Information Technology Department Business Plan

Fiscal Years: 2016 and 2017

(10/1/2015 through 9/30/2017)

Approved by:

Angel Petisco, Chief Information Officer/
Department Director

Ed Marquez, Deputy Mayor

Plan Date: 2/8/2016

Delivering Excellence Every Day

TABLE OF CONTENTS

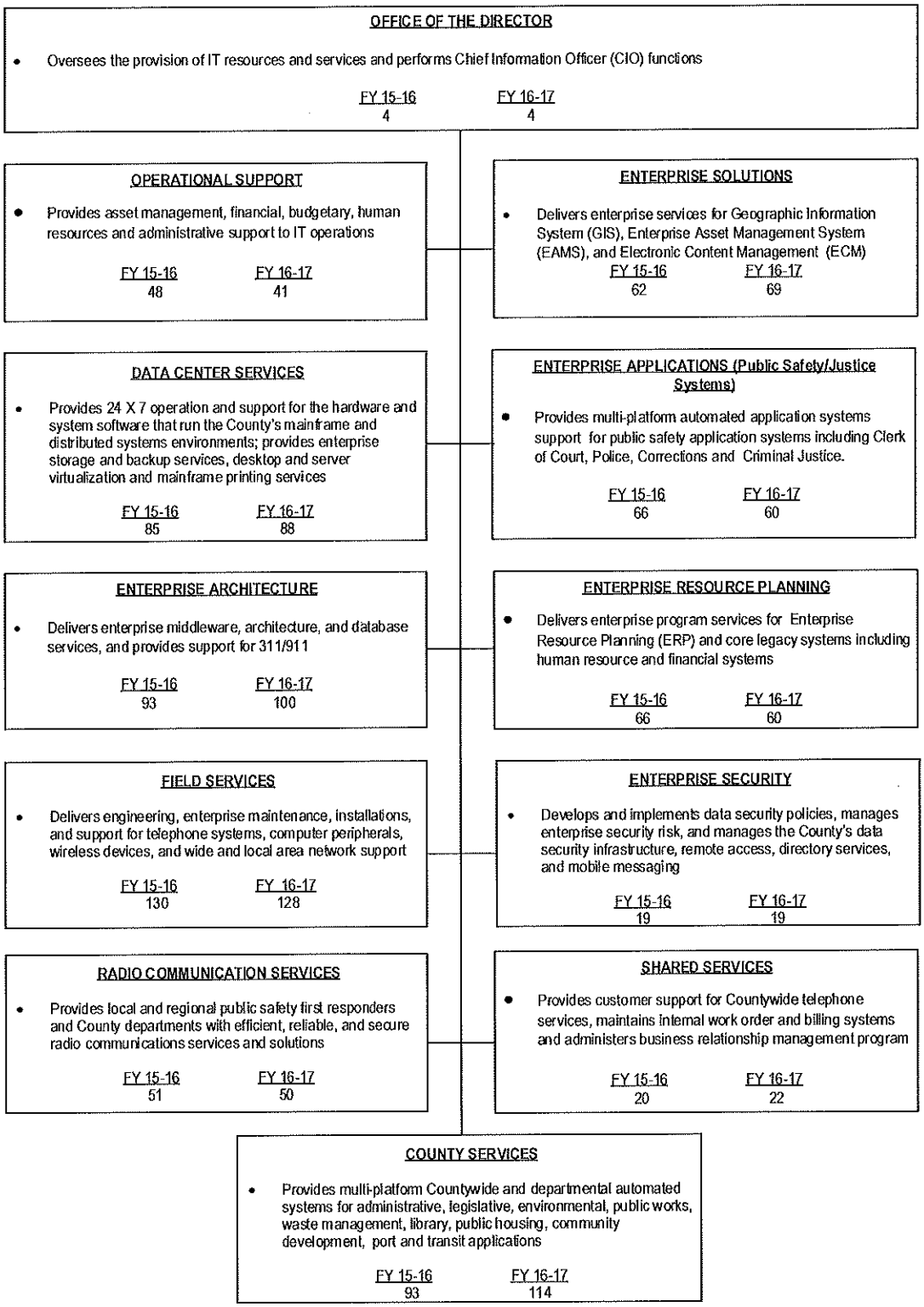
DEPARTMENT OVERVIEW

Department Mission

"At ITD, we provide technology, information, and business solutions that exceed customer's expectations and enhance the quality of life in our community"

The Information Technology Department (ITD) is the central technology provider for Miami-Dade County. ITD provides information technology services that enable and support the operations of all County departments, external governmental agencies, residents and the public at large, including making information and services easily accessible to citizens and visitors of Miami-Dade County. ITD plans, develops, manages, and maintains a reliable and secure information technology infrastructure, including network, radio and hardware/software platforms, to support countywide and departmental specific applications and services. ITD partners with other County departments, management, and key technology providers to implement and maintain technology solutions that enable efficient operations, delivery of County services, and coordinates with the Information Technology Leadership Council (ITLC) on policy and practices. The Department establishes business processes to ensure that IT standards, methodologies, security, and project management are implemented in accordance with best practices. Key stakeholders include all County departments, Miami-Dade County municipal governments, local, state, and federal agencies, elected officials, Miami-Dade County residents, businesses, visitors, and the public that visits the County's website worldwide.

TABLE OF ORGANIZATION



The FY 2016-17 total number of full-time equivalent is 755 FTEs.

Strategic Alignment Summary

ITD directly or indirectly supports virtually every objective in the County's Strategic Plan. The objectives which ITD supports most directly include:

GG1-1	**Provide easy access to information and services**
GG1-2	**Develop a customer-oriented organization**
GG3-1	**Ensure available and reliable systems**
GG3-2	**Effectively deploy technology solutions**
GG3-3	**Improve information security**
GG4-2	**Effectively allocate and utilize resources to meet current and future operating and capital needs**
GG5-3	**Utilize assets efficiently**
GG2-2	**Develop and retain excellent employees and leaders**
GG2-4	**Provide customer-friendly human resources services**

Our Customer

ITD's principal customers are the County's departments and agencies. Other customers include local and municipal entities, many of whom are public safety agencies, the State of Florida, the federal government, and the citizen population of Miami-Dade County. Our citizens have increasingly made use of technological avenues to obtain information and to perform business using the County's readily available technology and information. Miami-Dade County residents expect reliable, secure websites for conducting business with the County. Departments expect a readily available and secure computing and networking infrastructure to support their respective business. They also seek cost-effective and timely solutions to address their business needs and communities of interest. Additionally, the use of self-service solutions through all channels of access is a priority for all customers.

The County's departments manage a myriad of unique businesses resulting in different requirements and needs. The development of standardized enterprise-wide policies, deliberated through the County's IT Leadership Council governance process, enables ITD to focus on and address developing enterprise systems and solutions. At present, ITD engages several instruments to obtain customer feedback and gauge satisfaction with its services. The Remedy system is used to log requests for service and trouble calls, and can generate metrics used to evaluate the time for response and resolution of issues. The system also generates an automatic e-mail upon the closing of an open ticket requesting customer feedback through a short on-line survey. ITD's ASE scorecard contains a range of customer-service metrics that are reviewed on a regular basis by ITD senior management.

ITD adheres to federal, state and local government regulations, including the federal Communications Commission (FCC), Health Insurance Accountability and Portability Act (HIPAA), U.S. OMB Circular A-87, National Incident Management System (NIMS) for Emergency Response, Florida statutes for the Public Records and Government in Sunshine laws, as well as, compliance with the Payment Card Industry (PCI), NEIM (National Information Exchange Model) and with Criminal Justice Information System (CJIS) requirements. NIEM is a collaborative partnership of private and public entities whose purpose is to effectively share critical information in the intelligence, public safety, disaster recovery and security environments and to develop and support enterprise information exchange standards that will enable jurisdictions to automate information sharing.

In addition to the Project Management process employed for all key IT projects, ITD utilizes a concluding step, "Lessons Learned" that allows the project team and the customer to review the project's successes, shortfalls, and improvements and modifications for the future. A comprehensive map of all IT Services, their performance metrics and costs are outlined in all-inclusive Memorandums of Understanding (MOU) and Service Level Agreements (SLA) with County departments. The provisioning of services is assessed on a quarterly basis to ensure adherence to agreed-upon service levels and service effectiveness allowing the opportunity to gauge satisfaction with ITD services and make adjustments to better serve customer needs, and ensure the integration of business strategies, and priorities into the IT strategy. In continuing to improve services, ITD will create and make available a service catalog that clearly describes ITD's various lines of business and rates that is more customer-centric and that can be electronically requested.

Major customer trends include increased demand for self-service functionality, a desire for on-line and current information that is flexible for business intelligence, greater integration of solutions and more self-evaluating tools where feedback is built into the process. During FY2015-16 and FY2016-17, ITD will continue to execute the Mayor's initiative to implement information technology best practices into a consolidated environment, utilize the maximum efficiency of systems, staff and resources available to Miami-Dade County; consolidation of IT infrastructures and redundant functionalities county-wide is well underway. Through this process, ITD is working with customers to identify opportunities to create additional efficiencies and savings through technology which will be supported through increased analytics. A countywide review will identify and facilitate the development of proposals for technology solutions to address business needs, leveraging IT synergy potentials across business units.

KEY ISSUES

Representation from all divisions contributed to identifying key issues facing the department by performing a SWOT analysis. ITD has made significant progress and continues to work on its strengths, weaknesses, opportunities and threats.

Strengths

- Experienced and talented employees
- Infrastructure and cutting edge technology
- Business process knowledge – (departmental business process)
- Employee commitment and longevity
- Established customer relationships- internal/external
- Cost effectiveness
- Strong technical, analytical, and information gathering skills
- Consolidated IT staff with core expertise in respective business area

Weaknesses

- Internal/External customer service skills – *on-going training*
- Complicated business processes – *processes being streamlined*
- Lack of documentation – *addressed through project management processes*
- Lack of measures and incentives – *addressed through project management and realignment of organization*
- Succession planning – *department realignment, skills mapping and IT consolidation creating opportunities for succession planning*
- Rigid/archaic HR policies and procedures – *addressed through development of streamlined processes, policies and procedures in compliance with County administrative and implementing orders and procedures*

Opportunities

- Software as a service offering efficiencies and vendor specialization.
- Business process re-engineering through technology implementing best business practices
- Robust Portfolio Management Office being established
- Agile developmental workforce
- Development of quantitative measures ensuring accountability
- Centralized IT Service Desk to include business area knowledge base
- Further cost effectiveness and efficiencies as a result of IT consolidation
- Development an organic organization with modern IT position classifications
- Development and management of customer Memorandums Of Understanding (MOU)

Threats

- Future economic and fiscal environment
- Loss of business knowledge through attrition
- Efficiently integrate large number of staff in short time due to IT consolidation
- Aging workforce – loss of institutional knowledge
- Rapidly changing cybersecurity threat landscape

PRIORITY INITIATIVES

Organizational Structure Modernization:

Bi-Modal organization

The Bi-Modal IT organization model postulates that the IT enterprise organization structure would support two modes of operation – one to preserve the foundation and structure that maintain existing core disciplines focused on stability and efficiency, the other mode will respond to the new innovating, emerging and changing technology demands focused on time-to-market, rapid application evolution, and, tight alignment with business units. In FY 15-16 and FY 16-17, ITD will continue the evolution of the IT enterprise organization structure to exemplify the bi-model concept and methodologies.

IT Innovations Center

ITD will continue the organizational structure modernization with the foundation of an IT Innovations Center which will promote agile development methods and tools, introduction of new software bundles and a concentration on mobile systems development. The Innovations Center will incorporate the Modern IT roles of an Agile Coach, Innovations Center Manager, and an Information Technology Internship program.

Enterprise Portfolio Management Office

ITD has effectuated positive change in the provision and standardization of the County's technology service, by establishing the Enterprise Portfolio Management Office (EPMO), focusing on understanding the needs of the County's IT initiatives, prioritizing and ensuring strategic IT projects are aligned with current technology and project standards, and endorsing the appropriate monitoring of resources for the quality delivery of strategic IT projects. The EMPO will concentrate on the provision of program management in the areas of ERP, Code Enforcement and Permitting and Criminal Justice System modernizations, as well as providing strategic project management services.

Service Management Initiatives:

IT Consolidation

During FY2015-16 and FY2016-17, ITD will continue to execute the Mayor's initiative to implement information technology best practices into a consolidated environment to utilize the maximum efficiency of systems, staff and resources available to Miami-Dade County. From launch of consolidated efforts through January 2016, IT functions in the following County departments have been consolidated under ITD: Regulatory and Economic Resources (RER), Internal Services (ISD), Animal Services (ASD), Public Works and Waste Management (PWWM), Transit (MDT), Police (MDPD), Corrections and Rehabilitation (MDCR), Seaport (SP), Parks and Recreation and Open Spaces (PROS), Library (LB), Public Housing and Community Development (PHCD) and Communications (GI). Upcoming departments that will be consolidated are Community Action and

Human Services (CASHD), Finance (FN), Water and Sewer (WS), Medical Examiner (ME), Fire Rescue (FR), Aviation (AV), and Elections (EL).

As the IT consolidation initiative progresses, County departments will continue to be analyzed and consolidation recommendations implemented to obtain not only additional cost savings and cost avoidances to the County, but also achieving simplification of processes and standardization of products and IT methodologies. This ongoing effort will produce operational efficiencies, expanded capabilities, improved continuity of operations, and better collaboration and information sharing.

In addition, information technology contract consolidation is ongoing, allowing the County to leverage its procurement volume to achieve more favorable pricing terms and lower operational costs. Under this state, ITD manages the contracts countywide for the purchase of IT products and services. Departments with an existing allocation under a current contract term will continue to issue purchase orders against their existing allocations until they exhaust their allotment for that term.

IT Service Center

The IT service center is part of a comprehensive plan to deliver quality services and enhance, promote and strengthen current and future customer relationships. As part of consolidation, ITD resumed direct responsibility of the IT Service Desk, the first phase in a planned expansion for an enterprise IT service center with greater emphasis for customer reliance on self-service. The initiative, sanctioned by the ITLC, is for an enterprise service center for all IT services, with a focus in providing quality services while building customer relationships. Working together with the Business Relationship Management (BRM) team, ITD continues to provide customer communications and service opportunities to improve the customer experience.

Business Relationship Management (BRM)

The Business Relationship Manager is a critical link between technology and business stakeholders acting as a connector, orchestrator and navigator between ITD and its customers, ensuring the integration of IT strategy and priorities into departmental business strategies. BRMs discuss key IT risks/vulnerabilities or issues with operational areas to achieve negotiated resolutions, promote standards, provide guidance to business units on IT matters, and enable and advocate for IT changes. The BRM team works with customers to shape digital initiatives, collaborate with the different IT areas to assure services meet customer expectations, and to review their technology portfolio, track performance and assess financial standing, as well as to identify key challenges, address risks and build IT strategy that aligns to the enterprise IT vision. A Memorandum of Understanding (MOU) will be developed annually with detailed key accomplishments, major projects planned for the following year, and cost comparison and forecast, with service level agreements (SLAs) within MOUs thereby providing the opportunity to gauge satisfaction with ITD services and make adjustments to better serve customer needs. A comprehensive map of all IT services, performance metrics and costs are in the MOU. The provisioning of services is assessed on a quarterly basis to ensure adherence to agreed-upon service levels and service effectiveness and the integration of business strategies and priorities into the IT strategy. The function supports IT consolidation, provides problem management support, ensures root-cause analysis and corrective action plan development. The BRM will provide customers

short and long term IT strategy recommendations for future IT investment decisions that align with enterprise goals leveraging the IT service catalog.

IT Service Catalog

The IT services catalog, with built-in, self-evaluating mechanisms including gathering customer feedback, defines the services ITD provides in terminology that is comprehensible and meaningful to County departments as part of their businesses. As a web based, self-service portal, the catalog will provide the means by which customers can understand the specifics of any IT service, make a request to receive that service, inquire on the progress of the processes needed to deliver the service, and provide feedback on the experience. The catalog will be integrated with back office technology solutions to achieve greater efficiencies through automation and ensure that all the information about a request for service is most current. As County departments and other customers refine their business operations and make IT requests, ITD can identify trends that can impact operations and address these in the most efficient manner. The services catalog continues to be developed through the Remedy system and augmented with different types of services as the IT consolidation process continues and departments provide ITD with specific service needs.

Smarter Cities Initiatives

ITD has implemented IBM Smarter Cities-based technology in partnership with other County departments, vendors and the private sector that will modernize and improve the predictive management capabilities of systems tied to law enforcement, transportation and water. Associated initiatives include:

- Completed the upgrade of the Intelligent Operations for Water to the latest revision for Parks, Recreations and Open Spaces (PROS). The upgrade included; new servers, more features to allow the customer ease of use administration, better graphical user interface to access new reports, redesigned interactive dashboards, real-time alerts and more self-service options.
- Completed proof of concept and implementation on the first phase of the Intelligent Video Analytics project for PROS Gould's Park. Currently conducting site survey for several other locations.
- Completed first phase of the analytic data discovery model for the Homestead Exemption fraud project. In the process of engaging IBM Counter Fraud Management Platform Team to refine the solution.
- Provided the Police Department with workshops and knowledge sharing on the Intelligent Video Analytics and Management tool. Continued to provide guidance on the Integrated Law enforcement solution.
- Completed proof of concept on the Intelligent Operation for Transportation with the Transit Department using data analytics to discover patterns and trends in the data as it relates to Bus Bunching. The project was a success as it assisted in improving the bus schedule and business process of the bus driver's logistics.

Centers of Excellence (CoE)

A CoE is a Competency or Expertise Center; comprised of expert staff, a CoE promotes collaboration of staff and the use of best practices surrounding a specific focus area to drive business results. A CoE delivers:

- Support by offering corroboration to the business lines in their respective area of focus through the provision of services needed, or by making available subject matter experts (SMEs)
- Guidance through standards, best practices within the organization, methodologies, tools and knowledge repositories
- Shared Learning via training and certifications, skill assessments, team building and mentoring
- Governance, thereby ensuring organizations invest in the most valuable projects and create economies of scale for their service offerings; assist with the best allocation of limited resources (e.g., funding, personnel) across all possible uses; and coordinate countywide interests to deliver IT value

The current CoEs are:

Enterprise Resource Planning (ERP)

ERP is a suite of fully integrated financial, procurement and human capital management systems that will replace disparate legacy systems currently used and deliver substantial efficiencies, increased accountability and responsiveness to the County. A fully implemented ERP system will improve transparency of business, enhance financial planning, and improve management and reporting. An ERP system manages the business process from 'procurement to payment', and 'hire to retire', and allows for financial transactions and reporting.

The County selected the Oracle PeopleSoft, Hyperion, and Business Intelligence products as its ERP platform and implemented the ERP financial and procurement modules in the Water and Sewer and Aviation Departments. The goal for future ERP implementation is to improve organizational effectiveness through process efficiency and self-service, and to facilitate improved talent acquisition and staff retention. A governance structure will be established to support the ERP and ensure that the software remains current as the ERP software applications evolve. The implementation is planned over a four year timeframe and is expected to begin in FY2015-16. In FY2015-16, the Hyperion/Business Analysis Tool (BAT) solution will become the all-in-one solution for forecasting, preparing, monitoring and reporting on departmental budgets. With an eye towards full integration with the ERP system, Hyperion includes Operating, Employee/Position Management and Capital Budgeting.

Enterprise Content Management (ECM)

ITD has completed the implementation of software and hardware in support of modern Enterprise Content Management technology. This technology enables the automated capture, management and retention of documents. Plans are to fully sunset older technology by finalizing the migration of public safety, legislative, human resource, financial, election and other document types to the new technology and to develop new systems that will facilitate access to multiple documents. Capabilities will be developed that will enable the searching of public documents over the Internet as well as the ability to integrate ECM with current systems to improve indexing, retrieval, retention and archiving functions.

Business Intelligence Analytics Center of Excellence (ACE)

An Analytics Center of Excellence (ACE) promotes and provides delivery enablement through a consistent set of Business Intelligence (BI) I skills, standards and proven practices. ACE enables repeatable successful BI and Analytics deployments through the development and focus of people, technology and process in ways that make sense to an organization as a whole, rather than a single project. Following established standards and best practices, the core BI ACE includes all technologies for the development of business intelligence and analytics. ACE has marketed the use of analytics and provided enterprise training to continue expanding this technology. As a result of current implementations, such as dashboards for employee data, public safety and sustainability, other new enterprise implementations were developed, such as the Invoice Workflow Accounts (IWA) Payable, along with planned web-based reporting capabilities for Financial Disclosure, Cone of Silence and Permitting statistics. Enterprise business analytics will continue to be upgraded to the most current versions and available to all County departments on the web and via mobile devices, and a geographical location analytics tool is available to enhance dashboards with mapping information.

As more IT staff is consolidated into ITD, the objective is to establish a data-driven culture that encompasses business analytics into all new and existing applications to enrich decision making. The implementation of additional critical business functions are required to provide a higher level of program support. These include data warehouse modeling, and the creation of enterprise data warehouses. Having these critical functions facilitates integration with major countywide core technologies to include Enterprise Resource Planning (ERP), Enterprise Content Management (ECM), Enterprise Asset Management (EAM) and Geographical Information Systems (GIS).

Geographic Information System (GIS)

The County's GIS CoE is a mature competency center serving County departments, external government agencies, residents and businesses. Specialized services include but are not limited to the provisioning of the County's central repository of geographic information, maintenance of base layers, such as streets, addresses, parcels, imagery, administration of GIS infrastructure, GIS application development, integration, project management, vendor management, and GIS portal administration. The GIS CoE maintains a base street foundation presently containing over one thousand layers of information, over 571 thousand addresses, nearly 320 thousand sub-addresses, and over 104 thousand street segments. The competency center researches and evaluates new GIS technologies and environments, supports the GIS user's group and promotes countywide GIS education via presentations, events and its GIS portal presence on miamidade.gov. The GIS CoE continues to expand the geographic based Open Data site delivering readily accessible live spatial information and map services that provide location centric government data via web self-service.

Applications Initiatives:

Staff Scheduling System (SSS) or Intelligent Workforce Management (IWM)

The initiative to implement a Staff Scheduling System for Miami-Dade Corrections and Rehabilitation Department (MDCR) is underway. MDCR selected Orion Communications AgencyWeb Business

Management Solution as a centralized staff scheduling system for the department. The department currently manages staffing, leave, attendance, and overtime through numerous manual, repetitive, and redundant processes. The new solution will automate MDCR's time collection, as well as manage rosters, conduct shift bidding, and automate filling certain vacancies in conjunction with audit controls and enhanced reporting. It would also intend to improve overtime management, send and receive work communications, and ensure consistent application of policies and collective bargaining agreements. The centralization and automation of these processes will result in comprehensive data for managers to make timely decisions on staffing, scheduling, and cost tracking and containment. The implementation will follow a phased approach. Phase 1 will include the implementation of interface with the County's Payroll Time and Leave and the automation of rosters.

Offender (Jail) Management System

Miami-Dade County Corrections and Rehabilitation (MDCR) Department operates the eighth largest jail system in the nation and includes seven detention facilities. Inmates housed in these facilities are awaiting trial or serving sentences of 364 days or less. MDCR currently utilizes legacy mainframe platform applications, as well as numerous vendor and County developed applications in different technologies to maintain their facilities and supervise their inmates. An effort is underway to implement a vendor package, Offender Management System (OMS) that will automate the intensive manual processes through MDCR and interface to existing vendor applications to record, verify, inspect and evaluate operational aspects of the facilities, including inmates. The OMS will also comply with regulatory and legislative mandates; the project is estimated to take approximately two years. The implementation will follow a phased approach. Phase 1 will include the deployment of the Classification, Housing, Incident, Discipline and Grievance modules. The scheduled implementation date for Phase 1 is summer of 2016. Phase 2 will automate other business processes within MDCR that will provide efficiencies with possible business process reengineering.

A-Form Implementation

ITD, in collaboration with the Miami-Dade County Association of Chiefs of Police, State Attorney's Office, Public Defender's Office, Clerk of the Courts, Administrative Office of the Courts, Miami-Dade Corrections and Rehabilitation and Juvenile Services Departments, and Miami-Dade Police and municipal law enforcement, collaborated on a project to automate the Arrest Affidavit (A-form) for all county law enforcement and other County and state agencies. The automation of the A-form makes the arrest information available at correctional facilities by the time the officer arrives with the arrestee and stores the information in a centralized repository. Additionally, all law enforcement is using a standardized set of statutes, thereby streamlining the booking process. The system enables law enforcement to generate statistical information by geographic areas and other search criteria to enhance law enforcement efforts. The project was funded by the Florida Department of Law Enforcement (FDLE) American Recovery and Reinvestment Act (ARRA) and Edward Byrne Memorial Justice Assistance Grant (JAG). As of October 2014, law enforcement personnel from over 30 municipalities were trained on the use of the electronic arrest form; the Corrections and Rehabilitation Department plans to accept only electronic arrest forms as of January 2016.

Criminal Justice Information System (CJIS) Modernization

The initiative to modernize the Criminal Justice Information System (CJIS), the system of record for Miami-Dade County tracking the life cycle of cases from arrest to disposition, is underway, and includes more than 220 interfaces. The analysis phase will document the present state; identify high-level requirements for a new CJIS and document requirement to comply with Supreme Court of Florida No. AOSC13-48, *Electronic Filing of Criminal Cases in the Trial Courts of Florida via the Florida Courts e-Filing Portal.* Findings and recommendations will be presented to the Criminal Justice Modernization Policy Committee representatives for policy direction. The goal of the modernization effort is to provide a centralized system serving the informational needs of all justice agencies.

Municipal Plans Review

A pilot was completed to standardize the municipal plan review and permitting process in Miami Dade County. The project will enable time and cost savings to customers by reducing the time and cost, and minimizing the need to travel to County facilities to conduct plan review and permitting business activity as well as allowing multiple review areas to review the plans concurrently. The goals of the project are to increase the efficiency of the plan review and permitting process by leveraging existing MDC computer applications/services by offering customers (developers, design professionals and citizens) a phased deployment plan. Deployment has been completed at the Cities of Miami Lakes, Miami Beach, and Cutler Bay; ITD is in the process of collaborating with North Miami Beach to expand the program further.

Enterprise Permitting

ITD is in the process of soliciting proposals for an enterprise land use management, licensing, permitting, plan review, inspections, and code enforcement solution. The solution will be used county-wide for land use management, licensing, permitting, plan review, inspections, and code enforcement business processes that will leverage the existing GIS infrastructure, provide mobile technology for remote work in the field, provide a workflow based user interface for administrative and support staff usage, and a citizen portal that will streamline these business processes for the public. The solution will expedite the business processes and facilitate data sharing and reporting.

Infrastructure:

Desktop and Application Virtualization Services

ITD will continue to offer a desktop and application virtualization solution to deliver highly flexible personal desktop environments that are accessible from any device, anywhere, anytime and to realize greater efficiencies from ITD's infrastructure. Costs can be minimized by reducing human workload, electricity consumption, support calls and eliminating security threats which adversely affect productivity by the manner in which personal computer systems and software are managed.

Voice over IP Enterprise Telephony (Voice Gateway Expansion)

ITD implemented an enterprise telephony solution to address future needs of all County departments. The implementation of the Cisco IP telephony platform standardized administrative telephony

requirements throughout the County by creating a telephony transport layer that rides the redundant County fiber optic infrastructure. The goal of the project is to consolidate all County voice service on the Cisco enterprise system. The expansion of the IP voice infrastructure allows the County to take advantage of the Voice over Internet Protocol (VoIP) technologies in the replacement of legacy phone systems as defined by the County's strategic objectives. ITD will continue migrating the remaining Miami-Dade Police Department districts and County Courts in FY2016-17.

Enterprise Call Center and Interactive Voice Response (IVR) Consolidation

ITD implemented an enterprise telephony solution to address future needs of all County departments. The implementation of the Avaya Voice Portal platform standardized administrative telephony requirements throughout the County for Call Center and IVR services leveraging the County transport layer that rides the redundant County fiber optic infrastructure. The goal of the project is to consolidate all County call center and IVR applications under one (Avaya) enterprise solution. Present tenants on the system are 311 Answer Center, Elections, Animal Services, Transit, Finance, Public Housing and Community Development Departments, Property Appraiser's Office, State Attorney's Office, Water and Sewer Department, and the RER Miami-Dade Permitting and Inspection Center. ITD will continue migrating service by moving the Public Defender Office and County Courts in FY2016-17.

Enterprise Video Management & Analytics Consolidation

There are a diversity of video management systems (VMS) being used in the County without standardization that are installed for security surveillance, traffic surveillance, or other video related service. The County is implementing an enterprise VMS which will serve as the foundation for the County going forward. This platform can be expanded in the future by adding needed additional servers, disk storage and user licenses to implement customer requests to support standardized video cameras, and recorders. To streamline, ITD will research ways to consolidate existing VMS with the accepted (Genetec) VMS and define a strategy to strive to consolidate all video resources into one solution that can be accessed from mobile devices over the network by public safety and other users granted access to specific video resources when a major incident or disaster occurs. With this solution, ITD can integrate video when new technology solutions are designed to improve the efficiency of customers' operations, as well as, the safety and security of County citizens.

Transportation and Congestion Management

Implement coordinated mobile and other technologies that provide easy access to Transportation Information, and support reliable and safe mobility services across the tri-county region in FY2016-17 this will include: signage with predictive arrival technology to facilitate delivery of real time arrival/departures at selected rail and bus stops; infrastructure upgrades, mobile technologies that facilitates fare purchases, parking, transportation information and technology that improves County wide coordinated mobility.

The County currently operates approximately 2,900 traffic signal intersections with an incremental rate of approximately 30 intersections annually. These signals are managed at the County's Traffic Control Center (TCC) facility via a centralized software using a combination of digital lines and wireless technology at the intersections cabinets. Since 2009, the County is migrating landline circuitry to

private broadband wireless technology, reducing recurring circuit costs. Approximately 2,300 traffic signal have been migrated and are using wireless, with 600 traffic signals to be deployed using broadband wireless services to include the installation of about 100 video cameras for traffic surveillance using 4G LTE wireless services in the next fiscal year. The TCC facility will be upgraded and reconfigured to include improved technology and infrastructure providing Traffic Operations Engineers the real time collaborative decision making tools for Active Arterial Management, leverage existing hosted traffic analytics and performance management tools and prepare for future adaptive signal control technology solutions. The ITD will continue the work with Traffic Operations Engineers to implement a hybrid communications solutions to include Intelligent Transportation System (ITS) devices. These hybrid communications solutions will support higher bandwidths. The ITS devices will be integrated with the County's ATMS platform to support modern functions, including remote equipment malfunction diagnosis, video-based traffic flow surveillance, congestion management/mitigation, integrated multi-modal transportation network, and integrated operation of freeways and arterials. In addition through integration with the County's ATMS, additional Transit vehicles and corridors will be equipped with Transit Signal Priority technology allowing for improved performance in bus services.

Cyber-security Services

ITD is responsible for maintaining the confidentiality and integrity of County and citizen data and ensuring the availability of systems and data to County departments and citizens they serve. This is accomplished through a continual process of implementing, reviewing and enhancing County cyber-security technologies, standards and procedures to mitigate risk to the greatest extent possible. ITD utilizes multiple technologies, including firewalls, anti-virus, automated security updates, intrusion detection and prevention, and security event and information monitoring, correlation and alerting, vulnerability assessment and penetration testing tools and has implemented technical and policy controls to ensure continued compliance with multiple security standards including Payment Card Industry (PCI), Criminal Justice Information Systems (CJIS) and Health Information Portability and Accountability Act (HIPPA). Ongoing enhancements address modernization of MDPD and Enterprise (MetroNet) security architecture, prevention, identification and notification of inadvertent and intentional disclosure of sensitive information, improving security for employees accessing County systems while away from the office or from mobile devices and implementation of encryption for County owned mobile devices.

Radio Communications

Radio Systems Enhancement Initiatives

The objective of the radio systems enhancement initiatives is to increase radio communication capabilities within Miami-Dade County. The 800 MHz modernization project was completed which transitioned Miami-Dade County to new state of the art P25 digital networks servicing all County agencies, municipalities, state and federal agencies. The initiatives include evaluating communications coverage with a focus on improving the historically low coverage radio communication areas, expanding new radio infrastructure sites, and upgrading subscriber user hardware. In 2015-2016, new

radio infrastructure sites were activated in the Key Biscayne and in the Cutler Bay areas. The Key Biscayne site has greatly improved communications for first responders in the village by expanding radio coverage on the island and surrounding waters. The Cutler Bay site has greatly enhanced communications in the South Dade area to include portions of the Everglades National Park.

In FY2016-17 and beyond, the focus will be the addition of new radio sites in the north and central western part of the County. Evaluation of the radio coverage expansion will continue, which may include the addition of other radio sites in addition to enhancing the user hardware by upgrading the software code and personalities to reflect and provide access to the new technology's capabilities. This enhancement encompasses working with all user agencies and approximately 30,000 radio hardware devices.

FUTURE OUTLOOK

Service Management Initiatives

As the County continues with IT consolidation, the importance of having a comprehensive, evolving and on-going plan is crucial. As ITD modernizes and implements new technologies, the Department has addressed the manner in which business is conducted and has begun restructuring and redesigning its customer service business strategy to improve service delivery management while working with customer departments and agencies to provide better services. As ITD expands its services countywide, the IT service center will become the central gateway for customers to strategically plan and order IT services. Embracing IT consolidation effectively within a complex organization such Miami-Dade County will challenge ITD for a more centralized and better managed IT environment that will support a more customer oriented service delivery strategy for the future. ITD will continue to establish value-added relationships and communications with its users/customers to improve its insight of business requirements, allowing for the establishment of standards to promote consistency, allocation and matching of costs to specific business units, and increasing awareness and visibility for IT service provisioning, as well as, maximizing existing and future investments by leveraging enterprise solutions.

Applications Initiatives

ITD will continue to work toward simplification of the County's applications portfolio by implementing enterprise and contemporary technologies and upgrading and augmenting skill sets to support current and future County applications. This will be accomplished through the growth of enterprise solutions, or through development or acquisition of new ones. This modernization effort will also require updating the skill sets of the IT professionals in emerging applications technologies while simultaneously ensuring adequate ongoing support for legacy systems until such time as these systems can be modernized. Reducing complexity in the applications portfolio, leveraging technology and expanding the availability of self-service components will enhance County staff and citizen access

to data in a more timely and cost-effective manner. Specific areas of application modernization include:

- Full County-wide roll-out of ERP, which will replace FAMIS, ADPICS, Time and Leave, Human Resource, and Payroll applications with an integrated solution that will stream-line business processes, and automate work flow throughout the County
- Continue rollout of Automated Arrest Form (A-form) to insure that by January 2016 all arrest forms are submitted electronically
- Complete the Criminal Justice Information System (CJIS) modernization analysis and market research to be able to provide a final recommendation to the Criminal Justice Modernization Policy Committee (CJMPC) made up of criminal justice agency directors and elected officials
- Implement the Jail Management System (JMS) for the Miami-Dade County Corrections and Rehabilitation (MDCR) department to streamline processes through automation, reduce paperwork and increase safety throughout the facilities with available comprehensive information for decision making
- Implement Project Management methodologies and Governance to manage major projects such as ERP, CJIS and other business critical applications
- Expand the use of the online tool (Oracle Policy Automation) for citizen to open new businesses, sign up for Social services or access certain HR benefits

Expansion of County Cloud

The County has continued to expand its cloud capabilities and is in the position to provide its cloud services to non-County entities including municipalities, State and federal agencies operating within Miami-Dade County. Successful implementation of expanded cloud services should yield significant savings/cost avoidance benefits, and increase the County's ability to leverage its investment in its cloud infrastructure to generate incremental revenue from external sources.

As new cyber-security technologies are implemented and existing technologies refreshed and migrated to a shared IP environment, ITD will continue to provide guidance to enable secure access to these resources. Working with departments, internal stakeholders, and the IT Leadership Council, ITD will continue to improve security through the implementation of technology, policy and standards to ensure the County's risk exposure is minimized.

++