**THE COUNTY OF ORANGE
AUDITOR-CONTROLLER**

ERP CAPS+ ANALYSIS – ERP APPLICATION ALTERNATIVES ASSESSMENT REPORT

FINAL

Intueor   KPMG

JULY 2022

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Section 1. Executive Summary

Project Overview and Purpose

This document summarizes the findings and recommendations based on team Intueor's analysis of the County of Orange Auditor-Controller's (County) current Enterprise Resource Planning (ERP) system, CAPS+. The focus of this study, and associated recommendations within this document, was to analyze CAPS+ current ability to service the County's ERP needs related to critical Finance, Budgeting, Procurement, Payroll, and Human Resource needs. Critical to this analysis was the system's ability to meet the needs of County business stakeholders today, while also allowing future flexibility, growth, and the incorporation of modern-day best business practice enhancements for the future.

Analysis Process

To conduct the analysis and make a formal recommendation for how the County can best achieve their ERP related business needs and modernize their system to support best-business practices, the Intueor team followed a systematic project approach which included the following major steps:

Identification & Development of Requirements	Quantify & Analyze Gaps of Current System vs. Needs	Analyze and Evaluate Options to Overcome Gaps	Generate Recommendation for Achieving ERP Needs

Exhibit 1 - Analysis Approach Used to Conduct Study and Determine Recommendations

This approach allowed for the careful analysis of the current CAPS+ system, incorporated critical inputs and needs of County stakeholders both from a business and technology perspective, and quantitatively evaluated several different leading options for how to best achieve the ERP needs of the County.

Current State of CAPS+

Based on the analysis performed, the Intueor team discovered functional and technical gaps within the CAPS+ system. Specifically, it was determined that of the 787 technical and functional ERP business requirements gathered during this project – which covers a combination of stakeholder and business defined system needs as well as modern-day best practice capabilities of ERP systems and Finance/HR business functions – that CAPS+ meets roughly 60% of identified requirements. Although functional and stable today, the CAPS+ system, as currently implemented, is reaching end-of-life and limits the ability for functional growth, utility of the system, and leveraging the integration and functional capabilities of a modern ERP system.

Recommendation Overview

Considering the current state of CAPS+, as well as other impacts, the Intueor team recommends that procuring a Commercial off the Shelf (COTS) software package is the best option for modernizing the Finance and HR systems and overall business needs of the County as it provides the most long-term flexibility while ensuring that functional and technical needs are achieved with the highest degree of quality and control. This approach gives the County the opportunity to evaluate all leading options in a competitive environment in which vendors (including CGI) must commit to specific deliverables and must provide competitive pricing.

Intueor recommends the County deploy a Software-as-a-Service (SaaS) model in order to best leverage the financial, scalable, and functional benefits and capabilities of a modern ERP application. Additionally,

due to the size and complex nature of the County's business processes and wide-ranging stakeholder needs, it is recommended that the County utilize the structure and services of an experienced Program Management Office (PMO) to help with business process re-design, implementation oversight, and Organizational Change Management (OCM) activities. These services and approach will provide the County with the most successful path forward for a comprehensive implementation that will help deliver the system efficiently with the least amount of program risk. Due to the amount of new functionality that would be implemented, and the associated business process changes involved, having a structured and focused workstream directly responsible and experienced in managing the business processed re-design activities and overall transformation effort will help with the speed of delivery and the rate in which the new system gets fully adopted by the end users.

It should be noted that this recommendation does not directly specify a replacement of CGI Advantage. It is extremely likely that if the County was to go out for the procurement that CGI would be a major vendor that would bid on the proposal and would be considered accordingly.

ERP Market

Overall, the ERP market and the associated offerings available today are very mature and can fully manage the complex business rules and system integration requirements of the County.

Since the County's implementation of CGI roughly two decades ago, with an upgrade of the Financial/Procurement system in October 2016 and an upgrade of the HR/Payroll system in May 2017, market offerings have evolved greatly to provide more flexibility, remote access, functional and technical capabilities, computing power, and seamless integrations with other supporting systems and business intelligence and reporting tools.

Considering the rate at which the market has evolved, compounded by the impacts of Cloud computing, Intueor believes that if the County looks to the evolving ERP market, including CGI, for their next ERP system it will provide the best path forward for growth and scalability while also offering the greatest opportunity to leverage the advantages of next generation offerings in the ERP market.

Financial Considerations

Procuring and implementing an ERP system is a costly endeavour that should be carefully managed and planned to achieve the greatest Return on Investment (ROI) from the new ERP implementation. The recommendation of going to market for a SaaS based COTS ERP solution represents the lowest barrier of entry for the County, while also providing the flexibility to scale the system and number of users over time. Furthermore, going to the market via competitive procurement provides the County the ability to view and demo multiple ERP options at different price points, leverage competitive pricing via the bid process, and select the best value system for their needs.

Other Considerations

The team did not review external, third party, or supplemental systems outside of CAPS+ that may be in use by the County or other third-party vendors providing technology services or support to the County. The team assessed how these systems may interface or interact with CAPS+ but did not assess those systems functionality independent of CAPS+. Examples of these systems include Eureka, ARA, etc.

Considering this, there may be some business applications in use by the County today whose functionality could be absorbed and supported by a new ERP system. This would create more value to the County by eliminating the direct and indirect maintenance and support costs of multiple legacy systems while providing more integrated solutions. Prior to proceeding with the procurement of a COTS ERP system, Intueor strongly recommends that the County consider performing a detailed business applications

assessment to determine which other systems in use by County departments would be potential candidates for moving to the new ERP platform.

Conclusion

Based on the research and analysis conducted, Intueor recommends that the County procure a SaaS based COTS ERP solution to replace their current implementation of CGI. This approach provides the County with the highest degree of control, scope, flexibility, and ultimate quality of the new system implementation while also providing the most ERP options at a competitive price. Considering the size and complexity of the County, careful planning should be conducted prior to going to market to ensure that overall scope needs and program management requirements are properly identified and planned for. This will ensure the highest degree of quality and the most efficient rate of adoption and utilization of the new system.

Please refer to the body of this document, as well as all work products and project artifacts in Appendix A, for more detail on the process and analysis conducted to support these recommendations.

Section 2. Document Introduction & Purpose

The County of Orange Auditor-Controller (hereby referenced as "the County") has hired the team of Intueor Consulting, Inc. and KPMG (hereby references as "Intueor") to analyze the current ERP system (CAPS+) and perform an assessment as to the system's overall capability to meet the current and growing business needs of the County.

This document summarizes the findings and recommendations based on the Intueor team's analysis and provides the following elements in detail to support the overall recommendation of procuring and implementing a Commercial off the Shelf (COTS) ERP solution:

1. A formal recommendation for how the County can modernize their ERP system and supporting business functions and leverage modern-day best business practices and ERP market capabilities and technologies.
2. An overview of the project, analysis, and systematic approach for conducting the assessment.
3. An overview of the options analyzed for upgrading or replacing the CAPS+ system. This includes detail as to how each option was assessed and the criteria used to determine the overall recommendation.
4. Implementation considerations and recommendations for how to best procure, implement, maintain, and manage a new ERP solution.
5. An estimated Implementation Roadmap and schedule, by phase, for the deployment of a COTS ERP application.
6. Rough Order of Magnitude (ROM) cost for system acquisition and implementation of a COTS ERP application tailored to the needs of the County.
7. An estimation of work tasks, activities, and associated estimated resources and level of effort for managing the recommended implementation.
8. Supporting detail and reference documents of the work products and project artifacts developed by the Intueor team to provide support for the recommendations within this document (Appendix A).
9. A high-level overview of the ERP market summarizing the ERP landscape and known vendors in the market capable of providing ERP applications that fit the functional and technical needs of the County.

The Intueor team focused their analysis on the CAPS+ system's ability to perform current best practices and meet County defined business requirements for critical Finance, Budgeting, Procurement, Payroll, and Human Resource (hereby referenced as Finance/HR) functions.

To conduct this analysis, the Intueor team engaged stakeholders throughout the County to understand their business needs from an ERP system perspective and analyzed the current CAPS+ system's ability to meet those needs. Additionally, considerations related to achieving flexibility and capabilities to support the growing demands of daily business operations and modern-day best practice approaches to implementing and maintaining ERP systems weighed into the analysis and associated recommendations within this document.

2.1 Recommendation Overview

Based on the analysis performed, the Intueor team identified functional and technical gaps within the CAPS+ system. Specifically, it was determined that of the 787 technical and functional ERP business requirements gathered during this project – which covers a combination of stakeholder and business defined system needs as well as modern-day best practice capabilities of ERP systems and Finance/HR

business functions – that the CGI Advantage software meets approximately 60% of identified requirements.

Considering this, as well as other impacts, the Intueor team recommends that procuring a Commercial off the Shelf (COTS) software package is the best option for modernizing the Finance and HR systems. This approach will provide the most long-term flexibility while ensuring that all functional and technical needs are achieved with the highest degree of quality and control. This approach gives the County the opportunity to evaluate all leading options in a competitive environment in which vendors, including CGI, must commit to specific deliverables and must provide competitive pricing. Additionally, this option allows the County to move to a Cloud-based deployment model, which is highly recommended by the Intueor team. Specifically, Intueor recommends the County deploy a Software as a Service (SaaS) model in order to best leverage the financial, scalable, and functional benefits and capabilities of a modern ERP application.

Additionally, due to the size and complex nature of the County's business processes and wide-ranging stakeholder needs, it is recommended that the County utilize the structure and services of an experienced Program Management Office (PMO) to help with business process re-design, implementation oversight, and Organizational Change Management (OCM) activities. The System Integrator (SI) selected will be an expert with implementations of the selected software provider. These services and approach will provide the County with the most successful path forward for a comprehensive implementation that helps deliver the system efficiently with the least amount of program risk to the County. Due to the amount of new functionality that would be implemented, and the associated business process changes involved, having a structured and focused workstream directly responsible for and experienced in the management of business process re-design activities and overall transformation efforts will help with both the speed of delivery and the rate in which the new system gets fully adopted by the end users.

The sections below detail the process approach, critical areas analyzed, and associated summary analysis, that led to this recommendation.

2.2 Recommendation Process and Analysis

To conduct the analysis and make a formal recommendation for how the County can best achieve their ERP related business needs and modernize their system to support best-business practices, the Intueor team followed a systematic project approach which included the following major steps:

| Identification & Development of Requirements | → | Quantify & Analyze Gaps of Current System vs. Needs | → | Analyze and Evaluate Options to Overcome Gaps | → | Generate Recommendation for Achieving ERP Needs |

Exhibit 2 - Analysis Approach Used to Conduct Study and Determine Recommendations

This approach allowed for careful analysis of the current CAPS+ system, incorporated critical inputs and needs of County stakeholders both from a business and technology perspective, and quantitatively evaluated several different leading options for how to best achieve the ERP needs of the County.

A detailed overview of each major step is described in the subsections below. Please see Appendix A for supporting documentation and project artifacts that support the work performed in performing this work across each project task.

2.2.1   Identification and Development of Functional and Technical ERP Requirements

Throughout fieldwork performed, the Intueor team collected 787 requirements across core financial, procurement, human resources, and payroll functional areas. The purpose of these requirements is to gauge the level and quality of which the current CAPS+ system meets the County's needs and sets the foundation for a future business vision and the fulfillment of potential technical requirements to support that vision.

The Intueor team, in consultation with Orange County stakeholders, created a list of applicable business requirements using a comprehensive list of leading practices for the Finance, Procurement, Payroll and HR functional areas identified below:

Finance and HR Functional Areas Reviewed	
Finance Functions	**Procurement Functions**
• Accounts Payable • Accounts Receivable • General Ledger • Cash Management and Bank Reconciliation • Fixed Assets • Planning and Budgeting • Grants • Travel and Expense • Asset Management • Payments and Reconciliation • Project Management and Accounting	• Purchase Orders • Receiving • Inventory Management • Reporting and Analysis
Human Resources/Payroll Functions	**Technical Functions**
• Payroll • Work Force Administration • Time Management • Total Rewards • Learning and Talent Management • Employee Benefits • Employee Records	• Access and Security • Mobility/Employee Self-Serve • Reporting / Business Intelligence • Infrastructure • Integration • Workflow / Business Process Support • Delivery / support model

Exhibit 3 - Listing of Finance and HR Functional Areas Reviewed

Additionally, unique business requirements to meet Orange County needs were identified through interviews and workshops with Orange County stakeholders. The Intueor team leveraged KPMG's Powered Enterprise framework to help drive the requirements gathering process. Leading practice process flows and taxonomies were leveraged during workshops to help align the County's future state requirements with leading practices for public sector organizations and to help drive the transformation of existing manual processes.

The business requirements are defined and summarized in a Requirements Traceability Matrix (RTM) by functional area and priority. These business requirements are written in clear, concise, and unambiguous language, and are specified at a consistent level of detail. The business requirements are not design or

implementation solutions and do not conflict with other requirements and are designed to focus on functional needs, not specifically associated with any individual ERP vendor or solution.

The requirements in the RTM were reviewed and validated by Orange County stakeholders that participated in the requirements elicitation to validate the accuracy and completeness of these requirements. The RTM has integrated the leading practice business requirements with the unique Orange County business requirements identified in this process. This RTM should be included within the County's RFP, so that vendors can identify how they can meet these business requirements, upgrade the current CAPS+ system with the current vendor, or complete new integrations with the current system. The complete RTM is provided in Appendix A (Requirements Matrix).

It is important to note that the Intueor team did not review external, third party, or supplemental systems outside of CAPS+ that may be in use by the County or other third-party vendors providing technology services or support to the County. The team assessed how these systems may interface or interact with CAPS+ but did not assess those systems functionality independent of CAPS+. Examples of these systems include Eureka, ARA, etc.

2.2.2   CAPS+ System Gap Identification and Performance Analysis

Using the RTM as a baseline, the Intueor team thoroughly analyzed the level of capability in which CAPS+ achieves the stated requirements. Additionally, the Intueor Team utilized the knowledge and documentation from interviews and workshops with Orange County stakeholders to evaluate the current delivery model and the existing applications that support the County's Finance and HR business processes today. The information obtained from the County was analyzed to determine potential functional process or performance needs.

During this analysis, process and performance gaps were documented along with other key attributes, including the cause of functional process gaps, if determinable, the impact (if any) on the current system environment, and how these gaps may impact efficiency and effectiveness at both the business and system level.

The gaps identified during the analysis were ranked based on the impact of the gap to the County's current business processes versus future state needs. The impacts are measured as follows:

Impact	Description
High	Focuses on process areas that have the most impact on the overall operation and productivity of the County processes.
Medium	Focus on process areas that have a moderate impact on the overall operation and productivity of the County processes.
Low	Focus on process areas that have a low impact on the overall operation and productivity of the County processes.

Exhibit 4 - Functional Impact Importance Descriptions

In the High Impact area there are major areas of processing and systematic gaps resulting in inefficiencies, lack of modern system integrations with the CAPS+ system, lack of robust reporting, lack of extensive security features and workflow, lack of validation, lack of audit trails, and lack of automation of current business processes.

Most notably, these include General Ledger, Cash Management and Bank Reconciliation. These gaps include manual processes and reconciliation that may impact the County's ability to effectively manage financial transparency and increases the risk of human error in critical business processes. Further, high impact gaps related to Accounts Receivable and Cash Management limit the ability of the County's CAPS+ system to integrate with external third-party systems or platforms in use by departments or agencies. This lack of integration and automated workflow increases processing time and decreases the ability of the County to maintain an audit trail of transactions.

The table below summarizes the gaps by functional area:

Functional Area	High Gap Impact	Medium Gap Impact	Low Gap Impact
Accounts Payable	1	1	1
Requisition	0	1	1
Procurement	3	4	1
AR/Cash Management	5	6	3
Capital Budgets	1	3	0
Contract Management	2	2	0
Grants	2	5	2
GL and Bank Reconciliation	10	0	0
Fixed Assets	1	3	0
HR	0	2	0
HR/Payroll	0	2	0
HR/Benefits	0	2	3
HR/Time Management	2	3	1
HR/Workforce Administration	0	0	3
HR/Class and Comp	0	2	0
Financial Reporting	3	4	0
Vendor Management	0	1	0
Total	**30**	**40**	**15**

Exhibit 5 - Gap Impact Identification

The graphic below rates each functional area in terms of severity based on identified gaps and impact. Red is a high severity area, yellow would represent a medium severity area and green a low severity area.

Functional Area Severity (Based on Gaps)							
Accounts Payable	Requisitions	Procurement	AR/Cash Management	Capital Budgets	Grants	GL and Bank Reconciliation	Fixed Assets
HR	HR/Payroll	HR/ Benefits	HR/Time Management	HR/Work. Admin.	HR/Class and Comp	Financial Reporting	Vendor Mgmt.

Exhibit 6 - Impact Severity Matrix for CAPS+ Gaps

2.2.3   Options Analysis and Evaluation

This activity identified and detailed the options available to the County to close known gaps while improving functional and technical capabilities. The options identified were analyzed against a common set of evaluation criteria in order to help best identify the most impactful option for the County to consider when determining how best to fulfill its ERP needs. Analysis of all options was summarized and evaluated to provide the ranking of each option, relative to each other.

The potential options for fulfilling identified requirements and overcoming system gaps were defined based upon the County's needs, considering the state of the organization's current ERP system and technical environment. Evaluation criteria were developed to rate the pros and cons of each option. The result of the analysis was used to help identify the recommended option most beneficial for the County to meet its requirements, considering all factors including cost and risk.

The approach to identifying the best option for the County is based on a standard evaluation methodology. Pursuing the modernization of an ERP is a mission-critical and expensive task demanding that decisions be based on a thorough, rigorous, and formal evaluation of both the quantitative and qualitative costs, benefits, and risks associated with each option. The recommended solution must be a practical, viable, implementable, and affordable choice that will provide the ERP needs required to attain the County's business goals and objectives. The following details the approach taken:

1. Finalize the scope and objectives of the ERP solution embodied in the functional and technical requirements, including the identification of boundaries.
2. Identify and define options. Options are based on alternative methods of achieving ERP system needs from current systems to future goals. These will include one or a combination of enhancing, modifying, customizing, replacing, supplementing, eliminating, or upgrading various portions of the County's application portfolio. Options will include a "do nothing" option (status quo) as a baseline for comparison, even if doing nothing is not an acceptable alternative. The options will describe the alternative solutions for enhancing or implementing an ERP System (e.g., new application, upgraded application, etc.)
3. Identify the key evaluation criteria and how these criteria will be weighted and applied to evaluate options. Criteria are identified based on the County's objectives, as well as standard industry best practices in options analysis.
4. Assess and rate each option by applying the criteria and calculating evaluation scores. Review and validate the scores based on experience and confidence in the ratings.

5. Tabulate and rank the options and perform a check to ensure that evaluations ring true and appropriately consider all factors. Identify any issues, such as scores that seem inconsistent or out of line with other rankings, especially when based on large scoring variances in different criteria. Utilize sensitivity analysis if required to resolve close scores or ties, and further identify the primary factors affecting scores.

6. Confirm the cost-benefit of high-ranking options. In some cases, an option will be ranked very high, but comes at an unacceptably high cost or risk. This practicality check is an important step in validating evaluation rankings.

7. Select the most beneficial option for the County, all things considered, and flush out projected implementation details.

As part of the analysis, four main options were analyzed as viable considerations for the County when looking to upgrade or replace CGI's Advantage system. The options are detailed below:

Option#	Criteria Title	Criteria Description
1	Status Quo	The Status Quo is the "do nothing" option. This option is traditionally included in evaluations to serve as a baseline for comparison with other options, even if it is not truly a viable alternative. This is the case for Orange County. This option includes continuing the normal pace of current application maintenance and enhancement, and the implementation of planned changes and additions. So, this option is not just the current applications, but also the current development, software maintenance, and support processes.
2	Upgrade, Expand, and Re-Implement CGI Advantage	This option is to take advantage of the full capabilities of CGI Advantage to support all requested ERP functionality. It is a bottom-up re-implementation designed to maximize the fit with the County's requirements and to maximize the benefit to the County for effective and efficient support for Finance and HR functions. This option represents an overall upgrade, redesign, and implementation of CGI Advantage with an attempt to retain some of the investment in existing licensing, training, support, etc. and shorten the learning curve for users. The system user interface and conventions, operations look and feel, menus, etc. would be mostly familiar for current users, based on the upgrade and new configuration.
3	Best of Breed	This option is to solicit, evaluate, and procure commercial off-the-shelf (COTS) products that are focused on fulfilling the functional needs and gaps of the County's CAPS+ system. It would mean retaining elements of CGI Advantage for select Finance and/or Human Resources (HR) functionality and then selecting best of breed market products to fill in the gaps of missing functionality. Multiple options, depending on

Option#	Criteria Title	Criteria Description
		the scope of needs of the County, could be considered, such as: Upgrading CGI for Finance and going to market for HR functionality or fulfilling all missing functionality with market options while retaining core elements of the current CGI Advantage system.
4	COTS ERP Software Package	This option is to solicit, evaluate, and procure a COTS software solution that best meets the County's requirements based on an RFP process and product availability within the ERP market.

Exhibit 7 - CAPS+ Upgrade or Replacement Options

A common set of evaluation criteria (described below) was developed that embody the factors that measure the degree to which ERP solution options (described above) will meet the County's objectives, satisfy industry standards and ideals for effective applications, and present acceptable costs and risks. The criteria developed are as follows:

Criteria #	Criteria Title	Criteria Description
1	Ability to Meet Requirements	The ability of the software to meet functional and technical requirements and to fill the gaps in current application capabilities.
2	User Experience/Consistency of Operations	The level of consistency in operations, presentation and user interface, conventions, and design leading to ease of use and a shorter learning curve.
3	Integration/Interfaces	The level of integration within the software and externally, minimizing data entry, reducing redundancy, and effectively sharing information across all software modules and products.
4	Flexibility and Scalability	The ability to modify, reconfigure, and expand to accommodate changes in business, technology, and regulations.
5	Availability of On-Going Support	The availability of staff trained in the software, user groups, external support, and the frequency of regular updates, patches, and upgrades.
6	Use of Modern Technology	The degree to which the solution is based on state-of-the-art technology, such as for database administration, security, reporting and analysis, interoperability, etc.

Criteria #	Criteria Title	Criteria Description
7	Life Cycle Costs	The estimated cost of deploying the solution over its life, typically broken down into one-time acquisition costs and on-going annual costs.
8	Time to Implement	The length of time required to implement the solution, also called "time to value" to describe how long the organization will need to wait to begin gaining the benefits of the solution.
9	Implementation (Project) Risk	Difficulty to implement, probability of issues or problems occurring.
10	Fit with IT Strategy and Environment	General fit with overall IT strategy, technical environment, and preferences. Such as: • Deployment model • Security • Support Model/Staffing • Customization(s)

Exhibit 8 - Evaluation Criteria for Weighing Upgrade or Replacement Options

To ensure a consistent evaluation of options, the criteria described above were weighted to reflect their relative importance and a standard rating scale was used to rate each option. The following table displays the weights and rating scale used for the ERP solution options evaluation. The weights represent the consensus priorities reviewed by County staff:

Criteria	Weight	Rating Scale 0-5
Ability to Meet Requirements	20	Estimated level of requirements met – 90 - 100% = 5 points 76 – 89 = 4 61 – 75 = 3 41 – 60 = 2 21 – 40 = 1 0 – 20 = 0
User Experience/Consistency of Operations	10	High = 5 Medium =3 Low = 1
Integration/Interfaces	10	Fully integrated = 5 Mostly integrated = 4

Criteria	Weight	Rating Scale 0-5
		Moderate integration = 3 Some integration = 2 Little integration = 1 No integration = 0
Flexibility and Scalability	10	High = 5 Medium =3 Low = 1
Availability of On-Going Support	7	Readily available/regular updates = 5 Some available/irregular =3 Hard to find/no regular updates = 1
Use of Modern Technology	5	High = 5 Medium =3 Low = 1
Life Cycle Costs	15	Assign points 1 – 4 based on range of costs (graded on the curve). Highest cost solution = 1 Lowest cost solution = 4.
Time to Implement	5	Longest = 1 Medium =3 Shortest = 5
Implementation (Project) Risk	13	High = 1 Medium =3 Low = 5
Fit with IT Strategy and Environment	5	High = 5 Medium =3 Low = 1
Total	100	

Exhibit 9 - Evaluation Criteria Weighting and Rating Scale

Each of the ERP System solution options were evaluated and scored using the evaluation criteria and rating scales listed above. The evaluation involved reviewing the characteristics of each option relative to the criteria and considering how each option compares with others. For example, when evaluating risk, the general risk level of the option is considered, as well as whether it is more or less risky than other

options. The following tables illustrate the relative ranking of all options for each criterion. For a detailed analysis and description of how and why each option was scored specific to the identified criteria, please see Appendix A (Orange County CAPS+ ERP Options Analysis Report).

The following tables shows the summary of scores for all options, followed by the overall rankings:

Criteria	Weight	Option 1 - Status Quo		Option 2 - Upgrade, Expand, and Re-Implement CGI Advantage		Option 3 - Best of Breed		Option 4 - COTS ERP Software Package	
		Score	Total	Score	Total	Score	Total	Score	Total
Ability to Meet Requirements	20	3	60	4	80	4	80	5	100
User Experience/Consistency of Operations	10	3	30	3	30	1	10	5	50
Integration/Interfaces	10	2	20	4	40	3	30	5	50
Flexibility and Scalability	10	3	30	3	30	3	30	5	50
Availability of On-Going Support	7	3	21	3	21	3	21	5	35
Use of Modern Technology	5	3	15	5	25	5	25	5	25
Life-Cycle Cost	15	4	60	3	45	2	30	1	15
Time to Implement	5	5	25	3	15	1	5	1	5
Implementation (Project) Risk	13	5	65	5	65	1	13	3	39
Fit with IT Strategy and Environment	5	3	15	5	25	1	5	5	25
	100		341		376		249		394

Exhibit 10 - Calculated Options Evaluation Scored

Options Rankings	
Option	**Total Score**
COTS ERP Software Package	394
Upgrade, Expand, and Re-Implement CGI Advantage	376
Status Quo	341
Best of Breed	249

Exhibit 11 - Options Evaluation Final Rankings

2.2.4   COTS Recommendation

Based on this evaluation, a COTS ERP Software Package was the highest scoring option for the County; largely based on the functional capabilities, flexibility, and the County's overall ability to procure and select a system that best fits their needs from a growth, integration, technological advancement, and deployment and support perspective. This option ultimately allows the County to design a specialized procurement that ensures that all of their collective needs are met with the highest degree of quality and capability. **It should be noted that this option does not directly specify a replacement of CGI Advantage.**

It is extremely likely that if the County was to go out for procurement that CGI would be a major vendor that would bid on the proposal and would be considered accordingly.

Section 3. Implementation Considerations and Recommendations

This section summarizes the key considerations that the County should consider when determining how best to approach the procurement and implementation of a COTS ERP solution. It is important that the County considers factors outside of the initial software purchase and adequately plans for, budgets, and appropriately staffs the procurement and implementation processes and phases. Specifically, the sections below summarize the County's options and considerations:

1. Procuring and implementing the ERP solution.
2. Deploying and maintaining the ERP solution.
3. Program/Project management activities, and
4. Managing organizational change and business process enhancements.

3.1 Procurement

Any upgrade or replacement of an ERP system requires two main elements: procurement of the solution(s) and implementing the solution. When determining how best to plan for and manage the procurement process, the County should consider if they want to identify and select the System Integrator (SI) responsible for implementing the solution at the same time, in the same RFP, as the ERP system or if they want to first select the ERP solution and then issue a separate RFP for an SI.

The options below summarize the two leading best practice approaches to consider when procuring ERP Software and SI services:

1. Combining the procurement of the software and services into a single procurement. In this scenario the County would issue a single RFP.

2. A separate procurement for each key component. For this option, the County would issue one RFP for the software and a second RFP for the implementation services.

The SI market for Tier 1 ERP solutions that will best fit the County's needs and requirements have a very stable and mature footing in the industry. There are advantages and disadvantages to both options however, it should be noted that some ERP vendors (e.g., CGI and Tyler Munis) are the only ones to implement their system and do not rely on or support the utilization of outside SI vendors.

Below, we provide additional detail on the two options along with advantages and disadvantages for both options along with our recommendation for this consideration.

3.1.1 Single RFP vs Technology/SI RFP

Single Procurement/Request for Proposal (RFP): Under this option the County would issue a single RFP that would include both the COTS software and the system integration services for the implementation of the software. With this option, the software vendors may submit a response solely to provide both the software and services or they may partner with a systems integrator that will propose the implementation services. Ultimately, if the selected software vendor chooses to partner with a systems integrator, this single procurement would result in two contracts.

Key advantages of a single procurement are:

- Higher quality responses. Software vendors will partner with the systems integrators that will provide them with the best opportunity to win the procurement.

- Shorter procurement time and effort with both the software and services being procured concurrently.

- Along with the shorter procurement time, a single procurement will be less expensive than two procurements.

- The single procurement has become the leading practice in ERP software procurements.

Disadvantages of a single procurement:

- May result in a lower number of systems integrator responses if they are not able to partner with a software vendor.

- When combining software and SI in a single RFP all elements are commonly weighted and scored collectively. This may prohibit some preferred software due to cost concerns or other implementation concerns for SI vendor(s) attached to a single RFP.

Two Procurements/Request for Proposals: In this option, the County would issue two proposals. The first RFP would be for the software. Once the County selects the software, a second RFP would be issued for the SI services for the implementation of the software. The two RFPs will result in one contract for the software and a second contract for the implementation services.

Advantages for two procurements:

- Allows the County to focus on selecting their most favorable software and SI. This scenario helps ensure that the County is selecting the best of breed option for both the ERP solution and the SI services.

The disadvantages of two procurements:

- Longer time for two procurements. The procurement cycles will occur consecutively due to dependence on first selecting the software.

- Two procurements will result in more effort and more expense.

- Quality and experience of SI vendors responding would vary. In this scenario, it is strongly recommended to take a "best value" procurement approach over selecting the lowest cost proposer.

- Unintended consequence of potentially preventing key software vendors from participating. There are some software vendors that provide both software and services and do not partner with third party systems integrators. This would include the County's current provider, CGI, along with Tyler Technologies.

3.1.2   Recommendation

Intueor recommends the County select the option of going to market with a single RFP. For this consideration the advantages heavily lean in favor of this option. These advantages include the high probability that the County's current software vendor, CGI, will respond to the proposal. Since CGI is the only implementor of their system, this option creates the most balanced and fair approach to considering CGI while also expanding the candidate pool of potential ERP vendors. Additionally, it's advantageous to want the software vendor and the systems integrator to be partners if the vendor goes to a third party

for the services. This combined with the shorter procurement timeline are the reasons for this recommendation.

3.2 System Deployment and Maintenance

As the County embarks on its planning for its next steps, one of the key items to consider is whether or not the future ERP will be an on-premise system or one hosted in the cloud supported by a Software as a Service (SaaS) model. Increasing demand for real time data analysis, remote monitoring and predictive maintenance in various industries make the ERP system an essential component to the County's success and the model in which the ERP is supported is equally as important.

While an On-premise ERP offers more ability to customize system components, tighter control over application infrastructure and data access controls, the market and public sector is moving increasingly towards a hosted cloud or SaaS model. The cloud model offers overall reduced infrastructure and maintenance costs, increased flexibility and scalability, shorter deployment timeframes and the ability to rely on service providers for ongoing updates. The graphic below summarizes the key differences between the cloud and on-premise models. In considering a move to the Cloud, the County will notice there are several options, a Public Cloud, Private Cloud, or Hybrid. In a Public Cloud environment, the software is hosted on a platform that may be in use by several customers, whereas a Private Cloud is in use by only one. The County should consider regulatory requirements when selecting which cloud hosting option to select.

According to Panorama Consulting Solutions 2019 survey, 64 percent of organization chooses Cloud ERP as preferred deployment option primarily due to reduced maintenance costs.

Parameter	Public Cloud	Private Cloud	Hybrid Cloud	On-premise
Infrastructure	Hosted remotely and used by multiple customers	Hosted remotely and used for dedicated customer	Combination of public, private, and on-premise	Hosted on organizations' local server and systems
Customization	Very Limited	Yes	Yes	Yes
License Owner	Vendor	Vendor	Customer	Customer
System Updates	Quarterly updates, done by vendor	Quarterly updates, done by vendor	Annual updates, co-managed	Annual updates, done by customer
Maintenance Fee	Yes	Yes	Very low	No

Cloud ERP is offered to organizations through three options, **Public, Private and Hybrid Cloud Model**
- As per Panorama Consulting Solutions 2019 ERP Survey of 241 organizations, **21 percent** use **public cloud** model and **14 percent** use **private cloud** model
- **Only 9 percent** of the surveyed organizations have opted for a **hybrid cloud ERP model**

On-premise is a traditional model where vendors provide organizations the software **installed on in-house servers**
- Panorama Consulting Solution's survey indicates that on-premise ERP is **deployed by 37 percent of the organizations in 2019**

Exhibit 12 - ERP Hosted Model Descriptions

It is suggested that the County strongly consider a move to a SaaS based model as part of their ERP upgrade effort. The sub-sections below, as well as the Market Analysis documents detailed in Appendix A provide more detail about deployment and maintenance options.

3.2.1   On-Premise, Hosted, SaaS

In an on-premise deployment the software would be installed on physical hardware that is owned by the County, and typically located in the County's own data center. An on-premise deployment model requires the County to have in-house server hardware, software licenses, integration capabilities, and IT employees to manage and support the systems. Orange County's current CAPS+ system is an on-premise deployment.

The advantages and disadvantages of the On-premise deployment model are detailed in the table below:

Advantages & Disadvantages of On-Premise Deployment	
Advantages	**Disadvantages**
• Security on client-side • Client has the option to customize the software • Greater control over system	• Significant up-front costs for infrastructure and licenses • Typically, a longer implementation • Maintenance of infrastructure by the client • Less flexibility and scalability • More challenging to access system and data remotely and on mobile devices • Software vendors are investing greater dollars and effort in developing SaaS model

Exhibit 13 - Advantages & Disadvantages of On-Premise Deployment

A hosted deployment model is a Cloud solution that combines elements of both the on-prem and SaaS deployment models. In this deployment the organization pays a third party to maintain its data center which is hosted in a Cloud environment. Several examples of Cloud providers include Amazon Web Services and Microsoft Azure. In this model, in addition to paying for the hosting services, the organization will be responsible for the software licenses.

The table below provides the advantages and disadvantages for the hosted "hybrid"

Advantages & Disadvantages of Hosted Deployment	
Advantages of Hosted Deployment	**Disadvantages of Hosted Deployment**
• Client has the option to customize the software • Maintenance on the vendor side • Greater access to your data and information	• Higher up-front cost • Security on the vendor side • Longer time to implement • Some loss of control over system

	• Software vendors are investing greater dollars and effort in developing SaaS model

Exhibit 14 - Advantages & Disadvantages of Hosted Deployment

A SaaS deployment is a Cloud computing model where a third-party provider hosts and manages Cloud-based applications that Orange County would access over the internet. The third party owns the servers, storage, databases, and software, and would deliver them to the County as a service. The services would be provided to the County on a subscription basis and typically includes maintenance in the cost.

Provided below are the advantages and disadvantages of considering a SaaS deployment:

Advantages & Disadvantages of SaaS Deployment	
Advantages of SaaS Deployment	**Disadvantages of SaaS Deployment**
• Lower up-front cost • More rapid implementation • Maintenance of infrastructure on the vendor • Increased flexibility and scalability • Greater access to your data and information • Software vendors are investing greater dollars and effort in developing SaaS model	• Security on the vendor side • Limited customization of base product • Some loss of control over system

Exhibit 15 - Advantages & Disadvantages of SaaS Deployment

3.2.2   Recommendation

Provided below is a summary comparison table of the deployment options presented above. Based on this comparison it is the recommendation of Intueor that the County consider a SaaS deployment model when procuring a COTS ERP Software Package. Some of the major benefits of the SaaS model for the County are:

- Scalability, in the subscription basis, it's "pay as you go" where the County would pay for what they use.

- Maintenance, the task of maintaining the infrastructure, software, and upgrades is the responsibility of the vendor.

- Vendor Marketplace, the vendors are focused on investing on developing their SaaS offerings based on leading industry practices and processes.

Parameter for Consideration	On-Premise	SaaS	Hosted

Up-front cost		✓	
Security	✓		
Time to Implement		✓	
Software Customization	✓		✓
Maintenance		✓	✓
Control	✓		
Flexibility		✓	
Data Access		✓	✓
Marketplace		✓	

Exhibit 16 - ERP Deployment Model Comparison

3.3 Program Management Activities

ERP system implementations are large and complex IT projects that can impact virtually every aspect of an organization, including employees, vendors, elected officials and taxpayers. In many cases, business processes are adjusted while implementing new technology and both impact the day-to-day jobs of employees. The project manager fills an essential role by leading the organization, setting the tone for the overall project, and helping to escalate and manage issues as they arise.

ERP system implementations of this size and complexity for agencies as large as the County are most successful when managing the project as a "program". Program Management is the process of managing projects/programs mapped to business objectives that improve organizational performance. Unlike traditional project management, which typically represents a singular, focused piece of work, Program Management is the act of managing multiple, related projects, with diverse stakeholders and workstreams that align to achieve major strategic initiatives and business transformation.

3.3.1 Options

Major leadings options to consider for the Program Management Activities are:

- Rely solely on County resources in combination with a vendor or SI project manager.

- Manage the overall ERP project through a Program Management Office (PMO). It should be noted that the County A-C does have an experienced internal PMO that could assist with managing the project. With that said, it would be advantageous to seek additional assistance from a vendor who specializes in providing PMO support services surrounding large, complex, ERP business transformation projects.

Following below we provide a narrative of project management best practices along with recommendation for the two options presented.

3.3.2 Program Management Activities Best Practices

When considering the options of Vendor versus PMO, it is important to understand the program management activities and best practices that need to occur for the successful delivery of an ERP project. Whatever option is selected, the program management for the project will need to perform and provide support in the following tasks and activities:

- Develop a project planning and execution framework that addresses goals and objectives; implementation scope, sequencing, methodology, deliverables; team roles and responsibilities, decision support framework; all project management procedures, forms and templates – schedule, deliverables review and acceptance, QA/QC, communications, change management, issues and risk management, customizations review and approval, document control, scope change control, invoice review and approval; and overall project governance framework.

- Provide the Day-to-Day Program Management Activities including the following coordination and oversight activities:

  o Scope Management – monitor scope compliance and alert the County on potential scope creep and risks; develop a change control framework to include change criteria and operational processes for change orders; verify activities and deliverables are satisfactorily completed by the vendors as scoped in the respective contracts and deliverable acceptance criteria.

  o Schedule Management – review of the project plans and help identify potential problems, providing suggested alternatives as appropriate; coordinate with the County stakeholders to manage the project schedule periodically; determine schedule variances, causes, and facilitates mitigation to address the variances.

  o Invoices, Payment and Budget Management – maintain and administer a program cost spreadsheet that will enable up-to-date program cost reporting; processing of invoices for payment release on completed and accepted deliverables.

  o Functional Support – interface with and assist the vendor teams in the understanding of the County's business and technical needs, requirements and expectations; oversee the development of detailed functional specifications, design, configuration and customization; manage the County staff's review of the functional specifications, and support the County and the vendors validate the specifications; manage the County staff's review of business and workflow processes and recommend how processes may be modified.

  o Technical Support – work with the County's IT infrastructure and vendor teams to ensure that timely procurement of infrastructure for system development, testing and development; assist the County in the evaluation of suitable systems architecture (as necessary); assist the County on decisions related to application customization, integration, data conversion and migration.

  o Issues and Risk Management – identify issues at an early stage when there is adequate time to mitigate potential problems; administer vendor developed processes that identify, track, manage and close project issues and action items; oversee the development and execution of risk management methodology to address risk identification, quantification, and mitigation.

  o Quality and Testing – manage QA/QC plans that will identify quality standards and deliverable acceptance criteria; provide a framework for evaluating the performance on a regular basis

and monitor results to determine compliance with the program objectives; assist in the development and validation of system test and UAT plans.

- At the completion of the project, work with the County to complete the project close-out activities and perform the lessons learned analysis

3.3.3 Recommendation

Intueor strongly recommends that the County consider utilizing a PMO approach and structure for the implementation of their future ERP system. The role of a PMO on an ERP project is to support the owner, i.e., acting as the owner's representative and enabling successful delivery of the ERP system. Overreliance on ERP vendors to provide overall project management is risky, as the vendor's targets and goals may not be aligned with the County's and issues and risks may not be managed in the best interests of the County. For example, it is possible a vendor may wish to frontload the payments, increase price or cancel/eliminate parts of their obligations.

An experienced PMO will have managed a wide range of ERP engagements gaining experience and expanding their capability to successfully manage projects for their clients; additionally, this experience will have allowed them to continuously refine and mature a project management approach, toolkits and frameworks, templates, benchmarks, and lessons learned – as discussed above. Ultimately, a PMO approach leads to quicker and more successful system implementations.

3.4 Organizational Change Management (OCM) Activities

Unlike project management, which is focused on the realization of the technical solution, change management is focused on the achievement of the desired results or outcomes of change by managing the people side of change. Organizational Change Management (OCM) is a framework that enables employees to adopt new values, skills, and behaviors, so that business results are realized. This section reviews the options for managing and conducting the OCM project activities.

This is a critical, and often overlooked or under supported, process in managing business transformation projects. Inherently, with any IT system deployment, especially an enterprise-wide system, business process changes occur. Managing these changes, and the people impacted by them, via OCM tools and techniques help to increase the speed and rate of adoption with the new ERP system.

3.4.1 Options

Often, OCM is a project management element that is not properly planned for, addressed within the project budget, or staffed with appropriately skilled resources. However, when properly planned for as part of project delivery there are two main approaches utilized:

- Rely on the software or SI vendor to provide these services; typically as an "add-on" requiring additional costs as part of their services.

- Acquire OCM services through a specialized third-party, independent from the software vendor or SI. This approach is commonly included as part of a well-staffed and experienced PMO (see above).

These options assume that there is not an internal OCM workgroup or credentialed OCM resources to manage OCM activities as part of the project.

3.4.2 Organizational Change Management Best Practices

When considering the options of software or SI vs independent vendor, it is important to understand the project management activities and best practices that need to occur for the successful delivery of an ERP project. Whatever option is selected, OCM will need to perform and provide support for the following tasks and activities:

- Overall change impact assessment. The objective is to review the overall change and how it will impact the County. This assessment provides the situational awareness that is critical for effective change management. This helps identify the core values, beliefs, behaviors, and perceptions that must be considered for successful change to occur. It serves as a baseline for designing essential communications, key messages, and interventions needed to drive change. Examples of common assessment outputs include:

    o Identification of the critical elements, major business process changes, most complex or challenging aspects, and key stakeholders impacted by the change.

    o Analysis of potential pockets of internal resistance that need to be managed and overcome in order for the project to be successful.

    o Determine the overall change management risk for the project.

- The design of an overall strategy for managing the change: Based on items identified as part of initial assessment activities, a change management strategy should be developed. This strategy should address specific ways in which change issues will be managed and should provide a framework for managing stakeholder engagement and communication activities.

- Change enablement activities, which include daily management of OCM related tasks. Common activities include identifying and managing OCM related risks, identifying and communicating training needs, Business Process Redesign (BPR), and contributing to overall project communications.

3.4.3 Recommendation

For similar reasons described for Program Management, Intueor recommends that the County consider engaging an experienced OCM vendor to help provide oversight and delivery of OCM tasks and activities related to implementing a future ERP system. Like program management, while both the software vendor or SI and the County would be working for the successful completion of the project, they may likely measure and identify success differently.

A professional and experienced OCM, working directly for the County and sitting on their side of the table, will be a strong advocate for the County and will have established tools and techniques that will provide structured communication plans, and activities to drive key messages and goals from the top and then throughout the organization.

Additionally, the County's decision to engage a consultant or vendor to support Project Management/Independent Verification and Validation/Organizational Change Management during the ERP implementation (as well as the ERP Implementation Vendor's scope responsibility with respect to these areas), will influence these estimates.

Section 4. Implementation Roadmap

The team developed a high-level implementation roadmap based on the County's requirements and priorities based on historical knowledge of SI vendor implementation processes and methodologies. These implementation roadmaps include the estimated time required for the individual components within the design, build, testing, and deploy stages as aligned to a 23-month timeline to implement the financial, procurement and HR modules.

Should the scope of the ERP application system implementation be adjusted (e.g., addition of additional modules, specific training requirements) then these estimated implementation schedules would also need to be adjusted accordingly. Each application system implementation can be a different experience based on the scope and size of the organization.
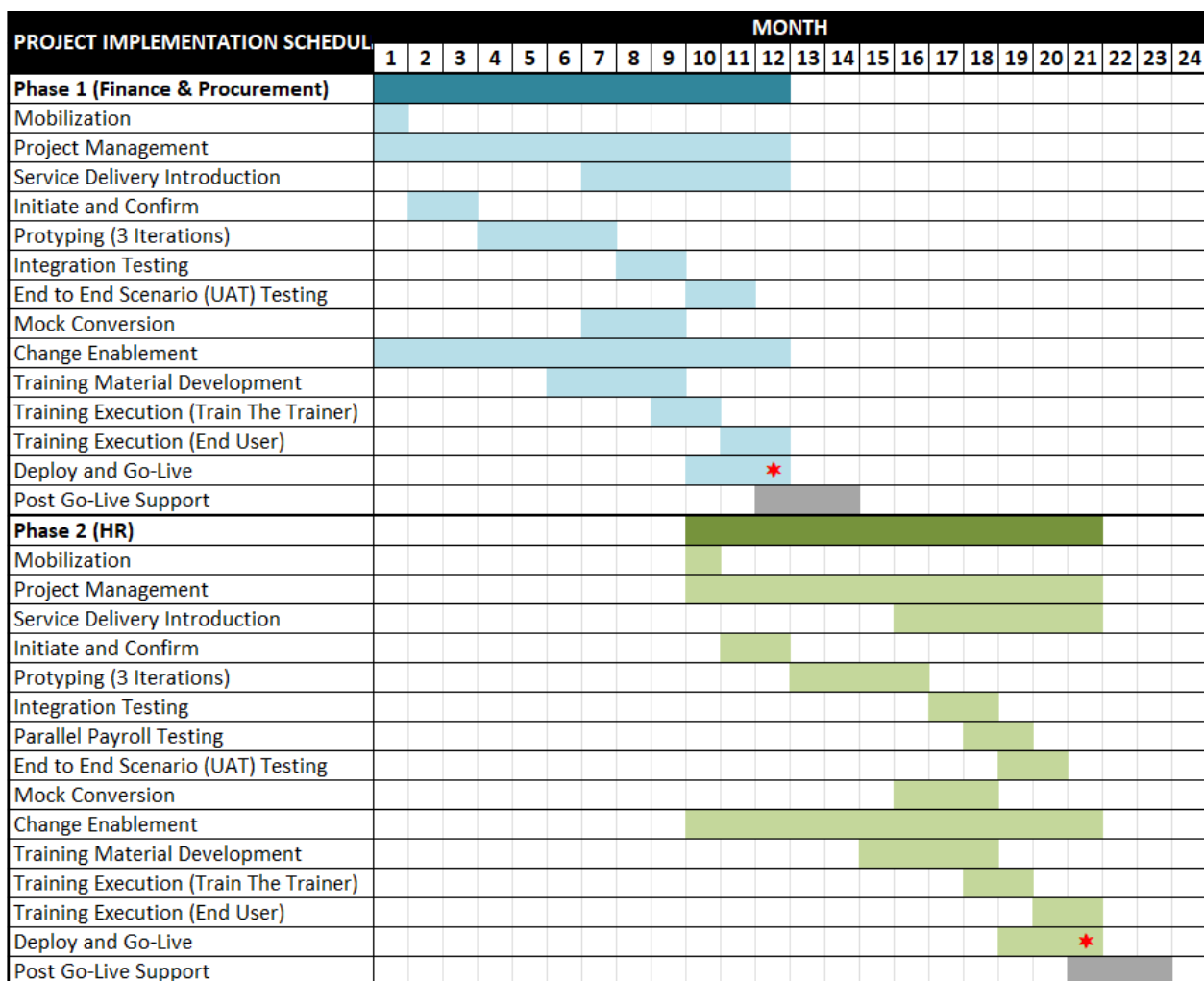
PROJECT IMPLEMENTATION SCHEDULE	MONTH																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Phase 1 (Finance & Procurement)																								
Mobilization																								
Project Management																								
Service Delivery Introduction																								
Initiate and Confirm																								
Protyping (3 Iterations)																								
Integration Testing																								
End to End Scenario (UAT) Testing																								
Mock Conversion																								
Change Enablement																								
Training Material Development																								
Training Execution (Train The Trainer)																								
Training Execution (End User)																								
Deploy and Go-Live											✳													
Post Go-Live Support																								
Phase 2 (HR)																								
Mobilization																								
Project Management																								
Service Delivery Introduction																								
Initiate and Confirm																								
Protyping (3 Iterations)																								
Integration Testing																								
Parallel Payroll Testing																								
End to End Scenario (UAT) Testing																								
Mock Conversion																								
Change Enablement																								
Training Material Development																								
Training Execution (Train The Trainer)																								
Training Execution (End User)																								
Deploy and Go-Live																							✳		
Post Go-Live Support																								

Exhibit 17 - ERP Implementation Schedule (ESTIMATED)

Section 5. Cost Estimate (ROM)

Leveraging the high-level implementation roadmaps developed in the previous section and industry knowledge, Intueor developed a high-level implementation cost estimates for a potential COTS SaaS ERP application system. These cost estimates are broken down by key cost categories that detail vendor costs but also internal cost estimates for implementation support (technical support).

The cost to purchase system licenses and implement an application system can vary widely depending on the industry but also on the motivation of the application system vendors during the bidding process or pricing negotiations. For the purposes of this high-level cost estimate industry sources were reviewed, as well as published vendor pricing, and some assumptions were also made that included:

- Application system license pricing was scaled using 200 concurrent / business users (some vendors define concurrent users as number of transactions processed simultaneously, not the number of people using the system at any given time) or business users and 300 employee users. Business users (power users) would have unlimited access to all modules based on their security access. Typically, if a user is going to enter transactions then they would be classified as a business user. Employee users can generally view everything based on their security access and go anywhere a business user can in the system but with read-only access. Although some ERP vendors offer an enterprise licensing model, a user licensing model was used for the ROM as it is more common.

- Annual user license fees were increased 3% year over year based on the tendency of vendors to make some form of annual adjustments where allowed.

- Training pricing was scaled based on vendors providing some instructor-led classroom training targeting smaller groups of employee business users and some Computer Based Training (CBT) for training large groups of employees on processes such as the employee travel and expense reimbursement process.

- A Year One implementation period was used to reflect the beginning of the application system implementation when system license fees and implementation support (e.g., change management, technical support) would also begin.

- Implementation costs were scaled based on legacy production data for current County data not requiring clean up by the vendor before migration.

- Implementation costs were scaled based on County retaining responsibility for the interface management of other County systems interacting with this cloud application system, user acceptance testing and report maintenance and local print functions, though the implementation vendor would support changes to interfaces and reports maintenance via the agreed upon change request process.

- The implementation costs outlined do not include the costs associated with County resources who will actively participate on the project. Effort estimates, that can be utilized to determine the County's internal/soft costs, are outlined in the next section and found in Exhibit 19.

- Implementation costs were scaled based on vendor change management support being supplemented by a third-party consultant during the implementation period.

- Although Human Resources costs are included below, the scope and cost for Human Resources could change based on key scope decisions including, benefits, learning management, inclusion of employee self-service, mobile access, and the amount and type of integrations with other County systems that get developed and managed.

- The Vendor Transition cost are reflective of pricing for either the primary software provider or a third-party SI providing the implementation services.

Cost & Investment Schedule							
Cost Component	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Transition / Implementation Costs							
Consultants - Transition Support	$0	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Consultants - Change Management	$383,750	$111,300.00	$0.00	$0.00	$0.00	$0.00	$495,050.00
Implementation Vendor Transition	$4,894,860	$3,263,240.00	$0.00	$0.00	$0.00	$0.00	$8,158,100.00
Supporting Hardware	$0	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Supporting Software	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Subtotal for Transition	$5,278,610.00	$3,374,540.00	$0.00	$0.00	$0.00	$0.00	$8,653,150.00
New Application Costs							
Annual License Fees	$1,285,136.00	$1,323,690.08	$1,363,400.78	$1,404,302.81	$1,446,431.89	$1,489,824.85	$8,312,786.41
Annual Maintenance Fees	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Subtotal For New Application Fees	$1,285,136.00	$1,323,690.08	$1,363,400.78	$1,404,302.81	$1,446,431.89	$1,489,824.85	$8,312,786.41
Total Project Costs	$6,563,746.00	$4,698,230.08	$1,363,400.78	$1,404,302.81	$1,446,431.89	$1,489,824.85	$16,965,936.41

Exhibit 18 - ERP ROM Costs (ESTIMATED)

Section 6. Work Tasks and HR Estimates

The team developed a high-level and conservative estimate of the County's staffing needed during the implementation – based on prior experience and historical data from previous projects. As shown in Exhibit 19, the staffing estimates depict number of hours of effort required for each month of the implementation schedule described in the previous section.
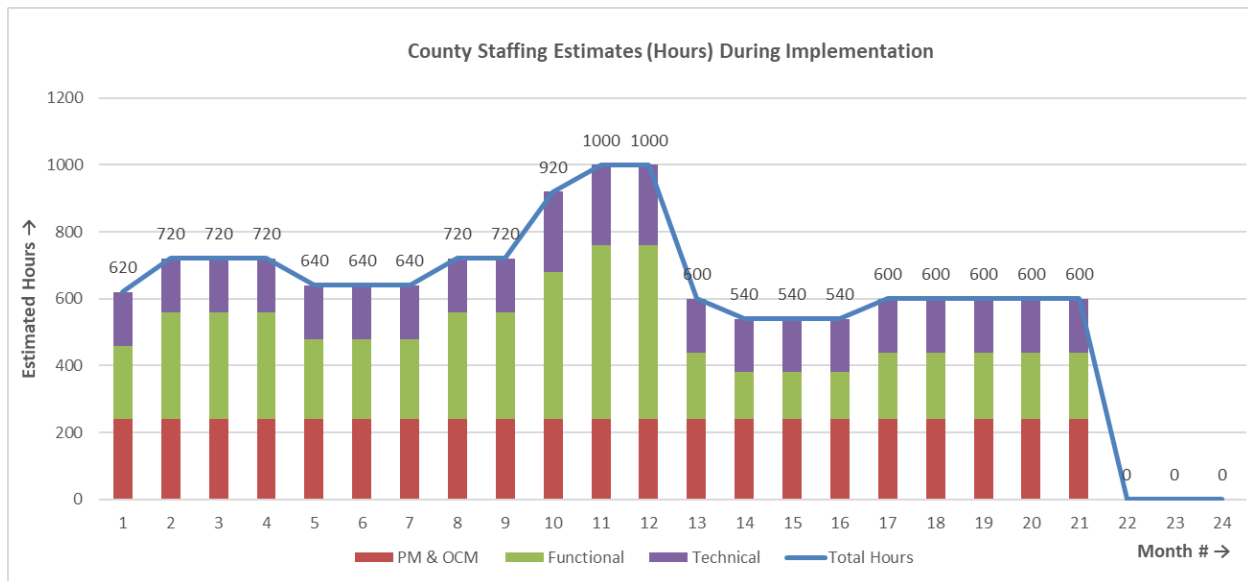

Exhibit 19 - County Staffing Estimates for ERP Implementation (ESTIMATED)

The effort estimated is broadly categorized into three groups:

- **Project and Organizational Change Management:** this group represents the estimated effort to be spent by the County's designated Project Management Office (PMO), Project Manager, Organizational Change Management (OCM) Lead, and any PMO/OCM analyst support necessary to work with the ERP vendor, during the implementation phase of the project. The outcomes associated with this effort include effective project planning, tracking, and monitoring the progress of the project, risk management, leading change management efforts to enable sustainable adoption of the ERP system by the County staff.

- **Functional Resources:** this group represents the estimated effort to be spent by the County's designated leads for each of the functional phases/workstreams (i.e., Finance, Procurement, HR, etc.) and the subject matter experts (SMEs) who will actively participate in the ERP implementation. The effort is expected to result in business process re-engineering, efficient design of the ERP system, data conversion, testing, training and go-live of the ERP project.

- **Technical Resources:** this group represents the estimated effort to be spent by the County's IT resources, supporting and working with the ERP vendor in areas such as IT architecture and standards, environments, information/cyber security, database management, and infrastructure support.

It is important to note that these estimates are very high-level macro estimates for budgetary purposes and based on typical cloud-based/SaaS ERP implementation projects – that will need to be adjusted based

on the proposed methodology and approach (and therefore, the roles and responsibilities of County vs. ERP Vendor staff), project schedule and sequencing/phasing.

Additionally, the County's decision to engage a vendor or Consultant to support Project Management/Independent Verification and Validation/Organizational Change Management during the ERP implementation (as well as the ERP Implementation vendor's scope responsibility with respect to these areas), will influence these estimates.

Finally, staffing estimates pertain to only the implementation phase(s) of the ERP project and do not include post implementation support activities. Post implementation staffing needs will depend on the support model and options the County negotiates with the ERP vendor (i.e., managed services, vendor supports, SaaS, etc.)

Section 7. ERP Market Overview

This section provides a high-level overview of some of the applications, and associated analysis, present within the ERP market that may be viable candidates for the County and who could potentially bid if the County was to issue an RFP for a COTS ERP system. A comprehensive market report, available in Appendix A, titled "Orange County CAPS+ ERP Market Analysis" was developed as part of Intueor's research on this project which provides a much more detailed overview of the ERP market.

It should be noted that the ERP applications identified below are not listed in any ranking order nor are they identified by any degree of favourability. All ERP applications listed are presented based on common trends and current deployments of major U.S. implementations over the last three years. These are a representative sample of potential vendors or applications that could potentially bid and or be viable to the County. This is not a full listing of all applications in the market, nor does it represent the only applications that the County should consider. Data presented is for County reference as to the current market players for ERP applications.

Intueor's analysis did not include a detailed review of the CGI Advantage platform, as the County is familiar with the offering. However, CGI does offer a Cloud offering that may help meet the County's future needs and should be considered as a viable option should the County proceed with a move to a SaaS model. Based on the requirements and size of the County, the Intueor team identified key market players that will be applicable to the County's future needs. The consensus for the ERP application systems that were to be included in this group included:

- Infor CloudSuite Public Sector

- Microsoft Dynamics 365 ERP

- Oracle ERP Cloud

- Oracle NetSuite

- Sage Intacct Cloud

- SAP S/4HANA Cloud

- Tyler Munis ERP

- Workday

An assessment of the listed ERP application vendors was conducted that included:

- An overview of these ERP vendors in several key areas (where available):

  o Key statistics

  o Market perception

  o Key industries / clients served

  o Industry innovation and proprietary technology

  o Key partnerships

  o Eminence in the space

- Financial management platform capabilities

- Procurement management platform capabilities

- Strengths and weaknesses

- Key risk areas

- Case studies

Below is a summary listing of several observations made as a result of Intueor's assessment of ERP application system vendors:

- Oracle Cloud ERP is characterized by multiple features, such as an accounting engine and Intelligent supplier portal, to streamline finance and procurement process. Oracle Cloud ERP has been recognized as a Leader in Product-Centric Enterprise by Gartner Magic Quadrant for Cloud Core Financial Management Suites in 2020 along with Oracle NetSuite ERP (Leader), Microsoft (Visionary) and Infor CloudSuite (Honorary).

- Oracle NetSuite ERP offers single platform for managing Finance and Procurement functions, with built-in intelligence systems for decision making. Many of the NetSuite clients are mid-sized firms in various industries such as, Consulting, Information Technology, F&B, Financial Services, Health Care, Public Sector and Retail.

- Oracle NetSuite emerged as having strong financial and procurement capabilities offered by the solution including automation of accounts payable, accounts receivable, fixed assets, financial reporting capabilities, management of entire procure-to-pay process and supplier relationships.

- SAP S/4 HANA has strong procurement capabilities and was recognized as Leader in 2020 Gartner Magic Quadrant for Procure-to-Pay suites.

- SAP S/4 HANA has its highest score in procurement capabilities and is also recognized as Leader in 2020 Gartner Magic Quadrant for procure-to-pay suites. However, it lags in the financial features offered.

- Workday has significant experience in government and public sector, with robust capabilities in Cloud Financial Planning and Procurement

- Workday also demonstrated an edge to other vendors in its experience in government and public sector and showcased a decent score in its financial capabilities, lagging behind only Oracle NetSuite and Sage Intacct.

- Tyler Munis trails behind the vendors primarily owing to its presence primarily in the mid-size market, the company has an extensive experience in serving the US public sector, especially government agencies.

- CGI, the County's current vendor, is also a leader in the ERP market, specifically for governmental, municipal, and other public sector entities.

Overall, the ERP market and the associated offerings available today are very mature and can fully manage the complex business rules and system integration requirements of the County.

Market offerings have evolved greatly in recent years to provide enhanced flexibility, remote access options, functional and technical capabilities, computing, and more seamless integrations with outside systems. Considering the rate at which the market continues to evolve, compounded by the impacts of Cloud computing, Intueor recommends that the County look to the market (CGI included) for their next ERP system. Doing so will ensure that the County implements an ERP solution that will allow them to grow and scale while taking full advantage of the next generation offerings in the ERP market.

Appendix A.   Work Products and Supporting Project Deliverables

Artifacts below represent the work products and supporting deliverables that were developed as part of this project. These documents were preliminary tasks that highlight the detail and scope of analysis performed as part of this project. Collectively, this body of work, built the foundation and provide greater detail and context to the recommendations found within this report.

1. Kickoff Meeting

ERP (CAPS+)
Analysis - Project Kic

2. Gap Analysis

Gap
Assessment.pdf

3. Requirements Matrix

Final Requirements
Matrix.pdf

4. Business and Technology Analysis Report

OrangeCounty_CAP
S+ ERPBusinessand

5. Options Analysis Report

Orange County
CAPS+ ERP Options

6. Market Assessment Report

Orange County
CAPS+ ERP Market A

7. Market Assessment PPT

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