Getting Started with ITAM

Ed Tittel

Inside the Guide

• Understanding ITAM
• The Business Case for ITAM
• The Best Way to Get Started on Your ITAM Journey
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The Gorilla is the professorial sort that enjoys helping people learn. In the School House callout, you’ll gain insight into topics that may be outside the main subject but are still important.

This is a special place where you can learn a bit more about ancillary topics presented in the book.

When we have a great thought, we express them through a series of grunts in the Bright Idea section.

Takes you into the deep, dark depths of a particular topic.

Discusses items of strategic interest to business leaders.
ICONS USED IN THIS BOOK

**DEFINITION**
Defines a word, phrase, or concept.

**KNOWLEDGE CHECK**
Tests your knowledge of what you’ve read.

**PAY ATTENTION**
We want to make sure you see this!

**GPS**
We’ll help you navigate your knowledge to the right place.

**WATCH OUT!**
Make sure you read this so you don’t make a critical error!
Do You Know Where Your IT Assets Are?

To paraphrase an old television commercial: It’s 11 p.m.—do you know where your hardware and software is? If not, you could be in for a world of hurt when the vendor of your most important—and expensive—software package shows up, demanding to see the evidence of your compliance.

What do you do? Open up your Excel spreadsheet and hope that the information in it has been updated at least within the last year?

Not if you use proper IT Asset Management (ITAM) practices. With solid ITAM, you have an up-to-date record of every bit of software that vendor needs, including where it is and how long it’s been there. You can breathe easy, knowing you’re in full compliance. If not, it could be a very long week.

This Gorilla Guide will help you avoid that painful (and potentially expensive) situation. It goes in-depth on ITAM and its close cousin, Software Asset Management.
(SAM). You’ll get an overview of the technology, tips on doing ITAM and SAM right, and some of the gotchas you need to know about.

Who is this book for? It’s for anyone involved in the ITAM chain, from the front-line admin installing equipment that needs to be tracked, to the CIO with responsibility for making sure that costs are controlled across the IT department.
ITAM Business Challenges

Though you’ll have a chance to explore ITAM in greater depth in subsequent chapters of this book, let’s begin with a very basic expansion and explanation of the acronym “ITAM.” IT assets include computing, networking, and related equipment, as well as software licenses, entitlements, and subscriptions. In too many organizations, IT assets are quite numerous, widely distributed, and neither fully inventoried nor documented.

In fact, a lack of a complete “big picture” understanding of IT assets lurks behind most of the challenges organizations face when it comes to managing IT assets. ITAM brings all these pieces together, and makes them accessible, visible, and subject to various controls. Let’s examine some of the elements found in a proper ITAM solution.
Reactive Mode Rules How Business (Mostly) Works

Because of widespread distribution, unclear assignments of responsibility, and even questionable ownership, organizations tend to manage their IT assets as a reaction to some event or discovery, often unplanned and perhaps even unexpected. Sometimes, it’s a response to user request for a specific software title or software subscription. Someone in IT must then determine if sufficient subscription capacity is available to accommodate the request. A certain amount of casting about may be required to confirm whether the request can be fulfilled using existing, already-purchased resources. Then, the necessary arrangements must be made to honor that request and get the user set up.

Not all such situations are benign or easily solved. A letter from a software or subscription vendor may arrive, demanding an audit of the organization’s licenses and subscriptions. Inevitably, this prompts a panic followed by an “all-IT-hands-on-deck” meeting to prepare for the big day when the auditors come to town. Records and paperwork must be rounded up from accounting, purchasing, and one or more IT repositories. Then all that data must be correlated, and a potential damage assessment undertaken.
And all the while, work as usual must go on even while extraordinary and superhuman efforts are underway. All too often, it’s a crazy mess that demands long hours, hard work, and difficult realizations and decisions. Surely, there must be a better way.

3 Big Gotchas

In trying to understand how things can get out of control, organizations must often face up to some common, almost inevitable, mistakes or missteps. Three of the most common of these serve as the focus for the following subsections: wasted spending, unnecessary and avoidable risk, and inefficient use of human resources engaged in unnecessary activities.

Wasted Spending

By far, one of the more painful issues in establishing full control over ITAM is recognizing that a certain portion of current spending is likely going to waste. This might mean paying for software or subscriptions no longer in use. It might mean paying for more licenses or subscription seats than are really necessary, based on actual usage and consumption history. Either way, the result is overspending for idle assets that produce no return on costs sunk into them.
Figure 1: Various Gartner press releases document software\(^1\) and SaaS\(^2\) waste. Another confirms an average of 30% overspend.\(^3\)

Figure 1 shows some recent analyses of worldwide IT spending. They reveal an amazing amount of waste that includes $152 billion exhausted on enterprise software expenditures (out of $507 billion total, or nearly 30%). Another $33 billion is wasted on SaaS charges.


\(^3\) [https://www.gartner.com/document/3920323](https://www.gartner.com/document/3920323)
(out of $110 billion total, also nearly 30%). This totals up to $185 billion, and represents a huge drag on bottom lines everywhere. Organizations must pinpoint and stop such outlays. The first and best step toward cutting waste is proper use of ITAM.

**Unnecessary and Avoidable Risk**

The other side of overspending is failure to purchase or acquire licenses or subscriptions needed to legally make use of specific software or services. Typical causes of license overuse include:

- Admins deploying software without understanding license rules—these vary by publisher, and some are quite complex

- Deploying licenses on virtual machines or in containers without understanding (or applying) license rules

- Upgrading hardware processing power without adjusting licenses (which are sometimes pegged to the number or type of processors in use)

Other instances might represent “Shadow IT” at work, where departments of branch offices stand up software or services without going through normal IT and procurement channels to comply with organization policy and meet licensing requirements. And some might
simply indicate rogue individual operators active on the organization’s network without oversight, supervision, or knowledge of what’s going on.

All these activities can lead to financial penalties and fines, as well as payments to cover costs to rightful recipients for payments not made. This makes for potential legal trouble, and negatively impacts the bottom line. Worse, when legal matters get reported, they can pose opportunity costs related to damaged reputation and loss of future business. All this risk is unnecessary and entirely avoidable, given proper use of ITAM.

**Manual Work Reduces Productivity, Stifles Innovation**

Keeping up with software assets can be tedious, time-consuming, and labor-intensive. Organizations that have been through emergency audits learn this painful lesson the hard way. But what also happens when such fire drills occur is that IT, finance, and other staff get drawn away from their usual work and responsibilities causing overall productivity to suffer.

Worse yet, with their bandwidth consumed in reacting to a crisis, staff members don’t have time to think about better ways to do their present jobs or about new products, services, or offerings they could provide to
clients, customers, and partners to help boost earnings and further contribute to business success.

In the long run, in fact, stifling innovation often proves to be the most expensive hidden cost that old-fashioned manual record keeping and paper-based asset management incurs. Here again, proper use of ITAM eliminates such work. In fact, its use of automation can actually help foster innovation and improve response time and services that IT offers its constituents.

**Software Investment Inefficiencies**

From a different perspective, organizational processes and practices also lead to software investment inefficiencies. Often, these inefficiencies result simply from maintaining time-worn practices even when better alternatives abound and are just waiting for deployment. Let’s examine a few well-known examples in the next subsections, all depicted in Figure 2.

**Stuck in Silos: Tools and People**

Organizations too often segregate themselves into discrete and disparate sub-units. Sadly, this often leads to lack of synergy, failure to exploit potential opportunities to scale, and a painful lack of shared communication, expertise, and win-win situations. If an enterprise can leverage its people, tools, and strengths
across the board, it can often achieve much more than when individual departments fail to coordinate. A single coherent and consistent view of IT across the whole organization, along with the entire collection of assets it handles and manages, helps break things out of their silos.

**Replace Manual Processes with Automation**

It’s a truisim that manual processes stifle business outcome potential. Automation on the other hand offers unparalleled benefits—namely, thorough vetting and
testing before deployment, reliable and repeated results, and greatly improved response and completion times. And because automation takes over and handles repetitive and tedious tasks, IT staff can instead spend its time on more bottom-line-enhancing activities (as well as avoiding errors that manual input allows).

Audits Cause Reactionary Fire Drills
When a vendor requests a license audit, a panicked scramble often follows. IT, finance, and procurement staff must roll up their sleeves and put in long, expensive overtime hours. Only then can they keep up with normal work while they also prepare records and information for an audit. This is a huge disruption of the normal routine. It can’t help but negatively impact staff productivity.

Costs Are Opaque and Unpredictable
Licenses and contracts come and go all the time, each with its own calendar, terms, and conditions. When not managed, vendor or service provider bills show up at irregular and unpredictable intervals. Cost increases, changes in usage terms or costs, or changes in consumption levels turn understanding and consolidating costs into a chronic headache.
Then, too, cloud or subscription services levy costs based on consumption that varies according to market and business cycles. All of these factors result in costs that don’t always make sense and ongoing outlays that are seldom the same—and never entirely predictable. Such unpredictability causes difficulties with reporting and managing budgets and turns forecasting into more guesswork than analysis.

**Users Are Unhappy and Dissatisfied**

One of the primary causes for “Shadow IT” mentioned in an earlier section comes from users who need software or services right away. No or slow response from IT has users taking things into their own hands—off the books and outside IT’s oversight. If users are unhappy and dissatisfied with what IT provides them, productivity suffers. There’s got to be a way to show users what’s available to them and to work more closely with them to get them what they need, when what’s available isn’t what they need or want.

**Teaser: ITAM Offers a Way Out**

Indeed, ITAM offers a solution for all the gotchas and inefficiencies discussed so far. Please read on to understand how ITAM can eliminate organizational silos, add automation benefits to reduce (or remove) manual
operations, create an audit-ready organization, make costs transparent and predictable, and help improve user satisfaction and happiness. Though it may sound too good to be true, it most assuredly is not!
Understanding ITAM

At this point, readers should know that ITAM brings all assets found under the IT umbrella together. Thus, ITAM embraces software and services, licenses and entitlements, hardware and infrastructure, spares and replacement parts, and so forth. In addition, ITAM records and monitors such assets to make them accessible, visible, and subject to specific controls and policies. But of course, there’s more to ITAM than this general description, as we’ll explore in the rest of this chapter.

What ITAM Really Means

ITAM is best understood as a set of business practices built around record keeping (and maintenance). It combines and deals with contractual functions, discovery and inventory, and financial activities. On one hand, ITAM seeks to accommodate and represent all the various contracts for licenses, subscriptions, and services (such as SaaS applications) within an organization in a coherent and consistent way.

On the other hand, ITAM also looks out onto an organization’s networks to sniff out, discover, and compile
as complete a list as possible of what IT assets it actually sees in use, along with who’s using them, what for, how long, and so forth. Finally, ITAM also tracks financial activities around those assets—including costs of acquisition, licensing, upgrades, maintenance, and so on. Simply by assembling, combining, and correlating these three bodies of data, ITAM helps to create a current and consistent record of IT assets within an organization.

With this information at its disposal, ITAM can do much more than simply document contracts, assets in actual use, and financial information. More importantly, ITAM seeks to create an environment to help make the most of the IT assets under its purview. Thus, ITAM provides tools to help organizations optimize their spending.

ITAM also seeks to support lifecycle management for those assets from requirements analysis and evaluation, through procurement and deployment, to ongoing maintenance and upkeep, to eventual retirement and disposal or destruction. (Of course, that lifecycle never ends because new assets keep entering the system even as old ones become obsolete or age out of the system).
Ultimately, this makes ITAM an important element in an organization’s strategic decision-making process. As alternatives are weighed, selections made, deployments undertaken, and so forth, ITAM provides valuable data to help organizations make good technology choices and improve their returns on such investments over time.

The ITAM Savings Equation

Use of ITAM also offers some interesting economics for organizations that put it to work. Though ITAM is not free, with costs for its acquisition and use and further costs for training and upskilling the people who use it, ITAM also offers scalable economics in the form

![Figure 3](image_url)

**Figure 3**: For each $1B of customer revenue, roughly 4% goes to the IT Budget. Of that $40M, 25% usually goes for software. ITAM savings on that budget item go straight to the bottom line.
of savings that come straight from the organization’s own bottom line. Please consider that in Figure 3, the savings shown apply to each element along the way, and must be adjusted to reflect an organization’s specific figures.

Savings from ITAM are greatest in the first year after deployment and usually come out around 10%. For a $10M software budget, that’s a million dollars saved. For years two and beyond, savings of 5% are typical, or half a million. Scale that up (or down) as your actual numbers dictate. That should give you a good sense of the financial value that ITAM delivers simply by optimizing outlays. But ITAM can do more than that, as you’ll see.

**Anticipating and Preparing for Audits**

Because ITAM gathers all licensing information and correlates it with contracts, it compiles information needed for an audit in advance. As a dynamic system that tracks actual, current data, ITAM offers a snapshot for audit at that moment—thus, it’s guaranteed to be more accurate than what comes out of some IT manager’s spreadsheet and a collection of bills and invoices from finance.
In addition, ITAM shows organizations when they’re out of compliance with licensing and subscription requirements. It also provides the data needed to get things squared away ASAP.

Finally, ITAM exposes the doings and workings of “Shadow IT.” This gives the organization the chance to get rid of what’s not needed (or permitted), and to purchase licenses or subscriptions for what is needed.

Thus, when an audit comes, using ITAM should more or less eliminate the possibility of unpleasant surprises. Ditto for the risk of fines and penalties for unlicensed or under-licensed software or subscriptions.

**Avoiding Unnecessary Expense**

ITAM also tracks consumption of valid, paid-for software and subscriptions. In particular, ITAM can help organizations trim excess, unused, or unneeded elements—all of which incur specific, documented costs—from the asset inventory and avoid waste from overspending.

Early 2019 Gartner predictions asserted that billions of dollars would be overspent on cloud computing alone that year; a Business2Community article[^1] for related

analysis that predicts $14.1 billion of cloud spend waste for 2019. Another Gartner press release\textsuperscript{5} estimates that 30% of software spend can be eliminated by implementing various best practices, including right-sizing license outlays.

**How a Single Platform Simplifies SAM**

Software asset management (SAM)—best understood as the software part of the overall ITAM practice—works best when all its elements come together under a single software umbrella. Such a platform handles record-keeping and interfaces with multiple organizational units and departments.

**Figure 4** shows how a single platform simplifies software asset management by interacting with all key constituencies and stakeholders. This single platform not only permits each party to receive (and provide) important information related to software assets, but also promotes communication and cooperation across an entire organization.

SAM can even present opportunities for cross-department and cross-functional innovation, since the whole is greater than the sum of its individual, no-longer-siloed parts.

The ServiceNow single platform shown in Figure 4 shows how departments such as IT, customer service, HR, and security can combine their forces and investments to get more out of IT.

**Figure 4:** Using a single platform puts all IT elements under a single umbrella
IT itself makes use of ITSM (IT service management, a common discipline in management frameworks such as ITIL and COBIT), IT operations management, IT business management, and ITAM. This graphic is meant to show that many departments can benefit from use of SAM data.

IT shares a common connectivity with enterprise functions when there’s a configuration management database (CMDB) in place. IT works with customer service, in that they help support and fulfill customer trouble reports and service requests. Intelligent applications work for all parties in that they help to provide key automation and services capabilities across the ITAM spectrum. HR provides service and asset delivery to all employees, including onboarding and ongoing training and staff development.

HR also interfaces with security on matters related to acceptable use policies, security awareness training, and best security practices. Security provides a natural home for security operations and works with IT to deal with vulnerable assets, matters related to governance, risk, and compliance (all of which usually fall under policies that apply at all levels of the organization).

By investing in ITAM (especially on a platform), enterprises gain tremendous insight and information across
the entire organization. Normally, they would already have 80% of SAM ingredients in place: a CMDB, an asset database, automated network discovery capability (to observe empirically all assets in use), and a service catalog (a collection of all services legally available to users within the organization). And in fact, leveraging those existing ingredients for SAM only improves their ROI as well.

Using SAM in the same place you manage IT improves your overall environment’s speed to value proposition. The single platform model means that whenever capabilities might be introduced, they will be faster to deploy and use than in a more fragmented architecture.

For security, this might mean adding or adopting new threat intelligence and response tools. For IT, this might entail hardware support such as new platforms or devices. For DevOps or in-house developers, this could be integration such as added automation for various departmental processes or new applications. Finally, everyone benefits from routine maintenance
such as updates or upgrades to one or more platform elements.

**Benefits of Lifecycle Management**

Overall, ITAM with a native CMDB brings with it the benefits of full lifecycle management. In working through the typical cycle: request/purchase/deploy/reconcile/service/retire (which cycles back to the beginning)—ITAM confers benefits at each step along the way.

Here are some example benefits during each phase for various organizational units:

- **Request:** IT Service Management benefits from a self-service catalog for employee access, from which they can draw on existing elements or ask for new elements to be added. ITAM benefits from transparency and clarity in software allocation. HR benefits from an onboarding sequence with intelligent applications to help get new employees equipped and oriented.

- **Purchase:** ITSM benefits from simplified vendor and spend management from a single, coherent view. ITAM benefits from accurate purchasing based on demand and actual usage.
• **Deploy**: IT Operations Management benefits from automated deployment with full orchestration. ITSM benefits from shorter fulfillment delays and fewer resulting incidents. HR benefits from increased speed in seeing employees become productive once onboarded. ITAM benefits from accurate tracking and allocation of licenses consumed.

• **Reconcile**: ITAM benefits because it can minimize true-up and audit costs while eliminating waste and overspend. Legal benefits because of vastly decreased compliance-related costs (ideally, none).

• **Service**: IT Business Management (ITBM) benefits from avoidance of risks associated with end-of-life (software) or end-of-service (subscriptions, SaaS, cloud services, and so on). ITSM benefits because it can proactively project and provide costs associated with IT change requests. Security operations benefits because it can focus and apply security vulnerability intelligence exactly where (and when) it’s needed.

• **Retire**: HR benefits from reduction in IT and manager efforts usually involved in asset reclamation. ITAM benefits from license harvesting for future re-use (or retirement to eliminate associated costs). ITBM benefits from aligning software at end-of-life with application deduplication to reduce overlap and complexity.
Starting Down the ITAM Road

Once organizations have made the commitment to invest in ITAM, there’s a definite process involved in moving toward implementation and deployment. In this chapter, we review the steps along that path and the kind of questions organizations will want to ask, along with the sorts of answers they should expect.

Examine the Current Business Environment

To start an ITAM adoption process, numerous activities will be required. You’ll first want to make sure you have support from the very pinnacle of your organization. It’s vital to secure executive sponsorship to get the right impetus and resources necessary to survive the processes of selection, adoption, implementation, and phased deployment. This usually means somebody at the C-level (typically either a Chief Information Officer or VP of IT, depending on how your particular org chart is laid out, and where responsibility for IT technology adoptions ultimately rests).
Other important people considerations include obtaining proper internal resourcing (staff, budget, and time). You’ll also need to decide if you’re going to work with an experienced business partner who’s done this for other organizations before or try to pull the ITAM adoption together in-house. An ITAM consulting organization can partner with you to bring a deep pool of software licensing knowledge, practical best practices, and technology expertise.

Given that ITAM touches everything that IT itself touches, it’s best to take a phased approach to adopting and implementing ITAM. You’ll need to understand current contracts, entitlements/licenses, and records. You’ll also want to conduct a thorough spend analysis on current IT assets with an eye to starting where changes are likely to make the biggest, most positive impact.

Here, it’s important to take stock of what’s going on in your current business environment. This means making an inventory of what’s “out there” (or examining such an inventory if you already have one). You will also want to zero in on some particular aspect of the IT environment for an initial effort. That might mean tackling user desktops, servers, or SaaS subscriptions to get going.
In getting a handle on your inventory, you will want to use automated discovery tools at your disposal. This could be ServiceNow Discovery, or it might be additional discovery resources already in use in your environment (SolarWinds, Manager Engine, Nagios, Spiceworks, or something similar).

You’ll also want to determine what kinds of SaaS integrations might already be in place, to understand how they’re being used and how their use influences consumption patterns and levels for your existing SaaS subscriptions.

**Figure 5** shows some sample applications reported by ServiceNow Discovery.

![ServiceNow Discovery Dashboard](image.png)

**Figure 5**: The ServiceNow Discovery dashboard, reporting various service-level applications in the right-hand column (MS SQL, IIS VDS, Tomcat War, and so on)
With this information and support behind you, you can begin work on an ITAM process. This means that you must make governance an operational function and obligatory part of the IT lifecycle process.

Ideally, that means ITAM governance operates on a regular cadence, with actionable items assigned for each iteration for which specific individuals are responsible and accountable. This is the best way to get the ITAM ball rolling properly and keep it rolling forward as it should.

**Establish Business Cases**

ITAM works best when you can structure your efforts around a planned event or assigned business objective that impacts your enterprise software footprint. This might include:

- Software waste reduction or cost-cutting initiatives.
- Upcoming renewals or new planned acquisitions of enterprise or volume license agreements for software. Maintenance agreements or renewals for software platforms or applications also apply.
- Data center expansions or consolidations, which usually require a thorough review of software licenses, agreements, and contracts.
• Migrating on-premises software into the cloud or switching from an on-premises application to SaaS.

• Point tool consolidation or application rationalization projects.

• Cybersecurity initiatives such as threat intelligence, planned remediations or upgrades, replacements of VPN, or remote access platforms and tools.

It’s also possible that an unplanned event might jump-start an ITAM program, including previously discussed software audits that a vendor or industry organization might initiate. In the same vein, mergers and acquisitions, workforce restructuring, a security incident, or a mandate to comply with new or changed government regulations can set things in motion.

Once you have an impetus to move forward, bring in your stakeholders to identify clear business goals. This might be something like, “No more surprises from Shadow IT expenses,” or, “Optimize our software spend to invest in applications that we actually use and need.”

Then, each such goal needs to map into at least one measurable outcome. Thus, “optimize software spend …” could result in an objective that reads, “Reduce software spend by 15% through eliminating redundant
“Such objectives make sense to everybody and offer obvious value to all players, so it’s typically easy to secure buy-in. Because they specify measurements, success or failure is also easy to determine and report. Next, it’s time to build a business case.

A business case results from a structured process to identify key challenges and quantify the potential value of improvement. A good business case offers up answers to certain key questions. These should include:

- **Why:** Conduct focused interviews to better understand challenges and corresponding improvements.

- **What:** Document challenges and develop recommendations for solution capabilities or functions.

- **How:** Select key improvement metrics and validate those metrics with key stakeholders.

- **Outcome:** Combine benefits and cost assumptions to estimate total cost of ownership (TCO) and corresponding return on investment (ROI).

**Figure 6** shows the progression of steps involved in building a business case.

Before you present any business case to management, staff, and stakeholders, spend whatever time is necessary to make sure that it solves the right problems for those key stakeholders.
With objectives in place, the work can actually begin. As the next sections illustrate, it’s best to start with something small and build up from there. It will take time to make ITAM pervasive, and SAM as complete
and comprehensive as possible. Hurry slowly, if you must hurry at all.

**Piloting the Process**

Start small, with a single specific initiative. This might mean tracking a single software vendor and going through a software audit with them to demonstrate compliance and proper license and maintenance numbers or levels.

As you work through the process, track the small wins along the way. Show how initial internal analysis led to changes in licensing arrangements and then document how you passed the vendor audit with minimal compliance issues. Explain how those issues were remedied or overcome, along with supporting reports and data. This is how you establish and consistently demonstrate success.

Once achieved on a small scale, you can start tackling additional areas in need of improvement. This might mean centralizing data into a CMDB and ensuring that its data is accurate, complete, and trustworthy. It should also include implementing repeatable, best-practice processes to keep licensing and software or service usage information current and correct.
After reconciling deployed licenses with financial records using ITAM, you can keep license purchases aligned with actual usage (which may go up and require additional purchases, or go down and free up funds when unneeded licenses need not be renewed). Unused licenses in one part of the organization can also be reclaimed and redistributed to other parts of the organization that need them.

Finally, software and licenses can be reconciled with job or organizational roles. Certain users may no longer need specific licenses allocated to them, while others may be missing licenses they need. All this arises naturally out of ITAM, given the right business and service context in which to evaluate current allocations and project future needs.

**Measuring (and Sharing) Success**

Once progress is made on business objectives, the metrics they include will provide the means to report and demonstrate success. As with any program, it’s important to manage executive expectations. Material long-term savings are possible with ITAM, but be clear with management on the smaller initial goals during the first six months. If the goal was to cut unnecessary software spend by 10% and a savings of 15% is achieved, this outcome is definitely worth sharing with
Because nothing succeeds like success, small wins should eventually lead to bigger ones. Soon, ITAM will be an established and welcome part of the way your organization does IT. And your metrics will always tell you—and the world—exactly how things are going.
Making ITAM Work

Once the ball is rolling and ITAM has been established in your organization, it’s time to put its tools and technologies to work. In the sections that follow, you’ll get a sense of SAM’s inner workings and how it leads to more optimal spending behavior and business outcomes. To begin that journey, we examine how SAM compares outlays and usage to seek the right balance.

Introducing SAM in an Organization

The SAM approach starts with paperwork on one side (purchase and license or entitlement records) and actual discovered software on the other. These two inputs go into a normalization and reconciliation process. This is where the ServiceNow Content Library really shines, because it can identify millions of software and hardware titles, including versions, releases, and levels. It can also handle discovery, procurement, and lifecycle data.
Following discovery and examination of financial records, users can always submit anything the library fails to recognize to ServiceNow’s research team through the automated feedback loop. Once validated, this should ultimately lead to its identification and inclusion in the ServiceNow Content Library. Out-of-box, typical normalization rates for customer instances discovered are 85% or better. After ServiceNow’s research team does its work, that rate climbs to more than 95%. With ongoing input from customers that opt in, the Content Library provides an increasingly accurate mirror of what’s in use in most enterprises, and is thus able to recognize nearly all existing software and subscriptions.

When usage gets compared to purchases, licenses, and entitlements, it’s easy to determine if there is an excess of licenses or entitlements for one or more items. It’s also simple to identify items for which no licenses or entitlements are on record or where usage outstrips supply. Once those situations are identified, SAM can define actionable workflows to correct
How does SAM work?

SAM compares software purchases and usage to identify waste and compliance issues.

- **Purchase & Entitlement records**
- **Normalization & Reconciliation**
  - Leverage our content library with millions of mapping rules
- **Discover usage**
- **Overspending?**
- **Out of compliance?**
- **Actionable workflows**
  - Correct waste and compliance

**Figure 7:** Comparing purchase and entitlement records to actual usage provides info necessary to balance them out whatever imbalances might exist. This process is depicted in Figure 7.

In the sections that follow, you’ll have a chance to explore key activities involved in ITAM best practices. These should enable the SAM software to do its job properly, and help your organization optimize costs, achieve compliance, and boost security and integrity.
Inventory Hardware and Software
The discovery process provides information about what’s present and in use on an organization’s network. This knowledge is essential for determining which applications and services an organization must have licenses for, or is entitled to use. ServiceNow Discovery can handle this, as can any number of other third-party discovery tools that pull the right attributes needed to measure licensing (some of which were mentioned in Chapter 3). This produces a massive and comprehensive list that must be compared to the financial data.

Digging into and Rationalizing Contracts and Entitlements
ServiceNow’s SAM solution analyzes your organization’s purchase, license and entitlement records. It uses that data to determine which licenses and entitlements have been granted to the organization, for what numbers, and over which duration they apply. This produces another massive and comprehensive list that must be compared to, and reconciled with, the discovery and usage data.
Reconciling the Data

On the financials side, all applicable licenses and entitlements (and their information as to numbers; durations; and other possible restrictions, terms, or conditions that may limit or control their use) must be compiled and collated. This creates a model of what the organization is legally able to do with that license or entitlement. On the usage side, all deployment and consumption data is aggregated. (Some licenses or entitlements pertain only to specific computers, some are measured in the aggregate, and some may be associated with specific users or departments. It’s complicated.)

Only after all this analysis is complete can ServiceNow SAM report if the organization has more specific licenses or entitlements than they actually use. It can also identify terms and conditions regarding allowable use, renewal terms and dates, and how unused resources might be recovered or reallocated to avoid incurring future costs.

In addition, ServiceNow SAM may determine that for another specific license or entitlement, the organization is using more than their holdings entitle them to put to work. In that case, the software can identify strategies and methods to achieve compliance with
Figure 8: Highest spend and highest count metrics immediately show overlapping software items most worth keeping actual usage (and also avoid unnecessary outlays by perhaps redistributing unused licenses in one department or location).

Another report identifies overlapping software items, so that ITAM users can focus on elements that get the most use and produce the highest returns, as shown in Figure 8.

Understanding the Current Status Quo

The ultimate result of reconciliation is an “Effective License Position” report that shows where licenses and entitlements stand. This report and dashboards
provide an overview of savings that could be realized by eliminating unused and underutilized licenses and entitlements.

A similar overview for costs that must be incurred to match acquisition costs for licenses or entitlements in use, but not yet paid for, is also an important part of what ITAM can provide. And finally, subject to administrative oversight and approval, the system can initiate actionable workflows to seek recovery and address deficits as circumstances may dictate.

This capability may be exercised at any time in an ITAM environment, which explains why it’s fair to say that such an environment is “audit-ready” whenever the balance it reports has been righted. If the current status quo is such that if the organization needs to correct the balance, it can take advantage of ServiceNow ITAM’s workflow capabilities to set the tasks in motion for remediation as soon as they can be completed.

**Putting SAM to Work**

Eighty percent of an organization’s software spend is likely to go toward a top few publishers. These are the same vendors who perform audits on their customers. Thus, SAM’s reconciliation (and remediation) capabilities represent a quick and easy way to put the
technology to work to help manage costs. This also helps reduce risk of unexpected cost, penalties, and reputation damage—a definite win, no matter how you look at it.

But for the business cases put together for SAM, such as reducing waste, eliminating outlays on unused or underused software, and doing away with redundant or unneeded software, SAM can also deliver clear and unambiguous wins. If ITAM is supporting the HR on-boarding process, document the efficiencies gained by running ITAM on the same platform as the HR system. The better you define and meet your metrics for success, the better the results will be for your organization.
Managing the ITAM Process

Overall, ITAM helps deliver value across the full IT asset lifecycle. That cycle consists of six phases surrounding IT assets: request, purchase, deploy, reconcile, service, and retire. The cycle never ends because retire leads right back to request, and the circle begins anew.

Platform Benefits, Revisited

ITAM’s benefits extend across the whole IT lifecycle. A CMDB is important for powering IT lifecycle processes. This starts at the request phase, as various players request access to IT assets with an eye toward eventual use.

ITAM is not a trivial program to set up. Integrating, configuring and maintaining disparate systems can add to the complexity. However, when ITAM runs on the same platform where IT is managed, work can flow. Asset management is balanced so that purchasing reflects demand as dictated by actual use.

Deployment becomes a matter of managing the assets on hand. Operations management can use automated deployment with orchestration so that platforms,
applications, and services are provisioned as (and when) they’re needed. Throughout this process, ITAM monitors and tracks license consumption, allocating it to the proper individual or role, department, and organization.

In the background, a constant process of checks balances financial records for licenses and entitlements against actual consumption and usage. This minimizes software reconciliation costs and vastly lowers the risk of audit costs and penalties for licenses or entitlements used but not paid for. In turn, ITAM helps ensure reduced legal costs associated with compliance because it ensures there’s little or no compliance failure to analyze, litigate, and remediate.

In actual service, applications and platforms are easier to manage because organizations can avoid issues associated with end-of-service or end-of-life situations. Accurate inventory and software information is essential for security operations, which use this data to filter and apply a focused set of vulnerability intelligence for software actually in use (and nothing else).

ITAM also contributes at the end of the lifecycle. As assets may now be automatically retired and taken off the books, the workload for IT and managers involved in asset reclamation is eased.
Fixing What’s Broken

Achieving the balance that reconciliation delivers helps organization steer between the dangers of overspending on idle, unused, or unneeded assets on the one hand, and underspending on licenses and entitlements already in use but not yet paid for. Both these dangers also have financial consequences.

Eliminating Waste

Eliminating waste saves outlays that need not go to third parties. For licenses and entitlements of any kind, ITAM clearly reports when more are present than are used. Most of the savings will come from the top five to seven vendors. Barring redistribution or reservations for planned additional consumption, organizations can realize savings by voiding them (and stopping related payments) as soon as applicable terms and conditions allow. As soon as the vendor lowers the count they charge for, associated costs get lowered too.

But ITAM also provides guidance and insight into the “long tail” of applications and services so often found in enterprises, where 80% of items account for 20% or less of actual costs. While there will be diminishing returns at a certain point, ITAM is an ideal program for identifying and targeting unused or little-used applications and services.
Because all of them come with associated costs, doing away with these applications and services wherever possible boosts the bottom line. And because it reduces the number of items that finance must procure and pay for—and IT deploy, maintain, and manage—it provides a welcome chance to reduce the number and complexity of software holdings as well.

**Achieving Compliance**

Avoiding risk of legal action, fines, and penalties prevents spending money on compliance that proper prior purchases make entirely moot. Because ITAM makes it easy to track license or entitlement consumption, and can immediately flag when compliance infractions occur, there’s no reason to wait for an audit to investigate and remediate.

Rather, ongoing compliance checks should be part of the governance process around ITAM described in Chapter 3. Ideally, the self-service software catalog that lets employees request licenses or entitlements should make compliance manageable.

That said, frequent checks will ensure that out-of-compliance conditions cannot persist for any longer than it takes to remediate them, as soon as they’re recognized. This should limit the organization’s risk of compliance infractions to a small
Figure 9: ServiceNow shows details where compliance needs fixing, alongside (mostly green) overall compliance number, and demonstrate a policy-driven and automated commitment to maintaining compliance at all times. Figure 9 shows the License Workbench dashboard from ServiceNow.

Understanding Workflows and Automation

ITAM at its core is the classic blend of people, process and technology. A platform technology can underpin the automation of processes that connect people across departments. The biggest benefits from using ITAM come when the platform’s more advanced capabilities can be fully exercised. Of these capabilities, workflows and automation are undoubtedly the most valuable and important.

Workflows define and assign a sequence of tasks to specific individuals within an approval and sign-off
environment that tracks progress and completion. When a workflow is defined, workers assigned tasks are informed via email or mobile alerts with links to forms, systems, services, and other elements they must access to work on and complete those tasks.

As tasks are completed, the workflow reports this information to a responsible party (usually a manager, team lead, or senior staff member responsible for the workflow as a whole). That party can then approve the completion and advance the workflow onto the next task until the entire sequence is complete.

At each step along the way, activities and input are tracked and reported. This kind of structure is invaluable in establishing policy-driven IT processes and procedures. It also provides complete visibility into, and accountability for, their enaction and completion.

Automation also provides a key ingredient in creating a modern, stable, and reliable IT lifecycle. Though trained professionals must create the process flows and approvals that make automation work—which must be thoroughly tested and vetted before going into production—automation is the linchpin for modern, virtualized, software-defined IT.

Automation enables IT to perform routine, repetitive tasks on a regular, predictable schedule. This even
includes complex tasks such as infrastructure configuration, provisioning, and updates. It also includes event-triggered tasks, which might occur in response to security events, link failures, or even disaster.

Automation is what really gives ITAM its power and capability. When combined with workflows, much of the work that required human hands in the realm of IT can be turned over to management computers and resident programs.

Though it cannot do away with the need for skilled and capable human operators, this combination extends their capabilities greatly and relieves them of most of
the tedium in the IT workplace. Figure 10 shows what one of ServiceNow’s customers, Community Health Systems, was able to accomplish through extensive use of automation and workflows.

**Optimizing Platform Synergies and Capabilities**

As organizations learn to take advantage of SAM’s advanced functionality and capabilities, they can move into the realm of true IT business management. They can drive strategic portfolio planning and execution, thanks to workflows and automation that lets them concentrate on innovation for new services, products, and offerings. They can align IT’s work to business priorities using business cases, specific metrics, and work toward measurably successful business outcomes. This lets organizations align their efforts to achieve business priorities and speeds their time to market in delivering what customers need (and ask for).

This Gorilla Guide has taken an in-depth look at the burgeoning field of ITAM. ITAM is increasingly becoming a key area of focus for companies, as they worry about things like vendor audits. But they do much more than that: they help you get a handle on what

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6 [https://www.servicenow.com/customers/community-health-systems.html](https://www.servicenow.com/customers/community-health-systems.html)
assets you have, so you can cut out unnecessary fat and only pay for the hardware and software you need.

In any economic environment, those kinds of savings can give you a decided advantage. If you’re not actively using ITAM, it should be clear by now that it’s time to start.
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