

AMENDMENT NUMBER 3
TO
MASTER SERVICES AGREEMENT
EXHIBIT 14

Schedule 2A - ITSM SOW

SCHEDULE 2A
IT SERVICE MANAGEMENT AND LIFE CYCLE
SERVICES SOW
for
COUNTY

Table of Contents

1.0	IT Service Management and Life Cycle Services Overview and Objectives	1
1.1	IT Service Management and Life Cycle Services Overview.....	1
1.2	Service Objectives.....	2
2.0	IT Service Management and Life Cycle Requirements	3
2.1	Service Descriptions and Roles & Responsibilities.....	3
3.0	Service Environment	33
4.0	Service Level Requirements	33
4.1	Objectives	33
4.2	Service Level Requirements	34
4.3	Reports	35
5.0	List of Referenced MSA Schedules and Attachments	35

List of Tables

Table 1.	General Services Roles and Responsibilities	3
Table 2.	Project Management Services Roles and Responsibilities	5
Table 3.	Planning and Analysis Services Roles and Responsibilities.....	8
Table 4.	Requirements Definition Services Roles and Responsibilities	9
Table 5.	Design Specifications Services Roles and Responsibilities	10
Table 6.	Integration and Testing Services Roles and Responsibilities	10
Table 7.	Implementation and Migration Services Roles and Responsibilities	11
Table 8.	Training and Knowledge Transfer Services Roles and Responsibilities	13
Table 9.	Documentation Services Roles and Responsibilities	14
Table 10.	Break/Fix and Maintenance Services Roles and Responsibilities	15
Table 11.	Backup and Recovery Services Roles and Responsibilities	16
Table 12.	Technology Refreshment and Replenishment Services Roles and Responsibilities	17
Table 13.	Capacity/Availability Management Services Roles and Responsibilities.....	18
Table 14.	Performance Management Services Roles and Responsibilities	19
Table 15.	Service Level Monitoring and Reporting Services Roles and Responsibilities	20
Table 16.	High-Level Security Functions.....	20
* Indicates formal System of Record.....		21
Table 17.	Asset Management Services Roles and Responsibilities	22
Table 18.	Software License Management Services Roles and Responsibilities	24
Table 19.	Financial/Chargeback Management and Invoicing Services Roles and Responsibilities.....	25
Table 20.	Incident and Problem Management Services Roles and Responsibilities.....	25
Table 21.	Root Cause Analysis Services Roles and Responsibilities.....	27
Table 22.	Configuration Management Services Roles and Responsibilities	28

Table 23.	Change and Release Management Services Roles and Responsibilities	30
Table 24.	Managed Time and Material Services Roles and Responsibilities	32



This is Schedule 2A (IT Service Management and Life Cycle Services SOW) to the Agreement. Unless otherwise expressly defined herein, the capitalized terms used herein shall have the meaning assigned to them in the Agreement.

1.0 IT Service Management and Life Cycle Services Overview and Objectives

1.1 IT Service Management and Life Cycle Services Overview

This Schedule 2A (IT Service Management and Life Cycle Services SOW) is the Statement of Work (or “SOW”) that sets forth the roles and responsibilities of Parties for the set of common services that apply to the provision, delivery, and management of all IT Services within the scope of this Agreement. The Vendor will provide these Services across all Service Areas defined herein and all future IT Service Areas that are added to this Agreement.

As depicted in Figure 1 below, Services, activities and roles and responsibilities described in this SOW are within the scope of each SOW for the Service Areas (Schedule 2B and 2C and 2F) and shall be included within the Fees for each Service Area specified in Schedule 3 (Fees) to the Agreement. Figure 1 depicts the relationship between the IT Service Management and Life Cycle Services (ITSM) SOW, and all SOWs within the scope of the Agreement.

For the Law & Justice Agencies (L&JA), Vendor will design, install and configure converged voice and data networks and VoIP system as detailed in Schedules 2D Converged Network Services L&JA and 2E Voice Communication Services L&JA.

Post converged network and VoIP system implementation, L&JA will be responsible for operating, maintaining and managing their converged network and VoIP environments and Vendor will manage enterprise network and VoIP segments and system. Prior to network convergence and VoIP system implementation L&JA agencies will manage their network infrastructures and Vendor will manage County network segments. The point of demark will be where the enterprise WAN interfaces with the L&JA networks. Prior to VoIP system implementation Vendor shall manage the County legacy voice system for all County agencies including L&JA agencies. The following documents identify Vendor responsibilities for the L&JA managed network and VoIP environments:

- Schedule 2D - Converged Network Services SOW (L&JA)
- Schedule 2E - Voice Communication Services SOW (L & JA)

ITSM services, roles and responsibilities contained in this SOW shall apply to the L&JA managed network and VoIP environments based on the applicable services identified in the above listed documents.

Figure 1: SOW Service Areas Areas

IT Service Management and Life Cycle Services SOW

**Converged Network
Management Services**

**Network Management Services in
Support of Systems providing only
IP/VOIP Telephony**

**Voice Communication
Services**

1.1.1 Service Area Maintenance and Changes

In order to perform regular maintenance and planned system changes, a weekly Maintenance Window is scheduled on the first and third Sunday of each month from 5:00 a.m. until 10:00 a.m. Pacific Time (PT) for all Service Areas. All maintenance performed during these hours is subject to approval by a Change Advisory Board. Some test system changes and most production changes that require downtime or have significant risk are scheduled during the weekly Maintenance Window. It is a requirement therefore that Vendor and County responsible groups be available weekends and nights as required to complete changes and requests in a timely and non-disruptive manner.

Tasks which require system downtime outside of the Maintenance Window, such as during the business day, shall be approved by the County and shall be scheduled to minimize business impact. Select non-production system changes that require downtime may be scheduled weekdays between 6:00 PM and 6:00 AM PT to minimize impact on development activities.

Due to the complexity of the Services there are some production changes that require ad hoc changes to the environment. The County shall notify the Vendor of such changes and any related scheduling limitations or required timing.

In addition, due to the business activities conducted by the County, there are several blackout windows during the year where production changes will not be allowed on certain systems (e.g., during property tax roll creation, elections). The County shall notify Vendor of such blackout periods.

1.2 Service Objectives

The following are the key high-level Service objectives the County expects to achieve through this IT Service Management and Life Cycle Services Statement of Work (SOW):

- Achieve the Service Levels (SLRs) identified in Section 4.0 below, including achieving the required customer satisfaction levels
- Ensure that critical IT life cycle and IT Service Management (ITSM) functions are included in all current and future Services Area SOWs
- Receive IT Services that consider an end-to-end enterprise view across all IT Service Areas and across all Third Party providers, vendors, Interfaces, products and solutions and maintain a security posture and security program across all Service Areas
- Receive Services based on industry standards and best practices (applicable industry standards include BSI 15000, ISO 9000, ISO 17799, ISO 20000, COBIT, ITIL/ITSM)

- Provide a consistent set of IT life cycle services applicable to all current and future software, hardware and services introduced to the service environment
- Continually improve Service delivery while lowering IT cost over time

2.0 IT Service Management and Life Cycle Requirements

Vendor is responsible for ensuring that Service Area services, as defined in the SOWs listed below, are integrated and consistent with the IT Service Management and Life Cycle Services defined in this SOW:

- Schedule 2B - Converged Network Management Services SOW
- Schedule 2C – Voice Communications Service SOW
- Schedule 2F - Network Management Services in Support of Systems providing only IP/VOIP Telephony

2.1 Service Descriptions and Roles & Responsibilities

The Vendor is responsible for ensuring that all Service Tower Service Areas are integrated and consistent with this IT Service Management and Life Cycle Services SOW.

2.1.1 General Responsibilities

The following table identifies general roles and responsibilities associated with this SOW. An “X” is placed in the column under the Party that will be responsible for performing the task. Vendor responsibilities are indicated in the column labeled “Vendor.”

Table 1. General Services Roles and Responsibilities

General Services Roles and Responsibilities	Vendor	County
1. Provide Services that support County requirements (e.g., business, technical, End User requirements)	X	
2. Comply with County SOPs (e.g., SOPs for information, information systems, personnel, physical and technical security)	X	
3. Provide County applicable policies, standards and procedures and available documentation relative to Service Areas as may be reasonably requested by Vendor		X
4. Interface, manage and coordinate Vendor’s subcontractors and other Third Parties (e.g., network circuit provider, Software vendors) in order to meet Service requirements and SLRs	X	
5. Measure and report performance against SLRs	X	

General Services Roles and Responsibilities	Vendor	County
6. Measure and report performance against mutually agreed Key Performance Indicators (KPIs)	X	
7. Provide the Vendor with physical access to County sites that is necessary to perform Services during scheduled hours and after hours and for emergencies as required		X
8. Coordinate all Changes to the Service Area that may affect the SLRs of any other Service Area or Third Party	X	
9. Provide a single secure collaboration web portal for County access to all account documentation as described in the IT Service Area SOWs (e.g., project plans and schedules, configuration diagrams, management reports, SLR reports, procedures, meeting minutes, change notices)	X	
10. Provide an integrated IT Service Management suite (e.g., Incident/Problem Management, Change Management, capacity planning/monitoring, availability, Asset Management) that integrates with the single secure web portal	X	
11. Deliver Services consistent with BSI 15000, ISO 9000, ISO 17799, ISO 20000, COBIT, and ITIL/ITSM best practices	X	
12. Provide Vendor with facilities for Vendor's on-site personnel, as required		X
13. Support Third Party financial, technical, and performance assessment activities conducted in the County environment (e.g., external audits, infrastructure assessments)	X	
14. Maintain and update a comprehensive Disaster Recovery (DR) plan for the Services as required	X	
15. Recommend Vendor's standard procedures for each of the Services/sub-services areas defined in this SOW and all Service Area SOWs this SOW is applicable to	X	
16. Develop, document and maintain in the Policies, Standards and Procedures Manual operational procedures consistent with industry best practices for each of the Services/sub-services areas defined in this SOW and all Service Area SOWs to which this SOW is applicable	X	
17. Review and approve operational procedures		X
18. Provide required network connectivity to the County to support Vendor service solutions (e.g., connectivity from Vendor remote facilities to support remote monitoring)	X	
19. Chair Computer Incident Response Team (CIRT) process		X
20. Participate in CIRT process	X	

General Services Roles and Responsibilities	Vendor	County
21. Provide documented details of the CIRT incident (time, date, logs, entry method, local/global, etc.), incident history (tickets, escalations, communications, prior minutes, etc) and incident-management (next tasks/owners/dates /status changes as defined by the CIRT)	X	
22. Work with County to ensure that all information is accurate and timely for the CIRT Team through resolution	X	
23. Provide legacy spares for County owned assets		X
24. Test spare equipment for production use	X	
25. Inventory and maintain a level of equipment spares required to meet SLRs	X	
26. Review and approve Vendor recommended level of equipment spares for which County is financially responsible (e.g., County owned assets)		X
27. Provide and support equipment that supports IPV6	X	

2.1.2 Project Management Services

Vendor will provide Project Management Services required to manage the Vendor services, activities and tasks associated with County Service Area projects. The following table identifies the Project Management Services roles and responsibilities that Vendor and County shall perform.

Table 2. Project Management Services Roles and Responsibilities

Project Management Services Roles and Responsibilities	Vendor	County
Project Office and Oversight		
1. Maintain a Project Management Office (PMO) to plan, monitor, and manage project-related work provided by Vendor	X	
2. Create, maintain and provide all appropriate project plans, project time and cost estimates, technical specifications, management documentation and management reporting in a form/format that is acceptable to the County (e.g., Microsoft Project and Clarity)	X	
3. Participate in meetings to review technology or business plans, and recommend appropriate IT services and projects in support of such plans	X	
4. Maintain appropriate levels of industry knowledge in County's business to support projects and recommend appropriate solutions	X	
5. Maintain and update a list of Vendor-supported projects, work activities, and prioritization of projects in the County's IT portfolio management system (currently Clarity)	X	
6. Participate in relevant project governance meetings	X	
Project Initiation		

Project Management Services Roles and Responsibilities	Vendor	County
7. Provide user requirements, specifications, high-level schedule, and prioritization for County-sponsored projects		X
8. Prepare proposals and project plans as requested by the County or as appropriate. Such proposals and plans will include the following based on whether the project is related to In-scope base services or an out-of-scope project: <ul style="list-style-type: none"> ▪ Deliverable(s) to be provided ▪ Technical approach and solution ▪ Total number and type(s) of FTEs required for the project (for out of scope projects) ▪ Description of any equipment, software, or other materials required for the project and ongoing support ▪ Expected project schedule and any time constraints or material assumptions ▪ Total cost of the project (including fees paid to Vendor as well as any retained expenses), and whether the cost is included in the Baseline Fees ▪ Ongoing annual cost of the project post-implementation (including fees paid to Vendor as well as any retained expenses), and whether the cost is included in the Baseline Fees ▪ Other material assumptions, including any support required from County or its Third Parties ▪ Provide service amendment as appropriate 	X	
9. Review and approve project proposals and project plans		X
Project Support		
10. Employ a project management methodology that conforms and/or complements the County's established PMI methodology to initiate, plan, execute, control, and close projects, in accordance with Software Development Life Cycle (SDLC) and ITLC processes, or other processes and methodologies as directed by the County	X	
11. Manage Vendor tasks and resources associated with the project, and coordinate activities with the County	X	
12. Make any changes related to the project in accordance with approved change management procedures and gain required approvals	X	
13. Identify scope changes and propose alternatives and, if necessary, provide appropriate change documentation	X	
14. Approve project changes to scope, schedule, pricing, services, or deliverables		X
15. Use County-approved project management tools and methodologies, which employ a regular reporting mechanism to identify tasks, develop and present status reports, and identify potential risks and issues	X	

Project Management Services Roles and Responsibilities	Vendor	County
16. Communicate project status as part of standard project management meetings, or other such meetings as agreed, with the County	X	
17. Develop, maintain, and update project schedules by deliverable	X	
18. Monitor and report progress. Institute corrective action against the plan for each project, if needed	X	
19. Monitor, track, and report actual results versus forecasted results per project deliverable	X	
20. Identify, log, and follow defined processes for risk and issue mitigation	X	
21. Identify, log, and follow defined processes for scope change management	X	
22. Conduct project closeout to include project estimated cost, actual cost, and key learning for Vendor project responsibilities	X	
23. Create project documentation and submit to the County's electronic document management system or such other system agreed to by both parties	X	
24. Review and approve Project Management Services related deliverables		X

2.1.3 IT Life Cycle (ITLC) & Operations Services

The IT Life Cycle and Operations Services described in the following sub-sections shall apply to current and future County Service Area environments (e.g., software, hardware, services). Vendor shall manage all Service Area IT life cycle activities in accordance with the following common life cycle and operational services, unless approved by the County. Vendor shall develop, document and maintain Service Area-specific activities and procedures associated with these ITLC and operations services in the Policies, Standards and Procedures Manual.

2.1.3.1 Planning and Analysis

Planning and Analysis Services are activities associated with:

- Researching new technical trends, products and services, such as hardware components, system Software, and networks that offer opportunities to improve the efficiency and effectiveness of the Service Areas
- Investigating methods to improve the quality of IT Services (e.g., productivity and operational improvements, defect reduction)
- Planning for the introduction of major Changes, enhancements and new County Application programs
- Continuously improving the County technical environment

The following table identifies the Planning and Analysis Services roles and responsibilities that Vendor and the County shall perform.

Table 3. Planning and Analysis Services Roles and Responsibilities

Planning and Analysis Services Roles and Responsibilities	Vendor	County
1. Define County requirements at the enterprise level for all Service Areas (e.g., business, technology strategy, functional, Availability, capacity, performance, backup and IT Business Continuity Service)		X
2. Perform technical and Service Planning and Analysis Services based on County requirements (e.g., availability, capacity, performance, backup and IT Business Continuity and Disaster Recovery Services)	X	
3. Provide analysis of alternatives and recommendations for new infrastructure and Services	X	
4. Review and approve Planning and Analysis recommendations		X
5. Provide information and data as available for Planning and Analysis Services (e.g., business capacity reports, roll out plans)		X
6. Monitor technical trends and report quarterly on products and services with potential use for the County as it aligns with the County's business and technology strategy	X	
7. Perform semi-annual assessments for the implementation of new technologies that best meet County requirements and cost objectives	X	
8. Participate in semi-annual technical and business planning sessions to establish standards, architecture and project initiatives	X	
9. Conduct regular planning and conduct semi-annual planning meeting with the County for technology refreshes and upgrades	X	
10. Participate in regular planning and semi-annual planning meeting with the Vendor for technology refreshes and upgrades		X
11. Conduct and provide to the County for the County's consideration written semi-annual technical reviews and provide recommendations for improvements that increase efficiency and effectiveness or reduce costs per the planning and analysis results	X	
12. Participate in project specific planning sessions at the discretion of the County and provide proposals with timelines, critical milestones and estimates on timing and costs	X	

2.1.3.2 Requirements Definition

Requirements Definition Services are those activities associated with the assessment and definition of County information system requirements (e.g., performance, disaster recovery, security requirements) that also comply with regulatory and County Standard Operating Procedures (SOPs). These requirements drive the technical design and operations for the Vendor managed Service Areas. The following table identifies the Requirements Definition Services roles and responsibilities that Vendor and the County shall perform.

Table 4. Requirements Definition Services Roles and Responsibilities

Requirements Definition Services Roles and Responsibilities	Vendor	County
1. Define requirements documentation format and content		X
2. Provide appropriate technical support staff (e.g., domain architects and engineers) to participate in technical requirements development with application team (e.g., County, Vendor, Third Party application developers)	X	
3. Determine infrastructure requirements with County stakeholders (e.g., system interface, performance, Availability, Disaster Recovery)	X	
4. Participate in requirements gathering activities (e.g., focus groups, interviews)		X
5. Document requirements necessary to deliver Services using approved artifact standards (e.g., system specifications, data models, upgrade requirements, conversion requirements, network design schematics)	X	
6. Determine and document required Service Area component upgrade, replacement and/or conversion requirements (e.g., hardware, software, networks)	X	
7. Ensure requirements meet defined security policies and procedures	X	
8. Document cross-Service Area integration requirements	X	
9. Recommend testing requirements and criteria (e.g., performance, regression, requirements traceability, security and user acceptance testing (UAT))		X
10. Participate in defining testing requirements and criteria	X	
11. Review and approve all testing criteria		X
12. Provide documented requirements and test criteria per approved requirements standards		X
13. Review and approve all requirements documents		X
14. Provide infrastructure cost estimates, in accordance with County policies, standards and procedures	X	

2.1.3.3 Design Specifications

Design Specifications Services are those activities and deliverables associated with translating County-developed information system standards and requirements (e.g., architectural, business, security, performance, availability, regulatory) into detailed technical designs and specifications for County review and approval. The following table identifies the Design Specifications Services roles and responsibilities that Vendor and the County shall perform.

Table 5. Design Specifications Services Roles and Responsibilities

Design Specification Services Roles and Responsibilities	Vendor	County
1. Provide Vendor with written information in sufficient detail pertaining to the design specifications to enable creation of the appropriate technical designs		X
2. Conduct site surveys for design efforts to deliver design specifications and plans	X	
3. Document and deliver design specifications, including cross-Service Area specifications	X	
4. Review and approve design specifications		X
5. Provide infrastructure cost estimates based on design results for budgeting purposes	X	

2.1.3.4 Integration and Testing

Integration and Testing Services are those activities associated with ensuring that all individual Service Area components (e.g., hardware, software, middleware, Interfaces, network) configured with or added to the environment work together cohesively to achieve the intended results and meet County requirements. The following table identifies the Integration and Testing Services roles and responsibilities that Vendor and the County will perform.

Table 6. Integration and Testing Services Roles and Responsibilities

Integration and Testing Services Roles and Responsibilities	Vendor	County
1. Develop technical test plans and criteria (e.g., unit, system, integration, regression)	X	
2. Conduct testing of changes in non-production environments per agreed to operational procedures	X	
3. Prepare test plans for any proposed Changes to Service Area components	X	
4. Review and approve test plans for any proposed Changes to Service Area components/configurations		X

Integration and Testing Services Roles and Responsibilities	Vendor	County
5. Conduct integration and security testing (using approved test plans) for all new configurations and upgraded equipment (e.g., hardware, software, middleware, interfaces, network) or services to include unit, system, integration and regression testing based on requirements defined in requirements and design documents	X	
6. Evaluate all new and upgraded Service Area components, configurations or services for compliance with County security policies, regulations and procedures	X	
7. Assess and communicate to the County the overall impact and potential risk to Service Area components prior to implementing Changes	X	
8. Provide the County with test results for Changes to Service Area components and configurations	X	
9. Review and approve test results		X
10. Stage new and upgraded equipment, Software or Services to smoothly transition to all existing infrastructure environments based on requirements defined in requirements and design documents	X	
11. Perform modifications and performance enhancement adjustments to system Software and utilities as a result of changes to architectural standards, additions and upgrades to the environment or configuration changes	X	
12. Test new releases of supported hardware and Software to ensure required performance and functionality is maintained and in conformance with SLRs	X	
13. Support middleware required to integrate Software, hardware and Interface with Third Parties	X	
14. Perform Configuration Management and Change Management activities related to Integration and Testing Services	X	

2.1.3.5 Implementation and Migration

Implementation and Migration Services are those activities associated with the installation of new and upgraded IT Service Area components (e.g., hardware, Software and network components). Implementation and Migration Services are coordinated through the Change Management process. The following table identifies the Implementation and Migration Services roles and responsibilities that Vendor and the County shall perform.

Table 7. Implementation and Migration Services Roles and Responsibilities

Implementation and Migration Services Roles and Responsibilities	Vendor	County
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Implementation and Migration Services Roles and Responsibilities	Vendor	County
1. Coordinate and review all Implementation and migration plans and schedules with the County in advance, in accordance with Change Management Services policies	X	
2. Approve Implementation and migration plans and schedules		X
3. Conduct pre-installation site surveys as required to meet implementation requirements	X	
4. Perform engineering functions required to implement design plans for additional or new products and services	X	
5. Develop and deliver engineering plans where there is an impact on County entities/facilities and/or other Third Party agreements	X	
6. Perform engineering functions required to implement and manage Service Area Services at County sites	X	
7. Review and approve engineering plans and procedures where there is an impact on other County entities/facilities/Third Party agreements		X
8. Implement enhancements to technical architecture or Services provided	X	
9. Install new or enhanced Service Area components (e.g., hardware, Software, middleware, utilities, networks, peripherals, configurations)	X	
10. Perform Service Area component upgrades as a result of new and enhanced applications, architectures and upgrade plans and requirements (e.g., hardware, Software, middleware, utilities, networks, peripherals, configurations)	X	
11. Coordinate Implementation and Migration Services activities with County, Third Parties and Service Desks	X	
12. Coordinate and support data migration and conversion by electronic or manual methods as a result of implementation or migration (e.g., databases)	X	
13. Perform appropriate tests on all installs, moves, adds, changes and disposals (IMACDs) per County-defined requirements	X	
14. Pick up and deliver disposals to County designated disposal location (e.g. OCDC)	X	
15. Perform disposal of the equipment per County policies		X
16. Determine UAT requirements and UAT exit criteria		X
17. Conduct and document testing to meet user acceptance requirements	X	
18. Review and approve UAT plans and results, and that all UAT exit criteria have been met		X

Implementation and Migration Services Roles and Responsibilities	Vendor	County
19. Maintain test cases/scripts in configuration management database to enable incremental fall back capability per County policy	X	
20. Provide County IT technical staff with training related to the implementation of new products and Services per requirements	X	

2.1.3.6 Training and Knowledge Transfer

Training and Knowledge Transfer Services consist of the following two types of training Vendor will provide:

- Training of Vendor staff, and any subcontractors managed by Vendor, for the improvement of skills through education and instruction. In addition, Vendor will participate in any initial and on-going training required to support County's evolving technical environment and that would provide a learning opportunity about the County's business
- Training/Knowledge Transfer for County-retained technical staff regarding the Vendor-managed County environment (e.g., Vendor Service delivery processes, technical configurations)

The following table identifies the Training and Knowledge Transfer Services roles and responsibilities that Vendor and the County shall perform.

Table 8. Training and Knowledge Transfer Services Roles and Responsibilities

Training and Knowledge Transfer Services Roles and Responsibilities	Vendor	County
1. Develop and deliver a training program to instruct County and Authorized Entities personnel on the provision of Vendor Services and the Vendor-managed County environment (e.g., "rules of engagement", requesting services)	X	
2. As part of transformation, provide initial technical and end user training to L&JA agencies	X	
3. Review and approve Vendor-developed training program		X
4. Develop and implement knowledge transfer procedures to ensure that the appropriate number of Vendor staff understands key components of the County business and technical environment	X	
5. Explain key aspects and components of the County business and technical environment to the Vendor		X
6. Participate in County delivered instruction on the County business and technical environment	X	
7. Provide support staff that are technically qualified to perform their role in order to meet established SLRs	X	

Training and Knowledge Transfer Services Roles and Responsibilities	Vendor	County
8. Develop technical training materials, training plan, and provide training to County-retained technical staff when substantive (as defined between County and Vendor) technological Changes (e.g., new systems or functionality) are introduced into the County environment	X	
9. Provide and maintain training materials for the applicable personnel on County business and technical environments, in a format that is acceptable to the County (e.g., electronic, hard copy)	X	
10. Review and approve training materials		X

2.1.3.7 Documentation

Documentation Services are those activities associated with developing, revising, maintaining, reproducing, and distributing Service Area information in hard copy and electronic form. The following table identifies the Documentation Services roles and responsibilities that Vendor and the County shall perform.

Table 9. Documentation Services Roles and Responsibilities

Documentation Services Roles and Responsibilities	Vendor	County
1. Provide output in agreed format for support of activities throughout the life cycle of Services as specified in each Service Area	X	
2. Document system specifications and configurations (e.g., interconnection topology, configurations)	X	
3. Provide current County operating procedures		X
4. Develop, document and maintain County operating procedures documentation (e.g., boot, failover, batch processing, backup, systems operations and scheduling)	X	
5. Review and approve standard operating procedures documentation		X
6. Document maintenance schedules	X	
7. Review and approve maintenance schedules and documentation		X
8. Provide the County with a copy of or access to any Vendor or Third Party-supplied documentation (including updates thereto) relevant to the Services	X	

2.1.3.8 Break/Fix and Maintenance

Break/Fix and Maintenance Services are those activities associated with the maintenance and repair of hardware, Software and networks to include Break/Fix and software maintenance (e.g., deploying emergency and standard software updates, patches, hot packs). In addition, the Vendor shall maintain installed Software product

version levels at no more than two (2) versions behind the current commercial release, with exceptions initiated by either party and mutually agreed. The following table identifies the Maintenance Services roles and responsibilities that Vendor and the County shall perform.

Table 10. Break/Fix and Maintenance Services Roles and Responsibilities

Break/Fix and Maintenance Services Roles and Responsibilities	Vendor	County
1. Develop and implement Maintenance schedules for changes and preventative maintenance based on County-approved Maintenance Window	X	
2. Define dispatch requirements and point-of-service locations		X
3. Provide maintenance and Break/Fix support in County-defined locations, including dispatching repair technicians to the point-of-service location if necessary	X	
4. Perform diagnostics and maintenance on Service Area components (e.g., hardware, Software, peripherals, networks, servers and special purpose devices)	X	
5. Install manufacturer field change orders, service packs, firmware, and Software maintenance releases, etc.	X	
6. Perform product patch, "bug fix," service pack installation or upgrades to the current installed version in accordance with ITLC services and Change Management procedures	X	
7. Perform major software release upgrades	X	
8. Perform maintenance related Software distribution and version control (e.g., software updates, upgrades, emergency and standard patches) using industry standard automated Software distribution and patch management tools across applicable Vendor-supported technology and Service Areas	X	
9. Maintain Software release matrices across all supported IT environments (e.g., development, QA, and production environments)	X	
10. Coordinate with County and Third Parties (e.g., Software vendors/developers) to develop the Software release matrix	X	
11. Validate and approve the Software release matrix		X
12. Replace defective parts including preventive maintenance, according to the manufacturer's published mean-time-between failure rates	X	
13. Conduct maintenance and parts management and monitoring during warranty and off-warranty periods	X	
14. Advise County of asset obsolescence conditions	X	

Break/Fix and Maintenance Services Roles and Responsibilities	Vendor	County
15. Administer leases for equipment which have been identified as included in the in-scope Services	X	
16. Provide lease expiration analysis, technology refresh notification, and recommendations	X	
17. Manage hardware, Software, peripherals, Services and spare parts to meet SLRs, minimize downtime and minimize County resource requirements, and provide related reporting in accordance with County requirements	X	
18. Provide routine and ad hoc Break/Fix reporting in accordance with County requirements	X	

2.1.3.9 Backup and Recovery

Backup and Recovery Services are those activities associated with providing ongoing Backup and Recovery capabilities according to County schedules and requirements for identified Service Area components (e.g., PBX devices Data Center servers, network routers, local Agency servers). The Vendor must demonstrate that it will consistently meet or exceed County's ongoing Backup and Recovery requirements. The County requires all backups to be encrypted. The following table identifies Backup and Recovery Services roles and responsibilities that Vendor and the County shall perform.

Table 11. Backup and Recovery Services Roles and Responsibilities

Backup and Recovery Services Roles and Responsibilities	Vendor	County
1. Develop, document and maintain in the Policies, Standards and Procedures Backup and Recovery Services procedures that meet County requirements and adhere to County policies	X	
2. Review, provide additional procedures as required and approve Backup and Recovery Services schedules and procedures		X
3. Procure and manage backup media		X
4. Develop and maintain backup schedule in accordance with County requirements	X	
5. Provide backup schedule requirements for Service Area components		X
6. Perform Service Area component backups and manage to established retention periods	X	
7. Archive data media at a secure offsite location required to meet disaster recovery and backup restore service requirements and SLRs	X	
8. Encrypt all data prior to offsite storage and archiving	X	
9. Provide ongoing media testing per SLRs for ability to recover data	X	

Backup and Recovery Services Roles and Responsibilities	Vendor	County
10. Ensure ongoing capability to recover archived data from media as specified (i.e., backwards compatibility of newer backup equipment)	X	
11. Test backup media quarterly to ensure incremental and full recovery of data is possible and ensure Service Area component integrity, or as required or requested by the County	X	
12. Recover files, file system or other data required from backup media, as required or requested by the County	X	
13. Provide recovery and backup requirements and updates as they change		X
14. Provide full backup, files or other data on County-supplied media (e.g., tape, optical disk) as requested by the County	X	

2.1.3.10 Technology Refreshment and Replenishment

Technology Refreshment and Replenishment (TR&R) Services are those activities associated with modernizing the IT infrastructure on a continual life cycle basis to ensure that the system components stay current with evolving industry standard technology platforms based on the County's asset replacement policy. A TR&R schedule and plan for each applicable Service Area and by Asset ownership type shall be developed and maintained in Attachment B.2 Transformation Plan. The following table identifies the Technology Refreshment and Replenishment Services roles and responsibilities that Vendor and the County shall perform.

Table 12. Technology Refreshment and Replenishment Services Roles and Responsibilities

TR&R Services Roles and Responsibilities	Vendor	County
1. Develop, document and maintain TR&R schedules and plans for each applicable Service Area in accordance with County policies	X	
2. Perform the necessary services and tasks required to fulfill the TR&R plans	X	
3. Provide management reports on the progress of the TR&R plans as defined in Attachment L – Reports	X	
4. Implement TR&R plan and provide status reports regarding TR&R implementation status as required	X	
5. Periodically review and approve the approved TR&R implementation plans to ensure they properly support ongoing County business requirements		X

2.1.4 Service Delivery

2.1.4.1 Capacity/Availability Management

Capacity/Availability Management Services are those activities associated with ensuring that the capacity and availability of infrastructure matches the evolving demands of County business in the most cost-effective and timely manner. The Vendor will provide comprehensive capacity and availability management for all Service Areas. Capacity and availability management will mitigate service degradation and Outages due to increases in utilization of Services and infrastructure. Additionally, Capacity/Availability Management Services will be used to support proactive development, maintenance, and communication of tactical and strategic technology plans, and to accommodate County growth or changing business requirements.

The following table identifies the Capacity/Availability Management Services roles and responsibilities that Vendor and the County shall perform.

Table 13. Capacity/Availability Management Services Roles and Responsibilities

Capacity/Availability Management Services Roles and Responsibilities	Vendor	County
1. Establish a comprehensive Capacity/Availability Management planning process	X	
2. Review and approve Capacity/Availability Management planning process		X
3. Define, provide and implement tools that allow for the effective capacity/availability monitoring/trending and reporting of IT infrastructure, applications, and IT components, that integrate with the IT Service Management suite	X	
4. Develop capacity/availability plans that enable Vendor to meet County demand and SLRs	X	
5. Review and approve capacity/availability plans		X
6. Identify future business requirements that will alter capacity/availability requirements (e.g., strategic and operational plan, video conferencing, new site setup, ad hoc events)		X
7. Define future capacity/availability requirements and define thresholds		X
8. Participate in all capacity/availability planning reviews		X
9. Assess capacity/availability impacts to all technology and in scope County agencies when adding, removing or modifying Services, applications and infrastructure	X	
10. Continually monitor IT resource usage to enable proactive identification of capacity/availability issues (e.g. SIP Trunk concurrent call volume)	X	
11. Capture capacity/availability trending information and forecast future County capacity/availability requirements based on County defined thresholds	X	

Capacity/Availability Management Services Roles and Responsibilities	Vendor	County
12. Assess Incidents/Problems related to throughput performance	X	
13. Recommend changes to capacity to improve service performance and/or reduce costs	X	
14. Assess impact/risk and cost of capacity changes	X	
15. Approve capacity/availability related recommendations and implementation		X
16. Maintain capacity levels to optimize use of existing IT resources and minimize County costs to deliver Services at agreed to SLRs	X	
17. Ensure adequate capacity/availability exists within the IT environment to meet SLR requirements taking into account daily, weekly, new services and cyclical business variations in capacity demands	X	
18. Provide Asset utilization and efficiency reporting	X	

2.1.4.2 Performance Management

Performance Management Services are those activities associated with tuning Service Area components within and across all Service Areas for optimal performance. The following table identifies the Performance Management Services roles and responsibilities that Vendor and the County shall perform.

Table 14. Performance Management Services Roles and Responsibilities

Performance Management Services Roles and Responsibilities	Vendor	County
1. Provide performance requirements for each Service Area		X
2. Perform Service Area component tuning to maintain optimum performance in accordance with Change Management procedures	X	
3. Manage Service Area component resources to meet defined Availability and performance SLRs	X	
4. Provide regular monitoring and reporting of Services component performance, utilization and efficiency, as formally prescribed by SLRs and Attachment L - Reports	X	
5. Proactively evaluate, identify and recommend configurations or changes to configurations that will enhance performance	X	
6. Develop and deliver improvement plans as required to meet SLRs	X	
7. Review and approve improvement plans		X
8. Implement improvement plans and coordinate with Third Parties as required	X	

Performance Management Services Roles and Responsibilities	Vendor	County
9. Provide technical advice to support County and Third Party technology maintenance and development staffs as required	X	

2.1.4.3 Service Level Monitoring and Reporting Services

Service Level Monitoring and Reporting Services are those activities associated with the monitoring and reporting of Service delivery with respect to SLRs. In addition, the Vendor shall report system management information (e.g., performance metrics, system accounting information) to the designated County representatives in a format agreed to by the County. The following table identifies the Service Level Monitoring and Reporting Services roles and responsibilities that Vendor and the County shall perform.

Table 15. Service Level Monitoring and Reporting Services Roles and Responsibilities

Service Level Monitoring and Reporting Services Roles and Responsibilities	Vendor	County
1. Define Service Level Monitoring and Reporting Services requirements and policies		X
2. Define SLRs		X
3. Report on SLR performance and improvement results	X	
4. Provide an executive summary dashboard for SLR reporting as part of the Vendor-provided single secure web portal	X	
5. Coordinate SLR monitoring and reporting with designated County representative and Third Parties	X	
6. Measure, analyze, and provide management reports on performance relative to SLRs	X	
7. Develop and deliver SLR improvement plans where required	X	
8. Review and approve SLR improvement plans		X
9. Implement SLR improvement plans	X	
10. Review and approve SLR metrics and performance reports		X

2.1.4.4 Security

Security Services are those activities associated with maintaining physical and logical security of all Service Area components (e.g., hardware, Software) and data, Malware protection, access protection and other Security Services in compliance with County security requirements and all applicable regulatory requirements. The following table identifies the high-level Security functions that the Scope 1 Vendor, Vendor, Third Party providers and County will provide. Specific Security Services that relate to the Network Services are provided in, Schedule 2B – Converged Network Management Services SOW.

Table 16. High-Level Security Functions

* Indicates formal System of Record.

High Level Security Functions				
Security Area	County	Scope 1 Vendor	Vendor	Third Party Provider
Forensics/Pentest	X			X
Policy Dev/Repository	X	X*		
Policy Compliance (GRC)		X*	X	
Risk Analysis/Audit		X*	X	
Physical Security		X*		
Environmental Controls		X*		
End User Administration	X	X*	X	
Event Monitoring		X*	X	
Alert Management		X (goes to SOC)	X * (SOC)	
Security Incident Management		X (ISSS*)	X (goes to ISSS)	
Incident Response Team	X	X (Lead)*	X	
Event Logging and Reporting		X (goes to SIEM)	X* (SIEM)	
Security Patching		X*	X	
AV/Malware Prevention		X*	X*	
Email Spam/ Filtering			X	
Email Encryption			X	
Data Encryption (rest)		X		
Data Loss Prevention			X	
Web Content Filtering			X	
URL Domain /SSL/IP Mgt			X	
Intrusion Prevention/Detection			X	
Traffic Capture			X	
Firewall Management			X	
Vulnerability Scan		X	X	
Document Config/Connects		X*	X	
Voice Encryption			X	
Network Encryption			X	
Mobile Device Mgt		X*	X	
Remote Access(Token,VPN)			X	
WiFi Mgt			X	
Annual Audit	X	X	X	
Remote Access		X		

(Password/Pin Reset)				
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2.1.4.5 Asset Management

Asset Management Services are those activities associated with ongoing management and tracking of new and upgraded Service Area components (e.g., hardware, Software) in the Asset Management System. The following table identifies Asset Management Services roles and responsibilities that Vendor and the County shall perform.

Table 17. Asset Management Services Roles and Responsibilities

Asset Management Services Roles and Responsibilities	Vendor	County
1. Deploy and manage an Asset Management System that meets County requirements and adheres to County policies (including the capability to track assets outside of the scope of the Services)	X	
2. Manage life cycle of all Assets from requisition ordering, inventory, installation, preventative maintenance to disposal	X	
3. Develop Asset type list that would be included in the Asset Management System		X
4. Review Asset type list and maintain Asset types in the Asset Management System	X	
5. Provide the County inquiry and reporting access into the Asset Management System for all Assets related to the Services including data access via a real-time access reporting portal in exportable and analyzable format and ad hoc and recurring (e.g., monthly) reports	X	
6. Input, maintain, update, track and report all in-scope Assets throughout the Asset life cycle (i.e., acquisition to retirement) via an automated self-discovery tool or through alternate means if using the automated self discovery tool is not feasible	X	
7. Maintain the accuracy of the data of in-scope Assets in the Asset Management System according to SLRs	X	
8. Provide extracts from Asset Management database for the County to implement into its various systems	X	

Asset Management Services Roles and Responsibilities	Vendor	County
9. Establish, update, and maintain the automated Asset tracking database to include, at minimum, the following Asset information for each Asset: <ul style="list-style-type: none"> ▪ Manufacturer ▪ Model ▪ Serial number ▪ Asset identification number (i.e., scanned asset tag) ▪ Asset location ▪ Ownership information (Vendor /County /Third Parties - lease /purchase) ▪ Asset cost information (e.g., current residual value, purchase price, accumulated depreciation) ▪ Maintenance information and history including the age of the Asset ▪ Warranty information ▪ Other billing information (e.g., lease information, County specific information) ▪ Transaction edit history (e.g., locations, billing and user) 	X	
10. Administer and manage warranty periods for all applicable Service Area-related assets	X	
11. Administer maintenance contracts for End User assets included in the in-scope services		X
12. Update in-scope Asset records related to all Change activities (e.g., Install/Move/Add/Change/Disposal (IMACD) activities, Break/Fix activities, enterprise reorganization and Change Management activities)	X	
13. Perform ongoing Asset inventories to validate that data in the Asset Management System is accurate and current and that County has the data it requires. This activity is done at the time of refresh or when an IMACD is performed	X	
14. Provide, and upon County approval, implement remediation plans for Asset Management System deficiencies	X	
15. Review and approve physical Asset inventory reports and remediation plans of Asset Management System		X

2.1.4.6 Software License Management

Software License Management Services are those activities associated with the acquisition, and ongoing management and tracking of Software licenses. The following table identifies the Software License Management Services roles and responsibilities that Vendor and the County shall perform.

Table 18. Software License Management Services Roles and Responsibilities

Software License Management Services Roles and Responsibilities	Vendor	County
1. Manage and maintain Software licenses information through Software license life cycle	X	
2. Conduct vendor agreement negotiations for County-retained contracts		X
3. Conduct vendor agreement negotiations for non County-retained contracts	X	
4. Review and approve vendor agreement negotiations for non-County-retained contracts		X
5. Develop and maintain inventory of all Software licenses in a Software License Management System that integrates with the IT Service Management suite and asset management	X	
6. Report to the County on any exceptions to vendor terms and conditions	X	
7. Coordinate and conduct Software license and maintenance agreements reviews allowing for sufficient time prior to expiration for negotiations	X	
8. Provide the County with reports and recommendations to use in making Software acquisition and discontinuance decisions	X	
9. Provide timely and regular recommendations to purchase additional license capacity, recommending alternatives, or curtailing usage where necessary and appropriate, to restore, or continue to maintain, license compliance taking into account County's budget cycle	X	
10. Identify and report license compliance issues	X	
11. Review license compliance issues		X
12. Manage and perform license audits and reconcile the number of licenses to the number of installs	X	
13. Provide data necessary to enable the County to conduct periodic reviews one hundred twenty (120) days prior to expiration of all Software license and maintenance agreements	X	
14. Hold periodic reviews and ensure review is conducted one hundred twenty (120) days prior to expiration of all Software license and maintenance agreements	X	
15. Obtain approval from the County for any license change or replacement	X	

2.1.4.7 Financial/Chargeback Management and Invoicing

Financial/Chargeback Management and Invoicing Services are those activities associated with providing data that allows the County to chargeback its internal business customers for actual usage of IT Resources and to receive detailed and accurate invoices that meet County requirements. The following table identifies the Financial/Chargeback Management and Invoicing Services roles and responsibilities that

Vendor and the County shall perform to meet state and federal regulatory reporting requirements.

Table 19. Financial/Chargeback Management and Invoicing Services Roles and Responsibilities

Financial/Chargeback Management and Invoicing Services Roles and Responsibilities	Vendor	County
1. Identify and provide chargeback requirements		X
2. Provide chargeback reports per County requirements	X	
3. Review and approve chargeback reports		X
4. Identify invoicing requirements		X
5. Document and maintain invoicing requirements	X	
6. Provide invoices per County requirements	X	
7. Review and approve invoices		X
8. Provide reconciliation reports per County requirements	X	

2.1.5 Service Support

2.1.5.1 Incident and Problem Management

Incident and Problem Management Services are those activities associated with restoring normal Service operation as quickly as possible and to minimize the adverse impact on County business operations, thus ensuring that the best possible levels of Service quality and Availability are maintained.

Problem Management also includes minimizing the adverse impact of Incidents and Problems on the business that are caused by errors in the Service Areas, and to prevent the recurrence of Incidents related to those errors. In order to achieve this goal, Problem Management seeks to get to the root cause of Incidents and then initiate actions to improve or correct the situation.

The following table identifies the Incident and Problem Management Services roles and responsibilities that Vendor and the County shall perform.

Table 20. Incident and Problem Management Services Roles and Responsibilities

Incident and Problem Management Services Roles and Responsibilities	Vendor	County
1. Establish operations and service management quality assurance and control programs	X	
2. Review and approve operations and service management quality assurance and control programs		X
3. Perform quality assurance and quality control programs	X	

Incident and Problem Management Services Roles and Responsibilities	Vendor	County
4. Interface and coordinate with the Service Desk, County and Third Parties for Incident and Problem Management Services activities and take ownership of end-to-end Incident and Problem Resolution	X	
5. Provide Level 2 Support and Level 3 Support as required	X	
6. Establish Incident/Problem classification by priority		X
7. Establish Incident/Problem workflow, escalation, communication and reporting processes that help to achieve SLRs	X	
8. Review and approve Incident/Problem classification, prioritization and workflow, communication, escalation and reporting processes		X
9. Provide, configure, and operate an Incident and Problem Management Services tracking system that tracks Incidents across all IT Service Areas and integrates with the IT Service Management suite	X	
10. Provide County access and input capabilities to Incident and Problem Management Services tracking system to allow for Incident/Problem monitoring and standard and ad hoc reporting	X	
11. Manage entire Incident/Problem life cycle including detection, escalation, diagnosis, County status reporting, repair and recovery	X	
12. Ensure Incident Resolution activities conform to defined Change Management procedures	X	
13. Manage efficient workflow of Incidents including the involvement of Third Parties (e.g., Vendor, public carriers, ISP, Third Party service providers) and broadcast of Outages	X	
14. Periodically review the state of open Problems and the progress being made in addressing Problems		X
15. Participate in Problem review sessions and provide listing and status of Problems categorized by Problem impact	X	
16. Authorize closure of County-initiated Priority 1 and 2 Incidents		X
17. Identify possible enhancement opportunities for improved operational performance and potential cost savings based on results of Incident Resolution activities	X	
18. Review and approve projects to implement enhancement opportunities		X
19. Implement approved projects to implement enhancement opportunities	X	

Incident and Problem Management Services Roles and Responsibilities	Vendor	County
20. Provide known-error database and process to utilize database and provide electronic access to the County	X	

2.1.5.2 Root Cause Analysis

Root Cause Analysis (RCA) Services are those activities associated with diagnosing and analyzing the root cause of Priority Level 1 or 2 Incidents and Problem and/or trends, and recommending and taking corrective measures to prevent the reoccurrence of such Incidents, Problems and/or trends. The following table identifies RCA Services roles and responsibilities that Vendor and the County shall perform.

Table 21. Root Cause Analysis Services Roles and Responsibilities

Root Cause Analysis Services Roles and Responsibilities	Vendor	County
1. Conduct proactive trend analysis of Incidents to identify potential/recurring Problems and providing RCA Services trend analysis reporting to the County	X	
2. Track and report on all Priority Level 1 and 2 Incidents and provide associated corrective actions	X	
3. Recommend corrective action solutions to address recurring Problems or failures	X	
4. Review and approve corrective solutions to address recurring Problems or failures		X
5. Identify root cause of Priority Level 1 and 2 Incidents and recommend appropriate Resolution action	X	
6. Review and approve solutions to address Priority Levels 1 and 2 Incidents		X
7. Provide status report detailing the root cause of and procedure for correcting recurring Problems and Priority Levels 1 and 2 Incidents until closure as determined by the County	X	
8. Identify root cause of Priority Level 3 and 4 Incidents at the County's request	X	
9. Provide reporting on status of open Problems (e.g., Problem aging, reoccurrence)	X	

2.1.5.3 Configuration Management

Configuration Management Services are those activities associated with providing a logical model of the Service Areas by identifying, documenting, controlling, maintaining, and verifying the installed service environment (e.g., hardware, software, middleware, Interfaces, network). The goal of Configuration Management is to account for all IT Assets and configurations, provide accurate information on configurations and provide a sound basis for Incident, Problem, Change and Release Management Services and to

verify configuration records against the infrastructure and correct any inaccuracies. The following table identifies the Configuration Management Services roles and responsibilities that Vendor and the County shall perform.

Table 22. Configuration Management Services Roles and Responsibilities

Configuration Management Services Roles and Responsibilities	Vendor	County
1. Establish Configuration Management Database (CMDB), including service dependency mapping, that integrates with the ITSM suite, in accordance with County requirements	X	
2. Review and approve the CMDB and service dependency mapping		X
3. Select, install and maintain Configuration Management tools	X	
4. Enter/upload and maintain configuration data into the CMDB on an ongoing basis	X	
5. Establish automated and manual process interfaces to Incident and Problem Management, Change Management, DR, technical support, maintenance and Asset Management processes	X	
6. Establish appropriate authorization controls for modifying configuration items and verify compliance with Software licensing	X	
7. Establish guidelines for physical and logical separation between environments (e.g., development, test and production) and the process for deploying and back out of configuration items	X	
8. Approve guidelines for physical and logical separation between environments (e.g., development, test and production) and the process for deploying and back out of configuration items		X
9. Establish configuration baselines as reference points for rebuilds, and provide ability to revert to stable configuration states	X	
10. Ensure Configuration Management processes are consistent across all environments (e.g., development, test and production)	X	
11. Establish process for verifying the accuracy of configuration items, adherence to Configuration Management process and identifying process deficiencies	X	
12. Provide County Configuration Management reports as required and defined by County	X	

Configuration Management Services Roles and Responsibilities	Vendor	County
13. Track and flag configurations that are not in conformance (e.g., exceptions list) with County-defined standards and requirements (e.g., County-approved and unapproved non-standard configurations)	X	

2.1.5.4 Change and Release Management

Change and Release Management Services are those activities associated with ensuring that standardized methods and procedures are used for efficient and prompt handling of all Changes and Software releases in the County service environment (e.g., hardware, software, middleware, interfaces), in order to minimize the impact of change upon Service quality and consequently to improve the day-to-day operations of the County environment. Change Management covers all aspects of managing the introduction and implementation of all Changes affecting all Service Areas and in any of the management processes, tools, and methodologies designed and utilized to support the Service Area components. The Change Management process includes the following process steps:

- Request process
- Recording and tracking process
- Prioritization process
- Responsibility and assignment process
- Impact and risk assessment process
- Review and approval process
- Implementation process
- Verification (test) process
- Release process
- Closure process

Release Management Services are those activities associated with providing a holistic view of a Change to an existing Service or addition of new Service(s) to ensure that all aspects of a release, both technical and non-technical are considered together and to plan and oversee the successful rollout of technologies, design and implement efficient procedures for distribution and installation of Changes. The activities also ensure that only correct, authorized and tested versions are installed and that Changes are traceable and secure.

Vendor and the County will establish, with representatives from both the County and Vendor, a Change Advisory Board ("CAB"). The purpose of the CAB is to ensure all hardware, Software, and environmental configuration changes are planned, analyzed, implemented, tested, approved, and seamlessly transitioned to a production support state. The CAB will meet on a regularly scheduled basis to discuss and approve planned changes. The County and Vendor will establish an agreed upon industry best practice process. Scope 1 Vendor will lead the CAB for all changes occurring with/within Services provided by Scope 1 Vendor and Vendor. The Vendor and County will participate on the

CAB and represent all changes occurring with/within its scope of Services. Vendor will also participate on an as needed basis with the County on all other changes occurring outside of Vendor Services under the direction of the County CAB.

Changes are to be tracked and integrated with configuration management, with changes requiring routine review and configurations audited for accuracy. Vendor will provide an effective change management system that provides a high degree of control and reduces or eliminates disruptions caused by change implementation and that integrates with the IT Service Management suite. This system will be used for all changes to the County environment initiated by Vendor and/or County IT personnel.

Vendor will provide Change and Release Management including, but not limited to the following:

- **Hardware** — All installations, decommissions, replacement, or other changes, and re-location of machines in the data center, network, and in-scope Service locations
- **System Software** — All system software changes, including modifications to the system operating code, access methods, program products, or common system support modules
- **Infrastructure Software** — All infrastructure software changes including, but not limited to, modifications to database, web server, middleware and network
- **Application Systems** — All Application System changes (including changes to software used by the Vendor to fulfill the services) being phased into the production and test environments. Application System changes often include alterations to processing programs, production batch jobs, databases, addition or deletion of job steps, and implementation of new application jobs and systems
- **Environment** — Environmental changes involving the facilities associated with the retained or Vendor-provided data center and in-scope County sites. This includes items such as power, air conditioning, chilled water, raised flooring, security, motor generator, and voice and data telecommunications
- **Security** — All security changes including, but not limited to, switches, routers, data and End User access, and related policy changes

The following table identifies Change Management and Release Management Services roles and responsibilities that Vendor and the County shall perform.

Table 23. Change and Release Management Services Roles and Responsibilities

Change and Release Management Services Roles and Responsibilities	Vendor	County
1. Provide a Change Management system and interface with County or other Third Parties	X	

Change and Release Management Services Roles and Responsibilities	Vendor	County
2. Provide integration between Change Management, Configuration Management (CMDB), and Asset Management systems (dependency mapping) and the IT Service Management suite	X	
3. Establish and lead the CAB and conduct regularly scheduled meetings with Vendor's Change and Release Management stakeholders		X
4. Participate in the regularly scheduled CAB meetings and represent upcoming Changes related to the Services	X	
5. Establish Change classifications (impact, severity, risk) and Change authorization process, including a list of contacts authorized to request Changes to scope by level of authority (e.g., dollar amount impact), and any updates thereto		X
6. Administer the version control system as it relates to Release Management of County applications	X	
7. Document and classify proposed Changes to the CAB, where required risk, impact and back out plans of those Changes and establish Release Management plans for major Changes	X	
8. Develop and maintain a rolling 90-day schedule of planned Changes, perform impact analysis, and provide to the County for review as required	X	
9. Develop CAB agenda based on rolling 90-day schedule of planned Changes represented by Vendors providing Services		X
10. Determine Change logistics	X	
11. Communicate and coordinate recommended changes with all affected parties	X	
12. Schedule and conduct Change and Release Management meetings to include review of planned Changes and results of Changes made	X	
13. Provide Change documentation as required	X	
14. Authorize and approve scheduled Changes or alter the schedule of any or all Change requests		X
15. Review Release Management details with County and alter as appropriate (e.g., back out plan, go/no go decision)	X	
16. Notify the County and other Third Parties of Change timing and impact	X	
17. Ensure Change and Release Management Services processes are consistent across all environments (e.g., development, test and production)	X	
18. Implement Change and adhere to detailed release plans	X	

Change and Release Management Services Roles and Responsibilities	Vendor	County
19. Modify and update systems and documentation impacted by implemented Changes (e.g., CMDB, Asset Management System, Definitive Software Library (DSL), Service catalog (if applicable), DR plan)	X	
20. Verify that Change met objectives and Resolve negative impacts from the Change	X	
21. Monitor Changes and report results of Changes and impacts and provide single portal access to reports and associated logs	X	
22. Manage Change communication with the County and Third Parties, including but not limited to web-based Change approvals, status updates, and completion notice	X	
23. Perform quality control activities and approve Change results		X
24. Secure and maintain master copies of all in-scope Software versions in a secured Software library and update CMDB	X	
25. Implement and document out-of-CAB-cycle changes related to the infrastructure components (e.g., emergency Changes)	X	
26. Review and approve out-of-CAB-cycle changes (e.g., emergency Changes) per County requirements		X

2.1.6 Managed Time and Material Services

The County may require the Vendor to provide skilled resources on a managed time and material (T&M) basis for various initiatives. The following table identifies the roles and responsibilities associated with Managed Time and Materials Services that Vendor and the County shall perform.

Table 24. Managed Time and Material Services Roles and Responsibilities

Managed Time and Material Services Roles and Responsibilities	Vendor	County
1. Provide the resource requirements in terms of background checks, roles, skills, task descriptions, timeframe and locations where the resources are required		X
2. Notify the Vendor with sufficient lead time (2 weeks or as otherwise mutually agreed upon by the Parties) to identify, select and onboard candidates approved by the County		X
3. Present suitable candidates for review and approval by the County	X	
4. Review and approve resources		X
5. Prepare Time and Materials Statement of Work for resources according to roles / rates on rate card currently in effect	X	

Managed Time and Material Services Roles and Responsibilities	Vendor	County
6. Obtain financial approval, generate purchase order and arrange for badge appointment, network logon, laptop setup and application access in a timely fashion		X
7. Provide approved resources at County-specified locations	X	
8. Communicate County policies, procedures and processes including, but not limited to, Change Management, Incident and Problem Management, operations, time reporting, to Vendor-managed resources	X	
9. Provide weekly reporting on operational resource performance through timesheets and progress vs. plan reports	X	
10. Provide mutually agreed upon reports as provided in the Monitoring, Reporting and Review section of this SOW	X	

3.0 Service Environment

The service environment section in each IT Service Area SOW describes and scopes a number of Service Area elements to be supported and/or with which the Vendor shall comply (e.g., in scope hardware and Software). As such, this SOW shall apply to the service environment as specified in each Service Area SOW. The service environment for each Service Area will be documented in the applicable SOW Appendices and are to be maintained by the Vendor, reviewed with the County, updated by Vendor and made available to County on a quarterly basis.

3.1.1 IT Service Management and Life Cycle Services Tools

A listing and description of all Vendor ITSM tools, associated functionality and capabilities, standard reports and associated Service Area environments supported by each tool shall be developed and maintained by Vendor in Appendix 2A.1 – IT Service Management and Life Cycle Services Tools.

3.1.2 County Network and Voice Environments

A listing and description of County Network and Voice Communication site information to be supported by Vendor in Appendix 2A.2 – Network and Voice Environment Data

4.0 Service Level Requirements

4.1 Objectives

A key objective of this outsourcing agreement is to attain Service Level Requirements (SLRs). SLRs specific to Service Areas are identified in the Service Management section of each Service Area SOW. SLRs applicable across all Service Areas are identified in

this IT Service Management and Life Cycle Services SOW below. SLRs associated with Fee Reductions are identified in Schedule 4 – Fee Reductions. SLR performance shall be calculated based on measurements taken over the indicated Measurement Interval and reported to the County based on the Reporting Period. SLR Fee Reductions for SLRs with multiple Measurement Intervals within the Reporting Period shall be calculated as defined in Schedule 4 – Fee Reductions.

Vendor shall provide written reports to the County regarding Vendor's compliance with the SLRs specified in each SOW Schedule.

4.2 Service Level Requirements

Service Level Requirements for this SOW are contained in the Appendix 4.1 Service Level Requirements and Weighting Factors and Schedule 4 – Fee Reductions.

4.3 Reports

Vendor shall provide written reports to County regarding the Vendor's compliance with the SLRs specified in this Section and other management reports. Required reports are documented in Attachment L, Reports.

5.0 List of Referenced MSA Schedules and Attachments

MSA Schedule/Attachment	Description
Schedule 2B	Converged Network Services SOW
Schedule 2C	Voice Communications Services SOW
Schedule 2D	Converged Network Services SOW (L & JA)
Schedule 2E	Voice Communications Services SOW (L & JA)
Schedule 2F	Network Management Services in Support of Systems providing only IP/VOIP Telephony
Schedule 3	Fees
Schedule 4	Fee Reductions
Attachment K	Reports