

Insights on IT risk  
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# Effective software asset management

How to reap its benefits

## **Tough economies make now the time to re-examine the benefits of effective software asset management (SAM).**

In the global push for improved performance, effective SAM can make a significantly positive impact by helping to reduce license-related expenses better manage compliance-related risk, and even improve overall operating efficiencies. Leading IT directors and CIOs to whom they report are realizing that effectively managing software assets can be a strategic advantage.

For example, effective software asset management:

- ▶ Potentially reduces liability risk by maintaining license compliance, and avoiding related penalties
- ▶ Lowers potential costs by helping to avoid license “overbuying”
- ▶ Helps to manage more efficiently the otherwise resource-draining and labor-intensive compliance processes
- ▶ Limits potential reputational risks associated with license violations or compliance-related conflicts with vendors

Software licenses currently account for about 20% of typical IT costs, and the already-pervasive use of software continues to rise. At the same time, many IT directors are noticing that their software vendors have become more diligent in ensuring their customers remain in compliance. IT leaders, members of the C-suite, and shareholders have come to expect increasingly more from the investments, including those which rely on IT functions.

Thankfully, the potential benefits drawn from effective SAM come at the right time to help CIOs and IT leaders make a strategic and positive contribution to their overall corporate performance by helping to reduce expenses, address potential risk and increase overall efficiency in their departments as well as others.







# The benefits of effective SAM

A holistic consideration of SAM involves managing and improving all aspects of software assets across most operational and organization components of the company. This big-picture view not only helps companies build a more strategic and integrated approach to software licenses, it also helps increase the number of benefits associated with effective management and their potential impact. Among those benefits:

## Cost control:

- ▶ Less legal- and compliance-related expenses, including software audits.
- ▶ Better management of operational costs related to maintaining license compliance. For example, securing better software licensing contracts – in which deployment and technical architecture are clearly outlined and understood – helps companies to negotiate more favorable deals with software vendors, thereby lowering overall costs of their software procurement. Cost avoidance is achieved by rationalizing the software portfolio to reduce redundant, overlapping or no-longer-necessary software licenses.

## Reduction of risks:

- ▶ **Contractual risk** - Effective SAM helps to optimize clients' negotiating position with their vendors, outsourcers and potential merger & acquisition partners. Companies armed with complete and insightful information will be better able to prevent third-party providers from inserting increased risk premiums into their offers.
- ▶ **Reputational risk** - Clients may face public disclosure of under-licensing, which could lead to significant adverse media coverage and penalties.

- ▶ **Financial and budgetary risk** - While settlements of vendor audits are normally confidential, vendor audit activity has been increasing. There have been settlements in many cases in multiples of millions of Euros per vendor for unlicensed application. A recent Gartner report indicates that more than 50% of their clients polled have been audited by at least one software vendor in the last 12 months.
- ▶ **Information security risk** - Inadequately licensed software introduces the possibility that clients may have deployed counterfeit and potentially unauthorized software. There is a risk that such software may include malicious code and be operating at sub-standard levels.

## Optimization of current assets and process:

- ▶ Enables license overpayment recovery.
- ▶ Facilitates preparations for mergers and acquisitions.
- ▶ Helps make vendor audits more time- and resource-efficient and delivers stronger negotiating position through better management of license-related contracts.
- ▶ Helps IT leaders make better decisions through the use of better information.
- ▶ Increased confidence by both internal and external stakeholders.
- ▶ Promotes more efficient IT systems; less time and money spent toward compliance, and more into making IT a more effective and strategic contributor to overall company goals and objectives.

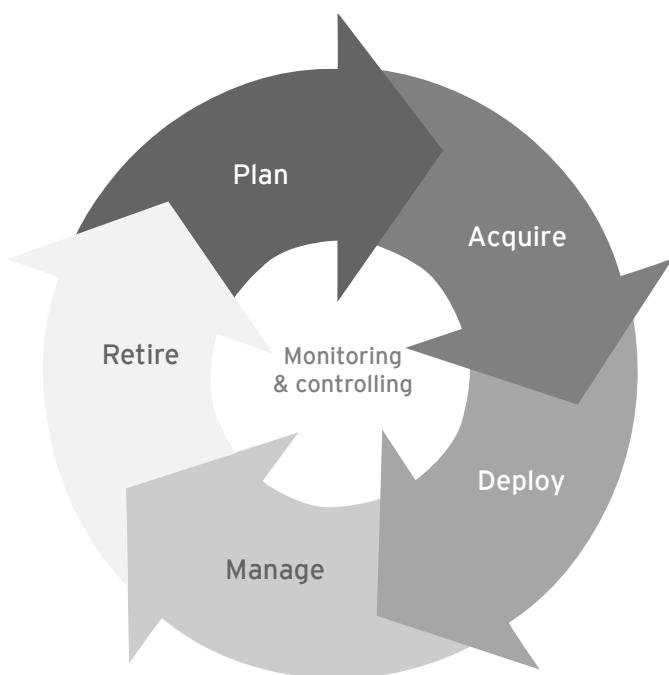
## Complexity of software assets require robust management

Defined by the industry-respected Information Technology Infrastructure Library, SAM includes the entire infrastructure and processes necessary for the effective management, control and protection of the software assets throughout all stages of their life cycle.

Due to the complex nature of software assets (licenses and maintenance contracts, associated IT infrastructure, etc.), SAM needs to be a comprehensive solution that integrates asset planning, purchasing, maintaining inventory, financial, maintenance and contract management into one management approach. That approach should cover software assets in all organization areas of the company, and consider the complete life cycle of the company's software assets.

In practice, SAM leverages information from databases that exist in the vast majority of mature IT organizations such as the Configuration Management Database (CMDB). The CMDB contains information on all IT assets, and from contract management systems or databases. Effective SAM typically combines this data with software information that may be obtained by SAM scanning software.

### Software asset life cycle



## Five stages of the software asset life cycle

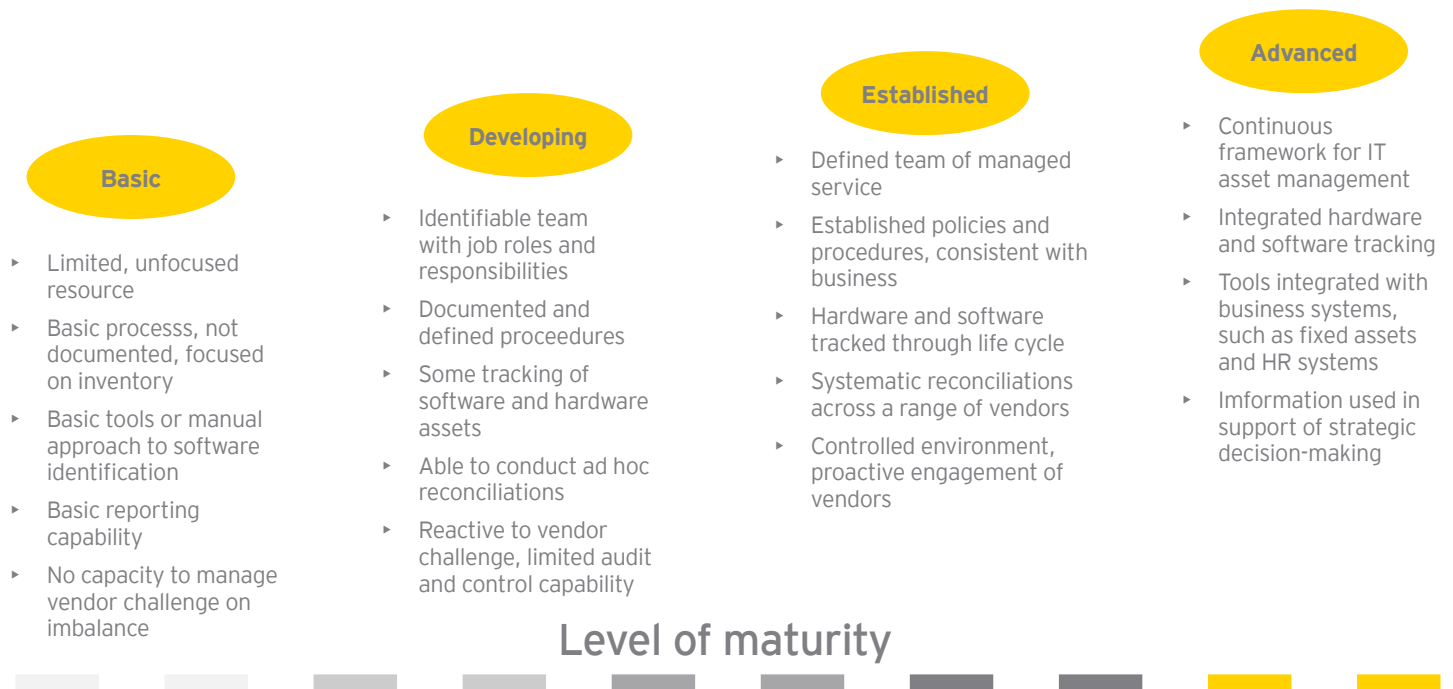
How companies think about software assets can be described using a five-stage life cycle model. Each stage describes the state of the asset as it advances from planning and acquisition to deployment, management and retirement. Understanding this cycle will help companies better understand how they use - and manage - these resources.

1. **Plan** – Activities performed prior to software procurement, including evaluating technical and organizational requirements for the software asset, planning the required quality and quantity (which impacts scale of discount), make-or-buy decisions, reviewing the inventory, etc. This step also includes software portfolio rationalization.
2. **Acquisition** – Identification of potential vendors and negotiation of the most cost-efficient contract and volume license deal are vital within this stage. At this time, the purchases/leases are executed; received goods are checked, tagged and entered into the software asset inventory.
3. **Deployment** – Deployment begins when the software asset is made available for use. Effective deployment helps to ensure the usage is recorded properly within the databases as the foundation for many SAM procedures.
4. **Manage** – The keys to effective management are enhancing productivity within the existing infrastructure and sustaining user satisfaction. Increased transparency can be established by managing the distribution of software assets, license inventory, software upgrades and maintenance activities. More sophisticated SAM facilities enable organizations to monitor usage of software, enabling them to revoke software where it is not used and redeploy it to another user, or to a license pool for future deployment.
5. **Retire** – Software asset retirement involves the planning and execution of orderly disposal of the software assets, closing of contracts and licenses and proper de-installation. Where licenses can be re-used, organizations should ensure software license availability is captured for use by others in the organization. At the end of this stage, software assets may be disposed of, sold or donated if feasible within the license contract.



The varying levels of SAM come with varying levels of investment, each ideally generating more bottom-line value than initial cost. Companies need to explore their optimal SAM future state to help ensure that the SAM benefits they receive exceed the associated costs. To do this, companies need to perform a high-level cost-benefit analysis for the different levels to determine which is best for them. Using a pragmatic SAM maturity model, such as the one shown below, will help enable such a cost-benefit analysis. Note that actual control over the asset management process will only occur in an established or advanced maturity level.

## Software asset management maturity model



# Effective SAM requires defined and integrated processes and roles

Often, consideration of SAM leads first to the use of tools. While tools are important, the process and roles that support them are critical.

## Accurate information requires clearly defined processes

SAM success relies heavily on knowing how many software licenses are available, their usages and the number of transactions involving those licenses. Because of the importance of this information, the processes that update it are crucial. The relevant software, hardware, license and contract inventory need consistent and timely updates provided by defined and repeatable processes. Also important is recognizing what events would trigger such updates. For example, some of the fundamental events that trigger an update might include:

- ▶ Significant change in significant license arrangement
- ▶ Acquisition or sale of a business
- ▶ Organizational change or bigger project
- ▶ Outsourcing

## Clarity of roles helps support effective implementation

The bulk of the roles responsible for effective SAM are handled by the SAM manager and the license controller. The SAM manager is typically responsible for SAM processes and controlling measures such as management reporting. The SAM manager acts as an interface between business units and the SAM team. The manager also supports the license controllers in evaluating the current state of licenses within the organization. The license controller's task includes keeping SAM information about a software product updated and creating a license balance in order to identify the current license status. The number of license controllers a company has is generally in proportion to the complexity of its software products.

Because software assets impact so many different facets of an organization, the roles responsible for effective SAM should be similarly expansive, extending well beyond just IT. To be effective, SAM strategy should be integrated within all aspects of enterprise layers, including those impacting the company's processes, organizational structures, various IT considerations and SAM-related tools.

# Influencing challenges for SAM

## Potential challenges to effective SAM implementation

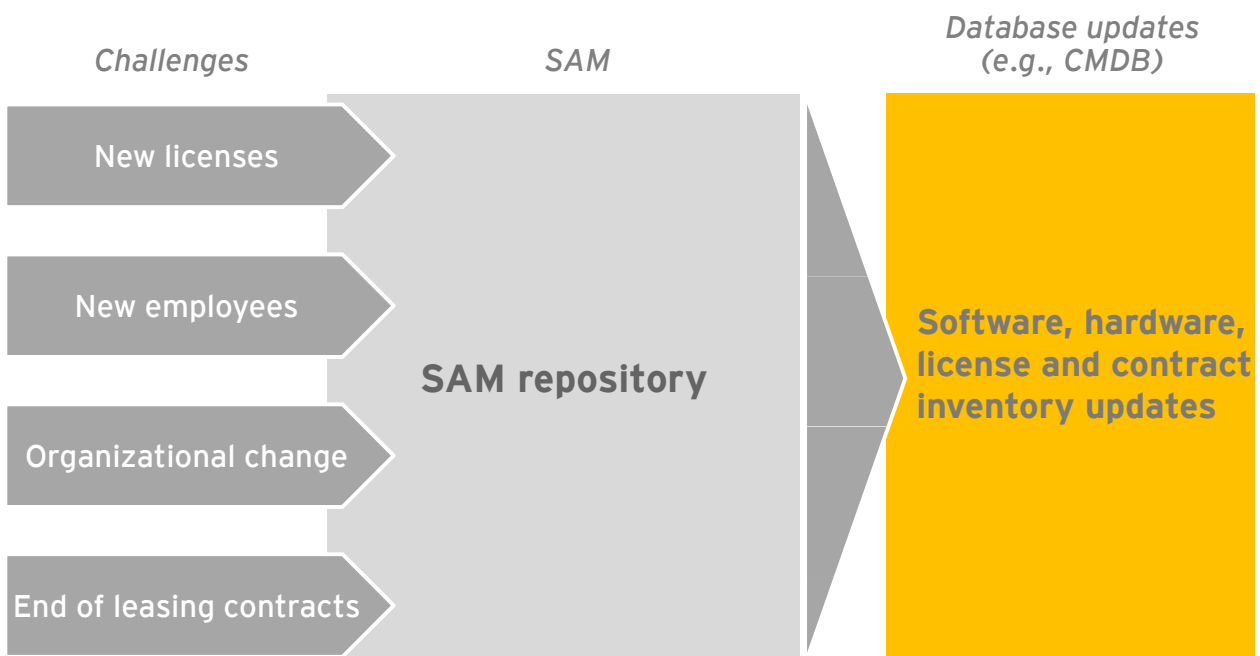
There are a number of potential hurdles that can arise while implementing an effective SAM program. The software asset life cycle can be complicated by many other factors which cannot always be anticipated, including user downloads, software installations and bundling, compatibility testing, decentralized procurement and development of software architecture roadmaps. Some of the major areas or initiatives in which complications can arise typically include:

- ▶ The centralization of licensing
- ▶ Updating data tracking expired and new licenses
- ▶ The use of outsourcers
- ▶ Integrating SAM initiatives into broader change management efforts

### Centralization of licensing

If a user in the company wants to use a software product, the SAM system needs to determine if there are any licenses available from a software library and if they are appropriate for the intended use (e.g., in a subsidiary). If an available license is used, the SAM system needs to be able to reserve that particular software license in case it is requested again. To help enable this, the provisioning of licenses should be centralized to leverage potentially available new license discounts. Whether an existing available license can be used for a particular need depends on many factors. A license check needs to be performed to compare a license contract's contents against the current request. For example, a software product might only be used in a particular area of the company or on a certain kind of hardware, restrictions which could potentially limit the number of available licenses.

### Challenges triggering database updates



## Tracking new and expired licenses

Detailed information on each software usage request should be captured in the SAM system, allowing the system to determine whether free or discounted usage licenses would be available. Such metrics used to help the SAM system better track software include the number of users, installations, CPUs and MIPS (million instructions per second, as measured in the host universe). Whenever new licenses are purchased, leased or rented, the new license entry needs to be recorded in the relevant databases. This robust information is recorded in a dedicated SAM dataset, thereby making access to licenses and related information easier and more efficient. When a contract ends or licenses are being sold, the number of available licenses needs to be updated in a timely manner to reflect accurate information about available licenses.

## Complications surrounding the use of outsourcers

For many organizations, some or all of the life cycle elements are provided by a service provider through an outsourced relationship. Often, there is a lack of clarity both in the contract and in practice over each respective party's responsibility. This can potentially result in false assumptions about the outsourcer's responsibilities and activities, leading to misunderstandings often not uncovered until a license audit is conducted. Companies should clearly agree on who is responsible for rectifying unlicensed software in the event of an audit and make certain that an accurate inventory is agreed upon by both parties at the outset of an outsource and verified at regular intervals during the contract.

## Integration of SAM into change management initiatives

A key step that is often neglected is making information on software usage available (e.g., installations, user accounts). As a result, linking SAM to broader change management procedures is crucial. Whenever a change prompts a software installation or de-installation, creation or deletion of user accounts or change in relevant hardware, databases containing software usage information also need to be updated timely.

## The benefits – and limits – of tools

The effective use of software scanning tools used to identify and track the number of software installations is critical to effective software management. However, while recognizing the important role tools play, it is also important to understand their limitations. License use is not measured solely by installation. Therefore, investing in tools alone will not solve license compliance problems without the other technological, processes and people elements in place (e.g., an interpretation engine, reconciliation process, ability to understand the wider picture). Tools are important elements that play a role, but they will not manage processes and workflows that are essential for reaching strategic SAM goals.

## Among the important limitations of tools

- ▶ Some tool scanners may have limited coverage and may not include Windows servers or Unix OS-based or mainframe software.
- ▶ If the software resides on a different machine, a tool-based count may not be accurate.
- ▶ Data may be very difficult to interpret, possibly resulting in the risk of double counting, false bundling and (or) lack of clarity over product use rights. For example, a company might find a product which has a "lite" version which is free, or products where a free reader looks the same as a costly writer tool.
- ▶ Some companies implementing SAM often customize service management tools already in use. This is an additional challenge compared to buying a dedicated ITAM tool with SAM functionality, because the special requirements of managing software assets within their life cycle are various and may not be met easily.



# Leading SAM-related trends to consider: cloud computing and virtualization

Companies like to use technologies that they believe can help make their businesses leaner and more efficient. Cloud computing allows companies to access online external storage, computing capacity and individual applications. This has made companies more flexible in adapting their IT-operations to current business needs and using the possibility to reduce costs at the same time. Also, many companies have combined efforts to reduce costs and enhance performance through virtualization. By decoupling software components from hardware resources (e.g., physical storage, CPU) through an abstraction layer, resources can be used more effectively.

Effective management of software assets has to control traditional IT architecture and emerging new trends, such as cloud computing and virtualization. Effective software asset management needs to cover access to and management of external software services in “the cloud” and the traditional in-house use of internal software products. In addition to cloud computing and Software as a Service (SaaS), virtualization brings along with it a need for new tracking parameters for measuring software use in a fair way for both parties.

In addition, it is quite difficult to provide licenses “on-demand” for a particular service or software product with these new technologies because determining available license has become more complex. Challenges posed by these new SAM-related trends should not be underestimated; companies have to cope with new, sometimes confusing license models in order to reap their benefits without unexpected costs. For example, companies should consider implications for license contracts if, because of downsizing, fewer resources of the cloud or virtual machine are needed.

IT sourcing and vendor managers can prevent problems by knowing out their vendors’ policies on server virtualization and by ensuring that their IT operations colleagues understand the policies as well. The rules may limit enterprises’ freedom to make full use of virtualization technology’s potential, but it’s better to work within those limits than to ignore them.

## License audits and legal aspects of SAM

Software license compliance can be complicated and difficult. A software compliance audit can represent a serious risk for any vendor manager, even if the enterprise has good SAM processes. SAM managers should act proactively to pre-empt such risks, and then move fast to address those that are not intercepted.

SAM managers are increasingly under pressure to help ensure that their companies – and even themselves – are prepared against claims of illegal use. Recently, software vendors have been more focused on contractual arrangements that allow them to obtain information about the usage of their licensed software and to verify compliance with the license agreement, if necessary, by onsite license audits. There are also ad hoc judicial actions that can provide vendors with sufficient justification for legal action against alleged illegal uses.

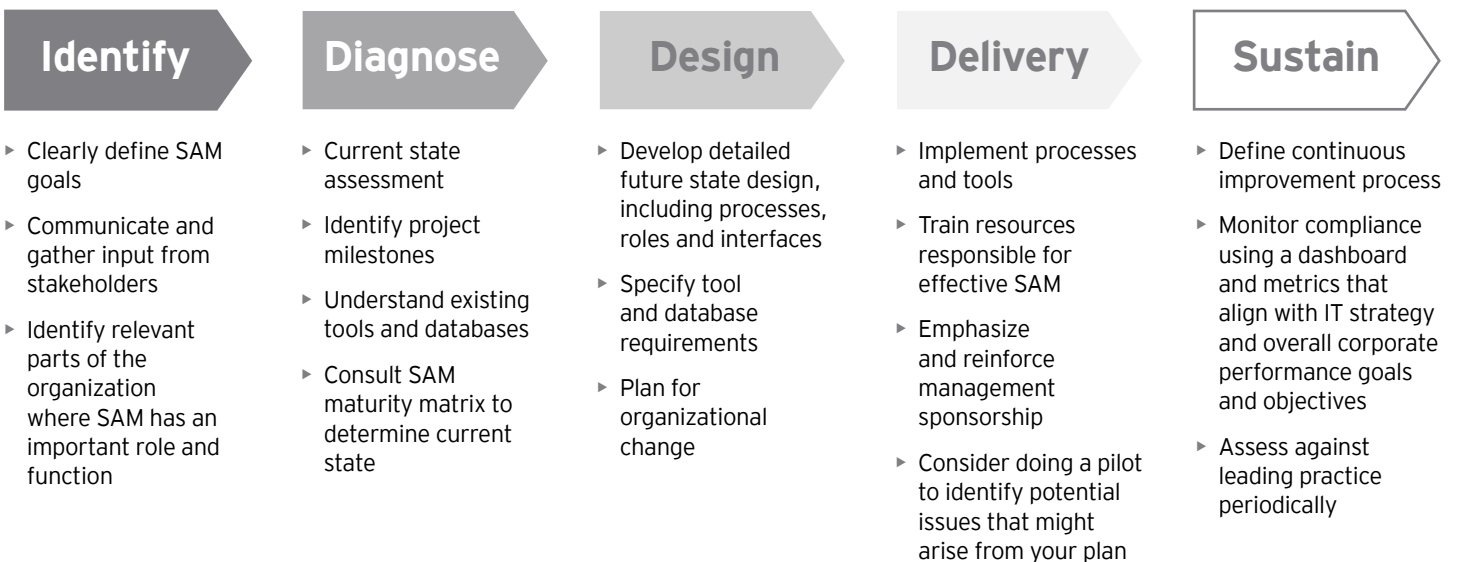
Different factors determine under which circumstances software can be used legally based on which kind of contract exists between the software vendor and the software user. For example, there might be differences between a perpetual and a subscription license. Furthermore, most software companies have a set of licensing models dependent on the nature of the software and the need of the organization, along with individually negotiated terms of the contract.

# Conclusion

Effective SAM requires a multifaceted approach through all layers of the organization, armed with an understanding of the asset life cycle, and with a keen eye to the role and limitations of tools. Only an integrated approach, involving all relevant enterprise layers, can fully realize the benefits of SAM; the documentation of software assets, the redesign of repeatable processes within the entire company and providing adequate resources and a good organizational fit are essential to implement SAM.

In summary, effective SAM helps create and maintain a broad understanding of software assets and related investments, costs, compliance and liabilities. In short, effective SAM helps companies avoid risk, reduce cost, optimize current assets and, ultimately, improve overall corporate performance.

## The roadmap to effective SAM & critical success factors



### Critical success factors to consider in the Diagnose, Design and Delivery phases of an effective SAM program

- ▶ Monitoring and controlling of SAM should be centralized
- ▶ Board-level sponsorship and commitment
- ▶ Good integration with existing organization structure
- ▶ Consider creating regional license managers reporting to the software asset manager
- ▶ Make license controllers responsible for the practical implementation and control data related to SAM and report results to management
- ▶ All software products should be assigned to license controller to more efficiently leverage license usage and availability
- ▶ Have a robust and ongoing training and continuous improvement program for SAM personnel
- ▶ Overall corporate-wide awareness of the importance of SAM



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