OC Strategy Guidelines

Orange County Information Technology (OCIT) will develop strategies for key areas of technology focus that will enable the County to provide innovative systems and solutions that address County business needs. The strategies will:

- Align with the County's over-arching goals and Strategic Financial Plan
- Provide the guiding principles and priorities for technology management
- Outline the technology roadmap that matches short-term and long-term objectives with specific solutions to meet the strategic goals

FY 16-17 Technology Strategies

A. **Cloud First** – The County has enabled secure technologies to leverage Cloud computing resources and services (OCIT OC Cloud). Leveraging cloud computing technologies that are scalable and delivered by cloud partners has helped Orange County IT to deliver services in a rapid and cost effective manner, increasing employee productivity while reducing County infrastructure and support costs.

B. **OC Mobile Always On** – The County will provide a consistent approach for enterprise mobile enablement; providing the necessary tools and platform to develop mobile applications, manage mobile devices securely and ensure that all County public facing applications have a responsive design (formatted to display correctly on any device). The goal is to provide County customers and workers with secure access to real-time data and services anytime, anywhere and on any mobile device.

C. **OC Open Data** – Open data requires effective information management; the ability to provide reporting of historical and current data, track leading indicators and present the business-driven information through tools that are easy to use. The County will deploy visualization solutions that provide relevant and accurate information and data to help improve business decision making and transparency. Data will be available internally to County agencies and departments seeking information and comparative data analysis. Open Data will also provide a catalog of systems that contain data that may provide value to customers, along with data repositories that allow for data review, and download by County constituents.

D. **OC Infrastructure** – The County provides core IT infrastructure that can be leveraged to deliver systems and solutions to meet the needs of County agencies. This includes both Cloud and On-premises infrastructure (servers, storage, and network): the converged Countywide Voice and Data Network; Microsoft's Enterprise Mobility Suite of tools, designed to enhance the County's Identity Management solution, along with Cloud based directory services (AADP); Multi-Factor Authentication (MFA) to allow access to County systems from any internet device securely; Azure Rights Management (RMS) to manage user access to sensitive data, supporting data classification and management; Intune Mobile

Device Management and Mobile Application Management (MDM/MAM) to provide provisioning, administration, and management of mobile and remote computing devices.

Cloud First

There has been a shift in the way technology services are being delivered. Applications and services are increasingly being hosted in the Cloud; this includes web-based computing services or applications that are hosted outside of the County's locally maintained IT infrastructure and supported by 3rd party vendors (Software as a Service - SaaS, Platform as a Service - PaaS, and Infrastructure as a Service - IaaS).

Cloud technologies allow the County to provision and deliver IT solutions quickly, without the additional cost of establishing and maintaining onsite hardware infrastructure.

OCIT has delivered OC Cloud, ensuring that the County can achieve Cloud First, implementing the tools, security and architecture necessary to leverage Cloud resources.

Microsoft's Office 365 Government Cloud Offering

As part of the Cloud technology adoption, the Orange County IT has developed Microsoft's Office 365 (MS O365) Government Cloud offering (Azure). IntraOC, the County's redesigned Intranet, is hosted on the MS O365 platform and is built on SharePoint Online. SharePoint Online enhances countywide collaboration and the ability to share documents across agencies/departments. OCIT is currently evaluating and planning to enable other MS O365 components including Exchange Online for email services and OneDrive for file and data storage, as well as Skype for business.

Other Cloud Services

OCIT is ensuring that the County is ready to take advantage of other Cloud services. Whether it is Software as a Service (SaaS), Infrastructure as a Service (IaaS), or Platform as a Service (PaaS), OCIT is assessing the benefits, risks, costs and sustainability of cloud-based technology on an ongoing basis. OCIT Security is playing a vital role in this endeavor, 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, regardless of where data resides.

OC Mobile - Always On

To address the growing need for mobility, the County is working on mobile-enabling technologies. A mobile-enabled County opens many opportunities to improve the ways in which County workers perform their common business tasks, engage and interact with our customers.   In addition, by providing mobile ready applications, citizens can access services anytime, from any device – an imperative for excellent customer service in today's business environment.
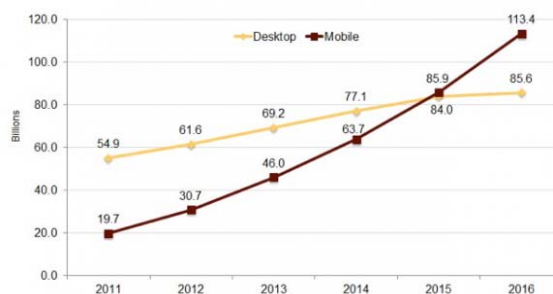
Enhanced Mobile Device Management

With the growing number of mobile devices among the County workforce, Orange County IT is implementing the underlying technology to manage and support these devices, as well as protect the data that resides on them. The County is leveraging Microsoft Intune (Cloud MDM/MAM) to provide enhanced mobile device and mobile application management capabilities from the cloud. Using Intune, OCIT is enabling employees to access County applications, data, and resources from virtually anywhere on almost any device, while helping to keep data and information secure. It will also enable the County to establish a Bring Your Own Device (BYOD) program, increasing workforce flexibility without putting County data at risk.

Responsive Web Site Design

Delivering services to the public from current county systems requires a shift in the way information is provided today – more internet searches are performed on Mobile devices than from Personal Computers (PC) – all systems must provide information in a responsive way; meaning the data must display correctly on whatever device is being used to access the information. As the County upgrades its web portal, OCGOV.com, the strategy will be to ensure that it follows a responsive design, making sure that our customers can access the site from any device and have the data display in a readable format.

Mobile Application Development

Mobile application development will follow the same principles that apply to non-mobile application development such as requirements gathering, design, development, testing, deployment, and maintenance. However, there are two rudimentary approaches to mobile development strategy: develop native applications or create web applications. Native applications which are built for specific type of device and user must download and install the application before it can be used. On the other hand, web applications can be accessed by the web browser of any mobile device. Both web applications and native applications have their own benefits and drawbacks, so requirements and cost will be major factors in determining the development approach.

OC Open Data – Enterprise Business Intelligence

The County's "Open Data" initiative requires that data be made readily available to both the public and employees for the purposes of decision making. Open data requires effective information management; the ability to provide reporting of historical and current data, track leading indicators, and present business information through tools that are easy to use. The County is deploying business intelligence tools and solutions that provide relevant and accurate information to enable decision making and transparency. A few of these solutions are described below and as business needs arise, others will follow.

Open OC

OCIT developed a new web-based tool, "OC$Data", that is critical to Open OC, the County's data transparency initiative. OC$Data provides an improved web experience for internal and external County users. The internal site is focused on the County finance teams and allows analysts and managers to create and share dashboards and reports countywide using data visualization and business intelligence tools. The external site is aimed at the public, providing County financial data to enhance transparency. Moving forward, these tools can be enhanced to meet the ongoing needs of the public and internal users.

OCIT Billing

OCIT desires to provide more transparency in the technology billing process and reduce the cost of generating monthly bills for Agencies and Departments. OCIT has developed an online portal for OCIT customers to access their billing information. Rather than receive a monthly bill in a PDF format, customers can access billing information online. In addition, they have access to previous billing data and can generate a dashboard of billing information, identifying trends in spending.

Infrastructure

OCIT is committed to ensuring that the necessary technology infrastructure, whether on-premises in the County's data center, or in the Cloud, is ready and available to implement innovative business solutions. 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 is implementing 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 Voice over IP telephony. The converged network also readies the County to take advantage of unified communications, the integration of real-time, enterprise communication services that provide a consistent unified user-interface and user-experience across multiple devices and media-types.

Microsoft OC Cloud Security

OCIT has selected the Microsoft Enterprise Mobility Suite (EMS) as a foundational toolset to enable the County to take advantage of mobility and extend our network and server infrastructure to the cloud. These tools include:

Azure Active Directory Premium – This enhances the County's OCid system, extending identity management to the cloud using Microsoft's enterprise-grade identity and access management for nearly any application or device, cloud or on-premises. As Cloud applications are added, a single UserID will be used to access these, making it easier to County users.

Azure Rights Management – This helps to secure data by providing the ability to assign access rights to the file level for data stored in the Cloud or on premises; only those with designated access will be able to open the file.

Multi-factor Authentication – This solution provides two-factor authentication, without the need of a FOB. It delivers strong authentication via a range of easy verification options—phone call or text message, allowing users to choose the method they prefer. Again, the goal is to safeguard data, while providing easier access for County users.

Intune – The County will leverage Microsoft Intune to provide enhanced mobile device and mobile application management capabilities from the cloud. Intune will enable employees to access County applications, data, and resources from virtually anywhere on almost any device, while helping to keep the data and information

secure. It will also allow the County to enable employees to Bring Your Own Device (BYOD), increasing workforce flexibility as required.