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**SUBMITTAL TO THE BOARD OF SUPERVISORS
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA**

FROM: Riverside County Information Technology

SUBMITTAL DATE:
January 3, 2013

SUBJECT: Receive and file the Riverside County Technology Services (RCIT) Strategic Plan FY2013-2014

RECOMMENDED MOTION: That the Board of Supervisors receive and file the attached RCIT Strategic Plan for FY2013-14.

BACKGROUND: The Chief Information Officer (CIO) is responsible for the oversight and coordination of information technology resources within the County, I have prepared the enclosed Strategic Plan for FY2013-14. The plan identifies the enterprise goals, business objectives, key initiatives, and the information technology governance within the County, as well as specific goals for RCIT. As per Board Policy H-11, the Strategic Plan was submitted to the Technology Standards and Oversight Committee (TSOC) for review and approval. I look forward to continued collaboration with county departments to deliver solutions that optimize the technology spend throughout the County.

Departmental Concurrence


Kevin K Crawford
Chief Information Officer

FINANCIAL DATA	Current F.Y. Total Cost:	\$ N/A	In Current Year Budget:	N/A
	Current F.Y. Net County Cost:	\$ 0	Budget Adjustment:	N/A
	Annual Net County Cost:	\$ 0	For Fiscal Year:	13/14

SOURCE OF FUNDS:	Positions To Be Deleted Per A-30	<input type="checkbox"/>
	Requires 4/5 Vote	<input type="checkbox"/>

C.E.O. RECOMMENDATION:

APPROVE

BY: 
Serena Chow

County Executive Office Signature

Consent
 Policy

 Consent
 Policy

 Dept's Recomm.:
 Per Exec. Ofc.:

Prev. Agn. Ref.:

District: *all*

Agenda Number:

ATTACHMENTS FILED
WITH THE CLERK OF THE BOARD

3-11

Jan. 15, 2013



**RIVERSIDE COUNTY
TECHNOLOGY SERVICES**

**STRATEGIC PLAN
FY2013 - 2014**



**RIVERSIDE COUNTY INFORMATION TECHNOLOGY
KEVIN K CRAWFORD
CHIEF INFORMATION OFFICER**



RIVERSIDE COUNTY TECHNOLOGY SERVICES
STRATEGIC PLAN FOR FY2013-14



This document is the County of Riverside Information Technology (RCIT) Business Plan for fiscal year 2013/2014 beginning July 1, 2013.

Riverside County Information Technology (RCIT) will:

- Be Riverside County's Business Solutions Partner.



- Deliver solutions that represent organizational collaboration and optimization of Technology Spend throughout the County.
- Meet the County Executive Officer's goal of Countywide consolidated Technology Services by FY2014-15.
- Make access to County data smart, efficient, and collaborative.
- Utilize the established Customer Focus Groups and Oversight Committees to ensure **Business Requirements are always first, middle and last!!!**



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**RIVERSIDE COUNTY TECHNOLOGY SERVICES
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EXECUTIVE SUMMARY

The County is in a continued economic downturn. It is a fact that there will be fewer funds, staff and other resources available for technology and at the same time County Departments seek more and more from technology systems to meet their business and constituent needs. The urgency of this need has been clearly stated by our Board of Supervisors and our CEO. This new normal means that we must use funds, staff and existing equipment as effectively as possible to continue to meet the County's growing technology needs. In order to accomplish this and in conjunction with our business customers throughout the County, RCIT immediately placed resources to meet the urgency of this objective.

The new normal requires us to take on numerous competing projects and initiatives, many of which are competing for the same resources. The requirements will reach well beyond the capacities of the resources available to us. Therefore, we must prioritize tasks with strategic forethought.

In order to continue serving County constituents, we also need to think differently about technology. To begin thinking differently, we need to employ the following ideas:

- **Put Outcomes First:** Start every technology effort with a business outcome. No technology work should be accomplished that does not directly lead to a business goal.
- **Expand Accessible Value:** Use what you already have. We have no need to reinvent the wheel for every business goal. When it comes to the product, do not let the "Perfect" stop a perfectly "Good" solution. We need to remember that unused data has no value.
- **Eliminate Contradictions:** Wherever possible, eliminate business goals that contradict each other. Look for the possible. Many times contradictory requests do not remain contradictory when the goals are thoroughly vetted.
- **Be Disruptive:** Do not fear change. This is required of any organization that wishes to remain robust, relevant and of value to the customers that they serve.
- **Innovate Business Value:** Dreams and ideas only become a value proposition when they are worked through to a solution. Technology is only a value when used. The smallest notion can add the greatest value, if given the light and allowed to grow. Focus on the greatest value, not the perfect solution.

RCIT Goals:

1. **Connect the County** – Connecting the County means to facilitate quality information exchange between Elected Officials, Departments, Constituents, and public agencies. Make sure that the right information is available at the right time to the right people.
2. **Become Riverside County's Business Solutions Partner of Choice** – RCIT will endeavor to be the departments' first choice to fulfill their technology needs and partner in automating business processes.



RIVERSIDE COUNTY TECHNOLOGY SERVICES
STRATEGIC PLAN FOR FY2013-14



In FY2013-14, RCIT will pursue the following technology key initiatives:

- **Geographic Information Systems (GIS):** RCIT will seek to push GIS information to all departments and County residents. Our Goal will be to make Riverside County the “Go To” County when it comes to how well GIS Information can be utilized.
- **Consolidation of Technology Services:** A consolidation and integration of County technology services is currently underway and will increase the overall RCIT budget and staff. However, these increases will be far less than the new requirements that RCIT will face to meet the needs and requests from our customers. This will require great coordination with technology committees, the Executive Office and all departments. RCIT will be expected to do more with the same or less for several more years.
- **Constituent Relationship Management (CRM) & SharePoint Collaboration:** RCIT will continue the project to bring a fully functional CRM and an internal collaboration system online. RCIT will be working with Departments to make more of our information and services available to County staff, residents and other users of County services.
- **Countywide Converged Network (including: Data, Video, Wireless and Telephony):** RCIT will begin the work of converging the network to better meet the needs of all departments. This will lower overall maintenance and support costs. Currently, County departments spend more effort to divide the network. A converged network will support several of the above initiatives and make it much easier to deliver new technologies, updates and fixes. We also will begin a yearlong project to replace our outdated PBX system and implement a new digitally based phone system - Voice over Internet Protocol (VOIP). This project will provide the County with both annual savings and a much more robust and feature-rich solution.
- **Network & Information Secured Enterprise-Wide:** RCIT will standardize our security platforms across the County’s Enterprise. The result will be a more substantial security system that protects our greatest technology assets.

In FY2013-14, our customers will see the results in operational efficiency through the following drivers:

- **Technology** – Ensure that all technology decisions are business requirement based and lead the County forward. Decisions should also answer multiple technology requests, wherever possible.
- **Processes** – Work with our customers to move business processes as closely to out of the box functionality as possible. This will reduce maintenance costs and lessen the time and effort of upgrades/enhancements of applications.
- **People** – When appropriate, procure utility services to move internal staff to higher value services and systems.

RCIT is well on the way to being the Customer Focused and Quality Driven organization the County requires and deserves. RCIT will strive to continually earn the mantle of

“Riverside County’s Business Solutions Partner”.



CURRENT STATE OF COUNTY TECHNOLOGY

Riverside County has multiple IT organizations (over 30). These organizations make most IT decisions based on the needs of their parent departments alone. While there has been some integration and base level standardization, these are no more than a consideration in the determination of a system decision.

This fact has resulted in the following situations:

- Implementation of various solutions for the same or similar problems.
- Separate implementations of the same solution at multiple departments or locations.
- Many systems that pull data from the central Enterprise Systems (Human Capital Management and Financials) into local systems.

The above have resulted in the following issues:

- Very difficult or no collaboration between departments.
- HR and Financial data being reported that does not match the central systems.
- A nightmare scenario for integration of systems and data.
- Added costs.
- Duplicative costs.
- A delay in implementing new and innovative solutions to meet future and strategic needs of County Departments.

The first step in correcting the above issues is creating an effective oversight structure for the County's technology environment. All technology procurements within the County should be reviewed to ensure that they meet the strategic plans of the County and that they fit into the current technology environment. The Board of Supervisors took a significant step in this direction with the establishment of the technology review process and creation of the Technology Standards & Oversight Committee (TSOC), through the H-11 Policy. The TSOC has also established lower level committees/groups to ensure that the process can support the myriad of current requests and the strategic goals.

The staffing and budget requirements of correcting the issues listed above far outreach our capabilities at this time. Therefore, we must be smart with the use of resources. Projects and initiatives must be prioritized within the following categories (categories are not listed in specific order, but one of many guides to the prioritization order):

1. **MANDATORY** – Required by the Board of Supervisors, CEO, or mandate (i.e. Federal, State or Local requirement). For example:
 - a. Consolidation.
 - b. Trusted Systems Compliance.
2. **COST OPTIMIZATION** – Projects that ensure that the resources the County utilizes for its technology presence are used to the greatest effect. For example:
 - a. Converged Network Initiative.
 - b. Renegotiation of County Licenses.



**RIVERSIDE COUNTY TECHNOLOGY SERVICES
STRATEGIC PLAN FOR FY2013-14**



3. **STRATEGIC** – Projects that lead the County’s technology environment to meet the strategic Goals of our Board of Supervisors, CEO and Departments. For example:
 - a. Constituent Relationship Management (CRM) and Web.
 - b. Geographic Information Systems (GIS).

Again, the urgency of the need to change the strategic direction of the technology systems within the County cannot be understated. Together with our business customers, RCIT is ready to move forward to meet the goals and priorities of the County.



INFORMATION TECHNOLOGY GOVERNANCE

Riverside County's Chief Information Officer (CIO) has oversight and coordination responsibility for information technology resources within the County. The challenging future mandates collaboration and partnerships to define cost-effective enterprise solutions. The formation of executive, business and technical committees has contributed to the success of Riverside County since their inception in 2005-06 and established the foundation for good decision-making. We see a payback in savings associated with collaborative projects, common skill sets, and the ability to share and exchange critical data.

TECHNOLOGY STANDARDS and OVERSIGHT COMMITTEE (TSOC)

<>Chaired by the CIO

The Technology Standards and Oversight Committee (TSOC) was established in April 2012 by the Board of Supervisors to develop and recommend strategies, best practices, and policies that will enhance corporate operational effectiveness and reduce the cost of corporate IT services. The role of the TSOC is to provide leadership and direction on business objectives, to set priorities, to review major technology purchases, and to evaluate technology solutions that will promote operational effectiveness.

The principle mission of the TSOC is to establish and implement corporate IT best practices and policies that will reduce the cost of Countywide IT services by consolidating duplicate technology systems and infrastructures that are commonly used by all agencies of the County.

INFORMATION TECHNOLOGY OFFICER'S COMMITTEE (ITOC)

<>Chaired by the Assistant Chief Information Officer, Infrastructure and Communications

Information technology leaders from County departments meet monthly to exchange systems information, establish a consensus on technology directions, work collaboratively on common projects that impact all County departments, and make recommendations on issues, standards and policies to the TSOC on technical matters that form County policy.

The charter of the ITOC places emphasis on working collaboratively to develop technology recommendations and decisions from a technical perspective. Recommended standards represent a cooperative effort to reduce cost, improve service, and share information.

TECHNICAL ADVISORY for BUSINESS SYSTEMS COMMITTEE (TABS)

<> Chaired by the Assistant Chief Information Officer, Business Systems

Business leaders from County departments meet monthly to exchange business requirements, establish a consensus on business directions that affect technology requirements, work collaboratively on common projects which impact all County departments, and make recommendations on issues, standards and policies to the TSOC and CIO on technical matters sensitive to the business matters that form County policy.

The TABS charter places emphasis on working collaboratively to develop technology recommendations and decisions from a business perspective. Recommended standards represent a cooperative effort to reduce cost, improve service, and share information.



INFORMATION SECURITY OVERSIGHT COMMITTEE (ISOC)

<> Chaired by the Chief Information Security Officer

Business and technology leaders from County departments meet monthly to exchange security requirements, establish a consensus on the directions that affect the securing of both County systems and information, work collaboratively on common projects which impact all County departments, and make recommendations on issues and standards to the TSOC and CIO on security matters that form County policy.

The ISOC charter places emphasis on working collaboratively to develop technology recommendations and decisions from an information security perspective. Recommended standards represent a cooperative effort to reduce cost, improve service, and share information.

GEOGRAPHIC INFORMATION SYSTEMS OVERSIGHT COMMITTEE (GISOC)

<> Chaired by the Assistant Chief Information Officer, Departmental Systems

Business and technology leaders from County departments meet monthly to act as a mutual voice on geographic issues, strategies, and policy recommendations. Recommended standards represent a cooperative effort to reduce cost, improve service, and share information. The GISOC will make recommendations on issues and standards to the TSOC and CIO on technical matters that form County policy.

The principle purpose of the GISOC is to implement a shared vision for the use of Geographic Information Systems (GIS) and geographically based data. The vision represents the crucial outcome of GISOC action, direction, purpose, collaboration, and willingness to bring the best thinking into discussion about global issues that may appear to be unique to a department or agency but may also affect departments countywide.

SPECIFIC SYSTEM OVERSIGHT OR EXECUTIVE COMMITTEES

<> Chaired as appropriate

Specific system oversight or executive committees work collaboratively to ensure applications and platforms meet County business requirements and that they are technologically sound. Recommended standards represent a cooperative effort to reduce cost, improve service, and share information. These committees make recommendations to the TSOC and CIO on technical matters that form County policy.



BUSINESS PLANNING

Overall Riverside County Information Technology (RCIT) has done a good job of weathering the fiscal storm that the County has faced, including finding many millions in savings to help reach the County targets. The savings thus far, have come with little impact to services provided. Additional upcoming changes will be weathered; difficult choices will be necessary which will require significant collaboration and dedication to implement the changes that are required for success.

Customer business goals for RCIT include finding savings with new and innovative ways to meet customer requirements while automating processes and allowing staff to move to higher value work.

RCIT will continue to consolidate technology services throughout the year. This will deliver savings to those departments and provide them with access to technologies for which they had little or no prior access. The Departmental Services Bureau will continue their role as the lead in technology transitions to RCIT, but will also enhance delivery of Department Specific Solutions and become another large operational team within RCIT.

Other RCIT Bureaus will also continue to consolidate enterprise systems such as the network, ERP, Web, telephony and video. Utilizing funds across the County will afford RCIT the ability to deliver more comprehensive and integrated systems to meet or exceed the requirements of County Departments. Obviously, this can only be done with diligent coordination through Oversight, Focus and Application Teams and committees to ensure that business requirements are primary.

The following five business objectives and their accompanying success metrics will be used in support of meeting RCIT's goal of meeting our customers' current and future business needs over the next three years.

- 1. Decrease Expenses**

Measurement: Cost Reduction

Economic pressures continue to force the County to look for ways to reduce the costs of operating its numerous business lines. RCIT is tasked with finding \$12,000,000 in annual savings through the consolidation of technology services Countywide.

- 2. Improve Quality of Customer Service**

Measurement: Customer Satisfaction

Our customers want RCIT to provide low cost solutions to meet very limited budgets, technical or "how to" direction, business partnerships in identifying enterprise solutions, and coordination of strategic County technology business through collaboration and partnership. Our customer's satisfaction will be measured by our ability to act as Riverside County's Business Solutions Partner and attainment of the stated goals of this strategic plan.

- 3. Improve Operational Efficiency**

Measurements: Meeting Service Agreement (SA) and On-time Product Delivery

RCIT requires a reliable, effective and efficient business environment in order to meet its strategic goals and objectives in a cost-effective manner. We must look to improve business



processes, manage our resources, and establish effective policies and procedures for managing all operations.

Our business customers expect RCIT to continually improve automation and quickly respond to business requirements. Therefore, RCIT will review and recommend new technologies with our business partners to enhance the County's ability to meet its goals.

4. Improve Employee Satisfaction

Measurement: Employee Satisfaction Rating

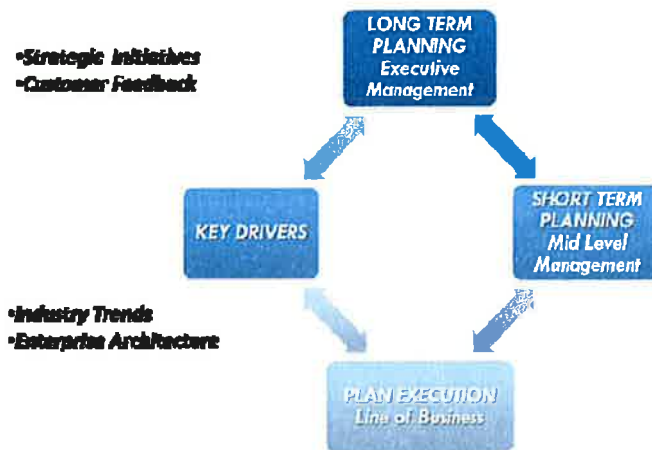
We must attract, develop, and retain highly skilled County staff. This requires having technologies that make Riverside County a leader, the right tools for continued business success, training on both current and new technologies, and opportunities for continued staff growth throughout the County.

5. Expand Market Share

Measurement: Revenue Growth

RCIT will work to expand our revenue options through offering services in technologies where the County excels. Specifically, GIS, PSEC, Data Center, and CRM will be targeted for revenue opportunities.

RCIT executive management has established a planning program that will enable RCIT to meet our customers' current and future needs. The program will also provide guidelines for successful enterprise planning so that business and business resource plans can be developed, tracked and updated consistently while maintaining a link between business and resource planning efforts. The planning success will be controlled by the governance model that allows management to take a leadership role in defining the business and technology strategy for the enterprise.





KEY COUNTY INITIATIVES FOR FY2013-14

OVERVIEW

During FY2013-14, the following key initiatives and enterprise solutions will be the focus of study and/or implementation:

- GIS – Enterprise and Online - STRATEGIC
- Consolidation of Technology Services - MANDATORY
- Constituent Relationship Management and SharePoint Collaboration - STRATEGIC
- Countywide Converged Data, Video and Telephony Network – COST OPTIMIZATION
- Network & Information Secured Enterprise-wide (NISE) - MANDATORY

The initiatives reflect collaboration in strategic thinking and planning. They promote proactive leadership for cost effective long-term growth. Now, in our fiscal crisis, the initiatives (especially Mobile Workforce and Video Conferencing) can help reduce cost, protect jobs, and perpetuate service to the public.

The rapidly changing business climate requires prudent technical investments so that the solutions we implement today will serve our needs well into the future. Making well-informed decisions and recommendations is essential. RCIT remains active in state and national organizations to keep pace with issues facing government, and remains knowledgeable about new technologies. RCIT uses the expertise of industry leaders in technology research and analysis as part of technical evaluations. The TABS and ITOC blend technology and business issues to formulate recommendations that ensure well-founded and value-based solutions.

Interdepartmental collaboration, well-organized communications, and partnerships will remain essential elements for continued success in selecting and implementing technology that contributes value-added service to our citizens.



GEOGRAPHIC INFORMATION SYSTEMS (GIS)

In 2012, the TLMA GIS Group moved to RCIT forming the base for a renewed Countywide enterprise GIS effort. Through the collaboration of multiple departments including the Assessor Clerk Recorder, Flood Control District, TLMA, RCIT and the Executive Office an enterprise license agreement was signed in late 2012 with ESRI. ESRI is the worldwide leader in GIS information services and a strategic County partner.

This action initiated a fundamental change to the way GIS information is shared and accessed by County staff, our business partners and the public. The County has adopted ESRI's ArcGIS Online mapping tools. This is a cloud-based mapping system that offers tools for cataloging, visualizing and sharing geospatial information. These web based services allow the County to communicate via user friendly tools commonly found on desktop computers, tablets and mobile phones.

CONSOLIDATION OF TECHNOLOGY SERVICES

Consolidation of Technology Services, which was started in January of 2012, will be completed by the end of FY2013-14. Savings have been estimated at approximately twelve million dollars (\$12,000,000) annually.

A new Bureau, Departmental Services Bureau (DSB), was created in RCIT to facilitate this effort and assume support of consolidated departmental applications. The Transition Solutions Division (TSD) of DSB will complete in-depth assessments of consolidation opportunities with departments by July 1, 2013. The in-depth assessments will require significant input from participating departments and other Bureaus within RCIT. The outcome of the assessments will be Technology Services Agreements for the specific departments. If a Technology Services Agreement is agreed to and signed, it will be implemented by the agreement dates. All signed Service Agreements will be implemented by the end of FY2013-14.



CONSTITUENT RELATIONSHIP MANAGEMENT & SHAREPOINT COLLABORATION

Constituent Relationship Management (CRM) along with SharePoint Web will create an Enterprise Level collaboration suite for both internal and external customers and constituents of the County. Several departments have current CRM projects underway and all chose Microsoft Dynamics, which is now the standard for the County and the platform that RCIT has built for the Enterprise System.

Departmental IT Audit reviews changed the priority on this CRM project. The capabilities of a CRM system were requested by many departments, thus requiring the project move forward ahead of the original schedule. As the CRM suite is enhanced and grows, RCIT is creating an application support team to support and maintain it.

COUNTYWIDE CONVERGED NETWORK

Countywide converged data, video, wireless and telephony network - what does it actually mean? Currently, County Departments have multiple firewalls internally to the network. What this means is that we have more protection between County Departments (protection from each other) than from those external groups that would like to infiltrate our network and cause us harm.

RCIT has completed a due diligence effort looking at the current vendors selling networking capabilities to the County to see if we could architect the whole network (data, video, wireless and telephony) to better meet the needs of County Departments with the following outcomes: reduced hardware costs, reduced support costs, better facilitation of County communications and many more capabilities than the current system.

Voice over Internet Protocol (VoIP) is a digitally based telephony system and will replace our outdated analog systems throughout the County. RCIT has completed a due diligence process in FY2012-13 and recommended a solution to the TSOC. VoIP will allow integration with many of our other systems and make our telephony system mobile.

The demand for wireless access has increased sharply over the past few years due to increased public use of various wireless mobile computing devices such as Smart Phones, PDAs, Tablets, etc. The current use of wireless networks at the enterprise level has become essential to support governmental and corporate business communication requirements, from small to very large organizations. RCIT has seen only moderate growth of wireless LANs in various County departments. In view of our present and long term objectives and the rapid advancements in the enterprise level wireless arena, we see higher growth and demand of wireless network installations throughout all County businesses.



Under the enterprise wireless architecture, the Countywide wireless system will offer a highly secured, scalable, and easy to connect wireless communications system for all County employees. The system will be designed to support robust roaming capabilities and high mobility to access private networks for County employees from their offices or other County locations. The wireless systems will be designed to support general public, visitors and departmental guest access by providing high availability in a controlled environment. The security of these wireless LANs will meet or exceed authentication and encryption standards of wireless communications. The high security features provide peace of mind and confidence to County wireless users for efficient and effective wireless communications. Using the enterprise model for the wireless networks with a single vendor solution will provide economy of scale and significant cost savings to Countywide wireless deployments. The project will provide wireless coverage to all County sites staffed with 5 or more people.

Though the project will not include video devices for all users, it will bring video capability to every desktop. Departments will be able to fund video devices and systems during the project. The project will continue to be phased in throughout the County. Completion of this project is scheduled for the end of FY2013-14.

Our current operating and maintenance costs on our analog system will be significantly reduced, the savings are expected to cover the costs of both the procurement and implementation, with significant budget savings following.

A converged network is required to attain the full capabilities and savings of the VoIP and CRM/SharePoint projects, as well as other requirements and follow-on projects that Departments have requested from RCIT.

NETWORK & INFORMATION SECURED ENTERPRISE-WIDE

Network and information security is a must have for the County. After revealing and responding to several vulnerabilities, it became clear that an enterprise solution was needed. The Network & Information Secured Enterprise-wide or NISE project has been formed to identify a “To-Be” state for the security of County technology assets and begin efforts that move us towards that end state.

The review and “To-Be” recommendation will be managed by the ISO and coordinated through the ISOC. As this is the security of our technology systems, project data will only be shared on an as-needed basis.



TECHNOLOGY and BUSINESS ALIGNMENT – THE LONG LOOK

With business requirements driving the focus on technology implementation, RCIT continues to look forward to the next generation of capabilities to keep County technology ahead of County Business requirements and expectations. Governance is key in this area. All of the committees identified herein and ad hoc groups setup for specific or special purposes will help to ensure the focus is clearly on the business delivery to our constituents and customers.

The chart below aligns technology initiatives with business drivers. It outlines technology direction that RCIT believes will help ensure we invest our resources in technologies that maximize public value. As County departments hone their business requirements, we can expect to see the technologies working their way into our Capital Improvement Program (CIP) process.

TECHNOLOGY INITIATIVES	BUSINESS DRIVERS	Category	TIME FRAMES
Green Computing	Save resources to the point that every penny spent on conservation is returned in cost savings as well as a greener environment	Strategic	1-5 Years
SaaS Email	The County should no longer take on technology tasks that have become utilities in the industry.	Strategic	1 Year
ERP Systems Architecture	Implement the TSOC approved ERP Systems Architecture to meet current and future County requirements.	Strategic	3 – 5 Years
PSEC	Work with outside Agencies to join the new Public Safety Communication System.	Mandatory	1 – 5 Years
Virtual Desktop Initiative (VDI)	Provide the savings and mobility that VDI will afford to County staff.	Cost	1 – 5 Years
Employee Self-Service (ESS)	Implement ESS capabilities in our ERP systems.	Cost	1 – 3 Years
eProcurement	Implement eProcurement in our ERP system.	Cost	1 – 3 Years
Enterprise Security Architecture	Identify and design Security Architect and implement.	Mandatory	1 – 3 Years
Three Tiered DMZ	Implement Three Tiered DMZ to buffer County Systems from external access.	Mandatory	1 Year
Rapid 7 Nexpose Vulnerability Scanner	Implement security based systems to enhance the security of County systems.	Strategic	1 Year
Red Seal Vulnerability Advisor	Implement security based systems to enhance the security of County systems.	Strategic	1 Year
Automate County Processes with CRM	Implement CRM functions to facilitate internal and external data collaborations.	Strategic	1 – 5 Years



KEY TECHNOLOGIES – ONE TO FIVE YEARS

GREEN COMPUTING

Green computing can be defined as the environmentally responsible use of computers and related information technology resources. Green computing includes the design, purchase, usage, manufacturing, and disposal of information technology resources. The end goal is to effectively and efficiently use needed resources, while lessening the negative impact on our environment. In conjunction, green solutions need to be accomplished in a financially responsible manner. Initiatives include the utilization of thin clients, virtual desktops, virtual servers, and deploying group policies that put monitors and desktops into sleep mode. Going green is a major consideration in technology purchases.

SAAS (SOFTWARE AS A SERVICE) EMAIL

Software as a service (SaaS) is a software delivery model in which software and associated data are centrally hosted on the cloud. SaaS is typically accessed by users using a thin client or a web browser.

With SaaS, the responsibility of testing and installing patches, managing upgrades, monitoring performance, ensuring high availability, and so forth for a given application—is handled by the provider. Cloud computing provides the opportunity to reduce the cost of IT infrastructure by utilizing commercially available technology that is based on virtualization of servers, databases and applications and also minimizes capital outlays for additional cost savings.

The County currently administers Novell GroupWise and Microsoft Exchange systems comprising of over 100 e-mail servers with users spread across 333 physical locations with a total of approximately 18,000 mailboxes.

ERP SYSTEM ARCHITECTURE

Enterprise Resource Planning (ERP) systems integrate management information across an entire organization. ERP applications span finance, accounting, procurement, service, constituent relationship management, human capital management, asset management, and more. ERP systems enable information sharing among business units (e.g. departments) within an enterprise. They further control centralized information exchanges with external entities and outside stakeholders.

ERP system architectures have evolved through over 40 years of development from centralized, to distributed client/server, to internet web-based implementations. Current ERP system architectures are evolving in “cloud computing” directions through the use of computer hardware and software delivered as a service over a network (typically the Internet). While numerous derivatives of cloud-based implementations exist, service providers offer cloud-based ERP system architectures typically through these offerings:

- Software as a Service (SaaS)
- Platform as a Service (PaaS)
- Infrastructure as a Service (IaaS)



PSEC

The benefits of the PSEC system include delivering a resilient, ubiquitous, interoperable system that provides enhanced functionality for all public safety and related stakeholders. The system was designed to not only meet the needs of the current radio users but also with the ability to expand to meet the regional needs of all County departments as well as other public safety and public service agencies throughout Riverside County. The implementation of the PSEC System will provide a Countywide voice and data radio communication system ensuring that emergency responders have the tools to communicate quickly and effectively, each and every time they call for assistance, and to provide a communication system that promotes interoperability between public safety agencies.

Regional Network – There are public safety agencies throughout Riverside County that have a compelling need to communicate with each other when operations and jurisdictions overlap. Collaboration and coordination of operations are often critical for life saving outcomes when traffic collisions, house fires and multi-agency efforts require the diverse and complementary skills of different public safety organizations. Having a regional, interoperable network facilitates capabilities previously unavailable.

Interoperability – Interoperability is a priority concern in public safety today. Interoperability is the ability of diverse systems and organizations to work together. Effective interoperability is difficult within the fragmented systems currently in place in Riverside County. To effectively reach full interoperability, collaboration is required between the participating agencies. The PSEC System is the first step in that process.

The PSEC System covers those areas accessed by emergency first responders, while the remaining areas are inaccessible due to terrain and topography issues. Through the use of aviation communication, should an emergency responder be required to go into an inaccessible area, they will still have communication with the aviation unit through the use of direct channels.

Operational Goals

The PSEC Project team is developing a five-year plan that includes immediate (1 year or less), short-term (1-5 years), and long-term (5 or more years) goals, as follows:

1. The security of the sites is of utmost - Immediate
2. Upgrade to P25 Phase II –The upgrade will take the PSEC System from a proprietary system to an open standards-based system – Short Term
3. Northern microwave route – The current microwave system contains a single point of failure at one of the centrally located microwave sites. - Short Term
4. Upgrade the 25 year old channel banks for microwave – Short Term
5. Construction of the Palo Verde site – Short Term
6. LTE (Long Term Evolution) is a wireless broadband technology standard that provides significantly faster upload and download rates. LTE will support mixed data, voice, video and messaging traffic – Long Term
7. Video Streaming – Video streaming encompasses a broad range of use cases, for example: to provide incident or other pertinent video between vehicles and between agencies (where capable) – Long Term



VDI

Virtual Desktop Infrastructure (VDI) separates desktop environments from physical machines using a client-server model of computing. Implementing a VDI solution allows for Operating System and third party applications that are routinely stored on local storage and within the framework of a desktop to be stored on a remote central server. Because the primary computing workload shifts from the desktop to a central server; lower end computers or thin clients can be deployed at some locations rather than a standard desktop. These thin client computers are less expensive compared to a desktop, require less energy (green computing) to operate, have a lifecycle that far exceeds a desktop, and require less “Hands On” maintenance from the PC technician.

ePROCUREMENT

Electronic Procurement (eProcurement) defines a category of computer applications that automate the purchasing and sale of products, supplies, work, goods, and services through the Internet. Applications of eProcurement systems enable enterprises to automate and administrate the supply chain, vendors, catalogs, contracts, and related procurement operations. Workflow, reporting, searching, tracking, and related management services in eProcurement systems improve operational efficiencies and improve transparency. The benefits include cost savings, faster performance, and greater transparency in procurement administration. Automated functions of eProcurement systems streamline the processing of Requests for Information, Requests for Proposal, and Requests for Quotation, Purchase Requisitions, and related procurement processes. Other benefits include improved exception processing, policy enforcement, and standardization of procurement controls.

ESS

Employee Self-Service (ESS) applications are web-based services offered through enterprise Human Capital Management systems to enable employees to access their personal records, payroll details, and other human resource administrative services. While these services help improve efficiency and provide real-time access to important information, emerging ESS services help empower employees and managers to take more responsibility for their jobs and career development.

At the County of Riverside, ESS services currently exist for:

- Personal Information
- Payroll and Compensation
- Benefits Management
- Recruiting Activities
- Open Enrollment

The County can expand ESS services further as our Enterprise Solutions evolve.



ENTERPRISE SECURITY ARCHITECTURE

Enterprise security architecture (ESA) is the practice of applying a comprehensive and rigorous method for describing the current and/or future effectiveness and posture of an organization's security processes, information security systems, staff, and organizational business units, so that they align with the organization's core objectives and strategic direction. Although ESA is often associated with information security technologies, it more broadly relates to the security practice of business optimization in that it addresses the organization's business security architecture, performance management, and security process architecture as well.

Objectives

- Provide organizational structure, coherence, and cohesiveness with IT operations and strategies
- Enable business-to-security alignment
- Define top-down approach beginning with business strategy
- Ensure that all models and implementations can be traced back to the business strategy, core business requirements, and key principles
- Establish a common "language" for information security throughout the organization

THREE TIERED DMZ

Most organizations connected to the Internet utilize a screened sub-net architecture/DMZ environment to guard against Internet-based threats. Those that wish to have an Internet presence utilize a DMZ to segregate their publicly available web servers from their internal network, which they deem as a safe zone (DMZ) to be used by their trusted employees.

Three Tier Concept

For most organizations today, there are three primary functionalities provided by their external networks: 1. an Internet presence (web site); SMTP connectivity (email), and 3. DNS name resolution.

An Internet presence has a web presentation front end, business logic, and oftentimes, backend database services. This is basically a three tiered application. The common design a lot of organizations follow is to put presentation and application servers, along with email and DNS servers into one DMZ, with their databases located on their internal network. This has the same effect as placing all available keys to a front door under the doormat. It permits externally initiated traffic to cross the internal network. If a hacker compromises just one server in the DMZ, the hacker gains the permission of the firewall, with certain port and protocol restrictions, to enter the internal corporate network.

A three tiered DMZ addresses issues surrounding problems with today's single external DMZ architecture, namely security and management, when implemented in conjunction with a standalone DMZ for SMTP and DNS.



RAPID7 NEXPOSE VULNERABILITY SCANNER

Rapid7 Nexpose Enterprise is a security risk intelligence solution that proactively supports the entire vulnerability management lifecycle, including discovery, detection, verification, risk classification, impact analysis, reporting and mitigation. Nexpose helps organizations effectively improve their risk posture. Nexpose was designed for organizations with large networks and virtualized infrastructure deployments requiring the highest levels of scalability, performance, customizability and deployment flexibility.

The product will provide the following capabilities to our security infrastructure:

1. Identify more vulnerabilities by extending what is being scanned
2. Get an accurate understanding of your real risk with more accurate data and analysis
3. Gain the insight to make better security decisions

REDSEAL VULNERABILITY ADVISOR

Red Seal Vulnerability Advisor is a security risk intelligence solution that correlates network access and vulnerabilities. It shows where the network is exposed to threat sources. It also identifies the pathways hackers could use to compromise critical assets. It enables the County to fully leverage its significant network security investment, prioritize vulnerability mitigation and determine which vulnerabilities have been mitigated.

AUTOMATE COUNTY PROCESSES WITH CRM

Constituent Relationship Management (CRM) systems automate business processes throughout the County's enterprise operations. CRM technologies expedite the rapid deployment of software applications through advanced technology toolkits and developmental utilities. This provides County savings by reducing the cost of County technology services. CRM systems enable the County to manage its interactions with constituents more consistently and more thoroughly. The constituents served by CRM systems encompass residents, citizens, taxpayers, businesses, service providers, contacts, legislators, vendors, and more. CRM's advanced technologies help organize, automate, and synchronize business processes throughout the enterprise of the County's diverse business departments. These business processes encompass day-to-day County business applications, public service, constituent contacts, public communication, technical operations, and many more. CRM-based business applications span a wide range practically without limit. Examples include case management systems, business intelligence, statistical analysis, data mining, electronic forms administration, process automation, workflow, reporting services, and public service. CRM systems store data associated with the County's business, the County's constituents, and all respective interactions. This data provides the County with analytical insight into its enterprise operations and its interactions with its constituents. The data improves transparency, statistical insight, and budgetary accuracy. CRM benefits include advanced reporting capabilities, work administration, open communication, collaboration, cost reductions, constituent satisfaction, measurements, and related improvements to enable County leaders to be more responsive and accurate in defining County strategic directions.



RCIT EXECUTIVE TEAM AND MANAGEMENT

EXECUTIVE MANAGEMENT:

Executive Management provides strategic governance for creating long term plans and initiatives including key work areas. The strategic aspect of the planning process provides the prioritization, direction and resources for all initiatives at the enterprise level. These key work areas are then used for tactical planning.

MIDDLE MANAGEMENT:

Middle Management provides tactical and operational governance for creating short term action plans. The tactical/operational aspect of the planning process ensures that initiatives are planned, selected, and managed at a line of business level and are sustainable from a fiscal, people, and process resource perspective to ensure ongoing delivery of services. This Management Forum has been directly involved with many significant advances in improving operational efficiencies.

LINE OF BUSINESS:

Lines of Business provide operational execution of developed plans. The operational aspect of the planning process ensures that all planned activities are executed and managed.

KEY DRIVERS:

Key drivers provide business direction for strategic, tactical and operational planning. These drivers enable us to identify business challenges, opportunities and available resources. The planning program is driven by Strategic Initiatives, Customer Feedback, Enterprise Architecture and Industry trends. All of these factors are routinely evaluated and aligned with the priorities and business goals.



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