



Yolo County, California

IT STRATEGY AND GOVERNANCE AUDIT

October 26, 2023



bakertilly

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Executive Summary

Background

Yolo County (County) requested assistance from Baker Tilly US, LLP (Baker Tilly) in performing an IT strategy and governance audit. The audit assessed the IT strategic planning process and reviewed how performance is evaluated the operating budget is tracked and resources are consumed.

Yolo County and the IT Department are dedicated to achieving world-class information security and compliance without imposing unnecessary bureaucracy and disempowerment. The County pursues world-class operations that consistently deliver reliable, safe, and up-to-date services for the community. Additionally, opportunities are often sought out to improve technological advancement that directly align with the IT Department's business strategies. Lastly, the County is committed to achieving operational excellence and is willing to achieve objectives by emphasizing security, operational reliability, and innovative technologies.¹

Baker Tilly performed testing to assess the effectiveness of IT strategy and governance controls. Our evaluation encompassed various aspects of the IT Department's processes, including development, maintenance, and execution. This report offers concrete suggestions and recommendations to address gaps and enhance the County's systems. The conclusions were gathered through staff interviews and a thorough review of relevant organization-wide and departmental documents.

Objectives and Scope

Through the audit, we will be able to provide reasonable assurances that effective controls related to IT strategy and governance are in place and operating effectively.

1. Evaluate the development, maintenance, and approval of the IT strategic framework that is aligned with the organization's business strategy
2. Confirm the development and execution of the tactical IT plans that are aligned with the IT strategy
3. Assess the development, maintenance, and approval of an IT operating budget
4. Verify whether there is recurring performance and risk reporting to Executive Management and the Board of Supervisors
5. Review oversight of the IT operation and resource consumption by Executive Management and the Board of Supervisors

¹ 2023-2024 Recommended Budget, County of Yolo
IT Strategy and Governance Audit

Audit Methodology



Phase I: Project Initiation and Management

- Identify communication channel, reporting relationships and responsibilities of project staff
- Conduct meetings to understand current processes and risks to refine the project workplans
- Conduct a kick-off meeting explaining the audit process, timeline, and expectations

Phase II: Data Gathering and IT Strategy and Governance Interviews

- Develop and distribute information requests (strategy, governance structure, operating, monitoring, and reporting related policies and procedures, etc.)

Phase III: Fieldwork and Testing

- Evaluate the development, maintenance and approval of the IT strategic framework that is aligned with the organization's business strategy
- Confirm the development and execution of tactical IT plans that are aligned with the IT strategy
- Assess the development, maintenance and approval of an IT operating budget
- Verify whether there is recurring performance and risk reporting to Executive Management and the Board of Supervisors
- Review the oversight of the IT operation and resource consumption by Executive Management and the Board of Supervisors

Phase IV: Reporting

- Develop an audit report that summarizes the methodology, scoring rubric, and highlights key risks and findings
- Provide guidance and recommendations for improving gaps and opportunities for improvements based on testing audit objectives 1-5.
- Review any findings and process improvement recommendations with Management and obtain Management responses.

Acknowledgements

Thank you to the Yolo County, California team members for their support and cooperation throughout the audit. Their insight and responsiveness in providing information was integral to the successful execution of this audit. Specifically:

- Lee Gerney, IT
- Gary Sandy, Supervisor District 3
- Lucas Frerichs, Vice-Chair
- Oscar Villegas, Chair
- Jim Provenza, Supervisor District 4
- Angel Barajas, Supervisor District 5

Department Directors:

- Philip Pogledich, County Counsel
- Jesse Salina, Assessor
- Jeff Reisig, District Attorney
- Tom Lopez, Sheriff-Coroner
- Mark Bryan, Deputy CAO
- Humberto Izquierdo, Agriculture
- Leslie Lindbo, Community Services
- Ryan Pistoichini, General Services
- Alberto Lara, Human Resources
- Diana Lopez, Library
- Tracie Olson, Public Defender
- Natalie Dillon, Child Support Services
- Tom Haynes, Financial Services
- Nolan Sullivan, Health and Human Services
- Danin Fruchtenicht, Probation
- Kristin Welvoda, Office of Emergency Services

Conclusions, Summary, and Findings

During this audit, we evaluated numerous factors that may contribute to the process of the IT Department for Yolo County, assessed the IT operating budget, and provided advice for steps to take in the future. The Baker Tilly team has also confirmed the development and execution of the IT plans that are aligned with the IT strategy. This report will provide a clear pathway of suggestions the team feels would fill gaps and improve the system.

The audit findings are listed in the table below. Additional information on the findings, recommendations, management's responses, and process improvement recommendations are located within the Detailed Report section.

Rating/Criticality:

- **High** - significant internal control weakness exists that may result in the inability to meet the County's business objectives and/or can cause disruption in business operations.
- **Medium** - internal control weakness may result in the inability to meet the County's business objectives and/or can cause disruption in business operations.
- **Low** - Internal control weakness exist; however, this may not result in the inability to meet the County's business objectives and/or cause disruption in business operations.

Objective 1: Evaluate the development, maintenance, and approval of the IT strategic framework that is aligned with the organization's business strategy.

Finding #	Finding	Rating/Criticality
1	Outdated Strategic Framework	High

2	Lack of Documented Review	High
3	Lack of Documented Procedures	High

Objective 2: Confirm the development and execution of the tactical IT plans that are aligned with the IT strategy.

Finding #	Finding	Rating/Criticality
4	Misalignment of IT Strategy and IT Tactical Plan	High

Objective 3: Assess the development, maintenance, and approval of an IT operating budget.

Finding #	Finding	Rating/Criticality
N/A	No Exceptions Noted	N/A

Objective 4: Verify whether there is recurring performance and risk reporting to Executive Management and the Board of Supervisors.

Finding #	Finding	Rating/Criticality
5	Inconsistent Project Execution Documentation	Medium
6	Lack of Performance Monitoring for All Projects	Medium
7	Lack of Risk Monitoring for All Projects	Medium

Objective 5: Review oversight of the IT operation and resource consumption by Executive Management and the Board of Supervisors.

Finding #	Finding	Rating/Criticality
8	Oversight of the IT Operation	High
9	Monitoring Over IT Operation	High
10	Resource Consumption Management	High
11	Resource Consumption Monitoring and Tracking	High

Detailed Report

Background, Roles, and Responsibilities

Baker Tilly conducted an audit of IT Strategy and Governance for the Yolo County organization. As a result, we performed testing to ensure that effective controls related to IT strategy and governance are in place and operating effectively. To summarize, the steps includes: Project Initiation and Management, Data Gathering, Testing, and Reporting.

We evaluated numerous factors that may contribute to the process of the IT Department including development, maintenance, execution of the work and more. This report will provide a clear pathway of suggestions the team feels would fill gaps and improve the system.

The recommendations provided in this report are based on the information gathered through staff interviews and a review of pertinent organization-wide and departmental documentation. The interviews allowed Baker Tilly and Yolo County to assess the internal control environment in order to identify high impact areas for development of the IT operation.

Audit Methodology

Baker Tilly's audit approach consists of the following phases:



Phase I: Project Initiation and Management

- Identify communication channel, reporting relationships and responsibilities of project staff
- Assign key responsibilities
- Review and confirm the timing and format for project status meetings
- Conduct meetings to understand current processes and risks to refine the project workplans
- Review and confirm preliminary timelines
- Review and confirm work products to be delivered including expectations
- Conduct a kick-off meeting explaining the audit process, timeline, and expectations

Phase II: Data Gathering and IT Strategy and Governance Interviews

- Develop and distribute information requests (strategy, governance structure, operating, monitoring, and reporting related policies and procedures, etc.)
- Develop interview questions for strategic planning and oversight interviews
- Conduct interviews with members of IT leadership, executive management and members of the Board of Supervisors

Phase III: Fieldwork and Testing

- Evaluate the development, maintenance and approval of the IT strategic framework that is aligned with the organization's business strategy
- Confirm the development and execution of tactical IT plans that are aligned with the IT strategy
- Assess the development, maintenance, and approval of an IT operating budget
- Verify whether there is recurring performance and risk reporting to Executive Management and the Board of Supervisors
- Review oversight of the IT operation and resource consumption by Executive Management and the Board of Supervisors
- Provide guidance and recommendations for improving gaps and opportunities for improvements based on testing audit objectives 1-5. Thorough testing was conducted, and the results were drawn in collaboration with reputable internal audit and public sector entities, including esteemed organizations such as the Institute of Internal Auditors (IIA), Government Finance Officers Association (GFOA) and Information Systems Audit and Control Association (ISACA).

Phase IV: Reporting

- Develop an audit report that summarizes the methodology, scoring rubric, and highlights key risks and findings
- Provide guidance and recommendations for improving gaps and opportunities for improvements based on testing audit objectives 1-5.
- Review any findings and process improvement recommendations with Management and obtain Management responses

Findings, Recommendations, and Management's Responses

Finding #	Finding	Recommendation	Rating	Management's Response
1	<p>Objective 1: Strategic Framework Valuation Title: Outdated Strategic Framework</p> <p>Criteria: An IT Strategic Framework should align with current organizational goals and objectives, new technology, and project prioritization.</p> <p>Condition: Although the IT Strategic Framework is in place and properly approved, the Strategic Framework is outdated and needs modifications to remain relevant. The Strategic Framework was implemented in 2013 and updated in 2018. The framework does not capture any of the ERP upgrades, outdated technology and operations.</p> <p>Cause: The IT Strategic Framework has not been updated or reviewed by appropriate personnel since 2018.</p> <p>Consequence: Strategic Framework Misalignment</p>	<p>Recommendation: We recommend updating the IT Strategic Framework at least every three years to ensure it reflects new goals, objectives, project, and technology landscape. Additionally, review and approval of updates should be formally documented and retained.</p>	High	<p>Management's Response: Management agrees with this finding.</p> <p>Action Plan: Develop strategic plan in coordination with departments after the BOS revises the County strategic plan as the IT Plan should support the County Strategic Plan.</p> <p>Owner/Responsible: Lee Gerney</p> <p>Personnel: Department Directors & CAO</p> <p>Target Completion Date: 12/31/2024</p>

Finding #	Finding	Recommendation	Rating	Management's Response
2	<p>Objective 1: Strategic Framework Valuation Title: Lack of Documented Review</p> <p>Criteria: IT policies should include documented review and approval to allow for transparency, accountability, and quality control.</p> <p>Condition: Although IT policies have been established, there is no log including evidence of a review being completed at least annually, the updates incorporated within the policies, and approval from management.</p> <p>Cause: The IT policies in place have not received timely, documented review. Additionally, its unknown when or how often updates have been made to the IT policies.</p> <p>Consequence: Polices Misaligned with Current Operations</p>	<p>Recommendation: We recommend that the IT policies have evidence of an annual documented review and approval to promote effective governance, risk management, and quality assurance. The record of this review process should be documented and retained, as well as include a revision history.</p>	High	<p>Management's Response: Management agrees with these findings. Action Plan: Once the governance committee as recommended in finding #8 is established, the executive committee will be responsible to review policy on an annual basis. Owner/Responsible: Lee Gerney Personnel: IT Executive Committee Target Completion Date: 12/31/2024</p>
3	<p>Objective 1: Strategic Framework Valuation Title: Lack of Documented Procedures</p> <p>Criteria: The policy framework is critical in explaining how to achieve an objective in detail. Necessary procedures should include implementation guidance, clarity in roles and responsibilities, operational efficiency, and risk mitigation. Procedures detailing how the County will comply with the policy framework should be designed and documented.</p> <p>Condition: Policies within the IT department have been established, however, there are no detailed, step-by-step procedures to ensure the County is in compliance with the policy and achieves its objectives.</p>	<p>Recommendation: We recommend that detailed procedures are designed and implemented for each of the County's IT policies that clearly define step-by-step action items for the following processes: Implementation of new technology, risk assessments, security, planning, incident response, contingency planning, training, and system integrations to ensure alignment with the County's strategic plan. The procedures should be a structured set of instructions that outline how specific tasks and processes should be performed.</p>	High	<p>Management's Response: Management agrees with these findings. Some of this has already started (example Mobile Device Policy & associated policy) Action Plan: ITS will develop procedures to accompany policies. Owner/Responsible: Lee Gerney Personnel: ITS Department Target Completion Date: 12/31/2024</p>

Finding #	Finding	Recommendation	Rating	Management's Response
	<p>Cause: Detailed procedures related to processes within the IT environment have not been established.</p> <p>Consequence: Loss of Efficiency and Productivity</p>			
4	<p>Objective 2: <u>Plan Alignment with the IT Strategy</u> Title: <u>Misalignment of IT Strategy and IT Tactical Plan</u></p> <p>Criteria: An organization's IT Strategy and IT Tactical Plan should align in order to help with consistency with organizational goals, resource allocation, setting priorities, and risk mitigation. The IT Strategy should be updated, reviewed, and approved annually to help an organization operate cohesively and efficiently.</p> <p>Condition: The Tactical IT Plan (s) describe current operations. The IT Strategy is outdated and requires modification before the Tactical plan(s) can be reviewed for adequacy and updated (as needed) to ensure alignment with strategic objectives and current/future projects.</p> <p>Cause: The IT Strategic Framework has not been updated or reviewed by appropriate personnel since 2018.</p> <p>Consequence: Misalignment with Current Objectives</p>	<p>Recommendation: We recommend updating the IT Strategic Framework at least every three years to remain relevant to new goals, objectives, projects, and technology. Additionally, review and approval of updates should be formally documented and retained. The Tactical IT Plan(s) should clearly align with the IT Strategic Framework.</p>	High	<p>Management's Response: Management agrees with these findings.</p> <p>Action Plan: Once the governance committee as recommended in finding #8 is established and the IT strategic plan is developed, tactical plans will be developed to support the strategic plan.</p> <p>Owner/Responsible: Lee Gerney Personnel: Governance Group Target Completion Date: 12/31/2024</p>

Finding #	Finding	Recommendation	Rating	Management's Response
5	<p>Objective 4: Performance and Risk Reporting Title: Inconsistent Project Execution Documentation</p> <p>Criteria: It is important to utilize project management templates for all projects as the templates will increase consistency, increase efficiency, align with best practice, and potentially reduce errors.</p> <p>Condition: Project management templates have been created, however, they have not been fully utilized or incorporated. Baker Tilly was unable to receive project management supporting documentation for current and on-going projects requested as the project management templates are not fully developed.</p> <p>Cause: The project management templates in place have not been fully utilized on all projects as intended.</p> <p>Consequence: Lack of Consistent Production Management Documentation</p>	<p>Recommendation: We recommend implementing and prioritizing project management templates for all IT related projects. This will ensure that a standardized approach exists across projects. The project management templates will ultimately contribute to the successful planning, execution, and completion of projects.</p>	Medium	<p>Management's Response: Management agrees with these findings. This will be included as part of the IT Governance framework.</p> <p>Action Plan: ITS is already in the process of developing a project management framework.</p> <p>Owner/Responsible: Lee Gerney</p> <p>Personnel: ITS / Governance Group</p> <p>Target Completion Date: 12/31/2024</p>

Finding #	Finding	Recommendation	Rating	Management's Response
6	<p>Objective 4: Performance and Risk Reporting Title: Lack of Performance Monitoring for All Projects</p> <p>Criteria: Performance monitoring should exist for all IT related projects. Performance monitoring will help achieve organizational goals faster, assist with decision-making, provide quality assurance, improve risk management, assist with resource allocation, and increase accountability.</p> <p>Condition: Although performance monitoring exists for IT related projects, it only exists for projects that include a third-party vendor and are not utilized for in-house projects.</p> <p>Cause: Performance monitoring is not being applied to all IT projects.</p> <p>Consequence: Lack of Proper Accountability, Loss of Productivity</p>	<p>Recommendation: We recommend that the County implements performance monitoring key performance indicators (KPI) for all IT related projects. Performance monitoring metrics that should be monitored include, and are not limited to: project scheduling, resource utilization and allocation, budget, scope changes, third-party vendor performance, and documented review and approval.</p>	Medium	<p>Management's Response: Management agrees with these findings. This will be included as part of the IT Governance framework.</p> <p>Action Plan: ITS is already in the processes of developing a project management framework. Performance monitoring will be included in this framework.</p> <p>Owner/Responsible: Lee Gerney</p> <p>Personnel: ITS / Governance Group</p> <p>Target Completion Date: 12/31/2024</p>
7	<p>Objective 4: Performance and Risk Reporting Title: Lack of Risk Monitoring for All Projects</p> <p>Criteria: Risk monitoring should exist for all IT related projects. Risk monitoring will help detect risks early, assist with decision-making, positively impact cybersecurity, assist with strategic planning, and positively influence operational efficiency.</p> <p>Condition: Although risk monitoring exists for IT related projects, it only exists for projects that include a third-party vendor and are not utilized for in-house projects.</p> <p>Cause: Risk monitoring is not being applied to all IT projects.</p>	<p>Recommendation: We recommend that the County implements risk monitoring for all IT related projects. Risk monitoring metrics include, and are not limited to: risk exposure, risk response and effectiveness, risk accountability, risk response time, risk tolerance, and risk categories.</p>	Medium	<p>Management's Response: Management agrees with these findings. This will be included as part of the IT Governance framework.</p> <p>Action Plan: ITS is already in the processes of developing a project management framework. Risk monitoring will be included in this framework.</p> <p>Owner/Responsible: Lee Gerney</p> <p>Personnel: ITS / Governance Group</p> <p>Target Completion Date: 12/31/2024</p>

Finding #	Finding	Recommendation	Rating	Management's Response
	<p>Consequence: IT Risk Management Program</p>			
8	<p><u>Objective 5: Review of Oversight of the IT Operation</u> <u>Title: Oversight of the IT Operation</u></p> <p>Criteria: Proper oversight of IT operations is critical to ensure business objectives are being met, a governance framework exists, compliance with laws and regulations is prioritized, and risk management is in place.</p> <p>Condition: Per Management discussion, there is a lack of oversight over IT operations, as the County lacks a structure and a comprehensive system for managing and controlling IT activities on a day-to-day basis.</p> <p>Cause: Processes related to managing the day-to-day IT operation have not been developed at the County.</p> <p>Consequence: Insufficient IT Governance, Ineffective Decision-Making</p>	<p>Recommendation: We recommend the County establish a County IT Governance/Technology Committee ("CIGTC") as a governance structure. A charter should be adopted to define the committee's purpose, authority, responsibilities, and limitations. The CIGTC should include the Chief Technology Officer ("CTO"), a Board of Supervisors liaison to serve in an advisory capacity and rotating representation from various County Departments/ Offices. The Committee size should be limited to 7 members, always include a County representative that works in the public safety department. The meetings should occur quarterly. A Committee member can be an executive leader or senior management with the authority to act on behalf of the department and should serve a four-year term to support continuity with the Strategic Framework three-year update. Note: for more details on the Framework refer to Findings #1 & #4. The CIGTC responsibilities should include:</p> <ul style="list-style-type: none"> • Setting the County's IT strategic objectives • Directing and provide oversight of the IT operations, resource consumption and performance management • Monitoring compliance with County wide IT operational 	High	<p>Management's Response: Management agrees with these findings: we need to develop a governance methodology which fits Yolo County culture. Action Plan: ITS will work the BOS, CAO and department heads to develop a user centric governance model. Owner/Responsible: Lee Gerney Personnel: ITS, CAO, BOS, Departments Target Completion Date: 12/31/2024</p>

Finding #	Finding	Recommendation	Rating	Management's Response
		<p>standards, policies and internal controls</p> <ul style="list-style-type: none"> • Providing transparent, complete, clear, and timely communication to stakeholders 		
9	<p>Objective 5: Review of Oversight of the IT Operation Title: Monitoring Over IT Operation</p> <p>Criteria: Monitoring IT operations is essential to ensure performance and security of an organization's IT infrastructure.</p> <p>Condition: There is an absence of comprehensive IT operation monitoring processes and tools at the County.</p> <p>Cause: IT operation monitoring processes and tools have not been developed at the County.</p> <p>Consequence: Reduced Productivity and Security</p>	<p>Recommendation: We recommend that the County implements a Key Performance Indicators ("KPI") program. The monitoring process should be based on input from users and IT management to ensure the achievement of business goals and objectives, define expected results, measure progress and report performance on a periodic basis. This will help to facilitate decision-making, and update KPI's as necessary. This will support to projection of existing and future County needs in alignment with strategic planning. Monitoring should be in real-time, with real-time alerts and notifications. Subsequently, KPI's should be reported to the CIGTC and the Board of Supervisors at least quarterly for the following:</p> <ul style="list-style-type: none"> • CPU utilization • Computer storage 	High	<p>Management's Response: Management agrees with these findings but disagrees with some of the metrics provided. The business needs to be presented business metrics not IT metrics.</p> <p>Action Plan: ITS will work with the business and governance committee to develop metrics that demonstration IT service satisfaction and performance.</p> <p>Owner/Responsible: Lee Gerney</p> <p>Personnel: ITS, Governance Group</p> <p>Target Completion Date: 12/31/2024</p>

Finding #	Finding	Recommendation	Rating	Management's Response
		<ul style="list-style-type: none"> • Telecommunications • Lan and WAN bandwidth utilization • Number of users • IT service delivery satisfaction • New technologies • New applications • Number of licenses • Helpdesk responsiveness • Infrastructure upgrades • Third-party provider performance • Service level agreements • Number of facilities/operational incident/problems (reoccurring vs. new and resolved) <p>Internal and external monitoring tools should be explored to identify methods to automate tracking, real-time alerts and generate automated reporting to improve transparency.</p>		

Finding #	Finding	Recommendation	Rating	Management's Response
10	<p>Objective 5: Review of Oversight of the IT Operation Title: Resource Consumption Management</p> <p>Criteria: Resource consumption documentation should be maintained and managed. Resources in the form of data, equipment, network, human resources, policies, procedures, and standards is critical in an IT environment. Managing resource consumption improves operational efficiency, resource availability, cost control, and mitigates risk.</p> <p>Condition: There is an absence of formalized documentation for managing the day-to-day operations of resource consumption. With no established system or process in place for managing resource consumption, data, equipment, and resources are not properly supervised.</p> <p>Cause: No supporting documentation related to managing resource consumption exists.</p> <p>Consequence: Lack of Projected Resourcing</p>	<p>Recommendation: We recommend that the County implements a comprehensive resource consumption process in order to analyze operational activity. This would allow the County to determine the type of resources that are needed. Additionally, effective management oversight would assist the County in identifying necessary employee training, timely reporting, and ensuring compliance with polices on resource capacity, allowing for prompt remediation when required.</p>	High	<p>Management's Response: Management agrees with these findings. Action Plan: ITS will implement a resource consumption management program. Owner/Responsible: Lee Gerney Personnel: ITS Target Completion Date: 12/31/2024</p>

Finding #	Finding	Recommendation	Rating	Management's Response
11	<p>Objective 5: Review of Oversight of the IT Operation Title: Resource Consumption Monitoring and Tracking</p> <p>Criteria: Effective tracking and monitoring of resource consumption would assist an organization with data accuracy for decision-making, forecasting staffing assignments, and improve resource efficiency metrics. Tracking and monitoring assists an organization in mitigating risks such as, early staffing issue detection, performance evaluations, and resource optimization.</p> <p>Condition: There is an absence of formalized documentation for measuring and tracking resources. The absence of resource consumption tracking and monitoring makes it challenging for the County to assess its resource efficiency and identify opportunities for cost savings and sustainability improvements.</p> <p>Cause: No supporting documentation related to monitoring and tracking resource consumption exists.</p> <p>Consequence: Ineffective Resource Allocation</p>	<p>Recommendation: Refer to the Finding #8 recommendation.</p>	High	<p>Management's Response: Management agrees with these findings. Action Plan: ITS will implement tools which will assist with reporting resource consumption to the IT Governance Committee. Owner/Responsible: Lee Gerney Personnel: ITS Target Completion Date: 12/31/2024</p>

Contact Information

If you have any questions about this report, please contact:

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