The value of integrating IT asset management with ERP applications

White paper

IT asset management: Where IT meets finance

"What do we have? Who's using it? What is it really worth?" The struggle to manage capital assets for maximum utilization and the greatest bottom-line benefit centers on these questions. In large companies, the processes of procuring, allocating, tracking and managing assets is a massive undertaking and a major factor on the balance sheet.

During the past decades, Enterprise Resource Planning (ERP) applications have been developed to consolidate the operational and financial management of capital assets by providing a wide range of integrated products.

Ultimately, ERP systems gather information from various business lines and roll the information up into the balance sheet. Company officers then must sign off on the accuracy of the data in the balance sheet. This makes ERP a fundamental and strategic element of today's large organization. Almost no major company can function without it.

From a corporate finance point of view, ERP applications are very good at procuring and managing most types of fixed assets. On this basis, it's easy to assume that these capabilities are also sufficient to handle IT assets. However, managing IT assets calls for specific and detailed processes— at both operational and financial levels— which go beyond traditional ERP capabilities.

In effect, ERP's greatest strength is its ability to standardize how different types of corporate assets are bought, distributed and accounted for becomes a weakness when it comes to the complex, dynamic and demanding world of IT. The unfortunate result is that the bottom line can be compromised due to overpayment for and under-utilization, mismanagement and incomplete accounting of IT assets.

Asset management has become a central IT discipline

Within IT organizations, IT asset management has evolved to control costs, manage inventory and improve IT asset utilization across the enterprise. The goal is to manage the asset lifecycle from request and procurement through retirement. Commonly considered an operational discipline, IT asset management now has strategic implications that bridge objectives for both IT operations and corporate finance.

The merging of these objectives raises an important question: what value does IT asset management bring to the broader ERP implementation?

Consider how ERP applications maintain the financial integrity of IT assets. Besides simply procuring and accounting for them, ERP applications should support processes that prevent over purchasing, ensure full asset utilization and provide an audit trail that demonstrates strong internal controls. In fact, few ERP applications are providing these capabilities.

With IT assets accounting for a significant percentage of a company's capital investment, this is not a trivial matter. Effectively managing IT assets requires specific and detailed operational and financial processes, which ERP applications simply can not address.

IT operations and financial requirements have become inextricably linked

Understanding the value of integrating IT asset management with an existing ERP application requires insight into the dynamics of an IT asset's lifecycle, the increasing demand to more accurately reflect that asset's performance on the balance sheet and the need to demonstrate the accuracy of internal controls relating to that asset.

Most ERP systems either don't have the capability or are not implemented specifically to exercise sufficient control over IT assets. The systems support strategic and financial reporting requirements dictated by Generally Accepted Accounting Principles (GAAP) and by governmental regulations, such as SEC reporting and Financial Accounting Standards Board (FASB) requirements.

ERP applications are not designed to support the level of detail required to manage IT assets through their lifecycle, nor can they gather all the pertinent historical information needed to substantiate and justify current and future IT-related spending.

IT asset management integration delivers what finance needs

While managing IT assets has traditionally been viewed as an IT operational discipline, it is increasingly important to corporate financial management. Best practices in IT asset management have always pointed to managing the lifecycle of an asset: tracking and managing costs, location, ownership, value and retirement.

The challenge, then, is to find a way to exchange the granular information within IT asset management with an ERP application to ensure accurate reporting and documentation of internal controls without drastically affecting the ERP application.

Government regulations make this challenge more urgent. Companies must now be able to prove that effective operational and fiscal processes are in place. For example, Sarbanes-Oxley requires that companies validate the accuracy of financial reporting as well as demonstrate the internal controls related to that financial accuracy.

The solution is to integrate IT asset management information and processes with existing ERP processes, creating straightforward connections among fixed assets, procurement and human resources. This provides the detailed financial information and documented processes critical to financial managers.

How IT asset management works

IT assets are unlike other fixed assets

The underlying concept of a "fixed" asset in ERP is that the asset is static, meaning it does not change. As anyone who uses a computer knows, however, the life of an IT asset is anything but static. It is constantly changing being upgraded, repaired and repurposed.

This distinction has significant operational and financial implications. Consider the life of a hypothetical laptop computer from acquisition, deployment, support, redeployment and retirement. Its life covers a number of events:

- Purchased outright as a capital asset or procured through a lease
- Configured with other assets, including software and network connections
- Breaks and needs to be repaired
- Upgraded with other assets, perhaps new software or hardware
- Gets transferred to another state with different property tax or depreciation regulations
- Sits in inventory until redeployed after the user leaves the company
- Returned to the leaser within the terms of the original lease agreement or disposed of following strict environmental regulations at the end of its life

For many companies, this laptop is depreciated according to a predetermined schedule regardless of what actually happens to it. Often, assets that have been retired, lost or stolen continue to be kept on the books and depreciated at significant expense, because financial managers lack the necessary operational information to do anything else.

As IT assets change, the IT organization must keep up

IT organizations must ensure that users have the technology they need to do their jobs effectively. Part of that job is tracking IT assets that are always on the move both physically and financially.

Thus, it's vital that IT asset management addresses the full lifecycle of technology assets from an operational point of view. Specifically, asset management initiatives strive to answer those three basic questions we began with:

- What assets do we own and lease?
- Who is using them?
- What is the true value of those assets?

But, that is just the beginning. Other asset management questions are also critical:

- How can we mitigate contractual fines and errors on leases?
- How can we audit the actual cost of assets and services to initiate chargebacks?
- How do we know we are in compliance with government and industry regulations?
- How can we manage IT spending without compromising business unit requirements?

By answering these questions at an IT operational level, there is an important payoff: the ability to analyze and use the data to improve the ERP application processes that are ultimately responsible for financial resolution.

A consolidated, accurate repository creates a solid foundation

The foundation of effective operational and financial IT asset management is a single, accurate and up-to-date asset repository. Typically, this repository is populated with source data from procurement, automated asset discovery tools and manual entries from physical inventories. Armed with the appropriate data, the repository is then ready to track and manage the operational and financial details of every asset, including the asset's relationship to other assets, financial and operational records, the asset's owner, the owner's entitlements, service records, inventory and retirement status.

Depending on how a company views the material impact of IT asset expenditures, the repository can be constructed to varying levels of depth and complexity, including for example, related "sub-assets" such as memory, network adaptors or other components.

With the asset repository in place, the IT organization can control the physical, financial and operational lifecycle of technology assets using specific business rules and workflow processes. IT asset management carries that control through to retirement and accounts for the resulting IT and financial implications.

The success of this process depends upon getting accurate cost information into the repository at the beginning of an asset's life, so its individual value on a given day can be properly calculated. This is a key component in the reconciliation of fixed asset records.

Integrating IT asset management with the ERP application simplifies the creation, maintenance and long-term accuracy of the repository by providing direct access to the latest status and usage information about every asset at a discrete, per-asset level.

IT asset visibility leads to better financial and risk management

Having gained visibility into all the elements that make up an IT asset's lifecycle, it soon becomes clear which asset attributes have the greatest impact on financial cost and risk exposure.

Think about something as common as software licenses, which are notoriously hard to track and manage in large corporations. For years, companies have over bought licenses to minimize their risk of noncompliance.

In such cases, dozens or even hundreds of seat licenses are bought, paid for and remain unused simply because there is no efficient way to tell exactly who is using what on a daily basis. IT management considers the additional license fees "insurance" against compliance troubles.

This is exactly the kind of problem IT asset management is designed to solve and which ERP applications handle poorly. When fully integrated into the ERP system, IT asset management easily

reconciles license rights (derived from the terms of a contract) with actual installations, usage and entitlement. Almost immediately costs are reduced, risks are minimized and asset utilization improves.

Ultimately, these benefits map back to the integrity and accuracy of a single, consolidated and up-to-date asset repository, which is where we started.

ERP integration touch points

The value of the IT asset management practice impacts ERP processes in three areas:

- Procurement: improving the full cycle of procurement, from request through acceptance and payment
- Fixed asset management: providing detailed information on the financial disposition of each IT asset
- Human Resources (HR): linking employee ownership to specific IT assets

Integrating IT asset management with ERP procurement, fixed assets and HR functions can bring significant value to the enterprise through cost savings, service improvements and risk mitigation.

IT asset management and ERP procurement

Typically, the procurement cycle includes request, authorization, ordering, receiving, acceptance and invoicing of assets. For most asset classes, procurement is accomplished through the ERP system, and that system is adequate. An employee issues a request, the request gets approved and a purchase order is issued. The item subsequently is ordered, received, accepted, paid for and put into service.

IT assets are acquired in a variety of ways

In the case of IT assets, however, not all requests need to go through procurement. In fact, there are three ways an IT asset request may be fulfilled, based on the request, entitlement to use and even budget.

From existing inventory: With a consolidated IT asset repository in place, requests can be fulfilled with existing stock, there is no "green dollar" exchange and there is no involvement from corporate purchasing. Automated asset discovery and inventory reconciliation show available inventory and reduce the need for new purchases.

From entitlement contracts: Unused software licenses can be issued to fulfill IT requests. These asset entitlements reside in a contract and when linked to an IT asset management system become clearly visible for issuance. Again, purchasing is not involved. In addition to the cost savings resulting from better contract utilization, accurate software license tracking is at the heart of software compliance.

From outside vendors: Assets that can't be fulfilled from existing resources get forwarded to a purchasing system. When initiated through IT asset management, the complete details of each request can be tracked against the purchase order and subsequent procurement processes, thus enabling tie-backs to the requester and details for payment reconciliation.

Regardless of how an asset request is fulfilled, the original request can be linked to the fulfillment event, tracked for cost and inventory allocation and registered as an asset change in the IT asset management system.

From an asset lifecycle point of view, procurement is the single most important "catch-point" for collecting data about IT assets. The beginning of the asset's lifecycle in the enterprise is at acquisition and is the best place to capture all relevant asset attributes, including the requester, cost center, specific configuration and owner location.

With so much information at hand, it makes sense for integration between IT asset management and ERP procurement.

A standardized IT asset catalog reduces cost and improves services

Creating a catalog of approved IT assets helps reduce costs and ensure a more efficient purchasing cycle. Whether it exists within the IT asset management system or is integrated with an ERP-based master catalog, the process of standardizing asset requests benefits the enterprise in several ways:

Reducing the number of SKUs: Standard configurations enable purchasing to reduce the number of products and vendors it handles. Orders can be consolidated, and costs can be reduced through volume purchasing. The entire purchasing process is simplified and expedited.

Getting new hires the technology they need: A standard catalog enables HR and line management to request the right configuration for new hires, based on their job requirements.

Improving service and support: Reducing the number of hardware and software configurations makes it easier to provide technical support and resolve problems.

Making better IT decisions: Tracking asset details at a granular level helps managers analyze usage trends more accurately and provides decision support for selecting new asset standards and manufacturers.

Tracking asset details improves the procurement process

Suppose an IT organization wants to order 100 laptop computers in five different configurations. In most cases, purchasing issues an aggregate purchase order for all 100 laptops. Then, through ERP, procurement attempts to reconcile received goods against the purchase order.

But, IT assets can be tricky. For example, the vendor fills the laptop order in stages over three months. In addition, ten of the laptops are damaged in shipment and must be replaced. ERP procurement has no way to distinguish the individual computers under the aggregate purchase order, so payment is initiated before the order is fully received and accepted. Reconciling the order with actual invoices is problematic.

By capturing important data about each requested asset and making that data available to ERP procurement, IT asset management helps reduce costs and streamline the purchasing process. In the case of the 100 laptop computers, the process works much better with integrated IT asset management and ERP:

- The order comes through the standardized IT catalog (the five different configurations are completely specified).
- Purchasing issues an aggregate purchase order for all 100 items.
- The asset detail for each laptop becomes part of the purchase order in ERP procurement. The information is also maintained within the IT asset management system so it can be reconciled later.
- Once a laptop (or group of laptops) is shipped by the vendor, notification comes through the ERP application into the IT asset management system and is reconciled. Laptops that were not shipped or accepted maintain their open status, and payment for these computers is not initiated.
- When a laptop is received and accepted, IT asset management notifies the purchasing system so that the payment process can begin on that particular asset.
- The asset is then logged against the request, creating a one-to-one correspondence between what is ordered and what is received, accepted and put into service.

This process establishes an audit trail from the original request to the order, then all the way through to shipping, receipt, acceptance and payment.

By tracking each asset through every step of the procurement cycle, managers can better control costs associated with items not received or received late, yielding significant savings. In addition, IT asset management data makes it easy to analyze vendor performance based on a variety of criteria, including time to fulfillment, volume purchasing discounts and performance trends.

The procurement cycle is linked with the fixed asset cycle

Using IT asset management, the receipt and acceptance of assets can trigger the ERP system to initiate the fixed asset record and depreciation process. This unique asset tag (and associated detail) is another critical link between IT asset management and the ERP system, because it ties detailed asset information to the fixed asset register.

From a financial management perspective, what makes this process so important is that this transaction "trigger" happens on a single-asset level rather than at an aggregate level. In light of recent financial regulations, such as Sarbanes-Oxley, the tracking and reconciliation capability in IT asset management can demonstrate effective process control over fixed asset accounting.

Integration reduces risk and unnecessary purchasing costs

Clearly, integrating IT asset management with ERP procurement produces better efficiency and management throughout the cycle. It also helps the enterprise avoid unnecessary purchasing costs and risks in two important ways:

1. Reducing overbuying: Better visibility and inventory control drive better buying decisions.

2. Standardizing IT offerings: Creating standards enables volume purchase agreements and efficiencies in the purchasing cycle.

Figure 1: Benefits of IT asset management and ERP procurement integration

ERP procurement	IT asset management procurement	IT asset management benefit
Manages requests directly by purchasing	Manages requests with fulfillment via inventory, entitlement or purchasing	Better use of assets and reduced cost of procuring new assets
Executes purchases at an aggregate level	Detailed purchase requests are tied back to the requestor	Ability to track the entire procurement cycle back to the requestor
Conducts receive and accept processes at an aggregate level	Conducts receipt and accept processes at a detailed levels; triggers per-asset payment process	Partial orders and other non-accepted assets not paid until reconciled

Delivering end-to-end procurement support

Procurement is the ideal place to initiate tracking an asset's lifecycle, with all its operational and financial implications. From acquisition to fulfillment to vendor payment, IT asset management accounts for every asset request in detail, each time there is a status change to an IT asset—financial, operational or both. IT asset management can trigger the ERP system to make the appropriate change, assuring financial accuracy and internal control.

IT asset management and fixed asset management

Fixed asset management is probably the least understood, yet most important, area in which IT asset management can support and enhance ERP functions.

Traditionally, fixed asset management in an ERP application focuses on the capitalization and depreciation of an asset based on its purchase price and on how this depreciated value impacts a company's general ledger. IT asset management provides the detail so that this process is accurate and comprehensive. IT asset management supports fixed asset management process by enhancing:

- Depreciation accuracy
- Regulatory compliance
- Budgeting and chargebacks

Tracking individual assets enables more accurate depreciation

As previously discussed, an ERP system typically identifies multiple procured assets associated with a single purchase order with a single fixed asset tag. This asset tag establishes a fixed asset value and an associated depreciation schedule on an aggregate level.

For example, if the 100 laptop computers are purchased for $120,000, the ERP application often assigns the entire group of laptops a single, aggregate fixed asset tag. The resulting depreciation schedule represents a single asset record valued at $120,000. Splitting bulk orders into per-asset records using ERP is arduous and isn't typically implemented.

As a result, the aggregated asset tag is issued, a single depreciation schedule is established, the 100 laptops are put into service and problems begin.

After six months, ten of the laptops are no longer in service due to breakage, loss or theft. Ideally, the value of those laptops should be written off, and the depreciation value of the remaining 90 laptops reduced. But this is easier said than done, because the ERP fixed-asset application originally aggregated all 100 laptops into a single fixed-asset record. The depreciation schedule continues as if the entire 100 laptops are still operating with obvious detrimental effects to the balance sheet.

Although it is possible for an ERP application to define fixed asset records for each asset, the broad scope of ERP applications renders this option difficult and impractical. It is rarely implemented.

However, because IT asset management is specifically designed to capture the status of every asset at every point in its lifecycle, any change to a single asset is reflected in an updated status record. A change triggers a workflow that notifies the ERP's managers to update the fixed asset record to reflect the new depreciation value. The ERP's record change facility then notifies the IT asset management system's records, completing the transaction.

Without tracking the detail captured in an IT asset management system, complete fixed asset reconciliation simply is not possible, yet doing so is critical. Most experts agree that the value of IT assets is overstated significantly in corporate ledgers. This kind of inaccurate detail not only misrepresents the true status of depreciated assets, it can also expose the enterprise to substantial legal and regulatory risk.

Better asset tracking aids in regulatory compliance

Prior to recent government regulations, such as Sarbanes-Oxley, certain depreciation discrepancies resulting from inaccurate fixed asset tracking were often tolerated. The current regulatory environment is less tolerant. For tax and reporting purposes, companies are now tracking transactions at an individual asset level to show how depreciation is expensed against profits. In addition, establishing an audit trail for asset status, change transactions and even asset ownership has become very important. Considering the level at which IT assets are often overstated, the need for IT asset management is both clear and urgent.

Because IT asset management tracks assets on an individual basis from the very beginning of the procurement cycle, integrating the detail for individual assets with the ERP system's fixed asset application maintains the necessary granularity and status integrity to address regulatory requirements.

Tracking true asset costs improves budgeting and chargebacks

The initial purchase price of an IT asset represents only a small fraction of that asset's true cost. But, most large companies simply don't track that cost across the asset's lifecycle. With IT asset management integrated with the ERP fixed asset function, true asset cost, as well as associated

services costs, can be associated accurately with an employee, department, project or any other asset attribute.

Once tracked by IT asset management, a regular cost-allocation transaction into the general ledger provides the data needed to implement cost center budgeting and an automated chargeback system. Through managing the full lifecycle of every asset, IT asset management provides a solid basis for total cost of ownership (TCO) analysis.

Integrating service management further enables TCO

Integrating service management with an ERP system provides additional value. By tracking service requests on a per-user basis, the resulting charges can feed directly into an IT asset management financial application.

The transparency created by this integration provides a complete view of actual, accrued costs. As a result, accurate chargeback to business units or departments can be realized and reported though the ERP application. Reporting that shows the total cost of ownership of IT assets and services can help the IT organization identify and manage its value to its customers, demonstrating fiscal responsibility and even profitability for the organization.

Figure 2: Benefits of IT asset management and ERP fixed asset integration

ERP fixed assets	IT asset management fixed assets	IT asset management benefit
FA records support and updates the general ledger	Provides detailed asset records for asset supported and updated ERP FA records	Visibility into granular and accurate data that supports balance sheet integrity
Provides records that support the budget process and capital allocations	Provides the detailed sub-ledger records that show residual value based on asset lifecycle	Accurate cost center budgeting based on true residual value (based on true depreciation)
Reports on fixed assets for capital budgeting at an aggregate level	Reports on fixed assets for departmental budgeting at a granular level	Accurate and detailed information on actual assets and services costs; provides the basis for cost center accounting and chargeback justification
Reports on aggregate asset valuation for tax and audit, based on "purchase value" depreciation	Reports on detailed, up-to-date asset valuation, based on actual per-asset depreciation	Detailed depreciation schedule that reflects lifecycle (including retirement) status Documents the processes for uplifting depreciation schedules

Improved accuracy and control for fixed asset management

IT asset management strengthens the entire fixed asset management process, giving managers a critical link between an asset's operational status and its financial status. By integrating asset management with ERP, this link can be fully automated, maintaining parity between the two systems and creating a manageable, closed loop and auditable, fixed asset management system.

Additionally, IT asset management validates the accuracy of each asset's value by creating an item-by-item subledger to support fixed asset records maintained in the ERP system. Plus, asset management enables financial managers to complete and adjust property tax records, as well as to provide evidence that an asset has been removed from the enterprise and retired or disposed.

IT asset management and HR integration

Having an accurate representation of the employees, departments and locations in the enterprise is critical to maintaining an accurate asset portfolio. In most companies, the authoritative source for this information is HR.

HR maintains a master list of employees, including their hire date, department, status, transfers and departure information. This HR data can be synchronized with the IT asset management repository to accurately connect the latest employee information with asset ownership. For example, when a new employee is hired, the process in HR can trigger the IT asset management system to initiate an asset request, such as reserving an in-stock laptop computer, along with a software image that derives from a master contract entitlement. This request can also trigger a service bundle that engages the help desk to create security rights and network access.

Associating employees with specific assets throughout the employment cycle also helps prevent theft and facilitates asset recovery. When an employee leaves the company, his or her associated assets can be fully documented to ensure that those assets are returned to the asset inventory.

This integration also enables more accurate cost-center budgeting. Employee events that affect asset status, such as hiring, job changes and transfers, can be associated with specific cost centers. By coordinating this data with HR records, IT can more accurately administer chargebacks for asset and service costs.

IT asset management and ERP integration

In summary, the unique, complex and costly nature of IT assets makes it necessary to implement a detailed and granular system for tracking and managing assets throughout their lifecycle. ERP systems support procurement and fixed asset accounting at a macro level, while the micro-level detail provided by IT asset management is mission-critical for cost management and regulatory compliance. Integrating the two systems is a matter of significant value to the enterprise.

This integration has three major benefits:

- Cost savings: IT asset management provides the details required to analyze and understand the true, total cost of ownership for assets and related services, from procurement through disposal. This information helps IT and individual business units manage costs through better use of assets and ensures that the ERP system remains accurate.
- Service improvements: Integrating IT asset management with HR allows the IT organization to time its requirements to specific events, such as provisioning a new hire, assuring that each employee has the right assets at the right time.
- Risk mitigation: The need for financial reporting accuracy and documented internal controls is of paramount importance for senior executives. IT asset management enables the collection of key lifecycle management data so that the enterprise can better leverage the ERP system to mitigate risks associated with fiscal irregularities and audits.

In short, connecting the IT organization's existing asset management practice with the ERP application creates a powerful synergy from both an operational and financial point of view. It helps finance, the IT organization and HR see technology assets in new and more productive ways and provides the enterprise with crucial support and process documentation data for navigating a changing regulatory landscape.

Figure 3: IT asset management enables better financial practices

ERP systems are in place to manage…	IT asset management procurement
Strategic financial planning and budget process	Providing the detail of asset and service costs required to accurately forecast and reconcile budgets, and make charge backs and reconciliation possible
Purchasing	Avoiding unnecessary purchasing by proactively checking inventory prior to issuing an order
	Consolidating standardized requests, implementing volume purchase agreements, and maintaining complete detail for fixed asset reconciliation
Asset depreciation	Providing the ERP system with data o depreciate on a per-asset level
Contract payment	Automating workflows and triggers that ensure contract obligations are met on time and within budget (based on details of the contract)
HR information	Associating assets and related costs with in-boarding and out-boarding both employees and consultants

For more information

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