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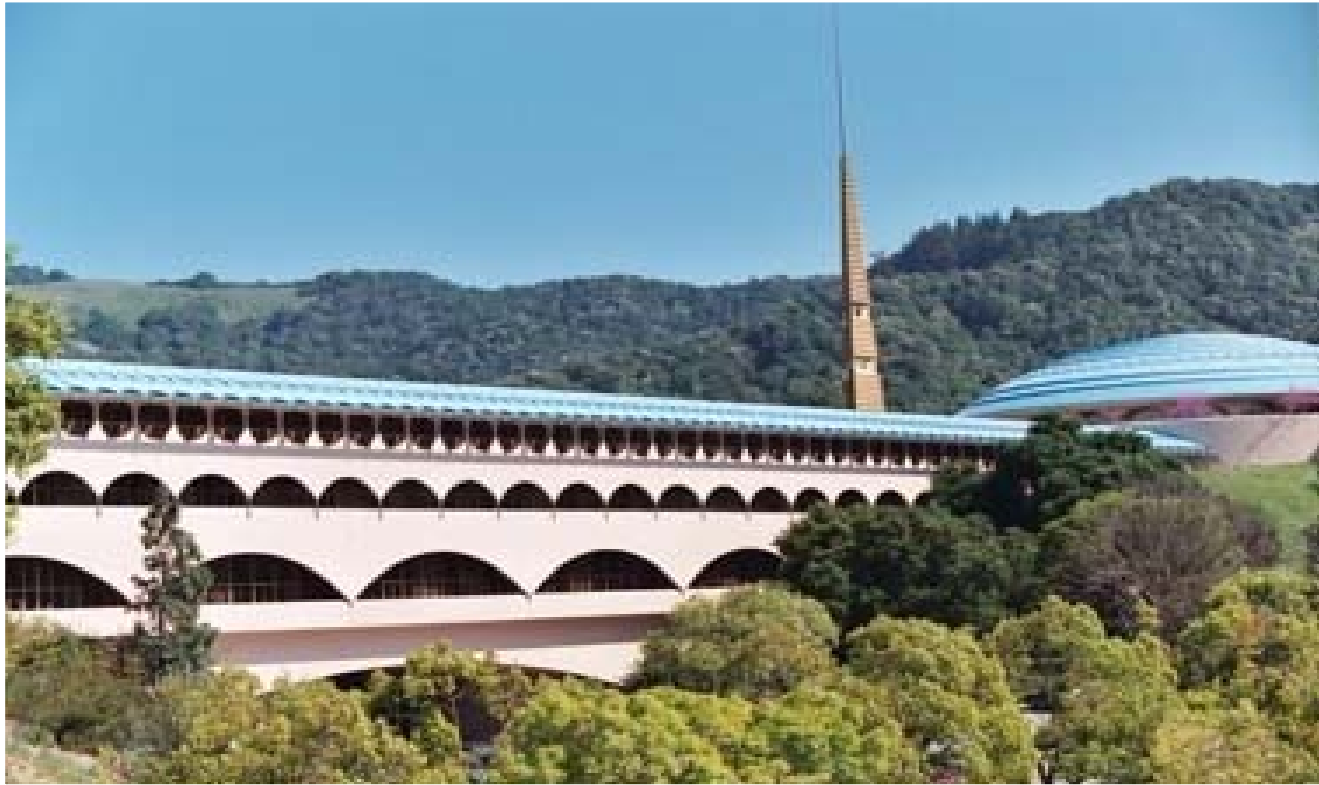
Assessment of Marin County Software

Information Systems & Technology

County of Marin

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Assessment of Marin County Software

Brief History of Marin County Software

The County implemented the SAP computer software in 2006 to use as its Enterprise Resource Planning (ERP) system. ERP systems provide a single computer system to manage an organization's financial, human resources and logistics business functions. Today, the County's SAP system is not completely functional, and it has not been implemented in all areas originally planned. The results of this incomplete implementation are that the County does not have a fully functional ERP system, and individual departments continue to provide workarounds for those areas that were not completely implemented or not implemented at all. As a result of this incomplete implementation, it is felt that the County has not realized its expected benefit of the SAP system and therefore has not begun to realize the intended return on investment for this system. As part of our long-term restructuring process, we have evaluated our computer system to ensure it is consistent with our organizational goals and available resources.

Executive Summary

In May of 2009, Dave Hill formed a small team to begin assessing the SAP implementation. The goal of this report is to provide the County with the current state of SAP and options for moving forward.

This analysis concentrated on two areas:

1. Thorough review of existing ERP requirements
   a. Independent of any software system, establish the County's ERP requirements
   b. Once ERP requirements were established, measure them against current SAP functionality
2. Review alternatives to SAP to benchmark functionality, pricing and implementation timing

The chart below, Figure 1, shows the current state of the SAP implementation by function – such as General Ledger, Accounts Payable, Human Resources, etc. Figure 1 shows that 50% of SAP functions have been installed and are functioning correctly. Further detail is provided in Figure 2 that reviews the SAP implementation by function. For example, 66% of the Accounts Payable functions are working in SAP, 18% are working but not necessarily in SAP, and 13% are not working at all – either in SAP or outside of SAP.

Currently, all new work and improvements on SAP are "on hold" and the support staff is only providing on-going maintenance. This hold on SAP improvements will continue until the County decides whether to stay with SAP or move to a new software system.

Marin County SAP Installation Status
by Mandatory SAP Function
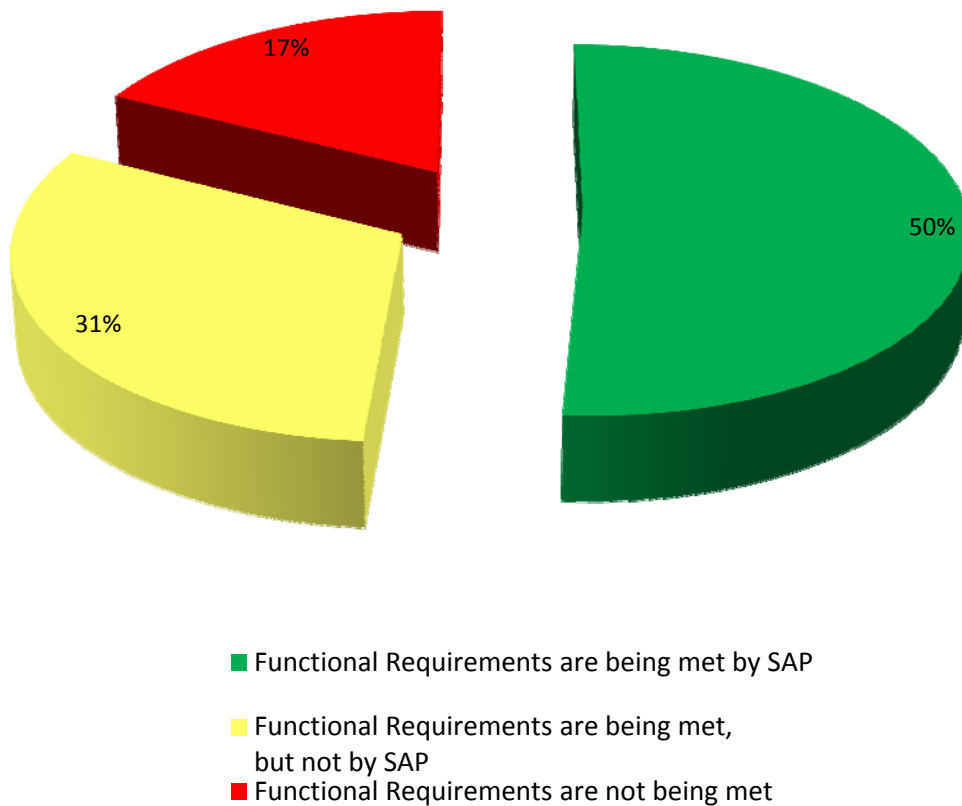

- Functional Requirements are being met by SAP
- Functional Requirements are being met, but not by SAP
- Functional Requirements are not being met

Figure 1. *SAP Installation Status by Function*
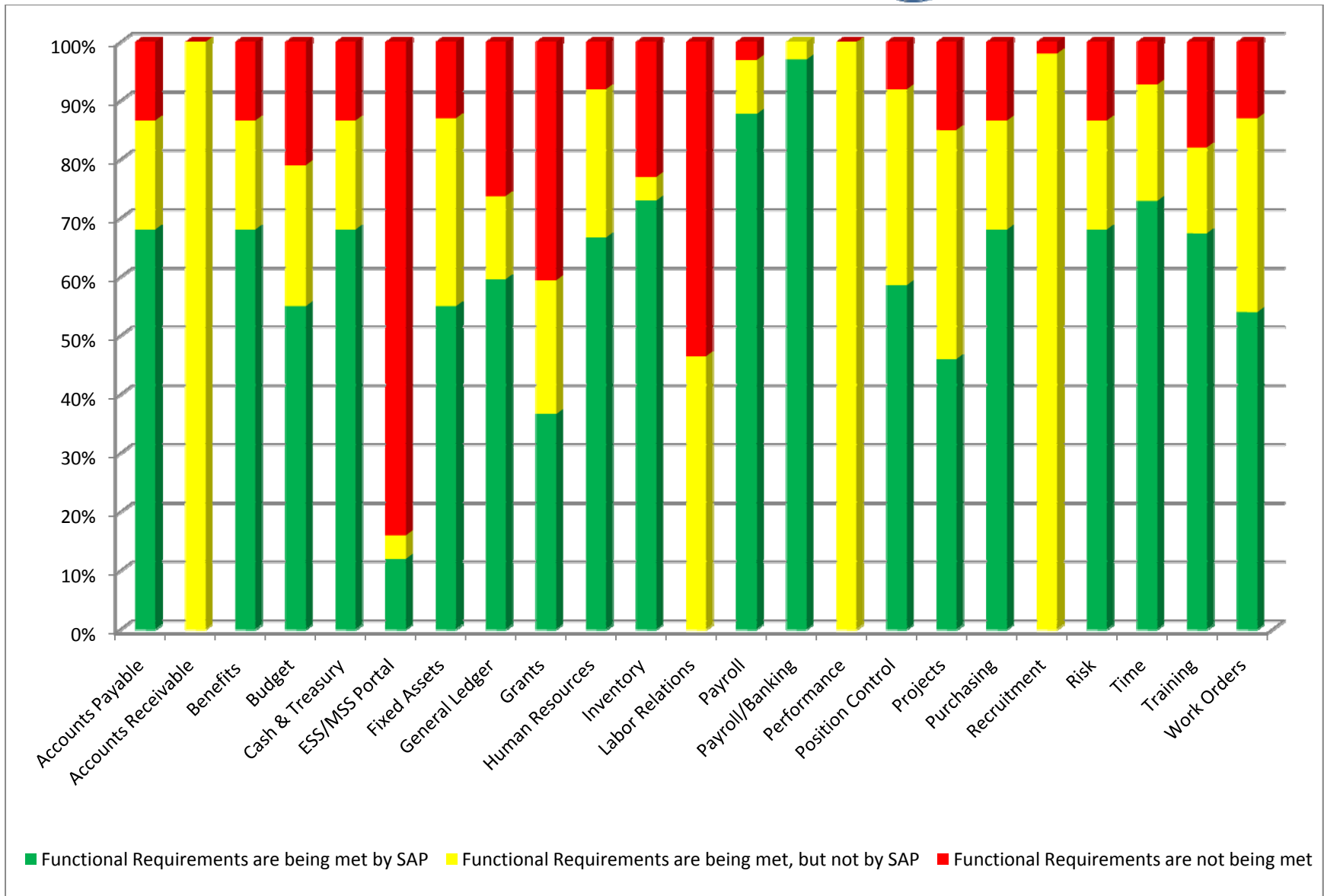
Figure 2. *SAP Reviewed by Function*

Assumptions

The following assumptions were used as a basis for this evaluation:

1. SAP will be fully functional and meet almost all requirements
2. We are basing all input on a 10-year Total Cost of Ownership (TCO)

Methodology/Approach

The assessment methodology covers the following areas:

1. Review and document existing ERP requirements with each department
2. Develop a set of requirements that reflects current needs and requirements
3. Identify alternate solutions and options to compare to SAP
4. Assess the County's readiness to fix SAP or implement a Public Sector computer system

The analysis team worked with a County steering committee composed of leadership from the primary departments to identify each Business Process, its Business Process Owner (BPO), and its relevant Business Process Community (BPC), which is the team of people who support the Business Process Owner to help create a high performance process. The team then met with each BPO and BPC to identify the requirements for each business process as they align with departmental goals. A result of these sessions is a comprehensive set of requirements that show what is being met by SAP and what is not.

These requirements have been provided to Phoenix Business Consulting, an independent SAP consulting organization who reviewed the unmet requirements and provided an estimate to fix them within the current configuration of the County's SAP system. The four consultants have a combined 72 years implementing SAP, 41 of which are in the public sector.

These consultants also worked with the SAP support team and some SAP end-users to understand what is working in SAP and what is lacking. From this work, the SAP consultants have identified the tasks that need to be completed in order for SAP to be completely implemented and functional. The consultants incorporated these tasks into an overall work plan and have provided estimates of time and costs for each task. This allows the County to understand what functions are still missing in SAP and the time, resources, and cost will be required to make SAP fully functional.

The County's most experienced SAP team members have reviewed the estimates from Phoenix Business Consulting and agree that they are reasonable and justifiable.

Other system options that were designed specifically for the public sector were not as widely available when we first looked at SAP; they are now and are used by other counties. In order to provide a benchmark for SAP alternatives, we chose, with the help of Gartner, four Public Sector ERP vendors. We invited them to provide demonstrations and estimate costs:

1. SunGard Public Sector
2. Tyler Technologies
3. New World Systems
4. Microsoft Dynamics

The above companies, except for Microsoft, provided in-depth demonstrations and estimated pricing for an ERP system. Microsoft did not choose to participate.

The County also engaged Leckey Consulting to provide a realistic expectation of what the County could expect with a SunGard IFAS implementation, which we believe is representative of a Public Sector ERP system. Steve Leckey has

implemented various ERP systems at numerous counties and cities, including Shasta County and San Mateo County, California (counties that are close in size to Marin). He studied our requirements, the 2005 SunGard bid, and the 2009 SunGard high-level estimate. He then applied lessons learned from his extensive experience and presented an estimate of time, resources, and cost for an implementation of SunGard IFAS at Marin County, which we incorporated into our benchmarks.

Readiness

Throughout this effort, IST is cognizant that SAP is not fully implemented. As a result, County staff is still working with an incomplete system and is accomplishing some tasks via workarounds outside of SAP. As part of the overall SAP assessment, IST has assessed the County's readiness to spend additional time in either fixing SAP or implementing a new ERP system.

We have incorporated readiness, or the ability, priority, and willingness to handle change, as one of the overall factors in making a decision to move forward with one of the options below.

The departments are ready to have a system that meets their needs. However, due to competing priorities as well as staff and budget constraints, these departments do not feel they have the resources to dedicate to a project right now. Over the past three years, the County has reduced 180 staff positions. This decrease in staff impacts departments' ability to allocate staff to a software project. Despite staffing hurdles, departments are unanimous in their desire to improve our current situation.

In general, the primary user departments have adapted to SAP. These departments have:

- Strong agreement that there is a compelling need to improve SAP
- Neutrality as to a compelling need to replace SAP
- Agreement that there will be strong resistance to changing SAP

Critical success factors for a software project impacting every department in the County include:

1. Management Commitment
    - Consistent, overt commitment across the County by all levels of management and staff
2. Reasonable Staff Workload
    - The County needs to backfill or make conscious trade-offs to be successful without casualties
3. The Right Team
    - The right people with the right skills in key roles

Software Study Results

IST hired Phoenix Business Consulting to review the County's SAP software. The goal of the Phoenix study is to determine where:

1. SAP is working correctly
2. SAP is not working correctly
3. SAP is not installed but could satisfy that functionality
4. SAP does not address that functionality

In addition, Phoenix provided an estimate of time, resources, and costs for bringing the SAP software up to full operation.

IST provided Phoenix Business Consulting extensive documentation. Three Phoenix Business Consulting consultants were present on-site at Marin County to examine our SAP software system and to interview support staff and key department personnel. Below is a summary of their findings:

- The SAP system, as configured, does not meet many of the original objectives of the SAP implementation project as defined in the Implementation Services Agreement with Deloitte Consulting dated March 29, 2005.
- Users have expressed unhappiness with the method in which the current SAP system functions and have expressed that the system does not meet their requirements.
- There are a large number of areas where the design needs to modified, the SAP system reconfigured and reports created. The number of problems identified exceeds the amount of issues normally expected in a system that has been live as long as Marin's.
- The configuration is incomplete and needs to be reconfigured.
- Reporting requirements are not being met. Additional reports need to be implemented.
- The configuration of the SAP system was set up incorrectly during the original SAP implementation (organization structure, general ledger accounts, Grants Management, Payroll accounting, etc.).
- Some of the configurations do not follow best business practices.
- System configuration and business processes are not fully documented.
- The SAP system does not produce basic financial reports.
- The SAP system requires excessive effort to maintain and operate on a daily basis.
- The Marin County SAP support staff is very knowledgeable. However, our initial finding is that the current staffing needs to be supplemented to continue the support of the SAP system.
- Although there are areas where the SAP system needs to be reconfigured, repaired and redesigned, **the majority of the errors can be corrected**.

In the Conclusion to their report, Phoenix Business Consulting states:

> *Based on our preliminary findings, there are serious process and functionality issues and significant deficiencies with the design and implementation of the SAP system at Marin County. The SAP configuration in many areas needs to be revisited and reconfigured. Business processes need to be redesigned and new reports created. The new configuration and business process will have to be tested extensively by the County before being implemented. The change in configuration and business process will result in additional training for end users.*
>
> *We believe the issues can be resolved to the satisfaction of the County but will require significant resources from outside consultants and Marin County staff.*

Key takeaways from the report are that SAP appears capable of meeting all major requirements for the County's software system needs:

- Estimates to make all the corrections are between 30-60 months depending on resource and budget availability.
- Repairs are estimated at $5.4 million.
- The above cost estimate does not include end-user documentation, training, and internal Marin County resource costs. These costs will be estimated in the next planning phase.

Assessment Results from Other Public Sector ERP Software

Leckey Consulting, an independent ERP management consulting organization with an exclusive focus in the public sector industry, reviewed Marin County's business requirements. The goal of the study is to determine independently if previously received information from Public Sector ERP vendors is "in the ball park" and is consistent with vendor estimates. The Leckey Consulting study of a SunGard IFAS implementation validated these estimates.

Key takeaways are:

- Total Hard Costs of implementing SunGard are $3.7 million (adjusted to be consistent with SAP)*
- County staffing requirements for implementation are 11 FTEs over 30 months
- County staffing requirements for ongoing maintenance are 6 FTEs*
- Estimated implementation time is 30 months in 3 phases
- Recommendation is to implement financial functions first
- Implementing HR first may be challenging and cause rework when financials are implemented
- There are no major functions that SunGard IFAS cannot accommodate
- Identified SunGard IFAS gaps in Marin's requirements for Training (currently Learning Solution in SAP)

* For comparison purposes below, we used the conservative estimate of $5.4 million to implement and 7 FTEs to maintain a Public Sector ERP implementation, despite the fact that Leckey Consulting has estimated a SunGard IFAS implementation at $3.7 million and 6 FTEs to maintain.

External Evaluation Feedback

Although it is difficult to project a direct match to Marin County's operations and needs, based on reference calls to 18 other public sector entities, we found that a SunGard Integrated Financial and Administrative Solution (IFAS) or a Tyler Munis implementation requires approximately 5 FTEs for support and an SAP implementation averages approximately 18 FTEs.

We also found that the majority of the software implementations were on-time and on-budget and that the implementations took in the 30-month range. Again, this is a generalized estimate because of the differences in what was being implemented and when these implementations occurred; some implementations were 10 years ago, so technology and skills will be different today.

Options

Cost Comparison and Resulting Options

In order to understand the cost basis to re-implement SAP, it is necessary to benchmark what it would cost to implement a Public Sector ERP system. As referenced earlier in this report, we chose, with the help of Gartner, four Public Sector ERP vendors:

1. SunGard Public Sector
2. Tyler Technologies
3. New World Systems
4. Microsoft Dynamics

The vendors chosen, with the exception of Microsoft, represent dedicated Public Sector ERP systems. See the basic Total Cost of Ownership (TCO) for both SAP and Public Sector ERP systems in Figures 3 and 4, below.

Implementation Options

1. <u>SAP Status Quo.</u> Based on costs, work estimates, available resources, and readiness factors, the County may choose to make no changes at this time, continue to operate in a Run Mode that does not support Continual Improvement related to the Board of Supervisors' policies, and delay any recommended actions.

    a. *Pros.* Keeping SAP would allow County staff to work with a known system for an additional amount of time, even if dysfunctional in certain areas.

    b. *Cons.* Departments are currently not able to do certain functions in SAP that are required, such as basic government reporting, and these jobs require them to work the information manually. This will continue to "cost" Marin in real dollars.

2. <u>Fix SAP and Support Continual Improvement.</u> This option would make the necessary repairs to SAP to bring it to full functionality. Increase the size of the support team so that the software would be adaptable to new business processes, policies, and legal requirements.

    a. *Pros.* The County has only one system to maintain and does not have to maintain interfaces with external, third party systems. SAP allows the County flexibility in setting up its business functions within the software. Fixing SAP would also allow County staff to stay with a system with which they are already familiar. Increasing the size of the support team as recommended in the Phoenix report would allow for policy changes and continual improvements to be quickly reflected in the software. County staff would not be subject to another system implementation effort.

    b. *Cons.* SAP is expensive to maintain and can be complex to use. This option would cost the County $5.4 million to fix SAP and then $4.4 million per year in County employee full-cost salaries and software maintenance fees.

3. <u>Fix SAP and Run Only.</u> Make the necessary repairs to SAP to bring it to full functionality and decrease the size of the support team to support the implemented functionality only.

    a. *Pros.* The County has only one system to maintain and does not have to maintain interfaces with external, third party systems. SAP allows the County flexibility in setting up its business functions within the software. Fixing SAP would also allow County staff to stay with a system with which they are already familiar. County staff would not be subject to another system implementation effort.

    b. *Cons.* SAP is expensive to maintain and can be complex to use. This option would cost the County $5.4 million to fix SAP and then $2.6 million per year in County employee full-cost salaries and software maintenance fees. Although the annual cost is less than the Fix SAP and Support Continual Improvement option, a smaller support team would be less able to support Continual Improvement.

4. <u>Replace SAP with a New System(s).</u> This option would completely replace SAP with a Public Sector ERP system that fully meets all the County's needs as defined in the requirements and gap analysis reports.

    a. *Pros.* Replacing SAP with a Public Sector ERP system that is specifically designed for organizations like Marin County could provide an overall less expensive system than SAP while providing similar functionality and in some cases, greater ease of use for the people using the system. A Public Sector ERP system may require 50% or less staff than SAP to maintain, and therefore long-term staffing costs will be reduced.

    b. *Cons.* The County will be required to maintain SAP for at least two years during build and implementation. Any new system would be a "start from scratch" effort requiring heavy participation from the departments. A new system would be a major undertaking and require heavy resource usage which may not be "popular" with the average worker.

Total Cost of Ownership (TCO) Analysis

For this study, we are projecting a simple TCO based on cost of implementation, annual maintenance licensing, and cost of support staff. While there are many other factors that apply, these bare-bones numbers are fairly accurate and represent a 10-year time period.

Options	Staffing + Start up Cost	1x* Cost	Ongoing Annual Cost *(post-implementation)*	10 Year Total Cost
SAP Status Quo	23 FTEs (current staffing)	$0	$3.5 m	$34.7 m
Fix SAP and Support Continual Improvement	30 FTEs + $5.4m Implementation Cost (7 staff added per Phoenix recommendation)	$5.4 m	$4.4 m	$49.8 m
Fix SAP and Run Only	17 FTEs + $5.4m Implementation Cost	$5.4 m	$2.6 m	$34.1 m
New ERP System	7 FTEs + $5.4m Implementation Cost	$5.4 m	$1.2 m	$26.2 m

Figure 3. *10-Year Total Cost of Ownership*
*Public Sector ERP estimate per consultant report who implemented for other California Counties is $3.7m for Marin. We used $5.4m to provide a conservative estimate and match the SAP price for calculation purposes.

Figure 4 shows estimated costs for each of the options identified above over a 10 year period. Although Leckey Consulting estimated a SunGard IFAS implementation at Marin County to cost $3.7 million and require 6 FTEs to maintain, we used a conservative estimate of $5.4 million and 7 FTEs for comparison purposes. The graph below compares the four options shown above.
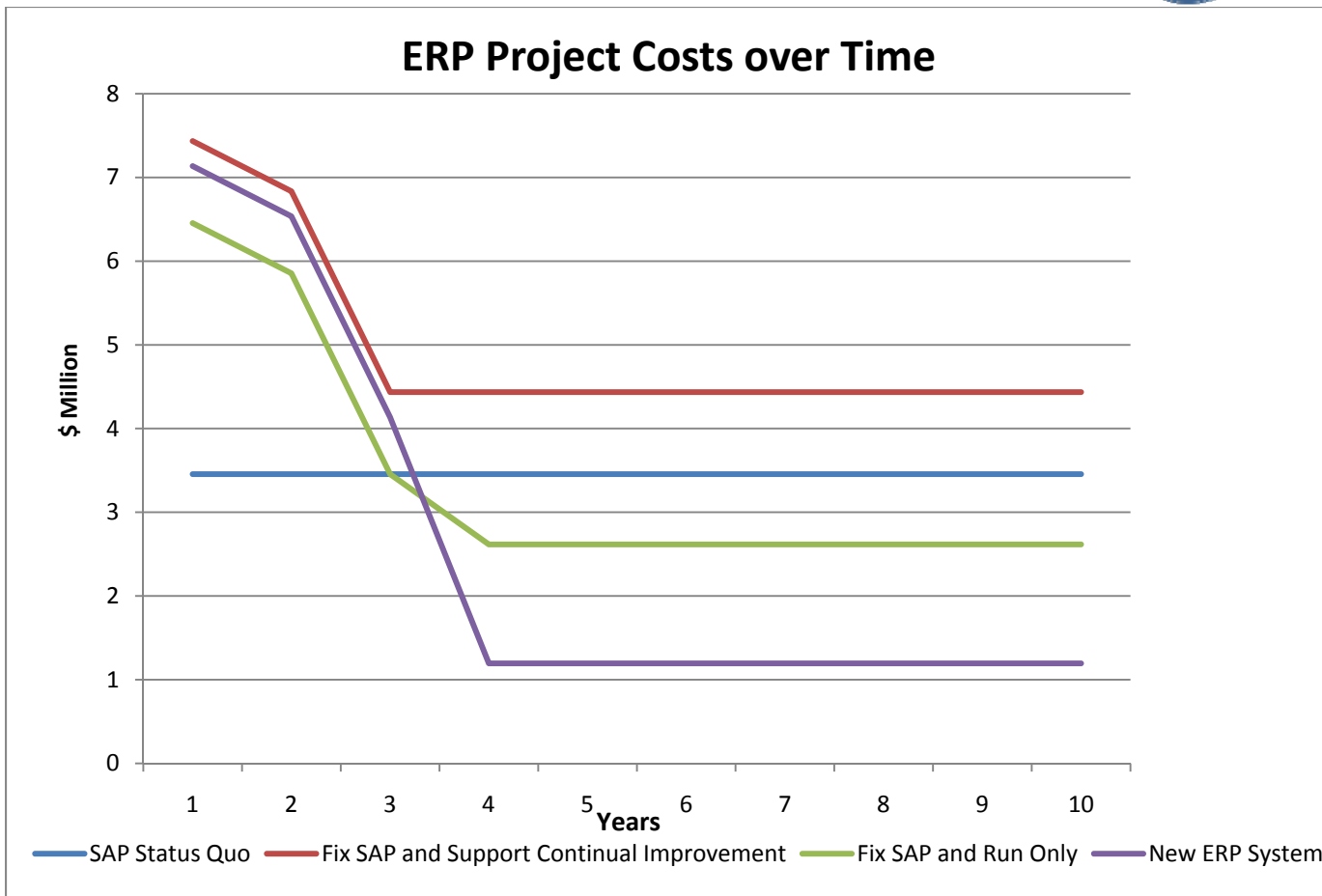
ERP Project Costs over Time

SAP Status Quo · Fix SAP and Support Continual Improvement · Fix SAP and Run Only · New ERP System

Figure 4. *Simple TCO Projections over 10 Years*

Recommendation

As a result of these studies, the County can understand the estimated cost and level of effort it will require to reconfigure the SAP system to meet current requirements and to implement a new Public Sector ERP system. Generally speaking, all requirements can be met in both SAP and Public Sector ERP systems. Those few requirements that cannot be met are identified in the Phoenix Business Consulting SAP report and the Leckey Consulting SunGard IFAS report, and none of them are considered "showstoppers."

This report represents due diligence for the SAP software that Marin County is currently using. It documents the research that substantiates the estimates to repair and maintain SAP versus the estimates to implement and support a Public Sector ERP system.

This report does not review the "Best of Breed" option where different systems would interface with each other. This may be another option for the County to consider.

After reviewing the findings from the Phoenix report and the pricing benchmarks for different Public Sector ERP systems, the Steering Committee reached a consensus that the County should investigate "New ERP" options. There are two compelling reasons for this recommendation:

- The "New ERP" option considers Public Sector ERP systems that are built specifically for organizations like ours
- The "New ERP" option costs less than all other options:
  - SAP Status Quo

- o Fix SAP and Support Continual Improvement
- o Fix SAP and Run Only

With approval from the Board of Supervisors, the next goal would be to develop a plan for the next phases of this project, including the following steps:

1. Strategic Plan with reasonable checkpoints, the ability to make adjustments, and with a County-wide focus
2. ERP Legacy Support and Transition Plan for the current SAP software system and support team
3. Alternative Solutions Research Plan
4. County/Departmental Readiness Plan
5. Implementation Plan for a Public Sector System in 2-4 years