



# Implementing a Shared Services Strategy for Information Technology



## Pilot Report





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# A MESSAGE FROM FRANK KIM, CEO

Dear County Community,

One of the most complex and critical support services in the County is information technology (IT). In many ways, the traditional roles of IT and government run counter to each other. Government can be bureaucratic and slow to change. It is bound by numerous policies, processes, agreements, rules, and regulations. Technology, on the other hand, changes rapidly. The systems we implement today are often surpassed by what's available tomorrow. As soon as we implement a new system or piece of hardware, there is a new version or a completely new technology. We often don't keep pace with technology, which can lead to greater support costs for the old systems and infrastructure. Yet, the public demands that we keep pace. Our constituents are increasingly looking to interact with us via their mobile devices, to get information more quickly and easily, and for us to provide them with a friction-free experience when obtaining services.



In order to address the IT challenges that have resulted from the County's fragmented IT environment, last year, the County commenced a Shared Services pilot, with the goal of establishing a foundation and framework for implementing the strategy across the County. Shared Services is an operational model that is a best practice in the private sector and is becoming increasingly common in the public sector. It is not simply a consolidation or centralization effort. While the driver for implementing Shared Services is often the need to increase efficiency, the model also fosters continuous improvement and innovation through ease of collaboration and the consistent application of industry leading practices.

The purpose of this report is to communicate the outcomes of the pilot. In this report, it will be evident that the pilot has been a success, and what we have achieved during the course of a year is praiseworthy. Accomplishments that I find particularly notable include the focus on developing enterprise applications such as OC Expediter, an enterprise procurement application that enhances our speed of procurement and increases accountability; the establishment of a cyber security team to focus on securing our data and information; taking steps to modernize technology with a focus on mobile application design and moving to the "cloud"; an emphasis on hardware and software standardization, including the implementation of three standard desktop computer models to replace 60 outdated models; and the additional value and efficiencies we have gained by bringing individual IT teams together under one organization, OC Information Technology (OCIT).

Though there remains much work to be done, the Shared Services framework has been set and the County is ready to bring additional agencies into OCIT. I am proud that the County of Orange is leading local governments in implementing such a forward-thinking IT model, and I am confident that within the next few years—as we continue to innovate, economize, and provide value to our constituents—we will solidify our reputation as a leader in civic technology.

Sincerely,

A handwritten signature in black ink, appearing to read "Frank Kim". The signature is fluid and cursive, written over a light-colored background.

**Frank Kim**  
**County Executive Officer**

# ABOUT THE IT SHARED SERVICES PILOT

## OVERVIEW

Over the past two decades, there have been significant shifts in the IT industry, not only in technology, but also organizational strategy, best management practices, and service delivery models.



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Today, the County finds itself attempting to meet modern expectations with dated technology, tools, and processes. Information Technology (IT) at the County of Orange has operated in a decentralized model since 1996. The County's fragmented IT past and resulting complexity has significantly impeded its ability to provide reliable, secure IT services and support. These inefficiencies have also had a negative impact on the citizen experience, as the County is lagging in its ability to enable data transparency, make data-driven decisions on behalf of its constituents, and automate business processes. The decentralized model, with County agencies operating their own IT teams, individually standing up their own IT infrastructure, and often independently procuring IT equipment and services, has had significant consequences. Among them:

- Inconsistent and inadequate security standards, policies, and training
- Higher costs for IT equipment, hardware, software, and services
- Reliance on legacy systems that utilize outdated technology
- Duplicative or redundant data centers, equipment, applications, and projects
- Difficulty in cost effectively or successfully implementing enterprise initiatives, including “big data” or “open data” initiatives
- Inconsistent performance expectations and technical proficiency of IT staff
- Limited opportunity for cross-training of staff to ensure there is an adequate “bench”
- Low levels of cross-agency collaboration and teamwork.



In 2014, the County Executive Officer, at the request of the Board of Supervisors, convened an IT Working Group to examine the County's IT structure and recommend a model that would address the County's challenges related to IT. Consistent with the Working Group's recommendation, on July 21, 2015, the Board of Supervisors approved the integration of IT resources



from two County agencies/departments, OC Community Resources and OC Waste & Recycling, with three other agencies/departments (Child Support Services, County Executive Office, and OC Public Works) that were already consolidated, to form OC Information Technology (OCIT) and to pilot the implementation of a Shared Services operating model. The goal of the pilot was to establish a foundation for the County to implement the Shared Services model on a wider scale. An IT Shared Services Steering Committee, composed of the Directors of each of the pilot agencies, was also formed to make decisions and provide direction to OCIT management related to IT Shared Services.

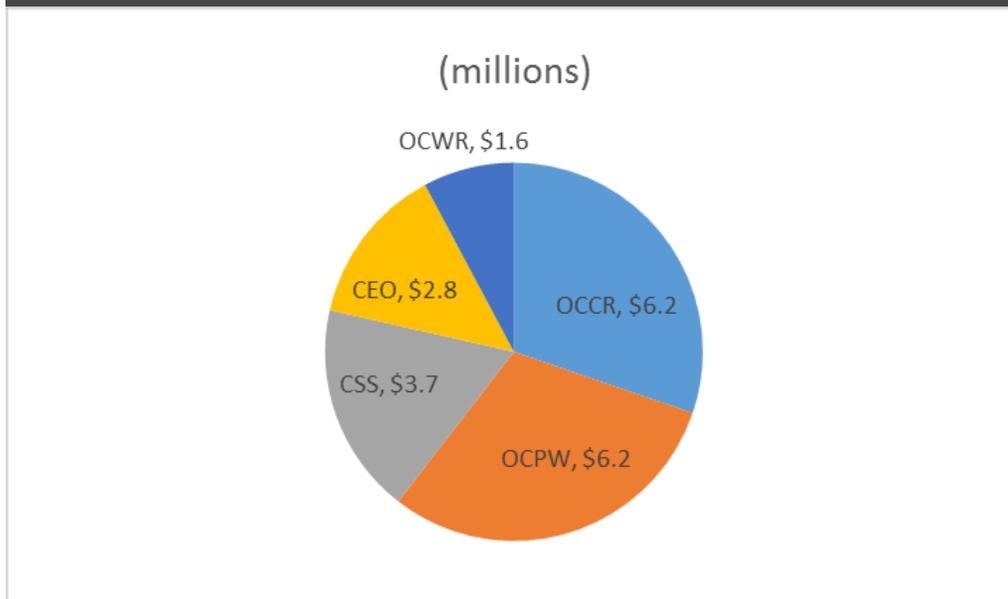
# INTRODUCING OC INFORMATION TECHNOLOGY

The integration of IT staff resources from five County agencies (Child Support Services, County Executive Office, OC Community Resources, OC Public Works, and OC Waste & Recycling) afforded an opportunity to implement a Shared Services organizational and operational model. Following the Board's action to consolidate staff, on November 27, 2015, OCIT officially began the transition to a Shared Services model. The 134 staff who comprise OCIT were assigned to functional teams that encompass a number of service areas, including customer relationship management, applications development and support, project management, business analysis, service desk, desktop support, infrastructure services, and information security.



As an organization, OCIT provides IT services to the five Shared Services agencies with an annual budget of approximately \$20 million.

FIGURE A. FY16-17 OCIT SHARED SERVICES BUDGETED BILLINGS



OCIT also provides enterprise-level services to other County agencies, primarily through its managed services contracts. Services provided by the contracted managed service vendors include OC Data Center operations; service desk and desktop support; network, voice, and infrastructure implementation and support; and management of the County's out-of-state disaster recovery location.



### DESKTOP/LAPTOP SUPPORT

We support over **5,000** laptop and desktop computers for approximately **2,500** Shared Services end users.



### SERVER/NETWORK SUPPORT

We support over **630** servers across more than **38** locations. We manage **80+** routers, **380** switches, **42** wireless bridges, and **173** wireless access points across **85** locations.



### VoIP PHONE SUPPORT

We support over **2,100** VoIP phones across **85** locations.



### APPLICATION DEVELOPMENT

We support over **100** applications for CSS, CEO, OCCR, OCPW, and OCWR. Each year, we develop over **800** application enhancements.



### EMAIL NEWSLETTERS

Each year, we deliver over **188,000** email newsletters and bulletins to our constituents.



### PROJECT MANAGEMENT

We manage approximately **170** IT projects annually, with our PMO managing the largest of these projects: **23** projects with a total budget of over **\$12** million.

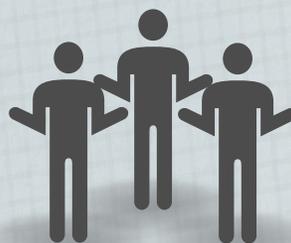


### IT CONTRACTS / PROCUREMENT

We manage approximately **140** IT agreements, with an aggregate contract value of **\$610** million, and each year, we process approximately **500** requisitions.



## SHARED SERVICES



# A CULTURE OF CUSTOMER SERVICE

When OCIT was formed in late 2015, the CIO convened a working group of OCIT staff to develop its organizational mission statement, vision statement, and core values.

At the top of its list of core values is Customer Focus, which permeates OCIT and is a key element in all of the organization's initiatives, activities, and services.

OCIT strives to be the County's IT provider of choice. To achieve this goal, the organization has not only looked to operate as efficiently as possible, it has also endeavored to create a culture where great customer service is paramount.

This starts with the Customer Relationship Management team, which is a new function established as part of the Shared Services implementation. Each Shared Services pilot agency is assigned a dedicated Customer Relationship Manager (CRM) who is responsible for ensuring that the customer's needs are met.

In addition, OCIT support staff has participated in customer service-oriented training and activities, and OCIT's plan for ongoing training identifies a number of opportunities intended to help technical professionals develop their communication, leadership, and conflict resolution skills.

## MISSION

To provide innovative, reliable, and secure technology solutions that support County agencies and departments in the delivery of quality public services.

## VISION

To be a recognized leader in providing innovative public sector IT services and business solutions and a valued strategic partner to County agencies and departments.

## VALUES

Customer Focus. Our customers; success is our top priority.

Stewardship. It is our responsibility to develop fiscally sound solutions in the best interest of the County.

Collaboration and Teamwork. We foster a work environment that values knowledge-sharing and leverages the diverse skills and experiences of the organization.

Continuous Improvement and Innovation. We encourage learning, new ideas, and innovative thinking.

Professionalism. We conduct ourselves with courtesy, integrity, and respect for our customers, partners, and colleagues.



## OVERVIEW

Shared Services is an operating model that focuses on seamlessly connecting with and responding to customers. It does so by enabling operational, staffing, and resource efficiencies and investing in services that customers value.



Shared Services is an operating model that focuses on seamlessly connecting with and responding to customers. It does so by enabling operational, staffing, and resource efficiencies and investing in services that customers value. This section of the report highlights the initiatives undertaken by OCIT during the pilot to operate more efficiently—initiatives that were only able to be accomplished with IT resources unified under one organization.

## OPERATIONAL EFFICIENCY

One of the most significant benefits of a Shared Services model is operational efficiency, as IT best practices can be implemented consistently across the larger, consolidated organization.

### EQUIPMENT STANDARDS

Standardization of computer equipment ensures that the equipment is up-to-date and has adequate “horsepower” to run the latest systems, thereby improving the overall user experience (i.e., faster speed, fewer errors). Having these equipment standards in place can also decrease costs in the areas of pricing and support by enabling bulk purchases at volume discounts and decreasing administrative overhead costs. Technicians supporting standardized equipment (i.e., fixing equipment breakdowns) are more familiar with the equipment and can provide more efficient service.

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“ OCIT HAS BEEN ABLE TO ACHIEVE OPERATIONAL EFFICIENCIES IN SEVERAL AREAS AND IS POISED TO ACHIEVE EVEN MORE EFFICIENCY OVER THE NEXT 12-24 MONTHS.”

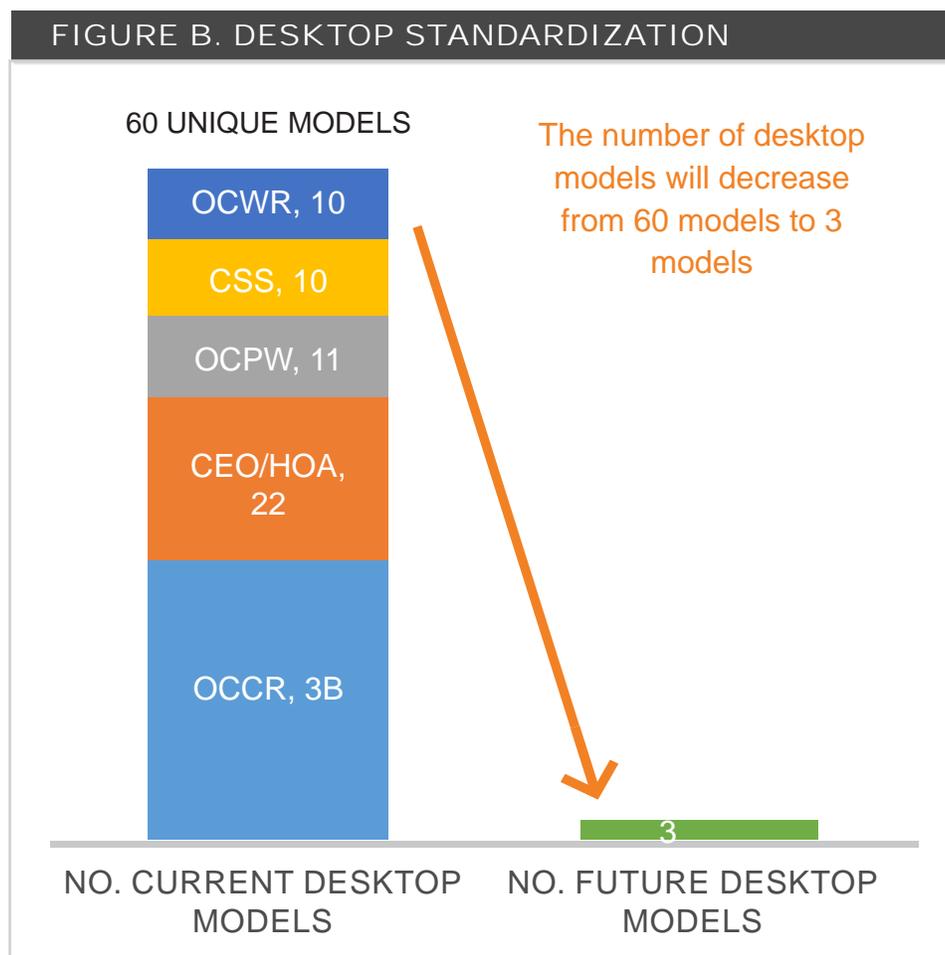
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## OPERATIONAL EFFICIENCY CONTINUED

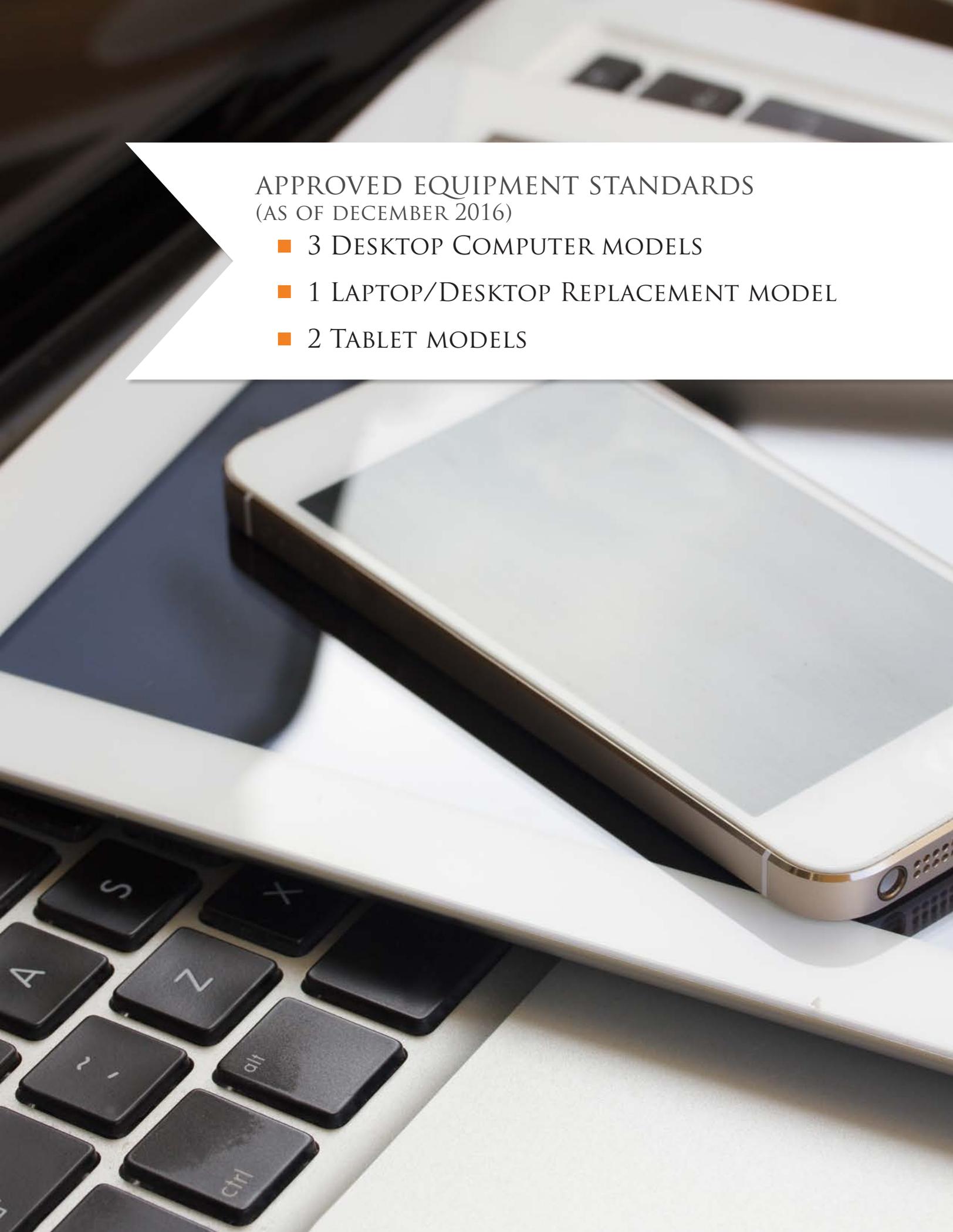
In March 2016, OCIT began to address the proliferation of different models of equipment such as desktop computers. Analysis revealed a total of 60 different models of desktop computers across the five pilot agencies. Many of these computers were a decade old and did not have adequate security specifications.

After conducting market research and analyzing pilot agency user needs, OCIT recommended three desktop computer models that would meet the needs of users across the pilot agencies (see Figure B below).

The new equipment standards and recommended desktop computer models were approved by the IT Shared Services Steering Committee in July 2016. They feature five-year warranties, support new security requirements (e.g., the ability for full encryption), and have the memory and power adequate to support the latest versions of common office productivity software such as Microsoft Office and Adobe.



In addition to the desktop computer standards, OCIT developed a laptop standard that includes a docking station, which eliminates the need for users to have both a desktop computer and a separate laptop—a cost efficiency gain.



APPROVED EQUIPMENT STANDARDS  
(AS OF DECEMBER 2016)

- 3 DESKTOP COMPUTER MODELS
- 1 LAPTOP/DESKTOP REPLACEMENT MODEL
- 2 TABLET MODELS

# OPERATIONAL EFFICIENCY CONTINUED

## SOFTWARE STANDARDS

Standardization of software, similar to standardization of computer equipment, promotes operational efficiency. Implementation of software standards ensures that the software is up to date, which in turn enhances security, reduces operating errors and “bugs,” and generally improves the user’s experience with the software. Technicians providing application support are also more familiar with the software and can more readily diagnose problems and deploy fixes. In addition, bulk software purchases should yield volume discounts and decrease administrative burden. One of OCIT’s Shared Services pilot initiatives is to establish software standards.

Today there are in excess of 60 operating system images across the Shared Services Agencies (an “image” is the set of hardware drivers and software on a laptop or desktop computer). Having such a high number of images often leads to errors. For example, when users receive new laptops or desktop computers, software and hardware drivers that were previously installed on their laptops or desktop computers may be missing from their new equipment because the wrong image was used. OCIT recently developed three standard base images to replace the current 60 images.

In addition to image standards, OCIT has developed and received approval for a Desktop Patching Guideline (i.e., when and how user computers receive software updates) and has developed a Windows 10 operating system standard.

## ADMINISTRATIVE EFFICIENCY: OCIT BILLING PORTAL

OCIT developed and implemented a Billing Portal that provides its customers with detailed data and information about its IT billings and charges. Customers have the ability to obtain summary-level reports or drill down to more detailed levels. In addition, customers can view year-over-year trends. OCIT’s objective in developing this portal was to provide its customers greater transparency and a higher level of customer service. For some agency/department budget staff, the portal will help increase the efficiency of their budget review processes.





## BREAKING DOWN BARRIERS

With 22 different agencies making up the County of Orange, collaboration and communication is challenging, particularly from a technology standpoint. Two decades of disparate technology decisions have created barriers to collaboration. With the implementation of the Shared Services model, OCIT has been able to begin breaking down those barriers for the pilot agencies, as exemplified by its initiatives related to Calendar Sharing, Skype for Business, and the Global Address List.

### **Calendar Sharing**

The “One View” Shared Services Pilot initiative, also known as the Calendar Availability project, was started with a single, modest goal: enable County staff to share and view staff calendar “free/busy” information across agencies. Although Outlook Address Book sharing existed, there was not a mechanism to allow staff to share calendar availability information across agencies. This was due to a number of technical factors, such as individual agencies maintaining their own separate IT organizations and the isolation of email environments that prevented

systems from communicating directly with each other.

Agencies have long operated under the perception that they are prohibited from accessing or sharing resources across agencies. In recent years, the County has begun a shift towards more collaboration in order to reduce overhead and streamline operations. This new paradigm allowed OCIT to pursue calendar sharing. This is a simple yet effective method for County agencies participating in Shared Services to collaborate with each other, while still maintaining a high standard of information security.

The success of the calendar sharing project has helped OCIT’s customers and has had a positive impact on OCIT’s own daily operations, as well. With staff dispersed across five agencies, managers and supervisors are able to view and allocate their staff’s time quickly and effectively, which enables OCIT to provide the highest level of service to its customers.

## OPERATIONAL EFFICIENCY CONTINUED

### GLOBAL ADDRESS LIST

A Global Address List (GAL) is an electronic shared address book for an organization. County employees rely on the GAL as a convenient and highly available directory to look up information such as name, title, phone number, company, department, and work address.

Currently, however, the data in the County's GAL is populated from individual agencies' / departments' Active Directories (AD) and are manually administered by individual agencies / departments. With no automated validation of the data in those directories, the County GAL has missing and incorrect data.

OCIT's Shared Services Project Management Office (PMO) is conducting a Data Normalization pilot to improve the quality of the GAL by using data from authoritative sources such as CAPS+ (the County's enterprise resource planning system) instead of relying on data manually populated and maintained. Once completed, the County's GAL will be a more consistent and reliable source of contact information for employees.

### COLLABORATION WITH SKYPE FOR BUSINESS



The implementation of Skype for Business will change the way OCIT communicates internally, and once rolled out to the pilot agencies, will facilitate communication and collaboration for those employees, as well.

Skype for Business is a collaboration tool that provides:

- **Instant messaging and user availability for real-time chat functionality**  
This feature is similar to texting, except it's done on the desktop. Using an Outlook calendar, staff are able to see when a coworker is available, and then send that coworker a quick message. This reduces the number of emails sent back and forth.
- **Skype Meetings for web, audio, and video conferencing**  
The tool has conference call capability and also allows hosts of the meetings to share their desktops to allow others to see the Excel, Word or any type of file on which they wish to collaborate. In addition, with the optional installation of video cameras on selected desktops, video conferencing is available. This reduces the number of emails sent back and forth.

Use of Skype for Business will also result in a cost savings to the County, as this tool is included as part of the Microsoft Office 2016 Suite. Agencies will no longer need to purchase licenses for separate tools such as WebEx and GoToMeeting.



## VIRTUALIZATION

Servers are powerful computers that host files and applications and run complex tasks. IT administrators usually dedicate each server to a specific application or task for manageability and to make it easier to pinpoint issues that arise. However, this approach is inefficient, as the server's processing power is not fully utilized, and additional servers are needed when new applications need to be hosted or new tasks need to be run. Additional servers mean more equipment refresh purchases, additional maintenance costs, a larger real estate footprint, as well as greater power and cooling needs—all of which increase costs.

Server virtualization helps address these issues. Using virtualization software, one physical server can be converted into multiple virtual servers that act like unique physical servers, effectively getting more servers “for the price of one.” **Typical savings from virtualization of physical servers is 20-40%.**

The level of server virtualization was a key pilot performance metric. For the five pilot

agencies, OCIT analyzed existing physical servers to determine which servers are good candidates for virtualization. Over the course of the pilot, OCIT virtualized additional candidate servers in order to improve operational efficiency and reduce costs for the pilot agencies.

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**“** TO DATE, 84% OF SERVERS THAT ARE CANDIDATES FOR VIRTUALIZATION HAVE BEEN VIRTUALIZED, AND THE REMAINING 16% WILL BE COMPLETED BY SEPTEMBER 2017. **”**

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## OPERATIONAL EFFICIENCY CONTINUED

### ELIMINATING DUPLICATION

Applications Portfolio Management (APM) is an industry standard technique and methodology for managing an organization's software applications. As a discipline, APM looks at each application from both technical and business value standpoints to determine what actions, if any, should be taken to update, invest in, or eliminate the application. APM is especially useful to the County, which has developed and deployed duplicative applications over 20 years of decentralized IT operations.

With the integration of the five Shared Services agencies, APM is helping OCIT examine the 100+ software applications across the pilot agencies, including the identification of applications that are good candidates for migration to an enterprise or multi-agency platform (i.e., eliminating the need for each agency to develop its own application).

OC Expediter is one example of how OCIT was able to reduce duplication by developing an enterprise application (see box).

By regularly reviewing agencies' application portfolios, the County can focus resources on applications that enhance business value. During the short duration of this exercise, the County has already benefited by identifying several overlapping applications, outdated platforms, and applications with little value. For example, while evaluating requirements to replace an outdated OC Community Resources application called Treasure Chest, which balances transactions from the OC Parks Direct Point of Sale (POS) system to deposits made to the bank, it was determined that OC Public Works' Cash Receipt application performs a similar function. The OCIT team was able to quickly develop a solution for OC Community Resources by modifying OC Public Works' application, and in doing so, avoided the costs of developing an entirely new application to replace Treasure Chest.



### SPOTLIGHT: OC EXPEDITER

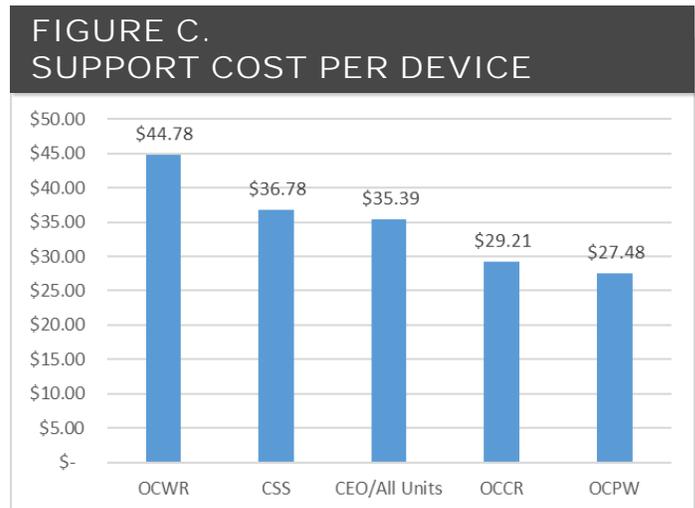
OC Expediter is an enterprise procurement application that has helped County agencies transform complex, manual purchase requisitions and contract management processes into electronic workflows that increase efficiency, reduce staff processing time, and eliminate errors. Enabled by the consolidation of the pilot agencies' IT teams, OCIT developed its first multi-agency or enterprise application that replaces the need for individual agencies to develop their own applications. Developed in collaboration with the application's business sponsor, the County Procurement Office (CPO)—and in only nine months—OC Expediter replaces previously paper-based requisition processes and provides users with the ability to route, approve, and process requisitions online.

Overall requisition processing time has been reduced by at least 75%. Each agency, on average, saves 15 hours of labor per procurement staff each month. Since the launch of the pilot, twelve County agencies have begun actively using the application and many other agencies are lined up to go live in the near future.

## CONSISTENT IMPLEMENTATION OF BEST PRACTICES

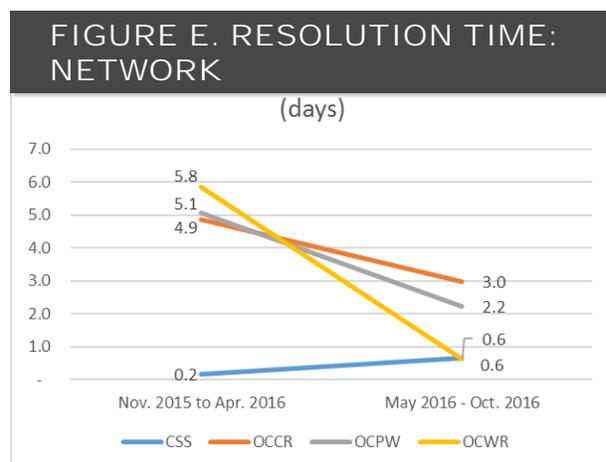
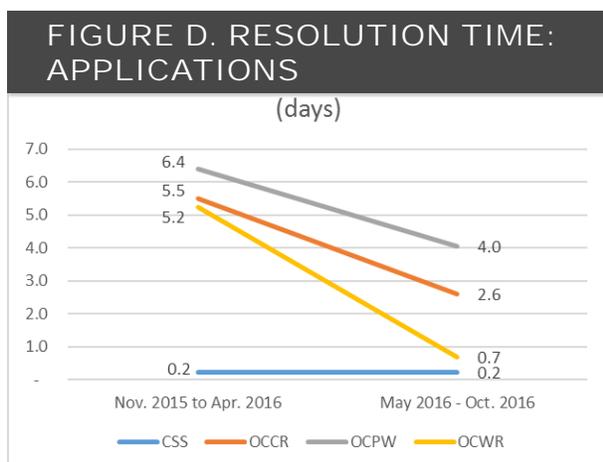
A Shared Services strategy facilitates the implementation of best practices across an operation. IT performance metrics help reveal areas where more consistent implementation of best practices is needed.

For example, **Support Cost Per Device** (e.g., per desktop computer) is a common IT metric used to gauge an operation’s cost efficiency in delivering IT service. Due to the County’s decentralized history of IT service delivery, each of the five Shared Services agencies has a different support model. For example, OCCR, OCPW, and CSS provide desktop/laptop device support through a team of OCIT County employees, while OCWR and CEO procure support for their devices through a vendor. In addition, OCPW and CSS staff call an employee-staffed Help Desk for incidents and service requests, while OCCR staff contact a Help Desk staffed by a vendor. These differing support models understandably cause differences in Support Cost Per Device across Shared Services agencies.



Using a sample of data from the current fiscal year, the estimated all-inclusive support costs per desktop/laptop for the Shared Services agencies is shown in Figure C. As illustrated, the monthly support costs range from a low of \$27.48 per desktop/laptop to a high of \$44.78 per desktop/laptop. **OCIT needs to continue examining its operations and how it supports each of the Shared Services agencies to determine how to drive costs down without impacting customers’ desired service levels.** Figure C is evidence that there are best practices in some areas of the operation that can be implemented in other areas.

Another metric that indicates the need for continued analysis and examination is **Time to Resolution**. This metric helps organizations track the average amount of time spent resolving user issues, which is important, as the longer it takes IT to resolve an issue, the lower a customer’s satisfaction. Figures D and E below show the average number of days to resolve two types of issues—Applications-related issues and Network-related issues—over the past year. Although Time to Resolution decreased for the most part, there is enough variability to indicate there is ample opportunity to examine OCIT’s operations and look for improvement opportunities.



## OPERATIONAL EFFICIENCY CONTINUED

Additionally, in order to accurately measure Resolution Time, incidents must be consistently logged into a ticketing system, and once incidents are resolved, tickets must be promptly closed. Unfortunately, Shared Services agencies utilize different ticketing systems with different incident categories and functionality. For example, Child Support Services' ticketing system does not have automated time stamping; instead, staff manually enter how long it took them to resolve a ticket. Moreover, when the pilot first commenced, some IT staff were not consistently entering or closing tickets. Due to the cost of implementing a common ticketing solution, OCIT has had to maintain these different ticketing systems over the course of the pilot, which has hampered OCIT's ability to accurately and consistently monitor Resolution Time across the operation, and also makes it difficult to deploy staff resources across Shared Services pilot agencies. Once OCIT is no longer in pilot status, it plans on purchasing and implementing a ticketing system that will be used across the Shared Services agencies.

### OPEN GOVERNMENT: OPEN\$DATA

Due to an expiring, expensive contract, the County needed to replace its public-facing financial data visualization software, OpenGov, within 60 days. OpenGov is a tool that makes data sets and a host of financial information readily accessible to all employees and the general public. Analysis revealed that a solution could be produced in-house, as opposed to hiring an external vendor. Under the Shared Services model, OCIT was able to access expert programmers from formerly disparate IT departments to form a cross-functional team that could get the job done. The team developed a new web-based resource, Open\$Data, that replaced the OpenGov product and is critical to OpenOC, the County's data transparency initiative. Deployed on October 16, 2015, the Open\$Data Tool has improved the financial transparency experience for users. The CEO Finance team saves hours of manual report generation monthly by employing reusable models created by the data team. In the prior solution, links in quarterly budget reports expired after a year; that is no longer the case. In working with agency/departments finance teams, the solution developers discovered multiple additional use cases. As a result, the tool is now available for use with IT and utility billing data as well as performance analytics. Public and internal users can instantly access financial details anywhere and at any time.



# STAFFING EFFICIENCY AND EFFECTIVENESS

The cornerstone of a Shared Services model is the ability to more optimally utilize staff resources in two ways:

1. Sharing resources, which leads to gains in staffing efficiency; and
2. Bringing experts together, which results in greater effectiveness in delivering solutions to customers.



## SHARING RESOURCES

Prior to the integration of staff to form OCIT, sharing staff resources between and among County agencies was neither common, nor prioritized. In the decentralized model, each agency had to bear the full cost of all IT staff regardless of whether those staff resources were fully utilized or in demand. When OCIT formed, the organizational barriers came down, and staff that were formerly siloed in their respective agencies were able to do work for more than their original agency. For example, during periods of lower demand, IT applications developers who had been part of one agency can now be utilized for another agency's increase in demand. For example, an analysis of OCIT labor charges to OC Public Works shows that OCPW's demand for services has recently been running at approximately 51,500 hours, which is 18% lower than the number of hours OCPW would have had to pay in labor charges had the agency not been a part of the Shared Services pilot. Over the past 12 months, **over 50% of OCIT staff have performed work for more than one County agency.**

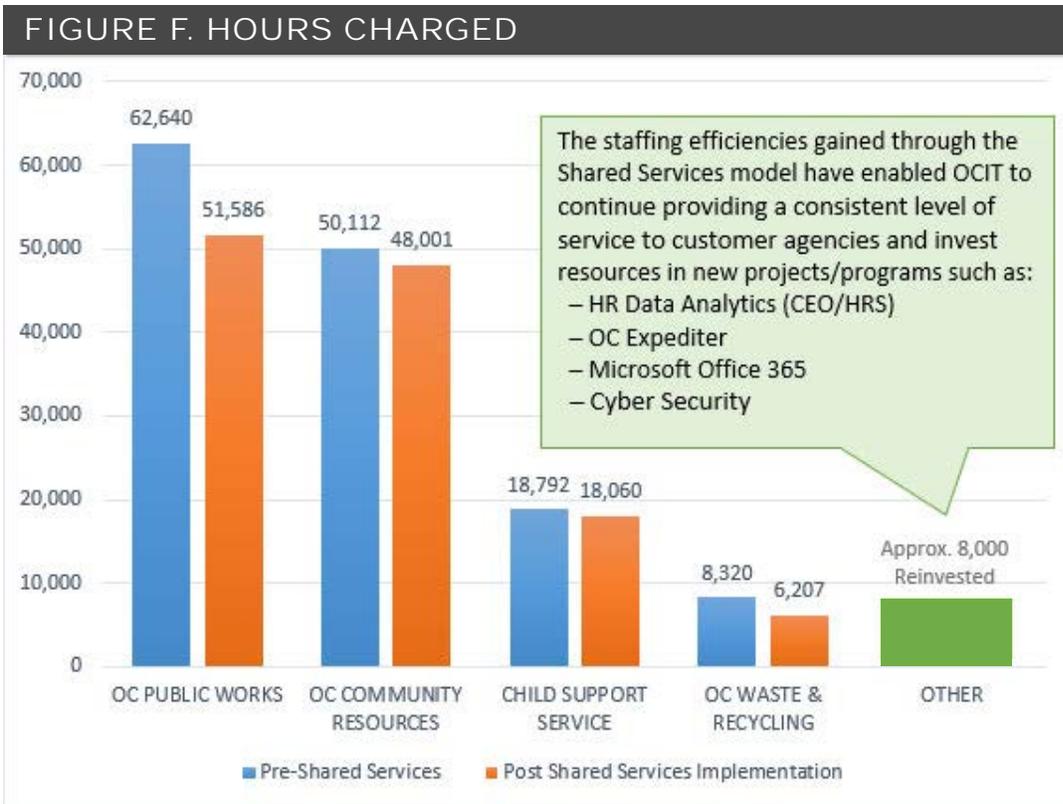
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“ OVER THE PAST 12 MONTHS, OVER 50% OF OCIT STAFF HAVE PERFORMED WORK FOR MORE THAN ONE COUNTY AGENCY.”

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Also under the Shared Services model, the impact of staff attrition or retirements is minimized, as there is a greater pool of staff that can temporarily backfill until positions are filled. Furthermore, should an agency's demand for services increase, under a Shared Services model, OCIT can quickly meet that demand.

In addition, one of the most significant benefits of the Shared Services model is that by realizing efficiencies in staffing, OCIT has been able to redirect staff resources to IT areas that either needed to be augmented, or that the County was lacking, as shown in the diagram that follows.



## BRINGING TOGETHER THE EXPERTS

IT is challenging. There are constant innovations: new technologies, new platforms, new best practices. In a decentralized IT environment, with small IT teams operating in “silos,” solving complex IT problems becomes even more challenging, particularly for County agencies with small or medium-sized IT teams that do not have IT expertise across all IT functional areas.

Implementing the Shared Services model has brought together subject matter experts (SMEs) from each of the pilot agencies into one organization. As a result, OCIT is able to offer its customers “end-to-end expertise”, which means that for any IT need, whether it is a need for a technology innovation or a solution to a challenging issue, OCIT has the expertise available in one organization to fulfill that need.

Network connectivity at the County’s Nix Nature Center is a good example. Since it was built in 2007, the Nix Nature Center, which serves as the headquarters for OC Parks’ Laguna Canyon Wilderness Park, has encountered network connectivity issues. Isolated from the “grid,” staff working at the Nature Center—which includes volunteers, park rangers, and naturalists—are often even more disconnected when they cannot access the Internet or cannot communicate via network-connected phones. Over the past several years, connectivity to the Nature Center has been unreliable. This has caused issues with on-site phone and computer connectivity, in addition to false fire alarms and inadvertent fire department dispatching (the current alarm systems are connected to the network).



## NIX NATURE CENTER AT LAGUNA WILDERNESS PARK

As part of OC Community Resources, prior to the formation of OCIT and the implementation of the Shared Services model, OC Parks received IT support from only the OC Community Resources' IT team. While IT support was highly responsive to the needs of its customers, it wasn't until OCIT was formed that the network issues at the Nature Center were sufficiently addressed. By bringing together staff that were formerly part of the IT teams at OC Public Works and the County Executive Office, along with the institutional knowledge from OC Community Resources, OCIT was able to examine network issues related to the remoteness of the Nix Nature Center site, as well as the topography of the area. OCIT has developed a solution that will utilize a remote access point capable of servicing the nature center and its staff. The solution will provide greater reliability and bandwidth for minimal up front and recurring cost. Further, the solution will separate the alarm systems from the network and allow direct communication to security and fire monitoring services.



# LESSONS LEARNED

## LESSONS LEARNED - OPERATIONAL EXCELLENCE

- Before OCIT can provide accurate performance metrics such as Time to Resolution to its Shared Services agency customers, OCIT will need to invest in a single service management system (i.e., ticketing system) and ensure that both users and staff utilize the system consistently.
- Efficiencies in the area of end-user delivery and support (i.e., service/help desk, desktop support) cannot be fully achieved without first giving staff essential tools such as a single service management system (i.e., ticketing system).
- OCIT still has much work to do to achieve operational excellence. Specifically, OCIT must continue to redesign processes, implement needed tools, and develop clear organizational roles and responsibilities that are communicated to all stakeholders.

# SERVICE EXCELLENCE

## OVERVIEW

Of great importance to a service provider is “service excellence”, which is defined as the ability to consistently meet and manage customer expectations.



Of great importance to a service provider is “service excellence,” which is defined as the ability to consistently meet and manage customer expectations. Over the course of the pilot, OCIT has focused on providing service excellence through:

- The creation of a **Business Customer Relationship Management** team;
- Undertaking a “**Voice of the Customer**” initiative to better understand the experiences and needs of its customers;
- Providing business-oriented services through its **IT Business Analysis** team;
- Increasing the success of business customers’ IT projects with **skilled IT Project Managers**; and
- Improving **IT talent**.



Interim CIO Charlie Eckstrom introducing OCIT’s Service Excellence Awards. OCIT staff receive the Service Excellence Awards for exceptional demonstration of customer service, teamwork and collaboration, professionalism, stewardship, and innovation.

# CUSTOMER

## BUSINESS CUSTOMER RELATIONSHIP MANAGEMENT

In developing OCIT's new organizational structure, the IT Working Group included a Business Customer Relationship Management (CRM) function. Each of the agencies participating in the pilot are assigned a Customer Relationship Manager, whose job is to develop an understanding of the customer's business—its priorities, concerns, and needs—and utilize that understanding to help the rest of the OCIT organization deliver service excellence.

## WHAT IS BUSINESS CRM?

SHEILA CARTER

OCIT Customer Relationship Manager

On a daily basis, Sheila has close interaction with OC Public Works and OC Community Resources, the two agencies to which she is assigned as the Customer Relationship Manager.

*"I attend executive meetings for OC Public Works and OC Community Resources, providing updates to senior leadership on key IT projects and initiatives and learning about their concerns and issues related to IT. I'll take what I hear and help interpret those concerns for OCIT staff so that we can respond quickly and appropriately. In a Shared Services model, it's important that customers' senior leadership have a single point of contact. By developing an understanding of both our customers' business priorities and of OCIT's services, I can help bridge the gap that is so common between the business and IT."*



## WHAT IS BUSINESS CRM? CONTINUED

### HELEN FRIED

Director of OC Public Libraries

As the head of OC Public Libraries (OCPL), one of OC Community Resources' major programs, Helen's daily concerns include the ability for the librarians and library support staff to provide service to library patrons. On any given day, library staff may be helping patrons use library computers to find information and books. OCPL staff also rely on technology that enables patrons to check out books, conduct research on the Internet by connecting to the libraries' Wi-Fi, and make copies on printer-copier machines.



*"The Customer Relationship Management component of OCIT has provided my management team and me a point of contact whose primary job is to connect us with the appropriate staff to support OC Public Libraries' business and objectives."*

## VOICE OF THE CUSTOMER

OCIT's "Voice of the Customer" initiative was a two-pronged approach to understanding the needs of its pilot agency business customers, learning about their experiences with IT, and obtaining feedback that can be used to improve how OCIT operates, communicates, and delivers IT services.

### CUSTOMER FOCUS GROUPS

In June 2016, OCIT conducted focus groups with its five pilot Shared Services agency customers, with representation from various levels (i.e., line staff, mid-level management, senior leadership).

One of the key opportunities for improvement illuminated by the focus groups was the need for more consistent follow-up communication when an IT issue is reported. Focus group participants also provided feedback to OCIT about their technology "wants" such as greater mobility and remote access, as well as a desire for standard web-conferencing and the ability to share large files.

## INITIATIVE HIGHLIGHTS

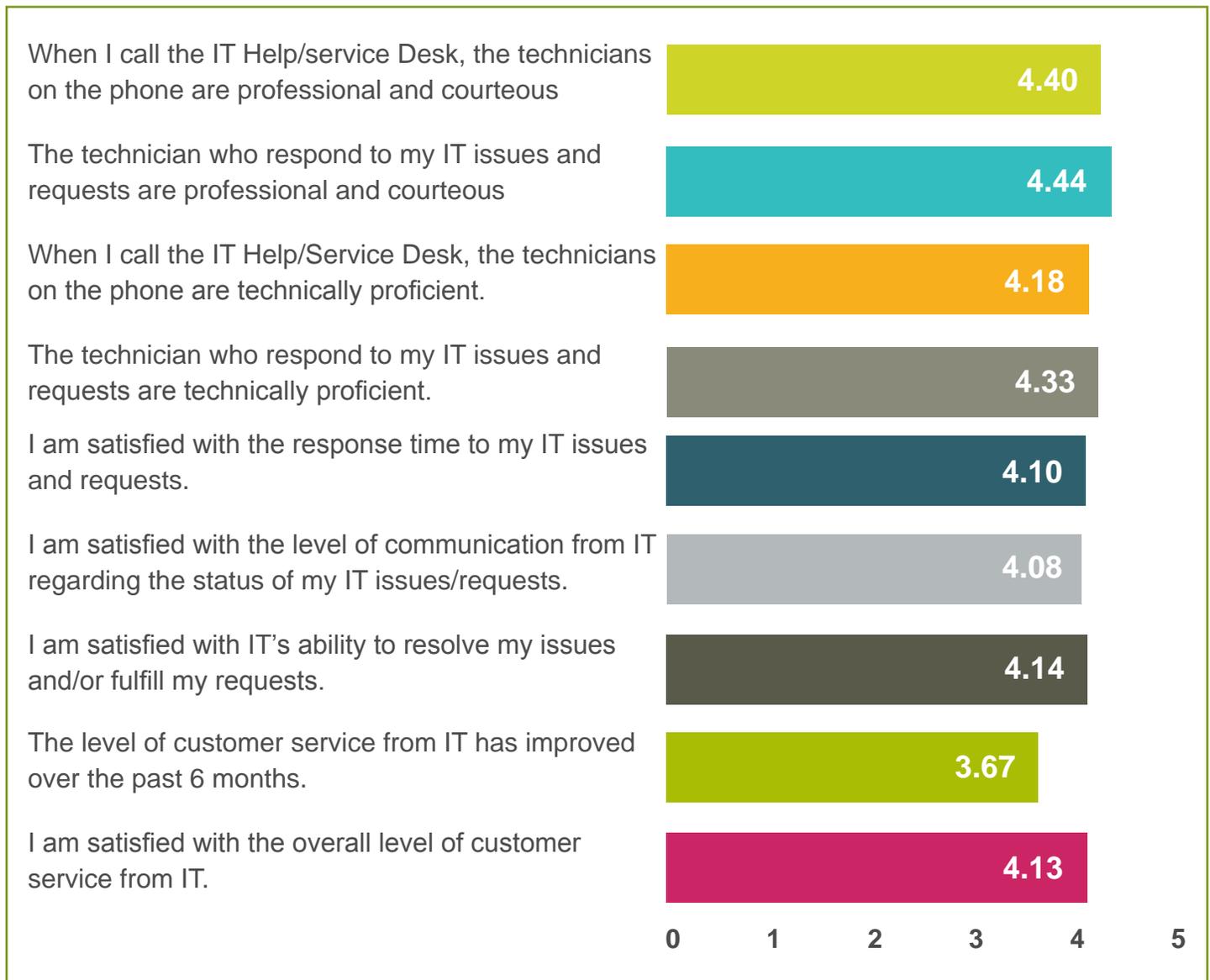
- 10 FOCUS GROUPS ACROSS FIVE AGENCIES
- 98 FOCUS GROUP PARTICIPANTS
- 1,026 SURVEY RESPONSES RECEIVED (30.5% RESPONSE RATE)

### CUSTOMER SURVEY

In August 2016, OCIT conducted a new customer survey, with the purpose of determining how end-users rate the level of IT customer service provided by OCIT. The survey was distributed to all end-users (approximately 3,300) in the pilot agencies, with a 30% response rate. The ratings serve as a quantitative metric that OCIT can measure on an annual basis to ensure it continues to provide a high level of customer service.

The results of the survey indicate high levels of customer satisfaction during the pilot as shown in the diagram that follows. In fact, customers indicate an improvement in customer service since the implementation of the Shared Services model.

## 2016 SURVEY RESULTS



### CUSTOMER SATISFACTION SURVEY HIGHLIGHTS

- Ratings of 4+ on a 5-point scale on eight of nine customer service dimensions
- Improved level of customer service since the implementation of Shared Services (rating of 3.7 on a scale of 1 to 5)

## BRIDGING BUSINESS AND IT

The divide between IT and its business customers can be difficult to bridge. One means by which OCIT more closely connects with its business customers is through its IT Business Analysis team—a team established under the Shared Services model.

IT Business Analysis provides a launch point to help Agencies determine how technology can assist them in meeting their business goals. Using a defined methodology to understand and quantify the business

problems agencies are trying to solve, IT Business Analysts partner with OCIT’s customers to listen, ask purposeful questions, document needs, processes, data and workflows—all in an effort to provide high-quality, cost-effective technology solutions that add value and meet the objectives defined by business customers.

OCIT’s Business Analysts work with key stakeholders and end-users to formulate and communicate the business vision for projects and to map out business requirements. They can also assist customers with business case development, as well as call upon the collective resources of OCIT to assist in identifying conceptual solutions, with cost and resource estimates, which allow the business to make technology decisions and investments in a more informed manner. IT Business Analysts can also facilitate a “buy vs. build” analysis to help stakeholders decide whether to develop a solution in-house, or procure commercially available technology. If the business challenge is process—not technology—driven, they can help customer agencies apply continuous improvement methodologies such as Lean and Six Sigma.

Key to the success of any IT project is the ability to build consensus with business users. IT Business Analysts fulfill this need by translating technical “jargon” into information that business decision-makers can use. Finally, IT Business Analysts can assist with developing training materials, assist in planning, and even deliver user training as required.

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“RESEARCH SHOWS THAT 32% MORE PROJECTS SUCCEED WHEN THEY HAVE PROPER REQUIREMENTS”

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### IT GOVERNANCE

The County IT Governance Model is foundational to all aspects of Countywide IT. The model ensures collaboration and agreement from key business decision-makers on Countywide IT initiatives and strategic direction.

Governing bodies include the **IT Executive Council**, which is the advisory council to the CEO; the **Investment Review Committee**, which evaluates, prioritizes, and makes recommendations for technology project approval; the **IT Shared Services Steering Committee**, which provides executive leadership related to the implementation of a Shared Services strategy for IT; the **Technology Council**, a technical advisory council to the CIO and the IT Executive Council; and **Application/Program-Specific Steering Committees**, which provide governance for enterprise and multi-agency applications/programs such as CAPS+ and OC Expediter.

## IT BUSINESS ANALYST SPOTLIGHT: LAVANYA KANTAMANENI

The Paradigm system is the most critical business application utilized by OC Waste & Recycling (OCWR) to conduct its day-to-day operations. Early in 2016, OCWR began working on a significant change to its charging structure, moving from a single rate to tiered rates. Accordingly, integral changes were required to the Paradigm system to reflect this change in business process.



Through close coordination with the customer—OCWR administrative leadership—OCIT was able to deploy a seasoned IT Business Analyst, Lavanya Kantamaneni, to act as the single point of contact for liaising between OCWR business users and the vendor that supports the Paradigm application. Drawing on her years of experience working on vendor-supported applications at OC Public Works, Lavanya was able to quickly and effectively assist OCWR to not only implement the new tiered-rate structure with Paradigm, but also cleanup data discrepancies that were identified.



“Through IT Shared Services, we are able to tap the expertise of accomplished IT professionals like Lavanya, which, in turn, helps us better leverage technology.”

- Dylan Wright,  
OC Waste & Recycling  
Director

# PROJECT MANAGING FOR SUCCESS

Though 97% of organizations believe project management is critical to business performance and organizational success (source: PricewaterhouseCoopers), according to a Project Management Institute (PMI) statistic, for every \$1 billion invested in IT projects in the United States, \$122 million was wasted due to poor project performance.

OCIT's Shared Services model has enabled the County to increase the success rate of IT projects—particularly enterprise or multi-agency IT projects— by creating a skilled group of IT project managers in the OCIT Project Management Office (PMO). Operating in a Shared Services model enables these Project Managers – all PMI-certified Project Management Professionals (PMPs) – to more effectively coordinate with and manage the various resources required to execute a project successfully. For example, a typical project requires close collaboration and teamwork among OCIT Business Analysts, Applications Developers, IT Infrastructure staff, Information Security staff, Contracts & Procurement professionals, not to mention business stakeholders.

In addition to managing projects and programs, the OCIT PMO also sets project management standards and establishes a common set of practices, templates, and tools across the Shared Services agencies; coaches project teams and customers on methodologies, including the Agile methodology; gathers project data and produces management reports for all projects across the County that have a budget of over \$150,000; manages the OCIT project portfolio and facilitates project prioritization and resource assignments; and makes recommendations to the County's IT Investment Review Committee on project selection, prioritization, and alignment with the County's business strategy.

During the Shared Services pilot, utilizing project management best practices, OCIT Project Managers have added business value on a number of projects, including:

- **VTI Single Sign On**, which allows users to access the County's timekeeping system without entering a separate ID and password.
- **eAgenda Replacement**, which utilized the Agile project management methodology to document and prioritize business requirements. The replacement solution costs \$145,000, which is a fraction of the million dollar price tag that was anticipated for a custom-developed application.
- **Enterprise Data-Driven Business Intelligence Solution**, which includes a public facing Probation Interactive Dashboard that will help County leadership make data-driven decisions.



# SCOPE

## 2016 SHARED SERVICES PROJECT MANAGEMENT HIGHLIGHTS

- 169 PROJECTS (62 COMPLETED; 107 IN PROGRESS)
- 100% PROJECTS MANAGED BY THE OCIT PMO WERE COMPLETED ON TIME AND WITHIN BUDGET
- ESTABLISHED THE OCIT PROJECT MANAGEMENT FRAMEWORK, COMPLETE WITH GUIDELINES AND PROCEDURES
- UPDATED ALL PROJECT MANAGEMENT DOCUMENT TEMPLATES TO INCORPORATE BEST PRACTICES



## PROJECT MANAGEMENT BEST PRACTICE SPOTLIGHT: HR DATA ANALYTICS

The HRS Data Analytics project is a collaborative effort between Human Resource Services (HRS) and OCIT to replace the County's existing Personnel Data Warehouse. The new HRS Data Analytics portal will provide expanded reporting capabilities and dashboard building tools. In addition, the new system will integrate with a new Business Intelligence tool to help users analyze the data to support critical decision-making. Finally, the new system will provide exception and compliance reports, which are currently performed manually, enabling HRS to effectively and efficiently comply with HR regulations and policies.



"We are delighted with OCIT's collaborative efforts on HRS' new data warehouse. Their facilitation of Agile scrum methodology has kept the project moving efficiently and effectively, and their commitment to excellence reinforces the County's drive toward evidence-based decision making."

- Brenda Diederichs  
Chief Human Resources  
Officer

This project is among the County's first application development projects to utilize the Agile scrum methodology, one of the Shared Services pilot initiatives. The Agile methodology is an iterative and incremental method that breaks a software application development project into segments called "sprints," with each sprint undergoing its own cycle of design, development, integration, testing, and deployment. This methodology contrasts with the more traditional Waterfall methodology that has projects moving forward only when the previous phase is completed for the entire project. When utilized effectively, the Agile methodology improves project outcomes and increases speed of delivery.

OCIT coached the entire project team, including the HRS product owners, to embrace the Agile scrum roles and incorporate the full scrum methodology. The use of Agile scrum methodology, while not appropriate for every type of project, was the best methodology for the HR Data Analytics project. It has resulted in strong collaboration between HRS and OCIT and increased customer satisfaction with the progress of the project, due to HRS being able to see an early and continuous stream of finished functions, features, and capabilities. As a testament to the team's effective adoption of the Agile scrum methodology, to date, the project has successfully completed all its sprints on time and within budget.



## THE IT TALENT CHALLENGE

The County is facing a looming IT staffing challenge: 43% percent of the County’s current IT staff will be age-eligible for retirement within the next four years. Strong competition for IT talent (e.g., competition with Silicon Valley), a long recruitment process, reduced pension benefits, and outdated job titles are all factors that make attracting new talent difficult.

The County’s ability to fill the 43% IT talent gap depends on its ability to offer candidates cutting edge work, a clear career path, and a collaborative culture. Surveys of Millennials reveal that they are motivated to work in organizations that are innovative, flexible, and collaborative, and that they are seeking purpose in the work they do, as well as a place that will help them develop professionally. Retention is also critical in light of the impending retirements of a huge percentage of the IT workforce.

In order to both attract new talent and retain staff that possess valuable institutional knowledge, OCIT is focused on developing a

strong organizational culture, as well as improving its processes, tools, and structure to create an environment where IT professionals are motivated and energized to provide service excellence and innovative solutions for OCIT’s customers. In addition, the consolidation of smaller IT teams into a larger Shared Services organization creates more career and professional development opportunities, with staff able to gain desired skills through cross-training, lateral moves, and promotional opportunities.

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### KEY IT STAFF STATISTICS

- IT POSITIONS % OF TOTAL COUNTY STAFF = 1.7%
  - % IT STAFF RETIREMENT AGE TODAY = 25.9%
  - % IT STAFF RETIREMENT AGE IN 4 YEARS = 17.3%
-

## THE IT TALENT CHALLENGE CONTINUED

### EMPLOYEE ENGAGEMENT

Employee satisfaction is a key element of retention. Over the past year, OCIT has worked to create a work environment that is collaborative, communicative, engaging, and recognizes the achievements of its staff. For example, OCIT has made full use of its Intranet site, creating a portal where both OCIT staff and other County staff can access information about OCIT and its services, as well as a place where OCIT staff can collaborate, share information, and recognize peers for service excellence.

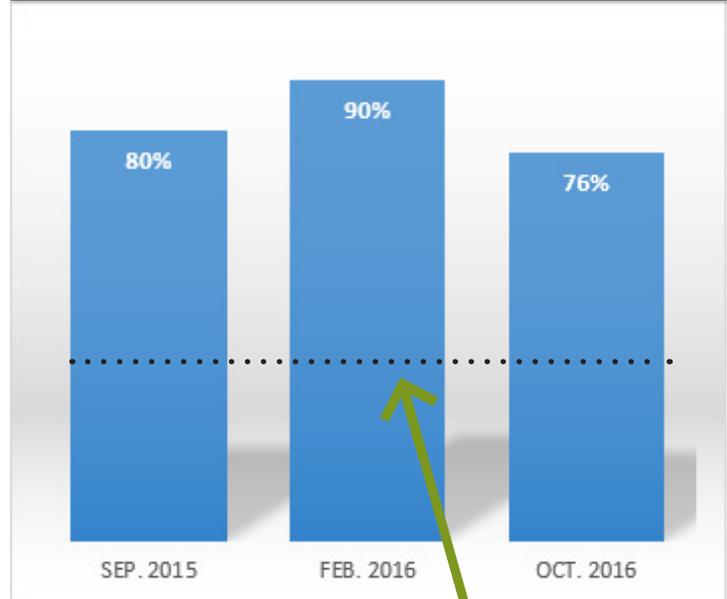
To measure employee engagement, OCIT conducted three periodic Employee Engagement surveys over the course of the pilot that pulsed staff's satisfaction as team members of OCIT. While the majority of satisfaction dimensions have held stable since the start of the Shared Services pilot, some notable takeaways include:

- An increase in satisfaction with staff recognition
- Some continuing confusion about roles and responsibilities in the changing organizational structure
- Challenges related to the lack of promotional opportunities

### IT JOB CLASSIFICATIONS

One of OCIT's goals for 2017 is to work with Human Resource Services to examine its current IT job classifications and make modifications to titles and descriptions. By doing so, the County will be in a better position to compete for talent, as the County's IT job opportunities will be more market-aligned.

FIGURE G. EMPLOYEE ENGAGEMENT SURVEY RESPONSE RATE



Compared to typical response rates for internal surveys of 30-40%

### TRAINING

In addition to surveying staff, OCIT is also focused on training its staff to ensure that their skills align with new technologies and where technology is headed. OCIT developed a Training Plan that will ensure consistency across the organization, which will increase the overall level of service to its customer agencies. This includes important industry certifications, as well as "soft skills" training in areas such as communication and customer service.



“By joining Shared Services, the OC Public Works’ embedded IT staff is now aligned in an organization that provides mentoring, training, and a career path appropriate for technology professionals. Bringing together the IT staff has also provided the County Departments / Agencies with opportunities for enterprise applications such as OC Expediter. Moving forward, OCIT should continue to focus on providing a high level of customer service and solutions that align with Department / Agency business strategies and objectives.”

- *Shane Silsby,*  
*OC Public Works,*  
*Director*

## A CULTURE OF INNOVATION

As previously mentioned, Millennials are looking to work in organizations that innovate. Achieving its vision of becoming a leader in civic technology requires OCIT to create a work environment that fosters innovation. “Shared Services and Innovation” below describes OCIT’s Solutions Development team, created to mimic a “startup.”

## SHARED SERVICES AND INNOVATION

Stephen Salcido leads OCIT's Solutions Development team. This unique team focuses on rapidly developing innovative software applications. Using best practices of private industry, the team has been empowered to cut through bureaucracy to deliver efficient, easy-to-use digital services to the public. As described by Salcido, "the goal of establishing the Solutions Development team was to create a civic technology consultancy within the County—essentially a 'startup in residence.' We are extremely pleased with the success the team has achieved in our first year, and we look forward to working with our agency partners to transform how they deliver digital services and technology products."



OCIT civic technology has been recognized on a national level recently when Salcido was elected Government Vice-Chair of Digital Enablement for the American Council for Technology-Industry Advisory Council (ACT-IAC). ACT membership is made up of Federal, State and Local Government technology leaders.

The Solutions Development team recently launched myOCgov – County Services Mobile, which was rapidly developed over a period of 90 days with the support of the County Board of Supervisors. The myOCgov mobile application was created to give citizens greater visibility to County of Orange services, and specifically services which are close to their location. This rapidly developed mobile application places County services where the County's citizens are...on their mobile device. With myOCgov:

- Real Estate agents can show clients the closest services available to a location.
- Job seekers can locate the closest one-stop center to search for jobs.
- Entrepreneurs can easily get directions to file their fictitious name statements and file a Doing Business As (DBA) name.
- Health and Social services can be easily located by proximity to the user's location.

The team is now working on a mobile app for the County Clerk-Recorder called OC Wedding. This app will enable citizens looking to obtain wedding licenses, schedule appointments, and learn more about the County facilities where services are offered.



# LESSONS LEARNED

## LESSONS LEARNED - SERVICE EXCELLENCE

- The Customer Relationship Manager (CRM) role and its responsibilities in OCIT were not initially clear to internal staff and to customers. Although this role has developed over the course of the pilot, and many Shared Services agencies value their CRM, OCIT should continue to refine and clarify the responsibilities of CRMs.
- More communication to various stakeholders would have alleviated some of the misconceptions about the objectives of the Shared Services pilot and the impacts of the organizational changes to customers and staff.
- The Voice of the Customer initiative was successful in helping OCIT understand the pain points, concerns, and ideas of its customer agencies. From this experience, OCIT plans on conducting this exercise on an annual basis.
- Many IT staff were hired into the County 15-20 years ago to support the technology at the time. Although OCIT has developed a training plan, elevating the technical proficiency of staff to be able to support new technologies such as mobile design and cloud infrastructure is a multi-year endeavor.

# MODERNIZING GOVERNMENT

## OVERVIEW

Without a defined Enterprise Architecture, those driving IT initiatives or making IT decisions may be working in opposite directions and making counterproductive choices.



As technology becomes an increasingly integral part of government operations, and as the public's preferences change in how they receive public services, it is critical that the County focuses on modernizing government with technology. The consolidation of formerly disparate IT teams into one organization and the implementation of the Shared Services model has enabled the County to focus on innovation.

## ENTERPRISE ARCHITECTURE

In order to move technology forward, **the County must have a unified IT vision**. Similar to members of a football team all working from a common playbook to move the ball down the field to score a touchdown, having a developed Enterprise Architecture (EA) that all County agencies and their IT teams are working from is key to the County's ability to modernize government with technology.

"Enterprise Architecture" is a conceptual blueprint that defines the structure and operation of an organization and defines the intended "future state" (i.e., enterprise goals). Without an architectural blueprint for a new skyscraper, builders may be working on incongruent and opposing tasks, or not knowing what step to take next. Without a defined Enterprise Architecture, those driving IT initiatives or making IT decisions may be working in opposite directions and making counterproductive choices.

With the benefits of staffing efficiencies, **OCIT was able to dedicate resources to analyzing the County's IT architecture without increasing positions**. While components of the County's IT "blueprint" are still being formulated, three common threads have been defined: **Mobile Design, Cloud Computing, and Data Analytics**.



## MOBILE DESIGN

Growth in mobile usage continues to surge. Over the past decade, there has been a **400% increase in the number of mobile users** worldwide and it will continue to grow. Currently, 40% of web traffic to the County is through mobile devices.

“Mobile first” is OCIT’s strategy for the development of IT applications. This means that new web applications will be mobile device-friendly (i.e., built for use on a mobile device) and that over the next several years, OCIT will look to “mobile-enable” additional County web and software applications. Currently, only 21% of the Shared Services agencies’ current applications that can benefit from being mobile-enabled are mobile.

Mobile development expertise is critical, and given the County’s overall inexperience with mobile development, bringing County subject matter experts together from the various Shared Services agency IT Teams into OCIT has greatly increased the ability to develop mobile applications.

## MOBILE APPLICATION SPOTLIGHT: OCPetTrack



In April 2016, OC Animal Care launched PetTrack, a free mobile app that enables users to search through an up-to-date log of pets available for adoption, lost pets that have been brought to the shelter, and recently deceased animals.

The idea for PetTrack was generated by a member of OCIT’s Solutions Development team, which developed the app for OC Animal Care. OC PetTrack represents one of OCIT’s first mobile apps. In the first month of the app’s launch, the app has had over 3000 downloads.



OCIT application developers with Supervisors Todd Spitzer and Lisa Bartlett and Director of OC Animal Care Jennifer Hawkins at a press conference for OC PetTrack.

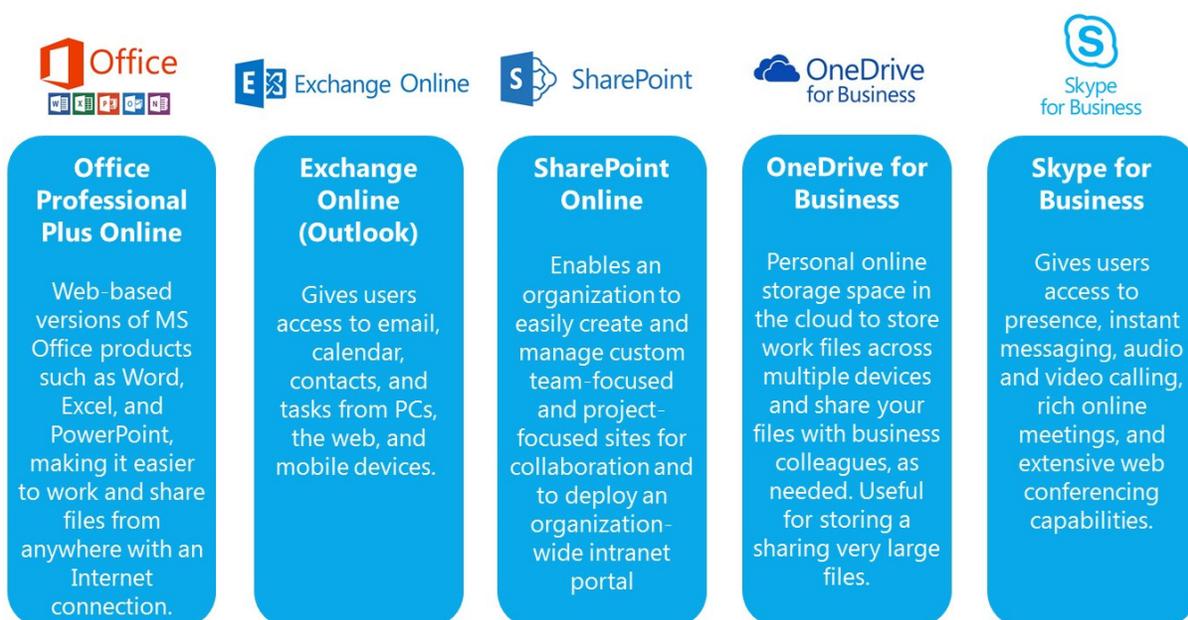
## CLOUD COMPUTING

In traditional computing, software applications run on a physical computer in an organization's building. For example, across the County, there are numerous physical computers or servers located in various County facilities, with the largest grouping of servers at the OC Data Center.

With cloud computing, these software applications are accessed through the Internet. There are still physical computers involved, but these computers are located elsewhere and operated by major cloud computing providers such as Microsoft or Amazon. Because there is no need for an organization—in this case, the County—to stand up physical computers or servers to run these software applications, **the cost to the County is less—typically 30-50% less than a physical server or 15-30% less than a virtual server.** Real estate footprint costs are avoided, as are the costs of IT support to maintain physical computers and servers located at the County.

Two of OCIT's Shared Services pilot initiatives focus on modernizing County IT by moving to cloud computing:

**1 Implementation of Office 365 (“O365”):** O365 is Microsoft's suite of cloud-based solutions. OCIT's initiative aims to transition services such as email to the Microsoft Cloud and also identifies specific opportunities to deliver additional collaboration services through the O365 solution. O365 services such as SharePoint have been previously implemented Countywide, but there are additional collaboration solutions that will provide value to County employees. For example, OneDrive for Business allows cloud-based storage of files in the cloud so that they can be accessed from any device. OneDrive also has the benefit of allowing users to share very large files, which is a common challenge experienced by County staff. OCIT is currently focused on conducting a pilot of Exchange Online with select Shared Services agencies, which provides cloud-based email.





## 2

**Migration to Azure:** Azure is Microsoft’s cloud-based data center service. Utilizing Azure services for hosting software applications and data storage is more cost effective than hosting on physical servers. The OC Cloud pilot initiative continues the County’s movement toward cloud-based solutions by identifying specific opportunities to move existing IT software applications to the OC Cloud and to utilize the cloud for new applications and data storage. For example, during the pilot, OCIT moved the OC Expediter application to the cloud, cutting costs by over 50% (approximately \$25k annually). A new Pest Control application and the new myOCgov mobile application are hosted on the cloud, as well.

### DATA ANALYTICS

Business decisions are increasingly under pressure to be data-driven. Business intelligence tools are needed to help users analyze data to support critical decision-making. One example of how OCIT is supporting County agencies in their quests to make data-driven decisions is the development of the public facing Probation Interactive Dashboard in collaboration with the County Executive Office, the Probation department, and the Health Care Agency (HCA). This enterprise business intelligence solution provides Probation information on a dashboard that can be easily visualized and analyzed by staff, managers, and the public. This Probation dashboard has already helped managers make resource allocation decisions and future budget planning estimates based on 10-year data trends. Another aim is to help HCA evaluate its health resource locations and programs. This collaboration demonstrated how the sharing of data across departments, facilitated by the Shared Services model which has brought IT subject matter experts together, can contribute to improved Countywide decision-making.

Another example, previously described, is the Human Resource Services (HRS) Data Analytics project that replaces the County’s existing Personnel Data Warehouse. The new HRS Data Analytics portal will integrate with a new Business Intelligence tool to help users analyze personnel data to support decision-making.

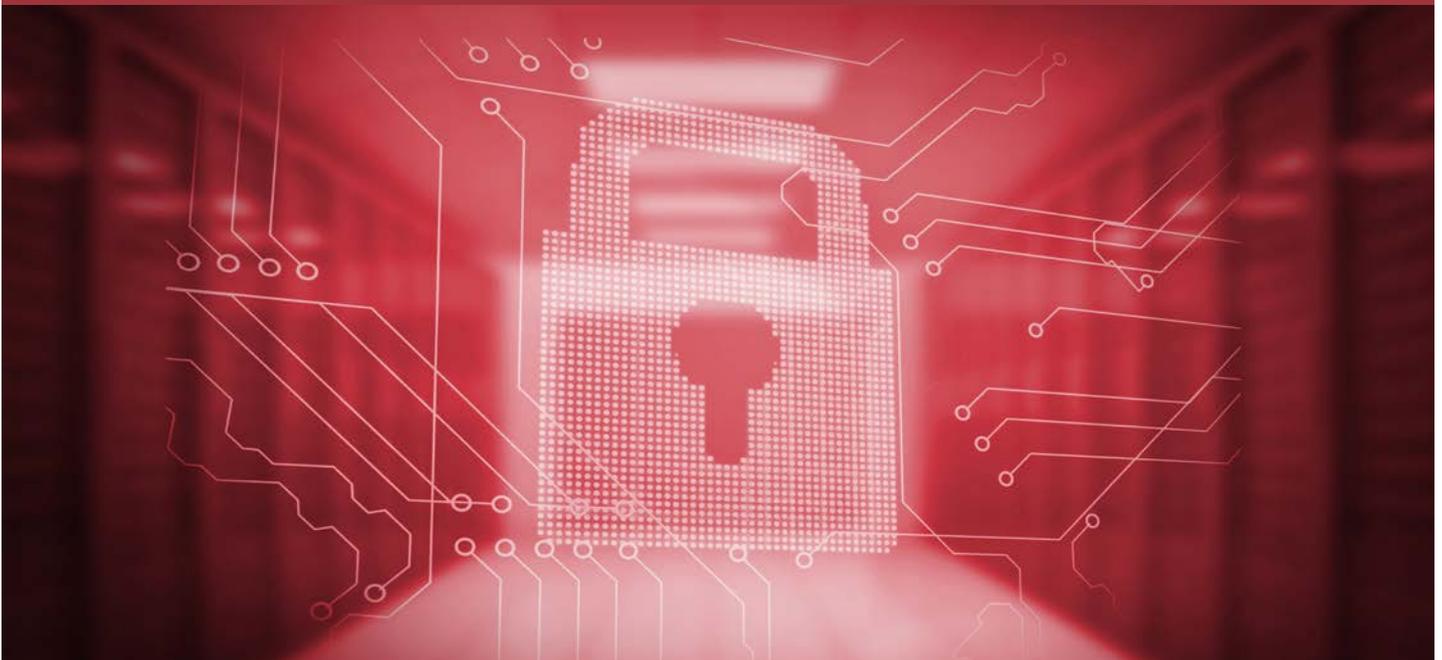
## SECURING THE COUNTY'S DATA

The implementation of the Shared Services model enabled OCIT to allocate resources to information security and form a Cyber Security team, whose mission is to facilitate the implementation of sufficient administrative and technical controls to safeguard County data and information technology systems. This mission will be accomplished by (1) People - Cyber Security Awareness Training, (2) Processes, Policies and Procedures, (3) Technology - Technical Safeguards, and (4) Validation - Cyber Assessments, Audits and Testing.

Over the past year, OCIT Security has made great strides in moving this mission forward. OCIT has entered into a contract with IT Training Solutions to provide Annual Cyber Security Awareness Training to all County employees effective January 2017. Providing education on cyber security effectively transforms every employee into a cyber-security sensor while providing employees with tools they can use to protect themselves online even when they are not at work.

In addition, OCIT's Security eDiscovery Manager was able to assist outside counsel with a County initiated lawsuit that resulted in a \$26 million dollar settlement in favor of the County. Processes in development, such as the County Draft Cyber Incident Response Plan, were used to successfully contain and eradicate the effects of a sophisticated email phishing campaign. OCIT became more unique as a cyber security service provider by merging the function of privacy with security. The County Information Security Officer (CISO) and the County Privacy Officer have conducted Countywide HIPAA reviews of all departments under the CEO as the Health Insurance Portability and Accountability (HIPAA) Hybrid Covered Entity.

Lastly, OCIT Security oversaw the modernization of the County's aging firewalls to Cisco Advanced Security Routers resulting in improved perimeter security capabilities for the entire County.





# LESSONS LEARNED

## LESSONS LEARNED - MODERNIZING GOVERNMENT

- While OCIT plans on implementing a cloud-first strategy for all new software applications, migrating existing applications to the cloud will take time for analysis and testing in order to ensure a seamless experience for users.
- Although OCIT has developed some expertise in building mobile applications, additional training and customer discussions are needed to incorporate greater mobility options into the County's delivery of public services, which will become increasingly demanded by constituents.

# LOOKING AHEAD

## OVERVIEW

Over the 12-month Shared Services pilot, there have been numerous accomplishments and commendable progress in modernizing government through technology and in achieving efficiencies through the new Shared Services operating model.



## A MESSAGE FROM CHARLES ECKSTROM INTERIM CHIEF INFORMATION OFFICER



Over the 12-month Shared Services pilot, there have been numerous accomplishments and commendable progress in modernizing government through technology and in achieving efficiencies through the new Shared Services operating model, as shown in this report. Having worked in many different organizations—both private and public—I am encouraged by the foundation that has been set in this short period of time and am confident that the County will achieve its vision of becoming a leader in civic technology.

We have learned a lot from this pilot. We have learned the value of being more communicative with our Shared Services agencies, particularly when it comes to demonstrating our success through metrics. We have also learned that when moving staff to new roles, cross-training takes more time than we had initially anticipated. The Shared Services agencies, while they are excited about the positive changes in store, also need assurance that OCIT can maintain service levels during this period of change. Finally, we have learned that building an organizational identity and culture takes time—more than a 12-month pilot—and that if we truly want to achieve our vision, we need to work as a unified team.

Looking ahead to 2017 and beyond the pilot phase, there are many next steps that will drive even greater efficiency and elevate the quality of IT services and solutions provided by OCIT, and to build on the foundation we have laid.

For example, OCIT will be working with the County Budget Office to transfer IT services and supplies



budgets to OCIT so that the agencies who receive services from OCIT will be able to reap the benefits of coordinated licensing, volume discounts for purchases, and optimized use of IT hardware. Additional operational efficiencies will be gained by investing in a new service/incident management system. A new system will allow OCIT’s Service Desk and Desktop Support staff to work as a cohesive team, seamlessly triaging, assigning, and following up on customer service requests. This system will also allow OCIT to more consistently provide Shared Services agencies with metrics on IT performance, which will facilitate the development of Service Level Agreements (SLAs) with its business customers.

### **Beyond efficiency is the need to secure**

our data and information while continuing to drive innovation—both of which are supported by the Shared Services model. With expertise in one organization, over the next few years, OCIT will be able to support its business customers’ desire to allow employees to leverage their own smart devices for email and file access, which, in turn enables staff to work remotely (“telework”). We will help business customers achieve their visions for enhancing the citizen experience through technology, while driving down costs through the use of a robust cloud platform. As part of creating a culture of innovation, OCIT will explore public-private partnerships that will bring energy and expertise from the private sector to the County. And from a talent standpoint, OCIT will develop a recruitment plan—working with local educational institutions to create IT internships and opportunities for students to make a meaningful impact in the community.



As a team building exercise during one of OCIT’s quarterly all-hands meetings, staff built tricycles to donate to Operation Santa Claus. OCIT team members Mai Le, Charles Gustin, Bill Tang, Michael Garcia, and Vincent Vo with the tricycle they built.



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**“ MISSION**  
TO PROVIDE INNOVATIVE,  
RELIABLE, AND SECURE  
TECHNOLOGY SOLUTIONS THAT  
SUPPORT COUNTY AGENCIES AND  
DEPARTMENTS IN THE DELIVERY  
OF QUALITY PUBLIC SERVICES.

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