

Rebooting IT Asset Management: Enabling IT Cost Optimization in a World of Ever-Increasing Complexity

A SCALABLE SOFTWARE POSITION PAPER

Introduction

The established practice of IT asset management (ITAM) has reached an inflection point. The reasons ITAM and its related discipline, software asset management (SAM), must re-invent themselves are as fresh as today's financial and IT news, and include:

- A staggering increase in workforce mobility.
- The trend towards “everything-as-a-service.”
- Virtualization, clustering, and the license risk these embody.
- A massive upswing in costly vendor compliance activity.
- The need for IT becoming a strategic partner in meeting the organization's goals.
- The opacity of IT infrastructure outsourcing costs.

In this position paper, you'll learn:

- The ways in which ITAM has worked to meet organizational needs.
- How and why traditional ITAM has generally failed to adapt for the modern enterprise.
- What a modern ITAM discipline must encompass to support new organizational imperatives.

In short, you'll learn why we believe the time is right for a reboot of ITAM, and what such a reboot might mean for modern organizations.

A brief history of IT Asset Management

IT Asset Management (ITAM) has been with us as a discipline for almost 25 years. Early ITAM systems evolved out of financial management processes around 1990, as IT became less centralized. Prior to the 1990s, ITAM was predominately a centrally administered function, and was based, in many cases, on mainframe-like technologies. It was designed as a lease management tool to address the needs of CFOs and finance departments in an era where large IT asset leasing was typical.

IT costs began growing rapidly during the 1990s, increasing from 4% of GDP to now more than 4 times GDP according to industry analysts. Much of this incremental expenditure was for distributed computing such as PCs and desktop software, distributed databases, and siloed application development. ITAM initially was used to keep track of who had requested and deployed these expensive new IT services—a problem that did not exist in the more centralized IT model of the 1980s.

These early ITAM systems became very good at the tracking and allocation of equipment, software, services, and costs, and to some extent measurements of Total Cost of Ownership (TCO). The challenge, however, was the records and data they provided were historic records, neither easily

A PwC survey of 1150 CEOs cited technological innovation as a key source of competitive advantage.²

nor reliably updated. The information produced by early ITAM systems had little connection to rapid changes in organizational structure and complexity.

It was this emphasis on tracking and TCO that effectively stalled further innovation in ITAM. TCO was the basis for applying the tracking and allocation functionality of ITAM systems towards cost reduction. TCO is, however, a very blunt instrument. It does not factor in investment. It does not factor in optimization, nor does it help differentiate between the business impacts of discrete expenditure items. As a consequence, traditional ITAM failed to adapt to the needs of the modern enterprise. In remaining a tactical IT tool rather than providing strategic support for cost modeling and planning, it has not been viewed as a way to drive real and significant operational improvements, and has rarely been used to strategic advantage.

More than 20 years after the birth of ITAM as a discipline, today's ITAM use cases are no more advanced than they were at its inception. What ITAM was then remains state of the art as companies struggle to unwind the complexity of rapid technological change.

Rebooting ITAM

A leading analyst group notes that the top 10 list of CIO priorities include reducing enterprise costs, improving IT applications and infrastructure, legacy modernization, and improving IT management. These priorities require the kind of information ITAM has the potential to deliver.

What's needed for that to occur, however, is a far more granular, responsive, and focused approach to managing and **optimizing** the costs associated with IT. Rebooting means that traditional people, process and technology models must be critically assessed and, in many cases jettisoned for what many may consider non-traditional and risky choices. This new approach must give direct answers, moving the discussion beyond simply measuring expenditure and the tracking of who has what, to objective measures of efficiency, utilization, and optimization. And the numbers measured must be material.

Materiality

The level of materiality (ie., the degree to which the quantifiable and qualitative financial event is big enough to matter) for CIOs will vary from organization to organization, but according to the Journal of Accountancy, 5% is considered a material amount in any financial transaction or event.¹

In addition, the cost savings need to be "hard costs," meaning they have to identify specific business-as-usual budgeted expenses that can be reduced going forward.

There is an important caveat to this 5% figure regarding IT expenditure: most industries spend less than 15% of their IT budget on innovation. The rest is invested in Maintenance of Organizations, Systems, and Equipment (MOOSE, or "lights-on" expenditure). Since a PwC survey of 1150 CEOs cited IT innovation as a key source of competitive advantage, the low investment in innovation is particularly distressing.² And any strategy that intends to reduce costs associated with innovation is less likely to be materially successful than one that focuses on reducing the costs of maintenance and upkeep for existing systems.

Putting the above statistics together, with IT budgets averaging around 6% to 8% of operational expenditures, an organization with operational expenses of \$1B will spend between \$60M to \$80M on IT each year. Of that, between \$51M to \$68M will be spent on "lights-on" expenditures. Therefore any program that can demonstrate annual hard cost savings of between \$2.5M to \$3.5M cut from "lights-on" expenditures is likely to provide material value—and secure CIO support, as these savings may be used to help fund innovation.

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How can an organization materially reduce its “lights on” IT expenses?

By shedding a historical or archeological approach to ITAM, or rebooting ITAM, IT Asset Management can evolve from a TCO and tracking discipline to one that can answer this question, and become a strategic aid in IT Cost Optimization.

Before such an evolution can proceed, the organization must understand what its business-as-usual expenses are, which is “home territory” for quality ITAM tools. Once existing costs are understood, the metrics for those costs need to be defined, in order to understand what must change if those costs are to be reduced. This “beyond TCO” functionality is where traditional ITAM begins to break down.

Dramatic increases in the use and impact of virtualization and clustering have made it incredibly easy to change the metrics associated with hardware and software expenses, while at the same time making it almost impossible to model the impact of configuration changes. As a result, most organizations have no automated way to predict the impact on operational costs of relocating subsystems from one environment to another.

The rapid proliferation of systems has also led to a lack of clarity on precisely which systems need to be retained. To a business stakeholder, it may seem odd that an IT organization would have extensive operational expenses for equipment that lies dormant month after month. To an IT administrator responsible for many hundreds of virtual machines and tasked with discovering who is using one of those machines, it’s likely no surprise. **The ability to automatically gather data on the extent to which existing systems benefit the organization in support of IT Cost Optimization is entirely absent from traditional ITAM tools.**

In summary, to support IT Cost Optimization, ITAM systems must not only understand the ongoing costs of the IT estate, but also enable full understanding of virtualization, Cloud, clustered configurations, and application usage. IT Cost Optimization can then proceed at the intersection of this information once a reboot of ITAM facilitates modeling the potential reductions in “lights-on” costs. Rebooting ITAM initiatives to address these requirements yields what we will call “ITAM 4D.” In the discussion that follows, we will explore the four dimensions of evolving ITAM to meet IT Cost Optimization demands.

Table stakes: Agile ITAM

The velocity of change and the increase in IT estate heterogeneity demands a new level of agility and adaptability from ITAM tool providers. Most tool providers, however, have to manage a legacy of rigid and brittle old codebase, effectively shutting them out from the world of agile adaptation. These tools may appear to be functionally “good enough,” but in reality they cannot meet even the most modest demands of variety and change in the IT estate, locking IT into “lights-on” projects rather than freeing resources for innovation.

The first step in rebooting ITAM, therefore must be to enable rapid adaptability, or Agile ITAM.

Traditional ITAM tools, with their annual or bi-annual upgrades followed by lengthy implementation cycles, cannot hope to keep pace with today’s rapidly changing hardware and software cost interdependencies.

Useful models for increasing adaptability and keeping up with customer requirements exist in both agile development practices and in SaaS delivery systems. Instead of waiting 18 months or more for product enhancements to make it into traditional ITAM production systems, four weeks is a more common customer experience for agile ITAM users. Some ITAM vendors, including Scalable Software, have adopted these more agile models. Agile ITAM is not sufficient in itself, however—this level of adaptability is simply table stakes for what Scalable calls ITAM 4D.

A crucial point that distinguishes ITAM 4D from traditional tools is that configuration discovery features are fully integrated into the ITAM tooling.

Defining ITAM 4D

There are four intersecting dimensions that a rebooting of ITAM addresses. **Only by implementing tools and processes that support all four dimensions can an organization hope to divert material funds from “lights-on” activities to investment in innovation.**

Dimension 1: Cost Elasticity

Instead of a very limited number of static metrics associated with IT expenditure, ITAM 4D is fully capable of modeling how costs for hardware and software can vary as a result of virtualization, clustering, and Cloud configuration changes. In addition, costs can be represented that model the way public Clouds and outsourced data center services are implemented.

Dimension 2: Integrated Configuration Discovery

Configuration is no longer static, and reflects the rate of change felt in all parts of the organization. An increasingly mobile workforce makes understanding the configuration of the IT estate all the way to its endpoints increasingly challenging.

ITAM 4D enables understanding of not only the baseline configuration, but its potential to change rapidly. This is an absolute requirement to enable costs to be understood. For example, if a Windows Server license is running in a Virtual Machine that is part of a DRS-enabled cluster, it must be treated as a Windows Datacenter Edition, and must be viewed as implemented on all the processors in the cluster. The implication of this is that there are significant cost differences—up to 10x—between a physical server and a virtual machine that is part of a DRS-enabled cluster.

A crucial point that distinguishes ITAM 4D from traditional tools is that configuration discovery features are fully integrated into the ITAM tooling. Since traditional ITAM systems often rely on configuration data from other vendors' products, and since the ability to manage assets is only as good as the quality of information maintained about those assets, this split of functionality across vendors introduces a great deal of risk.

Dimension 3: Usage Analysis

Understanding the extent to which chargeable resources are being used ensures that any opportunities identified to cut “lights-on” expenditures can be implemented in the real world. Measuring usage is not as easy as it would seem on the surface. To be effective, the measurement must identify to an almost forensic level the users, both human and application, of any group of assets whose costs are under scrutiny. Since many opportunities for cost reduction rely on consolidation and increased virtualization, it is imperative to also measure the impact on underlying resources.

Only when these three base dimensions—cost elasticity, configuration discovery, and usage analysis—are fully understood can effective and actionable modeling of the environment—the fourth dimension—occur.

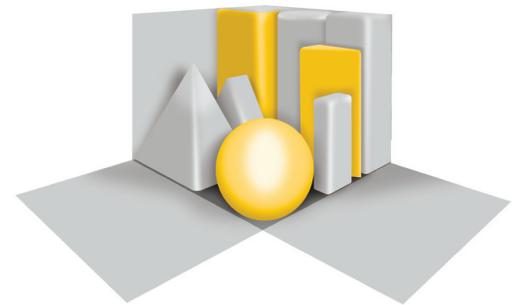


Fig. 1. ITAM 4D, through integrated discovery and usage metering, enables greater IT cost transparency, and thus IT cost optimization.

Dimension 4: Modeling

This is the culmination of the promise of ITAM, rebooted. Using the discovered information on the configuration of hardware and software, and an accurate representation of the cost elasticity of those assets, modeling enables the real, material savings in “lights on” expenditures to be realized. And by fully understanding the impact of configuration changes specifically around virtualization, clustering, and Cloud implementation, operational costs of a future mode of operation can be optimized.

The outcome of this dimension: reliable, actionable configuration changes that yield predictable cost savings, and realize the promise of IT Cost Optimization.

Conclusion

Reducing “lights on” IT costs to free up resources for innovation is a priority across all functional lines for the modern organization. It requires taking a hard look at traditional people, process and technology and Rebooting IT Asset Management to enable IT Cost Optimization. This can enable Finance and IT to fund strategic innovation, and increase their organization’s competitive advantage.

In several recent industry analyst case studies on IT optimization, enterprises implementing IT Cost Optimization programs could save millions and the first step is to move to an Agile ITAM approach. Although not all costs are accessible, and IT cost optimization projects should not attempt to boil the ocean, there are enough “low-hanging fruit” opportunities to yield material success in a world of virtualization, Cloud Computing, mobile computing, and outsourcing.

While most traditional ITAM vendors cannot adapt to meet these needs, those few agile ITAM vendors that can adapt must also support ITAM 4D—cost elasticity, integrated configuration discovery, usage analysis, and modeling—to fully meet the promise of IT Cost Optimization in funding innovation. Optimizing IT costs might seem to be an overwhelming, never-ending task. However, with a correct multidimensional approach, one that builds on many basic IT asset management principles, the benefits are achievable. Using this multidimensional approach, costs can be optimized on an ongoing basis without overwhelming staff and resources.

Notes.

1. <http://www.journalofaccountancy.com/issues/2005/may/thenewimportanceofmateriality.htm>
2. http://www.pwc.com/en_US/us/increasing-it-effectiveness/assets/it_spending_creating_value.pdf