



# Information Technology Department Business Plan

**Fiscal Years: 2014 and 2015**  
(10/1/2013 through 9/30/2015)

Approved by:

A handwritten signature in black ink, appearing to be "Angel Petisco", written over a horizontal line.

Angel Petisco, Department Director

A handwritten signature in black ink, appearing to be "Ed Marquez", written over a horizontal line.

Ed Marquez, Deputy Mayor

Plan Date: January 27, 2014

*Delivering Excellence Every Day*



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## 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 IT 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

<u>OFFICE OF THE DIRECTOR</u>					
<ul style="list-style-type: none"> <li>Oversees the provision of IT resources and services and performs Chief Information Officer (CIO) functions</li> </ul>	<table border="0"> <tr> <td style="text-align: center;"><u>FY 12-13</u></td> <td style="text-align: center;"><u>FY 13-14</u></td> </tr> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;">3</td> </tr> </table>	<u>FY 12-13</u>	<u>FY 13-14</u>	3	3
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<p style="text-align: center;"><u>OPERATIONAL SUPPORT</u></p> <ul style="list-style-type: none"> <li>Provides asset management, financial, budgetary, human resources, project management and administrative support to IT operations</li> </ul>	<table border="0"> <tr> <td style="text-align: center;"><u>FY 12-13</u></td> <td style="text-align: center;"><u>FY 13-14</u></td> </tr> <tr> <td style="text-align: center;">30</td> <td style="text-align: center;">35</td> </tr> </table>	<u>FY 12-13</u>	<u>FY 13-14</u>	30	35
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<p style="text-align: center;"><u>ENTERPRISE DATA CENTER</u></p> <ul style="list-style-type: none"> <li>Provides 24 X 7 operation, and support for the hardware and system software that run the County's mainframe and distributed systems environments, provides enterprise storage and backup services and mainframe printing services</li> </ul>	<table border="0"> <tr> <td style="text-align: center;"><u>FY 12-13</u></td> <td style="text-align: center;"><u>FY 13-14</u></td> </tr> <tr> <td style="text-align: center;">80</td> <td style="text-align: center;">82</td> </tr> </table>	<u>FY 12-13</u>	<u>FY 13-14</u>	80	82
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<p style="text-align: center;"><u>ENTERPRISE ARCHITECTURE</u></p> <ul style="list-style-type: none"> <li>Delivers enterprise middleware, architecture, and database services, and provides support for 311/911</li> </ul>	<table border="0"> <tr> <td style="text-align: center;"><u>FY 12-13</u></td> <td style="text-align: center;"><u>FY 13-14</u></td> </tr> <tr> <td style="text-align: center;">45</td> <td style="text-align: center;">71</td> </tr> </table>	<u>FY 12-13</u>	<u>FY 13-14</u>	45	71
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<p style="text-align: center;"><u>FIELD SERVICES</u></p> <ul style="list-style-type: none"> <li>Delivers engineering, enterprise maintenance, installations, and support for telephone systems, computer peripherals, wireless devices, and wide and local area network support</li> </ul>	<table border="0"> <tr> <td style="text-align: center;"><u>FY 12-13</u></td> <td style="text-align: center;"><u>FY 13-14</u></td> </tr> <tr> <td style="text-align: center;">109</td> <td style="text-align: center;">120</td> </tr> </table>	<u>FY 12-13</u>	<u>FY 13-14</u>	109	120
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<p style="text-align: center;"><u>RADIO AND WIRELESS SERVICES</u></p> <ul style="list-style-type: none"> <li>Provides local and regional public safety first responders and County departments with efficient, reliable, and secure radio communications services and solutions</li> </ul>	<table border="0"> <tr> <td style="text-align: center;"><u>FY 12-13</u></td> <td style="text-align: center;"><u>FY 13-14</u></td> </tr> <tr> <td style="text-align: center;">55</td> <td style="text-align: center;">51</td> </tr> </table>	<u>FY 12-13</u>	<u>FY 13-14</u>	55	51
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<p style="text-align: center;"><u>ENTERPRISE SOLUTIONS</u></p> <ul style="list-style-type: none"> <li>Delivers enterprise services for Geographic Information System (GIS), Enterprise Asset Management System (EAMS), and Electronic Content Management (ECM)</li> </ul>	<table border="0"> <tr> <td style="text-align: center;"><u>FY 12-13</u></td> <td style="text-align: center;"><u>FY 13-14</u></td> </tr> <tr> <td style="text-align: center;">46</td> <td style="text-align: center;">57</td> </tr> </table>	<u>FY 12-13</u>	<u>FY 13-14</u>	46	57
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<p style="text-align: center;"><u>ENTERPRISE APPLICATIONS</u></p> <ul style="list-style-type: none"> <li>Provides multi-platform Countywide and departmental automated application systems, including support for public safety applications, tax collection and legislative systems</li> </ul>	<table border="0"> <tr> <td style="text-align: center;"><u>FY 12-13</u></td> <td style="text-align: center;"><u>FY 13-14</u></td> </tr> <tr> <td style="text-align: center;">71</td> <td style="text-align: center;">64</td> </tr> </table>	<u>FY 12-13</u>	<u>FY 13-14</u>	71	64
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<p style="text-align: center;"><u>ENTERPRISE RESOURCE PLANNING</u></p> <ul style="list-style-type: none"> <li>Delivers enterprise program services for Enterprise Resource Planning (ERP) and core legacy systems including human resource and financial systems</li> </ul>	<table border="0"> <tr> <td style="text-align: center;"><u>FY 12-13</u></td> <td style="text-align: center;"><u>FY 13-14</u></td> </tr> <tr> <td style="text-align: center;">65</td> <td style="text-align: center;">72</td> </tr> </table>	<u>FY 12-13</u>	<u>FY 13-14</u>	65	72
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<p style="text-align: center;"><u>ENTERPRISE SECURITY</u></p> <ul style="list-style-type: none"> <li>Develops and implements data security policies, manages enterprise security risk, and manages the County's data security infrastructure, remote access, directory services, and mobile messaging</li> </ul>	<table border="0"> <tr> <td style="text-align: center;"><u>FY 12-13</u></td> <td style="text-align: center;"><u>FY 13-14</u></td> </tr> <tr> <td style="text-align: center;">20</td> <td style="text-align: center;">21</td> </tr> </table>	<u>FY 12-13</u>	<u>FY 13-14</u>	20	21
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<p style="text-align: center;"><u>SHARED SERVICES</u></p> <ul style="list-style-type: none"> <li>Provides customer support for Countywide telephone services and maintains internal work order and billing systems</li> </ul>	<table border="0"> <tr> <td style="text-align: center;"><u>FY 12-13</u></td> <td style="text-align: center;"><u>FY 13-14</u></td> </tr> <tr> <td style="text-align: center;">17</td> <td style="text-align: center;">17</td> </tr> </table>	<u>FY 12-13</u>	<u>FY 13-14</u>	17	17
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## 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 expectations are consistent among ITD's customer base. 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.

Service Level Agreements (SLAs) are reviewed annually with customers, thereby providing the opportunity to gauge satisfaction with ITD services and make adjustments to better serve customer needs. ITD will continue to improve its Service Catalog. The intent is to create a comprehensive and user-friendly inventory of IT goods and services 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 FY2013-14 and FY2014-15, ITD will continue to execute the Mayor's directive to consolidate IT programs and related resources Countywide, including deployment of IT personnel and consolidation of allocations on enterprise IT contracts. Phase 1 was completed in January 2014, which included RER, ISD, PWWM, and MDPD. 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.

## KEY ISSUES

ITD convened a workshop comprised of staff representing all divisions of the department to identify key issues facing the department by performing a SWOT analysis. The results of the workshop are summarized below. The workshop concluded with a brainstorming session to solicit ideas and input on what ITD can do within the next 12 months to address the weaknesses and threats and to enhance the strengths and make the most of the opportunities.

### **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



### **Weaknesses**

- Lack of team work – silos
- Lack of customer service standards and procedures
- Duplication of services provided by ITD
- Internal/External communication
- Internal/External customer service skills
- Lack of accountability and apathy of some employees
- Convoluted business processes
- Lack of department-wide planning (no alignment of plans)
- Lack of centralized service request software
- No clearly defined Project Management Office (PMO)
- No marketing of ITD services
- Lack of documentation
- Lack of measures and incentives
- Succession planning
- IT procurement takes too long
- Rigid/archaic HR policies and procedures

### **Opportunities**

- Software as a service
- Lead business process re-engineering through technology implementing best business practices
- Establish robust PMO
- Streamline procurement process
- Dream team approach – all roles required for system implementation
- 360 evaluations
- Agile developmental workforce
- Development of quantitative measures ensuring accountability
- Centralized IT Help Desk to include business area knowledge base
- Further cost effectiveness and efficiencies as a result of IT consolidation

### **Threats**

- Current economic/fiscal environment
- Lack of transparency/cooperation from some consolidating departments
- Losing the business knowledge
- Efficiently integrate large number of staff in short time due to IT consolidation
- Aging workforce –loss of institutional knowledge
- Lack of training
- Competition /outsourcing



## PRIORITY INITIATIVES

Because ITD services a broad array of County customers as well as external customers, the priority initiatives of the Department are numerous and varied. The main initiatives for FY2013-14 and FY2014-15 can be grouped into the following categories:

- Applications Initiatives
- Infrastructure: Expansion of County Cloud Services
- Radio and Wireless Broadband Communications
- Shared Services, and
- Service Management Initiatives

### Applications Initiatives

The modernization of the County's enterprise legacy applications requires establishing a technology platform and staffing model to support the current and future County's business requirements. This effort includes the implementation of new technologies, establishment of common development methods, techniques and an applications portfolio; leveraging existing solutions, and developing reusable components that will enable the delivery of effective and economical business solutions. Modernization involves migrating to more contemporary technologies as older legacy systems come to end of life and are no longer supported by vendor partners. Modernization also involves the retooling of staff skills to ensure continued reliable support of County systems. As the County proceeds with IT consolidation, ITD will identify and review County departments' applications and determine which ones will be identified for centralization in the Applications Portfolio for modernization. Commonality of processes that will be addressed enterprise-wide under applications modernization include Code Enforcement and Cashiering, both examples of processes that cross-cut County departments but involve common underlying businesses. Applications modernization is a priority on several fronts.

### *Enterprise Resource Planning (ERP)*

ERP is a suite of fully integrated financial, procurement and human capital management systems that will replace the disparate legacy systems currently used and deliver substantial efficiencies, increased accountability and responsiveness to County staff and citizens. A fully implemented ERP system will also 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. E-Recruiting has been put into practice countywide and time administration through ePARS has been implemented for 92 percent of County employees as of December, 2013. In addition, almost one third of County departments are utilizing the PeopleSoft Discipline Tracking module. 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.



In FY2012-13, ITD, working closely with the OMB, Finance and ISD, developed a Consulting Services RFP for full County-wide implementation of ERP. In addition, Bond funding for the full County-wide ERP implementation was obtained. The County-wide implementation, planned over a four year timeframe, is expected to begin in FY2013-14.

In FY2013-14, ITD, working closely with OMB began the implementation of the Hyperion planning tools for budgeting and reporting. These tools will take the place of multiple County applications for the maintenance and publication of the County budgets. The initial phase of the Hyperion implementation began to support the creation and consolidation of the FY2014-15 budget cycle process.

An ERP Center of Excellence and Governance structure will be established to support the ERP and ensure that the ERP software remains current as the ERP software applications evolve. During FY2013-14, an IT Governance model was recommended to the ITLC, whereby the ERP is expected to be a pilot project for the model.

### ***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 the 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.

### ***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

At present, there are two CoEs -- The Analytics Center of Excellence (ACE) and the Team Foundation Server (TFS) Center of Excellence. An Analytics Center of Excellence (ACE) promotes and provides delivery enablement through a consistent set of BI skills, standards and proven practices. ACE enables repeatable successful Business Intelligence and Analytics deployments through the development and focus of people, technology and process -- in ways that make sense to an entire organization rather than just a single project. The TFS Center of



Excellence is a team of IT professional that is currently establishing a repository for all source code associated with systems that do not reside on legacy platforms. Best practices for the protection and enhancement of this code is also a responsibility of this CoE.

### ***A-Form Implementation***

ITD, in collaboration with the Miami Dade County Association of Chiefs of Police (MDCACP), the State Attorney's Office (SAO), Public Defender's Office (PDO), Clerk of the Courts (COC), Administrative Office of the Courts (AOC), Miami-Dade Corrections and Rehabilitation Department (MDCR), Juvenile Services Department (JSD), and municipal law enforcement, collaborated on a project to automate the Arrest Affidavit (A-Form) for all County law enforcement, including municipalities, as well as for other County and State agencies. The automation of the A-Form makes the arrest information available at the correctional facilities by the time the officer arrives with the arrestee and stores the information in a centralized repository. In addition, all law enforcement is using a standardized set of statutes; thereby, streamlining the booking process. 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), which expired on September 30th, 2013. On September 3, 2013, Miami-Dade Police Department (Intracoastal District), City of Miami (one district), Miami-Dade Public Schools Police Department (one district), City of Aventura Police Department and Village of Key Biscayne Police Department started submitting electronic arrest forms for processing by MDCR and JSD intake areas. A second group of municipalities was trained in October with two other groups remaining to be trained during FY2013-2014.

### ***Criminal Justice Information System (CJIS) Modernization***

The Criminal Justice Information System (CJIS) is the system of record for Miami-Dade County from time of arrest to case disposition. The technology of the current CJIS is nearing end of its life cycle; along with an aging workforce with expertise in the technology required to maintain CJIS, it is necessary to look at a modernization approach. Consequently, executive sponsorship from elected and appointed officials representing the justice community was obtained to start the process of identifying areas of improvement for a period of one year starting October 2013. The findings of the extensive analysis spanning eight criminal justice agencies and recommendation for next steps will be reviewed by a Policy Committee composed of agency officials.

### ***Municipal Plans Review***

A pilot project was completed to standardize the municipal plan review and permitting process in Miami Dade County. The goals to be achieved are:

- To yield productivity gains to the Miami-Dade County community by reducing the time, cost and travel required to process paper and electronic plans
- 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 of the program has been completed at the City of Miami Lakes. ITD is in talks with other municipalities to expand the program further in 2014.



- To provide time and cost savings to customers by 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.

### ***Business Intelligence***

Following established standards and best practices, the core business intelligence group established an Analytics Center of Excellence (ACE) to include all technologies for the development of business intelligence and analytics. ACE is moving forward with marketing the use of analytics and providing enterprise training to continue expanding this technology. As a result of demonstrations of current implementations such as dashboards for employee data, public safety and sustainability, other new enterprise wide implementations were developed for Corrections Queue Management, GreenPrint and Enterprise Content Management (ECM) Invoice Workflow Accounts Payable.

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 such as iPhones and iPads. ESRI for Cognos geographical analytics tool was successfully installed and is available for production use to enhance dashboards with mapping information.

As more information technology departmental staff is consolidated with ITD, the goal is to create 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 Extract, Transformation, and Load (ETL) trainings, creation of enterprise data warehouses, and the establishment of an ETL team. Having these critical functions facilitates integration with major countywide core technologies to include Enterprise Content Management (ECM), Enterprise Asset Management (EAM), Enterprise Resource Planning (ERP) and Geographical Information Systems (GIS).

### **Infrastructure: Expansion of County Cloud Services**

ITD's Cloud Services infrastructure provides shared computer resource environments comprised of data storage, data backup services, physical-virtual servers and data center hosting. FY2013-14 will have greater emphasis on server virtualization as a means to lower operational and deployment costs. Virtual server disaster recovery and business continuity options will be available in late FY2013-14. Virtual servers with higher CPU and memory limits will be introduced in early FY2014-15. The Netbackup enterprise backup software will be upgraded to a Capacity license model in FY2013-14. Source based data de-duplication feature available in the Capacity license model will improved backup performance for fileshare data and remote clients. In addition, the expense of replacing end of life tape drives will be offset by deployment of disk based data de-duplication backup appliances. In FY2014-15, ICFB will become a repository for offsite backup data. Tier1 Storage Area Network (SAN) IBM Storage array will be deployed at ICFB in FY2013-14. This will facilitate server failover capabilities in the AIX environment using IBM Metro Mirroring SAN based replication.



On-going monitoring of the market is being performed to ensure ITD remains current with the latest technological advances, and remains competitive from a cost perspective. As such, ITD will continue to evaluate the merits of utilizing external cloud services on a case by case basis when it is not cost beneficial to host in-house and ITD will remain the cloud agent on behalf of the County. The major projects associated with the continued development of the County's cloud services are described in the following sections.

### ***Continued Secure Environment for Co-Location and Hosting Services***

This initiative entails the expansion of the existing secured server, network and storage environment of essential County IT assets for customers in order to be able to co-locate or host customer systems within a centralized and managed facility. ITD is currently managing and coordinating space allocation at both the Regional Data Processing and Communications Center (RDPCC) and the Integrated Command Facility Building (ICFB) data centers for departments wishing to co-locate equipment or for ITD to provide turn-key hosting services and support. Typically, services such as disaster recovery for a department's business systems or simply space allocation at a fully supported, secure, off-site, redundant location are excellent candidates for this service offering. In a co-location scenario, Miami-Dade Transit and Jackson Memorial Hospital, along with the Environmental Resources Division of RER have successfully migrated to leverage hosting services. For FY2014-15, ITD will continue to engage customers as part of the IT consolidation program to leverage operating savings by expanding centralized and managed hosted services.

### ***Desktop and Application Virtualization Services***

In an environment where cost savings and reduced operational overhead are key concerns, ITD is offering 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. By improving the manner in which personal computer systems and application software are deployed and managed, costs can be driven down by reducing human workload, electricity consumption, support calls and eliminating security threats which adversely affect productivity.

### ***Network Edge Switches***

Deployment of new network edge switches (end computer connections) will allow for higher through-put required for unified communication services, such as video, data and voice. This initiative is presently being launched with flexible location deployment schedules to accommodate the County's dynamic needs. As of November 2013, over 19,500 edge switch ports and 500 wireless access points have been deployed at various Miami-Dade County facilities. Major facilities that have been completed include the Stephen P. Clark Center, the South Dade Government Center, the Regional Data Processing and Communications Center (ITD's main facility) and ITD satellite offices, the Hickman Building, 19 West Flagler Building, the Miami-Dade Permitting and Information Center (MDPIC), Medical Examiner facility, Central Support Facility, and over 60 remote sites for varying departments.

For FY2013-14, the Courthouse Center Building, Dade County Courthouse, and Richard E. Gerstein building are scheduled for deployment once the final phase of the remote site deployment is complete.



### ***Metronet 10G Upgrade***

The core network upgrade will bring ITD's current 1Gbps (Gigabytes per second) core links up to 10Gbps via upgrades to the dense wavelength division multi-tasking (DWDM) equipment and core Ethernet switching equipment. This extra bandwidth will allow ITD to continue consolidating services and allow for new technologies to ride core links. Additionally, this upgrade will allow for 10 Gbps uplinks throughout ITD's three main data centers located at ITD, the NAP of the Americas, and ICFB. In addition to the increase in bandwidth capacity, some of the new features this equipment will provide allow for easier circuit provisioning and operation and for network virtualization to further enhance Cloud Infrastructure offerings. This deployment is scheduled to be completed in FY2013-14.

### ***IP Voice Gateway***

Expansion of the voice gateway infrastructure allowing the County to take advantage of the new VoIP digital technologies on the existing legacy phone systems until these systems can be replaced as defined by the County's strategic objectives. As of November 2013, several major sites have been completed include Elections, Animal Services, 311 Center, Information Technology Department, Medical Examiner's and over 20 remote satellite offices. For FY2013-14, the first phase of the Stephen P. Clark Center (SPCC) that includes PWWM, ISD, Mayors, County Attorney, Budget Office, and Board of County Commission are scheduled for completed. The Miami-Dade Police Department headquarters and Miami-Dade Permitting & Inspection Center are also scheduled to be completed in FY2013-14.

For FY2014-15, the Stephen P. Clark Center is scheduled for deployment and completion for all the remaining tenants.

### ***Cyber-security Enhancement***

The Enterprise Security Office is responsible for maintaining the confidentiality and integrity of County and citizen data and ensuring the availability of systems and data to 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. The ESO employees a 'defense in depth' strategy, utilizing 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. ITD 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 will address 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. The Enterprise Security Office also offers new and updated online security awareness training, including phishing awareness training and continues to stay abreast of cyber threats actively participating with local, state and federal cyber security and law enforcement agencies, sharing information to effectively identify and address vulnerabilities to reduce risk to the County.



## Radio and Wireless Broadband Communications

### ***800 MHz Public Safety Radio Modernization Project***

The objective of the 800 MHz modernization project is to reduce radio frequency interference to public safety two-way radio communications by moving public safety agencies to frequencies in the 800 MHz band away from the interference caused by commercial cellular carriers. A nationwide issue, realignment of frequencies is a mandate of the Federal Communications Commission (FCC). Costs to achieve this effort are paid by Sprint-Nextel under the administration of the 800 MHz Transition Administrator (TA), which included a settlement benefitting the County valued at over \$150 million with replacement of 24,000 radios. The settlement provided the means for the County to replace its aging radio infrastructure with a new system that adheres to industry and federal standards for public safety communications.

Miami-Dade County has 30,000+ radios generating over 90 million calls a year. Changing frequencies on an operational network with the quantity of radios as the County owns is a significant endeavor. Furthermore, work must be accomplished without affecting ongoing communications.

Deployment of Phase 1, the cutover of System A, was completed in December 2012. The cutover of the remaining systems will be completed during FY2013-14. More than 30,000 radios are being reprogrammed to utilize frequencies for the existing and new network. Infrastructure improvements include replacement of an equipment shelter, upgrade of two radio towers (TCC and Interama), deployment of the new microwave system, Mutual Aid equipment deployment, as well as batteries, generators, and A/C systems being upgraded. All County agencies, as well as municipal, state and federal entities having a radio communicating on the County 800 MHz network are affected, with users requiring radio re-training. Replacement of mobile radios presents a significant challenge, with removal of existing radios from all vehicles and replacement that requires programming and testing.

In FY2014-15 and FY2015-16, the focus will be the removal of obsolete infrastructure and a final round of reprogramming to remove access to the old frequencies from all radios.

### ***Miami-Dade Wireless Information Network***

In 2009, ITD deployed a private broadband network (3G) operating on a single 5 MHz channel in the 2.5 GHz band to provide wireless communications between traffic signals and the Advanced Traffic Management System (ATMS) managed and operated by the Public Works and Waste Management (PWWM) Department. Wireless routers installed inside equipment cabinets at traffic signals throughout the County deliver traffic signal information to ATMS 24 hours a day, 7 days a week. This network was designed to be a data network to support "in-street" requirements and has reduced carrier based leased circuit costs to the County through PWWM.

Miami-Dade County currently operates about 2,800 traffic signal intersections, which increment at an average rate of about 30 intersections per year. The County is planning to install about 100 video cameras for traffic surveillance starting in Q4 of FY2013-14. To administer these video streams, and make them available to the users that are authorized to have access to them, we plan to implement a new Video Management System (VMS).



To date, ITD has implemented three County wireless broadband infrastructure sites that are supporting over 400 traffic signal intersections. In addition, there are about 700 traffic signal intersections that have been deployed using broadband wireless services from the County's local telecommunications carrier. The remainder of the traffic signal intersections is using digital landlines from the local carrier. All the analog landlines that were being used to support the ATMS were migrated to digital landlines in FY2012-13.

PWWM is planning to move the County's Traffic Control Center (TCC) to a different existing County facility in FY2014-15 or FY2015-16. The detailed plans for this move are still being developed. In preparation for this move, ITD plans to deploy broadband wireless services from the County's local telecommunications carrier to an additional 1,600 traffic signal intersections during FY2013-14 and beyond.

ITD is in the process of working with PWWM Traffic Signals & Signs (TS&S) and vendors to plan and implement a hybrid communications solution with Intelligent Transportation System (ITS) devices in the first two out of 17 main traffic corridors that have been identified throughout the County by PWWM TS&S, which are: 1) Kendall Drive between Florida Turnpike and US-1, and 2) SW 87<sup>th</sup> Avenue between Kendall Drive and SW 56<sup>th</sup> Street. These hybrid communications solutions will support higher bandwidths, mainly based on a fiber and broadband wireless infrastructure, to support the new ITS devices that will be installed along these main traffic corridors. The first 2 hybrid communications solutions will be implemented during FY2013-14 and will continue into FY2014-15. The ITS devices in these corridors will be integrated with our ATMS platform to be able to support the modern ATMS functions, such as: 1) remote equipment malfunction diagnosis, 2) video-based traffic flow surveillance, 3) congestion management/mitigation, 4) integrated multi-modal transportation network, and 5) integrated operation of freeways and arterials.

The Miami-Dade County ATMS Communications Architecture and Strategic Plan is currently being developed, and it is expected to be completed by the end of January 2014.

## Shared Services

Shared Services is the provisioning of common functions previously performed independently by multiple areas within the County to a single provider, combining administrative and financial expertise to create centers for organizations. By centralizing common back-office functions within a single provisioning entity, shared services eliminates duplicative services and systems, facilitates the standardization of policies and practices, generates process efficiencies and improves service levels by leveraging technology capabilities and existing investments. The shared services approach provides better controls, data visibility, and creation of a platform for growth.

Several County shared services opportunities have been identified in such areas as finance, technology, and human resources. In partnership with the Finance Department, ITD continues to leverage the County's investment in the new Enterprise Content Management (ECM) system to implement an accounts payables workflow solution using state-of-the-art technology. In the technology realm, enterprise solutions such as Geographic Information Systems (GIS), Enterprise Resource Planning (ERP), Enterprise Asset Management (EAM), and Business Intelligence (BI) provide tools for facilitating a shared services approach. The integration of these technologies will



provide shared business solutions to satisfy current and future needs utilizing central repositories and shared content.

ITD's shared services strategy is to promote the continuous improvement of productivity, service quality and customer satisfaction by applying best practices and delivering service that meets ITD Service Level Agreements (SLAs) and for developing strong relationships with its customers. The strategy supports IT consolidation, provides problem management support, ensuring root-cause analysis and corrective action plan development.

## **Service Management Initiatives**

### ***IT Consolidation***

In support of the Mayor's initiative to deliver equivalent or enhanced service at a reduced cost while streamlining government, County departments, and in particular ITD have an obligation to ensure that IT services are delivered in the most efficient and cost effective manner possible. By leveraging existing enterprise infrastructure technology investments, such as networks and data centers, cost avoidances as well as direct savings while achieving efficiencies can be garnered and can reduce redundancy and complexity in the IT environment while facilitating the elimination of aging departmental infrastructures. ITD completed the consolidation of the RER and ISD Departments along with the transfer of IT personnel from Animal Services and Juvenile Service Departments in FY2012-13, realizing meaningful savings and will complete the IT consolidation of MDPD and PWWM by January 2014. This will complete phase I of IT consolidation. Additional consolidations are anticipated for FY2013-14 and FY2014-15. As part of its consolidation effort, ITD will re-assume direct responsibility of the IT help desk which is planned for expansion into an enterprise IT service center with greater emphasis for customer reliance on self-service. As the IT consolidation initiative progresses, departments will continue to be analyzed by ITD 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 on-going effort will produce operational efficiencies, expanded capabilities, improved continuity of operations, and better collaboration and information sharing.

Miami-Dade County has continued to consolidate its IT contract allocations under ITD. Under this scenario, ITD manages the contracts countywide for the purchase of IT products and services. Managing IT contracts under ITD allows the County to leverage its purchasing volume to achieve more favorable pricing terms and lower its operational costs. 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.

### ***Service Improvement Plan (SIP-IT)***

During FY2013-14, ITD continues to work on the five major focus areas of the SIP-IT program and continues to strengthen the business relationships with its customers by developing specific initiatives that will better internal departmental communications and the perception of ITD by customers. The following is an update on the five focus areas that will accomplish the goal to improve the delivery of technology services county-wide:



- Mission – ITD has created working groups to include all levels of staff to develop a new Mission for the department that is current, relevant and meaningful.
- Communications – ITD has engaged FIU to develop, collect and interpret an internal departmental employee satisfaction survey which will guide management ITD has developed a quarterly newsletter, strategic retreats for Countywide IT professionals and continues working on other methods of communication.
- Governance – Through the Information Technology Leadership Council (ITLC), a new governance structure has been established and projects are being reviewed through the designated subcommittees and up through the proper channels of approval.
- Communities of Interest – As IT consolidation continues, departmental solutions are being reviewed to determine if an existing enterprise solution can meet the need. Where no enterprise solution or platform currently exists, working groups of IT staff from different departments are coming together to identify the similarities in the functions needed to develop a comprehensive countywide solution to that will meet the requirements of all users.
- Business Process Re-engineering and Standardization – Internal operational and business processes are being reviewed and re-engineered on an ongoing basis to better align these with the IT Consolidation strategy for developing, supporting and maintaining enterprise systems.

### ***IT Service Catalog***

As part of the SIP-IT initiative, ITD has determined that a more customer-centric on-line IT services catalog is a necessity. It is ITD's goal to implement a catalog, with built-in, self-evaluating mechanisms including gathering customer feedback, which 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. In the future, 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 and as the IT consolidation process continues and departments provide us with their 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:

- Water Management - A predictive analytics and smart metering project to help remotely monitor consumption and identify water leaks across the Parks, Recreation and Open Spaces Department has been implemented and is expected to reduce water consumption by 20 percent. Up to \$1 million in savings per year which can be reallocated back into parks services for residents can result from this effort.



- Intelligent Law Enforcement - Intelligence analysis, lead generation and criminal identification and investigation enables Miami-Dade Police Department (MDPD) to reduce the time it takes officers to identify more accurate leads, investigate crimes and solve cases. Analytics and data mining with shared resources remove barriers to information sharing with other law enforcement agencies.
- Government Transparency - Consolidated analytics across finance, human resources, budgeting and planning provide financial transparency and access to key metrics and detailed spending information via the Internet.
- Economic Vitality - A pilot project that encourages public transit usage while promoting economic vitality in the Brickell community. The smart phone application will ingest information from the private sector on events happening in the Brickell community and provide coupons for use in Brickell businesses. The ability to donate to the Parks Foundation is also a feature of the application (App). Integration with the MDT Tracker App will provide the ability to plan trips and interact with public transit information.

## FUTURE OUTLOOK

### Applications Initiatives

ITD will 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 (ERP, GIS, EAMS, ECM), or through development or acquisition of new solutions. 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:

- Expansion of the ERP Applications: Complete Phase II of the Hyperion Budgeting tools; full County-wide implementation of the ERP. This 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. Several agencies have been trained and started submitting electronic arrest forms for processing by MDCR and JSD intake areas. A second group of municipalities was trained in October, 2013 with two other groups remaining to be trained during FY2013-14.
- Start the Criminal Justice Information System (CJIS) Modernization with the gathering of high level requirements and conducting market research to identify possible vendor solutions that may meet a large percentage of the requirements. A final recommendation will be provided to the Criminal Justice Modernization Policy Committee (CJMPC).
- 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

As the County continues to expand its cloud capabilities over the next few years, ITD will be in a position to increase its ability to provide similar services to non-County entities such as local municipalities and State and federal agencies operating within Miami-Dade County. Successful implementation of expanded cloud services is expected not only to yield significant savings/cost avoidance benefits, but also to increase the County's ability to leverage its investment in its cloud infrastructure to generate incremental revenue from external sources.

The cloud services to be provided by the County will fully conform and exceed the top ten evaluation criteria for cloud service providers as reported by Information Week:

- True Multi-Tenancy
- Regularly Delivered Software Updates
- Seamless Integration on Demand
- Business Driven Configurability
- World Class Data Center and Security
- High Performance Sustainable Architecture
- Predictable Total Cost of Ownership Model
- Faster Deployment
- Control
- Liberation of Departmental Non-Strategic IT Issues

As new cyber-security technologies are implemented and existing technologies refreshed and migrated to a shared IP environment, ITD will 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.

## Shared Services

ITD will continue to work collaboratively with the IT Leadership Council, OMB, and other County departments to further define the County's shared services mission, its relation to its customer base, and its overall role in Miami Dade County. ITD will continue to establish value-added relationships and communications with its users/customers to improve its insight of business requirements, issues, and challenges, 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.

## Service Management Initiatives

As the County continues with IT consolidation, the importance of having a comprehensive, evolving and on-going plan will be crucial. As ITD modernizes and implements new technologies, ITD has also taken another look at the way we do business and have begun restructuring and



redesigning the department's customer service business strategy. To start, through a collaborative effort with all levels of staff in the department ITD has come up with a new mission for the department: "At ITD, we provide technology, information and business solutions that exceed customer's expectations and enhance the quality of life in our community." This new mission and its guiding principles will help us continue to improve service delivery management while working with customer departments and agencies to provide better services. The SIPT-IT plan continues to be in full effect as the guide through the next coming years to improve the way ITD provides services. As the department continues to expand its services Countywide, the IT Services Catalog has become the central gateway for customers to research and order services and continues to be updated on a daily basis. Embracing IT consolidation effectively within a complex organization such Miami-Dade County has challenged ITD for a more centralized and better managed IT environment that will support a more customer oriented service delivery strategy for the future.

### Smarter Cities Initiatives

Building on the already implemented Smarter Cities foundation, the next major initiative that will be pursued is the IBM Intelligent City Planning and Operations (ICPO) which leverages investments already made in geospatial and temporal relationships among city data records that can inform better city-wide decision making and planning.

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