



2014/15 - 2016/17

# County of Orange Information Technology Strategic Plan

County Executive Office  
Office of Information Technology

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## I. Message from the Chief Information Officer

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Information technology is critical to everything we do.

The ability of the County of Orange to fulfill and advance its mission is directly connected to our information technology infrastructure – the organizational structure, the plan, the tools and the people with the level of expertise to both execute for current needs and prepare for the future.

This Information Technology Strategic Plan aligns with the County’s overarching goals and is a companion to the County’s Strategic Financial Plan. It outlines how technology will be integrated into all facets of running County of Orange operations and serving its residents and is based on our core values of customer service, transparency, innovation and teamwork.

Our technology investments over the next several years will mirror the County’s overall focus on investing in infrastructure, modernizing systems and providing new services.

Moving forward on our strategic path, the first priority is laser focus on the IT organization, our governance model and our policies and practices. We look to realize the benefits of a centralized IT operation, including innovation, research and development and consistent customer service. Our governance model will evolve as our organizational structure changes. We’ll pay particular attention to enterprise architecture and security best practices. We’ll focus on talent management, ensuring that our team has the skills and tools they need to help the County achieve its goals.

The years ahead are foundational. The IT Strategic Plan will be the roadmap to keep us on course and help us achieve our IT mission to provide quality, innovative, fiscally responsible and secure Information Technology solutions that support the County’s business needs.

I look forward to collaborating with you as we build an information technology organization for the County of Orange that is second to none.

CHRISTINA KOSLOSKY  
Chief Information Officer

## II. County Mission and Goals

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### County of Orange Mission Statement

Making Orange County a safe, healthy, and fulfilling place to live, work, and play, today and for generations to come, by providing outstanding, cost-effective, regional public services.

### Countywide Goals

- Promoting a Healthy Community
  - Assure access to healthcare and social services
  - Promote and maintain a healthful environment
  - Promote self-sufficiency and healthy lifestyles
- Building for the Future of Our Community
  - Maintain fiscal integrity
  - Attract and retain the best and brightest workforce
  - Provide and maintain essential infrastructure and community programs
- Protecting Our Community
  - Assure disaster preparedness and prompt emergency response
  - Reduce crime and recidivism
  - Promote a fair and equitable criminal justice system

### III. Information Technology Mission and Goals

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Information Technology (IT) is the common thread that enables the County’s business. The Countywide IT mission and goals align with the County’s mission and goals and were established to ensure support of these.

#### Countywide IT Mission

Provide quality, innovative, fiscally responsible and secure Information Technology solutions that support the business needs of the County of Orange as a whole now and into the future.

#### Countywide IT Goals



##### Customer Service

Provide excellent customer service to all internal and external constituents of the County of Orange while ensuring security of County data and systems



##### Transparency

Ensure transparent and fiscally responsible stewardship of IT assets



##### Innovation

Promote creative, cost-effective and innovative thinking



##### Teamwork

Foster a culture of teamwork and collaboration across Countywide IT functions

As you will see later in this document, these goals are at the forefront of all of our technology service offerings and initiatives.

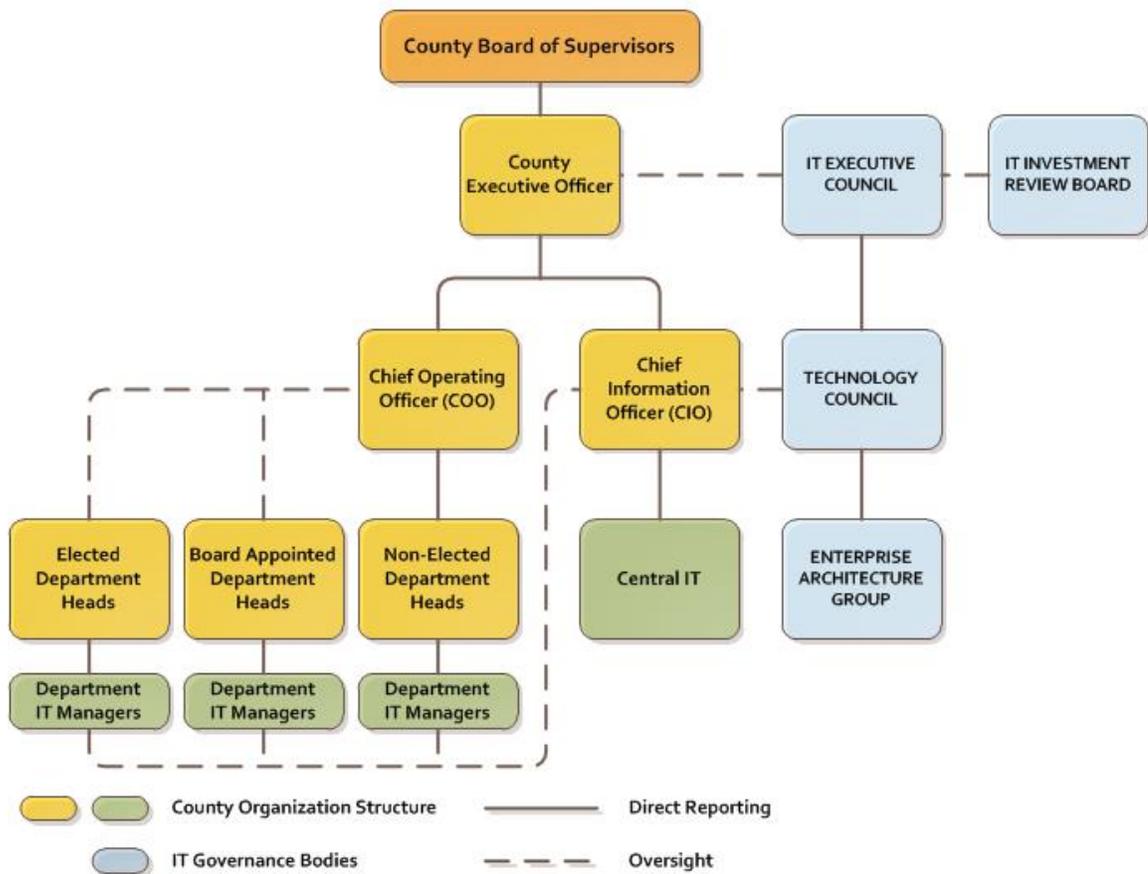
## IV. Information Technology Organization and Governance

The County of Orange currently operates in a highly decentralized IT organizational structure, with each agency/department responsible for its own technology decisions and supporting operating budgets. The IT Governance Model, depicted in the table below, defines the roles and responsibilities of the Chief Information Officer (CIO), agency/department IT managers, and business partners as participants in the defined governance.

The IT Governance Model ensures that there will be collaboration and agreement on Countywide IT initiatives and strategic direction in the decentralized organization and proposes to reduce IT costs whenever possible through collaboration and shared services. It further provides assurance to the County Board of Supervisors that there has been sufficient review of IT-related matters that are presented for their consideration.

The IT Organization and Governance model is summarized below.

**Orange County IT Management and Governance**



## Governing Bodies

### IT Executive Council

The IT Executive Council is chaired by the County Executive Officer (CEO). The membership includes the Chief Information Officer, Chief Financial Officer, Auditor-Controller, Deputy Directors, and rotating Agency Directors. This Council provides review and approval of Countywide IT priorities, strategic plans, policy and expenditures. The IT Executive Council ensures that Information Technology aligns with County business goals and priorities and that these are addressed in an efficient manner.

The IT Executive Council also serves as an escalation point for the Technology Council and IT Investment Review Board and may request specific tasks/projects of these governing bodies.

### Technology Council

The Technology Council is chaired by the Chief Information Officer (CIO) and consists of representatives from the CEO Office of Information Technology and County agency/department information technology units. This open forum fosters increased communication between agencies/departments and generates solidarity in the pursuit of common technology goals and direction. This council also serves as advisory to the IT Executive Council.

### Investment Review Board

The IT Investment Review Board is chaired by the CEO Program Management Office (PMO) director, with membership including the CIO, the County budget director, two rotating agency business directors and three rotating agency IT managers. The Investment Review Board evaluates and ranks proposed IT project business cases for all initiatives greater than or equal to \$150,000. The goal of the IT Project Investment Review Board is to ensure that IT projects and expenditures that have solid business cases and will achieve the greatest benefit for the County are prioritized and funded.

### Enterprise Architecture Group

This group is currently chaired by the CEO IT Enterprise Services Director and provides review and approval of County technology solution designs. Going forward, this group will be expanded to develop Countywide IT enterprise architecture policies, standards, and guidelines as needed in the IT domains including data, applications, technology and security.

Over the next several years, the County IT Governance Model will be modified to support the centralization of the IT organization, a key initiative that is discussed in this plan and that will impact how Information Technology decisions are made at the County in the years to come.

## V. Information Technology Standards

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The County of Orange has implemented industry Information Technology standards and best practices to guide IT service delivery within the County. Partnering with our service providers, the goal over the next several years is to continue to mature these practices, focusing on continuous improvement and excellent customer service.

### IT Service Management

The IT Service Management (ITSM) program has resulted in significant enhancements to County IT service delivery. Partnering with our service delivery vendors, CEO IT performs ITSM functions based on the [Information Technology Infrastructure Library \(ITIL\)](#) in order to provide optimal service to our customers.

ITIL is a widely accepted approach to ITSM, which has been adopted by organizations across the world. ITIL provides a cohesive set of best practice, drawn from the public and private sectors internationally. Because ITSM is driven both by technology and the range of organizational environments in which it operates, it is constantly evolving.

ITIL includes standards for Asset Management, Configuration Management, Change & Release Management, Incident Management, Problem Management, and Service Catalogue Management. Implementation of ITIL standard practices helps to ensure continuous improvement of County IT service delivery through repeatable processes and ongoing measurement and assessment, always striving to improve customer service.

### IT Project and Portfolio Management

The CEO/IT Program Management Office (PMO) is responsible for providing a standard IT project management methodology for managing County IT projects and working with the various governance groups to prioritize IT projects, thereby ensuring that the IT project portfolio aligns with business goals.

The PMO project management methodology is based on the Project Management Institute's (PMI) [A Guide to the Project Management Body of Knowledge \(PMBOK®\)](#), which defines the worldwide standard for effective project management.

The County PMO methodology is flexible. The methodology incorporates a variety of best practices to enable successful outcomes and establishes the following basic principles concerning processes:

- Repeatable processes provide consistency and quality.
- The role of process is to enable projects, not to hinder them.
- Processes evolve; they must be continuously updated and improved to meet organizational objectives.

With these principles in mind, the PMO plans to incorporate **Agile Project Management** techniques into its existing methodology over the next several years and to train staff in this approach. Agile Project Management is an iterative and incremental method of managing the design and build activities of projects in order to improve outcomes. This is especially useful for large IT and application development projects, which will benefit from the iterative nature of Agile Project Management.

## Application Development

The County's application development model has varied and lacked process standardization across agencies/departments. Historically, the traditional sequential Waterfall Application Development model has been used with varied success. This method follows sequential phases, including requirements definition, software architecture and design, code development, testing, documentation and implementation.

The traditional Waterfall method assumes that most software requirements can be identified before any design or coding occurs. This is very difficult to do, especially with larger development projects, and often results in a team developing software based on the initial documented user requirements only to find at the end of the project that the solution does not meet user expectations.

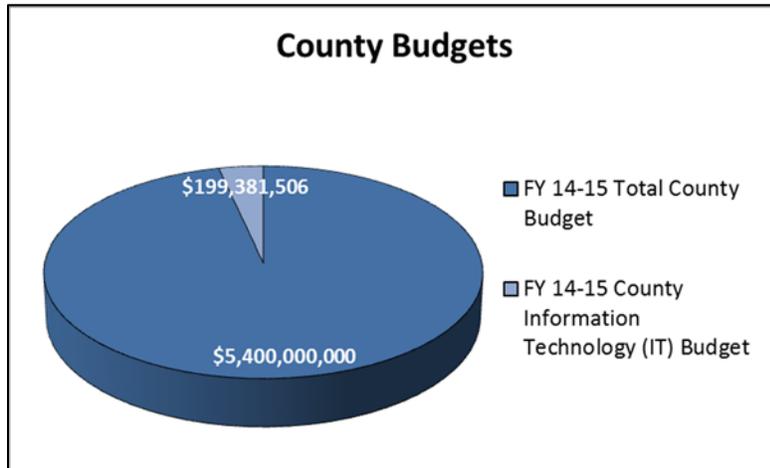
To help improve the application development process, some agencies/departments have incorporated the **Agile Development Methodology**. This methodology takes an iterative approach to software development and performs "sprints," wherein every aspect of development is continually revisited over shorter periods of time. Stakeholders have recurring opportunities to see what is being developed, assess what is being done, and provide input.

As County IT becomes centralized, the application development methodology will be standardized and matured. Where appropriate, the Agile approach will be incorporated. This will require training for software development staff in Agile Development Methodology and, as stated above, in Agile Project Management for those responsible for managing software development projects.

In addition, IT will develop standards and partner with the agency leaders to develop a more mobile-enabled County for both the workforce and constituents who utilize County services. This will open up an array of opportunities to improve the ways in which County workers communicate and collaborate, achieve efficiencies across common business tasks and improve the ability to engage and interact with customers.

## VI. Information Technology Budget

The total County FY 14-15 adopted budget is \$5.4 billion. As presented below, the County’s IT budget is \$199.4 million, or 3.7 percent of the total.



Agency/department IT expenditures are currently included in the individual agency/department budgets. Costs for Enterprise IT Data Center services provided to agencies/departments by CEO/IT are included in the CEO/IT Internal Service Fund (ISF) budget. Charges for services are recouped through direct monthly billings to agencies/departments.

The benchmark budget data provided below shows that Orange County’s IT spend as compared to overall operating expenses is in-line with the state/local government average. However, the County’s IT spend per employee appears to be higher than average. This is largely due to significant infrastructure upgrades and large-scale, multi-year projects that began in 2014, including the implementation of the new Countywide converged network and VoIP solution; a state-of-the-art Disaster Recovery system in Scottsdale, Arizona; and a new budgeting system, as well as the multi-year Health Care Agency Electronic Health Record initiative.

Benchmark Comparisons			
Category	Year	Orange County	State/Local Gov't
IT Spend as a % of Operating Expenses	2013	3.3%	3.8%
	2014	3.7%	3.6%
IT Spend per Employee	2013	\$9,021	\$8,581
	2014	\$11,044	\$8,355

<sup>1</sup>Source: Gartner – “IT Key Metrics Data 2015: Key Industry Measures, Government – State and Local Analysis”

<sup>1</sup> Gartner, “IT Key Metrics Data 2015: Key Industry Measures, Government – State and Local Analysis”

## Countywide IT Historical Cost Information

The chart below provides the current budget as well as historical IT budgeted and actual expenditure information. Historically, actual expenditures run approximately 10 percent less than budget. Expenditures for a few categories such as IT Professional Services, IT Training and Travel, and IT Fixed Assets typically experience significantly lower expenditures than planned.

Beginning in FY 14-15, the budgeted amounts for Communication and Phone Charges and Enterprise IT Services reflect significant increases due to implementation of the new IT managed services model, which also includes costs for implementation of the Countywide Converged Network and VoIP solution.

Expenditure Categories	FY 12-13 Budget	FY 12-13 Actuals	FY 13-14 Budget	FY 13-14 Actuals	FY 14-15 Budget
Communication & Phone Charges	\$15,348,802	\$14,886,555	\$16,544,247	\$16,943,332	\$22,718,321
Hardware & Software Maintenance	\$14,895,499	\$13,494,564	\$18,272,231	\$16,527,853	\$16,103,001
Hardware & Software Leases/Licenses	\$9,260,579	\$9,171,576	\$15,332,704	\$10,088,232	\$17,263,430
Minor IT Equipment (< \$5,000)	\$8,803,474	\$8,073,535	\$8,413,483	\$8,529,959	\$9,658,164
Enterprise IT Services (Data Center Charges from CEO/IT)	\$25,807,075	\$25,378,319	\$25,686,700	\$28,597,162	\$43,808,243
IT Professional Services	\$37,301,630	\$28,299,522	\$40,247,442	\$29,670,031	\$33,197,449
IT Training & Travel	\$255,732	\$92,993	\$459,070	\$60,668	\$542,480
IT Fixed Assets (> \$5,000)	\$10,137,932	\$6,183,212	\$8,870,321	\$3,809,515	\$9,923,726
IT Staffing	\$45,379,090	\$44,610,613	\$46,162,642	\$44,135,376	\$46,166,492
	<b>\$167,189,813</b>	<b>\$150,190,888</b>	<b>\$179,988,840</b>	<b>\$158,362,126</b>	<b>\$199,381,506</b>

As the County implements the IT Shared Services model, alternative IT budgeting models will be assessed to determine the most efficient and cost-effective approach. This will entail assessing to what extent IT expenditures should continue to be budgeted at the agency/department level and the mechanics of how the budget(s) should be structured. Regardless of how and where costs will be budgeted, IT centralization will provide more transparency on IT expenditures and enhanced oversight of IT projects and initiatives.

## VII. Countywide Information Technology Strategic Priorities

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IT is foundational to the County's ability to provide services; it is the common thread that enables County agencies/departments to reach their business objectives and provide excellent customer service to the citizens and business community of Orange County.

While IT supports the business of the County, the County's business needs drive IT requirements. Yet IT also serves as an enabler to transform and improve business processes in order to enhance services and better meet the needs of the County of Orange.

Through the County IT governance processes, IT leaders have identified the Countywide IT strategic priorities that will position the County to meet business needs now and into the future while keeping the following IT goals at the forefront of our service offerings and initiatives:



### Customer Service

Provide excellent customer service to all internal and external constituents of the County of Orange while ensuring security of County data and systems



### Transparency

Ensure transparent and fiscally responsible stewardship of IT assets



### Innovation

Promote creative, cost-effective and innovative thinking



### Teamwork

Foster a culture of teamwork and collaboration across Countywide IT functions

The strategic priorities described in this section are instrumental to providing the technology and solutions required to support Orange County business now and into the future.

## IT Shared Service Model



Customer Service



Transparency



Teamwork

State and local governments continue to be challenged with long-term reductions in funding and growing demand for access to information. The County of Orange is looking to IT as a mechanism for enhancing services, enabling efficiency, and promoting transparency. The current duplication of IT operations across multiple agencies/departments hampers the County’s ability to achieve these objectives. Consequently, in December 2013, the County Board of Supervisors approved a County strategic business priority to implement a more cost-effective Countywide IT model.



IT within the County of Orange supports the unique missions and operational requirements of 25 separate agencies/departments, as well as the County Executive Office and the Board of Supervisors. County IT also supports the information access requirements of more than 17,000 employees and 3 million constituents.

Over the past 20 years, IT at the County has become highly distributed and decentralized due largely to the rapid implementation of technology and local and wide area networks that occurred in the 1990s. Within the

current County of Orange IT model, every agency is responsible for its own technology decisions and supporting operating budgets. This has resulted in duplication of systems and services throughout the County. As a brief example, the County funds and maintains 13 data centers, 18 email systems, eight-plus storage area networks and multiple solutions that serve the same purpose.

A cross-functional IT working group was convened in 2014 to develop a recommendation for future County IT services. The team is recommending that IT Services be consolidated, moving toward a centralized, shared services IT model to drive innovation, deploy industry best practices, and achieve cost-effective service delivery through economies of scale and streamlined processes.

An IT Shared Service is a consolidated IT function that is provided for consumption by multiple business units within an organization. Many County Agencies leverage the shared IT solutions and services that exist within County IT today, including Disaster Recovery, eGovernment (the County’s web sites), data storage through the central Storage Area Network and the recently developed SharePoint Intranet site. Over the next several years, these and other shared services and applications will be expanded, addressing business needs and providing the oversight needed to gain efficiencies.

### Guiding Principles for Change

- A strong focus on customer service during the transition will be maintained, ensuring agency operations is a priority.

- Will ensure that Information Technology decisions meet all legal mandates and operational requirements.
- Implementing an IT shared services model is a significant undertaking that will require sufficient planning, assessment and time. The County will take an incremental approach to ensure service continuity and minimal impact on business staff.
- A significant effort will be placed on having the right mix of County staff, contractors, outsourced services, and solutions while retaining and memorializing institutional knowledge and experience.
- Common IT services such as VoIP, email, storage, server provisioning, and document management solutions will become highly standardized and replicable.
- The IT shared services model will be restructured for the purpose of adding value to the overall County enterprise and will be flexible enough to adapt to new challenges brought on by changes in business strategy, funding limitations and maturity of the IT organization.
- The IT shared services model will take on only those initiatives that have clear business value or enhance the efficiency and effectiveness of IT service delivery

### IT Shared Services Model - Key Milestones



## Essential IT Infrastructure



Customer Service



Transparency



Teamwork

The County is committed to ensuring that the necessary Information Technology infrastructure is in place to provide excellent service to our customers. Infrastructure includes the voice and data network, hardware, software, security and other systems necessary to support County operations.

### Converged Voice and Data Network Transformation

The County has implemented a contract to provide a new, Countywide converged voice and data network, including a Voice over Internet Protocol (VoIP solution). The County’s converged voice and data network transformation project will deliver a highly upgraded and streamlined network design that supports increased Internet capacity, data transfer speed, and a state-of-the-art telephone system. The project will be completed in 26 months (July 2014 – August 2016) and encompass 140 County sites and more than 17,000 users. Significant effort has been made to address County business requirements and ensure that there will be minimal impact to County operations during the course of the project.

The County will derive many benefits from the new converged network. There will be only one network system that will support both phone and data flow. This allows circuits to be consolidated, which in turn reduces maintenance costs. The new telephone system will provide users with updated phones and added features, including a corporate directory accessible directly from the phone, the ability to receive phone messages via email, and the ability to manage phone features through an online interface. Based on agency/department requirements, some users will be provided with “soft phones,” through which the user’s PC handles both network data and telephone service.

#### Business Drivers

- ◆ Current voice systems have reached end-of-life.
- ◆ Need a secure, planned network that supports increased bandwidth requirements.

#### Expected Outcomes

- ◆ Replaces current voice and data networks with a single network that will provide efficiencies and reduce maintenance of two separate networks.
- ◆ Implements a planned, Countywide, converged voice and data network design that is secure, reliable and scalable.
- ◆ Provides performance and availability that meets contractual service levels.

### Converged Voice and Data Network Transformation Key Milestones



## IT Security

The County’s IT security awareness and training programs must evolve to prepare County employees for current real-world IT security threats. In 2014, the County hired a new Computer Information Security Officer (CISO) to expand the County’s security programs. Significant emphasis will be placed on the development of Countywide security policies and user awareness.



Over the next several years, the County will implement Countywide security training at all levels. Training will include user awareness as well as programs to help Information Security Officers at all County agencies/departments to understand current threats and prepare network defense plans.

Security assessments and testing are also necessary tools to help County agencies/departments combat and thwart IT cyber security attacks. To that end, the County will invest in security assessment and testing tools that will be provided to all agencies/departments. These tools will aid the County in establishing a more in-depth defense methodology for its computer infrastructure, systems and data.

### Business Drivers

- ◆ The current security awareness and training program must evolve to prepare County employees for current real-world IT security threats.
- ◆ The County needs a security assessment and testing program to help strengthen the preventive methodologies that guard systems and data from cyber-attacks.

### Expected Outcomes

- ◆ An informed workforce that will understand the cyber threat landscape.
- ◆ Fewer accidental security breaches.
- ◆ A Countywide security assessment and testing program that enhances overall security posture.
- ◆ Much needed system security updates that will aid in avoiding security breaches.

### IT Security Key Milestones



## Disaster Recovery

The County continues to mature its strategies for the protection of County data in the event of a disruption. The objective of the County’s Disaster Recovery (DR) program is to establish capabilities for restoring critical business process IT dependencies following a regional disruption caused by earthquake, fire, flood, or other natural or man-made event.



In FY 14-15, the County contracted with SAIC to replace the existing DR solution with a state-of-the-art DR site at the SunGard West Coast Flagship facility in Scottsdale, Arizona. This 102,000-square-foot facility features redundant uninterruptible power supplies (UPS) and long-running diesel generators. Facility services include 24/7/365 monitoring and managed security.

The County will maintain DR instances of all enterprise critical systems, including Microsoft Exchange and Hyland OnBase, as well as the County’s CAPS+ Financial and Human Resource Services systems at the new SunGard facility. In 2015, agencies/departments will continue to transition critical data to the new County-maintained infrastructure hosted at SunGard. SAIC will ensure the integrity of data with bi-annual infrastructure and enterprise application recovery testing.

In addition, to support higher availability and performance after a disruption, the County’s DR site will host three on-demand servers. These servers are capable of providing redundancy for currently supported and future applications and will be used as necessary to support emergency operations.

### Business Drivers

- ◆ Significant level of reliance countywide on IT-enabled processes, transactions, and constituent services and support.
- ◆ Regulatory and compliance requirements associated with critical business processes.

### Expected Outcomes

- ◆ Ability to restore critical business processes within the identified recovery periods.
- ◆ On-demand equipment to support CAPS+ and other critical enterprise applications.
- ◆ Internet and high-bandwidth network access to the County network.

### Disaster Recovery Key Milestones



## Cloud Technologies

Cloud technologies include web-based computing services that are hosted outside of the County’s locally maintained IT infrastructure. Cloud-based software and services are hosted in offsite data centers that are maintained by a third-party vendor.



Many services are currently available in the cloud, including email, mobile banking and document storage. Because these services are available via the Internet, users can access them virtually anywhere and at any time using a PC, laptop or other device with an Internet connection.

In addition, many software vendors have adopted a subscription-based cloud-delivery model for the provision of software and services, including Microsoft, which is the County’s standard solution provider for office productivity applications. This industry shift requires that the County develop a clear strategy for when it is appropriate to make use of cloud-based solutions and when a more traditional, on-premises solution is appropriate.

As part of the cloud technology adoption, the County recently deployed IntraOC, the redesigned Countywide Intranet. It is built on Microsoft’s (MS) SharePoint Online platform, which is part of the MS Office 365 suite hosted in the MS Government cloud. Over the next year, the County plans to leverage other components that are part of the Office 365 offering, including the Office ProPlus application suite (Word, Excel, PowerPoint), Exchange Online email services, and Power Business Intelligence.

County IT will assess the benefits, risks, costs and sustainability of cloud-based services on an ongoing basis. IT Security will play a vital role in ensuring that County policy and the privacy and security controls needed to meet regulatory requirements are in place to safeguard the County’s information assets.

### Business Drivers

- ◆ Ability to securely access services anytime, anywhere.
- ◆ New vendor software application delivery models.

### Expected Outcomes

- ◆ Secure access to County systems from any device connected to the Internet.
- ◆ Providing IT systems that meet the needs of the mobile workforce.

## Cloud Technologies Key Milestones



# Enterprise Architecture



Innovation



Teamwork

Enterprise Architecture (EA) seeks to align strategic business objectives with the IT applications and infrastructure that enable them. EA also helps to define an organization's needs concerning standardization, job roles, systems, infrastructure, and the data in use by core business processes.

In order to ensure that IT meets the County’s business needs, a comprehensive Enterprise Architecture program will be implemented. This program will work to build stronger relationships between business and IT at the County by establishing a collaborative environment in which to share information and decision strategies; determine the processes and data that should be managed at the enterprise (countywide) level versus those that should remain with specific business units; and provide the basis for business and IT leaders to come to a mutual agreement of critical enterprise capabilities.



The initial steps in implementing this program will be to build the team and governance structure (including both County business and IT leaders), identify current and future business drivers, followed by a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis of the County’s current technology architecture. This analysis will be used to help determine a “to-be” technology architecture strategy that can be prioritized to address the business needs that are identified.

## Business Drivers

- ◆ Need for business requirements to drive technology decisions.
- ◆ Need for data standardization and designation of authoritative data sources to drive data mining and Business Intelligence.
- ◆ Ability to improve business processes through consistent application delivery.

## Expected Outcomes

- ◆ Enhanced alignment of business and IT visions and objectives.
- ◆ Policies and standards resulting in improved IT efficiency and accountability.
- ◆ Reduction of redundant technologies through leveraged enterprise IT services.

## Enterprise Architecture Key Milestones



## Countywide Collaboration



Customer Service



Innovation



Teamwork

County agencies/departments need technology-enabled collaboration solutions that support business processes. Rather than implementing individual systems at the agency/department level, the County has chosen to implement an enterprise-level collaboration solution that will allow the County to reach long-term goals for process maturity and efficiency, staff productivity and development, and lower operating costs.



The County has deployed IntraOC, the redesigned Countywide Intranet, which is built on Microsoft (MS) SharePoint Online and hosted in the Government Cloud. The SharePoint Online platform enables cross-agency/department document sharing and collaboration as well as improved access to County data. Cross-agency/department groups can request dedicated online space for sharing information and managing projects, work groups, or communities of practice.

Using the established platform, agencies/departments will also be able to host their own Intranets in the cloud. Over time, this will result in reduced infrastructure costs Countywide as agencies are able to decommission their individual Intranet platforms and move to the shared service.

County IT will be building on the established platform to enable features and functionality identified as high-level for the entire County. These include Business Intelligence, taxonomy and development of business forms and workflow. Countywide training and adoption of the solution will be ongoing. CEO/IT will also be working closely with agencies to continually improve the service offering by enabling the additional features and functionality needed to enhance the working environment.

### Business Drivers

- ◆ Agencies have a need for cross-County collaboration capabilities.
- ◆ Existing County Intranet site has reached end-of-life.

### Expected Outcomes

- ◆ Achieve economies of scale by leveraging shared technology across agencies.
- ◆ A Countywide employee portal that facilitates cross-agency/department collaboration, automated business processes, employee self-service, and document management.

### Countywide Collaboration Key Milestones



## Application Portfolio Management



Customer Service



Transparency



Teamwork

The County Office of the Performance Audit 2011 Report recommended that CEO IT develop an action plan for managing the Countywide IT Application Portfolio, ensuring that key applications are identified and managed through the asset life cycle. This will provide County IT and agency leaders with a clear picture of IT application assets and the costs of maintaining and replacing them, improving overall financial planning and reducing the duplication of these assets.

Key application information has been collected from agencies/departments concerning their existing applications and stored in a SharePoint database. Over the next year, the current Application Inventory will be migrated to IntraOC (the new Enterprise SharePoint site), to allow for easier access and real-time updates by Agency personnel. Access to this data will provide visibility to all applications throughout the County and enable the improved oversight and business decisions regarding the application life cycle.



To start this assessment process, CEO/IT is partnering with OCWR to evaluate its application portfolio and determine an application roadmap for the future. This exercise will form the basis of a methodology for enhanced application portfolio management countywide.

### Business Drivers

- ◆ Ability to identify County application assets and determine the application life cycle in order to support operations as required.
- ◆ Improved budgetary planning to support the application life cycle.

### Expected Outcomes

- ◆ An enhanced APM strategy relative to Agency business plans and goals.
- ◆ Improved oversight of County applications, reducing duplicative systems and maintenance costs.
- ◆ Improved budgetary planning to support the application lifecycle.

### Application Portfolio Management (APM) Key Milestones



## Identity Access Management



Customer Service



Innovation



Teamwork

Identity and Access Management (IAM) is an information security, risk management and business discipline. It ensures that the right individuals have access to the right systems and applications at the right times. IAM is a mission-critical initiative for the County and needs to be continually funded and protected so that the infrastructure can mature and align with current and future business needs.

The County has successfully architected, designed and implemented a foundational IAM infrastructure, which it has branded as OCid. The OCid infrastructure provides the County with a centralized repository of digital identities for all users, systems, and services. This repository, along with other OCid components, provides a single, authoritative source for County directory information, including telephone numbers, email address, and other employee attributes.



OCid has enabled single-sign-on (SSO) capability for several enterprise applications, including the Central IT Service Desk Portal, Microsoft Office 365 and IntraOC. This saves users from having to remember multiple user IDs and passwords for these enterprise-level applications. Additional applications will be integrated in the next several years.

The County will continue to mature and enhance OCid capabilities in order to align with business drivers, including enhancing system access for the mobile workforce. The workflow of key processes, including user provisioning and de-provisioning, and user authentication and authorization will be improved. Additional capabilities such as user self-service for password resets will also be addressed.

### Business Drivers

- ◆ Improved management of user provisioning and de-provisioning to County systems and applications.
- ◆ Regulatory compliance and reporting.

### Expected Outcomes

- ◆ A single Countywide directory of all County IT system users.
- ◆ Standardized user access controls to County applications and systems.
- ◆ Single sign-on, reducing the need for multiple User IDs and passwords

### Identity Access Key Milestones



## Mobility



Customer Service



Innovation

Mobile computing has been growing at a staggering rate across age groups, income groups, industries, and cultures. The rapid growth of mobile technology brings with it an expectation of adoption by service providers such as the County.



A mobile-enabled Orange County opens up many opportunities to improve the ways in which County workers perform their common business tasks and engage and interact with our customers. By providing mobile applications, citizens can access services anytime, from any device – an imperative for excellent customer service.

Various agencies/departments within the County have developed mobile applications. However, the IT Investment Review Board has funded the implementation of a Countywide Mobility Governance group to develop the necessary standards and platform to support both the mobile workforce and citizens countywide. This group will develop the long-term County mobility strategy and priorities that will improve services to County employees and constituents.

### Business Drivers

- ◆ Business efficiencies that can be gained through the enablement of a more mobile workforce.
- ◆ Growth of user mobile devices and expectations from constituents.

### Expected Outcomes

- ◆ Countywide governance of mobile application development and services.
- ◆ Clear roadmap of mobility priorities.
- ◆ Improved customer service via access to County self-service, mobile applications.

### Mobility Key Milestones



## VIII. Key County IT Projects by Program Area

The County Budget and Strategic Financial Plan are organized into program areas that group agencies/departments by program functions. Some of the key Information Technology initiatives in support of these programs are provided in this section. The project portfolio is categorized into project types.

### Project Types

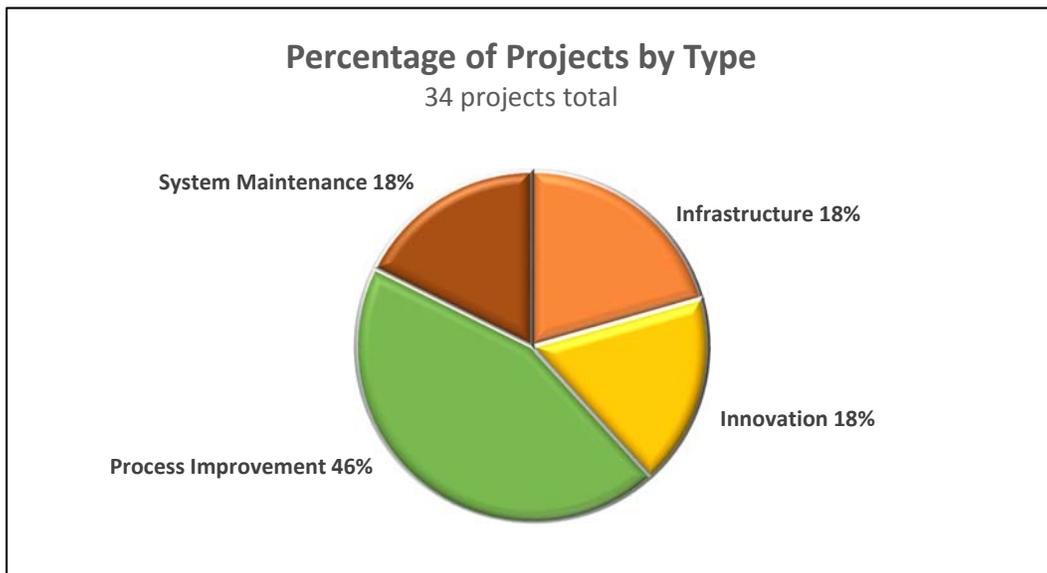
- **Type 1: Infrastructure**

IT Infrastructure serves as the foundation upon which mission/program/project-specific systems and capabilities are built.
- **Type 2: Innovation**

Implementation or assessment of state-of-the-art technologies that address business needs.
- **Type 3: Process Improvement**

Implementation of new applications and systems that streamline business processes and create efficiencies.
- **Type 4: System Maintenance**

Projects related to maintaining existing IT systems.



Implementing new systems to improve business processes, while replacing systems that no longer meet business needs is a large component of the project portfolio. Infrastructure investments are also being undertaken to provide the necessary foundation for County systems. In addition, the

County is investing in innovation; assessing newer technologies as we look to ensure continuous improvement.

## PROGRAM I: Public Protection

Public Protection includes the County's Law and Justice departments, including the Office of the District Attorney (OCDA), Public Defender (PD), OC Sheriff's Department (OCSD), and Probation Department. Some of the key IT initiatives in support of Program I departments include:

	IT INITIATIVE	TYPE
OCDA	<p><b>SCIENCE &amp; TECHNOLOGY THAT ENHANCE PUBLIC SAFETY (STEPS)</b></p> <ul style="list-style-type: none"> <li>♦ STEPS proposes to address the shortage of law enforcement investigative resources that are needed to identify, apprehend, and prosecute criminal offenders. Four components are proposed, one of which is technology-related. STEPS intends to leverage technology through the implementation of Rapid DNA System, expanded paperless documentation, storage and electronic filing and crime investigation and prohibition software.</li> </ul>	2
PD	<p><b>LEGAL CASE MANAGEMENT SYSTEM</b></p> <ul style="list-style-type: none"> <li>♦ The Public Defender is implementing a new case management application designed for PD offices that has the ability to integrate with other Justice Partners (i.e., District Attorney, Courts, etc.). The project will include the RFP process, system selection, installation, data migration and implementation of the new system.</li> </ul>	3
OCSD	<p><b>JAIL SECURITY ELECTRONIC CONTROL SYSTEM UPGRADE/REPLACEMENT</b></p> <ul style="list-style-type: none"> <li>♦ Upgrade the security electronics systems that allow the guard stations to control movement of doors; provide door status indication; seamlessly connect all needed audio communications paths; display relevant surveillance video. Establish a single control point for all of these systems.</li> </ul>	4
OCSD	<p><b>AUTOMATED FIELD REPORTING SYSTEM</b></p> <ul style="list-style-type: none"> <li>♦ Proposal for a new, modern suite of operations applications to include the Automated Jail System (AJS) and more than 60 additional legacy applications.</li> </ul>	2

Type 1 – Infrastructure, Type 2 – Innovation, Type 3 – Process Improvement, Type 4 – System Maintenance

	IT INITIATIVE	TYPE
OCSD	<p><b>800 MHz COUNTYWIDE COORDINATED COMMUNICATIONS SYSTEMS UPGRADE</b></p> <ul style="list-style-type: none"> <li>♦ The Orange County 800 MHz Countywide Coordinated Communications System (CCCS) services the wireless voice communications and interoperability requirements of all County and city public safety agencies in Orange County. Since the system is software-driven, active steps will be required to extend the useful service life of the infrastructure and electronic equipment to keep pace with technology.</li> </ul>	1

Type 1 – Infrastructure, Type 2 – Innovation, Type 3 – Process Improvement, Type 4 – System Maintenance

## PROGRAM II: Community Services

Community Services includes the County's Child Support Services (CSS), Health Care Agency (HCA), OC Community Resources (OCCR) and the Social Services Agency (SSA). Some of the Key IT initiatives in support of Program II departments include:

	IT INITIATIVE	TYPE
CSS	<p><b>PUBLIC WIRELESS ACCESS</b></p> <ul style="list-style-type: none"> <li>♦ Provide public wireless access for customers, followed by staff.</li> </ul>	3
HCA	<p><b>BEHAVIORAL HEALTH SERVICES ELECTRONIC HEALTH RECORDS (EHR)</b></p> <ul style="list-style-type: none"> <li>♦ Develop and implement a completely integrated and interoperable Electronic Health Records (EHR) system for Behavioral Health Services. The system will allow Behavioral Health Services to transition from a paper-based clinical documentation management system to an electronic system. Development and implementation will occur in three phases and is expected to complete in 2016.</li> </ul>	3
OCCR	<p><b>CALL CENTER UPGRADE</b></p> <ul style="list-style-type: none"> <li>♦ Upgrade the Animal Care Call Center to Cisco VoIP CCX to provide enhanced features and functionality.</li> </ul>	4
SSA	<p><b>ASAP LOBBY KIOSK PROJECT</b></p> <ul style="list-style-type: none"> <li>♦ Implement new lobby kiosks to offer a self-help alternative to clients seeking assistance with the Affordable Care Act (ACA).</li> </ul>	3

Type 1 – Infrastructure, Type 2 – Innovation, Type 3 – Process Improvement, Type 4 – System Maintenance

## PROGRAM III: Infrastructure and Environmental Resources

Infrastructure and Environmental Resources include the County's John Wayne Airport (JWA), OC Public Works (OCPW) and OC Waste & Recycling (OCWR). Some of the Key IT initiatives in support of Program III departments include:

	IT INITIATIVE	TYPE
OCPW	<p><b>CUSTOMER RELATIONSHIP MANAGEMENT</b></p> <ul style="list-style-type: none"> <li>Implement Customer Relationship Management (CRM) software in order to help business manage customer data and customer interactions; access business information; automate sales, marketing, and customer support; and manage employee, vendor, and partner relationships. The CRM software will streamline OCPW operations and personalize customer service based on the customer's known history and prior interactions.</li> </ul>	3
OCPW	<p><b>311</b></p> <ul style="list-style-type: none"> <li>Director's initiative to enhance the current OC Works mobile application to include integration with the in-house maintenance management databases. Over the next several years, this system will become a Countywide 311 system.</li> </ul>	2
OCPW	<p><b>OC FLEET WEBSITE APPLICATIONS</b></p> <ul style="list-style-type: none"> <li>Updating of OC Fleet website and applications in order to implement audit recommendations. This includes a vehicle purchasing website.</li> </ul>	3
OCWR	<p><b>FEE BOOTH POS SYSTEM UPGRADE</b></p> <ul style="list-style-type: none"> <li>Implement version 6 of SQL-based POS system with vendor for all open landfills.</li> </ul>	4
OCWR	<p><b>FEE BOOTH KIOSK REPLACEMENT</b></p> <ul style="list-style-type: none"> <li>Replace aging landfill kiosks with updated infrastructure to support current and future business requirements.</li> </ul>	1

Type 1 – Infrastructure, Type 2 – Innovation, Type 3 – Process Improvement, Type 4 – System Maintenance

## PROGRAM IV: General Government

General Government includes the County Assessor, Auditor-Controller, Clerk of the Board, Clerk Recorder, County Counsel, County Executive Office, Human Resource Services, Office of the Performance Auditor, Registrar of Voters, and the Treasurer-Tax Collector. Some of the key IT initiatives in support of Program IV departments include:

	IT INITIATIVE	TYPE
A-C	<p><b>CAPS+ HUMAN RESOURCES/BENEFITS DATA WAREHOUSE</b></p> <ul style="list-style-type: none"> <li>Develop a CAPS+ Human Resources/Benefits Data Warehouse solution based on business processes. The developed solution will provide a flexible, secure, and easy-to-use reporting and decision support system. It will include standard and ad-hoc reporting, business intelligence, and dashboard capabilities to meet the business needs of Human Resource Services and Employee Benefits.</li> </ul>	3
A-C	<p><b>CAPS+ RELEASE UPGRADE</b></p> <ul style="list-style-type: none"> <li>The CAPS+ System needs to be upgraded to a vendor supported version. The current version is incompatible with Microsoft's current Internet Explorer (IE). Furthermore, bringing both the CAPS+ Financial/Purchasing and HR/Payroll systems onto the same release version will simplify operations and maintenance while increasing operational efficiency.</li> </ul>	4
A-C	<p><b>EPROCUREMENT</b></p> <ul style="list-style-type: none"> <li>Implementation of a centralized, electronic, Countywide procurement solution that interfaces with the County's CAPS+ Financial/Purchasing system. A Countywide eProcurement system will standardize disparate processes and reduce transaction processing times.</li> </ul>	3
A-C	<p><b>CAPS+ COLLECTIONS SYSTEM</b></p> <ul style="list-style-type: none"> <li>Develop a centralized, Countywide collections solution that allows the County to benefit from a comprehensive solution, providing integration into the Countywide Accounts Receivable system. A comprehensive collections solution promotes visibility, efficiency, cost savings, and control.</li> </ul>	3

Type 1 – Infrastructure, Type 2 – Innovation, Type 3 – Process Improvement, Type 4 – System Maintenance

A-C	<p><b>PROPERTY TAX SYSTEM UPGRADE</b></p> <p>3</p> <ul style="list-style-type: none"> <li>The Property Tax System (PTS) is utilized by the Auditor-Controller, Treasurer-Tax Collector, and Clerk of the Board. The PTS currently runs on the County’s mainframe platform and was developed in the late 1980s using a programming language that is now obsolete. In July 2008, the County launched a multi-year implementation of a custom Property Tax Management System (PTMS). This project was subsequently put on hold, and the County is now moving forward with exploration of alternative options.</li> </ul>
COB	<p><b>E-AGENDA SYSTEM REPLACEMENT</b></p> <p>3</p> <ul style="list-style-type: none"> <li>The e-Agenda system is mission critical for the County’s Board of Supervisors agenda process and is 17 years old. It comprises three related sub-systems: Comprehensive Agenda Management Solution (CAMS), AgendaWorks, and the eAgenda Search Engine. A replacement system will be implemented to enhance current business process requirements, improve user experience, and provide additional features and functionality.</li> </ul>
CR	<p><b>REDACTION</b></p> <p>4</p> <ul style="list-style-type: none"> <li>Redact SSNs from all recorded documents in order to comply with state regulations.</li> </ul>
CR	<p><b>FBN</b></p> <p>3</p> <ul style="list-style-type: none"> <li>Replace the existing Fictitious Business Name application with a more current solution that better meets current requirements.</li> </ul>
CEO	<p><b>E-SIGNATURE</b></p> <p>2</p> <ul style="list-style-type: none"> <li>Implement a secure electronic signature system for countywide use to provide efficiencies in supporting a paperless environment.</li> </ul>
CEO	<p><b>ENTERPRISE EXPEDITER ROLLOUT</b></p> <p>3</p> <ul style="list-style-type: none"> <li>The County Purchasing Office is developing a standardized requisition and contract management software tool for use by all agencies. The software tool will allow agencies to submit and process paperless purchasing requests in a timely manner and manage contract activities.</li> </ul>

Type 1 – Infrastructure, Type 2 – Innovation, Type 3 – Process Improvement, Type 4 – System Maintenance

CEO	<p><b>OFFICE 365 STRATEGY</b></p> <ul style="list-style-type: none"> <li>Develop Microsoft Office 365 (O365) Cloud roadmap and deployment strategy for all O365 applications and services.</li> </ul>	2
CEO	<p><b>COUNTYWIDE CONVERGED VOICE AND DATA NETWORK</b></p> <ul style="list-style-type: none"> <li>Implementation of a converged, countywide voice and data network that will replace the current voice and data networks, ensuring the necessary infrastructure is in place to support county business needs now and into the future.</li> </ul>	1
CEO	<p><b>SHAREPOINT PHASES II AND III</b></p> <ul style="list-style-type: none"> <li>Phases II and III will build on the platform established, enabling features and functionality that have been identified by the County as being of high value, including Business Intelligence, taxonomy automation, development of business forms and workflow.</li> </ul>	3
CEO	<p><b>EGOV PLATFORM REPLACEMENT</b></p> <ul style="list-style-type: none"> <li>The current eGovernment website is a content management system (CMS) hosted under a managed service contract. This contract will expire in 2016 and a replacement system will be required. Project includes development of RFP, procurement of new hosting and CMS, and conversion of existing site content to new solution.</li> </ul>	3
CEO	<p><b>COUNTYWIDE DISASTER RECOVERY SOLUTION</b></p> <ul style="list-style-type: none"> <li>This project transitions the OC disaster recovery site from Solano County to a state-of-the-art SunGard facility in Scottsdale, Arizona.</li> </ul>	1
CEO	<p><b>OC DATA CENTER UPGRADES</b></p> <ul style="list-style-type: none"> <li>To ensure high availability, aging infrastructure at the OC Data Center is being replaced, including a second generator and implementation of a new cooling system.</li> </ul>	1
CEO	<p><b>AGENCY DATA CENTER MIGRATIONS</b></p> <ul style="list-style-type: none"> <li>Migration of IT infrastructures from agency/department management to the OC Enterprise Data Center.</li> </ul>	1

Type 1 – Infrastructure, Type 2 – Innovation, Type 3 – Process Improvement, Type 4 – System Maintenance

CEO	<p><b>VIRTUAL DESKTOP</b></p> <ul style="list-style-type: none"> <li>♦ Virtual Desktop Infrastructure (VDI) is the practice of hosting a desktop operating system within a virtual machine (VM) running on a centralized server. Software applications are then made available via this configuration for use by end users. VDI will be evaluated to determine if it could be an effective alternative to placing personal computers on every desktop.</li> </ul>	2
HRS	<p><b>ONBASE HR</b></p> <ul style="list-style-type: none"> <li>♦ Evaluate the current OnBase HR application to determine if it meets business requirements.</li> </ul>	4
ROV	<p><b>NEW ELECTRONIC VOTING SYSTEM</b></p> <ul style="list-style-type: none"> <li>♦ Replace the electronic voting system that has reached current system EOL (FY 2017-18) with an innovative solution using current technologies and practices.</li> </ul>	3

Type 1 – Infrastructure, Type 2 – Innovation, Type 3 – Process Improvement, Type 4 – System Maintenance

## IX. Looking Ahead

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This Information Technology Strategic Plan builds upon significant strengths already in place at the County, and articulates a business-based mission and actionable set of strategies and projects that will help improve county services, leverage and coordinate IT investments, and facilitate the County's ability to "do more with less." Through the established IT Governance channels, the Chief Information Officer will continue to foster collaboration with county leaders to ensure Information Technology aligns with business goals, objectives and priorities.

The efficiencies and cost-saving opportunities of leveraging "shared services" where it makes sense will continue to be a priority. Working together, we can ensure that the County of Orange will serve as a model governmental agency that delivers excellent services to the community.