Service Integration and Management (SIAM™) Foundation Body of Knowledge

Second edition

Version date: 23 March 2020

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Foreword

The idea of creating content related to SIAM first came to me in 2016. The service management world was developing rapidly and I could see that SIAM was being applied in more and more organizations to help manage complex sourcing environments, particularly for IT services. It was surprising though that there was little detailed SIAM content available to support practitioners using the methodology.

The idea of the SIAM Body of Knowledge was born and I set up the SIAM Architect Group, involving volunteers from all around the world and from different types and sizes of organization. We formed a strong team and created the Foundation BoK. Our aim was to offer standard SIAM terms, guidance and content that anyone in the ecosystem could use.

The SIAM Foundation BoK is available as a free download and as a hard copy publication. Since its launch, it has been downloaded more than 10,000 times. Hundreds of people around the world have taken SIAM training and passed the SIAM Foundation exam. In 2017, the architect team grew and we developed the SIAM Professional Body of Knowledge, led by Chief Architects Simon Dorst and Michelle Major-Goldsmith, providing more detailed practical guidance.

Scopism continues to be active in the SIAM sector, hosting a SIAM focused conference and publishing the global SIAM survey. The interest we see, and the survey results, show that SIAM is continuing to grow, with some geographies more mature than others. Digital transformation is driving the adoption of SIAM as a sourcing model, as organizations embed technology at the heart of their business strategy.

The 2019 edition of the SIAM Foundation BoK reflects changes in the market, but the underlying principles remain true. I am very grateful for the generosity of the SIAM community that has allowed us to build these valuable publications.

Claire Agutter

About Claire Agutter

Claire Agutter is a service management trainer, consultant and author, and director of ITSM Zone and Scopism. In 2018 she was recognized as an HDI Top 25 Thought Leader and was part of the team that won itSMF UK's Thought Leadership award for the SIAM Foundation BoK. Claire is the host of the popular ITSM Crowd hangouts and is Chief Architect for VeriSM™.

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Second edition

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Document purpose

This document introduces service integration and management (SIAM). Its contents are the source material for the EXIN SIAM™ Foundation certification.

1. Introduction to Service Integration and Management (SIAM)

1.1. What is SIAM?

Service integration and management (SIAM) is a management methodology that can be applied in an environment that includes services sourced from a number of service providers.

SIAM has a different level of focus to traditional multi-sourced ecosystems with one customer and multiple suppliers. It provides governance, management, integration, assurance, and coordination to ensure that the customer organization gets maximum value from its service providers.

SIAM governance operates at three levels in the ecosystem:

- Strategic
- Tactical
- Operational.

SIAM is an evolution of how to apply a framework for integrated service management across multiple service providers. It has developed as organizations have moved away from outsourced contracts with a single supplier to an environment with multiple service providers. SIAM has evolved from the challenges associated with these more complex operating models.

SIAM supports cross-functional, cross-process, and cross-provider integration. It creates an environment where all parties:

- Know their role, responsibilities and context in the ecosystem
- Are empowered to deliver
- Are held accountable for the outcomes they are required to deliver.

SIAM introduces the concept of a service integrator, which is a single, logical entity held accountable for the end to end delivery of services and the business value that the customer receives.

Terminology

SIAM is the generally accepted acronym for service integration and management.

Other acronyms that are in use are:

- MSI (Multi Sourcing Integration)
- SMI (Service Management Integration)
- SI (Service Integration)
- SMAI (Service Management and Integration)
- SI&M (Service Integration & Management).

SIAM can be applied to different sizes and types of organization, and to different industry sectors. Customers that only require a single service provider are unlikely to get the full value from SIAM.

SIAM can be applied to environments that include external service providers only, internal service providers only, or a combination of internal and external service providers. The effectiveness of SIAM and the value it delivers will increase as the number of service providers and the number of interactions between services increase.

Some organizational cultures are more able to adapt to SIAM than others. Effective SIAM requires control to be balanced with trust, devolution of responsibilities, openness, and collaboration across all parties. A transition to SIAM is likely to require significant changes in attitude, behavior, and culture in ecosystems that previously relied on command and control structures for effective service delivery.

The SIAM methodology encompasses:

- Practices
- Processes
- Functions
- Roles
- Structural elements.

The customer organization will transition to a SIAM model developed from these elements.

1.1.1. The SIAM ecosystem

There are three layers in a SIAM ecosystem:

1. Customer organization (including retained capabilities)
2. Service integrator
3. Service provider(s).

Each layer has a role as part of effective end to end management of services and the delivery of maximum value. Each layer should have sufficient capability and maturity to fulfil its role.

1.1.1.1. Customer organization

The customer organization is the end client that is making the transition to SIAM as part of its operating model. It commissions the SIAM ecosystem.

Customer organizations typically contain business units such as human resources, finance, sales and their own internal IT function. They also have their own customers who use their products and services.

Figure 1 shows the layers of the SIAM ecosystem, and the consumers of services from the customer organization.

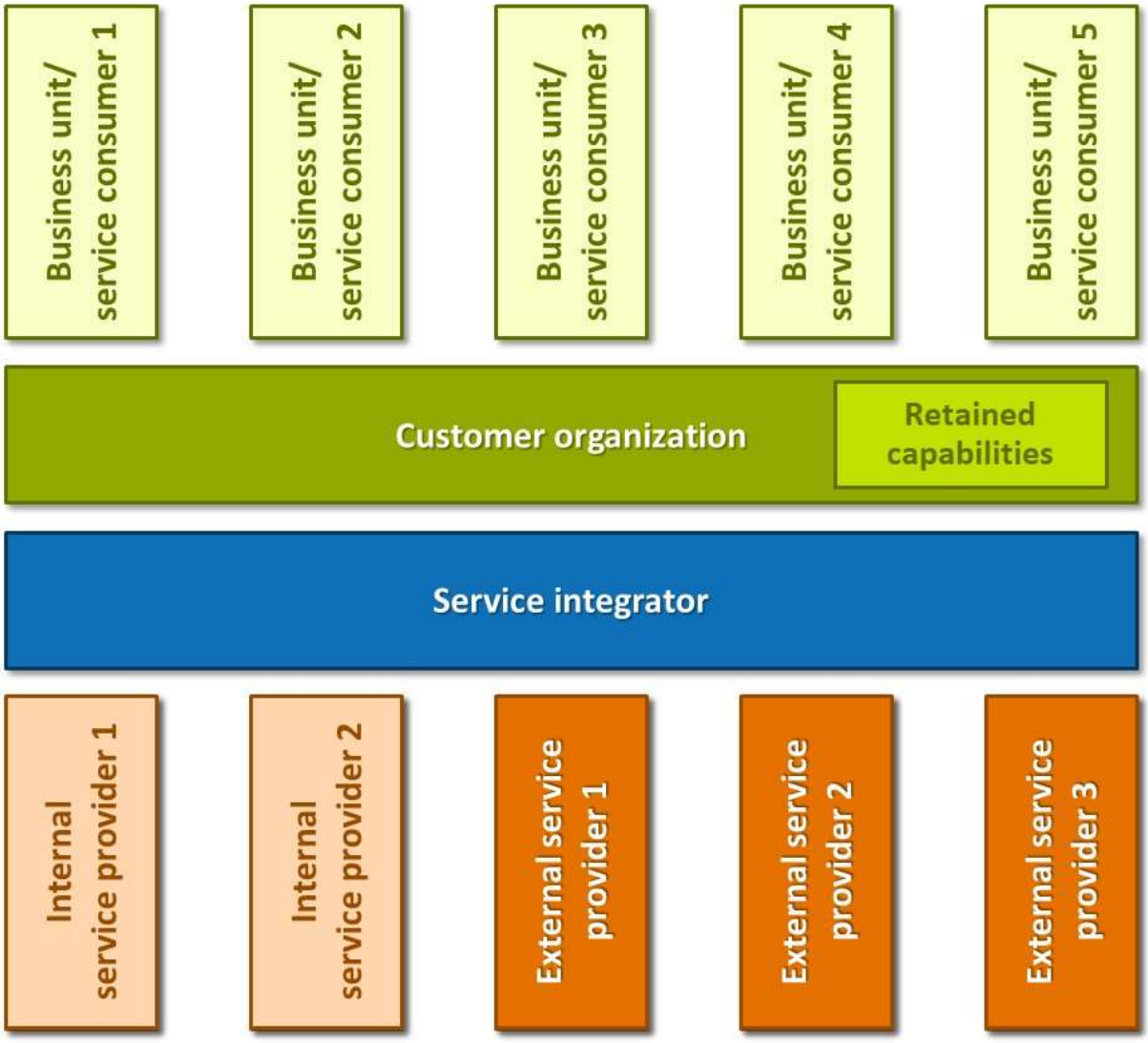

Figure 1: The SIAM layers, including consumers of services from the customer organization

In this document, we use the terms 'customer organization' and 'customer' to mean the commissioning organization.

The customer organization will own the contractual relationships with external service providers, and with any external service integrator.

1.1.1.2. Retained capabilities

The customer organization will include some retained capabilities. The retained capabilities are the functions that are responsible for strategic, architectural, business engagement and corporate governance activities.

These business-differentiating functions typically remain under the direct control and ownership of the customer organization. Retained capabilities also include any accountabilities and responsibilities that must remain with the customer for legislative or regulatory reasons.

Examples of possible retained capabilities are:

- Enterprise architecture
- Policy and standards management
- Procurement
- Contract management
- Demand management
- Financial and commercial management
- Service portfolio management
- Corporate risk management
- Governance of the service integrator; based on achievement of business outcomes.

The service integrator is independent from the retained capabilities, even if it is internally sourced. Service integration is not a retained capability.

Retained capabilities are sometimes referred to as the 'intelligent client function'.

1.1.1.3. Service integrator

The service integrator layer of the SIAM ecosystem is where end to end service governance, management, integration, assurance and coordination is performed.

The service integrator layer focuses on implementing an effective cross-service provider organization, making sure that all service providers are contributing to the end to end service. It provides operational governance over the service providers and has a direct relationship with the customer organization and the service providers.

The service integrator layer can be provided by one or more organizations, including the customer organization. If the service integrator layer is provided by more than one organization, it should still be considered as a single logical service integrator.

The service integrator can include one team of people or multiple teams.

1.1.1.4. Service provider

Within a SIAM ecosystem, there are multiple service providers. Each service provider is responsible for the delivery of one or more services, or service elements, to the customer. It is responsible for managing the products and technology used to deliver its contracted or agreed services and operating its own processes.

Service providers within a SIAM ecosystem are sometimes referred to as 'towers'. This term implies isolation and a monolithic approach, so the term 'service provider' is used as standard in this document.

Service providers can be part of the customer organization or external to it:

- An external service provider is an organization that is not part of the customer organization. Its performance is typically managed using service level agreements and a contract with the customer organization
- An internal service provider is a team or department that is part of the customer organization. Its performance is typically managed using internal agreements and targets.

Examples of services provided by service providers in a SIAM model include:

- Desktop services/end user computing
- Data center
- Hosting
- Security
- Network/LAN/WAN
- Cloud services
- Printing services
- Voice and video (VVI)

- Application development, support and maintenance
- Managed services.

If the customer retains its own internal IT capability, this should be treated as an internal service provider, governed by the service integrator.

Service provider categories

It can be helpful to categorize service providers in a SIAM ecosystem, to help define their importance to the customer organization and the approach to governing and assuring their services.

There are three common categories of service provider in a SIAM ecosystem:

- Strategic service provider
- Tactical service provider
- Commodity service provider.

SIAM is applied to all three categories, but the nature of the relationship and the amount of management required will be different.

Figure 2 shows a high-level view of the SIAM layers.

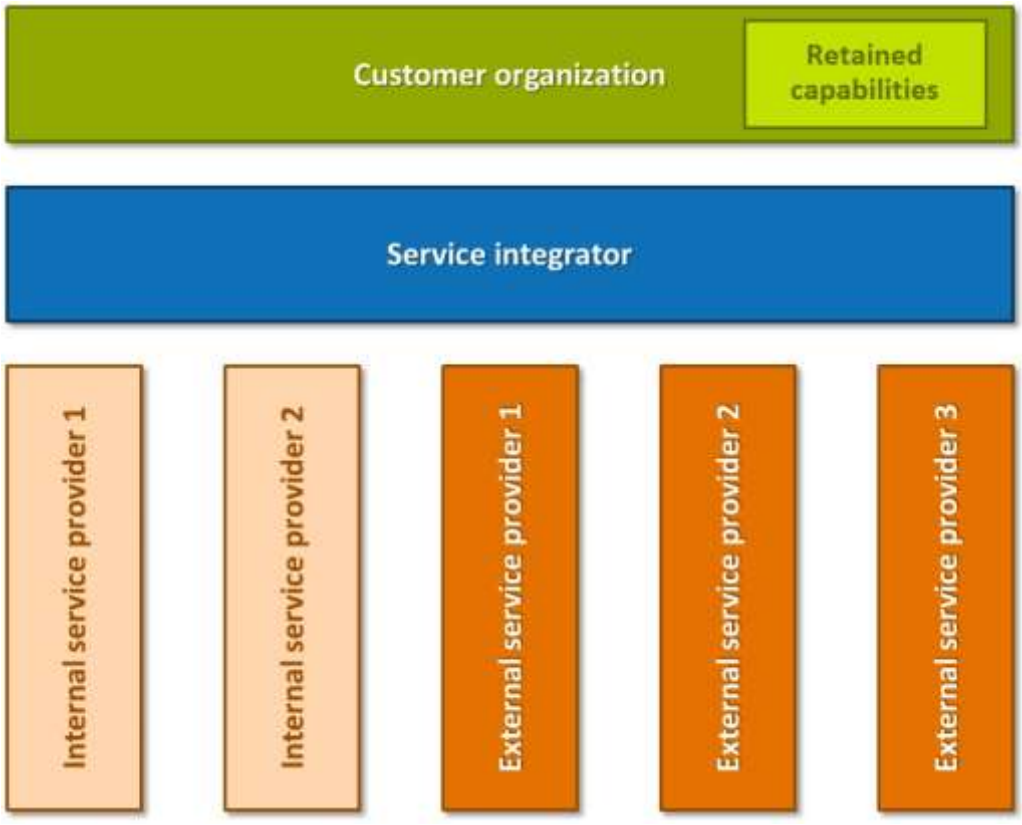

Figure 2: The SIAM layers

The focus, activities and responsibilities of each layer are different. **Figure 3** provides an illustration of this.

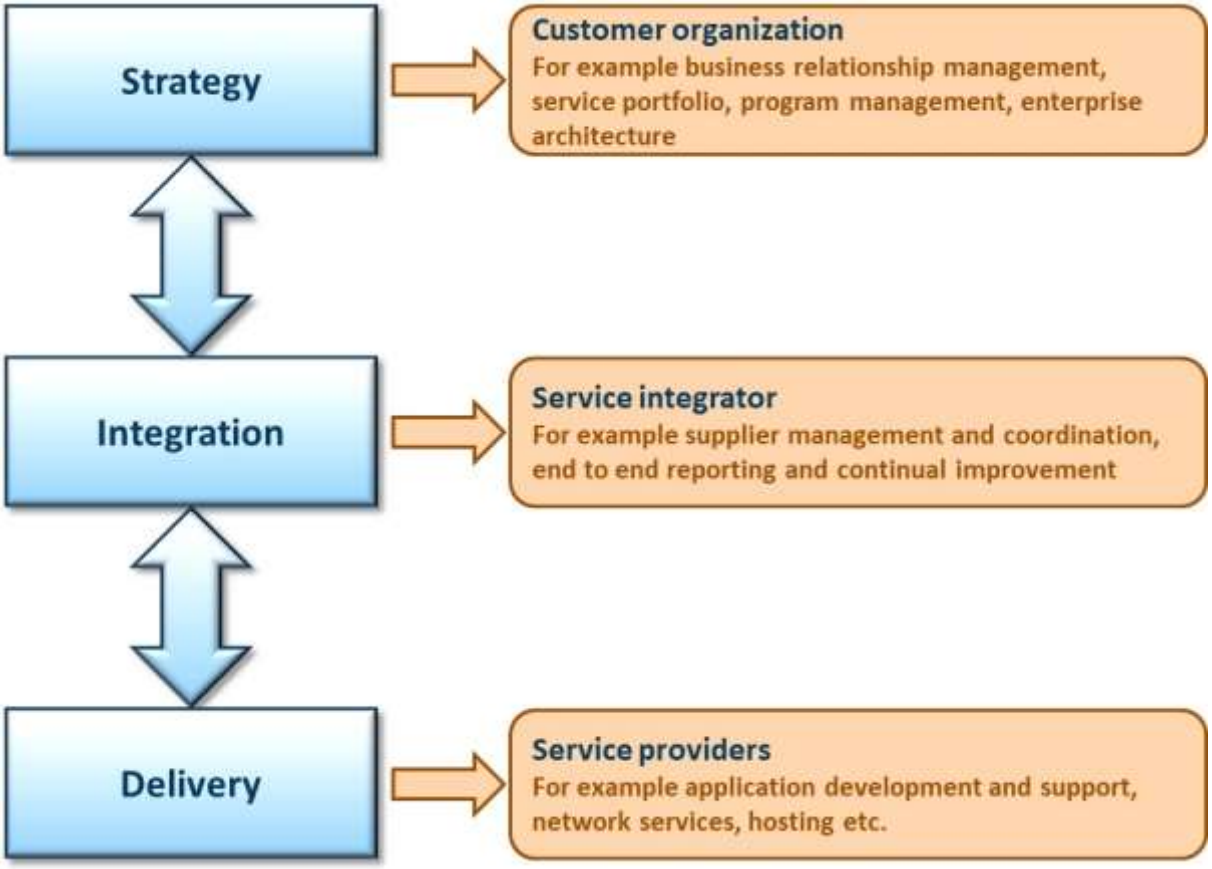

Figure 3: Focus of the SIAM layers

1.1.2. SIAM practices

Practice: *the actual application or use of an idea, belief, or method, as opposed to theories relating to it.*[1]

SIAM includes specific practices that differentiate it from other management frameworks. These practices support governance, management, integration, assurance, and coordination across the layers.

[1] Source: Oxford English Dictionary © 2017 Oxford University Press

Examples of practices are described in section **6 SIAM practices**.

- People practices: managing cross-functional teams
- Process practices: integrating processes across service providers
- Measurement practices: reporting on end to end services
- Technology practices: creating a tooling strategy.

SIAM also draws on other areas of IT and management 'best practice' – see section **4 SIAM and other practices**.

1.1.3. SIAM and processes

Process: "a documented, repeatable approach to carrying out a series of tasks or activities"

SIAM itself is not a process; it draws on and uses other management processes.

Most management approaches expect processes to be executed within one organization. In SIAM, these processes may also be executed:

- Across organizations in the same SIAM layer
- Across organizations in different SIAM layers.

Many of the processes used within a SIAM ecosystem are familiar processes like change management and business relationship management. Within a SIAM model, however, these processes require adaptation to support integration and coordination between the different parties. They also require alignment with the SIAM practices.

Although this is not an exhaustive list, processes used within a SIAM ecosystem can include:

- Audit and control
- Business relationship management
- Change management
- Release management
- Commercial/contract management
- Continual improvement
- Event management

- Financial management
- Incident management
- Request fulfilment
- Service catalogue management
- Information security management
- Knowledge management
- Monitoring, measuring, and reporting
- Problem management
- Project management
- Software asset and configuration management
- Service level management
- Service portfolio management
- Supplier management
- Toolset and information management
- Capacity and availability management
- Service continuity management
- Service introduction, retirement, and replacement.

These processes need to be allocated to the appropriate layers in the SIAM model. This allocation may be different for each implementation of SIAM.

Some processes will span multiple layers. For example: the customer organization and the service integrator can both carry out elements of supplier management; the service integrator and service providers will each have responsibilities in the end to end change management process.

1.1.4. SIAM functions

Function: an organizational entity, typically characterized by a special area of knowledge or experience.[2]

Each organization in the SIAM ecosystem will determine its own organizational structure. This structure will include functions that execute specific processes and practices.

The service integration layer in the SIAM ecosystem has specific functions. These are where the service integrator carries out the activities for governance, management, assurance, integration and coordination.

[2] Source: IT Process Wiki

Whilst these functions may seem similar at a high-level to those from other management methodologies, the activities can be different as they primarily focus on coordination and integration as opposed to operational activities.

The precise functions will vary for different implementations of SIAM, as they are dependent on the definition of roles and responsibilities across the ecosystem, and the detail of the SIAM model that has been adopted.

1.1.5. SIAM roles

Roles and responsibilities need to be defined, established, monitored and improved within a SIAM ecosystem.

This includes the roles and responsibilities of each:

- Layer
- Organization
- Function
- Structural element.

High-level policies for roles and responsibilities are defined during the Discovery & Strategy stage of the SIAM roadmap. More detail is added during the Plan & Build stage.

Roles and responsibilities are allocated to relevant parties during the Implement stage. They are then monitored during Run & Improve and amended as required.

1.1.6. SIAM structural elements

Within SIAM, 'structural elements' are organizational entities that have specific responsibilities and work across multiple organizations and layers in the SIAM ecosystem.

These structural elements link the functions with the practices, processes, and roles of SIAM.

The role of the structural elements includes:

- Governance
- Developing and maintaining policies
- Developing and maintaining data and information standards
- Reviewing and improving end to end service performance
- Reviewing and improving capability and maturity
- Identifying, encouraging, and driving continual service improvements and innovation
- Resolving shared issues and conflicts
- Delivering specific projects
- Integrating, aggregating and consolidating data to form an end to end view
- Recognizing and rewarding success.

Structural elements include representatives from the service integrator, the service providers, and, where required, the customer.

Using structural elements helps to establish relationships between the different parties. This encourages communication and collaboration, as attendees work together to achieve shared goals.

The use of structural elements differentiates SIAM from other methodologies and helps to facilitate the desired outcomes from SIAM.

There are three types of structural element:

1. Boards
2. Process forums
3. Working groups.

1.1.6.1. Boards

Boards perform governance in the SIAM ecosystem.

They are formal decision-making bodies, and are accountable for the decisions that they take. Boards will convene regularly, for as long as the SIAM model is in place.

In SIAM, governance activities are carried out by boards acting at strategic, tactical and operational levels. Examples are:

- Strategic: approval of funding, contractual and commercial agreements, and strategy
- Tactical: approval of policies
- Operational: approval of changes to services and processes.

1.1.6.2. Process forums

Process forums are aligned to specific processes or practices. Their members work together on proactive development, innovations, and improvements.

Forums will convene regularly, for as long as the SIAM model is in place. Their responsibilities include:

- Developing and sharing common working practices
- Developing data and information standards
- Continual improvement
- Innovation.

For example: a problem management process forum can be established with problem management peers from each service provider and the service integrator. They can jointly develop a set of key performance indicators for the problem management process.

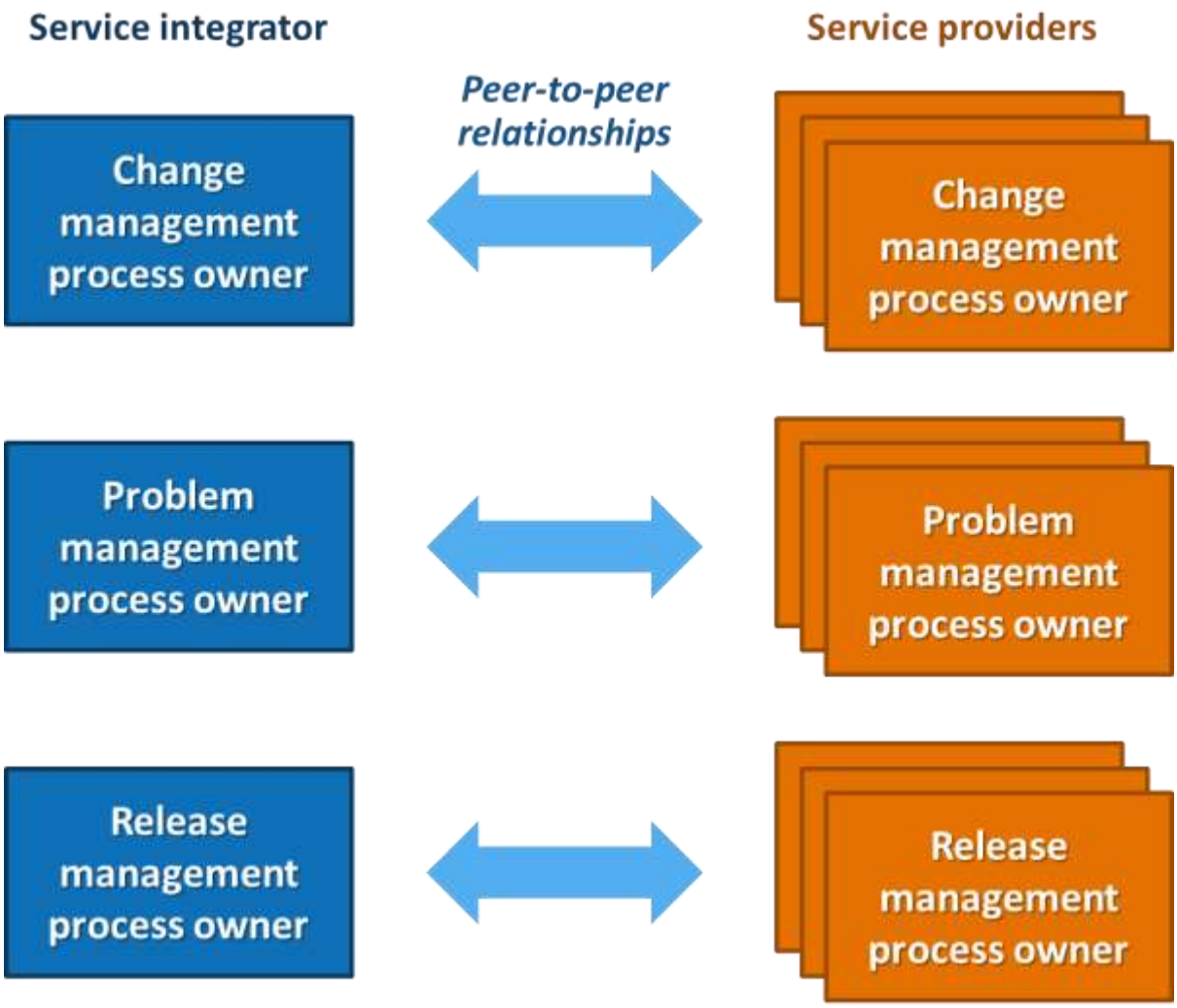

Figure 4: Peer to peer process forums

The scope of a process forum can be for a single process or for a group of related processes. For example, a single process forum could be established for the related processes of incident management and request management.

There is no requirement to create an individual process forum for every process. Where the scope overlaps, a single forum may address multiple processes. The value of the process forums will diminish if their remits overlap and work is duplicated, or if they are perceived as an unnecessary overhead.

1.1.6.3. Working groups

Working groups are convened to address specific issues or projects. They are typically formed on a reactive ad-hoc or fixed-term basis. They can include staff from different organizations and different specialist areas.

For example: an ad-hoc working group could be established with members from several service providers to investigate an intermittent issue with the performance of an integrated service. This could include specialists from capacity management, IT operations, development, problem management and availability management. Alternatively, a fixed term working group could be established to manage the delivery of an integrated release. The members would be from all layers and from multiple processes and functions.

Process forums and working groups often involve the same people, so can be combined into the same meeting if appropriate. In these combined meetings, it is important to ensure that there is a focus on proactive as well as reactive activities.

1.1.7. SIAM models

Each organization will develop its own SIAM model, based on the layers in the SIAM ecosystem. The SIAM model that an organization adopts will be influenced by several factors:

- The services that are in scope
- The required outcomes
- The use of proprietary models by externally sourced service integrators.

Because of this, there is no single 'perfect' SIAM model. No model is 'better' than any other, although some may be more suitable to particular implementations than others.

Different organizations adapt models to meet their own needs. All models share common characteristics that are aligned to the methodology described in this BoK.

Figure 5 shows a high-level SIAM model, including the relationships between SIAM layers practices, processes, functions, and structural elements.

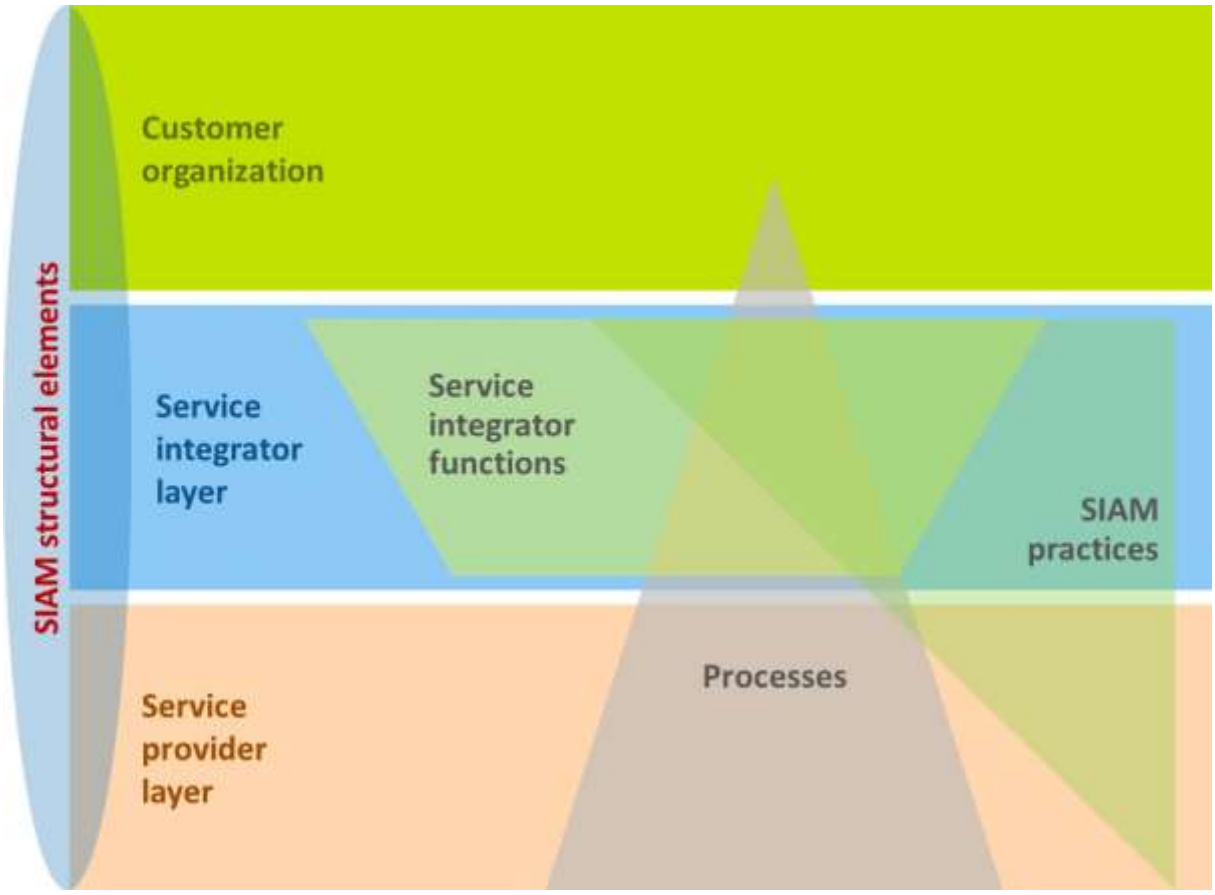

Figure 5: A high-level SIAM model

1.1.8. SIAM contractual and sourcing considerations

Within the SIAM model, the customer owns the contractual relationship with external service providers and any external service integrator.

The service integrator is empowered to act on behalf of the customer, exercising the parts of the contract related to the delivery of the services by the service providers.

The contracts between the service providers and the customer organization must make it clear that the service integrator is the agent of the customer, whether that service integrator is internally sourced or externally sourced.

To provide flexibility to support future business and technology strategies, where possible, the contracts should support changes to services and ways of working.

In many existing customer and provider relationships, standard contracts have limited the ability to transition to SIAM. For SIAM to be effective, the customer organization needs to select the right service providers and have suitable contracts in place.

SIAM contracts are typically shorter and more flexible than traditional IT outsourcing contracts. Targets within the contracts should encourage service providers to work together, including contributing to service improvements and innovation.

In a SIAM environment, the best outcomes are realized when the customer, the service integrator, and the service providers all work cooperatively to achieve common goals. Wherever possible, contracts should facilitate this, by being fair to all parties and by applying the terms in a transparent and impartial way.

Trust-based supplier management is more likely to achieve the necessary collaborative outcomes, rather than just relying on strict adherence through the terms of the contract. To establish this trust and fairness, it is necessary to consider the management practices and ways of working needed within the SIAM ecosystem. This is discussed in more detail in the SIAM Professional Body of Knowledge.

1.2. The history of SIAM

1.2.1. SIAM as a concept

Organizations have been using services delivered by multiple service providers for many years. They have recognized the need for service integration across service providers, and used different approaches to try to achieve end to end service management.

Historically, models for managing this type of ecosystem were proprietary to very large service providers, developed to meet specific client requirements, and rarely shared outside those providers.

In most cases, these service providers also delivered significant systems integration capabilities, but with no clear separation from service integration. These organizations were typically referred to as Systems Integrators (SI) or IT Outsource (ITO) providers.

1.2.2. The emergence of the term 'SIAM'

The term 'service integration and management' or SIAM, and the concept of SIAM as a management methodology originated in around 2005 from within the UK public sector, which was also the source of other best practice methodologies such as ITIL®.

The methodology was initially designed for the Department of Work and Pensions to obtain better value for money from services delivered by multiple service providers, and specifically to separate service integration capabilities from systems integration and IT service provision.

This new approach reduced the duplication of activities in the service providers, and introduced the concept of a 'service integrator'. This new service integration capability provided governance and coordination to encourage service providers to work together to drive down costs and improve service quality.

SIAM was viewed as a methodology, not a function. Within the methodology, a service integrator provided a set of service integration capabilities.

The SIAM methodology that was emerging facilitated collaboration between the various service providers, and management of interfaces between them. The service integrator was 'one step above' the service provider layer.

Processes were used in the SIAM ecosystem to define activities, inputs, outputs, controls, and measurements. The methodology allowed individual service providers to act autonomously and define the specific mechanisms that enabled those activities. These were then audited and assured by the service integrator.

Figure 6 shows a simple view of the SIAM model.

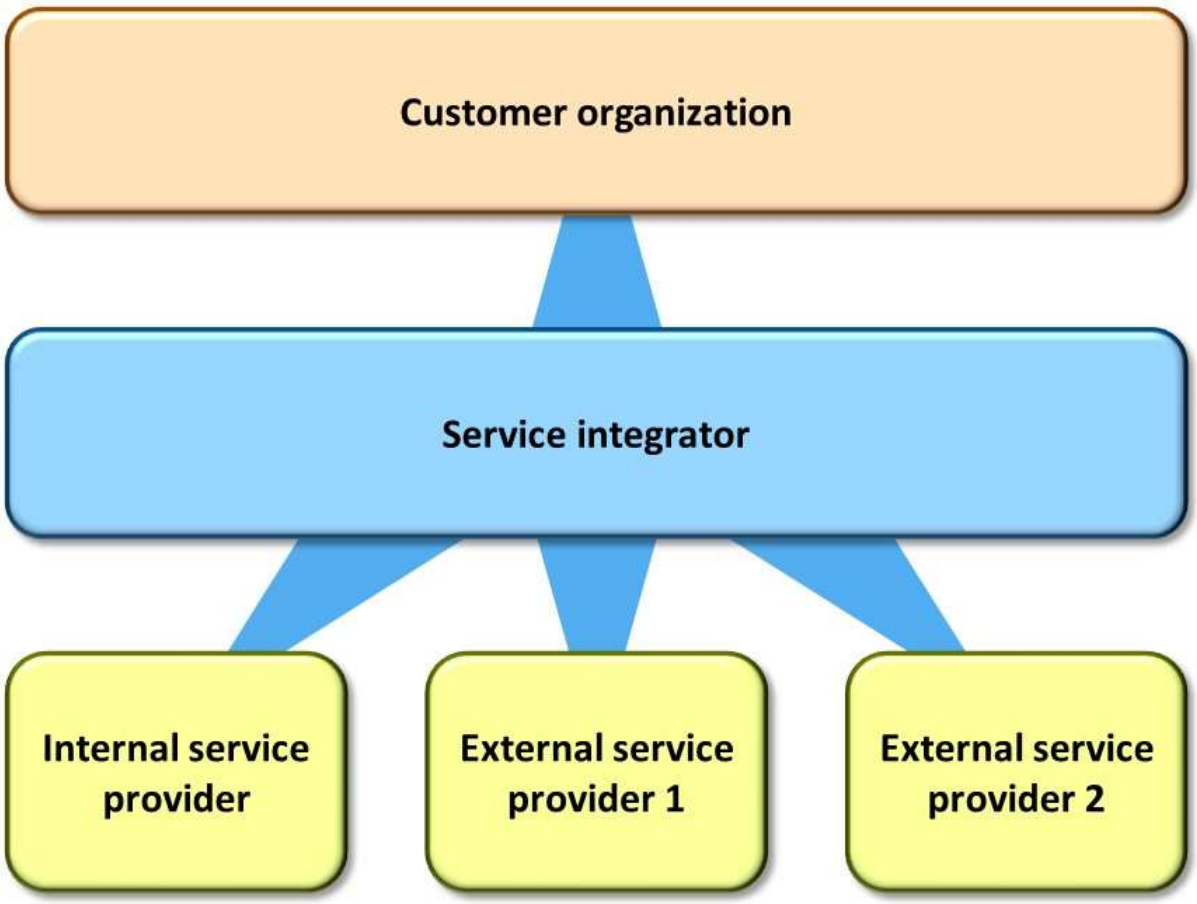

Figure 6: A simple view of a SIAM ecosystem

1.2.3. Growth and adoption of SIAM within UK Government

In 2010, the UK Government published a new information and communications technology (ICT) strategy. This included moving away from large prime supplier contracts to a more flexible approach using multiple service providers and cloud based solutions.

A paper was published in support of this strategy that set out a new approach for service management governance and organization. The proposal was to appoint an appropriate service management framework to coordinate multiple services, providers and consumers in a secure and seamless lifecycle of service delivery and improvement.

This accelerated the development and awareness of SIAM both in the UK public sector and elsewhere. This acceleration led to the publication in 2012 of the UK Government 'Cross Government Strategic SIAM Reference Set'. This was developed from experience and expertise in SIAM from the Department of Work and Pensions, Ministry of Justice, NHS Connecting for Health and the Government Procurement Service. Figure 7 shows the SIAM Enterprise Model from this reference set.

The aim of the reference set was to enable transformation in UK public sector organizations to a disaggregated, multi-sourced, multi-service environment.

The reference set described a wide range of SIAM capabilities and a suggested enterprise model, but encouraged adaptation to suit local requirements.

This was the first widely available description of SIAM. Its publication rapidly increased the awareness, development, and discussion of SIAM worldwide.

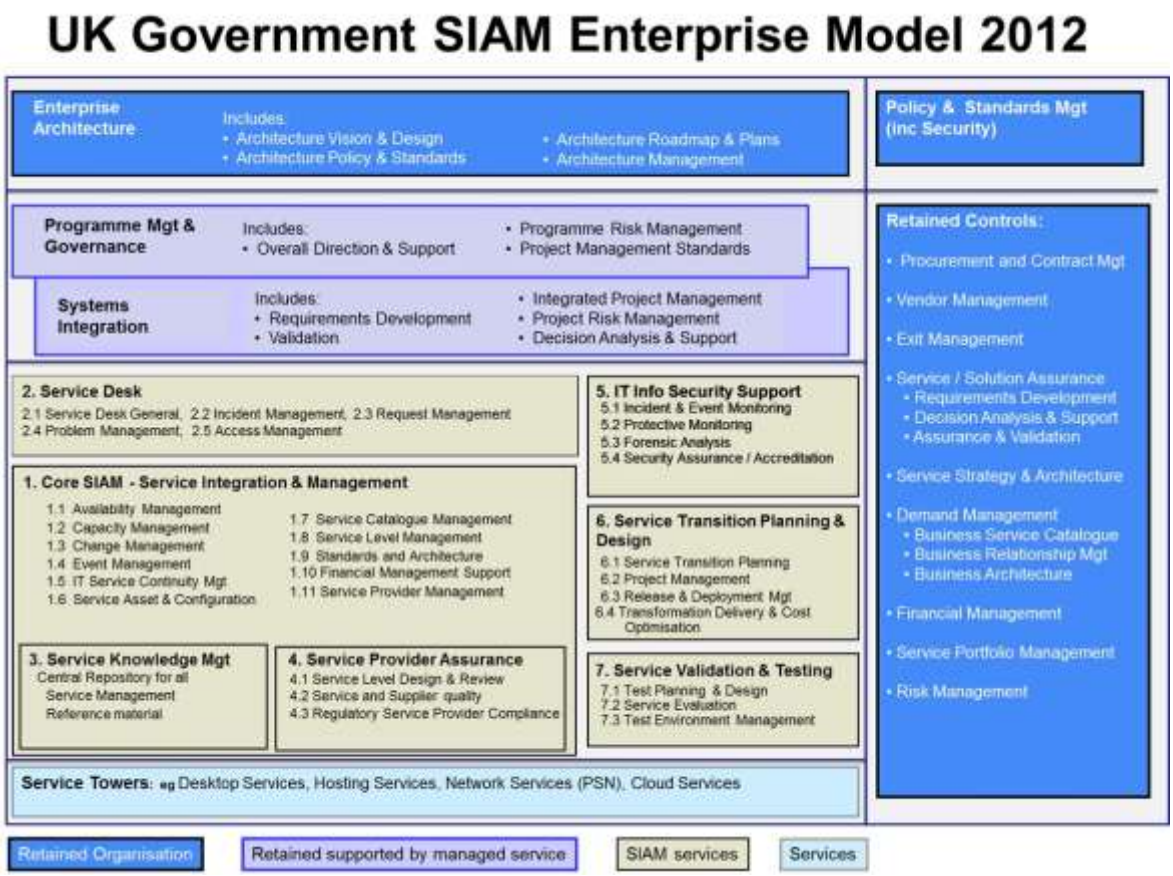

Figure 7: SIAM Enterprise Model from Service Integration & Management (SIAM) Framework Cross Government Reference Set, October 2012

The contemporary UK Government Service Design Manual advised that:

"The level of service integration will differ depending on the complexity of the business services and/or customers that are being supported, and the complexity of the services that are being delivered to those businesses. As the services and businesses become more critical or complex, the level of service integration becomes deeper.

The design of the service integration function will differ by department. It may be completely operated in-house. Or it might consist of a thin in-house capability ultimately responsible for the integrated end to end operation and management of quality IT services, underpinned by outsourced integration services for specific elements – for example performance monitoring, service desk, or service level reporting. Particularly for smaller departments and simple services, care needs to be taken not to over-engineer the service integration approach – effective use of commodity standards-based IT should mean that integration and support requirements are much less onerous than managing a locked-down bespoke system."[3]

[3] Source https://www.gov.uk/service-manual

1.2.4. SIAM history

Approaches to SIAM and its adoption have increased significantly in the last 10 years and advanced since the first iteration of this publication in 2016. This has been driven by strategic factors, including:

- Increased complexity of sourcing models
- A worldwide need to improve value
- A desire to remove reliance on single suppliers
- The need for effective controls
- A desire for the ability and flexibility to use 'best of breed' service providers and services, including the use of commodity cloud-based services.

The development and adoption of SIAM has been accompanied by an increase in the number of publications on SIAM and the number of commercial organizations offering service integration capabilities; many of whom have their own model.

> *"Against a backdrop of increased business and IT complexity, the IT service provider is faced with a challenge to deliver more with less. Customers demand IT cost transparency and demonstrated value. Additionally, multi-sourced service delivery is the new reality for many. Both customers and users are demanding innovative technology solutions and access to each providers' specialisms, but do not necessarily want to be presented with the issues that controlling the complex web of multiple providers brings.*
>
> *The multi-provider delivery models evident in many modern enterprises have created an interest in the benefits SIAM can bring. More and more customers are calling for better defined and more cohesive control structures that will allow the management of multiple service providers in a consistent and efficient way. They demand performance across a portfolio of services that meets the needs of the users and can be flexed as the needs change."*
>
> Source: Who is the King of SIAM? Whitepaper, Simon Dorst, Michelle Major-Goldsmith, Steve Robinson
>

Whilst SIAM itself may not be new, what is new is the recognition that SIAM is essential to support the delivery of value in multi-supplier ecosystems. There is evidence that this recognition is growing through the increased instances of:

- The incorporation of non-IT service providers into a SIAM ecosystem (sometimes referred to as 'enterprise SIAM')
- Internal service provider teams falling under the direction of a service integrator.

1.3. The purpose of SIAM

"Effective SIAM seeks to combine the benefits of best-of-breed based multi-sourcing of services with the simplicity of single sourcing, minimizing the risks inherent in multi-sourced approaches and masking the supply chain complexity from the consumers of the services. SIAM is therefore appropriate for businesses that are moving to or already have a multi-sourced environment. The benefits of a well-designed, planned and executed SIAM model can be realized by businesses that use multiple external suppliers, a mix of internal and external suppliers, or several internal suppliers. SIAM is therefore appropriate for most of today's businesses."

Source: An Example ITIL®-based Model for Effective Service Integration and Management Whitepaper, Kevin Holland

SIAM can, at first glance, seem to be simply an adaptation of commonly understood service management approaches such as ITIL®, COBIT®, the Open Systems Interconnect (OSI) model or the Microsoft Operations Framework (MOF). Where SIAM differs is that it acknowledges and focuses on the specific challenges associated with multi-sourced service delivery models.

The service integrator provides the customer with a single point of accountability and control for the integrated delivery of services. This is achieved through the definition and application of controls within a robust governance methodology that also provides the necessary coordination between the service providers within the SIAM ecosystem. The service integrator also drives collaboration and improvement across the service providers, acting on behalf of the customer.

The service integrator takes ownership of these activities on behalf of the customer, allowing the customer organization to focus on the activities necessary for its business, rather than focusing on service providers and technology.

The service integrator manages the complexities of dealing with multiple service providers, allowing the customer to benefit from its specialisms and capabilities without incurring any additional management burden.

The application of the SIAM methodology creates an ecosystem where all parties involved in the delivery of the services are clear about their roles and responsibilities and are empowered to deliver within those boundaries.

SIAM also provides an understanding of the necessary interactions between the services and the service providers, and the techniques to manage those interactions effectively. This facilitates the coordination of delivery, integration and interoperability.

The service integrator provides assurance of the performance of individual service providers and over the end to end service, ensuring that the expected outcomes are delivered to the customer.

SIAM enables the flexibility and innovation necessary to support the pace of change demanded by today's fast moving organizations.

1.4. The scope of SIAM

The scope of SIAM will vary from organization to organization. For the customer organization to derive any benefit from a transition to a SIAM model, the service(s) that are in scope must be defined.

This service definition makes it clear what is being governed, assured, integrated, coordinated and managed by the service integrator.

For each service within the scope of SIAM, these areas need to be defined:

- Service outcomes, value, and objectives
- The service provider(s)
- The service consumer(s)
- The service characteristics, including service levels
- The service boundaries
- Dependencies with other services
- Technical interactions with other services
- Data and information interactions with other services.

A service model should be created that shows the hierarchy of services. This hierarchy must clearly identify:

- Services that are directly consumed by the customer organization
- Underpinning services and dependencies.

Figure 8 shows an example of a service model showing the service hierarchies.

The model shows how business needs in the customer organization are met by service provider services (lettered), and how in turn they are dependent on one or more supporting services (numbered), which may be delivered by an alternative provider.

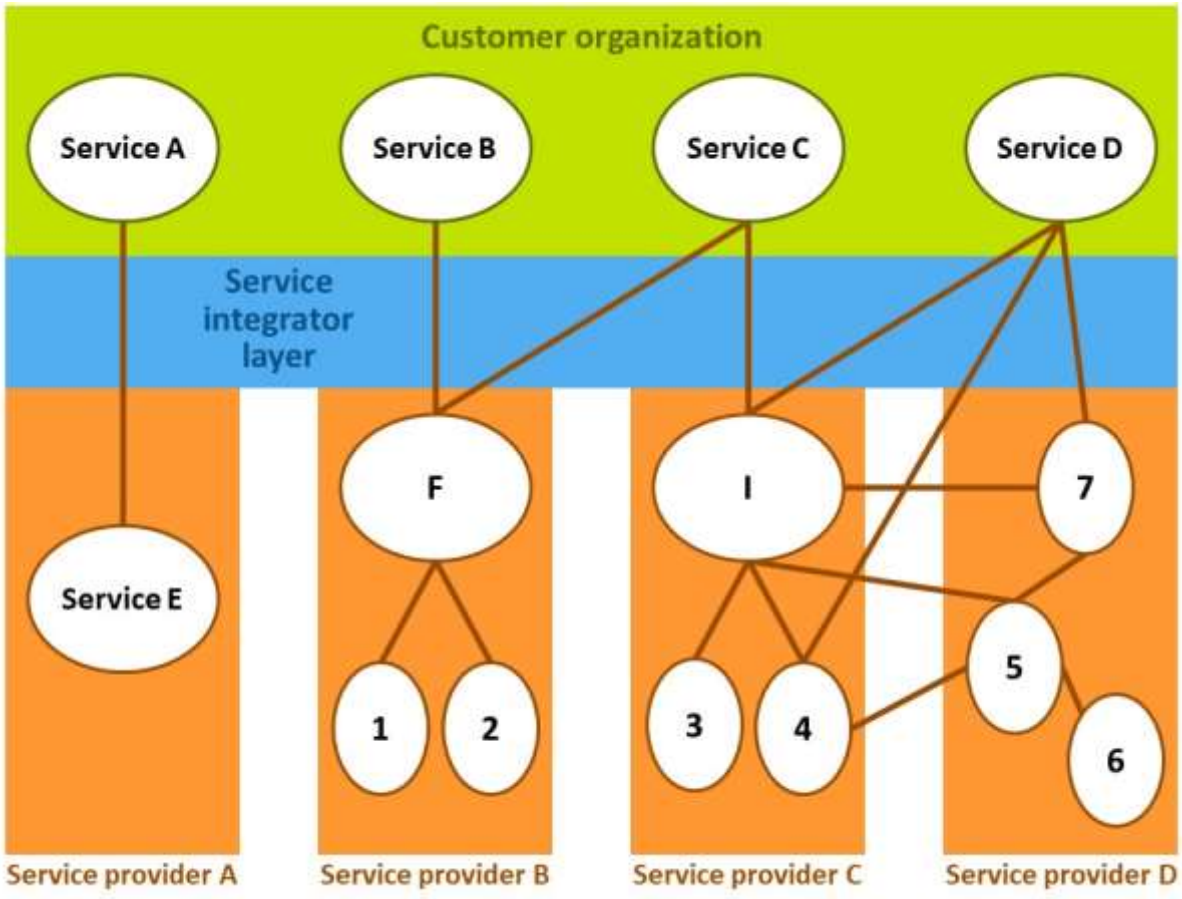

Figure 8: A service model showing the hierarchy of services

1.4.1.1. Types of service

SIAM can be applied to both IT services and technologies and non-IT services. Historically, it has mainly been adopted for IT services.

SIAM can be applied to managed services and cloud services, as well as to more traditional IT services, such as hosting or end user computing.

Different organizations will have different types of services within the scope of their SIAM model. Some models may only include services that were previously provided by internal IT, as part of a strategy to outsource these services to external organizations.

Others may include a wide range of externally provided services and retain their internal IT department as an internal service provider. The customer organization will determine the scope in line with its strategy and requirements.

Examples of IT services include:

- Office productivity applications
- Customer relationship management systems
- Networks
- Bespoke customer applications.

Examples of non-IT services that can be within the scope of SIAM are business processes such as sales order management, payroll processing, and consumer help desks.

Cloud services

SIAM can be applied to commodity services provided from the cloud. These include:

- Software as a Service (SaaS)
- Platform as a Service (PaaS)
- Infrastructure as a Service (IaaS).

Service providers for cloud services use the same delivery models for all their customers. It is therefore unlikely that they will adapt their ways of working to align with a customer's specific SIAM requirements or accept governance from the service integrator.

If this is recognized and the service integrator can adapt to its approach while still delivering customer outcomes, SIAM can still be effective for these services.

1.5. SIAM and the business strategy

1.5.1. Why change?

Without effective service integration, many of the benefits anticipated from services delivered by multiple service providers can remain unrealized.

Transforming an organization to a SIAM model ensures that critical artefacts are developed as part of the SIAM roadmap. These will include:

- A clear design for how the overall end to end service will operate and integrate
- A standard governance approach
- Definition of accountability for the integrated service
- An end to end performance management and reporting framework
- Coordination between service providers
- Integration between the processes of different service providers
- Definition of roles and responsibilities
- Definition of ownership and coordination for incidents and problems that involve multiple suppliers.

Organizations must be clear about why they want to adopt SIAM. Transitioning to a SIAM-based model is not an easy task. It will require investment and changes for all involved parties. The changes will affect areas including:

- Attitude, behavior, and culture
- Processes and procedures
- Capabilities
- Organizational structures
- Resources
- Knowledge
- Tools
- Contracts.

Senior level sponsorship and management commitment will be essential. Without management commitment, the transformation to a SIAM model is unlikely to succeed.

There are organizations for whom SIAM is not appropriate. Before any organization embarks on a transition to SIAM, it must fully understand SIAM and the benefits it could derive. This will enable it to make a value-based judgement.

The organization can gain this understanding in one of three ways, or in combination:

- Educate and train the staff who are leading on SIAM discovery and strategy in the SIAM methodology
- Seek help from outside the organization, either from similar organizations or from organizations experienced in SIAM adoption
- Recruit new staff who have the required understanding and experience.

1.5.2. Drivers for SIAM

In this context, a driver is defined as "something that creates and fuels activity, or gives force and impetus"[4]

These drivers are the triggers that create an organization's desire to move to a SIAM model. Understanding the drivers for SIAM will help an organization to gain clarity of purpose.

The drivers will be used to create a business case for the transition to SIAM. They will also help the organization to maintain focus throughout the SIAM roadmap.

[4] Source: Collins English Dictionary – Complete and Unabridged, 12th Edition 2014 © HarperCollins Publishers 1991, 1994, 1998, 2000, 2003, 2006, 2007, 2009, 2011, 2014

The challenges of delivery in a multi-service provider ecosystem

Service providers play a crucial role in helping a customer deliver its business outcomes. Poorly delivered services directly affect the customer's outcomes, and the service it can offer to its own customers.

This is true whether the services are delivered by one service provider or multiple service providers. However, the challenges of successful delivery are greater when there are multiple service providers, owing to increases in complexity and the interactions that need to take place between service providers.

Consider these scenarios that illustrate how poor service provision can have wider consequences:

- A hospital has booked in a patient to have an extensive medical scan. The medical machinery has stopped working and the cause of failure is unknown. The patient's appointment must be re-scheduled. Will the delay to this appointment have a negative impact on the patient's health?

- A motoring organization cannot dispatch a patrol officer to assist a lone female motorist and her small child on a busy freeway because its command and control systems are unavailable owing to a failed system change. The organization does not know which patrol officers are available or where they are. To how much risk is the woman and her child exposed, and for how long?

- An online retailer is unable to cope with the increase in transactions prior to the holiday season. This makes its retail platform slow down, unnecessarily reject payments and at times show as unavailable. Will customers accept this or buy their goods and services elsewhere?

- A hastily implemented, partially tested update to a travel agent's booking system has caused the personal information of its customers (including credit card details) to be hacked. The press has found out and is publishing worst-case scenarios of identity theft and potential financial impact for the customers. Will the reputation of this travel agent recover enough to remain a viable business?

There are generic drivers for SIAM that can be tailored for each organization. These can be placed into five driver groups:

1. Service satisfaction
2. Service and sourcing landscape
3. Operational efficiencies
4. External drivers
5. Commercial drivers.

1.5.2.1. Service satisfaction drivers

These are drivers related to the level of satisfaction the customer has with the services that it receives, and the level of satisfaction that is expected.

There are seven drivers related to service satisfaction:

1. Service performance
2. Service provider interactions
3. Clarity of roles and responsibilities
4. Slow pace of change
5. Demonstration of value
6. Lack of collaboration between service providers
7. Delivery silos.

Service performance

Customers expect guaranteed service performance and availability, irrespective of who provides the service.

On some occasions, customers in a multi-service provider ecosystem can experience dissatisfaction with the level of service they receive, even though each of the service providers report that they are achieving their individual service level targets.

One example is incident resolution times, where the time taken to pass an incident from one service provider to another is not considered in the service level calculation.

Without effective governance, coordination and collaboration, there will be service performance issues including:

- A lack of transparency for the end to end service
- Incomplete understanding of, and inability to report on, end to end service performance
- No management of service levels across the end to end service
- Service performance that is not aligned to business requirements.

Service provider interactions

In a multi-service provider environment, service users might have to interact separately and differently with each internal and external service provider.

For example, one service provider might only accept contact from users by telephone, another only by email, and another only by an internet portal.

Clarity of roles and responsibilities

Roles, responsibilities and accountabilities can be unclear in an ecosystem that has multiple service providers. The responsibility and accountability for the delivery of services is often held in several different places.

Some customer departments may have the primary relationship with a service provider; for example, the payroll department with the external provider of payroll services. Some service providers may need to have relationships with multiple customer departments; for example, the hosting provider with IT operations, the engineering department and the application development department.

Without effective governance and coordination, a culture can develop where there is no ownership of issues, leading to customer dissatisfaction and loss of perceived value.

For example, a customer frequently experiences slow performance of a business service. This service underpinned by several technical services from different service providers. Every provider says that its service is performing correctly and another service provider must be responsible.

Slow pace of change

Customers expect changes to be made quickly to meet business requirements.

They also expect that new services, new service providers, and new technologies can be introduced rapidly and integrated with existing services to meet demanding timescales.

Demonstration of value

Customers expect that services will deliver the outcomes they require, at a reasonable level of cost and quality. In many organizations, the IT department is not able to demonstrate this value to the customer.

Lack of collaboration between service providers

As the number of parties involved in service delivery increases, so does the need for collaboration.

The requirement is no longer just about a one-way relationship between a service provider and the customer, but a network of relationships between multiple service providers who all need to work together to provide a customer-focused service.

External service providers have their own commercial interests and drivers, which can conflict with the goals of the customer and other service providers.

An example of this is where a business service received by the customer relies on the integration of several services from different service providers. An individual service provider may only be concerned with the availability of the service elements for which it is responsible.

If a service provider does not consider how its service interacts with other providers' services, it could make changes that stop the integrated service working.

Delivery silos

Delivery silos can exist where there are multiple internal or external service providers. Each service provider focuses only on its own goals and outcomes.

These silos isolate service providers, processes and departments. Their impact includes:

- Duplication of work
- Lack of knowledge sharing
- Increased cost of service provision
- Potential for degraded service performance
- Inability to identify service improvements.

A blame culture can arise between the service providers due to the lack of co-operation between silos. When a service is faulty, each silo focuses on proving it is not at fault, rather than working with other silos to correct the fault.

1.5.2.2. Service and sourcing landscape drivers

These are drivers related to the nature, number, and types of services and service providers, and the complexity of the interactions between them.

There are five drivers related to the service and sourcing landscape:

1. External sourcing
2. Shadow IT
3. Multi-sourcing
4. Increase in the number of service providers
5. Inflexible contracts.

External sourcing

Many of the traditional frameworks and practices used to manage IT services were designed for an environment where most of the services were developed and supported internally. However, the way that many customers source their services has fundamentally changed.

Rather than the former insourced approach, many organizations have made the strategic decision to source applications and services externally.

External sourcing of services may enable a customer to reduce costs by realizing the benefits of competition amongst a wider network of service providers. This sourcing approach can also provide the customer with access to best in class capabilities.

These services often include specialized and cloud-based commodity services. The customer expects that all services will be fully integrated with other services that they consume.

Shadow IT

Shadow IT describes IT services and systems commissioned by business departments, without the knowledge of the IT department (sometimes referred to as 'stealth IT').

These services are commissioned to meet a business requirement, but can cause problems when they require connectivity and alignment with the other services consumed by the customer.

Multi-sourcing

Many organizations have made a strategic decision to transition from single-sourcing to multi-sourcing and multiple delivery channels.

This transition often results in a mix of internal and external sourcing. Multi-sourcing can reduce many of the risks and issues associated with being over-reliant on a single service provider. These risks include:

- Slow pace of change and low levels of innovation
- High cost of services when benchmarked against competitors
- Reliance on specific technology platforms
- Inability to take advantage of new service offerings, service providers or technologies that are available elsewhere
- Long-term contractual restrictions
- Lack of control over services
- Lack of service knowledge in the customer organization
- High risk to service continuity during a transition to a new service provider
- Cost of the transition to a new single service provider
- A risk that the service provider may go out of business.

Increase in the number of service providers

The number of service providers in the market is increasing. More and more options are available to customer organizations that are evaluating different sourcing approaches.

Inflexible contracts

Lengthy, inflexible contracts with service providers lock in customers and prevent them accessing technology developments and innovative practices.

Moving to a SIAM model will typically include shorter, more flexible contracts that allow customers to add and remove service providers, and adapt how they work with existing service providers.

1.5.2.3. Operational efficiencies drivers

These are drivers that relate to improvements and efficiencies for the end to end delivery of services, and the potential to create operational efficiencies through standardization and consolidation.

There are four drivers related to operational efficiencies:

1. Disparate service management capabilities
2. Data and information flows
3. Data and information standards
4. Tooling.

Disparate service management capabilities

In an environment with multiple service providers, each of them will maintain its own service management capability. The customer will also need to retain service management capabilities, which interact with the service providers.

This can result in:

- Duplication of resources and activities
- Low utilization in some areas and high utilization in others
- Inconsistent levels of capability and maturity
- No sharing of knowledge
- Inconsistent processes and procedures
- A blame culture between teams.

These can result in increased costs and degraded service performance for the customer organization.

Data and information flows

In an environment with multiple service providers, data and information will be transferred between parties during end to end service delivery.

If the data and information flows are not mapped and understood, the flow can be interrupted, leading to service performance issues and operational inefficiencies.

The 'integration' element of the SIAM methodology manages the service from end to end. This requires an understanding of all data and information sources and interactions between all parties.[5]

Mapping data and information flows provides an insight into the boundaries between the different service providers. This knowledge can then be used to create integrated flows of data and information.
SIAM is then used to manage and coordinate these flows. This enables end to end delivery of the required level of service to the customer.

Data and information standards

If data and information standards are not consistent across all service providers, then extra effort will be required when data and information are exchanged between service providers and with the customer.

A common data dictionary, introduced as part of an integrated approach to service management, would include:

- Incident severity, categorization and recording
- Service levels and service reporting
- Requests for change
- Capacity and availability recording
- Management report formats
- Knowledge artefacts.

Tooling

Service providers will have their own toolsets to support their internal processes. When there is a requirement to exchange data and information with other providers and the customer, lack of integration between toolsets can create problems.

[5] Techniques like OBASHI can be used to map data flows to support SIAM

Without a design for interoperability, these exchanges can be inefficient, leading to:

- Re-entry of data and information by the receiving party (the 'swivel chair approach')
- A requirement to translate data and information
- Inadvertent alteration of data and information
- Loss of data and information
- Time delays in the exchange between the parties, resulting in a poor service experience.

The swivel chair approach

The 'swivel chair approach'[6] is a colloquial term for manually entering data into one system and then entering the same data into another system. The term is derived from the practice of the user turning from one system to another using a swivel chair.

1.5.2.4. External drivers

These are drivers that are imposed from outside the organization. The organization must respond to these drivers in some way.

There are two drivers related to external factors:

1. Corporate governance
2. External policy.

Corporate governance

Many customers have corporate governance requirements that demand clarity over the responsibilities of service providers and the controls that are applied to them. An example is the Sarbanes Oxley Act passed in the United States of America in 2002 to protect investors from fraudulent accounting activities.

[6] Source: http://www.webopedia.com/TERM/S/swivel_chair_interface.html

Effective corporate governance requires a definition of roles, responsibilities, accountabilities and interactions between all parties and systems at a far more granular level than in the past.

External policy

For some organizations, the use of SIAM is mandated under a policy created outside the customer organization.

Policy drivers apply to:

- Public sector organizations affected by government or state policies
- Public sector service providers affected by government or state policies
- Private sector organizations that are part of a larger group that has adopted SIAM as part of its strategy.

1.5.2.5. Commercial drivers

These drivers apply to organizations who want to offer commercial services related to SIAM.

There are two drivers related to commercial factors:

1. Service providers
2. Service integrators.

Service providers

When a customer organization adopts SIAM, it will need its service providers to align to its SIAM model.

The delivery models of many traditional providers do not align with SIAM models, because they do not consider the requirements for integration with other service providers and a service integrator.

If these service providers want to be able to compete for business in SIAM ecosystems, they must make changes to how they deliver their services.

Changes will affect:

- Tooling
- Processes and procedures
- Process interfaces
- Data dictionaries and standards
- Service reporting
- Governance approaches
- Data and information standards
- Commercial and contractual standards.

Service integrators

Some organizations want to provide service integration capabilities to customers. They might act as an externally sourced or hybrid service integrator, or they might provide specialist support during one or more stages of the SIAM roadmap:

- Discovery & Strategy
- Plan & Build
- Implement
- Run & Improve.

1.6. Value to the organization – the SIAM business case

Any organization that is considering a transition to SIAM needs to understand the expected benefits. Clarity on these benefits will form the basis for developing the organization's business case for SIAM.

Benefits can be a mixture of tangible (for example: cost savings) and intangible (for example: improved customer service).

The benefits and costs will be different for each organization. They depend on many factors, including:

- Drivers
- Required business outcomes
- Services in scope
- The customer organization's role in the SIAM ecosystem
- Budget
- Organizational culture
- Appetite for risk
- The legacy contracts in place and their flexibility to accommodate new ways of working.

The costs that will be incurred need to include not just cost of service under a SIAM model, but also the cost of the transition project to achieve the change. There will also be costs associated with developing any capabilities or artefacts, which the organization does not currently have, but that will be required to operate within a SIAM ecosystem.

An organization should consider its own drivers to achieve the necessary clarity for the anticipated business benefits.

There are generic benefits that are likely to be relevant to most organizations making the transition to SIAM.

The benefits can be placed into four groups:

1. Improved service quality
2. Optimized costs and increased value
3. Improved governance and control
4. Improved flexibility and pace.

When defining the expected benefits, organizations should consider how long it will take for them to be delivered. It can be some time after the transition is complete before benefits start to be realized.

A SIAM model leverages experience and input from multiple service providers. It delivers benefits from collaboration between service providers, and from competitive tension between them.

1.6.1. Improved service quality

Improving service quality often forms part of a SIAM business case. Benefits related to service quality can include:

- A shift in focus from satisfying contractual targets to focus on innovation and satisfying perceived business need
- Consistent achievement of service levels, including end to end:
  - Incident and problem resolution times
  - Service availability
  - Service reliability
- Improvements in customer satisfaction with the services
- The customer can concentrate on delivering its business outcomes, and have confidence in its supporting services
- Improved quality in the delivery of changes, integrated across service providers
- Improved flow of end to end processes, sometimes referred to as 'SIAM cadence'
- Consistency in how end users interact with service providers
- Consistent and understandable management information about the services
- Access to best of breed services and service providers
- Development and sharing of knowledge and best practice
- Continual service improvement.

1.6.2. Optimized costs and improved value

The business case for SIAM must include the costs associated with the transition to a new way of working. The service integrator layer can add additional cost to an organization, whether it is sourced externally or provisioned using internal resources.

However, the increased value associated with a transition to SIAM, and the potential for cost optimization in the service provider layer, should balance out or exceed any overall cost increases.

If SIAM is correctly designed and implemented, it will provide better service value, with both tangible and intangible benefits.

Benefits in this group include:

- Cost optimization from:
  - Innovation
  - An understanding of the true cost and value of each service and service provider
  - Competitive tension between service providers
  - Best use of skilled (and often scarce resources)
  - Reduced costs of process execution
  - Identification and removal of duplication of resources and activities
- Improved value for money for individual services
- Consistent performance from all service providers, leading to improved efficiency
- Improved management of resources and capacity
- Faster response to changing business needs
- Faster access to new technologies and services
- Contract optimization and the potential for shorter term, more effective contracts
- Flexibility to accommodate change.

1.6.3. Improved governance and control

SIAM provides an opportunity to apply consistent governance and control over all service providers, both internal and external.

Governance and control benefits include:

- Consistent and visible definition and application of a governance framework
- Consistent assurance of services and service providers
- A single point of ownership, visibility, and control of services
- Clearly defined services, roles, responsibilities, and controls
- Improved management of service provider performance
- The ability to benchmark between service providers
- Contract optimization and standardization related to governance and control
- Improved visibility, understanding and management of service risks.

1.6.4. Improved flexibility

If correctly designed and implemented, SIAM can provide the flexibility that is necessary to support changing business requirements, balanced with an appropriate level of control.

The benefits in this group include:

- Effective and timely introduction of new and changed services and service providers
- The flexibility to replace poorly performing or uneconomic service providers
- The ability to rapidly accommodate changes to services, technologies, and business requirements
- Increased ability to manage commodity services in a consistent way
- Increased ability to scale service provision.

2. SIAM roadmap

This roadmap outlines an example plan for the implementation of SIAM as part of an organization's operating model.
Using a roadmap for the implementation has several benefits, including:

- Defining the SIAM requirements
- Providing a planning framework
- Determining the most appropriate SIAM structure and SIAM model
- Guiding the implementation
- Directing ongoing continual improvement.

There are four stages in the SIAM roadmap:

1. Discovery & Strategy
2. Plan & Build
3. Implement
4. Run & Improve.

For each stage, this section provides examples of:

1. Objectives
2. Triggers
3. Inputs
4. Activities
5. Outputs.

Whilst the activities are presented here in a sequential manner, many are likely to be iterative or may even be undertaken in parallel.

High-level requirements are defined in the first stage. These are then further developed in the second stage, before being implemented in the third stage. The fourth stage is where the SIAM model is operated and continually improved.

In many cases, the roadmap will be executed iteratively, with a checkpoint at the end of each stage. The checkpoint should review areas including:

- The actual outputs from the stage against those intended
- Risks
- Issues
- Plan for the next stage.

This information should be used to validate decisions taken earlier in the roadmap. It might highlight potential issues, requiring a return to an earlier stage for further work.

An example of an iterative roadmap

In the Discovery & Strategy stage, a customer organization might propose an internally sourced service integrator.

In the second stage, it formulates a plan and designs its SIAM model to support this structure.

However, during the third stage it discovers that it is unable to recruit the necessary resources. It returns to the first stage to review its strategy, and changes it to apply the hybrid service integrator structure.

The Plan & Build stages must then be revisited.

Many organizations use outside assistance during the execution of their SIAM roadmap. This can be helpful during the transition to SIAM, but the customer organization needs to ensure that the model being used by the external organization is suitable for its needs.

If outside help is required, it is a good idea to have a commercial boundary between an organization that is assisting with the Discovery & Strategy and Plan & Build stages, and any external service integrator.

2.1. Discovery & Strategy

2.1.1. Objectives

The Discovery & Strategy stage initiates the SIAM transformation project, formulates key strategies, and maps the current situation. This enables the customer organization to:

- Determine what it intends to source internally
- Consider any additional skills and resources that may be required
- Determine what it would like to source externally
- Understand the expected benefits.

The objectives for this stage are to:

- Establish the SIAM transition project
- Establish a governance framework
- Define the strategy and outline model for SIAM and the services in scope
- Analyze the current state of the organization, including skills, services, service providers, tools and processes
- Analyze the marketplace for potential service providers and service integrators.

2.1.2. Triggers

There are many reasons for organizations to consider adopting a SIAM model. These drivers are described in section **1.5.2 Drivers for SIAM**.

2.1.3. Inputs

Inputs to this stage include:

- Enterprise, corporate, and IT governance standards
- Current business, procurement and IT strategies
- Business requirements and constraints
- Current organization structure, processes, products and practices
- Existing service provider information, including existing contracts and agreements
- Understanding of market forces and technology trends.

2.1.4. Activities

The activities in this stage are:

1. Establish the project
2. Define strategic objectives
3. Define governance requirements and the high-level governance framework
4. Define principles and policies for roles and responsibilities
5. Map the existing services and sourcing environment
6. Assess the organization's current maturity and capability
7. Understand the marketplace
8. Define the strategy for SIAM and the outline SIAM model
9. Produce the outline business case.

2.1.4.1. Activity: Establish the project

The SIAM transformation project should be formally established using the organization's selected project management methodology.

This includes:

- Setting up a project management office
- Defining roles and responsibilities for the project
- Setting up project governance
- Agreeing the approach for managing project risks.

The organization will also choose whether to adopt a waterfall or Agile project delivery approach.

2.1.4.2. *Activity: Define the strategic objectives*

Strategic objectives are the long-term goals of the organization that SIAM is intended to support.

They are related to the drivers for SIAM and the SIAM business case. The objectives defined and agreed in this activity will be used as a basis for items including the:

- SIAM model
- SIAM governance framework
- Sourcing model
- Roles and responsibilities.

2.1.4.3. *Activity: Define the governance requirements and high-level governance framework*

SIAM requires a specific governance framework that allows the customer organization to exercise and maintain authority over the SIAM ecosystem.

The model should be tailored to the specific SIAM structures, the SIAM model, and the customer organization's overall appetite for risk.

At this stage, the SIAM governance framework will be defined at a high-level. It should include:

- Specific corporate governance requirements that support any external regulations and legal requirements
- Controls to be retained and operated by customer organization
- Definition of governance boards and governance board structures
- Segregation of duties between the customer organization and external organizations
- Risk management approach
- Performance management approach
- Contract management approach
- Dispute management approach.

2.1.4.4. *Activity: Define principles and policies for roles and responsibilities*

In this activity, the key principles and policies for roles and responsibilities are created. They will take into account the governance requirements and strategic objectives.

The specific, detailed roles and responsibilities will not be defined or assigned until more detailed process models and sourcing agreements have been designed within the Plan & Build stage.

Two aspects should be considered here:

- Segregation of duties if one organization is operating in more than one SIAM layer
- Boundaries of delegated authority.

2.1.4.5. *Activity: Map the existing services and sourcing environment*

Before a SIAM model can be designed, the current environment must be understood. This includes:

- Existing services and the service hierarchy
- Existing service providers (internal and external)
- Contracts
- Service provider performance
- Relationships with service providers
- Cost of services.

The creation of the service hierarchy is a critical activity to support the design of the desired future state. The hierarchy enables the identification of essential business functions, critical service assets and dependencies across the ecosystem.

This activity will provide clarity on the current environment. It can also help to highlight issues including:

- Duplications in service offerings
- Misaligned contractual commitments
- Unused operational services
- Uneconomic services
- Service risks that require mitigation.

Information about service providers can be used to decide whether they are to be retained in the current format, or whether their services should be sourced under new arrangements.

2.1.4.6. *Activity: Assess current maturity and capability*

Capability "*The power or ability to do something*"[7]

Maturity relates to the degree of formality and optimization of processes, from ad hoc practices, to formally defined steps, to managed result metrics, to active optimization of the processes.[8]

Both capability and maturity need to be assessed to inform the strategy for SIAM.

For example: a customer organization may currently have low maturity in service integration processes, practices, and tools; but have a high capability in these areas. This may influence its choice of preferred SIAM structure, leading it to select an internally sourced service integrator.

A baselining exercise should be carried out to understand the customer organization's current capability and maturity in organization, processes, practices and tools. This will inform the next stage of the roadmap.

This exercise can also identify any issues that require a review of earlier decisions. For example, where there is insufficient capability to run the project management office; or insufficient maturity of the incident management process.

2.1.4.7. *Activity: Understand the marketplace*

It is important at this stage to understand the existence and capabilities of potential external service integrators and service providers. This will inform the strategy for SIAM and the SIAM model.

[7] Source: Oxford English Dictionary © 2016 Oxford University Press

[8] Capability Maturity Model (CMM)

This activity should include a review of available technologies and services against the strategic objectives.

For example, a move to cloud services can support a strategic objective for reduced cost of ownership.

The service providers of commodity cloud services are unlikely to take part in the SIAM model's boards, process forums and working groups. This could reduce the workload of the service integrator, to a level where an internally sourced service integrator may offer better value than an externally sourced service integrator.

2.1.4.8. Activity: Define the Strategy for SIAM and the Outline SIAM Model

This activity will take the information and outputs from previous activities in this stage to define the strategy for SIAM, and an outline SIAM model.

These should include:

Strategy for SIAM

- The vision for SIAM
- Strategic objectives
- Current maturity and capability
- Existing services and sourcing environment
- Marketplace analysis
- Governance requirements
- Proposed SIAM structure, including retained capabilities
- Proposed sourcing approach
- Justification for proposals.

Outline SIAM Model

- Principles and policies
- Governance framework
- Outline roles and responsibilities
- Outline of process models, practices, and structural elements
- Outline of services
- Service providers to be retired.

The strategy for SIAM and the chosen SIAM model both need to align with the original business requirements and the business strategy.

2.1.4.9. Activity: Produce the outline business case

This activity will take the information and outputs from all previous activities in this stage to produce an outline business case for SIAM.

This should include:

- Strategy for SIAM
- Outline SIAM model
- Current state
- Expected benefits from SIAM
- Risks
- Outline costs of the transition to SIAM
- High-level plan.

The outline business case should be approved in accordance with the customer organization's governance arrangements before the next roadmap stage begins.

2.1.5. Outputs

The outputs from the Discovery & Strategy stage are:

- An established SIAM transition project
- Strategic objectives
- Governance requirements and high-level SIAM governance framework
- Defined principles and policies for roles and responsibilities
- Map of existing services and sourcing environment
- Current maturity and capability levels
- Market awareness
- Approved outline business case for SIAM
- Strategy for SIAM
- Outline SIAM model.

2.2. Plan & Build

2.2.1. Objectives

The Plan & Build stage builds on the outputs from the Discovery & Strategy stage to complete the design for SIAM and create the plans for the transformation.

During this stage, all plans and approvals are put in place before the Implement stage begins. The main objectives for this stage are to:

- Complete the design of the SIAM model, including the services that are in scope
- Obtain full approval for the SIAM model
- Appoint the service integrator and service providers
- Commence organizational change management.

2.2.2. Triggers

This stage is triggered on completion of the Discovery & Strategy stage, when the organization confirms its intention to proceed with a SIAM implementation.

2.2.3. Inputs

The inputs to this stage are the outline business case, and the high-level model and frameworks created during the Discovery & Strategy stage:

- Governance requirements and high-level SIAM governance framework
- Defined principles and policies for roles and responsibilities
- Map of existing services and sourcing environment
- Current maturity and capability levels
- Market awareness
- Approved outline business case for SIAM
- Strategy for SIAM
- Outline SIAM model.

In this stage, work will be carried out to further define, refine, and add detail to the outputs from the previous stage. Some organizations may choose to use an Agile approach for this.

2.2.4. Activities

The activities during this stage are:

1. Design the detailed SIAM model
2. Approve the full business case
3. Commence organizational change management
4. Appoint the service integrator
5. Appoint service providers
6. Plan for service provider and service retirement
7. Review stage and approve implementation.

2.2.4.1. Activity: Design the detailed SIAM model

The SIAM model provides the detail for how SIAM will be applied across all parties in the SIAM ecosystem. It contains many elements, including:

1. Service model and sourcing approach
2. The selected SIAM structure
3. Process models
4. Governance model
5. Detailed roles and responsibilities
6. Performance management and reporting framework
7. Collaboration model
8. Tooling strategy
9. Ongoing improvement framework.

Careful design of this model is critical to success. The design activities will not necessarily be sequential. There is more likely to be an iterative cycle, which starts with an initial definition, and becomes successively more detailed as each iteration is agreed.

There must be regular review and feedback across all the design activities. Agile approaches can be particularly useful for this. Consideration must also be given to interdependencies between the different design activities.

Organizations will determine the level of detail they require for their own SIAM model. This will depend on several factors, including:

- Strategic objectives
- Market conditions
- Services and service complexity
- Number of service providers
- Appetite for risk
- Resource and process capability and maturity
- Available tools
- Budget.

2.2.4.1.1. Define service model and sourcing approach

This activity defines the services in scope for the SIAM model, the service hierarchy, and how the services are grouped for sourcing. Creating the service model is a critical activity for an effective transition to SIAM.

These areas must be clearly defined for each service:

- The service provider(s)
- The service consumer(s)
- The service characteristics, including service levels
- The service boundaries
- Dependencies with other services
- Technical interactions with other services
- Data and information interactions with other services
- Service outcomes, value, and objectives.

Services should be placed into groups, with groups assigned to specific service providers. The service model shows the hierarchy of the proposed services, and the service provider for each service. This forms part of the overall SIAM model.

The model should also include the expected process interactions between the services and service providers. Enabling practices like OBASHI[9] can support this by mapping data flows between service providers.

[9] See OBASHI.co.uk for further information

The service model will help to identify omissions, single points of failure, and duplication.

The aim should be to achieve a balance between getting 'best of breed' services, the number of services and service providers, and the complexity of the service model and hierarchy. There also needs to be a balance between service complexity and integration complexity. Services should be designed to minimize interactions with other services, as these interactions drive complexity, risk, and cost.

Care should be taken when defining the services and assigning them to service providers. The number of contact points, interactions, and therefore opportunities for failure, will increase as the number of services and service providers increase.

Sourcing approach for services

The ability to source services in groups is one of the benefits of SIAM. Rather than having a single, monolithic contract with one service provider delivering everything, the full range of services can be broken down into the most efficient and best value groupings. Each group is then individually sourced, externally or internally.

Common examples of service groups include:

- Hosting
- Application development and support
- Desktop support/end user computing
- Networks
- Cloud services
- Managed services.

Each group can be provided by one or more service providers. For example, a 'hosting' group could include Platform as a Service (PaaS) and Infrastructure as a Service (IaaS), sourced from one or multiple service providers.

The design of service groups should try to minimize any technical dependencies between services. Dependencies create interactions between service providers and potential points of failure, and can increase the workload of the service integrator.

There is no requirement within the SIAM management methodology to separate services that logically stay together. For example, there is no need to divide a Software as a Service offering into 'hosting' and 'application development and support' if it is more logical to source it as one group.

Unnecessary separation can cause issues, such as disputes about who is responsible for performance problems. This particularly applies to managed services, legacy services, cloud services, and DevOps services.

There is no limit to the number of different groups within a SIAM model. However, integration complexity will increase as the number of service groups increases.

2.2.4.1.2. Select the SIAM structure

The selected SIAM structure determines the sourcing approach for the service integrator. This is a crucial decision that must be taken with care, as any changes to the structure after this point will result in re-work and cost.

All the information gathered so far should be used to select the preferred SIAM structure. If this is different from the proposal created during the Discovery & Strategy stage, it may be necessary to repeat parts of that stage.

See section **3 SIAM structures** for more information on the advantages and disadvantages of each structure.

2.2.4.1.3. Design process models

In a SIAM model, the execution of most processes will involve multiple service providers. Each service provider might carry out individual steps in a different way, but as part of an overall integrated process model.

Process models are therefore important SIAM artefacts; the individual processes and work instructions are likely to remain within the domain of the individual service providers.

The process model for each process should describe:

- Purpose and outcomes
- High-level activities
- Inputs, outputs, interactions and dependencies with other processes
- Inputs, outputs, and interactions between the different parties (for example, between the service providers and the service integrator)
- Controls
- Measures
- Supporting policies and templates.

Techniques such as swim lane models, RACI matrices, and process mapping are commonly used, and are helpful for establishing and communicating process models.

The process models will continue to evolve and improve as further activities are undertaken in this stage, and in the Run & Improve stage. This includes getting input from the selected service providers and service integrator.

Adding granularity

The iterative design and development of the SIAM structure, services and service groups, roles and responsibilities, governance model, process models, performance management and reporting framework, collaboration model, tooling strategy and ongoing improvement framework, all add detail to the SIAM model.

This detailed work and iterative approach is critical to ensure that the SIAM model will work once implemented, and that it aligns with the strategy for SIAM and the customer organization's requirements.

2.2.4.1.4. Design governance model

The governance model should be designed using the governance framework and the roles and responsibilities. For each governance body, this model should include:

- Scope
- Accountabilities
- Responsibilities
- Meeting formats
- Meeting frequencies
- Inputs
- Outputs (including reports)
- Hierarchy
- Terms of reference
- Related policies.

The governance framework should also be updated and more detail added. This is an iterative activity that should be completed before the end of this roadmap stage.

2.2.4.1.5. Design roles and responsibilities

Roles and responsibilities should be designed using the outline SIAM model and outline process models, the SIAM structure and the governance framework.

This should include the detailed design and allocation of roles and responsibilities to:

- Process models
- Practices
- Governance boards
- Process forums
- Working groups
- Organizational structures and locations for any retained capabilities.

This work may highlight a need to review earlier designs and decisions.

Roles and responsibilities can be further developed in the Run & Improve stage, but the detail must be confirmed in this stage before any service integrator or service providers can be appointed.

2.2.4.1.6. Design performance management and reporting framework

The performance management and reporting framework for SIAM addresses measuring and reporting on a range of items including:

- Key performance indicators
- Performance of processes and process models
- Achievement of service level targets
- System and service performance
- Adherence to contractual and non-contractual responsibilities
- Collaboration
- Customer satisfaction.

Measurements should be taken for each service provider and its services, but also across the end to end SIAM ecosystem.

Designing an appropriate performance management and reporting framework for a SIAM ecosystem can be challenging. It is usually straightforward to measure the performance of an individual service provider; the challenge is in measuring end to end performance as experienced by the users, particularly when there may be limited consistency in how each of the providers measure and report.

The framework should also include the standards for:

- Data classification
- Reporting formats and frequency.

2.2.4.1.7. Design collaboration model

SIAM can only be effective when service providers, the service integrator and the customer can communicate and collaborate with each other.

Section **7 SIAM cultural considerations** has some examples of how to encourage collaboration in SIAM ecosystems.

2.2.4.1.8. Define tooling strategy

A consistent and comprehensive tooling strategy is important within a SIAM ecosystem. The tooling strategy is influenced by:

- The selected SIAM structure
- The SIAM model
- Existing customer toolsets
- Service provider and service integrator toolsets
- Types of service provider
- Budget.

The tooling strategy should focus on supporting the flow of data and information and process integration efficiently:

- Between the service providers
- Between service providers and the service integrator
- Between the service integrator and the customer.

This is more important than focusing on technology alone.

Many organizations use more than one toolset in their SIAM ecosystem, selecting a range of 'best of breed' toolsets for:

- Supporting service management processes
- Data analysis
- Reporting and presentation
- Event monitoring
- Audit logging.

There are four main options for toolsets:

1. A single toolset is used by all parties, mandated by the customer
2. The service providers use their own toolsets and integrate them with the service integrator's toolset
3. The service providers use their own toolsets and the service integrator integrates them with its own toolset
4. An integration service is used to incorporate the toolsets of the service providers and the service integrator.

The tooling strategy should include:

- Enterprise architecture
- Functional and non-functional requirements
- Integration requirements (technical and logical)
- Data mapping for each SIAM layer
- Data ownership
- Access control
- Measurement and reporting.

2.2.4.1.9. Design ongoing improvement framework

An improvement framework needs to be developed and maintained in conjunction with all parties within the SIAM model. This will ensure a focus on continual improvement across the SIAM ecosystem.

Service providers should have incentives that encourage them to suggest and deliver improvements and innovation.

2.2.4.2. *Activity: Approve full business case*

At this point, the design should be detailed and complete enough to enable the full costs of the SIAM transition and the anticipated benefits to be determined.

The outline business case should be reviewed and updated with detailed information to create a full business case.

This should then be approved using the organization's corporate governance and approvals process. The approval allows the start of procurement activities for any external service providers, service integrator, and tools.

2.2.4.3. *Activity: Commence organizational change management*

A SIAM transformation is a major business change, affecting the customer organization, service integrator and service providers at every level.

Organizational change management will be essential if the transformation is to succeed.

During any organizational change, it is important to protect the existing service and minimize the impact on the existing organization.

2.2.4.4. *Activity: Appoint the service integrator*

Ideally, the service integrator should be selected and in place before the SIAM model is finalized and before any service providers are selected.

If this can be achieved, the service integrator can be involved with the Plan & Build activities. The benefits of this approach are:

- The service integrator is involved with the design and selection of service providers, so it can use its experience to assist with these activities
- The service integrator is fully aware of the requirements placed on the service providers during selection and appointment.

The selection process and contractual agreement for an external service integrator may take some time. On occasion, the customer might source the service integrator and the service providers simultaneously.

Alternatively, the service providers might already be in place or undergoing transition from legacy contracts before the service integrator role is confirmed.

2.2.4.5. *Activity: appoint service providers*

Service providers cannot be selected until this point, as it will not be possible to fully document the requirements until the SIAM model has been fully defined.

The contracts in place in a SIAM model need to support the overall strategy for SIAM. It is important to ensure that they include appropriate targets and risk and reward models. Detailed requirements should be included in any contracts or internal agreements.

Cloud Services
Where cloud services have been selected, requirements often need to be adjusted to consider that these are commodity services.

For example, cloud commodity service providers are unlikely to take part in boards, process forums or working groups, to change their processes or to integrate their toolsets with others.

The challenge is to balance the customer's desire for specific requirements against what is offered in the marketplace. Forcing service providers to customize their delivery models can result in increased costs and risks.

The procurement of external service providers can take some time, which needs to be included in any plan or timeline.

It is important to verify that the desired service providers can meet the full set of requirements in the SIAM model, particularly for strategic service providers. If there are issues or gaps, this may require a return to earlier lifecycle stages and activities.

In addition to the service providers that are appointed here, it is important to remember that service providers can be added and removed throughout the SIAM roadmap. Some service providers may not be appointed until after a legacy contract has expired.

2.2.4.6. Activity: Plan for service provider and service retirement

Planning also needs to address retiring services, and any resulting transfer of services to new service providers.

The relationships with any service providers, service dependencies, contract end dates and potential impact of retiring a particular service or service provider must be carefully considered.

Detailed plans should be developed for any decommissioning, discontinuation, and transfer of services. The plans need to include contractual restrictions, legal requirements, and lead times for service termination.

They must also detail how data, information, and knowledge will be transferred from retiring service providers, including:

- What needs to be transferred
- To whom it will be transferred
- When it needs to be transferred
- How to assess if the transfer is successful.

2.2.4.7. Activity: Review stage and approve implementation

The outputs from this stage should be reviewed against decisions taken in the previous stage, to identify if there are any issues or necessary changes. The roadmap will then progress on to the Implement stage if approval is given.

2.2.5. Outputs

The outputs from the Plan & Build stage are:

- Full design of the SIAM model including:
  - Services, service groups, and service providers (the 'service model')
  - The selected SIAM structure
  - Process models
  - Practices
  - Structural elements
  - Roles and responsibilities
  - Governance model
  - Performance management and reporting framework
  - Collaboration model
  - Tooling strategy
  - Ongoing improvement framework
- Approved business case
- Organizational change management activities
- Service integrator appointed
- Service providers appointed
- Plan for service provider and service retirement.

There may be several iterations during this stage before the outputs are complete and the roadmap progresses to the next stage. The outputs from Plan & Build must be detailed enough to support the implementation activities.

2.3. Implement

2.3.1. Objectives

The objective of this stage is to manage the transition from the organization's 'as is' current state to the 'to be' desired future state, the new SIAM model. At the end of this stage, the new SIAM model will be in place and in use.

2.3.2. Triggers

This stage is triggered when the organization completes all activities of the Discovery & Strategy and Plan & Build stages.

The timing for the start of the Implement stage can be influenced by events in the existing environment. For example, implementation could be triggered by:

- The end of an existing service provider's contract
- An existing service provider ceasing to trade
- Organizational structure changes due to corporate restructure or takeover.

The customer organization may have limited control over the timing of these events. It may need to react to them by completing as many of the Discovery, Strategy, Plan and Build activities as possible. There will be an increased level of risk if the activities from these stages are not fully completed owing to a lack of time.

2.3.3. Inputs

All the outputs from the Discovery & Strategy and Plan & Build stages form inputs for the Implement stage.

2.3.4. Activities

The activities in this stage focus on making the transition to the new SIAM model. They include:

1. Select the implementation approach
2. Transition to the approved SIAM model
3. Ongoing organizational change management.

2.3.4.1. *Activity: Selecting the implementation approach*

There are two possible approaches to implementation:

1. 'Big bang'
2. Phased.

2.3.4.1.1. 'Big bang' implementation

A 'big bang' implementation approach is one that introduces everything at once, including: the service integrator, the service providers (with new contracts) and the new ways of working.

The 'big bang' approach can be high risk, because it affects the entire organization at the same time. The resulting impact on the customer's business and the services provided can be very high, unless the risks are planned for and carefully managed.

Most organizations who adopt SIAM are introducing it into an environment with existing providers, contracts and relationships.

This can mean that 'big bang' is not possible, as different contracts expire at different times. The 'big bang' approach does provide an opportunity to make a 'clean break' from all legacy issues and behaviors at the same time and avoids the complexities of managing a phased approach.

2.3.4.1.2. Phased implementation

A phased implementation approach makes the transformation to the new SIAM model in smaller, more easily managed transition projects and iterations. This can be achieved in several ways, including:

- One service at a time
- One service provider at a time
- One practice at a time
- One process at a time.

This phased approach to SIAM implementation can lower the level of risk associated with the transition, but can be more complex to manage and will extend the total time for implementation. Specific care needs to be given to define and understand the impact of each transition and to ensure that the delivery of existing services continues with no disruption.

2.3.4.2. *Activity: Transition to the approved SIAM model*

The transition activities will be dependent on the selected approach; phased or 'big bang'.

This activity involves:

- Establishing processes and supporting infrastructure
- Commencing transition activity to new service providers and services
- Removing service providers who are not part of the SIAM model
- Verifying the successful execution of the transition steps
- Toolset and process alignment between all parties.

This is not a trivial activity. The number of service providers, services, processes and toolsets will all affect the complexity of the transition. It involves the transition to the full SIAM model, including the implementation of new:

- Service providers
- Services
- Service integrator
- Process models
- Roles and responsibilities
- Tools
- Practices
- Structural elements
- Contracts and agreements
- Governance framework
- Performance management and reporting framework.

A robust methodology should be used for this transition, including:

- Testing (both functional and non-functional)
- Data migration
- Service introduction
- Deployment testing
- Service acceptance
- Post-transition support.

The transition normally requires resources who are specifically dedicated to and focused on it.

The service providers selected during Plan & Build will need to be transferred into the SIAM ecosystem as part of the Implement stage.

Existing service providers who are taking on a new role in the SIAM ecosystem will need to understand fully its new role, relationships and interfaces. New service providers will need to undergo transition into the ecosystem in a managed way.

This activity should be managed by the service integrator on behalf of the customer. It is vital that clear ownership and roles and responsibilities are agreed, including reporting lines, escalation paths and mandates to ensure efficient and effective decision-making.

2.3.4.3. Activity: Ongoing organizational change management

Organizational change management started in the Plan & Build stage of the roadmap. It continues through this stage and into the next.

Specific activities in the Implement stage include:

- Conducting awareness campaigns throughout the organization
- Communicating with and preparing stakeholders for the change
- Ensuring appropriate training is completed
- Continuing with deployment of the organizational change plans
- Measurement of the effectiveness of communications and organizational change activities.

It is important to focus on protecting the existing service and minimizing organizational impact during this stage.

2.3.5. Outputs

The output from the Implement stage is the new SIAM model that is in place and operating, and supported by appropriate contracts and agreements.

2.4. Run & Improve

2.4.1. Objectives

The objectives of the Run & Improve stage include:

- Manage the SIAM model
- Manage day to day service delivery
- Manage processes, teams and tools
- Manage the continual improvement activities.

2.4.2. Triggers

This stage is triggered when the Implement stage is completed. If the chosen implementation approach is 'phased', Run & Improve will take over elements of delivery in an incremental way, as each phase, service, process or service provider exits the Implement stage.

2.4.3. Inputs

Inputs to this stage will include:

- The SIAM model
- Process models
- Performance management and reporting framework
- Collaboration model for providers
- Tooling strategy
- Ongoing improvement framework.

These inputs have been designed during the Discovery & Strategy and Plan & Build stages, and then transferred during the Implement stage.

2.4.4. Activities

The activities in this stage focus on providing consistent, guaranteed service outcomes to the business, which can be managed, measured and improved. They include:

1. Operate governance structural elements
2. Performance management and improvement
3. Operate management structural elements
4. Audit and compliance
5. Reward
6. Ongoing change management.

In the Run & Improve stage, the new operating model should no longer be seen as 'new'; it is just how things are done.

2.4.4.1. Activity: Operate governance structural elements

Governance boards provide an important role in the control of the overall SIAM ecosystem.

During the Plan & Build stage, the high-level governance framework was created. In Implement, it was transferred to the live environment. In Run & Improve, governance board members adopt their new roles.

See sections **5 SIAM roles and responsibilities** and **1 Introduction to Service Integration and Management (SIAM)** for more information about governance boards.

2.4.4.2. Activity: Performance management and improvement

The performance of all services and processes should be measured and monitored against key performance indicators and, where appropriate, service level targets. The measurements should be both qualitative and quantitative.

Measurements are used to create meaningful and understandable reports for the appropriate audiences. They provide visibility of performance issues, and support trend analysis to give early warning of possible failures.

Routine service improvement activities should include review and management of actions arising from the information and review of report relevance.

Within SIAM, reports also need to include feedback for how the service is perceived by users, referred to as qualitative reporting. For more information see section **6 SIAM practices**.

Reports can be used to identify opportunities for improvement and innovation.

2.4.4.3. Activity: Operate management structural elements

Process forums and working groups are two of the structural elements that unite the service integrator, service providers and the customer.

They provide an environment to work collaboratively on the operation of a specific process or processes, process outputs, issue or project.

In this stage of the roadmap, these forums and groups should be actively working. The frequency and format of meetings will vary, but it is a good idea to have regular contact between the forum and group members in the early stages of implementation, as they will be instrumental in creating the necessary collaborative culture.

See sections **5 SIAM roles and responsibilities**, **7 SIAM cultural considerations** and **1 Introduction to Service Integration and Management (SIAM)** for more information about process forums and working groups.

2.4.4.4. Activity: Audit and compliance

In addition to the review of reports that takes place in a SIAM environment, a more formal audit schedule should also be introduced.

This can include process audits, service audits, service provider audits; whatever is most appropriate for each organization and the SIAM ecosystem. Some audits will be mandated by regulations, legislation or corporate governance.

These audits may be performed by an external organization.

Audits support ongoing assurance of compliance to the customer organization's legislative and regulatory requirements. They can provide valuable information about whether elements of the model are working as they should and help to embed a culture of improvement.

2.4.4.5. Activity: Reward

A SIAM ecosystem can challenge all stakeholders to behave in new ways. Service providers must be encouraged to collaborate rather than protect their own interests. Reward mechanisms can be used to encourage collaboration and communication.

Good practices for creating a reward system include:

- Use small rewards often, linked to specific actions
- Give rewards at unexpected times
- Reward the behavior, not just the results
- Reward all stakeholders, not just one layer of the SIAM model
- Reward publicly.

Case study

One customer organization has created a CIO Award for Collaboration.

This is given quarterly to the service provider who has demonstrated excellent behaviors, including collaboration, willingness to help others, and ease of working with them. The scores are collated and shared with all parties.

Crucially, service providers are encouraged to nominate each other, encouraging them to recognize good behavior within the service provider layer.

2.4.4.6. *Activity: Ongoing change management*

After the SIAM model enters the Run & Improve stage, it will change and evolve as the sourcing landscape and business requirements change and evolve.

Ongoing change management will include the addition and removal of service providers, scaling the services if customer needs get grow or shrink, and potentially changing the SIAM structure.

If major change is required, this can include going back to earlier roadmap stages, for example to revisit Discovery & Strategy.

2.4.5. Outputs

Outputs from the Run & Improve stage fall into two categories:

- Run outputs: business as usual outputs including reports, service data and process data
- Improve outputs: information used to evolve and continually improve the SIAM model.

3. SIAM structures

There are four common structures for a SIAM ecosystem. The difference between each structure is the sourcing and configuration of the service integrator layer.

The structures are:

- Externally sourced
- Internally sourced
- Hybrid
- Lead supplier.

The customer organization will choose a structure based on factors including:

- Business requirements
- Internal capabilities (including maturity, resources and skills)
- Complexity of the customer's services
- Customer's organizational structure and size
- Legislative and regulatory environment
- Customer budget
- Current organizational maturity and capability in service integration and IT
- Appetite for external sourcing/loss of direct control
- Required timescales
- Appetite for risk
- Types and numbers of service providers to be managed.

3.1. Externally sourced service integrator

In this structure, the customer appoints an external organization to take the role and provide the capabilities of the service integrator.

The service provider roles are performed by external service providers and/or internal service providers.

The externally sourced service integrator is exclusively focused on service integration activities and does not take any of the service provider roles, as illustrated in **figure 9**.

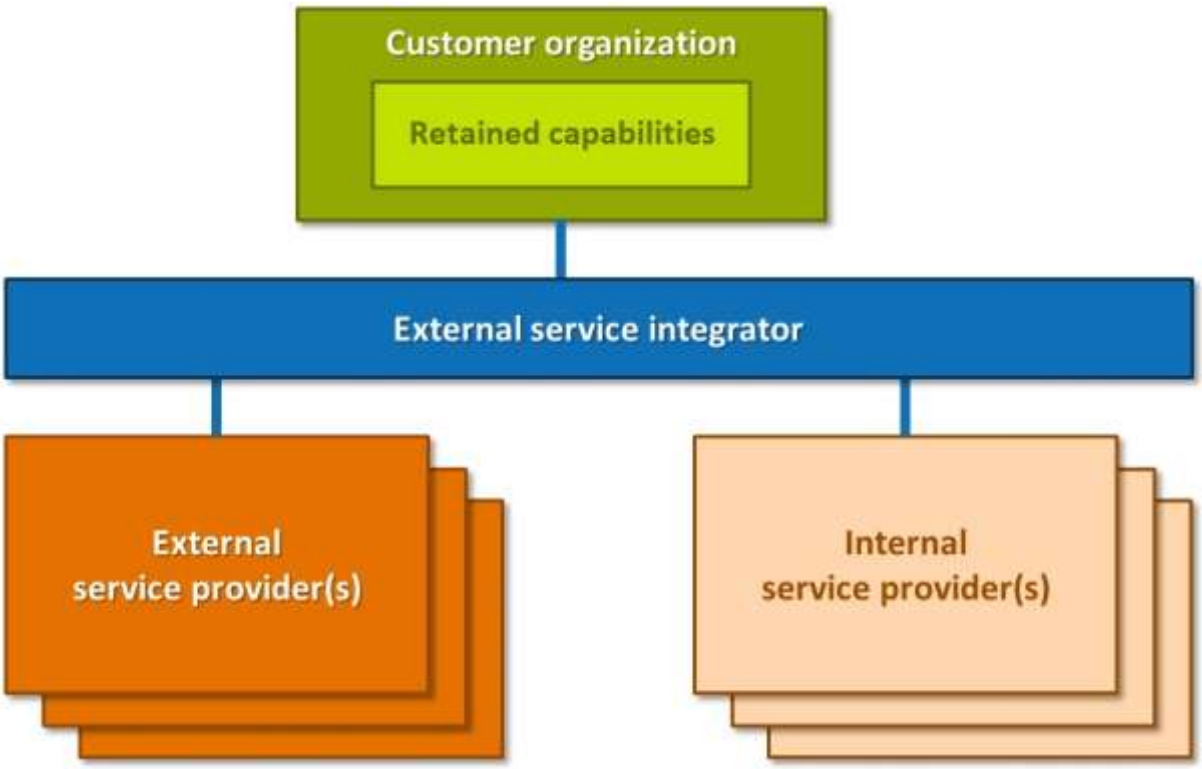

Figure 9: Externally sourced service integrator

3.1.1. When does a customer use this structure?

This structure is suitable when the customer organization does not have in-house service integration capabilities and does not intend to develop them.

It is also commonly chosen by organizations who do not have the resources available to take on the service integrator role, and do not want to have an increased headcount or the management responsibilities associated with selecting and maintaining service integration resources.

This structure is suitable for customers who are prepared for another organization to take the service integrator role, and who are prepared to have a high degree of trust in their external service integrator.

It relies on the customer empowering the service integrator and giving it the responsibilities of day-to-day coordination and control of service providers, implementing and coordinating processes and managing end to end reporting.

For this structure to succeed, the customer needs retained capabilities to provide strong governance over the external service integrator. These capabilities will identify the goals and the mandate for the external service integrator, and will communicate them clearly to all stakeholders.

The customer must allow the service integrator to act on its behalf. The customer should not bypass the service integrator by having direct operational relationships with the service providers.

Summary: Externally sourced

Suitable for:

- Customers who are prepared for another organization to take the service integrator role
- Customers who are prepared to have a high degree of trust in an external organization acting as their service integrator
- Customers who do not have service integration capabilities and do not want to develop them
- Customers who do not have service integration resources and do not want to add or manage them.

3.1.2. Advantages

The advantages of an externally sourced service integrator include:

- The opportunity for the customer to review multiple service integrators and then select an experienced service integrator with good reviews from previous clients
- The potential for faster benefits realization, as the service integrator's expertise reduces the time to implement the SIAM roadmap; although the time required to select the external service integrator also needs to be considered
- The potential for improved value, as the service integrator applies its experience to manage the SIAM ecosystem in an efficient and effective way
- Separation of concerns: the service integrator can focus on the end to end governance and coordination of the service, processes, metrics and reporting and the customer organization can focus on business outcomes and strategic objectives
- Access to established SIAM models, processes and toolsets, where the service integrator is providing the toolset
- Access to innovative practices from the service integrator's experience on other SIAM implementations.

3.1.3. Disadvantages

The disadvantages of an externally sourced service integrator include:

- The high-level of dependency on the external service integrator adds a level of risk; including commercial, continuity and security risks
- The potential for higher costs related to the sourcing and management of an external organization
- The potential for resentment from any internal service provider that is part of the customer organization, but is being managed by an external organization
- The potential for resentment from the external service providers in the SIAM ecosystem, particularly where the service providers and service integrator compete in other markets. This can lead to relationship issues and poor performance
- The external service integrator's models and practices might not be the best fit for the customer organization
- The use of an external service integrator can make it more difficult to change how the service integrator is working, because contractual changes may be required. This means the customer will be less agile and may result in higher costs
- There is a risk that the customer decides to appoint an external service integrator because they do not fully understand SIAM themselves. This is likely to increase overall costs of delivery and result in poor service because the customer has not clearly defined its own objectives
- The external service integrator must build relationships with the customer organization and with the service providers; the time and effort required to do this if often not accounted for in the initial investment analysis
- The service integrator does not have a contractual relationship with the service providers, so, without empowerment from the customer, they can be ineffective.

3.2. Internally sourced service integrator

In this SIAM structure, the customer organization takes the role of service integrator, providing the service integration capability. The service integrator role and the customer role still need to be defined and managed separately.

If the customer role and the service integrator role become inseparable and indistinct, service providers may interact with the customer as if it was part of a traditional outsourced ecosystem. The benefits of moving to a SIAM model would not be realized.

The service provider roles are performed by external service providers and/or internal service providers.

The internally sourced service integrator is exclusively focused on service integration activities.

Figure 10 shows the internally sourced service integrator structure.

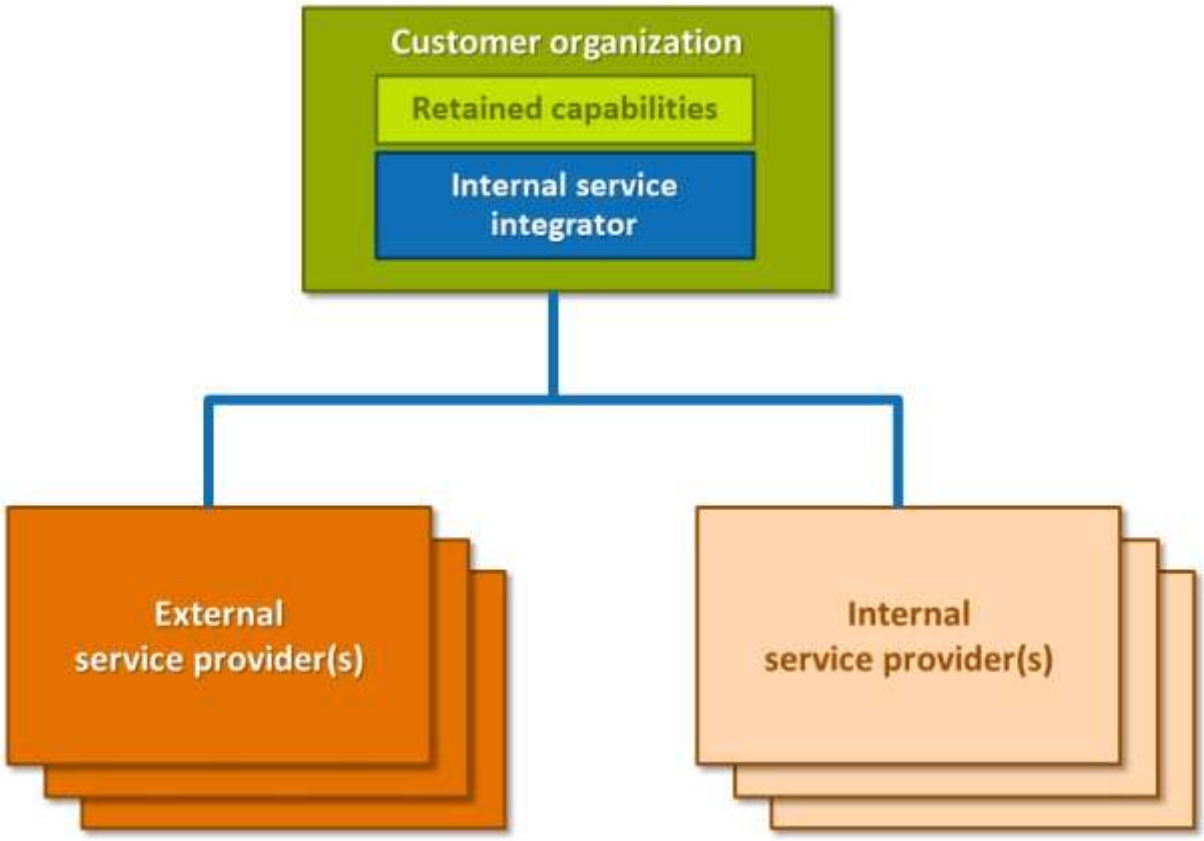

Figure 10: Internally sourced service integrator

3.2.1. When does a customer use this structure?

This structure is suitable for organizations where the customer already has or intends to develop in-house service integration capabilities.

It is typically used where the customer wants to retain control and flexibility over the SIAM ecosystem, or where timescales do not facilitate the procurement and establishment of an external service integrator. It is also used by organizations that have a business, regulatory or legislative need to retain ownership of the service integration layer.

As part of this structure, the customer may use resource augmentation. This is an approach where many of the individual roles within the service integrator are filled using directly employed internal staff, supplemented by resources provided by an external organization. Even though some of the staff might not be directly employed by the customer, this still fulfils the criteria for an internally sourced service integrator as the customer has overall ownership and control.

Summary: Internally sourced

Suitable for:

- Customers who have in-house service integration capabilities or plan to develop them
- Customers who have business, regulatory or legislative requirements relating to the governance and management of service providers
- Customers who want to retain control and flexibility over the SIAM ecosystem
- Customers whose timescales do not allow procurement of an external service integrator.

3.2.2. Advantages

The advantages of an internally sourced service integrator include:

- The customer has full control over the service integrator role, with no dependency on an external company, or any of the associated risks and costs
- Valuable skills remain in-house and there is no loss of key resources or key knowledge
- The service integrator shares strategic goals with the customer organization so there is no conflict
- The service integrator can be flexible and accommodate change without a requirement for any contractual amendments
- External service providers will not see the service integrator as a competitor and are thus more likely to cooperate and collaborate with the service integrator
- The service integrator can be established more quickly because it already understands the customer organization's goals and drivers, and as there is no time required to procure and establish an external service integrator
- The service integrator is part of the same organization that manages service provider contracts so has direct leverage over service providers, their behavior and performance.

3.2.3. Disadvantages

The disadvantages of an internally sourced service integrator include:

- The customer must develop and maintain the service integrator capability, resources and skills, and design and implement toolsets, sometimes with no experience of SIAM implementation
- The customer may underestimate the number of resources and the expertise required for the service integrator capability
- The service integrator is seen as synonymous with the customer organization; this can make it more challenging for them to mediate between the customer and the service providers if there is a conflict
- There is a risk that the customer decides to act as the service integrator because they are not fully committed to SIAM, and do not wish to formally establish and outsource the structure. If SIAM is not adopted fully, the benefits will be limited and there will be a further risk that old ways of working continue
- Internal service providers may not accept the authority of the internal service integrator.

3.3. Hybrid service integrator

In this structure, the customer collaborates with an external organization to take the role of service integrator and provide the service integrator capability.

The service provider roles are performed by external service providers and/or internal service providers.

The hybrid service integrator is exclusively focused on service integration activities and does not take any of the service provider roles.

The hybrid service integrator structure is shown in **figure 11**.

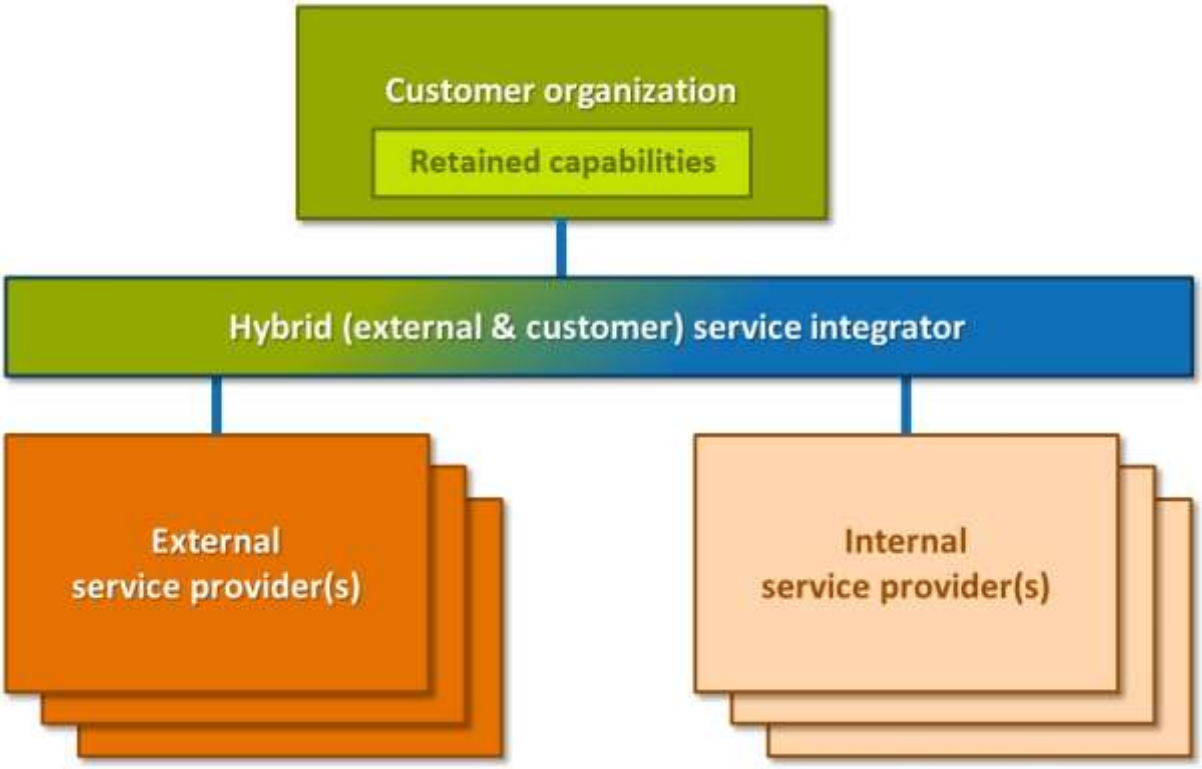

Figure 11: Hybrid service integrator

3.3.1. When does a customer use this structure?

This structure is suitable for organizations that wish to retain an element of involvement in the service integrator role, but do not have sufficient in-house capabilities or resources.

In the hybrid structure, the service integration capability is created through collaboration between the customer and an external service integrator acting as a service integration partner. This can allow the customer organization to learn from an external service integrator that already has expertise in that role.

This structure can be temporary or permanent. If it is temporary, the hybrid approach will end when one of the following has occurred:

- the customer has developed sufficient service integration skills and resources in-house, and has transitioned to an internally sourced structure
- the customer organization has decided that it no longer wants the hybrid structure, and has transitioned to an external service integrator or a lead supplier structure.

In this structure, it is normal to allocate specific service integration roles, functions and structures to either the customer or the service integration partner. This differentiates this structure from the resource augmentation approach that can be applied to the internally sourced structure.

Summary: Hybrid

Suitable for:

- Customers who want to act as a service integrator but do not have sufficient capability or resources
- Customers who want to learn from an external service integrator
- Customers who want the flexibility of a temporary or permanent hybrid service integrator.

3.3.2. Advantages

The advantages of a hybrid service integrator include:

- The customer develops skills and resources, and can revert to an internally sourced solution if the service integration partner fails to live up to initial expectations
- Benefits can be realized more quickly, as the service integrator brings expertise and collaborates with the customer, reducing the time it takes to transition to a SIAM model
- Access to commercial skills and knowledge; the service integrator can help the customer to negotiate with the service providers and avoid common mistakes.

3.3.3. Disadvantages

The disadvantages of a hybrid service integrator include:

- The customer must develop a service integration capability, and recruit and manage resources
- Without clear design, this structure can lead to duplication of skills, missed activities, confusion about responsibilities and poor definition of where the boundaries of operation lie
- This structure can be confusing for the service providers where a clear governance framework and communication plan have not been implemented
- When the hybrid approach is meant to be temporary, the customer may inadvertently build a long-term dependency on the service integration partner
- Organizations may adopt the hybrid model because they are reluctant to give up control, not for a valid business reason. This can lead to the benefits of SIAM not being realized.

3.4. Lead supplier as service integrator

In this structure, the role of service integrator is taken by an external organization that is also an external service provider. This can occur when:

- An existing service provider successfully bids to be the service integrator as part of a procurement process
- The existing service integrator successfully bids to be a service provider as part of a procurement process
- One external organization wins two parts of a tender and so becomes the service integrator and a service provider.

The organization that is a service provider and the service integrator is referred to as the lead supplier.

This structure is sometimes referred to as 'guardian' or 'custodian'. It is important to emphasize that the contractual relationship in this structure remains between the customer organization and the service providers. The service integrator does not have a contractual relationship with the service providers.

Prime vendor

The lead supplier structure is different from the model known as 'prime' or 'prime vendor', where a service provider sub-contracts other service providers to deliver the service and the customer only has a contractual relationship with the prime vendor.

Any of the service providers in any of the four SIAM structures could be a prime vendor, using one or more sub-contracted providers as part of its own service delivery. However, these sub-contracts are not visible within the SIAM ecosystem. The relationships in the SIAM ecosystem are between the service provider, the service integrator and the customer. The sub-contracts of a particular service provider are not relevant from the SIAM perspective if the service provider can deliver its service to the agreed levels.

Figure 12 shows the lead supplier structure.

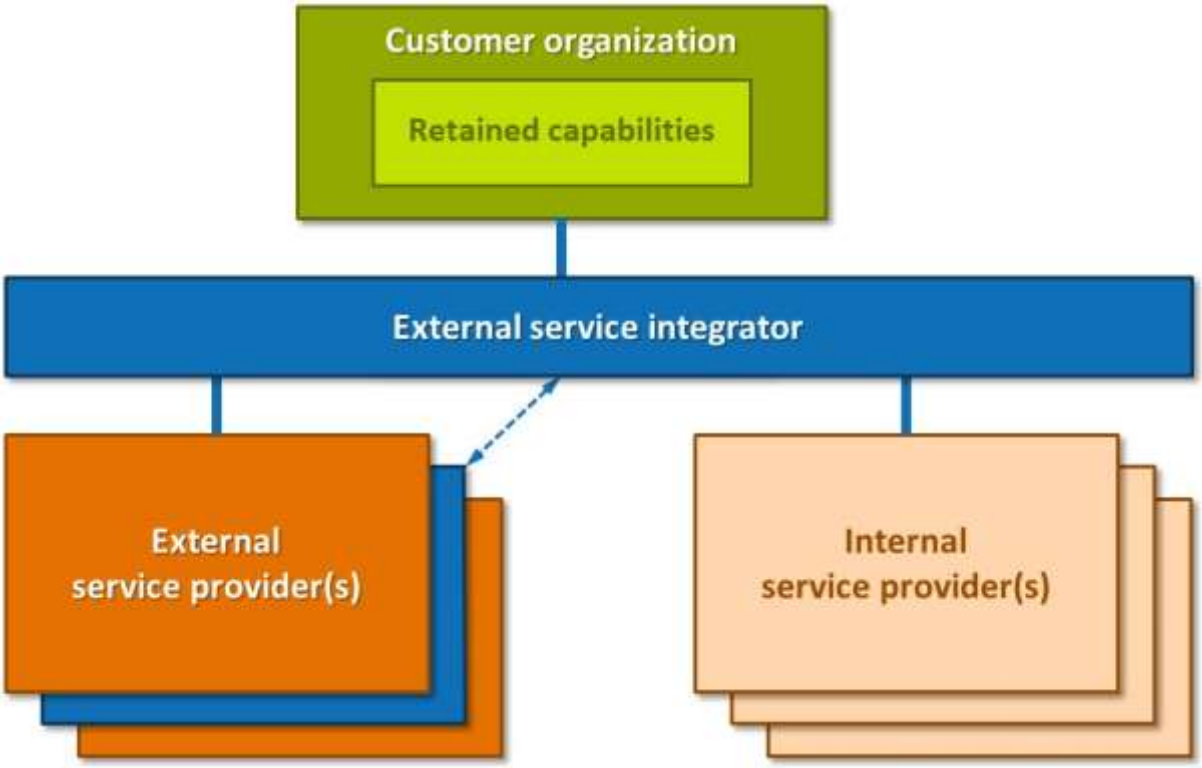

Figure 12: Lead supplier as service integrator

3.4.1. When does a customer use this structure?

A customer would choose this structure for the same reasons that it would choose an externally sourced service integrator; i.e. it does not have its own service integration capabilities or resources and does not wish to develop and maintain them.

In this structure, when the customer goes out to tender to choose a service integrator, one of its existing service providers may already have in-depth knowledge of the customer organization, and the customer knows and trusts it. This could facilitate that service provider also acting as the service integrator.

Conversely, the current service integrator may also have expertise in the delivery of one or more of the services (or service elements) and be could selected for that reason.

If a single organization is acting as both the service integrator and a service provider, there are management considerations that need to be addressed. These include:

- Making sure there is no unfair advantage for the service integrator or the service provider
- Maintaining the impartiality of the service integrator role
- Ensuring that the customer is not being charged twice for the same capabilities.

This requires clear segregation of duties in the lead supplier, often known as 'Chinese walls'.

The service integrator and the service provider roles should be viewed and managed as two separate entities (as if they were separate organizations). They will each have their own contract or agreement, roles, responsibilities and reporting requirements.

Ideally, different resources will work in the service integrator and service provider entities to reduce the likelihood of any conflict of interest.

Summary: Lead supplier

Suitable for:

- Customers that have a trusted service provider that also has service integration capabilities
- Customers that have a trusted service integrator that also has service provider capabilities
- Customers that are prepared for another organization to take the service integrator role
- Customers that do not have service integration capabilities or resources and do not plan to develop them.

3.4.2. Advantages

The advantages of a lead supplier service integrator are mostly the same as those for an externally sourced service integrator.

There are some additional advantages:

- Where the service integrator is currently acting as a service provider, the set-up process can be faster as there is an existing relationship with the customer
- From the customer's perspective, the service integrator has a vested interest. If the service fails, it will be subject to penalties at the service provider level, so it has an extra incentive to deliver to agreed targets.

3.4.3. Disadvantages

The disadvantages of a lead supplier service integrator are mostly the same as those for an externally sourced service integrator.

There are some additional disadvantages:

- The organization acting as the service integrator and service provider might not have effective internal governance, leading to knowledge 'leaking' between the two roles. This will create relationship issues between the service integrator and other service providers if this is perceived as an unfair advantage
- The organization acting as the service integrator and service provider might be perceived to be biased, even if this is not the case, which can also lead to the service integrator/service provider relationships suffering
- The organization acting as service integrator and service provider might charge the customer twice for the same resources; for example, service desk resources shared between the two roles, or management resources shared between the service provider and service integrator roles
- The service integrator part of the organization could treat its service provider function harshly or unfairly to try and prevent any allegations of bias, which can also create relationship and service management issues.

4. SIAM and other practices

This section of the Body of Knowledge looks at examples of enabling practices, and how they relate to a SIAM ecosystem.

This includes examples from the management frameworks, methods and standards of:

1. Service management (including ITIL®, VeriSM™ and ISO® standards)
2. COBIT®
3. Lean
4. DevOps
5. Agile, including Agile Service Management.

For each practice, there is a short summary followed by examples of its relevance to a SIAM ecosystem.

This is not an exhaustive list. There are other practices that can complement and support implementation, operation and improvement in a SIAM ecosystem. These include:

- ADKAR: for organizational change
- BiSL: for business information management
- TOGAF, IT4IT, and other architectural practices
- CMMI: for services, for process assessments
- OBASHI: for mapping relationships, dependencies, and flows of data and information
- Project management methodologies.

4.1. Service management

Service management defines the capabilities that support the implementation and management of quality IT services that meet the needs of the business.

Service management is performed by service providers through an appropriate mix of people, process and information technology.

There are two service management practices and several standards that are particularly relevant to SIAM:

1. ITIL®
2. VeriSM™
3. ISO® standards.

4.1.1. What is ITIL®?

ITIL® is the most widely accepted approach to IT service management in the world. ITIL® can help individuals and organizations use IT to realize business change, transformation and growth.

ITIL® advocates that IT services are aligned to the needs of the business and support its core processes. It provides guidance to organizations and individuals on how to gain optimal value from IT and digital services.

The key elements of ITIL® 4 are:

- the four dimensions
- the Service Value System (SVS), containing the service value chain, practices and guiding principles.

4.1.1.1. ITIL® in a SIAM ecosystem

In most cases, transitions to SIAM will take place in an environment that already uses some IT service management processes or elements based on ITIL®.

SIAM does not replace ITIL®; it builds on service management elements and extends them across the ecosystem where they are relevant to the SIAM model. This might include service management processes, or ITIL® concepts, such as the Service Value System, dimensions, practices and techniques. SIAM adapts them to work effectively in a multi-service provider environment.

Whilst ITIL® includes some general guidance for operating in multi-provider ecosystems, it is designed for use in any ecosystem. SIAM, specifically and uniquely, provides in-depth guidance for multi-provider ecosystems, including structural, organizational and functional elements.

4.1.1.2. The service value chain

The ITIL® Service Value System provides a holistic approach to the co-creation of value through service relationships. At the heart of the service value system is the service value chain (SVC) – a flexible operating model for the creation, delivery and continual improvement of services. The service value chain defines six key activities:

- Plan
- Improve
- Engage
- Design and Transition
- Obtain/Build
- Deliver and Support.

These activities are interconnected, with each activity receiving and generating triggers for further action. The tasks can be combined in many different sequences, which means the service value chain allows an organization to define a number of variants of value streams to react to changing demands from stakeholders effectively and efficiently.

These value streams are equally useful in SIAM, in particular when mapped across service providers to understand better the interactions and cooperation required between them.

4.1.1.3. The four dimensions

A holistic approach to service management is key in ITIL®. It defines four dimensions of service management that are critical to the successful facilitation of value for customers and other stakeholders:

- **Organizations and people**: An organization needs a culture that supports its objectives, with the right level of capacity and competency among its workforce
- **Information and technology**: This includes information and knowledge, as well as the technologies required for the management of services

- **Partners and suppliers**: This refers to an organization's relationships with those other businesses that are involved in the design, deployment, delivery, support and continual improvement of services
- **Value streams and processes**: This defines the activities, workflows, controls and procedures to achieve agreed objectives, describing how the various parts of the organization work in an integrated and coordinated way to create value through products and services.

SIAM is mentioned specifically in the Partners and Suppliers dimension. However, in order for a SIAM model to meet its objectives, it is important to look at SIAM aspects of the other dimensions (Organizations and People, see section **7 SIAM cultural considerations**, Information and Technology, see section **6.4 Technology practices: creating a tooling strategy** and Value Streams and Processes, see section **6.2 Process practices: Integrating processes across service providers**).

4.1.1.4. The practices

In ITIL®, a practice is a set of organizational resources designed for performing work or accomplishing an objective. This includes the service management processes from previous versions of ITIL®, but expands the concept. The practices need aspects such as culture, technology, information and data management to be considered to achieve holistic ways of working.

Within a SIAM transformation program, consideration should be given as to how existing ITIL® processes and practices need to be adapted to integrate with the local practices of multiple service providers.

For example, the incident management process will follow similar steps, but will need adaptation to support the transfer of incidents and updating of related information between the service providers and the service integrator.

4.1.1.5. The guiding principles

The guiding principles are recommendations that guide an organization in all circumstances. A guiding principle is universal and enduring.
The ITIL® guiding principles are:

- Focus on value
- Start where you are
- Progress iteratively with feedback
- Collaborate and promote visibility
- Think and work holistically
- Keep it simple and practical
- Optimize and automate.

They allow professionals to define approaches and navigate difficult decisions and should be followed at every stage of service delivery. ITIL®'s focus on collaboration, automation and keeping things simple reflect principles found within SIAM good practice.

4.1.2. VeriSM™

4.1.2.1. What is VeriSM™?

VeriSM™ is a service management approach for the digital age that considers service management from the organizational level, looking at the end to end view rather than focusing on the IT department. The premise is that digital products and services require changes at all levels of the organization including people, technology and ways of working.

Based on the VeriSM™ model (Define, Produce, Provide and Respond), it explains how organizations can adopt a range of management practices in a flexible way to deliver the right product or service at the right time to their consumers.[10]

[10] Source: VeriSM™ a service management approach for the digital age.

VeriSM™ was created by the IFDC, the International Foundation for Digital Competences, in 2017. It is a service management operating model for an organization, which defines several key areas:

- **Governance** – the underpinning system of directing and controlling the activities of an organization
- **Consumer** – provides the requirements for products and services, receives products and services, gives feedback and participates in the verify/review/improve activities
- **Service management principles** – based on the organizational governing principles, they provide the 'guardrails' for the products and services delivered, addressing areas such as quality and risk
- **Management Mesh** – how an organization combines its resources, environment and emerging technologies with different management practices to create and deliver products and services
- The Define, Produce, Provide and Respond **stages.**

4.1.2.2. VeriSM™ in a SIAM ecosystem

Using techniques from VeriSM™ can help to make sense of the technologies and management practices likely to be evident in a SIAM ecosystem. SIAM recognizes the need to allow service providers to utilize their own approaches and practices and VeriSM™ supports this.

The Management Mesh can be used throughout each stage of the SIAM roadmap to create blueprints depicting specific 'resources', 'environment', 'management practices' and 'emerging technologies' for each service. In the Discovery & Strategy stage, mesh blueprints depicting the 'current state' and 'high level requirements' can be created. In the Plan & Build stage mesh blueprints for the 'full requirements' and 'gaps' can be created to support Implement. Moreover, in Run & Improve, the updated mesh provides a view of the current environment and a potential baseline for future requirements.

The VeriSM™ model stages can also be used to support the SIAM roadmap:

- **Define** – design of a solution (product or service) using agreed requirements. This aligns to the SIAM roadmap stage Discovery & Strategy
- **Produce** – creation of the solution (build, test, deploy) ensuring the outcome meets the needs of the consumer. This aligns to the SIAM roadmap stages Plan & Build and Implement
- **Provide** – the new/changed solution is available for use. This aligns to the SIAM roadmap stage Run & Improve
- **Respond** – support the consumer, during performance issues, unexpected occurrences, questions or any other requests. This aligns to the SIAM roadmap stage Run & Improve.

4.1.3. ISO® standards

The International Organization for Standardization (ISO) is an independent, non-governmental organization, made up of the standards organizations of its member countries. It is the world's largest developer of voluntary international standards.

The standards help businesses increase productivity while minimizing errors and waste. The standards also serve to safeguard consumers of products and services, ensuring that certified products conform to the minimum standards set.

There are many standards - over 20,000 - but those that are most applicable in a SIAM environment are:

- ISO 900x - Quality management family
- ISO/IEC[11] 20000 - Service management
- ISO 22301 - Business continuity management
- ISO/IEC 2700x - Security techniques (information security management)
- ISO/IEC 30105 - IT enabled services -business process outsourcing
- ISO 37500 - Guidance on outsourcing
- ISO/IEC 38500 - Governance of IT
- ISO 4400x - Collaborative business relationship management.

[11] IEC refers to the International Electrotechnical Commission, a standards organization for all electrical, electronic and related technologies

There are many more and it will depend on the organization, its service providers and external requirements, to determine which standards need to be integrated into the SIAM model.

What is ISO/IEC 20000?

ISO/IEC 20000 is the first international standard for IT service management. It was developed in 2005.

ISO/IEC 20000 was originally developed to reflect best practice guidance contained within the ITIL® framework, although it supports other IT service management frameworks and approaches equally, including the Microsoft Operations Framework and components of ISACA's COBIT® framework.[12]

ISO/IEC 20000 is the international standard for service management and requires an organization to have a Service Management System (SMS) that complies with the requirements of the standard. The SMS defines several areas including:

- Services, organizations, and locations in scope
- Service management policies
- Service management capabilities and competencies
- Service management processes
- Governance of processes operated by other parties, including multiple service providers managed by an internal or external service integrator.

As most transitions to SIAM will take place in an environment that already uses some service management processes, the standard can be useful in SIAM ecosystems, either for certification, to demonstrate capability or as guidance.

For instance, a service provider that does not have ISO/IEC 20000 will be able to use the standard's requirements, and associated guidance, as the basis for the development of the processes and policies it requires for operating in a SIAM environment.

[12] Source: https://en.wikipedia.org/wiki/ISO/IEC_20000

It can also be used as one of the criteria for selecting service providers for a SIAM ecosystem. However, whilst the standard provides an independent assessment of the capability and scope of a service provider's service management system and processes, it will not give any indication of its ability to operate in a SIAM ecosystem.

4.2. COBIT®

4.2.1. What is COBIT®?

COBIT® is a control framework for the governance and management of enterprise IT.[13]

The latest version is COBIT® 2019, which is an evolution of the previous version, COBIT® 5.

The official guide from ISACA documents nine principles of COBIT®, broadly aligned to governance system principles and governance framework principles.

Governance system principles:

- Provide stakeholder value and satisfy stakeholder needs
- A governance system is built from a number of components that work together in a holistic way
- A governance system should be dynamic. Each time one or more of the design factors is changed, the impact of these changes should be considered
- Separating governance from management - clearly distinguish between governance and management activities and structures
- Tailor and prioritize to the enterprise's needs, using a set of design factors as parameters of governance system components
- A governance system should focus not only on the IT function, but on all technology and information processing.

[13] Source: ISACA

Governance framework principles:

- A governance framework should be based on a conceptual model, identifying the key components and relationships among components
- A governance framework should allow the addition of new content while maintaining integrity and consistency
- Alignment to relevant major related standards, frameworks and regulations.

It also defines the seven supporting enablers that form the framework:

1. Processes
2. Organizational structures
3. Principles, policies and procedures
4. Information
5. Culture, ethics and behavior
6. People, skills and competencies
7. Services, infrastructure and applications.

COBIT® includes:

- **Framework to organize IT governance objectives and practices** - Organizes IT governance objectives and good practices by IT domains and processes, and links them to business requirements
- **Process descriptions** - A reference process model and common language for everyone in an organization. The processes map to responsibility areas of plan, build, run and monitor
- **Control objectives** - Provide a complete set of high-level requirements to be considered by management for effective control of each IT process
- **Management guidelines** - Help assign responsibility, agree on objectives, measure performance, and illustrate interrelationship with other processes
- **Maturity models** - Assess maturity and capability per process and helps to address gaps
- **Performance management** - Refers to how well an organization's governance and management system, plus all the components, work.

4.2.2. COBIT® in a SIAM ecosystem

The nine principles of COBIT® and the seven supporting enablers have clear synergies with SIAM as described in sections **2 SIAM roadmap**, **6 SIAM practices**, **7 SIAM cultural considerations**, and the **SIAM Process Guides**.

Table 1 shows how the COBIT® components can map to SIAM.

COBIT® component	SIAM component
Framework	Practices, governance model and structural elements
Process descriptions	Process models and processes
Management guidelines	Governance model
Maturity model	No direct equivalent
Performance management	Performance management and reporting framework

Table 1: COBIT® components and SIAM components

In a SIAM ecosystem, governance and management of information become more complex owing to the number of stakeholders and organizations involved. The control objectives and maturity models from COBIT® can be particularly useful in addressing this complexity during the Discovery & Strategy and Plan & Build stages of the SIAM Roadmap.

An enterprise governance model like COBIT® can help to deliver outcomes including:

1. **Benefits realization** - This consists of creating value for the enterprise, maintaining and increasing value derived from existing investments and eliminating IT initiatives and assets that are not creating enough value. The basic principles are delivery of fit-for-purpose services and solutions, on time and within budget initiatives
2. **Resource optimization -** This ensures that appropriate capabilities are in place to execute the strategic plan and sufficient, appropriate and effective resources are provided. Resource optimization ensures that an integrated, economical IT infrastructure is provided, new technology is introduced as required by the business and obsolete systems are updated or replaced.

4.3. Lean

4.3.1. What is Lean?

The core idea of Lean is to maximize customer value while minimizing waste. Simply, Lean means creating more value for customers with fewer resources.

A Lean organization understands customer value and focuses its key processes to continuously increase it. The goal is to provide optimal value to the customer through an optimal value creation process that has zero waste.[14]

Lean thinking started in Toyota as a way to improve the speed of the products and services moving through an organization's processes by constantly improving flow and quality to optimize the level of customer value and satisfaction. The Lean approach includes five principles:

- Specify **value**, as defined by the customer
- Identify the **value stream**
- Create an even **flow** of value adding activities
- Let the customer **pull** the product or service through the value stream
- Strive for **perfection** through continuous improvement.

Lean techniques focus on removing or minimizing any activities that do not add value to the finished product. These activities are referred to as 'Muda' (waste). Waste types were defined by Toyota first and have since been 'translated' to a service related context. The waste types are described in **table 2**.

Traditional waste types	Examples of waste type in service context
Transport	▪ Moving tickets between operators ▪ Moving devices around and out to users
Inventory	▪ Queues of tickets, alerts, requests ▪ Lots of devices, PCs or service requests

[14] Source: Lean Enterprise Institute

Traditional waste types	Examples of waste type in service context
Motion	▪ Flipping through many screens or fields to complete an activity ▪ Having to put in the same information multiple times to complete an activity ▪ Looking for necessary information ▪ Switching between different tasks
Waiting	▪ The time a ticket or product sits idle, waiting for action ▪ A user waiting for service desk on the phone or at the service desk counter
Over-processing	▪ Double handling ▪ Too many approvals and controls ▪ Controls being performed before things are done ▪ Constraints on the process flow due to bottlenecks, inflexibilities and decisions not being timely
Over-production	▪ Delivering before the agreed time ▪ Delivering more service than agreed ▪ Preparing things ahead of time
Defects	▪ Mistakes, misunderstandings, incomplete or wrong information on a ticket
Unused Skills or talent	▪ Too little autonomy and responsibility given to employees ▪ Skilled employees working on simple tasks ▪ Employees working on tasks they do not have the required skills or knowledge for.

Table 2: Lean waste types

In addition to being a way to improve processes or value streams, Lean affects the entire organizational culture, involving and affecting everyone. Lean thinking has been applied to other sectors, including IT service management. For example, Lean IT takes lean manufacturing principles and applies them to the development and management of IT products and services.

The Lean culture and way of thinking can be said to be the foundation of both Agile and DevOps ways of working.

4.3.2. Lean in a SIAM ecosystem

Using Lean techniques can help to increase delivered value and maximize efficiencies in a SIAM ecosystem.

The application of Lean could be relevant in all stages of the SIAM roadmap:

- **Discovery & Strategy** - When establishing a SIAM project, mapping and understanding the current state of the organization could be done using Lean approaches and tools
- **Plan & Build** - When defining the collaboration model, it could be useful to include Lean principles of continuous improvement, emphasizing the prevention of errors over reactive fixes
- **Implement** - Applying Lean to this stage could in many cases increase throughput and speed
- **Run & Improve** - The Lean principles and underlying culture of continuous improvement could form the general approach for improvement across the ecosystem.

Lean techniques can also deliver value when applied to processes. Every step in every process should be analyzed. Considerations should include:

- What value does this step add to the outputs from the previous step?
- Does that value contribute to the expected outputs from the whole process?
- Does this step repeat any work done in a previous step?
- Does this step repeat any work done in any other process?
- Are there any times during the step when no work is being carried out?
- Can the process step cope with the expected workload?

One of the key concepts from Lean is that quality should be designed into a product, not added into it by inspection. Wherever possible, processes should be designed to consistently deliver outputs with the required quality. Any subsequent quality inspections by the service integrator or customer should be examined to justify why they are required.

For example, consider the management of a change request sent from a service provider to the service integrator for approval, as shown in **table 3**.

Process step:	Potential waste:
Send change request to the service integrator	Defect: the change request does not hold the correct – or adequate – information
Service integrator logs and reviews the change request	Waiting: the change request sits in an email inbox until read Over-processing: change request has already been reviewed by the service provider
Service integrator's change manager assesses the change	Waiting: the change request sits in an email inbox until read Over-processing: change request has already been assessed by the service provider
Change manager circulates the change request to the integrated change advisory board members	Waiting: the change manager only sends out change requests once a week
Integrated change advisory board members assess the change	Waiting: the change request sits in an email inbox until read Over-processing: Some board members do not have the skills or knowledge to assess the change
Integrated change advisory board schedule the change	Waiting: the board only meets once a week
Change manager authorizes deployment of the change	Waiting: the change manager does not authorize until the day after the Integrated change advisory board meeting

Table 3: Management of a change request and sources of waste

4.4. DevOps

4.4.1. What is DevOps?

DevOps represents a change in IT culture, focusing on rapid IT service delivery through the adoption of Agile, Lean practices in the context of a system-oriented approach. DevOps emphasizes people (and culture), and seeks to improve collaboration between operations and development teams. DevOps implementations utilize technology - especially automation tools that can leverage an increasingly programmable and dynamic infrastructure from a life cycle perspective.[15]

DevOps embraces the full lifecycle of software development and operation. It is a flexible and evolving philosophy and approach, not a standard or a framework with prescriptive processes. It focuses on bringing an organization's Development and Operations capabilities together into cross-functional, autonomous teams with shared responsibilities.

DevOps thinking focuses on aspects including:

1. Ownership and accountability
2. Systems thinking
3. Continual experimentation and learning
4. Collaborative culture and sharing
5. Automation
6. Elimination of waste/Lean principles
7. Measurement.

DevOps values are described as CALMS and are shown in **table 4**.

[15] Source: Gartner

Culture	The DevOps scope can be thought of as people, process and technology. Culture addresses the people and process aspects. Culture includes communication, collaboration and behaviors.
Automation	Automation includes tools that enable the automation of tasks like testing and deploying software. Release management, configuration management and monitoring and control tools all enable automation.
Lean	Lean refers to creating more value for customers with fewer resources. See section **4.3.1 What is Lean?**
Measurement	From a DevOps perspective, measurement is essential. Measurement will demonstrate the value of DevOps, and also provide feedback on the products and services being developed. This feedback is used to highlight improvement opportunities.
Sharing	Sharing improves communication and collaboration and provides opportunities for the organization to learn and improve. Sharing can be thought of as a feedback loop.

Table 4: DevOps CALMS values

4.4.2. DevOps in a SIAM ecosystem

DevOps and SIAM approaches can initially seem to be in conflict with each other. DevOps focuses on end to end ownership of products and services, with autonomous, self-managing teams. SIAM ecosystems often break services down and allocate management responsibility for different elements to different service providers.

But, the two share a common goal, of delivering high quality products and services that lead to customer satisfaction, and the DevOps CALMS values can be used to help adapt DevOps for a SIAM ecosystem as shown in **table 5**.

Culture	In a SIAM ecosystem, the logical team that is responsible for a product or service might include personnel from multiple service providers. Instilling a DevOps culture would include encouraging a sense of collective ownership and building strong relationships across the team.
Automation	Automation can be more challenging where there are multiple service providers, possibly using different toolsets. Automation needs to be considered when developing the SIAM tooling strategy, and there could be a forum that meets to discuss further opportunities for automation.
Lean	The number of service providers involved in a SIAM ecosystem can unintentionally create waste, when information needs to be passed between service providers and tasks are duplicated. A Lean focus helps to minimize waste. DevOps seeks to reduce hand-offs between teams; SIAM needs to have clarity of where hand-offs are taking place.
Measurement	Both DevOps and SIAM see measurement as essential to show value is being delivered and efficiencies are being realized. DevOps teams can support measurement automation, and the service integrator can help to create end to end measurement across the ecosystem.
Sharing	DevOps teams may only need to share information within the team, or within one organization. In a SIAM ecosystem, the service integrator needs to build a culture that encourages and rewards sharing between service providers.

Table 5: DevOps CALMS values in a SIAM ecosystem

4.4.2.1. Ownership and accountability

DevOps is designed to deliver working software and solutions at pace, with a culture of full ownership and empowerment of the DevOps team(s). This can seem at odds with the governance and assurance roles of the service integrator, and it can cause tension with service providers who have adopted DevOps, as the service integrator can be considered to add delay to the implementation of change, with no added value.

DevOps uses the same team to specify, develop, test, deploy, and fully support services, including applications and infrastructure. This can conflict with the segregation of duties required in some SIAM governance models (often defined in sourcing contracts).

DevOps thinking can also conflict with SIAM sourcing approaches and grouping of services, where different service providers support infrastructure and applications. Most DevOps teams prefer to be responsible for all aspects of the service. The SIAM model needs to balance the benefits that DevOps ways of working can deliver with the complexity of the sourcing environment.

4.4.2.2. Systems thinking

Systems thinking emphasizes the performance of the entire system, rather than focusing on a single silo, team or department. It focuses on all of the business value streams enabled by IT. In high performing organizations, flows are visible, for example as process or value stream maps. People self organize to improve flow.

In a DevOps environment, systems thinking is focused on understanding the flow of work from Dev to Ops and ways to increase flow. In a SIAM ecosystem, the focus is on the flow of work between and across service providers, highlighting and addressing any issues or bottlenecks.

4.4.2.3. Continual experimentation and learning

An important DevOps concept is the incremental deployment of new functionality, followed by user feedback before the next increment. This can be problematic in a SIAM ecosystem, as the deployment will impact multiple service providers.

If DevOps is adopted, the service providers and the service integrator will need to collaborate to build and maintain comprehensive automated test suites for the end to end services.

DevOps also encourages a culture of experimentation and learning in ways of working. Failures are a learning opportunity, not a blaming opportunity. This culture can be used to reinforce a culture of collaboration in a SIAM ecosystem.

4.4.2.4. Collaborative culture and sharing

DevOps behavioral concepts can be particularly useful in building a strong culture in SIAM ecosystems.

The focus on culture and sharing encourage collaboration and communication throughout the life of a product or service, using co-located multi-disciplinary teams who all share the goal of delivering outcomes that the customer wants.

For example, in a DevOps environment all members of the team are accountable for the success of a change; they take collective responsibility and accountability for approval. Contrast that with an approach that expects a single individual to be accountable. Using collective accountability for decisions in SIAM ecosystems can help to create a collaborative culture.

4.4.2.5. Automation

Automation of activities such as testing and deployment is an important element of DevOps. Automation can speed up delivery and reduce risks. Automation needs to be integrated with the change management governance requirements in a SIAM ecosystem.

DevOps thinking can also help to address some common SIAM challenges, applying automation to overcome problems caused by a lack of integrated toolsets.

4.4.2.6. Elimination of waste/Lean principles

The end to end ownership of products and services advocated by DevOps thinking ("you build it, you run it") reduces hand offs between teams. This allows greater clarity about the value streams associated with a product or service and makes it simpler to identify where there are wasteful activities, because fewer people are involved.

In a SIAM environment, the challenge is to balance the value that comes from the end to end view of a service against the complexity created by having multiple service providers involved in the delivery. Hand offs between service providers need to be carefully reviewed to analyze where duplicated or redundant activities can be removed, and how to involve the service integrator.

4.4.2.7. Measurement

DevOps prioritizes getting feedback about products and services quickly, using techniques like short feedback loops and Agile development practices. Feedback is used to identify improvement opportunities related to products and services and to ways of working.

In a SIAM model, the service integrator must ensure that measurement takes place across the ecosystem for end to end service delivery. Measuring each service provider individually does not provide a complete picture. DevOps thinking can also be applied to help identify ways of automating measurement, reducing the management overhead related to collecting and sharing data.

4.5. Agile, including Agile Service Management

4.5.1. agile, Agile and agility

The word 'agile' is an adjective and means "*able to move quickly and easily; able to think quickly, solve problems, and have new ideas*". Being agile refers to a mindset or organizational culture (how we see ourselves, behave and what we value). Building an agile culture offers a way to harness the power of people in an organization, and to find ways to be more adaptive, innovative and resilient in a fast-paced world.

'Agile' (with a capital A) is also used to refer to a group of frameworks and methods used for the development and management of projects or initiatives. Examples of Agile methods and frameworks are Scrum, Kanban, eXtreme programming and Dynamic Systems Development Method (DSDM).

The word 'agility' is generally used in the context of enterprise or organizational agility. In broad terms it means the ability to adapt easily to change. Through organizational agility companies strive to improve speed of execution, and the ability to better respond and adapt to customer needs, and engage and empower employees.

In many publications 'agile' and 'Agile' may be used interchangeably but it is important to understand the underlying difference between the two words.

4.5.2. What is Agile?

> Agile is a set of values and principles under which requirements and solutions evolve through the collaborative effort of self-organizing cross-functional teams.[16]

Agile thinking originated in software development. It used and built on Lean techniques from the manufacturing sector. In 2001, the Agile Manifesto was published which encapsulates the four values and twelve guiding principles for Agile.

Agile thinking and the Manifesto have now been successfully applied in many different disciplines and situations, including project management, change management, service management, DevOps, and SIAM.

[16] Source: Wikipedia

Compared to traditional 'waterfall' approaches, Agile delivers changes more frequently, with smaller amounts of change delivered in each iteration and/or increment. This provides a faster realization of benefits and value, and reduced business risk.

The Agile approach also allows easier change of direction. For example, allowing a business to realize that a new service will not deliver the expected benefits before too much investment is made in its development.

4.5.3. What is Agile Service Management?

Agile Service Management (Agile SM) ensures that ITSM processes reflect Agile values and are designed with "just enough" control and structure in order to effectively and efficiently deliver services that facilitate customer outcomes when and how they are needed.[17]

The goals of Agile SM include:

- Ensuring that Agile values and principles are embedded into every service management process from design through implementation and continual improvement
- Improving IT's entire ability to meet customer requirements faster
- Being effective and efficient (Lean)
- Designing processes with "just enough" scalable control and structure
- Provide services that deliver ongoing customer value.

[17] Source: Agile Service Management Guide, © DevOps Institute 2015

4.5.4. Agile in a SIAM ecosystem

Any SIAM implementation will benefit from a focus on the values and principles of Agile.

The values from the Agile Manifesto can be adapted to apply in SIAM ecosystems; all parties in the ecosystem should value:

- Individuals and interactions over processes and tools
- Working services over comprehensive documentation
- Collaboration over contracts
- Responding to change over following a plan.

According to the Agile Manifesto there is value in the items mentioned second, but more in those mentioned first. For example, the first value indicates that the best way to improve performance is to focus on human aspects, i.e. more emphasis on individuals and interaction, rather than focusing on processes and tools.

Agile approaches can be used to design, develop, and implement many parts of a SIAM model, SIAM structure, and a SIAM roadmap, including:

- Processes
- Policies
- Tooling
- Service improvements
- Structural elements.

Scrum is one of the Agile methods commonly adopted by organizations. It includes the concept of a sprint retrospective which can be used in a SIAM ecosystem as a structural element. A sprint retrospective is an opportunity for the team to review and create an improvement plan for the next sprint (or iteration).

A typical sprint retrospective covers:

- What worked well and should we continue doing?
- What could be improved and what should we stop doing?
- What will we commit to and start doing in the next sprint?

Applying the four values and twelve guiding principles from the Agile Manifesto to IT service management and SIAM can:

- Improve delivery and the flow of work
- Improve customer satisfaction
- Support collaboration across the SIAM ecosystem
- Support incremental process improvement
- Provide flexibility
- Allow early identification of course corrections or changes of direction.

Table 6 provides some adapted examples of the twelve Agile principles, applied in a SIAM ecosystem.

Agile principle	SIAM application
The highest priority is to satisfy the customer through early and continuous delivery	Agile could be applied in a phased implementation of the SIAM ecosystem to provide a quicker result with incremental learning
Deliver releases frequently	The end to end change and release management processes and supporting governance should be designed to support the required rate of test, approval, and deployment of releases
Build projects around motivated individuals. Trust them to get the job done	The service integrator should trust the service providers and empower them to deliver their services without - or with minimum - interference (and vice versa)
Face to face conversation is the most efficient and effective method of conveying information	Working groups and process forums are an effective way to convey important information to service providers. Video conferencing and chat technology can be used to make this virtually 'face to face'
Continuous attention to excellence and good design enhances agility	Process forums can support the development and use of best practice across the service provider community
Simplicity is essential	The SIAM model should be understandable. If not, service providers may have difficulty in understanding and applying it
The best outputs emerge from self-organizing teams	Embodied in a SIAM environment through trust, empowerment, working groups and process forums
Reflect at regular intervals on how to become more effective, then tune and adjust behaviors	Process forums and governance boards should use data and information to identify areas for improvement, then action those improvements. Positive behaviors should be encouraged and rewarded

Table 6: Examples of Agile principles applied in a SIAM ecosystem

4.5.5. Agile Service Management in a SIAM ecosystem

Agile Service Management in a SIAM ecosystem can enable:

- **Agile process design** - uses Agile methods to design IT service management processes. These are designed and implemented in small, frequent releases; typically using two to four week cycles. The first cycle should deliver a Minimum Viable Process (MVP), which is the smallest amount of functionality that is needed. This enables early use and feedback, which is then fed into the next cycle
- **Agile process improvement** - uses Agile methods to improve processes. Within one service provider, the process owner should be empowered to improve the process. In the wider SIAM ecosystem, the process forum should be awarded that empowerment. Individual improvements should be designed and implemented using a regular, short cycle. The priority should be customer satisfaction. Lean thinking can be applied to find and remove waste and activities that add no value.

Summary

These, and other, practices can provide support to SIAM. Care should be taken to understand them in more detail, and to adapt them where required for use in a SIAM ecosystem.

5. SIAM roles and responsibilities

This section of the Body of Knowledge looks at roles and responsibilities in a typical SIAM ecosystem. This includes looking at the specific role of each SIAM layer, and the way that roles are grouped into structural elements.

A role is defined as "*the position or purpose that someone or something has in a situation, organization, society, or relationship*"[18]

A responsibility is defined as "*something that it is your job or duty to deal with*" [18]

5.1. Roles and the SIAM roadmap

Within a SIAM ecosystem, roles and responsibilities need to be defined, allocated, monitored and improved.

Principles and policies for roles and responsibilities are defined during the Discovery & Strategy stage of the SIAM roadmap, before detail is added during Plan & Build. Roles and responsibilities are then allocated during the Implement stage and monitored during Run & Improve.

The four main activities related to roles and responsibilities are:

1. Definition of principles and policies
2. Design
3. Allocation
4. Monitoring and improvement.

5.1.1. Definition of principles and policies

Definition of the principles and policies for roles and responsibilities is a vital step in the design of the SIAM ecosystem.
During the Discovery & Strategy stage, existing roles and job descriptions are mapped and compared to required responsibilities (for instance, those defined within the governance framework) and the selected SIAM structure.

[18] Source: Cambridge Dictionary

During the Discovery & Strategy stage, the roles and responsibilities themselves are not detailed; they are revisited and more detail is added during the design activities in the Plan & Build stage.

There is no single, ideal mapping of roles and responsibilities for a SIAM ecosystem. Each SIAM model will be different, depending on what the customer organization wishes to retain, and what it is prepared to source externally from the service integrator and/or the service providers.

The customer organization's decision about what to source internally, and what to source externally, will be influenced by several factors:

- The overall objectives for implementing SIAM
- The selected SIAM structure
- The customer's strategy and organizational goals
- Customer capability and skill levels
- What the customers regards as a strategic capability that is essential to retain
- Existing service provider relationships and outsourced roles and responsibilities.

The service 'menu'

We can think of this process as like choosing food from a menu. The customer is given the opportunity to review the roles and responsibilities and can select the options that are attractive to them.

This process puts the customer in control, allowing it to retain activities it sees as too risky or complex to outsource, and to transfer responsibility for tasks that it no longer wishes to undertake itself, or that can be effectively sourced externally.

5.1.2. Design

During the Plan & Build roadmap stage, detailed roles and responsibilities are designed using the outline SIAM model and outline process models, the SIAM structure and the governance framework.

5.1.3. Allocation

During the Implement stage, roles and responsibilities are allocated.
There are some roles that will always be allocated to specific SIAM layers:

- The customer organization must retain any roles that are mandated by legislation or regulations
- The service integrator will always be accountable for service governance, management, integration, assurance, and coordination, including end to end service management, service provider management, monitoring and reporting
- The service providers will fulfil service delivery roles.

5.1.4. Monitoring and improvement

Once the roles and responsibilities are established, they are monitored to determine their effectiveness and to identify any opportunities for improvement. Improvements can be made to the individual roles and to the interfaces between roles.

Roles will need to be reviewed following any restructuring activities across the organization to ensure they remain aligned and effective.

5.2. How is a role different in a SIAM ecosystem?

The definition of roles and responsibilities in a SIAM ecosystem must recognize that they will be applied in a multi-provider environment. Without careful design and management of roles and responsibilities, there is a higher risk that activities could be missed or duplicated as more parties are involved and the ecosystem is more complex.

Mapping activities

In a SIAM ecosystem, one process or activity might span the three layers. For example, consider change management:

- Customer layer: has input to change authorization and scheduling
- Service integrator layer: manages the integrated change management process
- Service provider: initiates changes, presents them to the change advisory board, implements changes.

There is also an opportunity for multiple roles to be performed by one person. For example, a process manager for a service provider might have:

- A change management role, attending the change advisory board
- A problem management role, attending a problem management working group
- A knowledge management role, providing input into knowledge articles.

The way that roles are allocated will depend on factors including the size and complexity of the SIAM ecosystem and resource availability and capability.

5.2.1. The role of the customer organization

Outside of a SIAM model, it is usual for the customer to have a direct relationship with its service providers. In the SIAM ecosystem, the customer needs to understand that its role is to support and empower the service integrator. If the customer continues to work directly with service providers within a SIAM ecosystem, it may inadvertently create a 'Shadow IT' structure.

5.2.2. The role of retained capabilities

For staff who are part of the retained capabilities, adapting to SIAM means relinquishing direct control of service providers and stepping back from day to day management of service provision. Their role needs to be strategic and proactive, rather than operational and reactive.

The retained capabilities role needs to have a strong relationship with the service integrator. Its purpose is to provide direction, and enable service integrator autonomy without creating a dictatorship.

The customer owns the contracts with the service providers, but the service integrator is managing delivery against them. The retained capabilities need to let the service integrator carry out its role without undermining it.

5.2.3. The role of the service integrator

The role of the service integrator involves being the agent of the customer, acting on its behalf. This means doing the right thing for the customer, while not undermining its own organizational goals and objectives.

The service integrator also represents the service providers and the end to end service to the customer organization.

The service integrator role relies on good relationships. To be effective, it must have a good relationship with the customer organization and the service providers.

The service integrator's role is to assure and facilitate service delivery. It needs to be contractually and commercially aware to carry out its role effectively in the SIAM ecosystem. The service integrator needs to focus on service integration and collaboration across multiple service providers.

5.2.4. The role of service providers

Working collaboratively can be a new approach and a culture change for service providers. They need to adapt to working with potential competitors, and adjust to having a relationship with the service integrator rather than their customer.

They may have to change their ways of working and their structure to be effective in the SIAM ecosystem. Their role will require a focus on service objectives, balancing them against their own organizational objectives.

5.3. Role description: Customer organization, including retained capabilities

Description	The customer's role within the SIAM ecosystem is that of the commissioning organization. It also includes the retained capabilities that carry out corporate governance of the SIAM ecosystem.
Typical accountabilities	▪ Strategic direction ▪ Enterprise architecture ▪ Policy and standards management ▪ Procurement ▪ Contract management ▪ Demand management ▪ Financial and commercial management ▪ Service portfolio management ▪ Corporate risk management ▪ Governance, including governance of the service integrator ▪ Accountability for program and project management.
Typical roles	▪ Head of IT ▪ Head of service ▪ Service owner(s) ▪ Enterprise architect ▪ Service architect ▪ Chief finance officer (CFO) ▪ Chief information officer (CIO) ▪ Chief security officer (CSO).

Typical responsibilities	▪ Defines and assures a core set of policies, standards, procedures and guidelines including architectural, informational, commercial, financial, security and enterprise service architecture ▪ Develops and owns the IT strategy and strategy for SIAM that align with and support the business strategy ▪ Develops and owns enterprise architecture, defines the technology, data and application roadmap, defines the service scope for SIAM ▪ Provides overarching program and commercial management ▪ Assures and governs the service integrator ▪ Manages the service provider relationships at an executive/commercial level ▪ Overall management of risk ▪ Resolves contractual disputes ▪ Owns business relationships and acts as "intelligent customer" function ▪ Defines end to end service budget.

5.4. Role description: Service integrator

Description	The service integrator layer of the SIAM model is where end to end service governance, integration, assurance and coordination are performed.
Typical accountabilities	▪ End to end service management ▪ End to end performance management ▪ End to end service reporting ▪ Service governance and assurance ▪ Tracking value for money ▪ Continual service improvement.
Typical roles	▪ Head of service integration ▪ Service delivery manager(s) ▪ Service manager(s) ▪ Process owner(s) ▪ Process manager(s) ▪ Service assurance manager(s) ▪ Performance manager(s) ▪ Security manager(s).

Typical responsibilities	▪ Responsible for end to end service management across the service providers and the interface into the customer organization ▪ Managing service provider relationships at an operational level ▪ Acting as the customer's "agent" and providing a communication path to the service providers ▪ Managing end to end performance management of all service providers ▪ Managing performance management of individual service providers against agreed targets ▪ Coordination of the service providers ▪ Assuring service provider performance and service delivery ▪ Governing the service providers, as delegated by the customer organization ▪ Facilitating process forums ▪ Managing operational supply and demand for services and capacity ▪ Consolidated service reporting ▪ Providing service communications ▪ Potential responsibility for provision and management of an integrated service management toolset ▪ Managing the performance of service providers against contractual and service targets.

5.5. Role description: Service provider

Description	Within a SIAM ecosystem, there are multiple service providers. Each service provider is responsible for the delivery of one or more services, or service elements, to the customer. It is responsible for managing the products and technology used to deliver its contracted or agreed services. The service providers can be part of the customer organization or external to it.
Typical accountabilities	▪ Delivering services required by the customer to defined and agreed standards, policies and architecture ▪ Exhibiting required behaviors for cooperation, collaboration, improvement and innovation ▪ Ensuring cross-service provider service management processes are followed ▪ Working collaboratively with suppliers and the service integrator to resolve issues, incidents and problems, identify improvement opportunities and meet customer outcomes.
Typical roles	▪ Service manager(s) ▪ Account manager(s) ▪ Process owner(s) ▪ Process manager(s) ▪ Technical staff ▪ Service management staff.
Typical responsibilities	▪ Responsible for the delivery of technology and products to deliver services, at agreed service levels and cost ▪ Integrating internal service management processes with the end to end service management processes ▪ Adhering to policies, standards and procedures defined by the customer ▪ Adhering to architectural design standards ▪ Working collaboratively with the service integrator and other service providers ▪ Taking part in structural elements, including process forums.

5.6. Governance roles

Governance is a term that is widely used and often misunderstood. In a SIAM ecosystem, governance refers to the definition and application of policies and standards. These define and ensure the required levels of authority, decision-making and accountability.

COBIT® includes three activities in its definition of governance: evaluate, direct, and monitor. Lower level activities (plan, build etc.) are part of management (see section **4.2.1 What is COBIT®?**).

This is shown in **figure 13**.

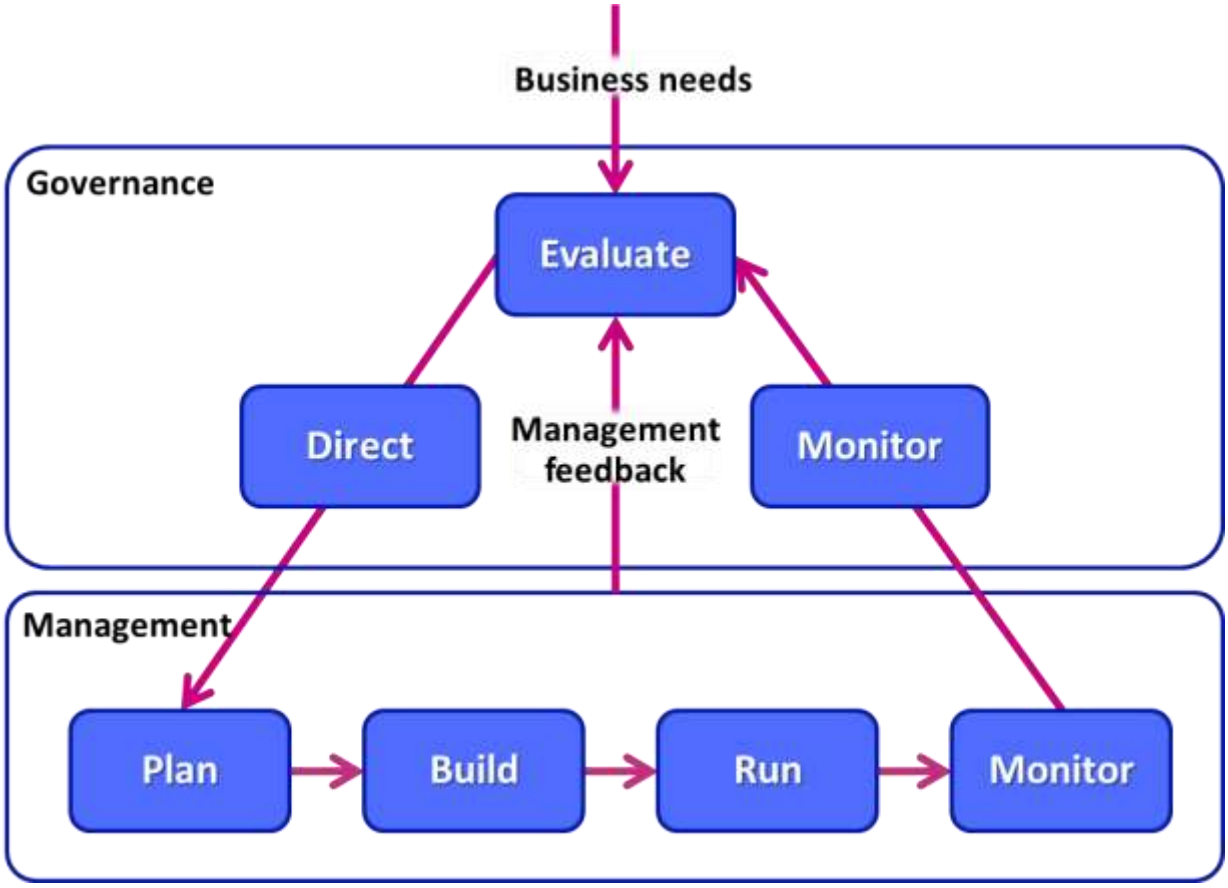

Figure 13: The COBIT® 5 Business Framework for the Governance and Management of Enterprise IT ©, 2012, ISACA

The SIAM roles can be mapped onto this model, as shown in **figure 14**.

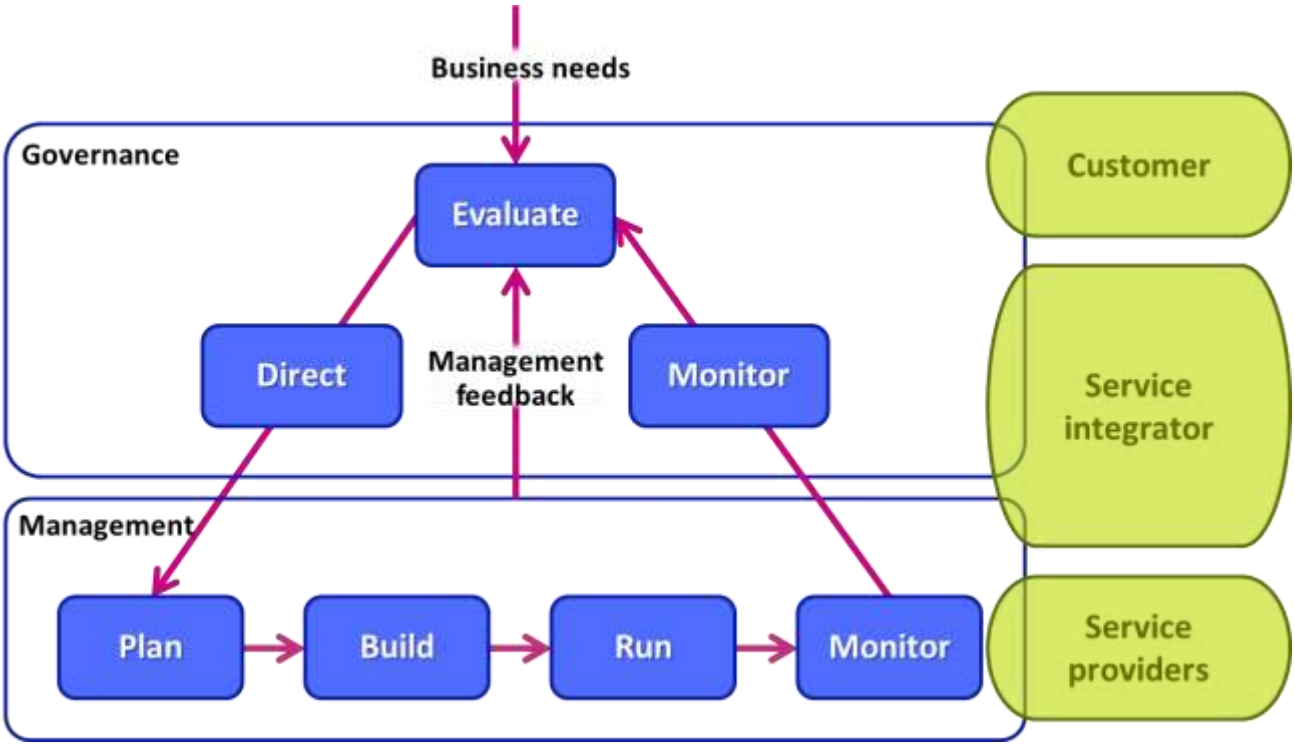

Figure 14: Mapping SIAM roles onto the COBIT® 5 Business Framework

Governance activities are carried out at strategic, tactical and operational levels through governance boards. These boards form structural elements in the SIAM layers.

Boards are decision-making bodies that are accountable for their outcomes.

The boards discussed in this document provide the required level of governance in a SIAM environment. In complex environments with many different service providers, more boards might be created to address specific areas, for example:

- Information security advisory board
- IT service continuity governance board
- Program board.

The board structure that is put in place in a SIAM model needs to balance the level of overhead created by the board meetings against the governance requirements and the outcomes achieved.

5.6.1. Strategic governance: Executive boards

Executive boards provide governance and oversight at the most senior level. These boards also play an important role in establishing a SIAM culture, by demonstrating good behaviors at the most senior levels (see section **7 SIAM cultural considerations**).

The attendees for these boards are senior staff with accountability for their organization's role in the SIAM model.

In addition to the executive board attended by all service providers, each service provider has an individual executive board with the customer and the service integrator. This allows a service provider to discuss commercial performance and sensitive issues.

5.6.1.1. Typical attendees

Typical attendees include:

- Customer: chief information officer (CIO), chief technology officer (CTO), head of delivery or service delivery director
- Service integrator: operations director, contract and commercial director
- Service providers: operations director, contract and commercial director, account executive, CIO, CTO.

5.6.1.2. Typical frequency

Executive boards are typically held quarterly.

5.6.1.3. Typical agenda

An executive board agenda could include:

- Customer strategy: for the next six months, one year and three years
- Service integrator strategy updates, including any possible clashes or synergy, and opportunities for mutual benefit
- Service provider strategy updates, where appropriate, including any possible clashes or synergy, and opportunities for mutual benefit
- High-level review of last quarter, including successes and issues

- Contractual performance, including any obligations not being met; these are typically discussed at the individual executive boards, unless there is a common issue across all service providers
- Planning for innovation, considering any new items from the service providers/service integrator
- Any other relevant topics.

5.6.1.4. Typical inputs

Executive board inputs could include:

- Quarterly and monthly performance information
- Customer and service satisfaction information
- Customer strategy
- Strategic service improvements
- Strategic innovations
- Service integrator and service provider strategies, where relevant
- Service provider technology roadmap.

5.6.1.5. Typical outputs

Executive board outputs could include:

- Action and decision logs
- Strategic course corrections or direction changes
- Business change requirements
- Strategic change schedule
- Celebration and communication of success.

5.6.2. Tactical board

The tactical board sits between the strategic and operational boards. It forms part of the preparation for the operational board and can be used to carry out discussions before meeting with the customer, for example if a major incident has occurred. It can also be used to identify items for escalation to the strategic board, and acts as a point of escalation for operational boards.

This board is not attended by the customer.

5.6.2.1. Typical attendees

Tactical board attendees are staff from the service integrator and the service providers. The roles present could include:

- Service delivery managers
- Service managers
- Process owners, as required
- Account managers.

5.6.2.2. Typical frequency

Tactical boards are typically monthly.

5.6.2.3. Typical agenda

This board is used to discuss service performance and continual improvement, so the agenda will vary depending on any issues that are being experienced.

The service integrator is empowered to interpret the contract on behalf of the customer so decisions might be made at this meeting about financial or non-financial remediation, which can then be communicated at the operational board.

This board will take direction from the strategic board and use it to create tactical action plans. It will also review changes escalated from the operational boards.

This board will include coordination, mediation, decision-making, assurance and governance.

5.6.2.4. Typical inputs

Tactical board inputs could include:

- Performance data, including customer satisfaction
- Service improvements
- Service provider data.

5.6.2.5. *Typical outputs*

Tactical board outputs could include:

- Action and decision logs
- Tactical change schedule
- Improvement opportunities.

5.6.3. Operational boards

The main operational board convenes to discuss service performance at a lower level than the executive and tactical boards.

It will review service performance and acts as an escalation point for all other operational boards and process forums. For example, it may authorize budget or resources to carry out improvement activities identified in a process forum that exceed the approval limit of the process forum attendees.

Other operational boards will be scheduled as required to support decision-making; the most common example of this is the integrated change advisory board.

5.6.3.1. *Typical attendees*

Operational board attendees could include:

- Customer retained capabilities, where required
- Service integrator
- Service providers
- User representatives
- Process owners
- Process managers
- Service managers.

5.6.3.2. *Typical frequency*

Operational boards are typically monthly.

5.6.3.3. *Typical agenda*

An operational board agenda could include:

- Review of monthly performance reports, including customer satisfaction
- Actions and decisions
- Critical and major incident reviews
- Escalations from other operational boards and process forums
- Six-monthly compliance and certification policies and procedures review.

5.6.3.4. *Typical inputs*

Operational board inputs could include:

- Monthly reports
- Process reports; for example, incident reports
- Improvement plans
- Escalations from other operational boards
- Decisions from the tactical and strategic boards.

5.6.3.5. *Typical outputs*

Operational board inputs could include:

- Decision and action logs
- Items for escalation
- Improvement actions.

5.6.4. Operational board: Integrated change advisory board

The integrated change advisory board is an operational governance board. It meets this definition because it makes decisions and is held accountable for them. It is chaired and managed by the service integrator.

This board reviews all changes within the scope of its authority that could affect the end to end service, regardless of which service provider will implement the change. It focuses on changes that affect multiple service providers, associated risks, and unintended impacts to the customer.

The board is also responsible for defining change policy. The policy defines the responsibilities for review and approval of different types of change. This includes the definition of standard or self-contained changes that can be approved locally by a service provider.

Where necessary, changes are escalated to the tactical or strategic boards. 'Review' of changes can encompass any action from detailed investigation through to definition of standard changes that gain automatic approval, or approval of systems for automated test and release (see section **4.4 DevOps**). The board seeks to facilitate, not prevent change.

The responsibilities of the integrated change advisory board include:

- Ensuring that all service providers and the customer are aware of relevant changes
- Confirming that:
  - Changes have been evaluated for risk and unintended impact
  - Remediation plans have been verified
  - Appropriate resources have been allocated and made available to implement the change
  - There are robust communication plans in place
  - Ecosystem technical and architectural standards have been met
- Collective approval or otherwise of the change
- Creating mechanisms for standard changes and their automatic approval
- Review of completed changes.

5.6.4.1. Typical attendees

Integrated change advisory board attendees could include:

- Service integrator change manager (chair)
- Service provider change managers
- Subject matter experts as required
- Customer representation as required.

5.6.4.2. Typical frequency

The frequency of the integrated change advisory board varies, relating to the number and scale of changes. Additional emergency meetings can be convened as required.

5.6.4.3. Typical agenda

An integrated change advisory board agenda could include:

- New changes to be reviewed
- Update on implemented changes and failed changes
- Improvements to the change management process.

5.6.4.4. Typical inputs

Integrated change advisory board inputs could include:

- Change requests and related information
- Change management process performance information.

5.6.4.5. Typical outputs

Integrated change advisory board outputs could include:

- Change status updates
- Process improvements.

5.7. Operational roles

An effective SIAM ecosystem is built on working relationships and cultural alignment between all the SIAM layers.

At an operational level, working groups, boards and process forums all help to establish relationships and encourage communication between service providers and the service integrator. These working groups, boards and process forums form structural elements of the SIAM ecosystem, spanning the SIAM layers; see section **1 Introduction to Service Integration and Management (SIAM)** for more information.

There are many possible boards, process forums and working groups that can be implemented in a SIAM ecosystem, including:

- Integrated change advisory board
- Problem management forum
- Knowledge management forum
- Continual improvement forum
- Capacity management forum
- Information assurance and security forum
- Transition planning and support forum
- IT service continuity forum
- Service monitoring forum
- Incident management working group (for a specific incident or incidents)
- Release planning working group
- Problem management working group (for a specific problem or problems)
- Innovation working group (for a specific innovation).

The structural elements in place will vary in each SIAM ecosystem. A structural element can be created for any service management process or activity, if it supports improvements in service delivery and outcomes.

Forums can be combined where appropriate – for example, a single 'process improvement' forum could be used to assess possible improvements to multiple processes.

Combined forums are of value when processes have similar scope or have dependencies between their activities, for example change, configuration

and release management. The number of meetings should always be balanced against the value of the meetings.

There are generic roles that will attend working groups and forums.

Process owner

- Accountable for end to end process design
- Accountable to process performance.

Both the service integrator and the service providers will have process owners. The service integrator process owner will be accountable for end to end process integration across the service providers.

The service provider process owner will be accountable for a process within the service provider and for alignment with the end to end process. A process owner is a role, so one staff member may act as the process owner for multiple processes.

Process manager

- Responsible for process execution.

In larger organizations, process manager roles are defined to support the process owner and be responsible for the execution of process activities.

Service owner

- Accountable to end to end service performance
- Defines service strategy
- Forecasts service demand and business requirements
- Service budget-holder.

This role will typically be part of the customer organization.

Service manager

- Responsible for service delivery for one or more services.

This role would typically be carried out by the service integrator.

Examples of operational roles

This section provides some examples of process forums and working groups in a SIAM ecosystem. These examples can be used as the basis for the design of other process forums and working groups within a SIAM model.

5.7.1. Knowledge management forum

The knowledge management forum is hosted and managed by the service integrator knowledge management process owner.

It is a regular forum where the performance and effectiveness of knowledge management across the ecosystem is reviewed and assessed.

5.7.1.1. Typical attendees

Knowledge management forum attendees could include:

- Service integrator knowledge management process owner (chair)
- Service provider knowledge management process owners/process managers
- Service integrator service manager as required
- Subject matter experts as required
- Customer representation as required.

5.7.1.2. Typical frequency

Process forums are typically monthly.

5.7.1.3. Typical responsibilities

Knowledge management forum responsibilities could include:

- Reviewing accuracy and currency of the knowledge articles in use
- Identifying new knowledge articles that are required based on repeat incidents or requests received by the service desk
- Allowing service providers to collaborate on identifying any incident types that could be resolved at the service desk or via self-help systems rather than by second line teams, improving the end user experience.

5.7.2. Continual improvement forum

The continual improvement forum is hosted and managed by the service integrator.

It is a cross-ecosystem forum attended by all service providers and the customer. Attendees can present, discuss and agree initiatives for improvement; for example, ways to deliver cost savings or improve customer experience.

5.7.2.1. Typical attendees

Continual improvement forum attendees could include:

- Service integrator continual improvement process owner (chair)
- Service provider continual improvement process owners/process managers
- Service integrator delivery manager/director
- Service owners
- Other process owners as required
- Subject matter experts as required
- Customer representation as required.

5.7.2.2. Typical frequency

Process forums are typically monthly.

5.7.2.3. Typical responsibilities

Continual improvement forum responsibilities could include:

- Presenting and reviewing ideas for improvement
- Assessing the potential of initiatives
- Prioritization of initiatives
- Agreeing the responsible party or parties to implement the improvement; this may involve cross-service provider collaboration and implementation
- Approval of any budgetary spend (this may need to be escalated to a governance board)
- Communicating the benefits to the business
- Tracking the progress and ultimate success of the improvements.

5.7.3. Major incident working group

The major incident working group is chaired and managed by the service integrator. It may also be referred to as a crisis team, critical incident team or major incident bridge.

It is convened during a major incident, to coordinate the response, facilitate cross-service provider communication and provide regular updates to the customer organization.

Any lessons learned during a major incident will be discussed in the incident management process forum.

5.7.3.1. Typical attendees

Major incident working group attendees could include:

- Service integrator major incident manager (chair)
- Service provider incident management process owners/process managers
- Other process owners as required
- Subject matter and technical experts as required
- Service owners as required
- Customer representation as required.

5.7.3.2. Typical frequency

A major incident working group will be held when required; when a major incident has occurred.

5.7.3.3. Typical responsibilities

Major incident working group responsibilities could include:

- Coordinating major incident investigation and resolution
- Coordinating major incident communications
- Encouraging a 'fix first, argue later' culture.

5.8. The service desk in a SIAM ecosystem

The role of the service desk and how it is sourced will vary from SIAM ecosystem to ecosystem.

The service desk is often seen as a good candidate for external sourcing due to high staff turnover and management overhead, but some companies prefer to keep it internal or use a hybrid approach.

The organization providing the service desk will be treated and managed as a service provider in the SIAM ecosystem, whether it is provided by the customer organization, the service integrator or a service provider.

Within a SIAM ecosystem, the service desk acts as a 'single source of truth' and provides important management information about service performance. If the service integrator is not providing the service desk, it must work very closely with it and use the service data it provides.

Some of the potential sourcing options are:

1. The customer organization provides the service desk and associated toolset, acting as an internal service provider, and routes incidents to service providers as necessary
2. The service integrator provides the service desk and associated toolset
3. An external service provider provides the service desk and toolset, but no other services
4. An external service provider provides the service desk and toolset in addition to other services; this is often combined with end user computing, applications or hosting
5. Different service providers provide their own service desks and toolsets and the service integrator provides a consolidated view; this is only possible where it is clear to the customer which service desk to contact for support.

In most instances, the end user contacts a single service desk, which then works with the relevant service provider service desks and support teams. The end user has a single point of contact.

The staff who work on the service desk will require similar skills to those outside of a SIAM ecosystem, but they will also need:

- Supplier management skills
- Commercial awareness.

These skills will allow them to work successfully with different service providers, who may have different contracts, service targets and responsibilities.

6. SIAM practices

Practices are defined as: the actual application or use of an idea, belief, or method, as opposed to theories relating to it.[19]

From a SIAM perspective, 'practices' meet this definition when organizations are applying them within a SIAM model. The examples in this section give some illustrations of how to apply SIAM practices, principles and concepts to deliver value.

Within SIAM there are four types of practice:

1. People practices
2. Process practices
3. Measurement practices
4. Technology practices.

This section of the Body of Knowledge looks at one area for consideration in each practice type. It considers the challenges associated with that area, and then the working practices that can be used to address the challenges.

These example practices should not be thought of as 'good' or 'best' practice. They provide an illustration of how practices can work in a SIAM ecosystem.

For example, in section **6.1** we consider cross-functional teams. Cross-functional teams are just one example of the challenges in a SIAM ecosystem and the people practices will help to deal with the challenges associated with cross-functional teams. Other challenges and practices exist and are explained in further detail in the SIAM Professional Body of Knowledge.

SIAM also draws on practices from other areas of IT and management; see section **4 SIAM and other practices**.

[19] Source: Oxford English Dictionary © 2016 Oxford University Press

6.1. People practices: Managing cross-functional teams

"A cross-functional team is a group of people with different functional expertise working toward a common goal. It may include people from finance, marketing, operations, and human resources departments. Typically, it includes employees from all levels of an organization."[20]

The SIAM ecosystem and cross-functional teams

With the SIAM ecosystem, cross-functional teams will have members from different organizations and different SIAM layers. These teams are referred to as "structural elements"

There are three types of structural element/cross-functional team:

1. Boards
2. Process forums
3. Working Groups.

These are described in sections **1 Introduction to Service Integration and Management (SIAM)** and **5 SIAM roles and responsibilities**.

In a SIAM environment, examples of cross-functional teams could include:

A major incident working group where the cause of an incident is unclear. The team includes staff from the service integrator and multiple service provider organizations. Team members need to work together towards a shared outcome (incident resolution), whilst meeting service requirements and balancing their own organizational goals.

The integrated change advisory board involving staff from the customer organization, service integrator and multiple service providers. The team members work together to review, prioritize, assess risk and approve or reject changes to an integrated service.

[20] Source: Wikipedia

6.1.1. Challenges related to cross-functional teams

Some of the main challenges associated with cross-functional teams are:

1. Conflicting objectives, organizational strategies and working practices
2. Reluctance to share knowledge
3. Lack of automation.

6.1.1.1. Conflicting objectives, organizational strategies and working practices

The cross-functional teams in a SIAM ecosystem contain staff from multiple service providers, the service integrator and, in some cases, from the customer organization as well. This can create challenges when staff must balance their own organizational objectives with cross-functional team objectives.

For example, during a major incident, a service provider's organizational goals might be to demonstrate that it is not responsible for causing the incident, and to minimize the resources allocated to resolving it.

However, the end to end service targets could be focused on resolving the incident and then assessing what caused it later. This requires the service provider to adopt a 'fix first, argue later' approach, which may conflict with its individual organizational goals.

Differences between organizational strategies and working practices can also have an impact on the performance of a cross-functional team.

For example, technical organizations might prioritize resolving incidents above customer communication. In a SIAM ecosystem, they might have to prioritize customer communication over service restoration.

6.1.1.2. Reluctance to share

The service provider and service integrator staff working in a SIAM ecosystem need to share information, and collaborate at a people, process and technology level.

In an effective SIAM ecosystem, they may have targets relating to service improvement as well as service delivery.

To innovate effectively and improve service delivery, service providers and the service integrator need to work together. Some organizations may be reluctant to do this because they view it as sharing their intellectual property with a competitor.

6.1.1.3. Lack of automation

Lack of automation and ineffective toolsets can also be a challenge for cross-functional teams. Where more than one toolset is in use, poor integration between tools is also a challenge.

The issues here can include:

- Inability to measure end to end team performance
- Inability to easily share information between teams
- Duplicated work caused by entering data into multiple toolsets (the 'swivel chair' approach)
- Reduced likelihood of identifying patterns or opportunities for improvement
- Reduced workflow automation, leading to workflow interruptions, delays, and an inability to monitor workflow.

6.1.2. Practices for managing cross-functional teams

To support effective management of cross-functional teams, the service integrator and the customer need to consider:

1. Roles and responsibilities
2. Clear goals and objectives
3. Knowledge, data and information
4. Communication
5. Toolset integration.

6.1.2.1. Roles and responsibilities

Defining clear principles and policies for roles and responsibilities as part of the Discovery & Strategy stage of the SIAM roadmap will lay the foundation for better cross-functional working.

This supports communication within cross-functional teams because all the parties involved have a clear understanding of who the stakeholders are.

RACI matrices are a useful tool for mapping roles and responsibilities in cross-functional teams.

RACI matrix

RACI matrices are used to manage resources and roles for the delivery of an activity or task. They can be used to identify all participants in the delivery of a process or function.

Resources can be drawn from different functional areas and organizations, so a RACI matrix is used to track who is doing what, identifying interfaces and engagement with other roles. It provides a clear mapping of roles across the different teams in the SIAM ecosystem.

RACI stands for Responsible, Accountable, Consulted and Informed.

Only one role can be **Accountable** for a task. The role that is accountable for the task has the overall authority - but might not carry out individual pieces of work him/herself.

Any number of roles can be **Responsible** as part of the RACI model. These are the workers who will get the actual tasks done, and they will report to the Accountable resource about their progress.

Sometimes roles are **Consulted** to get a task done. This might be a person within the organization who holds specific knowledge, or it could be a document store or even an internet search engine. These resources need to be tracked to ensure they are available when required.

Other roles need to be **Informed**. These resources are stakeholders who need to track and understand exactly how the task is proceeding, or they may need an output from the activity. Customer organization sponsors, for example, will typically be informed about progress as part of a project.

To build a RACI matrix, these steps need to be followed:

- Identify activities
- Identify roles
- Assign RACI codes
- Identify gaps or overlaps that need resolving
- Distribute the chart for feedback
- Deploy to all relevant parties
- Monitor the roles
- Apply improvements or changes based on feedback and experience.

6.1.2.2. Clear goals and objectives

As well as a clear understanding of roles and responsibilities, parties in a SIAM ecosystem need clear goals and objectives.

- The customer will define the strategic objectives for the services
- The objectives will be translated into contracts and service agreements
- The service integrator will work with service providers to:
  - Develop process goals and objectives that drive process execution
  - Develop operational level agreements or targets that align with the contracts and service agreements.

Whilst it is important that each service provider has measurable service targets to work towards, they need to be part of an end to end performance management and reporting framework. This will, in turn, provide evidence of demonstrable achievement of service objectives, business benefits or value.

If there is no clear definition and communication of value, or end to end metrics, service providers may focus only on their own performance and not see the end to end view.

In some cases, it might be acceptable for a service provider to miss a target in one area, because it means meeting a target in a different area. The service integrator can help the service providers to prioritize when there is a conflict between individual targets and end to end service targets.

6.1.2.3. Knowledge, data and information

Cross-functional teams need access to shared knowledge, data and information.

When these are not shared or readily available:

- Team members will waste time re-discovering or recreating them
- Service issues and customer contacts might be managed in inconsistent ways
- Work will not be carried out in the most efficient way
- Different parties may have different 'versions of the truth'.

The service integrator needs to create a knowledge management strategy and policy to govern how knowledge is gathered, processed, presented, managed and removed.

The service integrator will also make sure that all service providers have access to the knowledge they need as part of a shared knowledge repository. All service providers should contribute to this repository for the benefit of all other parties.

Checks need to be in place to make sure knowledge is updated, relevant, and being used.

6.1.2.4. Communication

The service integrator and the service providers need to communicate regularly and work to build relationships and trust. The RACI matrix developed as part of the roles and responsibilities definition is useful to define the 'who', 'what', 'when', 'where', 'how' and 'why' of communication.

A communication plan is key to ensure that:

- All stakeholders and their communication requirements are identified
- There is an appropriate level of regular communication for all stakeholders, for example meetings and levels of reporting
- Communication takes place at the right level for each layer of the SIAM ecosystem
- Communication is consistent across service providers
- Effective communication channels are selected to support timeliness, relationship building, ease of execution and access.

Use of the various structural elements in the SIAM ecosystem (including boards, process forums, and working groups) will help to build relationships and encourage better cross-functional working.

Virtual teams

In a SIAM ecosystem, team members are likely to be in different geographical locations. These are referred to as 'virtual teams'.

The resources in the teams might also have multiple customers to work with; for example, a service provider's technical support staff might be involved in more than one SIAM engagement.

The service integrator needs to carefully consider how to manage communication within these teams. Even more care is required if teams are virtual as well as cross-functional.

Virtual teams need to build relationships between team members. This can be challenging if there is no regular face to face contact between them. It is recommended to have at least one face to face event where team members can get to know each other, to foster trust and create good working relationships.

Tools can be used to support communication in virtual teams. Examples are videoconferencing, social media, and chat tools.

6.1.2.5. Toolset integration

For cross-functional teams, integration between toolsets will save time and resources, and reduce the possibility of errors. It can also support workflow automation.

Integrating toolsets will reduce the need to re-enter and translate data. There is less chance of information errors leading to friction between teams.

6.2. Process practices: Integrating processes across service providers

Within the context of this document, a process is "a documented, repeatable approach to carrying out a series of tasks or activities".

SIAM environments and integrated processes

In a SIAM environment, processes must operate effectively and efficiently across multiple parties. This includes service providers, the service integrator, and sometimes, the customer.

For example, during change management, the service integrator is accountable for changes to integrated services, across all the service providers involved with the change.

Change management includes change recording, assessment, prioritization, planning, approval, and post-implementation reviews.

The service providers, the service integrator, and potentially the customer will all be involved. This requires a change management process that is integrated across all parties.

6.2.1. Challenges related to integrating processes across service providers

Challenges associated with integrating processes across service providers include:

1. Service providers do not integrate their processes or share process details
2. Gaps between process activities
3. Time-consuming and manual reporting
4. Poor relationships between service providers/blame culture.

6.2.1.1. Service providers do not integrate their processes or share process details

Within a SIAM ecosystem, data and information must flow between all parties. This does not mean that all parties must use the same process. Instead, each service provider and the service integrator must work together to ensure their processes are aligned to deliver the required outcome.

This requires processes from the service providers, the service integrator, and the customer to be aligned and integrated. Some of the service providers in a SIAM ecosystem may be unwilling, or unable, to make the adaptations necessary to support this integration.

This may be acceptable if outcomes and performance meet the pre-defined targets. However, unless this is considered in the design of the integrated processes it can result in:

- Adversely affected outcomes
- Failure to meet end to end service levels
- Inefficiencies in the execution of the integrated processes
- Unforeseen additional overheads in the service integrator
- Miscommunication.

For example, consider a situation where one of the services is a cloud based commodity email service.

The service provider will publish planned changes and service outages on its website. It will not directly inform the service integrator, seek approval for changes, or attend any change management boards. The service integrator must regularly check the service provider's website. The service integrator informs the other service providers and customer of any changes that will affect them.

6.2.1.2. Gaps between process activities

Process integration fails when there is a gap or a break in the process flow.

This could be a simple action; for example, an incident being assigned to a queue for a service provider, and not being picked up, resulting in increased downtime for the customer. Gaps are often identified when process performance targets are failed, for example, when incident resolution times are missed.

These gaps need to be identified and addressed during Plan & Build and on an ongoing basis. The development and agreement of process flows and RACI matrices (see section **6.1.2 Practices for managing cross-functional teams**) will help to identify and avoid such gaps.

Gaps should also be identified during the service integrator assurance activities.

6.2.1.3. *Time-consuming and manual reporting*

Where different providers use different processes, it is likely that they will also use different toolsets. The use of different toolsets can affect the ability, effectiveness, and efficiency of the monitoring and reporting on performance of end to end processes.

Unless this is recognized and managed during the Plan & Build stage, monitoring and reporting for end to end processes can be time consuming and laborious. Design activities must recognize this, to ensure that the value of the information produced justifies the effort required to collect and process it.

6.2.1.4. *Poor relationships between service providers/Blame culture*

The success of an integrated process depends on all parties contributing to its design, execution, and improvement. Service providers are less likely to contribute if their relationships with other service providers and with the service integrator are poor.

Service providers need to adopt a 'fix first, argue later' mentality to resolve issues. This needs to be supported by a 'no blame' culture so that service providers are ready to be open about their faults, rather than trying to hide them.

The 'no blame' culture needs to start with the customer and then be continually reinforced by the service integrator to create a collaborative environment. This will assist with building the necessary good relationships.

6.2.2. Practices for integrating processes across service providers

Practices for integrating processes across service providers include:

1. Focus on process outcomes
2. Continual process improvement
3. Establishing process forums.

In addition to these practices, the RACI matrices mentioned in section **6.1.2** will also be helpful for identifying the role and responsibility of each stakeholder for each process activity.

6.2.2.1. *Focus on process outcomes*

The service integrator needs to be clear about the outcome that a process is expected to deliver. This can then be communicated to the service providers so that they all understand their role and responsibilities within the process.

It is better to start with the outcome and then work back, rather than to start with lower level steps and activities in the hope that they can be brought together into a process. For each process that involves multiple parties, these items should be documented and understood:

- Inputs
- Outputs
- Outcomes
- Interactions
- Dependencies
- Controls
- Data and information standards
- Process steps
- Process flow.

RACI matrices can help to document these, and are a commonly used and widely understood technique.

It is important to recognize and reward positive outcomes when processes are performing well.

6.2.2.2. *Continual process improvement*

All processes should be subject to review and improvement measures. This continual improvement can be managed on multiple levels:

- Within each area responsible for the provision and fulfilment of the process
- At the process level, for example via the process forums or the process owner.

These levels should also feed into an overall process improvement program run by the service integrator. This is particularly relevant when an improvement is dependent on resources external to the process or is likely to have a significantly beneficial impact.

Each process will have a process owner who will be accountable for continual improvement across the end to end process, and the service integrator has ultimate accountability for process improvement.

Process improvements should be assessed, justified and approved using an agreed mechanism, often in the process forum. Once improvements are implemented, their benefits should be tracked to confirm a change has been delivered. This can be more challenging in a SIAM ecosystem than for a process that exists within a single organization.

6.2.2.3. Establishing process forums

Process forums are a type of structural element within a SIAM model. They are used to bring together process owners and practitioners from the service providers and the service integrator. Their purpose is to work together on the design and improvement of how their (process-)activities support end to end delivery.

This includes:

- Defining data and information standards
- Identifying and managing process improvements
- Developing and sharing good practice
- Sharing information
- Assessing and improving capability and maturity.

Process forums are invaluable for building relationships and trust between all parties. They can be established for a single process, a group of related processes, or a practice in the SIAM ecosystem.

6.3. Measurement practices: Enable and report on end to end services

End to end service measurement refers to the ability to monitor an actual service, not just its individual technical components or providers. Effective measurement practices support the performance management and reporting framework.

SIAM environments and end to end service measurement

In a SIAM environment, examples of end to end measurement could include:

The percentage of service downtime related to failed changes: based on the amount of downtime (minutes, hours, days) and the percentage of this caused by changes

Responsiveness of the service against defined targets: based on measuring the customer's actual experience of the service, not just individual elements, such as network speed or application responsiveness

End to end measurement is more complex in a SIAM environment because more than one service provider is involved with service delivery. The end to end view is aggregated by the service integrator using data from all service providers.

6.3.1. Challenges related to enabling and reporting on end to end services

Challenges associated with measurement of end to end services include:

1. Lack of strategic requirements
2. Reluctance to share information
3. Inability to map service architecture or end to end workflow
4. Not measuring the correct amount of data and information.

6.3.1.1. Lack of strategic requirements

An effective performance management and reporting framework can only be built once it is clear what needs to be measured.
If the overall strategic requirements for the services are unknown, it will be difficult to create a meaningful set of end to end measurements and reports.

6.3.1.2. Reluctance to share information

Poor relationships or competitive tension between service providers can lead to an unwillingness to share information. Service providers might also be reluctant to share information if they feel it will be used to punish them, rather than as a source of learning and improvement.

In some situations, the customer withholds information from the service integrator. If the service integrator is an external organization, for example, the customer might not want to share some information that it considers to be confidential.

6.3.1.3. Inability to map end to end service architecture

Many organizations struggle to map an end to end service, and understand what is in scope for measurement and what is not. With the addition of multiple service providers and a distributed architecture, this can be even more challenging.

The service integrator needs to map the end to end service and work with each service provider to confirm what needs to be measured to build the end to end picture. Enabling practices like OBASHI and configuration management can be of assistance in this.

6.3.1.4. Not measuring the correct amount of data and information

Some organizations do not collect enough data, and some collect too much.

If an organization does not collect enough, there is a risk that important information will be missed. If they collect too much, there is a risk that there is too much data to analyze, which can also lead to important information being missed.

The same is true for how much information is included in reports. Small amounts of information may seem easier to understand but may hide important information. Large amounts may be difficult to understand and can complicate the ability to present an accurate picture.

The challenge is to identify the optimum amount of information to collect and report on. A useful technique is to report at a summary level but have the detailed reports available to support any requirement for more in-depth information.

6.3.2. Practices for enabling and reporting on end to end services

Practices for enabling and reporting on end to end services include:

1. Create a performance management and reporting framework
2. Make reports visual
3. Use qualitative and quantitative measures
4. Apply agile thinking.

6.3.2.1. Create a performance management and reporting framework

A performance management and reporting framework provides a way to structure data and information from service measurement and link them to the customer organization's strategic requirements.

The performance management and reporting framework will be created during the Plan & Build roadmap stage.

Performance management and reporting frameworks can be structured in a variety of ways, depending on the available toolset, the strategic requirements and the service contracts.

Possible framework structures include:

1. By SIAM ecosystem layers:
    - Service provider metrics
    - Service integrator metrics
    - Customer metrics.

2. By type:
    - People metrics
    - Process metrics
    - Technology metrics.

3. By hierarchy, allowing for information to be expanded or shown in more detail when needed:
    - Strategic metrics
    - Tactical metrics
    - Operational metrics.

6.3.2.2. *Make reports visual*

Information is most effective when it is visual and easy to understand. Using service dashboards and scorecards will increase the impact of reporting.

A picture can be easier to understand than a long report, but care must be taken to clearly identify each visual and what it indicates.

6.3.2.3. *Use qualitative and quantitative measures*

Quantitative measures are numerical, and factual; for example, the number of incidents that were resolved in the agreed timescales, or a reduction in the number of target breaches.

Qualitative measures are usually descriptive and often in non-numerical form; for example, customer satisfaction surveys.

Whilst it is relatively easy to measure and report on quantitative measures, they do not often reflect the quality of the service accurately. One of the drivers for SIAM is the 'watermelon' effect, where service providers report they are meeting all their targets, but the customer is still not happy. Using a mix of qualitative and quantitative measures will help to provide a balanced view. Care should be taken to ensure that these remain aligned to strategic requirements and service objectives.

The watermelon effect

The watermelon effect occurs when a report is 'green on the outside, red on the inside'.

The service provider(s) meet individual targets, but the end to end service is not meeting the customer's requirements. This does not deliver a good outcome for the customer, and should also be a concern for the service provider.

It may be good for the service provider to be meeting its targets, but if the customer is not happy, it will not have a good long-term relationship.

In this situation, the target is not aligned to business requirements.

6.3.2.4. Apply agile thinking

The application of Agile techniques can help to determine the optimum amount of information in reports. Start by reporting on a minimum set of viable metrics. These can provide the minimum amount of information to assess performance, with no unnecessary additions or duplication.

These reports can then be used as the basis for discussion and learning, with more measurements being added if required.

It is often beneficial to start small and then develop the performance management and reporting framework. This approach should initially use less resource than trying to measure every single element of the ecosystem.

See section **4.5 Agile, including Agile Service Management** for more information about SIAM and Agile.

6.4. Technology practices: creating a tooling strategy

A tooling strategy outlines the requirements for a toolset or toolsets to support the SIAM ecosystem. It will include functional and non-functional requirements, the processes that need to be supported, standards for interfacing to the toolset(s) and a roadmap for future development.

Typically, organizations will focus on the IT service management tool, which will support processes including incident, problem, change, configuration, release management and request fulfilment. However, there are other areas where a tooling strategy will provide considerable benefit, such as:

- Event management
- Event correlation
- Software asset management
- Discovery
- Capacity, performance and availability management
- Operational risk management
- Project management
- Service performance reporting.

SIAM environments and the tooling strategy

An optimized tooling strategy will make it easier for the service providers in a SIAM ecosystem to work together. It can also:

- Help the service integrator to get a 'real time' view of end to end service performance
- Improve the efficiency of workflow
- Support data integration, which is critical in establishing aggregated service views from data provided by multiple service providers

There are several possible approaches for tooling. These are listed in section **2 SIAM roadmap**. The aim is to have integration between all toolsets.

Integration is difficult to achieve, relying on sophisticated data mapping between service providers and the service integrator. Toolset integration requirements need to be documented and assessed in the context of the broader technology architecture.

In some circumstances, it may be acceptable to use less sophisticated and more manual methods (often referred to as 'loose coupling' of data exchange). For time-critical activities like major incident management, there may be little alternative other than to build integration between toolsets (referred to as 'tight coupling' of data exchange).

The integrated toolset acts as a single version of the truth for all the parties in the SIAM ecosystem, simplifying data transfer, reporting and accuracy.

6.4.1. Challenges related to creating a tooling strategy

Challenges associated with creating a tooling strategy include:

1. Ineffective legacy tools
2. Defining the toolset scope
3. Non-compliant service providers
4. Lack of architecture.

6.4.1.1. Ineffective legacy tools

The customer organization may require the service integrator and/or service providers to use legacy toolsets that it already has in place. This can lead to several challenges:

- The toolset may not support all the processes in the SIAM ecosystem
- It may not support the use of integrated processes
- It will contain legacy data, which may be challenging to adapt to the new environment
- It may be difficult to interface with the service providers and service integrators toolsets
- If the service integrator is external, they may not have any expertise in the toolset.

6.4.1.2. *Defining the toolset scope*

A SIAM ecosystem can include many processes, some of which are outside the 'standard' set of IT service management processes.

The tooling strategy should encompass all the processes in the SIAM model, and recognize that the ideal solution may be a hybrid of various tools, to support the functional requirements of each process and the broader SIAM ecosystem.

The toolset also needs to support end to end process control, not just operational execution. More tool vendors are now creating functionality that supports a SIAM ecosystem.

6.4.1.3. *Non-compliant service providers*

If the tooling strategy requires that all parties use the same toolsets, some potential service providers may be unwilling to be part of the SIAM ecosystem.

If the tooling strategy is that service providers integrate their own tools with the service integrator's toolset, some may be unwilling or unable to configure the integration. For example, providers of commodity cloud services may have little flexibility in their offerings.

The tooling strategy needs careful consideration at the Discovery & Strategy and Plan & Build stages of the SIAM Roadmap, as it has influence on and dependencies within the SIAM structures and the overall SIAM model. The strategy must also consider the data and information standards.

Once they have been agreed, requirements from the tooling strategy should be included in any contracts with service providers and any external service integrator. This is because a non-compliant service provider can lead to inefficiencies in cross-provider processes, reporting, and gaps between service providers.

6.4.1.4. *Lack of architecture*

The absence of an enterprise architecture and technical architecture for the SIAM ecosystem and services will create challenges related to the selection of toolsets, and the definition of interfaces between toolsets.

The architecture documents need to address:

- The need for data sovereignty/visibility requirements to be addressed through role based access controls. For example, service providers may not be able to be view each other's targets or performance
- The need for robust data integration capabilities. Some organizations choose to build an 'enterprise service bus' or messaging engine into their technology architectures to cater for this requirement
- The need for all data update activities to be auditable and traceable
- The need for all parties in the SIAM eco-system to be familiar with the tooling strategy and the specific tools to be deployed, not only so they can develop any integrations as necessary, but also to ensure that their staff are trained adequately in their use.

The toolset architecture must support the tooling strategy.

The service providers of the toolsets themselves must be treated as a service provider within the SIAM ecosystem, because the effective operation of the SIAM model is dependent on their services.

6.4.2. Practices related to creating a tooling strategy

Practices associated with creating a tooling strategy include:

1. Technology strategy and roadmap
2. Industry standard integration methods
3. Ownership of data and toolsets
4. Ease of adding and removing service providers
5. Adopting a common data dictionary.

6.4.2.1. Technology strategy and roadmap

The customer organization needs to outline its technology strategy and roadmap, to help the service integrator and the service providers understand how the SIAM toolset will integrate and evolve.

The customer also needs to share any functional and technical requirements, for example if the toolset must meet certain security specifications.

6.4.2.2. Industry standard integration methods

Using industry standard integration methods will make it easier for service providers to share information between their own tools and an integrated SIAM toolset. This will simplify interface creation and should reduce the need for expensive development and customization.

The integration approach adopted should not just cater for data transmission, but also for error handling in the event of issues occurring.

Given the potential criticality of the integration, consideration should also be given to service continuity requirements. Both the production and any back up or continuity environments should be tested to ensure that they meet the functional and non-functional requirements required by the customer.

6.4.2.3. Ownership of data and toolsets

When the service integrator role is being taken by an external organization, the tooling strategy needs to clarify who owns the toolset, and the data within it.

If the external service integrator owns the toolset (for example), the customer needs to ensure it still has data access if the commercial relationship ends; or define how the data will be migrated at such time.

In addition, the toolset must be placed under change control, particularly if data integration exists. If changes to toolsets are made by any party, this can have unexpected effects on the integrity of the supporting data integrations described above, if data fields or values change.

6.4.2.4. *Ease of adding and removing service providers*

One of the benefits of a SIAM ecosystem is the ability to add and remove service providers easily.

The tooling strategy needs to support this. When a new service provider is added, it needs to be easy for that organization to adopt the toolset, including set-up of local toolset interfaces and training its staff.

When a service provider is removed, it must be simple to remove its access to the toolset and ensure that data is stored or (re)moved as required.

6.4.2.5. *Adopting a common data dictionary*

The toolset should be used to enforce a common data dictionary. This will deliver several benefits, for example giving consistency and a common understanding of incident priority and severity classifications.

There will be confusion if one service provider's 'priority 1' incident is another service provider's 'severity 3'. This activity should be undertaken for all data fields in the toolset.

The data dictionary must be in place before the SIAM model is operational, as it supports the exchange of data and information across the SIAM ecosystem.

The need for a common data dictionary must be part of the tooling strategy, as the selected toolsets must be able to support its use.

7. SIAM cultural considerations

The SIAM ecosystem and the relationships between the customer organization, service integrator and service providers create a unique environment. From sourcing and contractual negotiations through to governance and operational management, there are specific SIAM considerations.

The cultural aspects of a transition to SIAM are one such consideration. An effective SIAM ecosystem is underpinned by effective relationships and appropriate behaviors. The ecosystem culture needs to encourage and reinforce these relationships and behaviors.

SIAM is often described as a sourcing strategy, but it is more than this. It extends beyond sourcing into the ongoing management and improvement of the service to deliver better business outcomes.

Service providers that compete in other areas of a market may find themselves working together to meet overall customer objectives in a SIAM ecosystem. Some service providers might be internal departments of the customer organization, working together with external service providers.

There are specific challenges when an external organization is fulfilling the service integrator role, because they are governing service providers who may also be their competitors.

The cultural considerations examined in this section are:

1. Cultural change
2. Collaboration and cooperation
3. Cross-service provider organization.

7.1. Cultural change

7.1.1. What does this mean in a SIAM environment?

An organization that moves from either an insourced or a traditional outsourced environment to an environment based on SIAM will undergo a large program of change and transformation. If the cultural aspects of the change are not managed effectively, it can create disruption in the customer organization.

Adopting a new SIAM structure can include internal role changes in the customer organization and staff being transferred from the customer organization to the service providers or the service integrator. This can have a significant impact on staff at a personal level; they will be concerned about their role, their career and their skillsets.

Moving to an environment that includes multiple service providers will require the customer organization to build SIAM expertise and capabilities, understanding of the ecosystem and technical landscape and the future technical roadmap and strategy. This expertise and knowledge might already exist in the organization, but in many transitions to SIAM it does not. Staff will need commercial, contractual and supplier management skills, in addition to more traditional service management skills.

Cultural change will also come from a change of management style. The customer organization needs to manage service provider performance at an executive, not an operational level. Its role is to step in and resolve contractual issues when required and to provide corporate governance. This is a shift away from managing activities to managing outcomes; in other words, managing the 'what', not the 'how'.

The customer organization needs to empower its service integrator to manage the service providers at the operational level. These changes in relationship dynamics and responsibilities will lead to, and depend on, changes in culture.

For the service providers, culture change is driven by the need to work collaboratively. All the service providers need to work with the service integrator and with other service providers towards the shared goal.

7.1.2. Why is it important?

No organizational change can succeed without cultural change. If the culture and organizational behaviors stay the same, new processes and ways of working will not be adopted and expected benefits will not be delivered.

Effective management of cultural change will provide the basis for a successful SIAM transformation program, and will help the customer to retain skilled and motivated staff in key roles.

7.1.3. What challenges will be faced?

Some of the challenges related to cultural change are:

- Staff who are moving to a new organization can experience concern at a professional and at a personal, emotional level. Professionally, there will be a level of uncertainty over their role and their skills and, emotionally, they will be concerned about the possible impact on their life and career. This can lead to staff leaving, absenteeism and loyalty issues
- Organizations can suffer from change fatigue if too much is happening at once, leading to a higher chance of changes failing and new behaviors not being adopted
- People continue using old processes or move back to old ways of working. It is important for every stakeholder in the SIAM ecosystem to reinforce behaviors; for example, at the service provider level, staff need to be encouraged to contact the service integrator, and not the customer
- The customer organization's own business outcomes may be affected negatively if the changes are disruptive and have an impact on service delivery.

7.1.4. How can they be resolved?

These cultural issues can be addressed in several ways, including:

- Having a clear definition of the SIAM model and all associated roles and responsibilities at organization, team and individual levels
- From the customer perspective:
  - Implementing a good business change or organizational change management process, reinforced with a strong communication plan to prevent misinformation and rumors spreading
  - Applying program management to the SIAM roadmap, tracking progress and identifying where course corrections are needed to help increase confidence in likely success
  - Considering the use of external consultancy to provide guidance, advice, and an objective view
  - Understanding what retained capabilities are needed and putting plans in place to keep the skilled people in their roles
- From the customer and service integrator perspective, implementing a strong overarching governance structure, supported by processes, which work in practice and not just in theory
- From the service integrator and service provider perspective, aligning their own communication plans with the overall communication plan and measuring the effectiveness of communication
- From a service provider perspective, understanding the organizations it will be working with, how they want to work together, and committing to the level of collaboration required in a SIAM environment.

7.1.5. Cultural change and the SIAM structures

Externally sourced	The key challenge for this structure relates to staff who are moving from the customer organization to another organization as part of the transition to SIAM; the professional and personal impact will need to be managed
Internally sourced	To deliver effective cultural change and a successful transition to SIAM, the customer organization will need skilled people. These may not exist within the organization and could be difficult to recruit
Lead supplier	As with the externally sourced service integrator structure, the key challenge for this structure relates to staff who are moving from the customer organization to another organization as part of the transition to SIAM; the professional and personal impact will need to be managed
Hybrid	The key challenge for this structure is that confusion about roles and responsibilities can make it difficult for staff from the customer organization to change their behavior; this applies if the interfaces between the customer and external organization at the service integrator level are not clearly defined. Staff need to be clear on their role and the role of the service integrator's employees.

7.2. Collaboration and cooperation

7.2.1. What does this mean in a SIAM ecosystem?

In many cases, a transition to SIAM means that service providers that are used to competing must work together to deliver customer outcomes. This often requires a change in mindset. The service providers must work together; the relationship moves from competitive to collaborative.

In an outsourced environment with no service integration element, service providers may pursue their own objectives. Silos and blame culture are commonplace. Within a SIAM ecosystem, the focus is on relationships, particularly cross-provider relationships, governance controls and pursuit of common goals, rather than achievement of specific individual organizational service levels and objectives.

In a SIAM ecosystem, service providers need to put competitive considerations aside and adapt to a new way of working. The customer and the service integrator also need to be clear on their role and the boundaries of their responsibilities. These organizations are also likely to be working in new ways.

Cultural considerations for collaboration and cooperation include:

- Fix first, argue later: when there is an issue affecting service, the service providers need to work together rather than assign blame or pass issues around
- Service providers must acknowledge that the service integrator is the voice of the customer, and has the autonomy to direct and make decisions and govern without being undermined
- From the customer's perspective, it needs to empower the service integrator to manage the service providers, and not interfere or duplicate effort
- Creating an environment that is focused on business outcomes and the customer, not individual service provider's contracts and agreements.

7.2.2. Why is it important?

In a SIAM ecosystem, the service integrator does not usually have a contractual relationship with the service providers, but it does need to be able to manage and govern their behavior on behalf of the customer.

If the parties in the ecosystem are not prepared to collaborate, the service integrator will not be able to control service delivery effectively.

For example, it will be very challenging for the service integrator to manage a major incident from end to end and within service targets if the service providers will not provide information or accept responsibility for investigation.

7.2.3. What challenges will be faced?

Some of the challenges related to collaboration and cooperation include:

- From the service integrator's perspective, the challenge of service providers bypassing it and going straight to the customer. The customer needs to support the service integrator by reinforcing correct communication paths, and the service integrator needs to build relationships and reiterate correct ways of working
- From the service provider's perspective:
  - 'Fix first, argue later' being abused so that it incurs additional costs. This can happen if issues are identified and not corrected by the customer or the service integrator, so that the service provider must deal with them repeatedly
  - Being reluctant to collaborate and share with the other service providers
- Trust is a critical success factor for collaboration and cooperation. Trust between service providers (some of which may be internal, and some external), trust between the service providers and the service integrator, and trust between the service integrator and the customer must be built and maintained
- In a SIAM ecosystem that includes internal and external service providers, the internal service providers are part of the same organization as the customer. They may be reluctant to collaborate with the service integrator and with the external service providers; they may also have less mature delivery capabilities and so are less able to cooperate

- In a SIAM ecosystem that includes internal and external service providers, the internal service providers will not have the same contractual imperatives that require them to collaborate.

7.2.4. How can they be resolved?

These cultural issues can be addressed in several ways, including:

- For all parties:
  - Creating a 'code of conduct' or 'rules of the club' agreement, with input from all parties in the SIAM ecosystem. These govern behaviors on a day to day basis; for example: how staff will behave in meetings, they will maintain professional and courteous behavior always and will attend forums and make effective contributions. (see section **7.2.4.1**)
  - Signing collaboration agreements that are part of each contract, or agreed between parties after the contract is signed, to add more detail about how they will work together (see section **7.2.4.2**)
- Between the service integrator and each of the service providers, use operational level agreements (OLAs) to break down service targets and agreements into more detail, helping them to understand their role and their interfaces with other parts of the ecosystem and when collaboration and cooperation is required (see section **7.2.4.3**).

7.2.4.1. Example code of conduct

A code of conduct (or 'rules of the club') document is not a contractual agreement. It provides high-level guidance describing how the parties in the SIAM ecosystem will work together. All the parties can then hold each other to account, for example, highlighting if someone is behaving unacceptably in a meeting.

This will not usually be a formal document, and is normally quite brief, often only a single page. Where required, it may also include:

- Title page
- Document control: author, date, status, version, change log etc.
- Contents
- Introduction and document purpose

- Parties to the document
- Validity
- Approval/signatories.

The suggested key content is:

Partnership aims

- What are the expected business outcomes?
- What is the SIAM ecosystem meant to deliver?

For example:

- Better value for money
- Greater efficiency and cost-effectiveness
- Greater flexibility to respond to evolving business requirements.

Partnership ethos

- What values do the parties need to uphold?

For example:

- Maintain professionalism
- Work together as one team
- Share knowledge and ideas
- Embrace change
- Put the customer first
- Be courteous/respectful to others.

7.2.4.2. Example collaboration agreement

An effective collaboration agreement will help to create a culture based on working together to deliver shared outcomes, without continual reference back to contracts.

Collaboration agreements should be used with care. They should set out the intent of how service providers are expected to collaborate with each other, and with the service integrator.

Sufficient detail should be included to avoid ambiguity, and to reduce the likelihood of future disputes when a service provider was not aware of a specific collaboration requirement; for example, the need to take an active role in process forums.

Consideration must be given to the remedial approach that will be used if one of the parties does not align with the collaboration agreement. This can form part of the contract with the customer but, to be truly effective, the parties should embrace the collaboration agreement as part of the SIAM culture, and not see it as a contractual requirement.

A typical collaboration agreement will contain the following sections:

- Title page
- Document control: author, date, status, version, change log etc.
- Contents
- Introduction
- Document purpose
- Parties to the document
- Validity period
- Termination
- Required behaviors: for example, avoid unnecessary duplication of effort, do not hinder or withhold information from other service providers
- Mechanisms to support collaboration: for example, commitment to support process forums to review, improve and innovate processes and service delivery; commitment to triage and work together to resolve issues/challenges when requested by the service integrator; commitment to be involved in reviews and assurance activities
- Where relevant, toolsets to support collaboration
- Expected areas of collaboration: for example, review of proposed changes, incident investigation, taking part in working groups, innovation
- Dependencies between parties
- Any non-financial/non-contractual remedies: for example, where one or more service providers agrees with the service integrator and the customer to carry out actions to address an issue rather than trigger a contractual target and accept a financial penalty
- Change control
- Dispute resolution and escalation points.

7.2.4.3. Example operational level agreement

Operational level agreements (OLAs) between the service integrator and service providers break down service targets into more detail. They include guidelines and common ways of working that support effective integration and delivery across the ecosystem. Whilst the contents of OLAs are not themselves contractual obligations (all contracts are held by the customer organization), they should be formal agreements that are documented and controlled.

OLAs support end to end service delivery. For example, end to end incident management might include a four-hour resolution time for priority one incidents. In the OLA, the service provider might agree to a target of 30 minutes to either accept an incident or pass the information to a different service provider.

Within a SIAM ecosystem, it is important to define each service and its associated targets fully. OLAs support that definition and provide control and visibility. OLAs are prepared by the service integrator with input from the service providers. The service provider referenced in the OLA must have agreed the contents. The OLA supports the customer organization's overall objectives, but the customer organization may not be interested in the document detail.

OLAs can also be set up between two or more service providers, to agree or add some detail about how they work together.

An operational level agreement should include content such as:

- Title page
- Document control: author, date, status, version, change log etc.
- Contents
- Introduction
- Document purpose
- Parties to the document
- Validity
- Approval/signatories
- Rules for OLA termination
- Rules for OLA governance and escalation criteria
- Review schedule
- OLA change management

- Service description
- Scope of OLA: in- and out-of-scope activities
- Dependent services
- OLA details:
    - Name of service (for example, service desk, capacity management)
    - Service description
    - Service hours
    - Service provider
    - Service consumers
    - Service outcomes
    - Contact points and roles
    - Agreed activities of all parties (for example, party A will send an incident record to party B, party B will confirm receipt)
    - Service targets
    - Measurement: availability, performance targets etc.
    - RACI matrix
- Service boundaries
- Quality assurance and service reporting
- Service reviews
- Glossary.

7.2.5. Collaboration and cooperation and the SIAM structures

Externally sourced	▪ Internal service providers may be unwilling to collaborate and cooperate with the external service integrator
Internally sourced	▪ External service providers may be more willing to collaborate and cooperate as it will perceive the service integrator as the customer ▪ There is a risk that a customer organization might not manage the service providers well owing to a lack of SIAM experience. If the service integrator cannot encourage the right culture and behaviors, this will affect the level of collaboration and cooperation ▪ If the internal service integrator is seen to treat internal service providers differently this can lead to reduced collaboration and cooperation by the external service providers ▪ Internal service providers may be unwilling to collaborate and cooperate with the internal service integrator
Lead supplier	▪ Internal service providers may be unwilling to collaborate and cooperate with the external service integrator ▪ If the lead supplier is seen to favor its own service provider in its service integrator role, this can lead to reduced collaboration and cooperation from the other service providers
Hybrid	▪ The roles and responsibilities of the customer acting as service integrator and the third-party service integrator need to be clear. It is challenging for service providers to collaborate if they do not understand the structure and boundaries of responsibilities ▪ Internal service providers may be unwilling to collaborate and cooperate with the hybrid service integrator because it includes external elements.

7.3. Cross-service provider organization

This section addresses the cultural aspects of cross-service provider organization only. For more detail about managing cross-functional teams and managing conflict see section **6.1 People practices: Managing cross-functional teams**.

Cross-service provider organization describes the cultural considerations associated with managing a service across multiple service providers.

7.3.1. What does this mean in a SIAM ecosystem?

The SIAM ecosystem can include an internal, hybrid, external, or lead supplier service integrator, plus several internal or external service providers.

Each service provider will have its own strategies, objectives and ways of working. The customer organization does not always have the ability (or desire) to mandate that all service providers follow a common set of processes or use the same toolset. They do, however, require all service providers to be able to interface with and integrate into the end to end service management processes.

From a cultural perspective, cross-service provider organization requires service providers to have appropriate behaviors and attitudes to support the customer organization and help them achieve its goals, rather than focusing on individual goals.

7.3.2. Why is it important?

Successful cross-service provider organization supports delivery of the end to end service. It starts with the customer organization. The customer needs to articulate a clear vision of what success looks like to all the service providers in the SIAM ecosystem.

The vision needs to be cascaded through all layers and across the ecosystem. This will then enable consistent:

- Strategies
- Objectives
- Processes; this does not preclude service providers using their own processes and procedures, but assures that the overall end to end process is integrated, can be managed, and is driving the correct outcomes.

7.3.3. What challenges will be faced?

Some of the cultural challenges related to cross-service provider organization include:

- The customer retained organization may step back into its old role and get involved with delivery, rather than focusing on corporate governance and its own business objectives. This creates confusion, duplication and does not allow the service providers, the service integrator, or the customer to work effectively
- Service providers focus on their own targets at the expense of end to end service targets
- Service providers do not subscribe to the culture of collaboration and do not share innovations and potential improvements with other parts of the ecosystem
- The service integrator does not treat service providers equally, leading to resentment and disengagement
- If service providers have poor interfaces with end to end service management processes and tools, the role of the service integrator becomes more challenging; for example, monitoring, reporting, measurement will all be less effective.

7.3.4. How can they be resolved?

These cultural issues can be addressed in several ways, including:

- For all parties:
  - Establishing consistent contractual targets/service level agreements and common performance measures/key performance indicators across the supply chain, so that all service providers feel they are equal and not disadvantaged
  - Having performance measures that encourage partnering and shared innovation with other parties
  - Cross-service provider processes must be based on a common language that all parties can understand
- From the customer perspective, empowering the service integrator to have ownership, responsibility and accountability
- From the customer, service integrator, and service provider perspective, celebrate success, praise excellent service performance, delivery and innovation, to emphasize and reward the desired behaviors
- Establish 'champion' process forums with representation from the service integrator and all service providers to discuss and improve the effectiveness of end to end processes, tools, interfaces and integration.

7.3.5. Cross-service provider organization and the SIAM structures

Externally sourced	External service providers may be reluctant to share information about how they work with an external service integrator, if they view them as a competitor
Internally sourced	Internal service providers may be unwilling to work with and integrate with external service providers
Lead supplier	The external organization that is acting as the service integrator and a service provider could be seen as a 'favorite' of the customer. If other service providers do not feel they are being treated fairly, they are less likely to work together
Hybrid	Effective cross-service provider organization requires clear direction from the customer and the service integrator. If the roles within the hybrid service integrator are not clearly defined, meetings and structures to support cross-service provider organization may not be put in place.

8. Challenges and risks

Adopting a SIAM model requires an organizational transformation. The changes that are involved will affect people, processes, technology and the interfaces between them.

As with any organizational change, there will be challenges to face. These challenges can have a significant impact on the transition to a SIAM model and will require concerted effort to overcome.

Each challenge has associated risks, which need to be recorded, evaluated, managed and mitigated (where appropriate) using a risk management methodology. The impact of the challenge and associated risks will influence the amount of time and resources that will be used to address them.

The challenges and risks described here should be considered by any organization planning to adopt SIAM. They may not all be relevant, but can provide useful input for SIAM planning.

8.1. Challenge: Building the business case

Organizations must be clear about their business case for SIAM. This should include the expected benefits and costs.

It is not always possible to have a complete picture during the Discovery & Strategy stage of the roadmap, as some of the detail may not be known until the Plan & Build stage. However, it is usual to create an outline business case before starting a SIAM implementation that will be developed throughout the SIAM roadmap into a full business case.

The business case should include the drivers that apply to the organization, drawn from the five SIAM driver groups (documented in section **1.5.2 Drivers for SIAM**):

1. Service satisfaction
2. Service and sourcing landscape
3. Operational efficiencies
4. External drivers
5. Commercial drivers.

The business case also needs to articulate the benefits that the organization expects to achieve by adopting a SIAM model. These could include, for example:

- Mitigating the risk of procuring services from a single provider by leveraging best of breed services from several providers
- Improving its capability to add and remove service providers
- Improving the quality of service
- Increasing the value derived from IT services.

These benefits will only be achieved though clear objectives, robust planning, and effective management.

8.1.1. Which parties will this challenge affect?

This challenge mainly applies to the customer that is creating the business case. It can also apply to an organization that intends to be an external service integrator, as it will need to be able to justify the cost of its services.

8.1.2. Which roadmap stage will this challenge affect?

This challenge starts early in the SIAM roadmap, during Discovery & Strategy, and continues all the way through.

At the end of the Discovery & Strategy stage, executive backing is required to approve the outline business case for SIAM, and to allocate resources to the next stage.

At the end of the Plan & Build stage, executive backing is required to authorize any procurements and allocate resources to the remaining stages. The business case will also be used during the Implement and Run & Improve stages to verify that the anticipated benefits are being realized.

8.1.3. Associated risks

Without a strong business case, there are several risks, including:

- The customer organization's executives do not approve the transition to SIAM
- The customer organization's executives approve the transition to SIAM, but do not allocate enough resources or provide sufficient support
- The customer organization starts the transformation process without a clear picture of the benefits it expects to achieve; this will make it difficult to verify if the transition to SIAM has been successful
- The success of the program cannot be measured because anticipated benefits have not been clearly defined
- The costs of the transition to SIAM are understated, so there may not be enough budget available to complete the transition.

8.1.4. Potential mitigation

These risks can be mitigated by:

- Allocating skilled resources to build the business case
- Executing all the activities in the Discovery & Strategy and Plan & Build stages
- Linking the strategy for SIAM to the customer organization's high-level strategy and objectives
- Identifying and addressing each of the appropriate drivers for the SIAM transformation
- Adding as much detail as possible and refining the business case as the roadmap proceeds
- Identifying any current contracts that are inefficient
- Identifying contracts that are providing good value and are a good cultural fit
- Using industry data/benchmarks where available to show the benefits of SIAM in other organizations
- Including the proposed SIAM structure and SIAM model
- Documenting the expected benefits.

8.2. Challenge: Level of control and ownership

During the Discovery & Strategy stage of the roadmap, the customer organization needs to consider how it will balance the level of control it wants to have over service provision, processes, tools and data against the benefits it will obtain from delegating them to a service integrator. This decision is then confirmed in the Plan & Build stage.

This level of control also depends on the trust within the environment. Trust between all parties is essential in SIAM ecosystems. A lack of trust can manifest itself as duplication of roles and activities, such as the customer continually checking what the service integrator has done. The customer organization might be unable to let go of activities it used to perform.

It can also result in micro-management, for example, the service integrator reviewing every aspect of every change from the service providers.
All of this will increase cost, leading to savings and efficiencies not being realized. It can also cause confusion, inconsistency, poor relationships, and a lack of collaboration.

8.2.1. Which parties will this challenge affect?

This challenge mainly applies to the customer organization while it decides on its preferred SIAM structure and model, and sets policies related to roles, responsibilities, data and tooling.

If this challenge is not resolved, it can make the definition of the SIAM model, and the role of the service integrator and the service providers, more challenging because responsibilities and accountabilities are unclear.

Micro-management or a lack of trust embedded within the model can affect the customer organization, the service integrator and the service providers.

8.2.2. Which roadmap stage will this challenge affect?

The level of control and ownership needs to be decided at a high-level during Discovery & Strategy, and more detail added during Plan & Build.

This challenge will usually be identified after SIAM has become business as usual, so in the Implement and Run & Improve roadmap stages.

8.2.3. Associated risks

If the level of control and ownership is not clearly defined, associated risks include:

- If the customer is not prepared to relinquish ownership of service activities and processes, it may not be possible to realize the anticipated benefits from SIAM, as the service integrator may be unable to perform its role
- The organization is larger than needed as process and service activities are duplicated by the customer and the service integrator
- The customer organization wastes time and resources micro-managing and checking the work of the service integrator
- The service integrator wastes time and resources providing extra, unnecessary customer reports
- The service integrator wastes time and resources micro-managing and checking the work of the service providers
- The service providers continue to interact directly with the customer, because they see the customer does not value the service integrator (or they do not trust the service integrator)
- If the customer relinquishes all control and accountability, the service integrator might not have enough strategic direction to allow it to carry out its role.

8.2.4. Potential mitigation

These risks can be mitigated by:

- Defining a clear vision and selecting an appropriate SIAM structure and SIAM model during the Discovery & Strategy, and Plan & Build stages of the roadmap
- Ensuring that the customer organization understands the difference between governance and management, so it is clear what activities it needs to monitor, and what it needs to do. This will form part of the governance framework
- Careful design of the SIAM model in the Plan & Build stage, particularly roles, responsibilities, and governance framework
- Implementing clear policies for data, tooling and processes
- Defining ownership of processes, tools, data, information and knowledge
- Adopting a phased approach to the implementation of SIAM to allow the customer to develop trust in the service integrator and test the level of control (not too much, not too little ... just right)
- Having regular communication and a culture of improvement to identify and discuss micro-management and duplication of effort
- Establishing effective structural elements to support relationships, communication and build trust.

8.3. Challenge: Commercial challenges

Commercial challenges relate to how the SIAM model is established and the structure that is chosen. The customer, the service integrator and the service providers all need to feel they are getting what they expect and are being treated fairly.

If a customer organization does not have mature SIAM capabilities, the commercial agreements it puts in place may not be appropriate.

For existing service providers, there may be challenges associated with legacy contracts. The two main challenges are:

- Not fit for purpose: some legacy contracts might still be in place after the SIAM implementation. The contractual requirements in the legacy contract with the service provider are unlikely to align with the new SIAM model
- Expiry: continuity of service may be compromised if legacy service provider contracts expire before the implementation of new service provider contracts.

It is important to recognize that service providers who are not going to be part of the future operating model may be challenging to deal with.

8.3.1. Which parties will this challenge affect?

All the parties in the SIAM ecosystem can be affected by this challenge:

- The customer needs to feel they are getting value for money
- Externally sourced service integrators and all service providers need to be profitable and not incur penalties they see as unfair
- The service integrator and the customer need to have an appropriate commercial framework to govern and incentivize the service providers.

8.3.2. Which roadmap stage will this challenge affect?

This challenge will span the entire roadmap. Contracts that may not be fit for purpose should be identified during the Discovery & Strategy roadmap stage. Commercial decisions will also be made during Discovery & Strategy, and then detail will be added and contracts defined during Plan & Build.

The effects will need to be monitored during Implement and Run & Improve activities identified where necessary.

Contract expiry will affect the Plan & Build stage, and can also affect the Implement and the Run & Improve stage.

8.3.3. Associated risks

Commercial risks include:

- Unrealistic targets and service levels for service providers may result in their withdrawing from the ecosystem
- Lack of clearly defined boundaries between service providers make it challenging to allocate responsibility for service failures
- The service integrator is managing the service providers from a SIAM perspective but does not have any direct contracts with them; unless the right level of empowerment is in place, the service integrator may not be effective
- The service providers impose their own contracts that have targets that do not align with end to end service requirements (for example, when the service provider is a very large organization, it may have a standard set of service levels)
- Increased service integrator workload, when unexpired legacy contracts need to be integrated into the SIAM model
- A gap in service if a legacy contract expires before a new SIAM-based contract is in place
- Additional customer costs for extensions to existing contracts during the transition to SIAM, or for early release from an existing contract.

8.3.4. Potential mitigation

Commercial risks can be mitigated by:

- Getting the right skills and experience involved during contractual negotiations
- Defining service boundaries and service interactions
- Including in service provider contracts that the service integrator is the managing agent of the customer, with devolved authority for managing delivery against contracts
- Making sure targets and service levels flow down and are apportioned across service providers
- Ensuring that penalties and service credits can be calculated correctly
- Having clear and unambiguous contracts
- Scheduling regular reviews to assess if contracts are performing as they should.

Risks associated with contracts considered to be not fit for purpose or expiring too early can be mitigated by:

- Understanding to which contracts this relates and creating a timetable to project how long the risk will exist for
- Developing a roadmap for the transition to SIAM that aligns with existing expiry dates as far as possible
- Sharing the new SIAM vision with the existing service providers
- Renegotiating/amending contracts where possible; it is possible that requirements, SLAs, measurements or end dates could be changed
- Investigating the cost of termination.

8.4. Challenge: Security

Implementing a SIAM model requires sharing of data and information about services across multiple service providers. Security needs to be embedded in every layer, through roles, responsibilities, communication and reporting.

The customer organization needs to be clear about what data and information exists in the ecosystem, where it is, and how it will be managed and secured.

8.4.1. Which parties will this challenge affect?

This challenge affects the customer, the service integrator and the service providers; each party has a responsibility for the overall security of the service.

8.4.2. Which roadmap stage will this challenge affect?

If security related roles and activities are not clearly defined during Plan & Build, the impact will be felt in later roadmap stages.

In a worst-case scenario, a security incident during 'Run' might take longer to discover because no one party is responsible for detecting it. The response could also be slow because the service providers do not have clarity on individual responsibilities.

8.4.3. Associated risks

Potential risks associated with security include:

- A lack of understanding of the customer organization's legislative and regulatory responsibilities, and a lack of education for the service integrator and service providers to make them aware of these
- A lack of understanding of the criticality of information, and no agreed approach to managing information
- Inability to map data flows and the end to end service, to identify what is in scope for security
- Security roles and responsibilities not mapped and allocated

- Process inadequacies, including a lack of access management for service providers to ensure they can only access what is necessary
- Ineffective data segregation, particularly in relation to a service provider's commercially sensitive data that should not be visible to other service providers
- If roles are not clear, security tasks might be duplicated, leading to wasted effort, or not managed, leading to service unavailability and security breaches.

8.4.4. Potential mitigation

These risks can be mitigated by:

- Having a clear security strategy and supporting policies that are cascaded to all service providers via the service integrator
- Using other practices like COBIT® and OBASHI to help identify information assets and data flows
- Designing and implementing end to end security management
- Implementing effective processes such as access management
- Identifying and completing security activities when adding and removing service providers; service providers being added need enough access to be effective, and service providers that are being removed need to have access terminated
- Creating a schedule for audits and testing
- Encouraging a culture of openness so service providers are confident to share information about a breach
- Establishing a process forum for security.

8.5. Challenge: Cultural fit and behaviors

Different service providers will have different corporate cultures, which all need to work within the SIAM ecosystem.

Service providers need to work together to meet customer outcomes, often with organizations with whom they are in competition in the broader marketplace.

Existing service providers might not be willing to change to adapt to the SIAM model. When a major organizational change happens, it is easy and tempting for staff to revert to old ways of working with which they are more familiar.

This might mean that the intended value of the SIAM implementation is not realized, because the implementation does not become business as usual or an accepted way of working. An effective SIAM ecosystem relies on much more than just contractual agreements. It also relies on good relationships between the customer, the service integrator and the service providers. New service providers also need to be a good cultural fit and display the required behaviors.

8.5.1. Which parties will this challenge affect?

This challenge affects the customer, the service integrator and the service providers; each party has a role to play in cultural change and should adopt required behaviors to make the SIAM model successful.

8.5.2. Which roadmap stage will this challenge affect?

This challenge needs to be addressed initially in Plan & Build. The issues will increase during the Implement stage, and may worsen during Run & Improve.

In the Implement stage, SIAM is often the new way of working and all parties need to work together to implement the SIAM model. In Run & Improve, it needs to become business as usual. Behaviors need to be reviewed continually, and revisited if key staff change or a new service provider is added.

8.5.3. Associated risks

Potential risks associated with cultural fit include:

- Service provider staff circumventing the service integrator to talk directly to the customer, and vice versa
- One or more service providers not engaging fully
- Frustration for all parties if a service provider says one thing and does another
- Service providers not working well together
- Service providers not interacting with end to end processes and procedures
- The service integrator being unable to fulfil its role because the service providers are not working together effectively
- The service integrator is perceived as being biased
- The customer or service integrator acts in a dictatorial way and does not have good relationships with the service providers
- The customer and the service integrator do not present a united front
- Cultural issues can lead to SIAM benefits not being delivered to the customer organization.

8.5.4. Potential mitigation

These risks can be mitigated by:

- Being aware of the risk of cultural mismatch, and planning to identify it and intervene where required
- Assessing cultural fit during procurement and selecting service providers who will be a good cultural fit
- Regular behavior reviews and audits
- Rewarding good behaviors
- Encouraging a culture of collaboration
- Using collaboration agreements (see section **7.2.4.2 Example collaboration agreement**)
- Demonstrating correct behavior at the customer and service integrator level, presenting a united front to service providers
- Continual reinforcement of correct behavior at all levels
- Ongoing training and awareness for staff
- Establishing SIAM structural elements (boards, forums and working groups) to build relationships and reinforce culture
- Providing regular communication to build relationships, based on a communication plan that identifies relevant stakeholder groups and describes a communication strategy for each of them
- The customer and service integrator being realistic about what can be achieved by working with service providers, rather than punishing them.

8.6. Challenge: Measuring success

To show that SIAM is delivering value, it must be measured. Developing an end to end performance management and reporting framework that spans multiple service providers can be a significant challenge.

8.6.1. Which parties will this challenge affect?

This challenge will affect the customer if it is unable to validate whether SIAM is delivering value and services are performing and the service integrator that has the task of building the end to end reports.

8.6.2. Which roadmap stage will this challenge affect?

This challenge will usually happen during Run & Improve, when the customer tries to measure the effectiveness of SIAM in the business as usual environment.

The measures should be defined during Plan & Build, linked to the original drivers for SIAM identified in Discovery & Strategy. Measurements will need to evolve when improvement activities take place.

8.6.3. Associated risks

Potential risks associated with measuring success include:

- Measures not aligned with the anticipated benefits from the business case
- Not measuring and reporting on the right things
- Measuring too much, which wastes resources and can obscure important information
- Not measuring enough to identify the required information
- Being unable to measure services from end to end.

8.6.4. Potential mitigation

These risks can be mitigated by:

- Creating an effective performance management and reporting framework
- Clearly defining who needs to measure what, when, how and why
- Regularly reviewing reports to confirm they are still fit for purpose
- Using a mix of qualitative and quantitative measures.

Appendix A: Glossary of terms

This glossary defines the terms used in this document. This includes the specific SIAM definitions for common terms such as 'board'.

Aggregation	Also referred to as service aggregation. Bringing together components and elements to create a group (or service)
Board	Boards perform governance in the SIAM ecosystem. They are formal decision-making bodies, and are accountable for the decisions that they take. Boards are a type of structural element
Business as usual (BAU)	The normal state of something
Business case	Outlines a proposed course of action, its potential costs and benefits. Supports decision-making
Capability	The power or ability to do something[21]
Cloud services	Services that are provided over the internet, including software as a service (SaaS), infrastructure as a service (IaaS) and platform as a service (PaaS). Often treated as a commodity service
COBIT®	COBIT® (Control Objectives for Information and Related Technologies) is a framework for IT governance and management created by ISACA
Code of conduct	A code of conduct (or 'rules of the club') document is not a contractual agreement. It provides high-level guidance for how the parties in the SIAM ecosystem will work together
Collaboration agreement	A collaboration agreement helps to create a culture based on working together to deliver shared outcomes, without continual reference back to contracts
Commodity service	A service that can easily be replaced; for example, internet hosting is often a commodity service
Contract	An agreement between two legal entities. SIAM contracts are often shorter in duration than traditional outsourcing contracts, and have targets to drive collaborative behavior and innovation
Customer (organization)	The customer organization is the end client who is making the transition to SIAM as part of its operating model. It commissions the SIAM ecosystem
Disaggregation	Splitting a group into component parts

[21] Oxford English Dictionary © 2016 Oxford University Press

Ecosystem	The SIAM ecosystem includes three layers: customer organization (including retained capabilities), service integrator and service provider(s)
Enterprise architecture	A definition of the structure and operation of an organization. It maps the current state and can be used to support planning for desired future states
Enterprise service bus	A type of 'middleware' that provides services to link more complex architectures
External service provider	An external service provider is an organization that provides services and is not part of the customer organization. It is a separate legal entity
Externally sourced service integrator	Type of SIAM structure: the customer appoints an external organization to take the role and provide the capabilities of the service integrator
Function	An organizational entity, typically characterized by a special area of knowledge or experience[22]
Governance	Governance refers to the rules, policies, processes (and in some cases, legislation) by which businesses are operated, regulated and controlled. There may be many layers of governance within a business from enterprise, corporate and IT. In a SIAM ecosystem, governance refers to the definition and application of policies and standards. These define and ensure the required levels of authority, decision-making and accountability
Governance framework	Within a SIAM ecosystem, allows the customer organization to exercise and maintain authority over the ecosystem. It includes corporate governance requirements, controls to be retained by the customer, governance structural elements, segregation of duties, and risk, performance, contract and dispute management approaches
Governance model	Designed based on the governance framework and roles and responsibilities. Includes scope, accountabilities, responsibilities, meeting formats and frequencies, inputs, outputs, hierarchy, terms of reference and related policies
Hybrid service integrator	Type of SIAM structure: the customer collaborates with an external organization to take the role of service integrator and provide the service integrator capability
Infrastructure as a Service (IaaS)	A type of cloud service that allows customers to access virtualized computing resources
Insourcing	Sourcing from within the organization

[22] Source: IT Process Wiki

Intelligent client function	See retained capabilities
Internal service provider	An internal service provider is a team or department that is part of the customer organization. Its performance is typically managed using internal agreements and targets
Internally sourced service integrator	Type of SIAM structure: the customer organization takes the role of service integrator, providing the service integration capability
ITIL®	ITIL® is the most widely accepted approach to IT service management in the world, and is a registered trademark of AXELOS Limited
Key performance indicator (KPI)	A metric used to measure performance. KPIs are defined for services, processes and business objectives
Layers (SIAM layers)	There are three layers in the SIAM ecosystem: customer organization (including retained capabilities), service integrator and service provider(s)
Lead supplier service integrator	Type of SIAM structure: the role of service integrator is taken by an external organization that is also an external service provider
Man-marking	An undesirable and wasteful type of micro-management, where the customer checks the work of the service integrator constantly
Management methodology	A management methodology describes methods, rules and principles associated with a discipline
Microsoft Operations Framework (MOF)	A guide for IT professionals that describes how to create, implement and manage services
Model (SIAM model)	A customer organization develops its SIAM model based on the practices, processes, functions, roles and structural elements described within the SIAM methodology. Its model will be based on the layers in the SIAM ecosystem
Multi-sourcing	Sourcing of goods or services from more than one supplier
Multi Sourcing integration (MSI)	May be used as an acronym for SIAM
Open Systems Interconnect (OSI)	A reference model for how applications communicate over a network
Operational level agreement (OLA)	Within the SIAM context, OLAs are created between parties (for instance, the service integrator and a service provider) to break down end to end service targets into detail and individual responsibilities

Organizational change management	The process used to manage changes to business processes, organizational structures and cultural changes within an organization
Outsourcing	Procuring goods or services from an external organization
Performance management and reporting framework	The performance management and reporting framework for SIAM addresses measuring and reporting on a range of items including: ▪ Key performance indicators ▪ Performance of processes and process models ▪ Achievement of service level targets ▪ System and service performance ▪ Adherence to contractual and non-contractual responsibilities ▪ Collaboration ▪ Customer satisfaction
Platform as a Service (PaaS)	A type of cloud service that allows customers to use virtual platforms for their application development and management. This removes the need for them to build their own infrastructure
Practice	The actual application or use of an idea, belief or method, as opposed to theories relating to it[23]
Prime vendor	A sourcing approach where the service provider sub-contracts to other service providers to deliver the service, and the customer only has a contractual relationship with the prime vendor
Process	A documented, repeatable approach to carrying out a series of tasks or activities
Process forum	Process forums are aligned to specific processes or practices. Their members work together on proactive development, innovations and improvements. Forums will convene regularly, for as long as the SIAM model is in place. Process forums are a type of structural element
Process manager	Responsible for process execution
Process model	Describe the purpose and outcomes for a process, as well as activities, inputs, outputs, interactions, controls, measures and supporting policies and templates
Process owner	A process owner is accountable for end to end process design and process performance
Program management	The process responsible for managing groups of projects to deliver a unified goal

[23] Source: Google

Project management	A process that provides a repeatable approach to deliver successful projects
RACI	RACI is an acronym that stands for Responsible, Accountable, Consulted and Informed. These are the four principal 'involvements' that can be assigned to an activity and a role. A RACI chart is a matrix of all the activities or decision-making authorities undertaken in an organization set against all the people or roles
Request for information (RFI)	A business process used to compare suppliers, by collecting information about them and their capabilities
Request for proposal (RFP)	A business process used to allow suppliers to bid for a piece of work or project
Retained capability/ capabilities	The customer organization will include some retained capabilities. The retained capabilities are the functions that are responsible for strategic, architectural, business engagement and corporate governance activities. The service integrator is independent from the retained capabilities, even if it is sourced internally. Service integration is not a retained capability. Retained capabilities are sometimes referred to as the 'intelligent client function'
Roadmap	The SIAM roadmap has four stages: Discovery & Strategy, Design & Build, Implement, Run & Improve
Separation of duties/concerns	An internal control used to prevent errors or fraud, separate of duties defines what each role is authorized to do and when more than one person must be involved in a task. For example, a developer might not be permitted to test and approve his or her own code
Service	A system that meets a need, for example, email is an 'IT service' that facilitates communication
Service boundaries	A definition of what parts make up a service (what is 'inside the boundary'), often used in technical architecture documents
Service consumer	The organization directly using the service
Service integration (SI)	May be used as an acronym for SIAM
Service integration and management (SIAM)	Service integration and management (SIAM) is a management methodology that can be applied in an environment that includes services sourced from a number of service providers. Sometimes referred to as SI&M

Service integrator	A single, logical entity held accountable for the end to end delivery of services and the business value that the customer receives. The service integrator is accountable for end to end service governance, management, integration, assurance and coordination
Service integrator layer	The service integrator layer of the SIAM ecosystem is where end to end service governance, management, integration, assurance and coordination is performed
Service management	The management practices and capabilities that an organization uses to provide services to consumers
Service management and integration (SMAI)	May be used as an acronym for SIAM
Service management integration (SMI)	May be used as an acronym for SIAM
Service manager	Responsible for service delivery for one or more services
Service model	A way of modelling the hierarchy of services, including services that are directly consumed by the customer organization and underpinning services and dependencies
Service orchestration	Service orchestration is the term used to define the end to end view of service activities and establishing the standards for inputs and outputs to the end to end process. This includes defining control mechanisms while still allowing service providers to define the mechanisms of fulfillment and the freedom to pursue internal processes
Service outcomes	A definition of what a service is meant to achieve or deliver
Service owner	A role that is accountable for the end to end performance of a service
Service provider	Within a SIAM ecosystem, there are multiple service providers. Each service provider is responsible for the delivery of one or more services, or service elements, to the customer. It is responsible for managing the products and technology used to deliver its contracted or agreed services, and operating its own processes. They can be internal or external to the customer organization. Historically referred to as towers, may also be referred to as vendors or suppliers
Service provider category	Service providers can be categorized as strategic, tactical or commodity

Shadow IT	Shadow IT describes IT services and systems commissioned by business departments, without the knowledge of the IT department (sometimes referred to as 'stealth IT')
SIAM model	See model
SIAM structures	The four structures describe how the service integrator is sourced: internally, externally, from a lead supplier or as a hybrid
Software as a Service (SaaS)	A cloud service where software is paid for monthly as a subscription rather than purchased as a one-time payment
Sourcing	The procurement approach an organization adopts; for example, sourcing services internally or externally. Adopting SIAM will affect how an organization sources services and the types of contracts it puts in place with service providers
Structural element	Structural elements are teams that have members from different organizations and different SIAM layers. They include: boards, process forums and working groups
Supplier	An organization from whom the customer receives goods or services
Tooling strategy	Defines what tools will be used, who will own them and how they will support the flow of data and information between the SIAM layers
Tower	See service provider
Watermelon effect (Watermelon reporting)	The watermelon effect occurs when a report is 'green on the outside, red on the inside'. The service provider(s) meet individual targets, but the end to end service is not meeting the customer's requirements
Working group	Working groups are convened to address specific issues or projects. They are typically formed on a reactive ad-hoc or fixed-term basis. They can include staff from different organizations and different specialist areas. Working groups are a structural element

List of acronyms

This list expands the acronyms used in this document.

ADKAR	Awareness, desire, knowledge, ability and reinforcement
Agile SM	Agile Service Management
BAU	Business as usual
BiSL	Business Information Services Library
BoK	Body of Knowledge
CALMS	Culture, Automation, Lean, Measurement, Sharing
CFO	Chief Financial Officer
CIO	Chief Information Officer
CMM(I)	Capability Maturity Model (Integration)
COBIT®	Control Objectives for Information and Related Technologies
CSO	Chief Security Officer
CTO	Chief Technical Officer
EXIN	Examination Institute for Information Science
HDI	Help Desk Institute
IaaS	Infrastructure as a Service
IEC	International Electrotechnical Commission
IFDC	The International Foundation for Digital Competences
ISACA	Information Systems Audit and Control Association
ISO	International Organization for Standardization
IT	Information technology
ITIL®	Information Technology Infrastructure Library
ITO	IT outsourcer (or organization)
ITSM	IT Service Management
itSMF	Information Technology Service Management Forum
KPI	Key performance indicator
LAN	Local Area Network
MSI	Multi Sourcing integration
MVP	Minimum viable process (or product)
OBASHI	Ownership, business processes, applications, systems, hardware, and infrastructure
OLA	Operational level agreement
OSI	Open Systems Interconnect
PaaS	Platform as a Service
RACI	Responsible, accountable, consulted and informed
RFI	Request for information
RFP	Request for proposal
SaaS	Software as a Service
SI	Service integration
SIAM	Service integration and management

SLA	Service level agreement
SMAI	Service management and integration
SMI	Service management integration
SMS	Short message service (telephony) Service management system (ISO)
SVC	Service Value Chain
SVS	Service Value System
TOGAF	The Open Group Architecture Framework
UK	United Kingdom
VeriSM™	Value-driven, Evolving, Responsive, Integrated, Service Management
VVI	Voice and VIdeo
WAN	Wide Area Network

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