement/usage and disposal

### **IT asset management tools are worthless without good processes.**

While most organizations need sophisticated technology tools to manage the large number of IT assets in most organizations, an IT asset management initiative will not be successful without effective business processes wrapped around the technology.

# Any successful software asset management initiative must address internal political issues.

## **IT asset management is a process, not an event.**

The organizations that benefit most from IT asset management are the ones that treat it as a core competency that must be invested in and improved over time. Companies that see IT asset management as a special project involving tool selection usually marginalize the practice—until the next crisis forces additional action. To be effective long-term, IT asset management must be the primary responsibility for a specific set of people placed high enough in the organization to receive adequate management attention.

## Components of software asset management

Software asset management is a broad discipline that encompasses three main areas:

- Configuration management
- Cost management
- License management

Each of these areas is a major discipline in itself, requiring specialized knowledge, tools and dedicated people. These areas often touch different groups within the organization, causing the usual political problems that occur with cross-organization initiatives. Some software asset management initiatives do not get off the ground due to executive management confusion caused by fighting over who “owns” the practice!

One of the secrets of successful software asset management is to recognize and mitigate these political problems from the beginning. Software asset management works best when viewed strategically, but implemented tactically in phases. It is critical to reduce political fighting in the first few phases to facilitate both early successes and organizational buy-in. A good place to start is with the software assets directly under the control and budget of the software asset management department itself.

## Configuration management

Configuration management verifies that the software is available to end users. Because configuration management deals directly with software inter-operability, it requires more detailed information and deeper granularity than either cost management or license management.

Successful configuration management requires an effective discovery tool that can accurately get to the necessary level of detail. Information gathered by the discovery tool is also used in cost management and license management.

Patch management, software delivery and software metering tools are also useful in configuration management. Ideally, the software delivery and metering tools are integrated with the ownership repository to prevent over-usage penalties from license agreement violations.

In most organizations, configuration management is the most mature of the three software asset management areas. Therefore, the remainder of this paper will focus on cost management and license management, which usually hold the greatest opportunity for major improvement and quick payback.

## Cost management

Software is one of the biggest areas of IT spending in most organizations. With software costs increasing while hardware costs are decreasing, most organizations will eventually spend more on software than hardware—if they are not already doing so today.

Cost management is concerned with lowering the total cost of ownership for the software portfolio. This includes both software installed on the organization's hardware, and software running on hardware that is accessed through a subscription.

# An effective discovery tool is key to the configuration management process.

### Acquisition cost management

The primary objective in initial procurement is getting the correct information entered into the ownership repository. All software has either a license or a subscription agreement allowing its usage. These are usually put in place before purchase. One of the major challenges in cost and license management is connecting the purchase of software to the license or subscription that grants its usage.

Most enterprise resource planning (ERP) and purchasing systems do not handle enough data to make this connection automatically, so the acquisition and sharing of this information is one of the primary business processes that must be coordinated between purchasing and IT. While automating this process is ideal, it is important to be realistic about the amount of human intervention required to implement this process quickly and accurately. Capturing license and subscription information in the ownership repository at the point of initial purchase helps provide compliance in the event of an audit, and helps control software costs.

During a software audit, IT must show a direct relationship between software installations and proofs of purchase. Simply pointing to license agreements is not enough. Detailed purchasing information—including date of purchase, application description with version number, price paid, name of purchasing entity and vendor—is required to satisfy the auditor. Unfortunately, because the ERP or purchasing system is usually handling all purchases for the organization, this detailed information can be very difficult to find. That is why many organizations fail software audits and end up paying again for some software usage.

### Ongoing cost management

Once software is bought and deployed, the next financial challenge is in managing ongoing costs. Almost all software has some sort of cost after initial purchase. These costs can be in the form of rental, maintenance, purchase of new versions and support. These ongoing costs are, of course, a constant battle between vendor and customer, but they do not go away. So it is imperative these costs be captured accurately in the ownership repository so they can be accurately estimated, budgeted for and verified when an invoice is received.

### Avoiding unnecessary purchases

The final part of software cost management is avoiding unnecessary purchases by redeploying software licenses and subscriptions. Ideally, the ownership repository is checked for an available licenses or subscriptions before new ones are purchased. But making this happen in reality requires tightly coordinated business processes across all software asset management areas, as well as coordination with purchasing and ERP systems. Most organizations are not at this point yet, but it is a worthy goal to strive for.

### Open source software cost management

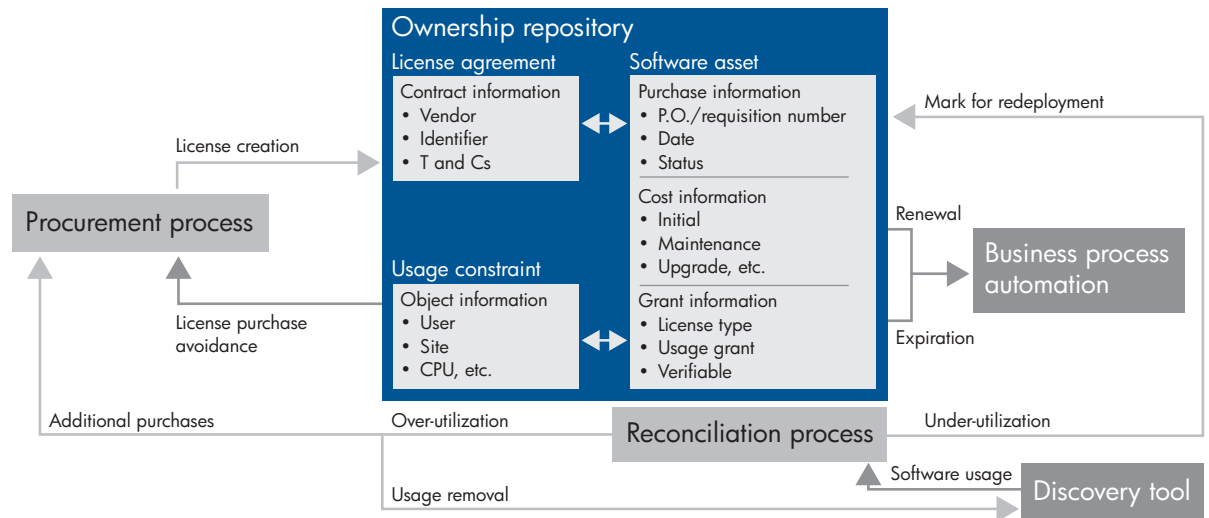
Another frequent pitfall in managing software costs is thinking that since open source software is “free” it does not have to be managed. In fact, the very assumption that open source software is free is often incorrect. Any effective software program must be inherently stable, and maintaining that stability in open source software requires employing (and paying) technical people who are proficient enough and dedicated enough to manage it. Therefore, it is vital that the IT organization understands the economics behind the open source software that it deploys. While open source software can be a great way to reduce software costs, it should be used carefully and thoughtfully.

### Usage-based pricing management

Usage-based pricing creates unique challenges in managing software costs. Usage-based pricing goes by several different names, such as “utility computing” or “on-demand software,” but the fundamental assumption is that costs are reduced by paying only for what is used.

In reality, most IT vendor billing is unacceptably inaccurate, because these vendors' back-office systems can't keep up with today's complex and rapidly changing software licensing and pricing methodologies. Usage-based pricing only increases this complexity and makes it even more challenging for vendors to produce accurate invoices.

**Figure 2.** Software asset management



However, when done correctly, usage-based pricing can be an effective way to reduce software costs. The most important thing is to understand exactly how the variable price is going to be calculated by knowing the data that will be used, where that data will come from and the exact calculations that will be performed. Armed with this information, IT can independently verify the variable price by accessing the same data the vendor uses, and performing the same calculations internally.

## License management

License management is concerned with the details involved in the grant of usage for a piece of software. Almost all software is purchased either through a license or a subscription. The vendor grants a right of usage, but not ownership of the underlying code. For every software program owned by an organization, there exists a license agreement that specifies the organization’s rights of usage. That agreement might be an enterprise-wide software license agreement that covers all usage instances, or a single-user license that only covers one usage instance.

One of the biggest mistakes in software asset management is treating instances of software usage as an asset. The true asset is not how many people are using the software, but rather how many can use the software under the grant of usage. License reconciliation cannot be accomplished until these grants of usage are accurately captured. License and subscription agreements usually contain other terms and conditions that are valuable to the organization, for example, free training, volume discounts, premium support or extended warranties. It is important to also capture these in the ownership repository.

License reconciliation—balancing actual software usage against grants of usage—is the “Holy Grail” of license management. It begins with the accurate recording of licenses in the ownership repository, and the recording of accurate actual usage counts by the discovery tool. A key factor in effective license reconciliation is matching grants of usage (which are spelled out in license agreements) with the physical presence of software found by the discovery tool. Inevitable differences between the naming used and level of detail provided by the discovery tool make this process very difficult, because license agreements tend to be very general in how they name an asset, while discovery tools are very specific.

Discovery tools are very beneficial and are necessary for license reconciliation, but ultimately a human has to make the final decisions. The goal of these tools is not to fully automate the entire process, but rather to find areas of significant exposure that warrant further investigation.

The importance of accurate license reconciliation cannot be overemphasized. Avoiding the unexpected costs and penalties for licensing violations is essential to increasing the value of IT.

## Putting it all together

Software asset management is a complex process involving many parts of an organization, many technology tools, and a set of sound business processes. The actual implementation of software asset management is different in every organization depending upon the existing IT environment, business processes, goals, internal politics, time frames and resources available. However, the desired end-state generally looks like what is depicted in Figure 2.

# Without detailed purchasing information, companies can end up paying twice for software usage.

The ownership repository is critical to a successful software asset management program. It should contain the following major data items:

**Software asset:** the cost and details around the grant of usage, including purchase order number to prove purchasing in the event of an audit. Initial and ongoing costs are captured, and business rules are put in place to handle automatic renewal. Finally, the details of the grant of usage are captured. These details are used in the license reconciliation process.

**License agreement:** details about the contract in which the usage was granted. The important terms and conditions that were not captured in the software asset are captured here.

**Usage constraint:** associating the software asset with another object in the repository, if that object is involved in the grant of usage. For example, a single CPU license would be associated with the CPU object in the repository.

There are many important business processes associated with the ownership repository, including:

- Checking for software license redeployment before making a new purchase
- Creating records in the repository when a new purchase occurs
- Verifying vendor invoices before payment

- Approving automatic cost renewals before they happen
- Proactively handling license key, password and other expirations

Key factors in the reconciliation process include:

- Reconciling actual usage against the licensing to avoid the penalties associated with licensing violations
- Reconciling software utilization against assets owned to improve utilization of the asset base
- Reconciling costs against budgets and forecasts

## Getting started

As previously stated, software asset management works best when viewed strategically, but when implemented tactically in phases. Early successes are critical to achieve organizational buy-in. It is important in the early phases to communicate the successes of the program, and to verify that management is clear about issues such as cost savings, successful audits and purchase avoidance.

What makes software asset management difficult at the beginning is that it is implemented into a diverse and often chaotic environment of existing software licenses, utilization strategies, purchasing, internal politics and management expectations. In such an environment, the best place to start is with new software purchases. Implement business processes for the accurate capture of new license agreements and software purchases into the ownership repository. Such processes create the necessary foundation for managing those assets in the future.

Once new purchases are being handled, the next major challenge is bringing effective management to existing software assets. Sometimes the motivation for effecting this phase of software asset management comes from a compelling business event, such as an audit or a large maintenance renewal. But while this generates immediate management attention on software asset management, it actually can make long-term success more difficult—because there is too much emphasis on short-term solutions and not enough on adopting software asset management as a long-term strategy. So the IT organization must perform a delicate balancing act, solving the immediate problem in the context of a continuing strategic vision for software asset management.

Absent a compelling business event driving software asset management, it is easiest to start with higher-value, lower-quantity assets. These assets cost less to manage (because there are simply fewer of them), but they can generate significant ROI because of their higher value. Mainframe software is an excellent example of an asset that fits this strategy. Most organizations can generate significant savings with better management of mainframe software. High-end database servers also fall into this category, as well as customer relationship management (CRM) subscriptions in companies that have a large sales force with significant turnover. In general, the focus should be on managing software value not software quantity.

The single most important step in getting started is the formation of the software asset management organization. This organization must contain people dedicated to the software asset management function, who enjoy this type of work, and who have adequate executive sponsorship to provide adequate time and resources to foster success.

## Summary

Just as software is essential in fulfilling IT's mission to the organization, software asset management is essential to increasing the value of IT. Software asset management is a broad discipline encompassing configuration management, cost management and license management. A successful software asset management initiative requires sound business processes supported by practical tools. Software asset management cannot be successful unless the organization embraces it as a core competency that it can invest in and improve over time.

With the increasing cost of software and the aggressiveness of vendors auditing license compliance, it is imperative that organizations develop an effective software asset management practice. The rewards are substantial, with many organizations achieving millions in hard-dollar savings.

Most importantly, the need for software asset management is ever-increasing. Licensing issues are getting more complex. Vendors are inventing new ways to extract money from customers. Now is the time to get started with software asset management, because the need to manage software is one problem that the passage of time may not solve.

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4AA1-5983ENW, April 2008



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