

# I. Section 4 – Understanding and Approach to Infrastructure Services

## 4.2 Infrastructure Understanding and Approach to System Performance (4B)

### RFP # 5.2.3.2 (RFP Table # 32)

CalSAWS must be fast, available, and secure. To meet this desired goal, we bring our AI-Driven Intelligent Monitoring & Automation Platform that integrates monitoring, assessing, resolving, and optimizing CalSAWS system components across cloud, software, hardware, networks, and DevOps. We have teamed with AWS to continue to provide you a performant infrastructure that is highly secure and continues to meet your service-level expectations as we enter the M&O phase of the largest integrated eligibility system ever implemented. We aim to move our CalSAWS System Performance management from reactive to a proactive, predictive approach. The following guiding principles underscore our understanding:



**Strengthen Operational Security:** Keeping Californians' data away from bad actors, we help protect your customers and preserve the hard-earned trust you have built with them.

**Predictable and Responsive System Behavior:** Consistent high performance means County staff and other end users receive the level of service they expect. For example, end users can use imaging-related applications seamlessly, and County staff can access LMS/Documents without performance issues.

**Timely and Responsive Services:** High performance is an expectation beyond the production environments. For example, responsive training environments allow new users to complete training without delays so they can quickly begin working and adding value to the County.

**Timely Software Upgrades:** A seamless experience with fast and easy interactions allows County staff to complete their tasks quickly and accurately. County staff are more efficient, allowing Counties to do more with the same level of resources.

Table 4-1 describes the five overarching themes—Acceleration Essentials—of our System Performance approach for CalSAWS.

What We Bring		What You Get	
	<b>Increased automation</b> using the myWizard automation suite	<b>Higher System Availability, Enhanced Reliability, and Scalability</b> using tools such as Automatic Ticket Assignment (ATA), Automatic Ticket Resolver (ATR), and Workflow Manager (WFM)	
<b>Proactive performance monitoring</b> using early detection and warning systems, like Dynatrace		<b>Improved Line-of-sight and Anomaly Detection:</b> For critical infrastructure while promoting proactive notification to users	
	<b>Self-healing</b> using AI-orchestrated bots	<b>Rapid Resolution:</b> Reduces system issue resolution time before they are widely encountered	



### High Performing Secure CalSAWS System

- **Increased Automation** through Accenture myWizard automation suite
- **Proactive Monitoring designed** to improve line-of-sight and anomaly detection
- **Self-healing** AI bots to reduce resolution time
- **AWS/Accenture partnership** to bring unparalleled technical knowledge and expertise
- **Security-First Approach** with automated tools as part of the Defense-in Depth framework
- **Continuous Improvement** with a formal Quality Management System

What We Bring	What You Get
<b>Data-driven decision-making</b> using a real-time analytics dashboard	<b>Insight Based Decisions:</b> Promotes faster decision-making for issue resolution
 <b>Proactive security and vulnerability analysis</b> through proactive monitoring and frequent security testing	<b>Improved Security Posture:</b> Automated logging and Defense-in-Depth approach based on Palo Alto Security Orchestration, Automation and Response (SOAR) integrated with the existing Splunk SIEM environment
<b>Formal Quality Management System</b> <b>Continuous Improvement to Quality of System Performance</b>	

**Table 4-1. The Features (What We Bring) and the Benefits (What You Get) of our System Performance approach deliver high performance while securing CalSAWS.**

## 4.2.1 Proactively Monitoring and Managing SLAs

### Item # I-UA4

Describe your approach to proactively monitoring and managing SLAs to ensure performance requirements and appropriate security measures are met.

### 4.2.1.1 Approach to Proactively Monitoring and Managing SLAs and Security

This section describes our approach for proactively and predictively monitoring and managing service-level agreements (SLAs) to make sure we meet performance requirements and appropriate security measures. We will implement a real-time dashboard integrating multiple aspects of CalSAWS—cloud, application, network, and DevOps metrics along with business metrics. This real-time dashboard [REDACTED] will be based on an Observability/Telemetry framework. Through this proactive performance monitoring, Consortium-approved users can view with real-time and near real-time dashboards how CalSAWS is performing. Our security monitoring and incident management services also provide near real-time monitoring, detection, and proactive responses to security incidents and intrusion attempts. Our data-driven solution will use trend analysis for forecasting, integrating information including prior months' actuals, State policy changes, and enhancement requests into the dashboards.

#### Key Success Factors

- Real-time view of the CalSAWS application performance
- Enhanced security with advanced threat detection
- Quarterly retrospectives to drive innovation, cost optimization and continuous improvement

### Quality Management System (QMS)

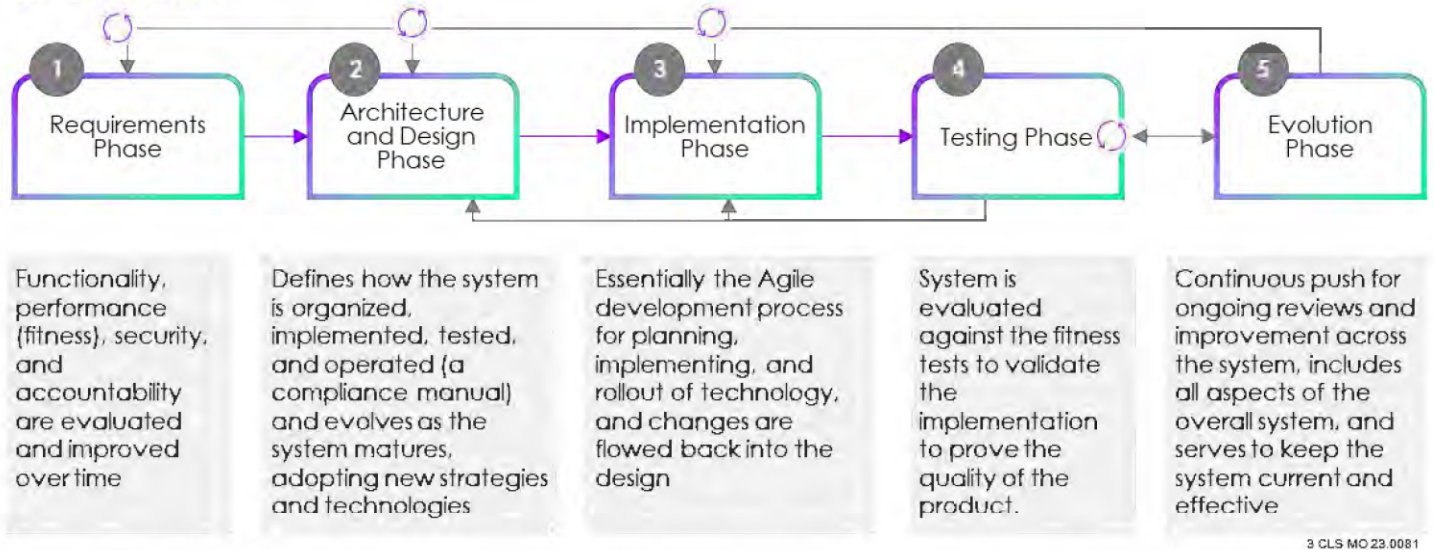
As part of our project-wide Continuous Improvement Program (CIP), we will evaluate and implement ongoing improvements to our proactive assessment of system performance, and our system optimizations efforts. This includes a formal quality management system (QMS) that documents processes, procedures, and responsibilities for achieving quality policies and objectives. The QMS will reinforce the current processes and procedures CalSAWS follows today, with thorough documentation, defined roles and responsibilities, and regular periodic auditing to promote the continuous improvement and evolution of the entire overall system.

We already have components of a QMS in place for CalSAWS and will work closely with Brian Rodgers, Cloud Technical Lead, Grady Howe, Technical Operations Manager, and Laura Chavez, Technical & Operations Director for CalSAWS, to further develop the formal process, including

working to drive requirements downstream. With QMS formally in place, improvements to system performance will occur regularly as part of keeping quality at the forefront.

Figure 4-1 illustrates how the QMS will run day-to-day to deliver continuous quality improvement to system performance.

### QMS in Action



**Figure 4-1. QMS promotes continuous improvement while keeping quality at the forefront.**

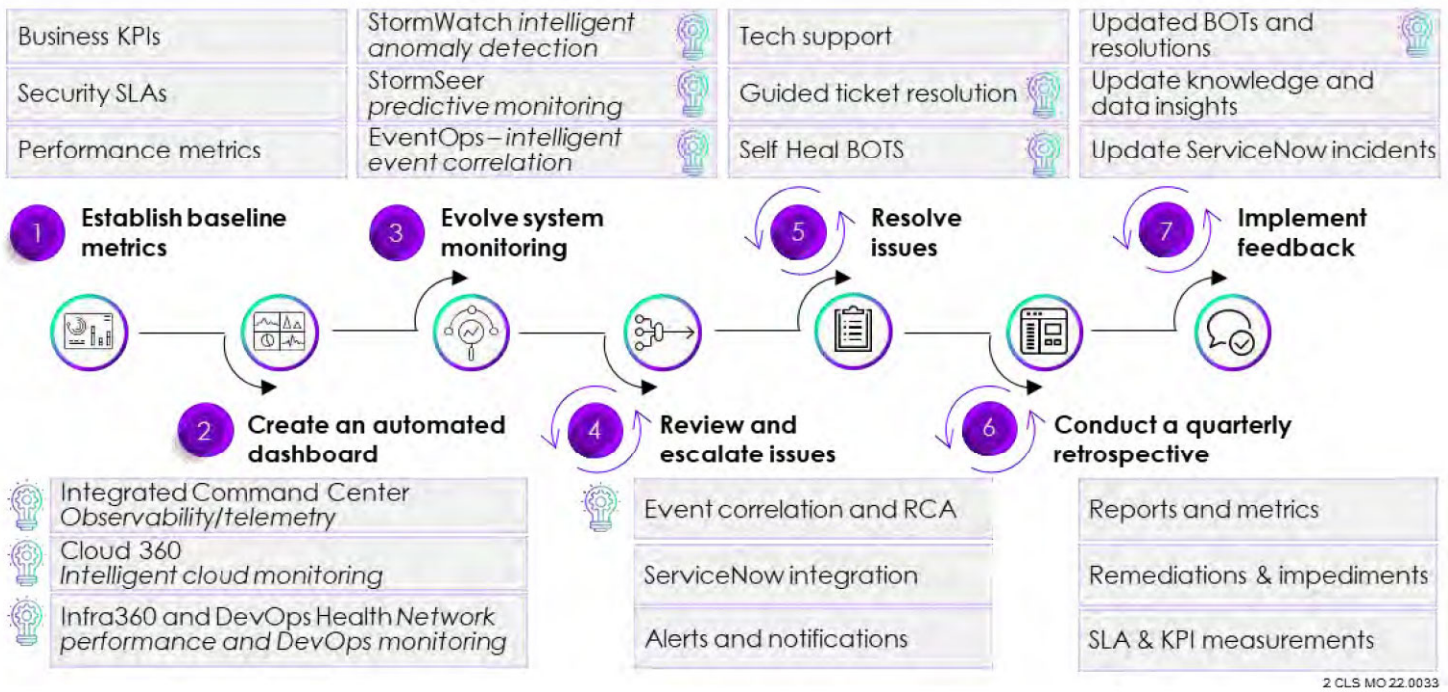
## Performance Requirements



Working with the Consortium, we will deliver a highly available, highly usable monitoring platform to present real-time and near real-time data. Our team will harness our multi-tiered Security Operations Center (SOC) to rapidly detect and respond to your security requirements through monitoring system performance and coordinating with various contractor partners. The SOC team will use the existing Splunk tool, and we will implement SOAR for automated logging as well as its machine learning capability to automate security incident management by triggering runbooks.

We are proactive in our security practices by incorporating the Accenture Threat Intelligence services into our solution, which features threat feeds and threat hunting leveraging Splunk Logs and Trellix. Threat hunting is a monthly manual activity leveraging all CalSAWS security technologies (Splunk ES, Trellix EDR) and Accenture Threat Intelligence.

Our tailored seven-step approach that we illustrate in Figure 4-2 will proactively monitor and manage current and agreed-on future SLAs for CalSAWS while securely enhancing system performance.



**Figure 4-2. Our approach to proactively monitor and manage SLAs creates a real-time view into multiple aspects of CalSAWS.**

The following details our seven-step process to proactively monitor and manage your SLAs:

- 1. Establish baseline metrics:** Based on our deep understanding of the CalSAWS application and infrastructure and our longstanding relationship with the Consortium, the QA Contractor, and real-time interface partners BenefitsCal, CalHEERS, and FIS (EBT), we will build on the existing business and technical metrics to maximize our ability to proactively monitor and manage the system performance for CalSAWS. In the multi-contractor environment, including the M&E Contractor is essential to set these baseline expectations. Besides meeting the RFP-mandated SLA requirements for online and batch performance metrics, we will provide additional, data-driven analysis around business volume forecasting—like logged-in users, eligibility determination benefit calculations run, and forms generated—and trend analysis to predict performance issues. This approach will enable the Consortium and County users to transparently see what we are measuring while helping us better determine where we apply automation to maintain CalSAWS SLAs.
- 2. Implement customized real-time dashboards:** We will deploy myWizard, our integrated automation AI platform and resilient plug-and-play architecture. To monitor and manage system performance for CalSAWS, myWizard will help the Consortium integrate with the ServiceNow ITSM for incident tracking. Built in myWizard and hosted in the CalSAWS environment, data-driven dashboards will enable users to proactively monitor and track all aspects of performance, business volume forecasting, trend analysis, and their impact on SLAs and KPIs, as highlighted in Figure 4-3.



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**Figure 4-3. Dashboards will provide the Consortium and designated QA contractor teams with real-time performance insights into the system.**

- 3. Enhance and evolve system monitoring:** We understand data-driven system monitoring requires automated and guided approaches for CalSAWS users. Our myWizard platform will help with event correlation and monitoring in-scope landscape by leveraging the Splunk enterprise agent, and integrating with current toolsets such as SolarWinds and AWS CloudWatch to track incident SLAs and business metrics while triggering proactive issue alerts when CalSAWS meets system thresholds. Our SRE and our Performance Monitoring teams will continually track service and business-level metrics through dashboards, verifying the system continues to run smoothly. With our proposed monitoring effort, we will use robotic process automation (RPA) for proactive early warnings for the most common failure points and set adequate threshold based on trend analysis to ensure an automation-based monitoring approach. Additionally, the Security Orchestration, Automation, and Response (SOAR) platform that integrates with ServiceNow will flag events identified from Splunk Enterprise Cloud logs for use cases such as brute force attacks and distributed denial of service (DDoS). Our QMS evolution will periodically review how the system monitoring is working and serve as a lever to reevaluate the requirements and design to verify all goals are being effectively met by the monitoring implementation.

### Introducing your New SRE team

We will also mobilize a site reliability engineering (SRE) team to focus on increasing system resilience, improving recovery, and enhancing visibility to system performance. The SRE team will be dedicated to delivering more automation and increasing availability by actively looking for ways to further harden the infrastructure architecture for resiliency. The SRE team will work across teams, collaborating with vendors to stay informed on new product capabilities and how best to incorporate updates into the roadmap.

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- 4. Review and escalate issues:** For each issue or security threat SOAR identifies, ServiceNow auto-creates a ticket and an email to the designated Consortium and/or Accenture staff members. Our automated Chatbot has real-time information to update designated users regarding incident status. We will also keep our Service Desk notified so that they know about system issues if users call to report the same incident. Our AI-driven monitoring tools will perform initial event

correlation, identify root cause, assign incidents to support teams, and, if needed, escalate to the QA team to create a base root-cause analysis (RCA) for critical or recurring issues. With strategically included AWS professional services SMEs on our team, we expect to generate concise and fully transparent RCAs quickly. We will collaborate with other contractors including BenefitsCal, CalHEERS, FIS (EBT), and the M&E Contractor to escalate issues. This approach will streamline the communication process, creating one Critical Incident Response team that will work with you to update you on the progress of the issue while enabling continuous improvement.

5. **Resolve issues:** As part of the self-healing and manual fixes, we can perform automated scaling and implement automated known recovery steps (such as restarts). Our SOC monitoring efforts also include monthly reviews and recommended resolutions of security threats. These proactive performance management processes will enable our team to respond to any automated actions or deployments that are known or common failures. For example, our server monitoring will perform rolling reboots to the system when thresholds are met and coordinate across the Infrastructure and M&E teams to resolve the issues while finalizing the RCA. These rolling reboots help us maintain end user operations.
6. **Conduct a quarterly retrospective:** Besides our monthly reporting meetings where we review monthly SLAs and security threats, daily continuous improvement opportunities, and any impacts on SLAs or business-driven KPIs, we will coordinate formal quarterly retrospectives with the Consortium, QA team, and other contractors to discuss the quarter's performance numbers as part of our proposed enterprise-wide Continuous Improvement Program (CIP). This data-driven, continuous improvement effort will enable us to proactively seek feedback on what worked and what areas need improvement while providing opportunities to introduce innovation. At the end of each quarterly cycle, Sean Swift, our CIP Manager, will work with our Performance Management Lead and our AWS team to deliver the following:
  - Summarized metrics and qualitative feedback on the current quarter's performance including suggestions received on this area from our various stakeholders around KPIs and SLAs that were missed or nearly missed
  - Suggestions to change tools, processes, and/or people to improve KPIs and SLAs and address the qualitative feedback, including changing how we track actuals, introducing new metrics for tracking, modifying the performance dashboard, or targeting tuning areas in the infrastructure or online/batch code for performance improvement
  - To build and increase cybersecurity resilience, introduce service upgrades, new releases, and enhancements that align with the CalSAWS business strategy and overall growth
  - Seek consensus on improvement ideas to emphasize for the next quarter
  - Enhanced security posture through ongoing evolution and integrated with the IAPDU process to obtain funding based on the agreed to roadmap
7. **Implement feedback:** To make the quarterly meetings more effective, we will update dashboards based on the retrospective, data-driven feedback we receive. Feedback is auto-ingested into the system using our intelligent knowledge management tools—Klewer and Quasar. We will coordinate with the Performance Improvement team and the M&E contractor to proactively implement identified performance concerns while enabling the team to update existing dashboards or add new dashboards based on the quarterly retrospectives. Besides working together to continuously refine the dashboards, our approach will accelerate turnaround on issues, improving CalSAWS reliability for every user.

Our team will be led by Infrastructure Performance Manager, Sumeet Patil. He brings 20 years of experience in designing, developing, configuring, and delivering innovative software architecture solutions, including the last 14 years serving the C-IV and CalSAWS. As part of our seven-step approach, our team will track the following key metrics to monitor and manage current and agreed-upon future SLAs:

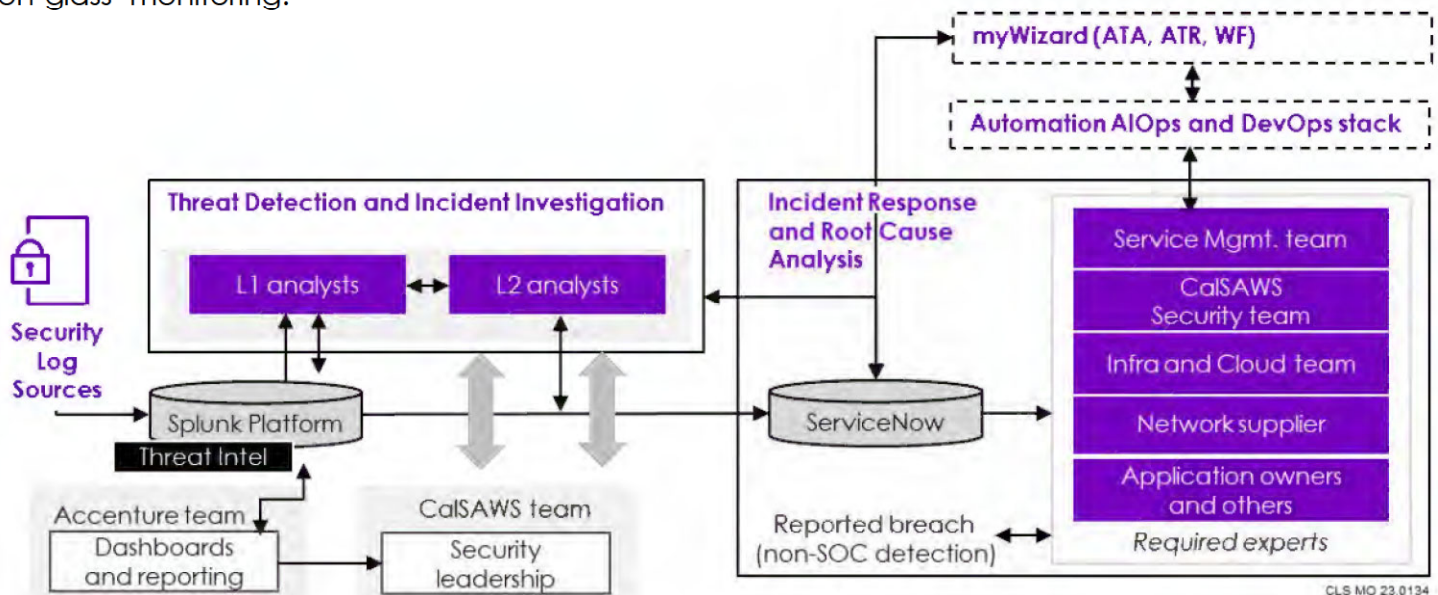
- **Infrastructure metrics:** These metrics include network uptime (circuits), network latency, network jitter and packet loss, database table space, database performance (like CPU, memory, and disk IO), backup health, and data sync.
- **M&E metrics:** We will coordinate with the M&E contractor to measure the following:
  - Base system: Including page load, database response times, and batch job performance
  - Business key performance indicators (KPIs): Coordinating with the M&E contractor, build out KPIs to allow the SRE lead to more effectively communicate system issues while the M&E team is researching and resolving the issue (note that these KPIs will be reported on the business scorecard as described in Section 4.1 CalSAWS Integrated Multi-Contractor Environment (4A))
  - Adjacent systems: Network performance as it relates to CalSAWS for systems including Hyland imaging, contact center, OCAT, and Child Care Portal
  - Ancillary systems: Application program interfaces (APIs) performance for the BenefitsCal portal, imaging, task, appointment, and GA/GR form service
  - Serverless: Support the M&E contractor throughout their application evolution effort to a serverless approach and make appropriate updates to SLA/monitoring



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## Security

Throughout our seven-step approach, security will remain foremost in our CalSAWS solution. Using the Splunk and ServiceNow platforms, we will integrate our SOC team to proactively adhere to your security and governance-related processes, as we highlight in Figure 4-4. We will integrate the Splunk Enterprise Security solution with the CalSAWS ServiceNow for auto-ticketing, which will reduce "eyes-on-glass" monitoring.



**Figure 4-4. We offer near real-time monitoring, detection, and proactive response 24/7.**

We will also integrate SOAR with Splunk to automate security logging. We propose to implement Security Orchestration, Automation, and Response (SOAR), designed to **accelerate security operations and incident response**. Through automation of repetitive security operational responsibilities, Accenture's proposed approach **minimizes manual effort, proactively mitigates risk, and drives faster response**.

Our approach features a threat detection and incident investigation process focused on continuously improving your security offering in ServiceNow based on the following activities:

- Log data of onboarded sources analyzed by Splunk
- Develop reports and dashboards
- Identify notable events for analyst review
- Investigate and classify incidents
- Auto-assign tickets to the appropriate response team based on the runbook
- Collaborate with the appropriate stakeholders for incident response and RCA
- Provide recommendations to improve visibility, detection, and response
- Request incident investigation support for non-Splunk-generated incidents per email



Proactive  
security and  
vulnerability  
analysis

Additionally, we provide the Consortium advanced threat detection capabilities through our endpoint security management to help CalSAWS proactively detect and counter the most complex and persistent cybersecurity threats. Unlike a traditional monitoring capability, our approach combines actionable threat intelligence with testable hypotheses to drive outcome-based threat-hunting operations. Besides the SOC monitoring capability, we will develop and execute threat-hunting plans and share these findings monthly with relevant stakeholders along with recommendations.

With SOAR, we will also improve the current SOC monitoring operations by aligning security tools and automating repetitive manual tasks to yield faster incident response capabilities with speed at scale while strengthening defenses through integrated tools, processes, and teams. Our Infrastructure Security Manager, Alexander (Alex) Hsiung will work with our Infrastructure Performance Manager, Sumeet Patil to deliver enhanced security processes while verifying we meet performance requirements. Alex brings over a decade of delivering field-tested security solutions to our clients.

To augment our SOC, we will share with the Consortium the following security offerings:

- **Governance, Risk, and Compliance (GRC) Services:** Our service optimizes compliance management using our System Security Plan (SSP) to provide the security planning requirements that apply to each stage of CalSAWS system and application lifecycles.
- **Network Security Management:** We will provide CalSAWS with managing network security appliances and maintaining rule definitions such as Cisco firewalls, intrusion prevention systems, and web application firewalls.
- **Email Security and Anti-Phishing:** We will support the Cisco Email Security and Cofense solution in spam/phishing mail detection and filtering.
- **Identity and Access Management (IAM):** Our IAM services for CalSAWS will verify we manage identities and access in compliance with CalSAWS security policies using CalSAWS' ForgeRock solution.

- **Accenture Cloud Security:** We deploy managed security service and compliance of applications and services on AWS using AWS-native security services such as AWS Firewall, AWS WAF, AWS Shield Advanced, AWS GuardDuty, AWS Config, Key Management System (KMS), Secrets Manager, AWS IAM, and AWS IAM Identity Center. Highlighted in Figure 4-5, we bring you unrivaled expertise delivering AWS solutions through our Accenture AWS Business Group (AABG), which is the only partnership of its kind within AWS.

### Accenture AWS Business Group (AABG)



### Full Spectrum Cloud Security



CLS MO 22.0074

**Figure 4-5. Through our AABG, Accenture can deliver peerless AWS capabilities.**

Accenture Security has the required skills, accelerators, and extensive experience in supporting multiple other public sector clients with initiatives across the cybersecurity service spectrum including cyber strategy, cyber resilience (like endpoint detection and response), and cyber protection (like privileged identity management and data protection). Our Security team will work with CalSAWS to support such initiatives and handle such requests through appropriate change management processes as standalone projects over and above the current scope of services.

**Proactive performance management**

Based on best practices from our work on CalSAWS along with our experience supporting other state IE systems as well as vital efforts like HealthCare.gov and COVID vaccine tracking systems, we understand how to proactively and securely monitor and manage SLAs for CalSAWS. Our seven-step approach will provide the Consortium with increased focus on meeting SLAs proactively while delivering early detection and remediation. Backed by our SOC, our solution delivers 24/7 security operations, automated search with correlation and containment, rationalized tools and capabilities, outcomes-based results, and enhanced cyber resilience for the Consortium. A renewed focus on innovative automation will also promote higher reliability and consistency. Additionally, the dashboards we envision for CalSAWS will deliver increased transparency to the Consortium on SLA statuses.

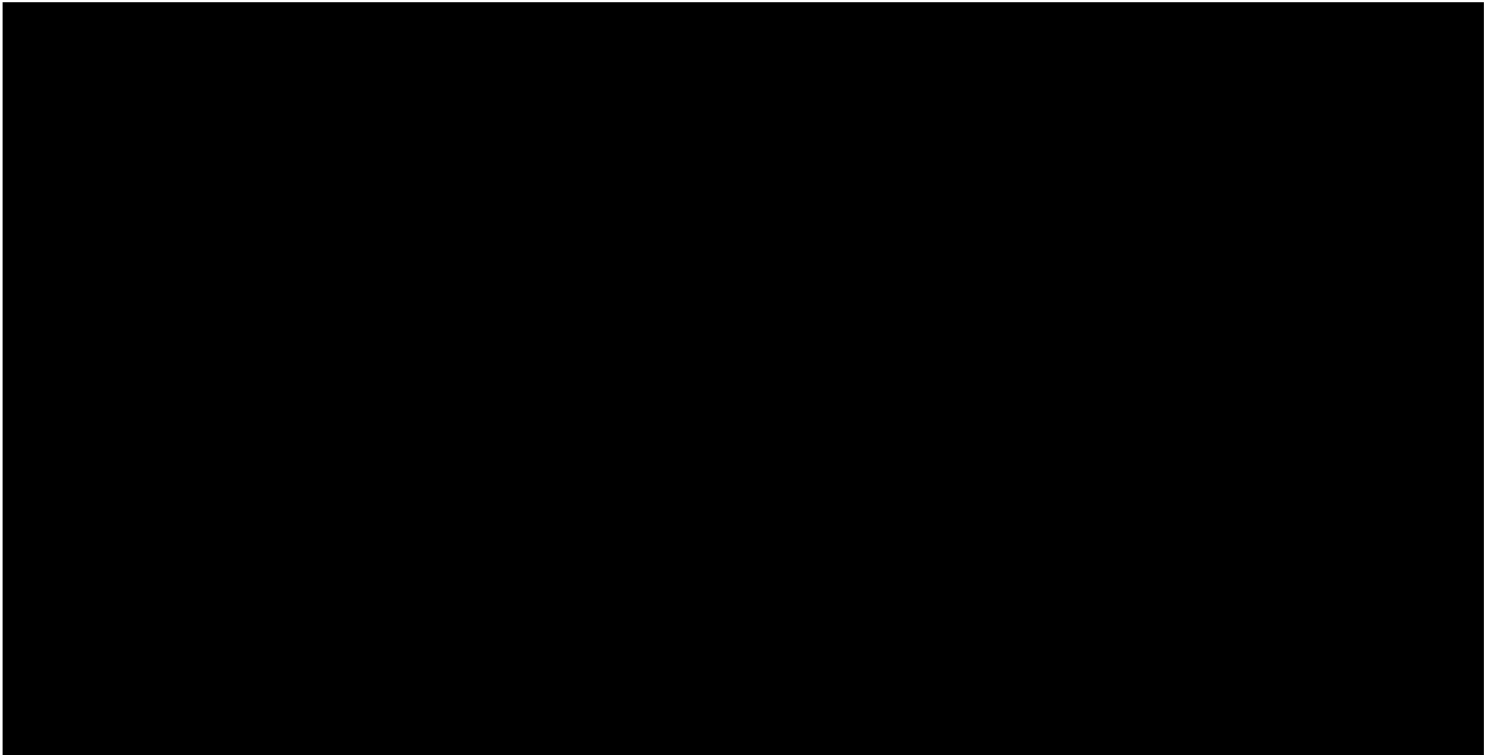
We considered various alternatives, such as maintaining our approach featuring automated monitoring of primary notifications or manual monitoring by a split focus team. We believe the automated approach works well but requires predefined "issues" and lacks the ability to respond creatively or to map to issues related to business service impacts. Likewise, the manual solution has its positives, but does not allow the proper focus on system performance, features slower turnaround on notification and RCAs, and increases the likelihood of discovering an issue only after it has affected

the system. Instead of choosing a solely automated or manual solution, we selected a blended approach that will bring the most innovative, value-driven results for you.

## Implementation Timeline

As your current Infrastructure contractor, we will not need to come up to speed or require orientation on the current infrastructure. Rather than just transitioning, we will transform the performance and security monitoring beginning Day 1. Our SRE and Performance Monitoring teams will dedicate themselves to several key tasks, including establishing the baseline expectations with the Consortium, QA and other CalSAWS contractors, developing the dashboards and implementing myWizard integrations. Accenture is committing dedicated resources to continue to [REDACTED] [REDACTED] over the life of the contract based on ongoing improvements identified by the SRE and Performance Monitoring teams.

Our dedicated team will help manage the transition into new tools and tracking while verifying that we still monitor and report on system performance. Weekly trend and forecasting analysis will show improved focus on prevention of issues rather than only resolution of issues. Additionally, the Quality Manager will own the execution of the QMS and confirm that each team has a quality manual with documented processes that remains continuously updated and audited. The proposed implementation timeline for the transformation activities is based on getting the needed participation from the Consortium and the M&E Contractor for dependent activities. Our team will keep the focus on timely issue resolution, as Figure 4-6 highlights.



**Figure 4-6. We will smoothly implement our seven-step process to proactively monitor and manage SLAs for CalSAWS.**

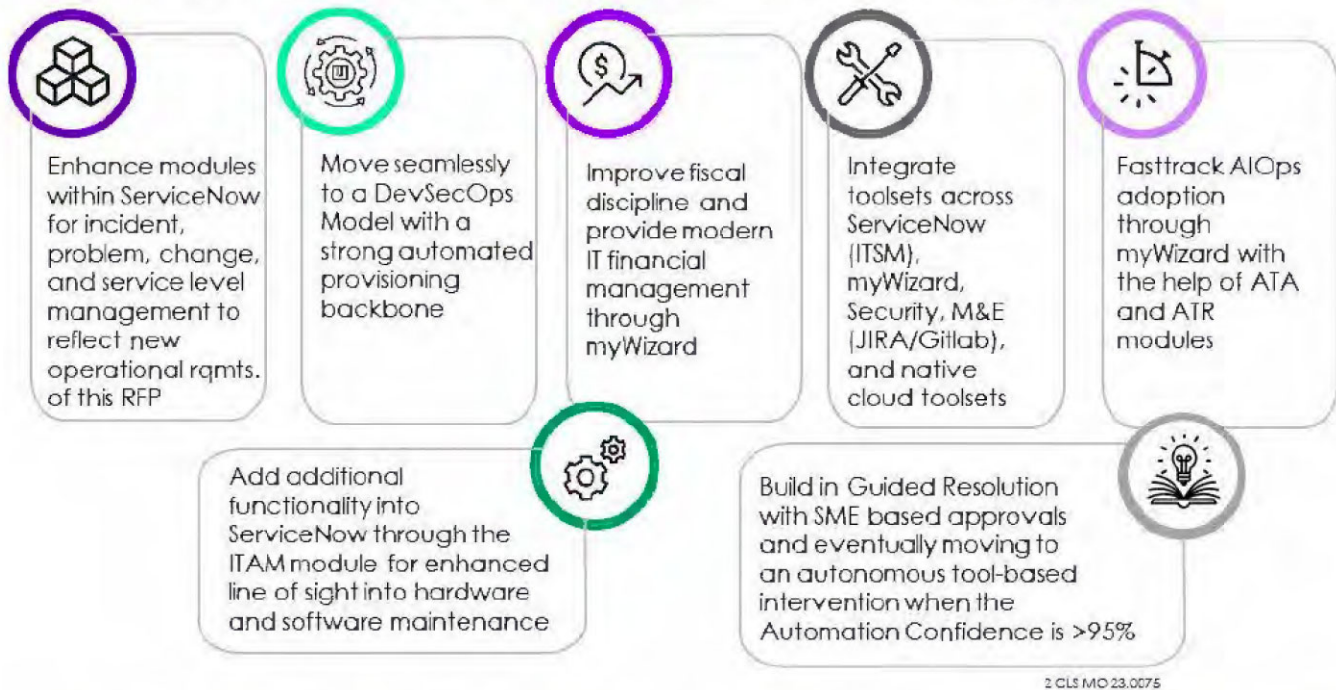
## Continuous Improvement

In addition to the quarterly CIP process, we will report and discuss weekly metrics with the Consortium for continuous improvement opportunities. Creating a mapping of functionality (KPIs) to system impact will also help us improve the time to notify Counties, their staff, and other stakeholders. Through these interactions, we can jointly review and align on the recommendations to refine the monitoring capabilities through added indicators. Our Accenture and AWS teams includes senior

specialists with deep experience who will periodically evaluate the overall effectiveness of our system performance work through the QMS and provide recommendations for improvement. We will also receive quarterly input from our national network of system performance experts regarding new trends or practices in the market that we could apply to CalSAWS.


#### 4.2.1.2 Tools and Technology

CalSAWS already has a strong monitoring baseline with enterprise grade toolsets such as SolarWinds and native toolsets like Avamar, CloudWatch, and Cloud Trail, outlined in Figure 4-7.



**Figure 4-7. We want to evolve the tools blueprint with a process based on our experience with CalSAWS.**

Besides the numerous tools we already use for proactively monitoring and managing system performance for CalSAWS based on their functional fit and ability to maximize existing spends, we are introducing the new toolsets we detail in Table 4-2 for our proactive monitoring approach.

Tools	Features and Benefits
	<ul style="list-style-type: none"> <li>Statistical and machine learning methods to identify and act on anomalies in large and complex CalSAWS data to improve system performance, stability, and security</li> <li>Holistic/real-time analysis of enterprise batch and related infrastructure operations</li> <li>Database performance monitoring to provide insight into the database, server, and instance</li> <li>Identification of slow-running platform-as-a-service services and other features that simplify Cloud Support teams' duties</li> <li>Monitoring DevSecOps pipelines and auto-provisioning capabilities</li> <li>Notification capability that notifies relevant support teams when the metrics being monitored breach the configured threshold</li> <li>Machine learning based application that handles tickets autonomously. Integrates with ServiceNow to classify/triage tickets and service request</li> <li>Digitized knowledge harvesting and management solution that builds a rich source of knowledge that are typically not tapped into (e.g., calls, chats)</li> </ul>

Tools	Features and Benefits
<b>Dynatrace</b>	<ul style="list-style-type: none"> <li>• Performs Application Performance Monitoring (APM)</li> <li>• Key applications, processes, and network components are monitored for abnormalities through a BSM tree.</li> <li>• Is currently used for diagnostic purposes such as JVM monitoring and profiling, thread tracing, and diagnostics.</li> </ul>
<b>Palo Alto Cortex Security Orchestration, Automation, and Response (XSOAR)</b>	<ul style="list-style-type: none"> <li>• Automates and orchestrates the security event response with workflows</li> <li>• Improves operational efficiency in incident handling</li> <li>• Minimizes response time</li> </ul>



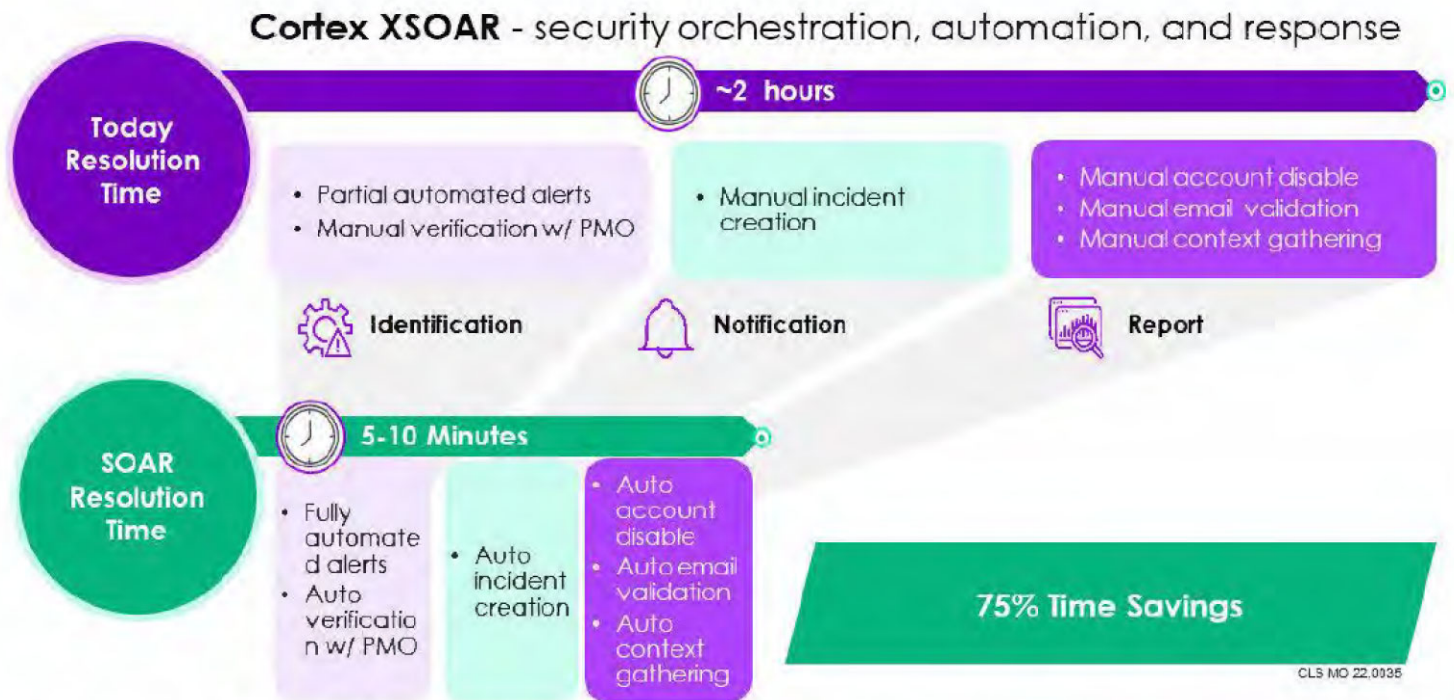
**Table 4-2. Our new technology offerings will provide secure monitoring and management of SLAs.**

These new tools and technologies are designed to enhance the current system performance and monitoring toolset through myWizard automation. By seamlessly integrating with the current ecosystem, these enhancements promote proactive system monitoring so we can stay ahead of any potential issues. As illustrated in Figure 4-8, our goal is to enhance user confidence and our M&E Contractor's confidence in CalSAWS system availability and reliability through timely, reliable, and robust system monitoring.



**Figure 4-8. Our new tools and technologies offer peace of mind for both CalSAWS users and M&E Contractor.**

Our tailored approach to proactively monitor and manage SLAs creates a real-time view into multiple aspects of CalSAWS. We will bring tools, like the Palo Alto Cortex XSOAR, that offer full automation to increase efficiencies and improve resolution times, as illustrated in Figure 4-9. Our tools offer full automation to increase efficiencies and improve resolution times. Our regular periodic evaluations performed under the QMS will evaluate new or updated tooling that may improve the overall system quality.



**Figure 4-9. Our tools offer full automation to increase efficiencies and improve resolution times.**



Another exciting tool we are bringing to CalSAWS through myWizard is StormWatch, an automation tool that helps teams focus on the root cause of an issue. Instead of one issue setting off a chain reaction of errors, which results in an influx of tickets and notifications, StormWatch finds the links between related issues and tracks it back to the root cause automatically. This generates a single report notifying the team of the root cause and associated issues.

At the same time, StormWatch provides inputs to Automated Ticket Resolution (ATR), which then automates a ticket in ServiceNow and begins resolving the issue. Automatic email notifications are sent to the individuals who need awareness, detailing the issue and its ultimate resolution. StormWatch takes the manual effort out of issue resolution, streamlining communications and speeding up resolution times for County users. Figure 4-10 provides a closer look at the benefits StormWatch will bring to CalSAWS.

## Event

During nightly batch, county Interface Inbound File received via SFTP, loaded into CalSAWS, data processed via Batch and Outbound File generated and sent back to County via SFTP.



### Today

Manual, time-consuming resolution

### Future

Automation leveraging



CalSAWS Team wakes up to **multiple uncorrelated failure notifications**.



**County is confused** due to interface being blank.

### StormWatch



**Resolution is hands-free** requiring only minor actions by CalSAWS Team.

**County receives proactive communication** regarding issue discovery and resolution.

- 1 A Network issue occurs causing the County Interface file to fail SFTP to CalSAWS
- 2 With a missing Inbound File, Batch job will fail data load into CalSAWS
- 3 When generating outbound file back to county, the file will be blank due to missing data

- 1 StormWatch correlates issues to help the CalSAWS Team focus on root cause immediately
- 2 Automated Ticket Resolution uses StormWatch input to trigger a process for a known issue and resolution.

- Logs a ticket in ServiceNow for traceability
- Performs automated steps to resolve the SFTP issue
- Sends proactive notice to County to retry sending Inbound File once issue is resolved
- Kicks off batch process for isolated functionality to process file and send an Outbound File with expected data
- Marks ServiceNow ticket resolved and sends notification to all stakeholders

CLS MO 22.0091

**Figure 4-10.** Our further streamlines and automates the incident investigation and resolution process and eliminates manual effort.

### 4.2.1.3 Results Delivered

#### Proactive SLA management at CalSAWS



##### Our Approach in Action:

In the last several years, our teams have implemented numerous solutions to proactively monitor and manage CalSAWS SLAs. We recently created a monitoring alert that measures traffic fluctuations to identify when certain counties are having issues.

Our CalSAWS dashboard and SLA monitoring alert notifies users when Screen-To-Screen SLAs are Red. We can identify the transactions contributing to the breakage, so the team can update the SQL plan for the backend query and verify the SLA was successfully met that day.

##### Results Delivered:

- Alert identified internet outage for Glenn County
- Alerted Marin County could not receive OTP email.
- Proactively react to "hogging threads" to avoid impact to users, including restarting servers
- Created an Apache alert to pinpoint general lag issues
- Created AMP Transaction Count Variance to identify when utilities, tasks, or views are not getting recorded.

#### Intelligent automation success for Danish Multinational Brewer



##### Our Approach in Action:

Our client had a high number of complex systems, custom developments, and applications across landscapes with multiple tech frameworks that led to siloed operations and hampered standardizations.

Using a similar seven step approach, we substantially simplified the entire IT application landscape and implemented intelligent monitoring, event management and automation through myWizard, Infra360, Cloud360, AlertCenter, Self Healing BOTS, all part of our myWizard AIOps platform. We also implemented ServiceNow integration, alerts, and notifications.

This led to improved operational efficiency and delivery speed, while ensuring no business process disruptions.

##### Results Delivered:

- 60% reduction in effort for monitoring and end-to-end auditing solution for databases
- 70% reduction in P1 and P2 tickets resolution
- 99.99% system availability

### 4.2.1.4 How We Exceed the Requirement

Our approach for proactively monitoring and managing system performance SLAs and security for CalSAWS will exceed the requirements in several ways, including extensive automation and integration of multiple data sources using myWizard; the formal quarterly continuous improvement process; implementation of the transformed reporting and monitoring capabilities in the first six months; and bringing in national experts regularly to provide guidance, feedback, and perspective. Table 4-3 provides additional points of how we exceed your requirements.

Going Over and Above	Benefit	
Extensive, intuitive real-time and trend analysis tools using myWizard	<ul style="list-style-type: none"> <li>• <b>Increases Transparency and Management of Operational Performance:</b> Real-time monitoring of SLAs available to enterprise-wide authorized staff, exhaustive historical trends presented to decision-makers in near real-time</li> </ul>	
Vulnerability scans performed more frequently than required	<ul style="list-style-type: none"> <li>• <b>Reduces Security Risks:</b> Weekly infrastructure vulnerability scans to proactively identify threats and vulnerabilities</li> </ul>	
Use of AI and machine learning to automate incident detection and reporting above required	<ul style="list-style-type: none"> <li>• <b>Fast Incident Management:</b> Using Security, Orchestration, Automation and Response (SOAR) to automate typically manual tasks for fast incident management</li> </ul>	
Greater collaboration with M&E Contractor focuses on predictive performance analysis	<ul style="list-style-type: none"> <li>• <b>Mitigates Risk of Production Performance Issues:</b> Proactively builds performance in from the Design and Build phases long before Test to mitigate application performance issues before they affect the SLAs</li> </ul>	

**Table 4-3. The Consortium will gain numerous benefits from our system performance monitoring and management approach.**

## 4.2.2 Proactively Assessing System Performance

### Item # I-UA5

Describe your approach to proactively assessing CalSAWS system performance, and how you will optimize and continually improve system performance.

Based on your experience, describe how your past system performance and SLA management processes delivered improved system performance and measures and the extent to which you met or exceeded stated SLAs.

### 4.2.2.1 Approach to Proactively Assessing System Performance

For those of us in the IT business, we have learned that the earlier we identify a problem, the smaller is the impact. In this section, we describe our approach to proactively assess CalSAWS system performance and how we will optimize and continually improve system performance. We also address, based on our experience, how our past system performance and SLA management processes delivered improved system performance and measures and the extent to which we met or exceeded those stated SLAs.

Our approach for proactively assessing system performance creates a foundation for CalSAWS to move from a reactive approach towards a data-driven proactive and predictive approach for system performance management. The basis of our foundation is provided by our proposed tools and process framework to accelerate the changes to monitoring and managing CalSAWS system performance. We continuously collect data by way of proactive alerts, perform analysis based on AI-driven event correlation, and provide insights based on industry leading practices.

Assessing system performance for CalSAWS requires a constant focus on continuous improvement as we gather multiple inputs. These turn into individual priorities based on the analysis performed by the performance management teams' retrospectives. We will work collaboratively with the DIO and the M&E contractor, as well as the other CalSAWS contractors, to identify drivers that may affect system performance, such as planned changes and major business events, to enable appropriate forecasting of system performance needs.

Today, we apply many of these same principles to implement alerts and monitoring tools such as Cast Exception alerts (server monitoring), the AMP monitoring tool (lag issue identification at the

#### Key Success Factors

- Weekly, proactive monitoring of key performance metrics
- Prioritization of the most impactful resolutions
  - Trend and forecast analysis to drive informed decision making

County and Office level), and performance testing (high response time identification) to improve system performance and meet your stated SLAs.



Our proposed approach is collaborative and all-encompassing. It is not limited to only monitoring the infrastructure and application stacks. We propose our Continuum Control Plane (CCP) framework to deliver enhanced performance management at multiple levels. The CCP is a holistic approach to instilling transparency, orchestrating change, driving innovation, and delivering higher, more cost-effective IT performance. Our framework will enable a consistent, unified, real-time view into what is working and what is not across the CalSAWS environment. The CCP brings together a modular collection of tools, services, and platforms that help achieve the goals of active budget control and predictive operations, promoting compliance while enabling automation, infrastructure as code, and business insights across these areas:

- **FinOps:** Identifies show and charge-back of cloud costs and license costs
- **AIOps:** Monitors full stack from application and middleware down to the cloud platform layer to gain insight and enable predictive maintenance
- **SecOps:** Offers intra- and inter-estate security
- **DevOps:** Automates numerous operational tasks, reducing reaction times and outages caused by human error
- **GitOps:** Using tools such as GitLab, provides a repository as the central source of truth for infrastructure estates, reducing configuration drift and enabling next-generation business continuity management
- **BizOps:** Delivers business and technology alignment through real-time insight into the entire technology stack

## Optimizing and Continually Improving System Performance

With our CCP based approach, we will build and manage at scale, optimizing and continually improving system performance while maintaining security compliance with services, and reducing cloud costs. The move to a serverless, microservices based architecture and adoption of DevSecOps will further unlock real-time observability into performance of applications, data, and infrastructure. Additionally, machine learning and AI-based recommendations and insights will be enabled through our myWizard based automation framework.

As part of CCP AIOps, an entire myWizard suite of tools leads the path for our data-driven solution. It uses trend analysis for forecasting, integrating information including prior months' actuals, State policy changes, and enhancement requests into the dashboards.

We will tightly integrate with CalSAWS existing monitoring tool stack with our Intelligent Monitoring and Automation platform—part of the myWizard suite—to help eradicate false alarms, alert, and notify appropriate staff of incidents with root causes, and bring in self-healing and guided resolutions to keep the system availability high.



### What Our Clients Say...

Accenture brought the best people to build, migrate the legacy data and support the successful implementation of the LA County Leader Replacement System (LRS). The implementation completed on time and on budget. The production system was stable, fast and the Accenture team provided high-quality services.

— Hayward Gee,  
Former LRS Project Director

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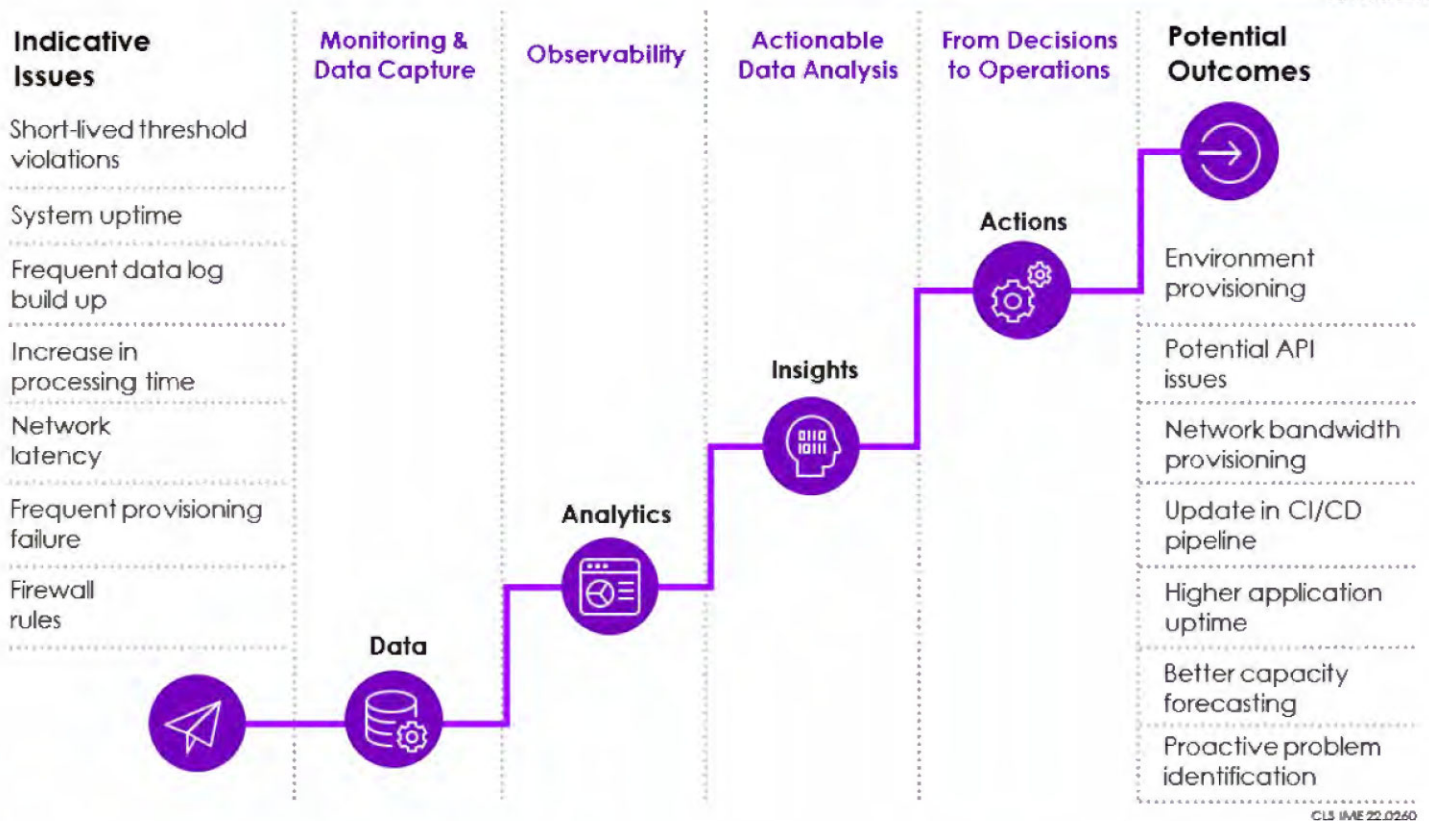
Our Performance Management team will capture daily outputs using the monitoring toolsets for infrastructure elements such as SolarWinds, cloud-based native monitoring tools such as CloudWatch, and an event aggregation layer such as [REDACTED]. Log monitoring is performed through Syslog and Splunk. Application performance monitoring for the critical infrastructure is performed by Dynatrace. Tight integration between the monitoring, automation, and compliance toolsets with the ServiceNow ITSM platform as proposed in our solution will provide the backbone for evaluation of system performance. We will collaborate with the DIO, QA Services, and other CalSAWS contractors to incorporate this information into our four-step approach, **Monitoring & Data Capture, Observability, Actionable Data Analysis, and From Decisions to Operations**, summarized in Figure 4-11 and explained in more detail in the following paragraphs.

### System Integration with Hyland Imaging

Through our system integration with Hyland Imaging, we can preemptively detect and escalate degradations in the SaaS service before it has notable impact to the end user.

We achieve this by setting up system alerts from within the admin console and by monitoring areas of the system and checking queues for specific errors based on historical data. If an issue is identified on the Hyland side, we escalate to them immediately for resolution before it can impact the end user.

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**Figure 4-11. The myWizard platform offers the Consortium early detection and resolution driven by data and insights to enable optimal performance.**

**1. Monitoring & Data Capture:** We have multiple ways to monitor the underlying infrastructure layer to make sure we capture data from the Database(s), Cloud, Infrastructure (i.e., Network, Servers, etc.), and DevSecOps. This data is captured and further processed by our AI-based tools to get meaningful insights. For example: INFRA360 unifies fault, availability, and performance monitoring of infrastructure. It provides a consolidated view of the complete network infrastructure. Another

example: HostProcess360, is a Windows and Linux Service monitoring tool that provides support teams with a deep service status and name insight (Figure 4-12).

**2. Observability:** Observability through open telemetry will be extended and integrated into the common Operational Technology (OT) edge devices to create our industrial operations Data Fabric. This will be our key layer to enable Intelligent Automation.

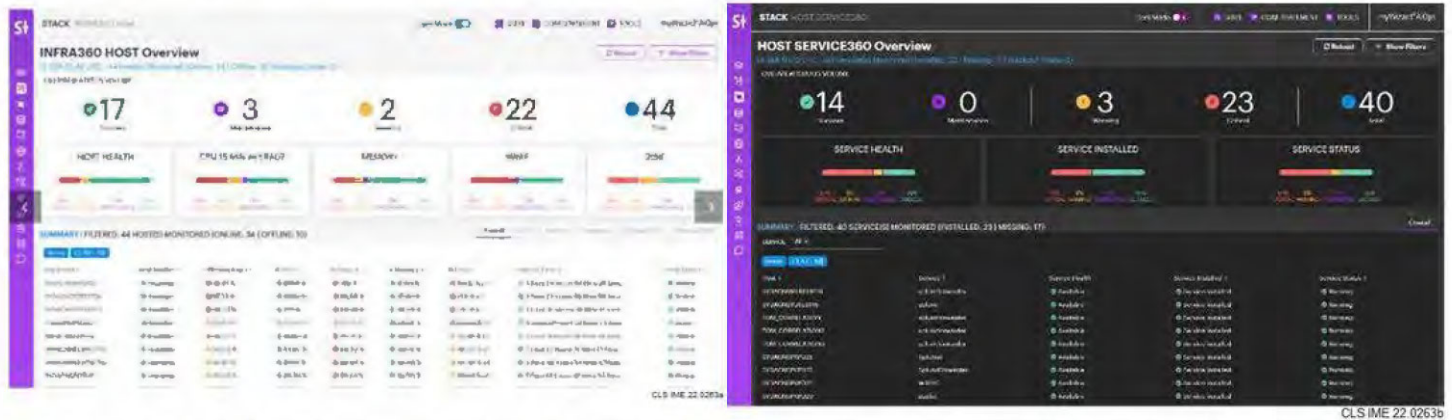
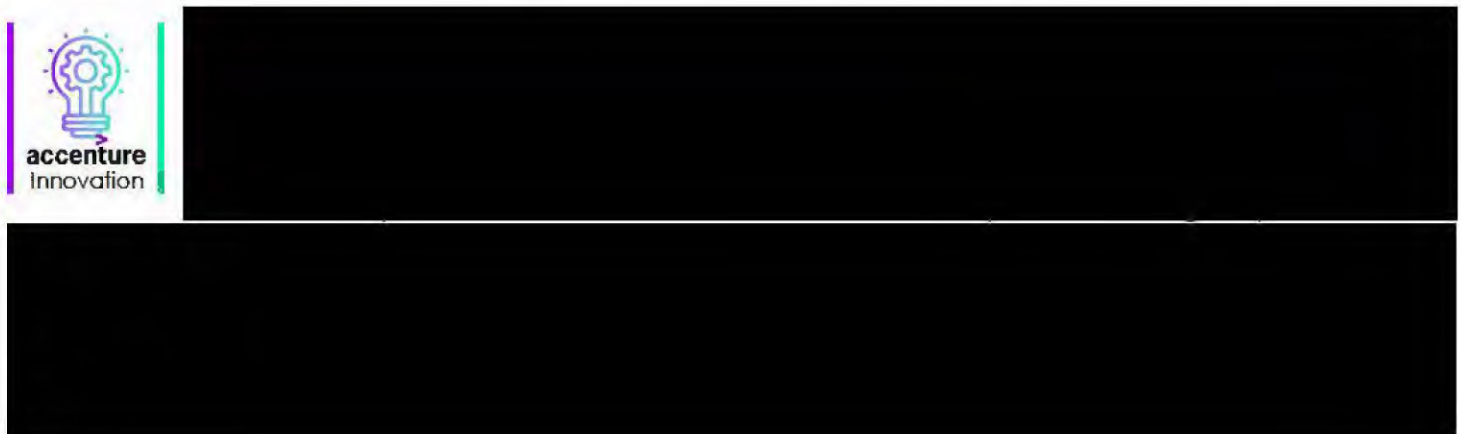


Figure 4-12. INFRA 360 and Host Process 360 dashboards provides a consolidated data view.

**3. Actionable Data Analysis:** The deep dive and predictive analytics dashboard provides insights into improvement areas. This, combined with the Repetitive Problem Identifier ML algorithm, determines the repeated incidents which can be logged as problem tickets and tracked in the automation journey tracker. This will perform an "eradicate, optimize and automate" set of processes. The output will feed back into the incident lifecycle in the ticket resolver knowledge base.

**4. From Decisions to Operations:** Our [REDACTED] augments the role of a data analyst and provides predictive, prescriptive, and descriptive insights from a multitude of available information. It identifies causes for specific data patterns and potential actions to mitigate areas of concern.



## Future State Scenario:



Figure 4-13.

We will work with the M&E Contractor and Consortium to determine if the M&E Contractor would like to take advantage of these capabilities and rollout the solution accordingly during the Operations phase.

Our assessment of performance will lead to clear, concise, and thorough recommendations in areas such as:

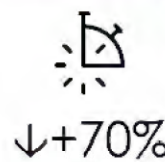
- **Network:** Our network monitoring and proactive assessments bandwidth and circuit utilization will allow us to provide recommendations to the Consortium regarding increasing or decreasing bandwidth.
- **Capacity:** Our assessments will include predictive outcomes, allowing us to provide you with accurate future capacity requirements in such areas as compute, data storage, and software licensing.
- **Operations:** Focusing on system operations, we will deploy automation to optimize environment utilization (provisioning and decommissioning environments faster, reducing costs). Similar tools will allow us to failover from Primary to DR more quickly. Another example of our proactive operations is to clean up old log files more efficiently.
- **Application tuning:** Application performance is a true collaborative experience. We will work with the M&E contractor, making recommendations such as software patching to address performance issues; tuning database calls, indexes, partitioning; environment utilization; and, in general, being available to discuss performance-tuning opportunities.

### Collaboration with Other CalSAWS Contractors to Optimize Performance:

The data gathered through our proposed integrated toolsets is not sufficient to optimize system performance on its own. Our Performance Management team will proactively work with the various CalSAWS contractors and their teams to align the capacity of the infrastructure to the stated performance goals and SLA requirements in alignment with your CalSAWS business needs. We

will work with the PMO and DIO teams to provide regular feedback on performance, trend analysis and anticipated performance degradation. Additionally, SLA tracking and analysis will provide the Consortium with an early indicator of future performance issues that may need remediation. To conduct system performance testing, **we have included two Accenture CalSAWS Application SMEs to assist the M&E contractor with creating scripts, test execution, and evaluating the results.** Working together, we will synchronize online/batch performance testing efforts, add an online database tailored volume data, and conduct batch runs during and after the online performance test with the

### Super Trigger Run Times

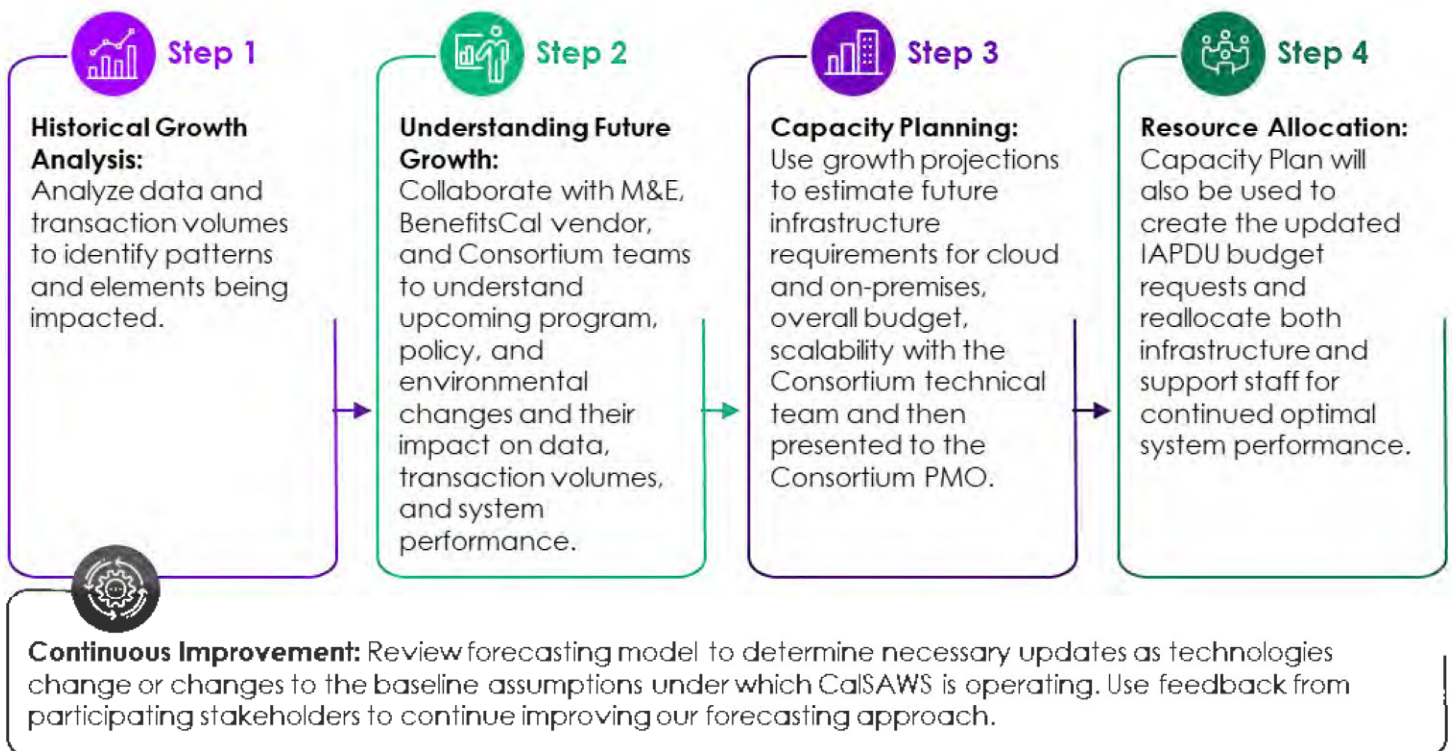


The CalSAWS Accenture team's performance tuning efforts **cut batch super triggers' run time by over 70%**, improving batch SLA results **while loads increased** from migrating additional Counties to the system.

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tailored dataset. Additionally, as part of the serverless system upgrades, we will work with the M&E contractor to execute proactive performance assessment before delivery into the production system.

**Semi-Annual Infrastructure Forecasting:** A key aspect of assessing the impact to System Performance is understanding how upcoming program and policy changes might impact the caseload and consequently the amount of data being stored, and the number of transactions being processed both online and in batch by the system. As an example, with the Public Health Emergency, Accenture had to plan and implement measures to maintain the system performance and meet SLAs while having to adjust to an explosive growth in the total number of public assistance clients affecting the amount of cloud hardware and software resources being consumed. This increase in infrastructure capacity had cascading impacts on the overall M&O budget. Going forward, we plan on forecasting the infrastructure needs by evaluating the impact of program and policy system changes in the pipeline and any other environment changes. This forecasting will be a collaborative approach led by our M&O Operations Manager with participation from the Consortium technical team, M&E contractor, and BenefitsCal teams. Figure 4-14 details the key elements of this four-step approach.



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**Figure 4-14. We will evaluate the impact of program, policy system changes in the pipeline, and any other environment changes to effectively forecast infrastructure needs.**

## Hardware & Software Management impacts to System Performance

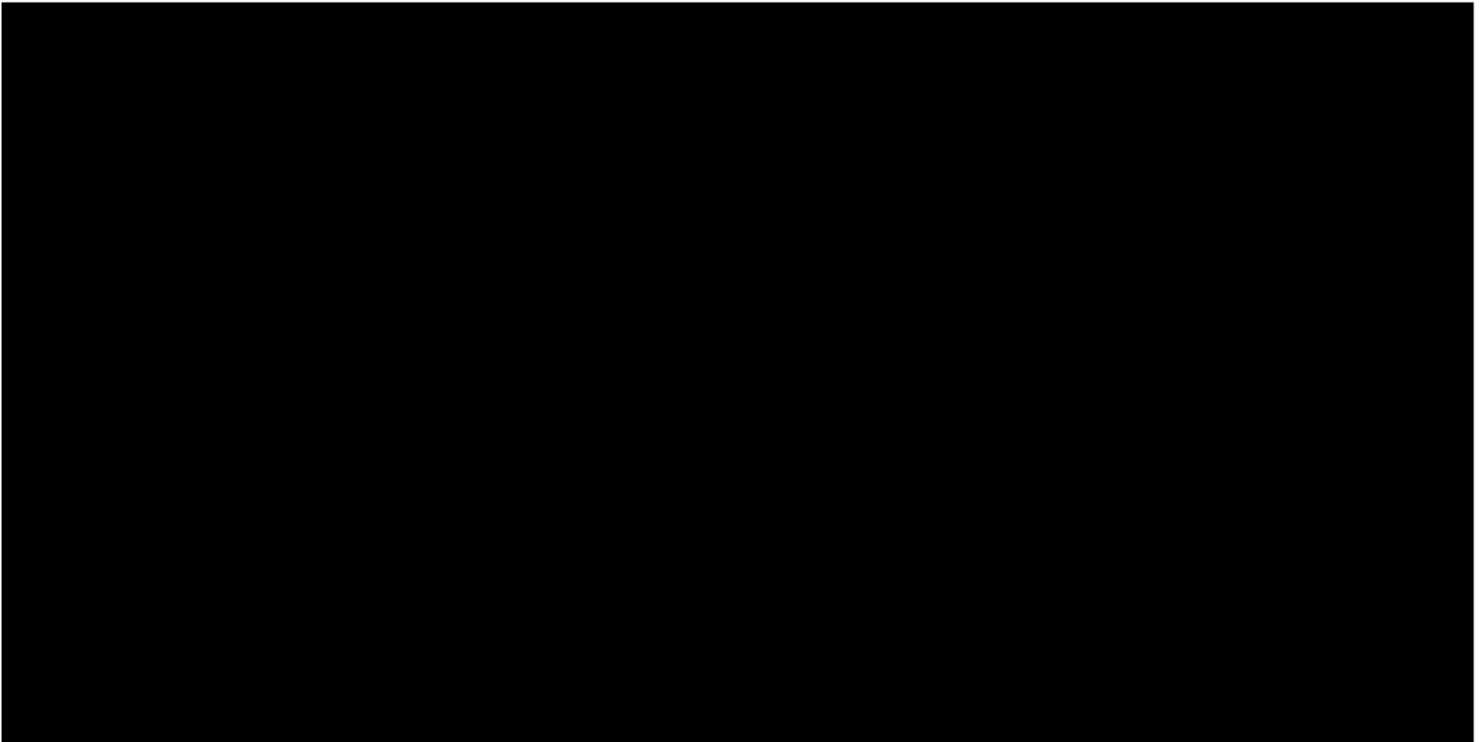
CalSAWS system performance is not limited to the CalSAWS itself. There are aspects of hardware and software management that have a direct impact to ancillary systems that impact CalSAWS. These include hardware and software required to access CalSAWS productively (i.e., network devices at Counties, Accenture laptops, VPN, and AWS workstations) and hardware and software for ancillary systems that connect to CalSAWS (lobby kiosk, FACT, Contact Center devices).

We are proposing to implement a hardware and software management solution that more effectively manages the ancillary infrastructure at the Counties, leading to improved overall system performance. Please refer to Section 4.3 Infrastructure Understanding and Approach to Hardware

and Software Management (4C) for further details on our hardware and software management approach.

## Implementation Timeline

To enact our system performance assessment efforts, we will build on existing processes that we have established in the current system, as we illustrate in Figure 4-15. With consistent performance execution, we will assess trends and quickly identify issues before they occur in production. Our proposed quarterly retrospectives will drive continuous improvement and enable us to manage risk as we will build on existing processes while collaborating with the stakeholders during each stage. We will provide a draft of our guide to this transformation effort on Day 1, with a final Consortium-approved version ready in Month 3. We based the proposed implementation timeline for the transformation activities on getting the needed participation from the Consortium and the new M&E Contractor for dependent activities.



**Figure 4-15. Our CalSAWS solution for assessing system performance will involve all stakeholders in driving the priorities to promote a collaborative, informed approach.**

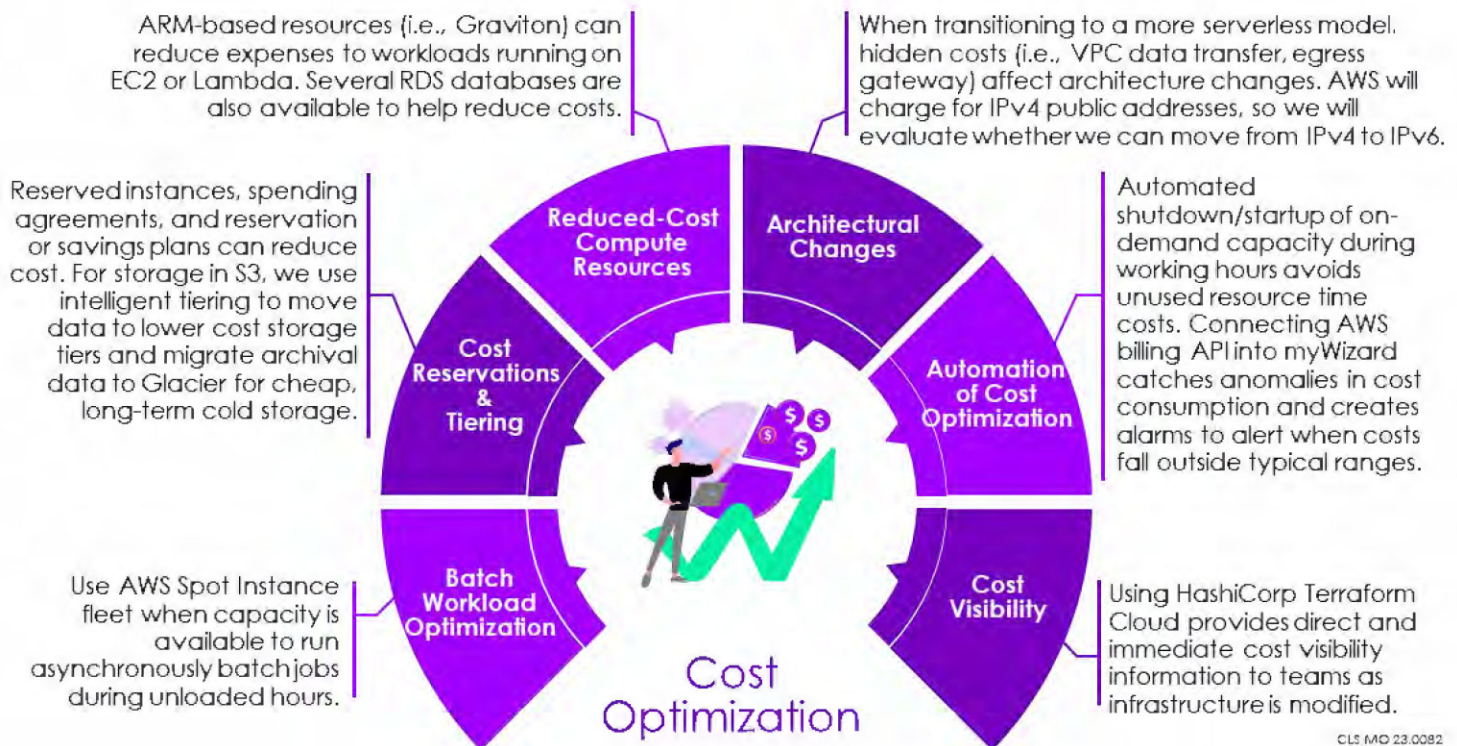
## Continuous Improvement and Cost Optimization

As part of our project-wide CIP, we will evaluate and implement ongoing improvements to our proactive assessment of system performance, and our system optimizations efforts. As part of QMS way of life, we continuously evaluate areas for improvement across all aspects of the system using the QMS governance model. The evolution of the QMS will repeatedly evaluate the requirements and design to consider new technologies, new talent, or new capabilities that would improve the overall system. This may include performance changes, task analysis, network performance, hardware changes, batch logic, and configuration. Led by Sean Swift, our CalSAWS CIP Manager, the program will run quarterly. At the end of each quarterly cycle, our CIP Manager will work with our Performance lead to deliver the following:

- Coordinate with the Consortium, M&E contractor, external partners, or other stakeholders to summarize system performance metrics and qualitative feedback on the current quarter's performance, using inputs to drive which system performance optimization changes are planned

- Identify opportunities to optimize cost and improve performance by reducing database size, environment consolidation, etc.
- Recommend changes to tools, processes, and/or people based on the qualitative feedback—for example, adjusting how we execute the performance assessment tests or analyze results
- Conduct a quarterly retrospective to present findings and improvement ideas to the Consortium leads, QA contractor, other contractors, and other project stakeholders as applicable
- Seek consensus on improvement ideas to focus on for the next quarter
- Develop and implement the approved improvements for system performance and cost optimization, and system performance assessment ideas

We will take a multi-faceted approach to cost optimization (shown in Figure 4-16) as part of our continuous improvement process across the following pillars of focus:



**Figure 4-16. Cost optimization is an integral part of our continuous improvement process.**

Our team, including AWS Professional Services, has the extensive experience and system knowledge to quickly and effectively track, execute, and report on performance during all stages of the project from development through production, and for all components of the CalSAWS Infrastructure.

#### 4.2.2.2 Experience Delivering Improved System Performance and Measures

In many jurisdictions and working with many other state and federal organizations, we have implemented our system performance and SLA management processes to deliver improved performance and measures, meeting, and frequently exceeding stated SLAs. Notably, Accenture helped save the Affordable Care Act's federal eligibility exchange website, HealthCare.gov, in our work with the Centers for Medicare & Medicaid Services (CMS).

In 2013, to rescue HealthCare.gov, CMS named Accenture as the prime contractor for application maintenance, system modifications, cloud-based operations, project management, cybersecurity vulnerability mitigation, network, and system engineering, capacity planning, performance testing and monitoring, and batch processing. In just six weeks, we achieved CMS' objective to stabilize and enhance HealthCare.gov while working closely with the original contractor. Our role in capacity planning included monitoring, measuring, and analyzing resource performance. We established capacity baselines that profile the use of resources and establishes an understanding of resource demand. Accurate forecasts served as the basis for forecasting and planning.

We used monitoring insights to create dashboards that tied multiple monitoring data sources together and provided an integrated view. We created, maintained, and shared a set of high-level dashboards for an overview of system performance and stability. These dashboards trend with an even larger suite of dashboards to display more granular data critical to rapid triaging. We also shared over 200 fine-grained dashboard variations across database, network, security, and cross-exchange monitoring categories. Performance monitoring and alerting was a 24/7 activity. Our monitoring tools analyzed the performance of the servers and web applications through the server agent and the browser agent. Accenture conducted performance testing to evaluate the speed, responsiveness, and stability of the application under a simulated user workload. During performance testing, we used a full-scale environment with production size and composition of data to meet and exceed expected consumer traffic volumes against the system. Insights from the system performance assessment were used to provide recommendations that were implemented that continually improved system performance.

## HealthCare.gov achievements

- Triaged and resolved **more than 50,000** individual issues from 2015 through 2022
- Delivered **700 releases, 99.7% on time** with the remainder delivered no more than seven days after the planned release
- Decreased load time from **~200 plans** per day to **~420 plans** per hour
- Supported **more than 45 million** enrollments and **\$200 billion** in total payments since 2015

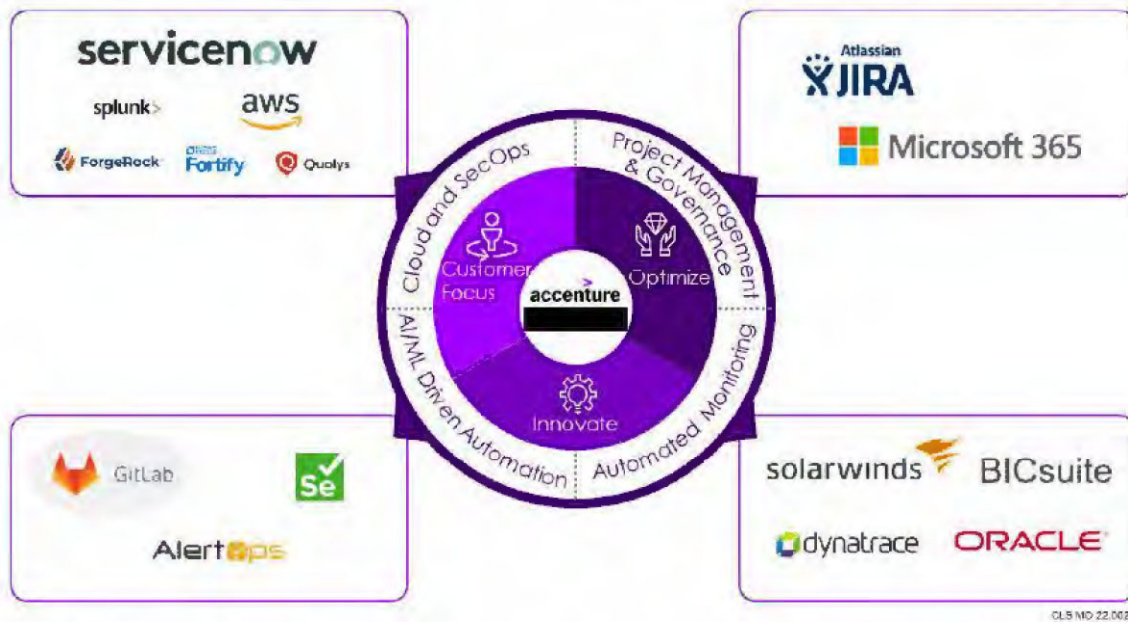
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### Healthcare.gov Service Levels

Based on approximately **100 Quality Assurance Surveillance Plan (QASP)** metrics CMS measures annually, we have had **99% compliance since 2015**, missing out on only 10 of the **more than 780 service levels evaluated**.

### 4.2.2.3 Tools and Technology

As explained earlier, we will use myWizard extensively to proactively assess system performance for CalSAWS. Figure 4-17 summarizes the tools that integrate with the myWizard monitoring system. We have also highlighted applicable features of myWizard in 4.2.1.2 Tools and Technology.



**Figure 4-17.** [REDACTED] integrates seamlessly with technology ecosystem to proactively monitor system performance.

#### 4.2.2.4 Results Delivered

The following stories from our experience at CalSAWS and Ohio Benefits detail how our past system performance and SLA management processes delivered improved system performance and measures that met or exceeded stated SLAs.

##### Enhanced batch completion for CalSAWS

###### Our Approach in Action:

During the C-IV migration to CalSAWS in 2021, we created a plan for a series of changes that improved batch completion time and future-proofed system performance for increased volumes. Our team targeted the batch and online processes where performance improvement would have the greatest impact for CalSAWS.

Using Kafka, they spread the long-running nightly batch jobs across the day by modifying specific online modules to produce transactions or small micro-batches. This enabled county workers to make case updates as usual while the system collected the transactions at regular, smaller intervals throughout the day, taking the heavy processing out of the nightly batch cycle.

To promote full transparency, we began implementing the early stages of QMS by conducting weekly meetings with the Consortium and QA to keep everyone informed of status. To build upon this success, full scale QMS implementation will continue with this contract.

###### Results Delivered:

- Reduced the nightly run times by as much as 80% for the MEDS interface
- Lowered the production batch load by processing 85% of online-generated Notices of Action
- Reducing the execution time by 40% for batch-triggered forms

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## Implementing live batch monitoring for CalSAWS

### Our Approach in Action:

When we began the CalSAWS migration in 2021 we did not have live batch monitoring and we quickly identified this as an area for major improvement. Fully aware that successful batch jobs are essential for CalSAWS users, we prioritized the need for live monitoring and stood up an offshore team to monitor batch jobs so we could better anticipate issues to resolve them quicker. We prioritized jobs that were running long and added enhancements to make batch run faster.

At the start of this initiative in 2021, 40 counties had been migrated to CalSAWS, and by 2023 it had increased to 52 counties. Despite the increase in counties, we were able to continue improving batch productivity. Today we complete approximately 15,000 batch jobs per night about two hours faster than required.



### Results Delivered:

- 99% of batch jobs completed by the 6:00 a.m. target
- Majority complete 2-hours ahead of schedule

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## 4.2.2.5 How We Exceed the Requirement

In Table 4-4, we document how our approach will help exceed your requirements to proactively assess and optimize system performance for CalSAWS.

Going Over and Above	Benefit
AI Based Insights through myWizard Platform	<ul style="list-style-type: none"> <li>• Early prediction of performance risks</li> <li>• Comprehensive System Performance Assessment</li> <li>• Opportunities to reduce cloud costs</li> <li>• Increased availability and resiliency of core services</li> </ul>

**Table 4-4. Our collaborative approach will enable the Consortium to more effectively assess and optimize system performance and costs.**

As part of our ongoing commitment to continuous improvement, we will reevaluate the GenAI landscape throughout the program to determine of cutting-edge improvements in the GenAI landscape could help improve the quality of the overall solution.

## 4.2.3 Major Risks and Mitigation

### Item # I-UA6

Identify major risks inherent in multi-contractor system performance requirements and your proposed mitigation strategies.

In an integrated multi-contractor environment, system performance carries inherent risks and challenges for any project, particularly one of the scales of CalSAWS. In this section, we detail the key risks associated with proactively monitoring, managing, and assessing system performance for CalSAWS. We also describe how our mitigation approaches present the safest, highest-quality option for the Consortium.

As we developed our response, when we assigned a probability to the likelihood that the risk would be realized and become an issue, we did this from the perspective of Accenture as the selected Infrastructure contractor. In practice, we would work with the Consortium and the other contractors to assign values to probability and impact. Also, another contractor would have a different probability, likely higher, of these risks becoming issues.

The following tables represent the risks inherent in multi-contractor system performance requirements and how we will mitigate the risks. We have based the probability, impact, exposure, level, and category based on the Appendix F – Risk and Issues Management plan of the CalSAWS PCD.

- **Probability:** Five risk probability categories from 10% Highly Unlikely to 70% (and over) Highly Likely
- **Impact:** Uses an ordinal scale with values ranging from 1 (lowest) to 5 (substantial) to measure the impact of the risk in four performance areas: cost, schedule, technical, and quality
- **Exposure:** Calculated value based on the assigned probability and the impact
- **Level:** Categorized as Low, Medium, or High based on the risk probability and risk impact value

### Risk 1: Negative impacts of a Poor M&E Transition-in to System Performance

Probability	Impact	Exposure	Level	Category
30%	5	1.5	Medium	Cost, Stakeholder, Technological
Trigger			Customer Impacted	Owner
The M&E Contractor fails to complete their Transition-In on time			County users, Clients	Performance Monitoring team, M&E Contractor, DIO, QA
Risk Description				
If the M&E Contractor fails to complete their transition-in on time, or transitions ineffectively, delays can occur in the evolution of the application to microservices or the migration from Oracle. Further, since performance testing requires the M&E contractor to develop performance test scripts, any deficiencies there could result in inadequate performance testing. There is also risk related to a different targeted architecture which requires additional instrumentation to integrate with the monitoring architecture.				
Proactive Mitigation Strategy				
To address the transition-in challenges due to a delay or deficiency in performance from the M&E Contractor:				
<ul style="list-style-type: none"><li>• Accenture has included additional staffing during the transition such as the M&amp;E Contractor Success Champion, Change Management, and application SMEs to manage changes in the CalSAWS Infrastructure and in collaboration with the M&amp;E Contractor through transformation to support the move to microservices</li><li>• Accenture will coordinate with the M&amp;E Contractor through the DIO and recommend the M&amp;E Contractor consult with the Infrastructure Contractor on system changes to avoid impacting Infrastructure</li><li>• Accenture will collaborate with the Consortium and recommend monitoring requirements into the M&amp;E contractor's infrastructure architecture</li></ul>				

## Risk 2: SLA Conflicts in a Multi-contractor Environment

Probability	Impact	Exposure	Level	Category
50%	2	1.0	Medium	Schedule, Stakeholder, Quality
Trigger		Customer Impacted	Owner	
System performance is affected by multiple contractors		County users, Clients	Performance Monitoring team, M&E team	
Risk Description				
Lack of accountability (i.e., finger-pointing) between the Infrastructure and M&E Contractors regarding missed SLAs can negatively impact system performance.				
Proactive Mitigation Strategy				
As part of our multi-contractor teaming approach for monitoring and managing SLAs, Accenture will:				
<ul style="list-style-type: none"><li>• Help define a clear RACI for all operations and application tasks which have a dependency or are shared between the Infrastructure and M&amp;E teams</li><li>• Use the DIO forum to appropriately revisit RACI matrices where potential gray areas are discovered for support that may arise through the transformation program or a change in business requirements</li><li>• Define/compartmentalize SLAs so clear ownership and accountability is tracked and documented</li><li>• Provide periodic recommendations in areas of concern so they are resolved before they become issues</li></ul>				

## Risk 3: Challenges with Integrated Dashboards

Probability	Impact	Exposure	Level	Category
10%	5	0.5	Low	Schedule, Quality, Cost
Trigger			Customer Impacted	Owner
Transition issues			County users	Performance Monitoring team
Risk Description				
Challenges in the development of integrated dashboards can occur due to the division of responsibilities between the Infrastructure and M&E Contractors.				
Proactive Mitigation Strategy				
During the Infrastructure transition planning phase, we will identify areas of convergence and allocate responsibilities with the M&E Contractor and other contractors as applicable in the ecosystem. We will make sure there is early alignment to deliver the required dashboards to CalSAWS				

## Risk 4: Impact of Application Evolution on Infrastructure Tools

Probability	Impact	Exposure	Level	Category
50%	5	2.5	Medium	Cost, Technological
Trigger		Customer Impacted		Owner
Unexpected environmental change		County users, Clients		Infrastructure Contractor, M&E Contractor
Risk Description				
The M&E Contractor's approach to application evolution may include new components and require retooling of performance monitoring.				
Proactive Mitigation Strategy				

In our view, the Infrastructure contractor should be aligned with the M&E Contractor to realize the benefits of full stack DevSecOps enabled through a serverless microservices based architecture. We recommend the M&E Contractor share their application evolution strategy with the Infrastructure contractor at the earliest opportunity, preferably before finalizing the contracts. The M&E and Infrastructure contractors should identify and align on the required scope in the Infrastructure contract for potential retooling. This includes creating an integrated roadmap with a 2-year horizon to align with IAPDU budgeting cycle and keep all parties on track with a change process in place for the roadmap to allow for evolution, while still maintaining focus.

## Risk 5: Operational Activities May Impact M&E Contractor

Probability	Impact	Exposure	Level	Category
30%	5	1.5	Medium	Schedule, Quality, Cost
Trigger		Customer Impacted	Owner	
Spikes in support needs		County users, Clients	Performance Monitoring team, M&E teams	
Risk Description				
Meeting Infrastructure SLAs will require patching, upgrading, and database tuning—some of which may require application changes and deployment windows. These activities require the cooperation of the M&E Contractor who may have competing priorities.				
Proactive Mitigation Strategy				
To mitigate this risk, we recommend that the M&E Contractor carve out capacity to handle emergency changes/patches.				

## Risk 6: Ineffective Change Management and Communication

Probability	Impact	Exposure	Level	Category
30%	4	1.2	Medium	Schedule, Quality, Cost
Trigger		Customer Impacted		Owner
Missed deadlines; late or inaccurate communications;		Consortium users, Performance Monitoring team		Performance Monitoring team, M&E teams, BenefitsCal team, Imaging team
Risk Description				
Managing the expectations and communicating effectively across the Consortium, the Counties, stakeholders and the CalSAWS contractors is essential to meeting the CalSAWS vision. <b>Ineffective management of the change and communication could lead to missed expectations, as well as schedule, quality, and performance challenges.</b>				
Proactive Mitigation Strategy				

To minimize delivery risk and increase transparency, the enhancements we will implement include:

- restructuring how we present the performance data,
- use of [REDACTED] and access to the reports, and
- continual improvement of our existing processes through quarterly retrospectives.

Our focus on communicating system performance zeroes in on **enhancing our dashboard-level views** for system performance and security metrics that today are confined to daily measurements. We will provide training to users of the enhanced dashboards within the myWizard tool.

We will work with the Consortium DIO and Technology teams, as well as the QA, M&E, BenefitsCal, Imaging, and Central Print contractors to assess priorities, obtain consensus on modifications, and confirm we are effectively communicating and escalating issues.

Although the Consortium and QA teams are familiar with our performance testing, **we will provide additional training** on the increased frequency of performance testing, how to read the extracts, and how we are evaluating the trend analysis while factoring in forecasting from the M&E Contractor and other influences.

Similarly, our **CalSAWS Communication plan** will share the structure and cadence from the current CalSAWS weekly batch performance meeting where we discuss current system performance, upcoming data volume changes, system changes that resolve current issues and plan for future performance needs, upcoming transaction volume changes, change timelines, and quarterly retrospective on how changes affected after deployment.

## Risks Conclusion

The individual risks we've discussed earlier focus on system performance and security. Each risk is assessed individually, independently from the other risks. We would like you to consider another element in determining the overall Project risk—who is doing the work. Accenture submitted proposals for both the Infrastructure and M&E scope of work. Assuming we are awarded both contracts, the overall risk profile of the entire CalSAWS Project will be lower, and so will the risk score of each individual risk. Why? For the simple reason that one accountable contractor is more efficient, and the Consortium will have "one throat to choke" when it comes to handling risks and issues. This global reduction of risk is only true for Accenture. Any other contractor would be quickly overwhelmed by the prospect of taking over the immense and complex CalSAWS Infrastructure and M&E Application, while simultaneously attempting to manage and assess the performance and security of a system with which they are unfamiliar. Just imagine how the Consortium's risk level would increase even more if **two** other contractors attempt to complete their transitions in at the same time. Accenture has been your partner for a long time—now that we've nearly completed the statewide rollout of CalSAWS, we're ready to accelerate the momentum into the CalSAWS M&O organization of the future.