Next-Generation ITAM

Building for Tomorrow's Use Cases Today

An ENTERPRISE MANAGEMENT ASSOCIATES® (EMA™) White Paper
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EMA™
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Executive Introduction

From the first time a wheel rolled with its owner's proclamation of "mine," asset management has been a staple of business. After all, ownership, opportunity, and obligation have always been at the heart of business commerce and value.

Yet, knowledge of today's IT assets is inadequate to serve the demands of today's business. In the explosive age of digital everything and Internet everywhere, IT asset management (ITAM) has not kept pace with progress. Part habit and part lack of motivation to change, this knowledge deficit is now a luxury that successful organizations can no longer afford.

Health in the digital age requires asset information that is complete, current across its lifecycle, accurate, and useful for running IT as a business. Data alone is not enough. The information needs to represent the interdependencies of hardware and software correlated to the business processes and services they execute.

This level of intelligence is only possible when all the disparate data sources are brought together for a unified understanding on a single, rationalized basis. The resultant holistic view of assets at work tells the story of how well IT investments are performing and where cost efficiencies can be put into play. It also informs proactive tradeoffs in planning for critical initiatives, such as data center consolidation, cloud migration, and ongoing cloud or hybrid services.

This white paper leverages EMA's global research and industry experience to view the changing role of ITAM policy, process, technology, and function, as well as offer recommendations for forward movement.

Next-Generation IT Asset Management is not for Sale

Next-generation asset management (NGAM) is a hybrid of excellence—software, vision, and execution.

Not surprisingly, EMA's experience is in line with common sense: first-rate ITAM begins at the executive level. Highly successful ITAM endeavors are fully backed, and frequently initiated, from the CEO and Executive Director offices, fully engaging the CIO and line-of-business stakeholders in the effort. The larger the organization, the more critical this executive sponsorship becomes. The reason is simple. The larger the organization, the more complex is the task of determining exactly what is being used by whom, to do what, at what cost, risk, and right to use.

Because knowledge is foundational to effective decision making, business-aligned, next-generation IT asset management requires complete, detailed, dynamic, and accurate data, including:

- All types of IT investments (hardware and software) including location, users, and usage
- Contractual entitlements and obligations
- Financial costs and considerations
- Interdependencies regarding asset health, lifecycle management needs, and relationship/role in providing IT and business services
- Increasingly, numerous non-IT devices in the growing Internet of Things (IoT)

Getting that knowledge and keeping it current requires meaningful investments in cross-organizational leadership, a commitment to evolving processes, and investments in technology ranging from discovery and service modeling to analytics and automation. Above all is the requirement for consistent and meaningful data that can be shared as a way of unifying IT, rather than further entrenching it into silos.

ITAM Data Foundation: The Challenges of Fragmentation

Complexity and IT information fragmentation go hand-in-hand. To begin with, IT assets span so many different types: endpoints to systems, network devices, touchable servers and virtual machines of all sorts, service provider costs, and applications that command enterprises and cloud-hosted microservices.

EMA research and experience finds that almost no IT organization consistently maintains a comprehensive, detailed view of 100 percent of all assets from a holistic viewpoint. However, highly successful practitioners of next-generation ITAM do tackle the fragmentation issues head on to develop a single view of assets in action. Even accurate data that's lost in isolation skews results, introduces risk, and diminishes clarity of decision making.

Sources of fragmentation are also areas of opportunity for developing next-generation IT asset management capabilities that optimize IT financial performance and include:

- **Asset complexity and volume**—The first step is identifying what needs to be managed and to what level of detail. Jumping into an ITAM initiative with the goal of immediate 100 percent coverage of all asset types is not practical. There is a cost/benefit consideration to deciding which asset classes belong where on the spectrum of level of control. Elements to consider include asset cost, criticality to the business, risk exposure, and the enterprise-wide volume of assets.
- **Software asset management (SAM) complexities and eccentricities**—The dizzying array of financial approaches to licensing or procuring the right to software use seems designed to thwart any attempt to unify a financial or cost view of usage. Even moderately-sized enterprises can field products from more than 100 software vendors whose names, titles, product versions, license terms, and cost must be captured and kept current. Next-generation ITAM marries the intricacies of SAM with the realities of infrastructure aligned with business uses and values.
- **Multiple inventory and discovery tools**—Ongoing EMA research finds that the average IT organization uses 11 or more different inventory and discovery tools, with more than 40 being common. All but the most efficient elite groups admit to having some lingering degree of Excel spreadsheet reliance to bridge the discrepancies. In a recent survey,[1] EMA found that each respondent spent an average of 15 hours every week resolving discovery discrepancies. It stands to reason that superior capabilities in discovery, rationalization, and reconciliation are essential ingredients in next-generation caliber automation.
- **Data storage**—EMA research finds that IT data is generally stored in at least four different information sources for asset, financial, and service planning. Pulling together inventory data with financial, legal, security, and business usage information into one unified system is a constant challenge that is error prone and labor-intensive. Organizations that judge their data sources to be cohesively linked and managed also report spending an average of 30 hours assimilating inventory data for a major software license or compliance audit, with an additional 30 hours spent collecting asset entitlement data on those occasions. Interestingly, organizations that judge themselves "highly successful" in this area are likely to invest more time on these efforts than their less successful counterparts, underscoring the criticality of effective asset data.
- **ITAM is often fragmented across IT**—It is not unusual for different IT groups to use differing tools, policies, and practices in support of the business functions they serve. Standardizing any aspect across organizational boundaries requires a top-down impetus that is comprehensive and sustained to support new, more effective ways of working. Having good data is one thing; the willingness to share it can be quite another matter.

[1] Dennis Drogseth, "Optimizing IT for Financial Performance," September 2016

Organizations, both global and modest-sized, have demonstrated that command of all these fragmented information sources is possible. It takes a concerted effort and a methodical approach that encompasses organizational effort, shared goals, and technology. Once successfully collated, these viewpoints begin to provide a persuasive foundation for cost savings and performance-based funding, as well as streamlined IT processes and automated workflows.

Cloud Carries its own set of ITAM Challenges and Rewards

While the journey to the cloud may not be a destination so much as an ongoing process of optimization, companies of all sizes cite increased flexibility and agility as the lead reasons to move workloads to the cloud. Also leading the pack are cost reductions in both CapEx and OpEx categories. When it comes to managing, EMA finds that almost half of the organizations manage public cloud separately, with about one-fifth handling cloud separately overall.

Rare is the organization that experiences no significant impact from cloud on asset and audit processes. In fact, most companies report experiencing impact that ranges from significant to dramatic.

According to EMA research, the following technologies have become especially critical for next-generation asset management:

- IT process automation/runbook
- Software license management optimized for virtualized environments
- Public cloud-specific financial analytics
- Appstore for cloud services
- Configuration/provisioning in public cloud

Conversely, the top challenges that organizations report facing when optimizing cloud IT for financial performance are:

- Security/compliance issues for audits and other security concerns
- Understanding software and application usage across lines of business
- Identifying performance or other quality issues in cloud-delivered services
- Optimizing a mixed SaaS and on-premise application portfolio

Of these top four challenges, three speak directly to the continuing—and enhanced—need for advanced ITAM solutions. This finding underscores the need for organizations to increasingly fold accurate cloud assets into a seamless ITAM process and picture. The cloud is not a place where assets can safely go to be invisibly consumed. It is an integral and mission-critical dimension to IT's service to the business, and to running IT itself as a business.

Technologies that Transform

EMA identifies several critical technologies to IT's transformation to next-generation, business-aligned ITAM, including:

Superior discovery and reconciliation: Knowing what's "there" becomes all the more critical when "there" includes public and private cloud, as well as traditional application/infrastructure. The sheer volume of asset types, from microservices to mainframes, demands a next-generation caliber of discovery and reconciliation to make business and financial sense of technology at work.

SAM currency and analysis: Software asset management (SAM) must also encompass cloud and ongoing support for a growing level of endpoint options, from mobile to virtual desktop infrastructure (VDI). Understanding usage, capturing unattended assets, delivering security and compliance insights, and even reconciling the costs of shadow IT with core IT operations, are all controllable with the right technology, workflows, and processes. Current, reconciled data is critical for enabling powerful analytics that can deliver business-aligned insights into costs, usage, value, and if/then predictive analytics to optimize capacity and prepare for change.

Unification and insights: CMDB and service modeling are central to the next generation of ITAM. Nothing could be more valuable than a cohesive vision of interdependencies across the infrastructure, its software, and its services than a CMDB/CMS for planning and optimizing assets in a hybrid cloud world. These insights enable IT to better prioritize asset needs by understanding their ongoing relevance to critical IT services, as well as providing an essential foundation for planning, managing, and optimizing change.

Service catalog: Integrating cloud into the service catalog means unifying access to cloud services for both IT and role-based end-user service consumers. Service catalogs can be not only a means of providing end-users more effective access, but also of tracking and controlling costs and usage of critical IT services.

IT governance analysis: Analytics run against asset and usage data that is accurate and business-aware has a direct, favorable, and often dramatic impact on OpEx and CapEx. Understanding how IT is performing in context with its asset investments and delivered services is becoming a game changer for enabling IT to run as a business.

Automation: Analytics coupled with accurate, complete, and dynamically current data makes all types of automation efficiencies and policy-based workflows practical. In fact, analytic insights cannot deliver on their promise if they're not coupled with automation to optimize speed and effectiveness. Some of the key automation technologies include workflow to support asset management processes; IT process automation or runbook to codify, accelerate, and harden repetitive routines; configuration automation; and patch management for active change management.

Optimizing IT for Financial Performance: Challenges, Success Metrics, and Success Factors

In late 2016, EMA conducted a worldwide survey of IT professionals (managers through C-level) to explore initiatives aimed at optimizing IT for financial performance.[2] When EMA examined role-related perspectives by comparing respondents in the non-IT business, IT executive, and IT professional groups, there were surprising levels of consistency across many of the responses.

Top 10 Challenges

Respondents identified the top 10 challenges standing in the way of their ability to optimize IT for financial performance. Note that although the responses are variously phrased, fragmented/siloed technologies and incomplete data account for six of the ten challenges as follows:

1. Operational inefficiencies
2. Incomplete data
3. Fragmented technologies
4. Lack of analytics in optimizing data from IT assets
5. Poor data quality
6. Sharing data effectively across IT silos
7. Low or inadequate levels of automation
8. Fragmented/siloed technologies
9. Unable to measure operation efficiencies
10. Communication/process issues

Collectively, these challenges reflect some common themes. Data issues are recurring concerns, as are fragmented technologies, along with operational and communication issues. The obvious fact is that these challenges are all interdependent. Fragmented data leads to fragmented ways of working.

Success Metrics

Regardless of the size of the organization under their leadership, respondents were consistent in the metrics they reported using to measure the effectiveness of their IT investments. When it comes to measuring success, the following metrics, in prioritized order, are top of mind:

- IT CapEx costs
- The costs of delivering services internally
- IT OpEx costs
- Internal and external costs for delivering IT services
- ROI and TCO
- Security-related points that minimize business risks
- Cost of delivering IT services externally

The mix of CapEx and OpEx costs, with service delivery-specific expenses, shows that IT organizations are seeking a more holistic way of optimizing assets for both value and cost.

[2] Ibid

Success Factors

Success *is* possible. If there's a formula for success, then here's what surfaced from the research:

- **Organizational values** – The most successful organizations are most likely to have a single coordinating organization across silos driven from the IT executive suite, with significant CEO-level involvement. Optimizing IT for financial performance is a C-level effort because of IT's operational and bottom-line impact, as well as its pervasive, cross-organizational reach.
- **Discovery** – Compared to the average, successful organizations are most likely to have:
  - More discovery/inventory tools overall
  - Real-time or current updates
  - More robust commitment to data reconciliation, including time spent reconciling data discrepancies across tools (33 percent spent more than 25 hours a week)
- **Automation** – Automation pairs well with successful outcomes. The most successful have more automation technologies deployed (an average of 3.77 per respondent) versus the least successful (an average of 1.39 per respondent).
- **Service catalog/app store** – Successful organizations are dramatically more likely to have service catalogs and, in some cases, app stores. They are also three times more likely than the least successful to show pricing in service catalogs.
- **Service modeling** – The most successful have either a CMDB or a CMS deployed, and are also likely to have an application discovery and dependency mapping (ADDM) capability deployed. The variety of use cases relevant to both asset and service management is also greater than those for less successful organizations.
- **Business technologies and analytics** – The more effective IT organizations in next-generation asset management used an average of 4.21 business technologies, versus only 2.21 technologies for the least successful. The biggest differences show up in the following areas:
  - Analytics for IT impact on business outcomes (a 6x difference)
  - Analytics in support of partner-related business process optimization (4x difference)
  - Workflow automation for processes linking business and IT stakeholders (4x difference)
  - IT governance targeting ITSM (3x difference)
- **Metrics –** An average of five metrics in place per successful respondent compares with only two for the least successful. Metrics are key, whether to show cost, OpEx overhead, or business relevance. They not only measure success and failure, but they become critical vehicles for communication and governance across IT, as well as between IT and its business stakeholders.

Conclusion

When viewed as a whole, EMA research and consulting underscore the need to adopt a multifaceted approach to optimizing IT financial performance. That approach includes everything from superior discovery, inventory, and asset management technologies to analytics and automation. It ranges from service catalogs and service modeling capabilities (CMDB/CMS and ADDM) to an informed and collective dialogue that transforms IT silos into a single operational system for IT and business stakeholders.

Moreover, any such initiative must address requirements for public and private cloud, and ascendant mobile and endpoint management requirements. Empowering business outcomes via IT services requires execution that is more direct, creative, flexible, and efficient than today's norm.

Does this vision exist in its entirety today? Yes and no. Yes: Next-generation ITAM is thriving in forward-thinking organizations today, delivering great value as it goes. No: NGAM is a vital business vision that will continually encompass breakthrough technologies and business opportunities as they evolve.

Optimizing IT financial performance requires an avant-garde willingness to consider these challenges in multiple dimensions and make investments accordingly. Traditional markets, traditional ways of thinking, and traditionally siloed IT organizations are all obstacles unless tackled from a single platform.

EMA expects a continued increase in the practical, unified understanding of IT and business performance. The conversation will move away from individual elements of the IT landscape (such as workloads and microservices, analytic technologies, or agile and mobile as standalone topics) to a sustained view of dynamic interdependencies. Forward-acting practitioners can make this move confident of substantial payback in terms of cost effectiveness, operational efficiencies, and ultimately competitive advantage.

About Enterprise Management Associates, Inc.

Founded in 1996, Enterprise Management Associates (EMA) is a leading industry analyst firm that provides deep insight across the full spectrum of IT and data management technologies. EMA analysts leverage a unique combination of practical experience, insight into industry best practices, and in-depth knowledge of current and planned vendor solutions to help EMA's clients achieve their goals. Learn more about EMA research, analysis, and consulting services for enterprise line of business users, IT professionals, and IT vendors at www.enterprisemanagement.com or blog.enterprisemanagement.com. You can also follow EMA on Twitter, Facebook, or LinkedIn.

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