

# Information Technology Strategic Plan 2014–2016

# Prepared by the Information Systems Services Department



Palm Beach County: A recognized leader in Information Technology

May 2014



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# Section 1 – Introduction

# I. Preface

Palm Beach County's Information Systems Services (ISS) Department has completed an extensive planning process to identify the information technology services, projects, and issues that will be our focus for the next 3 years. The resulting plan, titled **Information Technology Strategic Plan: 2014-2016**, references the past, reports on the present, and previews the future roles and responsibilities of ISS in providing IT services to County departments and agencies. It also takes into account the technology trends and fiscal constraints which must be managed against an ever expanding demand for IT services.

Looking ahead from now through 2016 we envision an exciting and challenging future. This period will present many opportunities to leverage technology in ways that improve work efficiencies for employees and offer expanded public access to information and services.

The planning process involved the participation of more than 100 ISS employees along with representatives of every department and agency in County government. This process has helped facilitate better communication among our staff, customers, management and elected officials.

This plan helps direct the focus and energies of the ISS Department toward accomplishing the goals identified herein – all of which are designed to improve the ISS organization and our abilities to serve our customers.





Information Technology Strategic Plan: 2014 - 2016 Palm Beach County Information Systems Services

Key benefits of the planning process and resulting document include:

- Assists the County's departments and agencies in communicating to ISS the direction and priority of their projects and initiatives and likewise communicate to the County Administrator and management team the priorities and direction proposed for ISS;
- Relies upon extensive employee and customer input in determining key decisions regarding the direction of IT policies and practices;
- Helps make decisions in allocating scarce resources to specific services and projects;
- Establishes a framework for IT governance groups and ISS management to continually measure and evaluate the quality of IT services;
- Supports County Administration's directive to improve departmental performance measurement;
- Provides next and future years outlook for ITrelated capital projects, along with return on investment analysis; and
- Sets forth a roadmap for the direction of technologies that will comprise the future enterprise infrastructure.

# II. Executive Summary

Palm Beach County Information Systems Services (ISS) Department fulfills a vital role in providing information technology services to the County's departments and agencies. Information technology is the only effective means of organizing and maintaining the vast amounts of information produced and accessed by County agencies and their numerous constituents.



"There are more challenges facing us and we expect more from our employees than ever before. Whatever your responsibility and position in County government, it is vitally important that you dedicate yourself to doing the best job possible so that our citizens are properly served. While we think that our organization is excellent, we know there is always room for improvement."

Robert Weisman, County Administrator in his Welcome Message to new employees

ISS is a full service IT organization which provides central support services for essential information technology functions in County government. This includes managing the largest fiber optic network of any local government in the state and an inhouse programming staff which has developed several hundred custom software applications for County departments and constitutional officers.

The full range of IT services provided by ISS is more fully described in Section 2. IV. of this Plan.

Relevant societal and industry trends impacting information technology are highlighted below followed by a summary of key projects and initiatives that will define the direction of ISS over the next three years.

# A. Key Trends and Issues

- Mobile Computing tablets and smartphones with anywhere access will increase the drive to deliver applications that work on mobile platforms. Use of employee-owned devices in the workplace requires new policies and processes.
- Citizen Engagement access to online services, interactive websites, and social media will continue to expand communication between government organizations and their constituents.
- Accountability citizens want government to be more accountable. This means ready access to public records, transparency in decision-making, performance reporting, and

responsible management of budget resources.

- Financial Constraints although the severity of the economic downturn has lessened, budget pressures will continue and it will be difficult to obtain adequate funding for services and projects.
- Demand for Business Applications ISS maintains a large inventory of existing applications but there are not sufficient staff resources to meet the customer demand for new software development.
- Aging Infrastructure IT software and hardware have finite lives, especially considering the obsolescence factor in technology. There is always an ongoing need to renew, replace and improve computer systems.
- Growth in Data Volume maintaining vast quantities of historical records and transaction data requires a significant investment in data storage facilities. Archival data must be stored, backed up, secure and searchable.
- Security Threats increased sophistication of hackers who will continue to pose risks to IT systems and data.

#### B. Top Projects and Initiatives

- Unified Communications System for new VoIP telephones with desktop video and messaging capabilities.
- New Software Development for remaining HRIS modules, work order system, and technical refresh of numerous legacy applications into a web-based architecture.
- *Glades Fiber Initiative* project to expand the County's network to interconnect the cities of Belle Glade, Pahokee and South Bay.



- New *Enterprise Data Center* to provide additional space in a hardened facility built to Tier 4 standards.
- *IT Security Policies* which will comply with standards for external auditors, HIPAA, and FDLE (for CJIS).
- Upgraded *Storage Area Network* for storing electronic data and updated data retention policies.
- Major upgrades to the Law Enforcement Exchange (LEX) Program necessary to provide state-of-the-art capabilities sharing data among law enforcement agencies.
- Implementation of Next Generation (NG) 911 System IP-based communications network including text, data, photos, and video communications that will enhance the speed, accuracy and preparation of first responders.
- Leveraging *SharePoint 2013* for departmental portals, collaboration, and records management.
- Pursuit of identified Strategic Objectives which involve:
  - Be Trusted Partners
  - Anytime/Anywhere Access
  - Essential and Secure IT Infrastructure
  - Information Gateway and Citizen Engagement
  - Government Cloud and Shared Services
  - Fiscal Management
  - High Performance Culture

These strategic objectives and associated initiatives are addressed in Section 10 of this document. A recap of all Projects and Action Items identified in the planning process is provided under *TAB 1.* 

# III. Building Upon the "Blueprint for Success" – 2004-2007 Strategic Plan

ISS' predecessor strategic plan, titled "A Blueprint for Excellence," set forth planning strategies for the 3-year period, 2004-2006. This document was successful in establishing IT governance structures and policies, preparing a Mission Statement and Guiding Principles, forming a Network Operations Center, and defining specific goals and objectives for improving the delivery of IT services in County government.

Although many of the original plan objectives have been accomplished, there is still work to be done in formalizing operations through the adoption of written standards, policies, and procedures. Further, the Governance committees that previously existing – the Technology Policy Advisory Committee (TPAC) and the Technical Architecture Committee (TAC) have since disbanded as more fully described under the Section of this Plan titled "Governance Policies and Structures."

Beginning steps for the 2014-2016 planning process included reviewing the prior plan to identify any carry-forward projects, ideas or issues that are still relevant today.





# IV. The Strategic Planning Process

The dynamic nature of the IT industry and the level of investment required to provide employees with a modern IT infrastructure are important imperatives for engaging a formal planning process.

Our strategic planning process involved a broad cross section of ISS employees and representatives from all departments and agencies in County government. Our close partnership with customer agencies has been strengthened as a result of this joint planning effort. The strategic planning process has also promoted teamwork among ISS employees. Insight gained from the participation of ISS employees and customers has been invaluable in the preparation of this plan.

Long-term strategic planning was set aside during the six-year period of recession (2008-2013) as base budget reductions forced management's focus on the annual budget cycle. Over this period of budget austerity, the ISS operating budget was reduced by 27% and 54 positions were cut from the ISS workforce. In this environment, management's attention was directed at minimizing the human impact of the cutback budgeting while attempting to maintain service levels.

All Board departments and constitutional offices participated in our enterprise-wide strategic planning process to chart the future direction of information technology projects and services in County government. A standard template for documenting baseline IT information for each agency was created in SharePoint to facilitate a paperless planning process.

On a parallel track, ISS formed 12 functional Focus Groups to evaluate current operations and business practices for the purpose of identifying strategies for streamlining processes, reducing costs and improving customer services. More than 100 ISS employees volunteered to participate on the Focus Groups. Information Technology Strategic Plan: 2014 - 2016 Palm Beach County Information Systems Services

The planning process was designed to engage our staff and customers; looking both inward and outward in an effort to improve the ISS organization in our wide ranging areas of responsibility.

Information obtained from the Baseline IT Information Worksheets and the ISS Focus Group Worksheets provided much of the foundation for our IT Strategic Plan.

# A. Baseline IT Information Worksheet

This template was designed to collect information used to establish an IT planning profile for each department and agency served by ISS.

A SharePoint template form was designed to capture the following categories of information for each department and agency:

- Matrix of Existing and Additional IT Services
- Inventory of Key Business Applications
- Enterprise Applications
- Active and Planned IT Initiatives
- IT-Related Objectives for FY 2014
- Ideas for Service Improvement/Enhancement
- Other Factors Relevant to IT Planning

The "Baseline IT Information Worksheet" template form is included under TAB 2 and the "Summary of Baseline IT Information Worksheet, by Department/Agency" is published on the IT Strategic Planning SharePoint site: http://pbcportal.pbcgov.org/ISS/strategicteam/DeptAgencyS trategicSurvey/Forms/AllItems.aspx

Information obtained from this process helped identify current IT service levels and future technology requirements, set future directions and formulate strategies. The documentation also included the creation of a database of all software products used by County organizations – *Software Inventory of Business Applications and Tools*. The data collection sheet for each application is shown under *TAB 3*.



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# **Action Items**

 Completely populate the database for the Software Inventory of Business Applications and Tools to include all relevant information pertaining to each application.

#### **B.** Focus Group Template

Twelve focus groups were established to examine planning issues for specific functional work units within ISS as follows:

- 1. Administrative Services
- 2. Applications/Customer Liaison
- 3. Computer Operations (incl. NOC)
- 4. Database Services
- 5. Desktop Administration
- 6. GIS Service Bureau
- 7. IT Security
- 8. Network Services
- 9. Quality Assurance and Training
- 10. Server Administration UNIX
- 11. Server Administration Wintel
- 12. Voice Services

Each Focus Group had a designated leader and more than 100 ISS employees participated on the various study groups.

A SharePoint template worksheet was designed to document the following categories of information for each Focus Group:

- Mission Statement
- Vision Statement
- Group Values
- IT Guiding Principles
- Emerging Information Technology Trends
- Goals
- Active/Planned Internal Projects & Initiatives
- Organization Strengths
- Opportunities for Improvement

• Other Comments

The Focus Group Worksheet template form is included under *TAB 4* and the "ISS Focus Group Summary" is published on our IT Strategic Planning SharePoint site: http://pbcportal.pbcgov.org/ISS/strategicteam/FocusGroupSt rategic/Forms/AllItems.aspx

#### C. Recap of Projects and Action Items

Information obtained from extensive interviews with customer agencies, focus group meetings, and targeted research formed the basis for the ISS Strategic Plan. All Projects and Action Items identified in the planning process have been compiled into a comprehensive list which forms the outline of a 3-year work plan.

#### SECTION 2 – Emerging Trends and Issues

A primary challenge for Palm Beach County as well as for most government organizations today is the sustainability of services and operations in the face of inadequate staffing, budget cuts, and political pressures. These are not simply temporary pressures; they in fact likely represent a "new normal" condition that will persist for years to come. This reality means that traditional approaches and measures will not be enough.

Advances in technology are now providing opportunities to engage citizens in policymaking and service delivery as well as increasing internal efficiencies through new generation technologies such as mobile computing, cloud computing, virtualization, social networking, big data, and crowd sourcing.

This section of the IT Strategic Plan examines the longer-term opportunities emerging from the confluence of information, consumer and operational technologies, and presents a vision and IT roadmap for the future.

Technology trends will broadly impact the business issues and priorities the County will face over the next several years based on the following expectations:



- The workplace is more mobile; therefore, job functions can be performed without being tied to a physical location.
   Furthermore, a number of employees are using their own devices in the course of doing their jobs.
- Communication, collaboration, and information sharing methods are increasingly automated, driven by social networking and commoditized technologies.
- Information resources must be managed from a full lifecycle perspective. Centralization and consolidation of services and resources, data centers, and IT staffs will continue to impact customer relationship management, organization structure, budget, cost management and business processes.
- Ever more sophisticated hacking techniques and malware attacks are being perpetrated by foreign governments, anarchists and criminals. The emerging trends of big data and open data balanced against data privacy rights will challenge our security infrastructure. Risk assessment, security frameworks, and data protection will remain a high priority.
- Technical architectures are facing increased capacity and flexibility demands, particularly with respect to **storage requirements**.
- Citizens require "around the clock" access to information and services to a variety of the new delivery channels. Applications need to be modified to handle requirements of mobile computing.
- Interoperability requirements drive the need for data standards and open information architecture.
- **Shared services** are continuing to impact business models, infrastructure, storage, and organization structures.

- Although there are still a number of significant barriers to overcome, the world is rapidly accelerating into cloud computing (*Gartner, 2014*). It is projected that that by 2020, cloud service will be the primary consumption source for 90% of individuals and enterprises (*CenturyLink, 2014*).
- Users will expect ISS to quickly assemble and deliver custom business applications. Lengthy development times will become unacceptable. This will put pressure on ISS to revise our current development processes and the management of projects.

A summary of Emerging Technologies and Trends Impacting ISS and Palm Beach County is provided under *TAB 5.* 

# SECTION 3 – ISS Organization Profile

# I. Background and History of ISS

An information technology function has existed in Palm Beach County since the advent of mainframe computers more than 50 years ago. Through the years, the organization's structure has evolved into a partially decentralized model. With the exception of the voice and data network which ISS provides to all agencies, IT responsibilities are currently diffused among ISS, four County departments and the independent constitutional officers.

The IT function was even more decentralized prior to 2010 when the IT staff from Community Services was transferred to ISS. Then, in October 2012, the IT reorganization directed by the County Administrator transferred the IT positions from six additional Board departments to ISS.

In evaluating a complex set of issues, challenges and opportunities, it is important to understand how the organization came to be in its current form. The following passages, taken from a 1983 document titled "Palm Beach County Data



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Processing – Historical Background, Future Plans, and Recommended Actions<sup>1</sup>:"

"Palm Beach County Data Processing came into being originally through the efforts of one of the former property appraisers in the 1960's. Eventually, it encompassed all of the Constitutional officers, the County Commissioners, and other County agencies. This included the Sheriff's office and, for a short time during the 1970's, all of the then existing computerized functions were accomplished utilizing the County Computer Center.

After a relatively short period of time, the Sheriff elected to obtain his own computer and to completely divorce his functions from anything pertaining to the County's computer functions. This also created a need for the Clerk of Court having to use the Sheriff's computer for the criminal justice network.

After the passage of approximately a year, the County Commission ... elected to put it (the computer function) under the management of the three constitutional officers who were the larger users of the Computer Center. Again, after the passage of about a year, it was decided that a single management entity would be by far the most cost effective and professionally efficient. When this became apparent, the decision was made by the then current County Commission to turn over the responsibility for management to the single larger user which was and still is the Property Appraiser's office. All other Constitutional officers involved were in agreement with this transfer of responsibility."



At some point, the Property Appraiser renamed the Palm Beach County Data Processing Department as "Automated Information Management" – AIM. AIM continued to be managed as a separate division of the Property Appraiser's Office until 1992, when the responsibility for overseeing the IT function was transferred to the ISS Policy Board, which was comprised of a cross-section of elected officials, including two County Commissioners, Clerk of the Court, Tax Collector, and the Property Appraiser with the Chief Judge serving as ex-officio member. In March 1992, the department was renamed Information Systems Services (ISS) and the 11-person staff of the County's separate IT group – Management Information Systems (MIS) was consolidated into ISS.

The Information Systems Services Department was "christened" with its new name and reporting structure, including the creation of the ISS Policy Board, by Resolution No. 92-324, adopted by the Board of County Commissioners on February 26, 1992. This Resolution states, in part:

"A Resolution of the Board of County Commissioners of Palm Beach County, Florida, creating Information Systems Services.

Whereas, the Board of County Commissioners, the Judiciary and the Constitutional Officers of Palm Beach County each have a need for efficient information processing services and equipment in order to accomplish their public duties; and

Whereas, it is in the best of interest of the citizens of Palm Beach County that the governmental officers combine efforts to

<sup>&</sup>lt;sup>1</sup> This document was authored by the Property Appraiser's Office, February 1983.



meet their respective information processing needs in a manner which would eliminate the duplication of time, effort, and money whenever possible; and

Whereas, Information Systems Services (ISS) shall be created and designed to serve all governmental users who have agreed to participate in a cooperative information processing system; and Whereas, the Information Systems Board shall be established as the governing board of ISS."

In 1992, except for the Sheriff's Office, IT organizations outside of ISS were limited to only a handful of specialized technical positions in certain organizations, e.g., Water Utilities. The early 1990's were the peak of the mainframe era and the primary data processing functions involved applications for payroll, accounting, utility billing, property data, criminal justice, building inspections, and water utility billing. This same period marked the advent of the more powerful personal computers coming onto the market which led to decentralized computing capabilities along with the required support staff.

The 1990's saw the formation and growth of numerous separate and autonomous IT organizations in Board departments as well as the Information Technology Strategic Plan: 2014 - 2016 Palm Beach County Information Systems Services

constitutional officers. Meanwhile, from 1992 until December 1996, the County's central IT organization – ISS, was managed by the aforementioned ISS Policy Board.

In December 1996, the Board of County Commissioners approved Resolution No. 92-324, which transferred responsibility for the ISS Department to the Board of County Commissioners with the ISS Director reporting to the County Administrator. In conjunction with this action, the ISS Policy Board was abolished.

This change in governance structure was a factor in the decision of some of the independent elected officials to establish their own IT shops. The Property Appraiser immediately established a separate IT function and the Clerk began expanding what was, up to that time, a minimal staff for internal IT support. The Clerk's IT organization has grown from 5 or 6 in 1997 to more than 50 full-time positions today.

The evolution of ISS as a centralized IT agency for county government is summarized below.





# II. ISS Organization Structure

The ISS Department is composed of the following work groups and divisions:

- Administration
- Application Services Division
- Finance & Strategic Services
- Network Services Division
- Platform Services and GIS
- Other IT Operations

The ISS Director reports directly to the County Administrator and is a member of the County Administrator's Management Team. The detailed ISS org chart is presented under the ISS Department SharePoint intranet site.

All ISS programs, including allocated positions and operating budget, are summarized in the following section of this Plan.

Division	Program	FTE	FY 2014
	Title	Pos.	Budget
Administration	Administration	4.2	\$960,391
Application	New Development	12.3	1 560 056
Services			1,569,856
	Maintenance &	28.6	2 612 009
	Support		5,012,908
	Technical Refresh	8.5	1,098,383
	Consulting Services	11.6	1,550,813
	System	7.0	
	Administration		055,205
	Secure Identify	4.3	503 651
	Management		10,001
	Sub-total	76.5	\$9,080,816
Computing	Database	5.1	883,054
Platforms	Administration		
	Client Support	11.9	1,045,729
	(Desktops)		
	Network	4.7	518,974
	Operations Center		
	Computer	4.8	533,321
	Operations		
	Document	3.0	257,020
	Scanning		
	Production Support	1.4	141,092
	Crystal Support	1.5	278,904
	Data Backup &	6.7	1,086,847
	Storage		
	Server	1.9	898,246
	Administration		
	UNIX Server	5.0	757,404
	Administration		

# III. ISS Operating Budget – FY 2014

	Windows Server	10.9	1,516,036
	Administration		
	Output Services	1.0	91,989
	Sub-total	57.9	\$8,008,616
Network	Wireless Network –	1.1	105,048
Services	County		
	Wireless Network – Public	1.0	91,672
	Network Design	1.8	389,620
	Network	3.8	345,926
	Documentation		
	Network	9.1	2,999,671
	Operations		
	UC (VoIP) Project	9.4	859,208
	Network Security	2.3	235,602
	External Agencies	1.6	212,775
	Voice Services	6.9	1,270,632
	Sub-total	37.0	\$6,510,154
Other IT	Countywide GIS	4.2	585,404
Operations			
	GIS Service Bureau	7.5	768,640
	Quality Assurance	11.5	1,094,596
	VPT/LEX (criminal	2.2	301,442
	data sharing)		
	Training	2.5	264,728
	Sub-total	27.9	\$3,014,809
Strategic	Procurement &	5.2	451,177
Services	Asset Management		
	Strategic Planning	2.0	341,807
	& Architecture		
	Security & Business	.6	110,320
	Continuity		
	Financial	2.0	243,820
	Management		
	Human Resources	1.1	67,419
	& Payroll		
	Sub-total	10.9	1,214,543
	GRAND TOTAL	210.5	\$28,789,329

# IV. ISS Cost Allocation Plan

In accordance with long-standing County financial management policies, ISS costs are allocated on an agency-by-agency basis each year as part of the budget process. ISS uses a cost allocation model which identifies direct costs as either: 1) "Professional Services" – i.e., costs of staff labor (billed at a flat rate of \$75 per hour) associated with software development and maintenance; or 2) "Enterprise Costs" which are further subdivided into 28 separate "cost pools" each of which represent a discrete service performed by ISS.

Indirect and administrative costs within the department are also determined and then allocated to Professional Services and Enterprise service areas to derive "fully loaded" program costs which are then allocated to each County department and



agency based on a set of pre-determined allocation statistics and the nature of the cost pool.

Although the ISS Cost Allocation Plan allocates costs for all agencies, these costs are <u>not</u> charged back to the General Fund agencies. ISS costs <u>are</u> charged back, as applicable, to all non-General Government departments and Constitutional Officers requiring that these agencies include these costs in their annual operating budgets.

Components and mechanics of the ISS Cost Allocation Plan are referenced in more detail under Section 7. VII. of this Plan.

The following graphs show the distribution of ISS Professional Services costs and ISS Enterprise costs for fiscal year 2014.



Total Professional Services Budget = **<u>\$10,703,600</u>** 



Total Enterprise Costs Budget = **<u>\$21,403,400</u>** 

#### V. IT Services Provided by ISS

ISS is principally responsible for maintaining the applications, processes, and hardware components

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comprising the enterprise IT resources of County government. These wide ranging responsibilities include the voice and data network, application development and support, desktop and server support, database administration, system administration, 24X7 Help Desk, security and various ancillary IT services, including data backup and storage, document printing and scanning.

#### A. Business Applications

# 1. In-house Developed Applications

ISS has a long and successful history of in-house programming dating back to the early days of mainframe computing. Through close collaboration with County departments and agencies, we build software business solutions tailored to fit the specific needs of our customers. Numerous County departments and agencies rely upon ISS for developing and maintaining their key business applications.

Our software development expertise has evolved as the industry shifted to client-server and then web computing platforms. Most of our newer applications are written utilize Microsoft's .Net development platform.

ISS maintains an inventory of more than 300 custom built applications as well as dozens of commercial software vendor packages. Key inhouse developed and commercial software packages are summarized in the following tables.

Department/ Agency	Applications	Purpose
Enterprise	- myGeoNav	Enterprise GIS, Fixed
(Countywide)	- FATS	Assets Tracking,
	- CMDB	Circuit Management
		Database
Community	multiple	Senior Services
Services		(DOSS), Human
		Services,
		Farmworker,
		LIHEAP, Elderly
		Home Energy
		Assistance
Economic	- Enterprise	Contract



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Sustainability	Contract Management	Administration
	System	
	- PBC	Online assistance for
	Interactive	new and relocating
		businesses
Engineering	ePermitting	Land Development
		permit application/
		plan review (for
		construction and
		utility permits)
Environmental	ERM	Resource Protection
Resources	Enterprise	Water Quality,
Management	Database	Coastal Lands, TABS
	(EEDB)	Cost Accounting, Sea
		Turtle Tracking,
		Fixed Assets
Fire-Rescue	FRHR –	Tracks time worked
	Fire-Rescue	and leave requests
	Human	for administrative
	Resources	staff
Human	HRIS –	Employee Self-
Resources	Human	Service,
	Resources	Compensation &
	Info System	Records.
		Recruitment,
		Time & Attendance.
		Fair Employment,
		Employee Relations
Inspector	- Audit	Tracks audit projects
General	Management	and investigations,
	Casa	Tracks intakes
	- case Management	TTACKS ITTAKES,
	- Contract	Tracks contracts
	Management	Hacks contracts,
	Management	
	- MyTime	Tracks staff time
Medical	M.E.	Records death scene
Examiner	Tracking	details, toxology,
	System	autopsy and
		investigative
		pictures, autopsy
		reports and death
		certificates
Office of	SBE Tracking	Tracks goals and
Small	System	actual payments to
Business		SBE vendors and
Administration		subcontractors
Palm Tran	Bus Pass	Tracks monthly bus
	Tracker	passes purchased/
		used by riders

Planning, Zoning & Building	- ePZB	Planning, Zoning Applications, Building Inspection, Contractor Certification
	- Damage Assessment	Tool for 1 <sup>st</sup> responders to record property damage (narrative and images)
Property Appraiser	- PAPA – Property Appraiser's Public Access	Property descriptions, locations, valuations, sales history, maps, photographs (aerial, street level), structural improvements and plats
	- eFiling	Homestead exemption, tangible property taxes
Public Affairs	County Internet and Intranet home pages	Programming, design and content management of pbcgov.com and pbc web sites
Public Safety	- JSIS – Justice Services Information System	Drug Court, Elderly Court, Pre-Trial Release, Released Own Recognizance
	- CATS	Consumer Affairs Tracking System
Risk Management	RIMS – Risk Information Management System	Clinic, Workers Compensation
Water Utilities	WUD CIS – Customer Information System	Utility billing, service orders, online payment, meter inventory, master contracts, permitting, capital projects
US Virgin Islands	Business License Application	Occupational license permitting and fee collection



Department/ Agency	Applications	Programs
Clerk & Comptroller	1) ADVANTAGE Financial System	BCC Financial Accounting and Budgeting
	2) Oracle PeopleSoft Payroll	Multiple custom interfaces to County personnel, pay and leave records
	3) BANNER Court System	Criminal, Traffic, Juvenile, and Civil Court Systems
Countywide	Microsoft Exchange	Outlook email and calendaring system; Active Directory (security)

# 2. Commercial Software Packages

Many of the legacy systems, while still functional, need to be updated to web-based versions or replaced altogether. ISS does not have an overall schedule for renovating or replacing legacy applications.

# Action Items

- Prepare plan with projected dates for "technical refresh," software version updates, or replacement of all business applications maintained by ISS.
- As part of our application modernization initiatives, rewrite our legacy applications to take advantage of mobile computing power and other modern platforms.
- Identify critical and high impact business applications and software tools.
- Indentify primary and backup staff resources for each application to assure sufficient staff coverage. Institute additional staff assignments and cross-training for applications which presently have inadequate coverage.

• Review system documentation for critical and high-impact applications/tools to assure documentation is maintained at an acceptable level.

# **B.** Other Direct IT Services

In addition to Application Development and Maintenance, many of the services provided by ISS involve direct interaction with employees of the organization. Direct IT services are listed in the following table.

	Other Direct Services
٠	24-hour Help Desk
٠	Email/Messaging/Calendaring
٠	Countywide GIS
•	Desktop Support
٠	Printing
٠	Document Scanning
٠	Project Management
٠	Telephones
٠	User Training
٠	Video Conferencina



Daily Briefing to Review Help Desk Activity and Projects

#### C. "Back Office" Services

Many functions performed by ISS are invisible to our customer but essential to the on-going operations of the ISS Department and the IT enterprise systems. Examples of these internal processes are listed in the following table.



Internal Services		
Backup and Recovery		
System Administration		
Computer Operations		
Server Administration		
Crystal Reports Environment		
Data Storage		
Database Administration		
Disaster Recovery		
Document/Records Management		
Data Network		
IT Security		
IT Resource Manager		
Software Licensing		
Standards and Policies		

# VI. Base Budget Reductions: FYs 2008-14

More than a decade of successive budget increases and approvals for new positions abruptly ended in FY 2008 when Board departments submitted reduced budgets, a trend which was to continue through FY 2013. During this long-term economic recession, all general government departments, with the exception of the Sheriff's Office, shed positions and adopted leaner spending plans, with less funding available each successive year. South Florida was especially hit hard by the housing bust which extended to downward valuation of commercial properties as well. The effects of the economic recession were evident in the decline of tourism and local spending, accompanied by a sharp increase in unemployment rates and housing foreclosures. Major stateshared revenues, such as sales taxes, gas taxes, and cigarettes taxes, fell off dramatically. These economic woes were preceded by the voterapproved referendums to impose limits on ad valorem taxes levied by Florida counties and cities, and these law changes had already begun to curtail spending in the local government sector, irrespective of the economic climate.

Economic indicators have begun to show improvement over the past 18 months as property valuations have started to recover, building permits are up, unemployment rates are down and tourism is strengthening. Government-related jobs represent the largest employment sector in Palm Beach County. Tourism and agriculture are also mainstays of the local economy, and both of these sectors were also under stress during the recession. Palm Beach County, like virtually all of our counterparts in local government, faced some of the most daunting budget challenges since the 1930's.

ISS began cutting positions in FY 2008 and by FY 2013 had eliminated <u>54</u> positions – or <u>24%</u> of its staffing level. Over this same period, the ISS base operating budget was reduced by <u>26%</u>.

Fiscal Operating		%	FTE
Year	Budget	Change	Positions
2014	\$28,789,329	+1.8	211
2013	\$28,289,969	-3.5 <sup>2</sup>	214
IT Reorg	\$3,232,049	+12.5	33
2012	\$25,955,361	-8.4	183
2011	\$28,338,874	-8.8	191
2010	\$31,088,060	-16.0	206
2009	\$37,015,158	+2.3	211
2008	\$36,167,641	+4.1	225
2007	\$34,759,169		231
Change	Over Period	-26.5	

#### A. ISS Operating Budget

Increases in the operating budgets for fiscal years 2008 and 2009 are solely attributable to shifting expenditures for telecom costs and software maintenance from the capital budget to the operating budget. Except for this budget shift, the actual base budget funding was reduced in these years as well. The year-to-year track of the operating budget is depicted in the following line graph.

<sup>&</sup>lt;sup>2</sup> Restated to remove fiscal impact of budget transfer due to reorganization.



#### Operating Budget Trend: Fiscal Years 2007–2014



**Note: Red** line tracks ISS baseline budget changes and **Blue** line shows impact of FY 2013 IT consolidation when IT positions and budgets were transferred to ISS.

#### B. Streamlining the ISS Organization

Cutting 54 ISS positions over the past seven years equates to almost one fourth of the complement. This level of reduction gives credibility to the credo of "doing more with less."

Personnel cuts affected all ISS Divisions and included both administrative and direct service positions. Eliminated positions included programmers, server administrators, network technicians, and telephone analysts. Positions eliminated from ISS Divisions are summarized below.

ISS Division	<b>Deleted Positions</b>
Administration	3
Application Services	15
Computing Platforms	9
Network Services	11
Other IT Operations	3
Strategic Services & Finance	<u>13</u>
Total	<u>54</u>

# C. Current Staffing Deficits

The consequences of these multi-year budget cuts especially impacted the ISS Application Services Division because this unit typically carries more vacant positions than other divisions of ISS<sup>3</sup>, and vacant positions were eliminated as the first priority in order to avoid employee layoffs. These reductions were sustained even as demand for application development and maintenance continued to grow. Funding was also substantially reduced for contractors which are used to augment the permanent staff of ISS. Again, these reductions had a disproportionate impact of the Application Services Division given that most of the contractor slots were assigned to this division.

These cutbacks have led to a permanent staffing deficit in the Application Services Division which is impacting its ability to manage the customers' demand for programming services. The strategic planning meetings confirmed that numerous departments would prefer to have additional programming resources assigned to their projects. These include Human Resources, Planning Zoning & Building, Community Services, Environmental Resources Management, Water Utilities, Engineering, and Economic Sustainability.

During the 1<sup>st</sup> half of FY 2014, ISS has identified 3 vacant positions which will be reallocated in the Application Services Division.

Currently active and planned projects impacting the workload of the Application Services Division are summarized by department/agency in *TAB 6,* which lists the project title and category: new development; maintenance of existing application; enhancement of existing application; or technical refresh of an existing application.

•	As positions become vacant through normal
	attrition, determine on a case-by-case basis
	whether these positions can be reallocated to
	the Application Services Division to help mee
	the demand for programming services.

Action Items

<sup>&</sup>lt;sup>3</sup> The higher vacancy rate is largely caused by staff turnover due to the market demand for experienced software developers.



# D. Capital Improvement Budget

During this 8-year period, funding for capital projects sustained an even greater percentage reduction than the operating budget. Annual new funding declined from a high of \$17 million to a baseline Ad Valorem funding level of roughly \$4 to \$5 million.

The FY 2013 funding level includes an infusion of \$10 million which the County financed through a bank note to pay for a new Unified Communications System which will include replacing more than 80 legacy PBX telephone systems with a single Voice over Internet Protocol (VoIP) system.

Fiscal Year	Capital Funding	% Change
2014	\$3,900,000	-22.8
2013*	\$15,050,000*	+21.7
2012	\$4,150,000	-6.7
2011	\$4,450,000	+28.3
2010	\$3,469,000	-53.0
2009	\$7,375,000	-32.7
2008	\$10,959,266	-35.8
2007	\$17,073,894	
Change	Over Period	-77.2

\*FY 2013 includes \$10 million in financing to implement a Unified Communications System.

#### Capital Budget Trend: Fiscal Years 2007-2014



This drastic reduction in Ad Valorem funding levels required that all capital projects be reprioritized and generally limited to necessary renewal, Information Technology Strategic Plan: 2014 - 2016 Palm Beach County Information Systems Services

replacement and improvement projects to maintain the infrastructure. One of the early cost reduction strategies was to let our Microsoft Enterprise Agreement expire in order to avoid annual maintenance costs exceeding \$1 million. Accordingly, Board departments are locked into the 2007 version of Microsoft Office.

A listing of all approved capital projects for FY 2014 and 3-year projected capital requests for Fiscal Years 2015-2017 are presented under *TAB 7.* 

#### VII. Organizational Strengths

#### A. Management Stability

Collectively, the ISS Director, the Deputy Director, and four Division Directors have a combined total of 140 years of experience as employees of the ISS Department. This collective longevity equates to an average of 23 years of tenure for the directors! Further, the management team has been together for the past 8 years with one new addition in January 2013 when the Platform Services Division Director was promoted from within following the retirement of his predecessor who had been an employee of ISS for more than 32 years.

#### **ISS Management Team**



L-R: Kelly Ratchinsky, Platform Services Dir.; Mike Butler, Network Services Dir.; Irene Manning, Strategic Services & Finance Dir.; Steve Bordelon, ISS Director; Phil Davidson, Deputy ISS Dir.; and Archie Satchell, Application Services Dir.

#### **B. Employee Experience**

The ISS work force has extensive longevity with the average employee having more than 14 years of service with the department. This collective



experience is <u>extremely</u> valuable in terms of familiarity with co-workers, customers and job responsibilities. The wealth of experience and expertise within the ranks has well prepared ISS for succession planning as there is a ready supply of competent candidates available when upper level positions become vacant due to retirements.

# C. Use of Contractors to Backfill and Augment Permanent Positions

ISS has long relied upon contractors for augmenting its permanent workforce on timelimited projects or in areas of specialized expertise. Contractors are principally used for applications development projects, but the use of contractors has recently been expanded for the Unified Communications Project and the NG 9-1-1 Project.

When contract support staff is needed, ISS solicits resumes from nine pre-approved professional services vendors. Contractor selections are made based on professional credentials, telephone interviews and rates offered by the vendor. Once on board, contractors become "virtual staff" working on teams under ISS supervision in ISS offices.

The use of contractors offers several advantages. Contractors can be acquired or dismissed relatively quickly, unlike permanent positions which entail months of due process. Also, contractors bring new ideas and, in some cases, heightened skills. Their assignments enable them to transfer knowledge to other ISS employees. Further, the use of contractors creates a ready supply of talent to compete for permanent jobs in the department. Numerous positions have been filled from former contractors. This model is based on a "try and buy" approach which reduces hiring risk to the department and retains the valuable knowledge the contractor has acquired from his/her work experience in Palm Beach County.

# D. Breadth of Technical Expertise

ISS provides a diverse range of IT services to County government which require a highly skilled work force. This challenge becomes more difficult given the highly specialized nature of skill sets throughout the department. Well trained and motivated employees are essential for carrying out the mission of the ISS Department. Due to the quality of our workforce, ISS has a long history of successfully maintaining the complex set of systems and processes which form the County's information technology infrastructure. This expertise is developed and maintained through careful hiring processes, technical training seminars, and on-the-job training.

# SECTION 4 – IT Programs in County Government

# I. Evolution of Central IT Agency and Self-Managed IT Organizations

# A. Decentralized Nature of IT Programs

ISS' responsibilities for providing many countywide IT services make it the largest IT organization in County government; however there are many autonomous, self-managed IT units maintained by departments and agencies as follows:

# **Board Departments**

- Airports
- Fire-Rescue
- Information Systems Services
- Library
- Palm Tran
- Public Affairs (Channel 20)
- Traffic Engineering (ITS Network)
- Water Utilities

# **Constitutional Officers**

- Clerk & Comptroller
- Court Administration
- Property Appraiser
  - Public Defender
- Sheriff
- State Attorney
- Supervisor of Elections
- Tax Collector



IT program responsibilities were more highly decentralized prior to October 2012 when IT staff and responsibilities from the following Board departments were transferred to ISS: Engineering: Environmental Resources Management; Facilities Development & Operations; Parks & Recreation; Planning, Zoning & Building; and Public Safety.

# II. IT Consolidation Project

In September 2010, County Administration directed that ISS and Community Services develop a plan to centralize the core IT services under ISS with the accompanying transfer of IT positions from Community Services to ISS.

This first IT reorganization was finalized in November 2010 when the Board approved the County Administrator's recommendation to transfer 3 IT positions from Community Services to ISS. In February 2011, the County Administrator directed ISS and Public Safety to explore the feasibility of a similar merger of IT resources; and a year later, in February 2012, the IT realignment study was expanded to include five additional general government departments - Engineering, ERM, FDO, Parks & Recreation and PZ&B. This last and largest phase of the IT reorganization took effect on October 1, 2012 when 27 IT positions and 6 GIS positions, along with related operating budgets, were consolidated within the ISS Department.

# A. Scope of IT Realignment Project

- Data Center and Server Consolidation;
- Enterprise Help Desk;
- Desktop Support based on Campus and Regional Coverage;
- Web Development;
- GIS Program;
- IT Management and Administrative Positions (succession planning); and
- Performance Measurement and Management Reporting Processes.

# B. Benefits of IT Consolidation

Centralization of IT in government is being driven primarily by the desire to reduce the overall cost of IT, as well as improve IT services and governance internally and to constituents.

An estimated \$631,000 in cost savings and cost avoidance was realized in FY 2013 from the elimination of 4 IT positions and consolidation of computer equipment. Additional cost savings will occur over time as the size of the workforce shrinks due to normal turnover and redundant server and maintenance costs are phased out. When the IT reorganization plan is fully optimized in years 3-4, savings will exceed \$1 million annually. Savings totaling \$274,150 were realized in FY 2014 through the elimination of three unfilled positions as a direct result of the reorganization.

Workforce reductions were achieved through normal attrition rather than elimination of filled positions. Attrition will occur naturally given the more than 50 IT professional and management positions that are expected to become vacant over the next 3 to 5 years as the incumbents retire.

Benefits realized through the recent IT realignment include:

- Reduced workforce through natural attrition, reassignment, and retraining;
- Began succession planning for IT managers and technical staff;
- Strengthened organization through combining talent pool of technical skill sets;
- Reduced internal competition for IT professional staff;
- Greater career opportunities for staff;
- Implemented campus coverage for desktop support;
- Reduced need for staff vehicles and travel;
- Provided staff backup and cross-training to minimize "key man" exposure;



- Improved IT governance, strategic planning and budgeting;
- Simplified IT environment fewer products;
- Promoted consistent application of policies and standards;
- Improved IT management practices cost allocation, performance measures, timekeeping, reporting; and
- Better enterprise planning for IT programs and services.

#### C. Further IT Reorganization Opportunities

The 2012 IT reorganization initiative focused on general government departments per the direction of the County Administrator. Some non-general government departments, including Airports, Water Utilities, Fire-Rescue and Library, continue to maintain separate IT support staff. The elected constitutional officers all continue to maintain independent IT organizations as well. All together there are 15 separate IT organizations, including ISS, within County government.

With the favorable results from the 2012 IT consolidation, ISS will evaluate further opportunities for IT consolidation in departments reporting to the County Administrator.

Some of the specific functional areas identified as candidates for future reorganization or consolidation include:

- Desktop Support;
- Server Administration;
- System Administration;
- Standalone Networks;
- Shared Enterprise Data Center; and
- 9-1-1 Emergency Dispatch System.

#### 1. NG 911 Program

Palm Beach County is implementing a \$30 million Next Generation (NG) 911 system which is capable of processing a diverse set of IP-based communications including text, data, photos, and video exchanges that will enhance the speed, accuracy, and preparation of first responders. Two major features of the new NG911 system include a remote backup system and a shortened call setup time, meaning the 911 call 'arrives' at the PSAP approximately 2 seconds faster. Additionally, the new system can identify the location of emergency calls from cell phones within a few feet of the caller. All of the Public Safety Answering Points have been transitioned to the new NG9-1-1 system with the exception of the Town of Palm Beach and the Sheriff's Office. Target date for project completion is mid-2014.

This project is funded entirely from a state grant and the 9-1-1 Emergency Service Fees (50 cents per month) collected by telecommunications service providers.

ISS will have an expanded role in supporting the 911 System, including serving as the initial intake point for all system help desk calls.

ISS and Public Safety have an agreement in principle to reorganize the 9-1-1 Emergency Dispatch program under the ISS Department. This decision follows ISS' offer to provide project management expertise to the 911 program following the 2012 IT reorganization. The Public Safety Department Director welcomed the involvement of ISS and, through the leadership of the assigned project manager, numerous project issues were resolved and reliance on an outside consultant was discontinued thereby saving \$26,000 per month.

After several months, the ISS Project Manager position was transferred to Public Safety by ISS. However, based on the highly technical nature of the 911 System and the close reliance on ISS for support (e.g., Help Desk, Network, GIS, Vendor Management), the prevailing thinking is that this program would fit best under the ISS Department. This would be consistent with the typical organization structure in large county governments. We anticipate this reorganization will take place prior to October 2014.



# Action Items

- In conjunction with Public Safety Department, prepare formal reorganization proposal for presentation to the County Administrator and reflect transfer of staff and budget for the 911 System (excluding dispatchers) to ISS in FY 2015 budget.
- Develop a list of specific opportunities for further IT reorganization and seek the direction of County Administration to determine whether a more in-depth study should be undertaken.

# SECTION 5- IT Governance

#### I. Vision, Goals, Guiding Principles

#### A. ISS Vision

ISS will be recognized as one of the leading governmental IT organizations in the United States, delivering innovative information technology and communication solutions to serve our employees, citizens and business partners.



Palm Beach County ranked #1 Digital County in 2011

The Center for Digital Government and the National Association of Counties (NACo) has awarded Palm Beach County top rankings as a "Digital County." The County was rated nationally #3, #1, and #3 among all large counties in the U.S. in 2010, 2011 and 2012, respectively.

#### **B. ISS Mission Statement**

Our mission is to manage the County's technology resources and provide services to improve employee productivity, enable public access, and support the objectives of County departments and agencies.

# C. Guiding Principles

The following business principles reflect the values and beliefs that ISS strives to uphold in performing its duties.

- Ensure customer satisfaction.
- Streamline business processes to improve work efficiencies.
- Deliver quality services at a reasonable cost.
- Be a learning organization that takes lessons from mistakes and continually improves.
- Build in transparency and accountability in the performance of our work.
- Maintain confidentiality of sensitive information.
- Be flexible in responding to customer's needs.
- Maintain a highly qualified staff through mentoring, training, and internal QA processes.
- Facilitate the sharing and mobility of talented personnel.
- Maintain an environment that maximizes intellectual productivity.
- Fully comply with County policies and industry best practices.

# D. Goals

The County's IT capabilities must be flexible, scalable, secure, and environmentally sustainable with the ability to respond to new goals, dynamically changing services and operational requirements by agencies in the public. Major priorities include M-Government, Palm Beach County cloud and shared services, continued



business process improvements, self-service, and cyber security.

To that end, we continue to improve project execution, oversight, and operational support as foundation components. We are also pursuing other IT consolidation opportunities within the County to reduce costs and improve service delivery. It is vital that we maintain standards and practices enabling a high-performance workforce and workplace. Therefore, we are working with the County management team to establish a performance measurement system. We also plan to reestablish an IT Steering Committee consisting of department director level and above positions.

We continue to invest in next-generation technologies and promote a culture of innovation in ISS and throughout the County government. We will expand the County's open access broadband network to economically disadvantaged families in qualified neighborhoods as well as the public sector community, including government, education, health care and non-profit organizations.

As part of our application modernization initiatives, we plan to rewrite our legacy applications to take advantage of mobile computing power and other modern platforms. We will implement a new unified communications system which includes the replacement of 10,000 analog handsets with VoIP as well as the integration of email, voice, video and related technologies. To ensure government and citizen data is protected and the business of government never stops, we will continue to enhance our enterprise security model that coordinates all planning, oversight, and response activities through a single program. Finally, in order to improve, enhance, and provide for future needs of Palm Beach County's communication and computing infrastructure, the ISS Enterprise Data Center will be relocated to the Vista Center.

To summarize, ISS is committed to carrying out our responsibilities in a manner that emphasizes transparency, accountability, accessibility, quality, teamwork, and customer satisfaction. It is important that ISS continue to work with County agencies to improve business operations by thoroughly understanding business needs and by planning, implementing and managing the best information technology solutions available.

Our ultimate goal is to provide citizens, the business community, and County employees with timely, convenient access to public information and services through the use of technology.

### II. Governance Committees

In accordance with the 2004 IT Strategic Plan, two governance committees were established: a Technology Policy Advisory Committee (TPAC) consisting of management-level representatives; and a Technical Architecture Committee (TAC) consisting of IT managers. Both of these committees have since disbanded.

# A. Technology Policy Advisory Committee

The TAC was established to assist in the formulation of plans, policies, standards and goals relating to Palm Beach County's IT resources. As such, the TPAC constituted an advisory body focusing on the strategic directions for countywide information technology. TPAC membership consisted of executive level employees (department directors and above) from agencies which maintained separate staff of IT professionals as well as agencies having countywide administrative responsibilities.

After several years, of existence, it was evident that interest in the TPAC was waning with some meetings barely obtaining or even lacking a quorum of the members. Accordingly, the final meeting was held in April 2007.

# **B.** Technical Architecture Committee

The County's Technical Architecture Committee (TAC) was sponsored by ISS and began meeting in 2005. This group was formed to discuss technology plans, resolve issues, and recommend improvements to information technology (IT) plans, policies and standards. Membership was



open to all of the technical support staff from the County's agencies and departments, and meetings were held every other month.

Examples of the projects and issues which were presented to and discussed by the TAC include:

- Crystal reporting tool upgrade;
- SharePoint upgrades;
- Expansion of the network infrastructure;
- Modifications in use of email graphics to save on storage costs;
- Upgrades to "Secure Identity Management" (SIM);
- Improvements in storage management architecture;
- Security issues with multi-function printers/copiers/scanners;
- Strategies for managing aging desktops; and
- Implementation planning for Windows 7

With the decision to consolidate seven of the selfmanaged IT organizations into ISS, most of the TAC participants became employees of ISS. This unification of staff resources served the original intent of the committee in fostering communication and collaboration.

# C. Proposed Successor Committee(s)

ISS recommends reestablishing a formal IT governance structure for County government in the form a "CIO Council" consisting of the top level managers from the respective independent (selfmanaged) IT organizations: ISS, Airports, Fire-Rescue, Library, Water Utilities, and the 8 Constitutional Offices.

This group would meet quarterly for the purpose of sharing information about IT projects, services and other areas of common interest.

#### **Action Items**

• Draft bylaws for the proposed CIO Council and determine interests of self-managed IT organizations in participating in such a group.

# The Domains of IT Governance<sup>4</sup>



# **III. Governance Policies**

IT Governance Policies prepared by the then extant Technology Policy Advisory Committee (TPAC) were formally adopted September 1, 2005 per Countywide Policy and Procedure Memorandum # CW-O-079 – "Information Technology Governance Policies." These policies were adopted for the purposes of delineating responsibility and accountability for IT services and projects, controlling expenditures to reduce costs, eliminate duplication, assure compatibility, and provide a high level of oversight for IT planning and spending.

Policies were established for the following 15 specific areas of IT responsibilities.

- 1. Enterprise Policies
- 2. IT Resource Manager
- 3. Cost Recovery of ISS Services
- 4. IT Advisory Committees
- 5. Enterprise Technical Standards
- 6. Security
- 7. Electronic Records Management
- 8. Software Programming
- 9. Oracle Database Administration
- 10. Software Marketing
- 11. GIS Service Bureau and Countywide GIS
- 12. Centralized Network Services

<sup>&</sup>lt;sup>4</sup> IT Governance Institute, *Board Briefing on IT Governance, 2nd Addition*, 2003



- 13. Directory Services Management
- 14. PBC Internet Content Management
- 15. Extension of Network Services to Non-County Organizations

### **Action Items**

 Update IT governance policies to reflect various changes that have occurred since the original adoption of PPM # CW-O-079 in 2005, and expand to address additional identified areas.

# SECTION 6 – ISS Internal Management Systems

Our managers and employees are directly accountable for the availability of systems and the quality of services. Best management practices and a well organized staff must be applied to assure reliable, secure and effective technology programs.

Various management processes are in place within ISS to assure that work assignments, progress, and outcomes are systematically documented. For many years, ISS has used specialized applications to record time worked, problem tickets, and customer service requests. Other internal management processes include preparation of monthly invoices, tracking performance measures, and various management reports. Each of these processes is briefly described below.

# I. Remedy System – Problem Calls

All problems reported by users to the ISS Help Desk or ISS employees are recorded in the Remedy Service Desk System. Remedy is a commercial software product for incident and problem management used by numerous medium and large-size organizations. Remedy automates key service desk processes, including recording and date/time stamping of initial intake calls, classification of service calls by type, dispatching calls to appropriate service areas, work log for technician's comments, and incident resolution (closure) date. Information Technology Strategic Plan: 2014 - 2016 Palm Beach County Information Systems Services

Management reports can be produced to show service problems opened, in process, and closed, by category and department. Tracking key dates and times associated with the Remedy ticket enables ISS to report performance statistics based on specific and average time to resolve problems.

### II. Project Tracking System – Work Orders

Whereas the Remedy System is used to record and track ISS responses to problems reported by customers, our Project Tracking System (PTS) is used to track assignments for *planned* work or services requested by customers. These work assignments were previously known as "Customer Service Requests" (or CSRs) when ISS used an older mainframe-based application to track and report CSRs. Since 2009 when the new PTS system replaced the legacy CSR system, each of these planned units of work is referenced as a "PTS."

A "project" can take the form of a routine work order (e.g., install desktop and printer) requiring a relatively short period of time to complete, a midsized project that involves a more extensive scope and a greater commitment of time, or a major project which involves substantial commitments of time and resources. The PTS system is designed to capture project staff resources applied (hours) and a description of work planned and performed (narrative fields). The PTS system provides a description of the project scope, identification of the assigned staff resources, estimate of time (staff hours), dates to complete the project, and listing of project activities (or detailed project plan for major projects). The PTS also facilitates monthly status reporting for selected projects.

# III. Circuit Management Database

Originally deployed in the fall of 2013, ISS developed a comprehensive Circuit Management Database (CMDB) application, otherwise known as the Circuit Vault. The CMDB is used as the centralized management point for all Voice and Data circuits and services either leased or internally installed by Palm Beach County (PBC).



The primary objectives of the Circuit Vault are as follows:

- Streamline the management of circuit information across several applications by sharing or synchronizing circuit data from the CMDB application, and reducing management touch points of circuit data. Data will be synchronized to other internal ISS applications (PTS-VS, Remedy and SAI) from the CMDB using different methods.
- Create a standalone CMDB application that will allow all Network Administration Services (NAS) personal to manage all data and voice-related circuits using standard processes and procedures. This will eliminate the need for standalone Access and FoxPro databases or spreadsheets, currently being used in the ISS Network Services Division to maintain the data.
- Collect, merge and import circuit data from several sources into a single repository.
- Integrate Secure Identity Management (SIM) user data with circuit assignment data, where applicable, to leverage identity events, such as phone assignments to new users, transfers between PBC agencies, and deactivations as they take place in SIM.
- Integrate location data with GIS addresses and MyGeoNav so that all locations have valid addresses. This allows technicians to quickly see where the circuits are located on a map of Palm Beach County.
- Include an Ordering module to communicate installation, change and disconnect requests to service providers so that NAS personal can manage all circuits throughout the entire life-cycle.

- Include billing audit processes to confirm disconnected circuit and service orders are removed from our bill.
- Produce a monthly report of all circuit activity, including call details, to replace the functionality currently provided through the SAI Call Management System.

The primary modules developed in Phase I of the CMDB, for purposes of addressing the above objectives, include the following:

- Circuit Search and Edit
- Ordering
- Data Metrics Dashboard
- Data Quality Dashboard
- MyGeoNav Integration
- SIM Connection to Identity Vault
- Integration with PTS, Remedy and SAI
- Auditing

The CMDB application represents a centralized management interface for adding, modifying and deleting circuits from numerous service providers including internal service workgroups. Data from this application is integrated with other systems using various interface technologies such that these integrated systems consume the data as depicted in the following the diagram.



Once Phase II is completed, the project team will determine if they can further consolidate circuit billing applications into CMDB. Specifically, the goal of Phase III is to integrate SAI's Call Management System (CMS) functionality into



CMDB eliminating the need to support the CMS application. This would allow PBC employee's to access call data reports directly from the CMDB using standard SIM User IDs and passwords. Detailed planning and analysis will be needed to determine the feasibility of this objective, before committing resources for development.

# Action Items

- <u>Phase II Objectives for Circuit Management</u>
   <u>Database (CMDB) application</u>:
  - Billing Import AT&T Landline April 2014
  - Billing Import Mobility May 2014
  - Billing MTM Reports 2<sup>nd</sup> QTR 2014
  - Wire Map Support 2<sup>nd</sup> QTR 2014
  - E911 Support 3<sup>rd</sup> QTR 2014
  - Dial Plan 3<sup>rd</sup> QTR 2014
  - Cost Allocation Plan 3<sup>rd</sup> QTR 2014
- Planned Projects for Phase III Functionality for <u>CMDB application</u>:
  - SAI Call Accounting Replacement 2015
- Future Design Elements for CMDB application:
  - Increased mobile device support for, tablets, and notebooks.
  - Improving and streamlining functions as necessary.

# IV. Management Reporting Capabilities

A variety of management reports are available from the above referenced systems. These reports can be made available to management and customers on a monthly, weekly, daily, or real-time basis.

# Action Items

- Train and direct line managers to undertake a more active review of the Remedy and PTS reports to identify variances and initiate corrective action when necessary.
- Assure the reporting databases contain current and accurate data; otherwise the value of the reports is greatly diminished.

- Reinstate the Project Management Office requirements for 1) Project Initiation Statements and 2) Monthly Status Reports for Selected "Dashboard" projects. <u>http://www.pbcgov.com/iss/pdf/ISS-PPM-Project-Mgmt-03-08.pdf</u>
- Initiate a project to review previous and present reporting practices with the goal of improving the quality of information presented.

# V. Performance Measures

Another example of ISS' management processes includes various statistical indicators established to track volume and performance measures associated with calls handled by the ISS Network Operations Center ("Help Desk"). These reports include volumes and types of service calls for each agency, % calls answered, average answer delay, average resolution times, etc. The full complement of performance metrics and operating statistics tracked by ISS is presented under *TAB 9*.

# VI. Hourly Time-keeping for ISS Employees

Time worked or leave taken is recorded daily in whole and fractional hours by ISS employees. An in-house application – Time Entry Application (known as the "TEA" System) is used by employees to enter their time worked each day. The TEA application provides drop down menus for categories of time worked or leave time taken. Work associated with a specific service problem or project is cross-referenced to the assigned Remedy Ticket or PTS number. The TEA application also has space for free-form comments to provide additional information. TEA is integrated with the County's HRIS System and Leave Accounting System.

# VII. Monthly Invoices for Customers

ISS prepares invoices each month showing the categories of services provided and the amounts billed. Application Services work (software programming) is billed at the rate of \$75 per hour. Costs for all other categories of work are determined and allocated through the ISS Cost



Allocation Plan. Charges are allocated monthly based on  $1/12^{th}$  of the total annual amount.

# VIII. ISS Cost Allocation Plan

For more than 30 years, ISS (and its predecessor organization AIM) has charged customer agencies for services provided. Prior practice entailed charging <u>all</u> units of government, including general government departments, for ISS service costs. This required that each agency budget for ISS Professional Services (programming) costs and ISS Enterprise (infrastructure-related) costs.

Beginning in FY 2007, ISS was reclassified as a component of the General Fund rather than an Internal Service Fund. With this change in fund classification, ISS discontinued charging the General Fund departments and agencies for any services provided by ISS. Although we continue to calculate each individual agency's pro-rata share of ISS Professional Services costs and Enterprise cost, General Fund agencies are not required to reflect these costs in their budget.

ISS continues to charge all non-general government departments and programs for their allocated share of ISS service costs so that these programs are not subsidized by countywide taxpayers. This requires the use of a Cost Allocation Plan model to programmatically account for service costs, and distribute these costs to all user agencies based on relevant allocation statistics which are updated each year based on measures of usage or service demand. In 2006, ISS contracted with an outside consulting company, MAXIMUS to assist in revamping the ISS Cost Allocation Plan. MAXIMUS has designed and assisted with implementing rate and cost plans for hundreds of local and state, governments. Their plan methodology fully complies with the requirements of OMB Circular A-87, titled "Cost Principles for State, Local and Indian Tribal Governments."

The prior ISS Cost Plan had been in place since 1997 when ISS was a mainframe-centric organization. The updated cost plan, which was introduced in FY 2007, expanded the number of cost pools from six (6) to thirty-three (33). The changes were introduced to more equitably allocate the costs of shared services among the user agencies.

The 33 cost centers in which ISS costs are tracked and allocated can be fully reconciled to the ISS operating budget. Capital IT costs are fully borne by the Board of County Commissioners and are *not* allocated as part of the ISS Cost Allocation Plan.

The Cost Plan covers a wide-range of ISS services and programs, including data network, telephones, help desk, desktop and server support, software licenses, printing, project management, etc. FTE positions are allocated either wholly or fractionally to specific cost centers. Non-personnel operating costs are assigned to specific cost centers based on the nature of these costs with some costs associated entirely with a single program and are other operating costs benefitting multiple or all cost centers. These non-personnel costs are accordingly either assigned 100% to a specific cost pool or allocated to multiple cost pools.

When all direct and indirect costs associated with a particular cost pool are determined, the total costs comprising the cost pool are allocated across all agencies based on the relevant allocation statistic (e.g., # of connected network devices, # of license seats, # of desktops supported, # of telephone handsets, # of positions, etc.). Each year's plan update involves determining the budgeted program costs and adjusting the various usage/volume/ headcount statistics. All of the plan assumptions and calculations are documented in a detailed cost plan model that is available for review by any agency upon request.

# SECTION 7 – Enterprise IT Systems

# I. Human Resources Information System (HRIS)

In 2008, ISS and Human Resources implemented the initial components of what was to become the Human Resources Information System (HRIS).



HRIS was developed in-house following preparation of a detailed Information Strategic Plan for Human Resources which identified business requirements for:

- Recruitment and Selection
- Testing and Assessment
- Records and Information
- Classification & Pay
- Employee Relations
- Diversity & Development
- Department Management & Administration

The impetus behind this ambitious project was to transition off the mainframe system under which the users were unable to query or access information, and the system provided limited reporting capabilities. Data had to be entered more than once and rates and time periods required manual calculation. More than 25,000 paper records were processed annually, either by typewriter or handwritten, and departments maintained multiple "satellite systems" for niche functionalities.

Core modules of the HRIS system are in place and have streamlined and simplified the work processes associated with the following functional areas: Common Module; Employee Self-Service; Compensation & Records; Recruitment; Time & Attendance; Fair Employment; and Employee Relations. Each of these major modules provides a wide array of functionality. For example, the Compensation and Records module encompasses Position Control, Across-the-Board Raises, Personnel Actions, Workers' Compensation, Job Specification, Org Structure Control, Vacation Donation, State & Federal Reports, New Hires, Pay Grades, FRS Benefits Tracking, and Long-term Disability.

HRIS is a web-based system which runs on the County private network and is customized based on the County's business rules. HRIS employs role-based security for access privileges and is integrated with Outlook for in-box routing and notification for electronic approvals. Further it is integrated with the Clerk's Payroll System, TimeServer and various departmental time systems. HRIS is intuitive, has user friendly interfaces and offers extensive reporting capabilities.

At the beginning of 2014, the following HRISrelated projects were underway:

- Time Entry Application (TEA) Roll-out
- Family Medical Leave Act (FMLA) Module
- TimeServer Replacement
- Recruitment Testing & Evaluation

The TEA application provides a standard online template form which displays time worked, leave, OT/Comp Time, and extra pay on a single dashboard. TEA pre-populates work hours based on work schedule and automatically adjusts work hours based on leave taken. All leave requests and weekly submittals of time worked are routed online via Outlook for inbox notification and electronic approvals. TEA is also integrated with another ISS-developed system – "Project Tracking System (PTS)" for those agencies that track staff time against work orders or projects.

# Action Items

- <u>Complete all Active HRIS-related Projects</u>
  - ADA Routing June 2014
  - TimeServer Replacement June 2014
  - Complete Testing & Recruitment June 2014
  - TEA Roll-out October 2014
  - FMLA Module October 2014
- Planned HRIS-related Projects for Future

# **Functionality**

- W4 and W2 Forms September 2014
- Direct Deposit September 2014
- Travel Voucher October 2014
- Certification Tracking April 2015
- Employment Eligibility April 2015
- Safety Sensitive Training June 2015
- Disciplinary Action October 2015
- Reclassification Request June 2016
- Future HRIS-related Design Elements
  - Increased mobility for smartphones, tablets



More integration with social networking tools

### II. Advantage Financial System

CGI's **Advantage Financial System** was implemented in October 2003 to replace the previous mainframe-based financial system (LFGS) used by Board departments.

Advantage is a web-based financial system which includes modules for Financial Management (general ledger), Budgeting, Procurement, and Fixed Assets. An additional module for Vendor Self-Service (VSS) was acquired as part of the original 2002 contract but Palm Beach County, along with numerous other CGI Advantage customers, elected to delay implementation of the Vendor Self-Service module until the most recent version of the software became available. Earlier versions were known to be problematic.

The first phase of VSS – Online Vendor **Registration**, was not implemented until May 2013 <u>http://www.pbcgov.com/purchasing/vendor\_resources/registration.htm</u>. This module enables vendors to register and maintain their account information (e.g., User, Address, Contact, E-mail, Commodity and Business information) via the Internet. It also includes inquiry access for the vendors regarding their invoice and payment information. The second phase – **Online Solicitation**, is designed to open up product and service offerings nationally via the Internet by allowing vendors to submit online responses to bids and solicitations. The Online Solicitation application is ready for implementation but is on-hold pending County Administration's approval. This phase of VSS will establish a website for vendors to register and maintain vendor profiles, search for business opportunities, electronically submit bid responses, and review current and past commodity history. It will also allow vendors to submit questions on-line, review questions submitted by other vendors, and review responses from the buyer. As part of the IT strategic planning process, ISS

solicited the input of the Financial System Administrative Team (FSAT) to identify and prioritize enhancements to the Advantage Financial System. The FSAT team is facilitated by the Clerk's Office with members from ISS, OFMB, Purchasing, Parks & Recreation, Community Services, Engineering, Airports, FDO and Water Utilities. FSAT recommendations are included in the Action Items below.

#### Action Items

- Upgrade Advantage System to 3.10.1 version (May, 2015)
- Implement VSS Phase 2 (July 2015)
- Advantage System Enhancements Prioritized by FSAT Team:
  - Archiving of Advantage data.
     Possibly use InfoAdvantage for the data warehouse; however, the cost could be significant and there is an ongoing cost. If these estimates are too high, a decision may be made for ISS to develop the data warehouse with the assistance of contractors who specialize in this area of expertise. CGI will need to be involved in establishing an archiving plan for our site.

A corollary recommendation is to implement InfoAdvantage to simplify reporting and access to the Dashboard (online viewing of reports).

- Online real time validation of Tax Payer Identification number (TIN) whenever transaction processing requires entry of TIN. This will ensure that accurate information is recording in the financial system and will help prevent IRS fines and penalties.
- "Punch Out" procurement feature in Advantage. This feature will allow the user to access the vendor "punch out" site directly through Advantage where they can add items to their cart, close the vendor site whereupon the cart items are forwarded to PeopleSoft and a requisition is automatically created. This functionality is currently available in Advantage so there is potentially no associated cost other than staff time.



 Vendor provided web service capability within the Advantage Financial system. This capability will allow. 3<sup>rd</sup> party systems to communicate with Advantage directly (e.g., Maximo system used by Water Utilities).

A related enhancement would be to integrate Advantage with WebEOC recognizing that this item on its own would be a low priority because of the infrequent activation of the WebEOC system.

 Streamline process for entering requisitions, purchase orders, and receivers in Advantage, including use of workflow for approval processing.
 A February 2014 meeting of the Financial Leaders' Group confirmed interest in implementing existing functionality in

Advantage for electronic entry and processing of purchase requisitions. It is unknown whether customizations to the Advantage package will be necessary to meet the County's needs.

- Associate order type with a particular procurement type based upon Document code.

- Add "*Invoice Pending*" box that could be checked when an invoice has been received, but no receiver is in place. When the box is checked, a message would be sent to the Issuer ID notifying them that the vendor has submitted an invoice for payment.
- Add "Go to Line" feature on the INSRCH page. Currently, when we have PO's with multiple lines we can only click "next" (print screen attached).
- Add the option to see only ten lines at a time or check a box and display all lines on one screen (print screen attached).

CGI will be requested to provide cost estimates for each of the above enhancements.

# **III. Broadband Network**

Beginning in the early 1990's, Palm Beach County began building a private fiber optic network to serve County government operations. The network initially consisted of connections between the main courthouse and the County's Governmental Center in the downtown campus. This first stage has grown to encompass 12 major sites, 378 separate facilities, and more than 10,000 nodes. The County's network extends from Tequesta in the north to Boca Raton in the south to Belle Glade in the west. Although many locations are connected directly to the fiber, many facilities are linked to the backbone network through leased AT&T circuits.

Palm Beach County's wide area network is the largest local government network in the State of Florida. It is a mission critical resource of County government which is relied upon daily to transport data, voice and video content. ISS maintains fulltime in-house network engineers and technicians who are responsible for the planning, building, maintaining, and continuous operation of the network.

The criticality of network uptime cannot be overstated. If the network is down and systems are unavailable, numerous County employees would be unable to perform their work tasks and their program's continuing ability to operate would be severely limited, if not halted altogether.

# A. Riding the Florida LambdaRail

Palm Beach County was the first county in Florida to connect directly to the Florida LambdaRail (FLR). Twelve state universities throughout Florida have joined together to create a non-profit organization (Florida LambdaRail, Inc.) which manages a 1,540 mile fiber network that traverses the entire state of Florida.

The FLR mission is to provide a fiber optic backbone for research, education, and economic development. In 2008, the FLR voted to allow Palm Beach County to join as an 'affiliate member.' By becoming a member and 'plugging in' to this



high bandwidth network, Palm Beach County is able to acquire incredibly fast Internet service at a dramatically lower cost than is available from any commercial carrier. Our agreement with the FLR also designates Palm Beach County ISS as an aggregator of FLR services with rights to resell connectivity to other units of local government.

As a reseller of FLR network services, ISS has become an Internet Service Provider (ISP) for numerous other units of local government, education, and non-profits. The County's role as a service provider is formalized under service agreements with each agency based on an approved rate plan. These service agreements generate more than \$450,000 annually in revenues to Palm Beach County.

A further benefit from our connection to the FLR is access to the Northwest Regional Data Center (NWRDC), a major disaster recovery site adjacent to the Florida State University campus in Tallahassee. In 2009, Palm Beach County entered into an agreement for server rack space in the NWRDC which enables ISS, the Clerk & Comptroller's Office and the School District to backup selected data at a significant savings over utilizing a commercial facility. The Clerk's Office, in particular, relies upon this facility for their disaster recovery program.

#### B. Advent of a Shared Services Model

Palm Beach County's fiber optic network was originally built and dedicated exclusively for the use of County government departments and agencies under the Board of County Commissioners and the separately elected constitutional officers (e.g., Clerk of Court, Tax Collector, Property Appraiser, Judiciary, etc.). In 2005, Palm Beach County began exploring opportunities to connect other public sector agencies to the County's fiber network. This initiative began with the School Board and has expanded to include other educational institutions, municipalities, countywide taxing districts, and non-profit organizations. These public sector organizations receive much greater network

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bandwidth for Internet access and other applications at a substantially reduced cost. This arrangement benefits all parties, especially the taxpayers, as it enables the sharing of costs and capabilities of the County's existing network in lieu of paying a commercial carrier for these services. All public sector agencies currently receiving ISS services are listed in Section 10.V.C.

Ironically, despite our numerous agreements with external agencies, including cities with law enforcement functions, the Palm Beach Sheriff's Office has historically used the services of a private telecommunications service provider rather than using the County's private network. Their decision to lease a separate network infrastructure is based on "security concerns." ISS has long maintained that a separate network domain can be created for the PBSO with all PBSO data encrypted from end point to end point.

In March 2014, ISS and the PBSO entered into a "Management Control Agreement" which approved ISS as a "non-criminal justice agency service provider" for the LEX program (Section 10.V.C.). This was necessary to comply with the FBI CJIS security standards for ISS' role in maintaining the LEX System (and presents another opportunity for the Sheriff to begin using the County network.

# Action Items

 Based on recently approved Management Control Agreement, revisit the prior proposal for the Sheriff's Office to join the County's network rather than leasing network circuits from a private service provider.

# C. Telecommunications Expense Management

Telecommunications expenses are second only to employee salaries in terms of operating budget costs for ISS. At the peak period in 2006, payments to AT&T for leased voice and data circuits approximated \$1 million monthly. Through a concerted effort to better manage telecom costs, peak monthly expenses have been reduced by



almost 40%, even though the number of facilities connected to the network has expanded.

Our telecom expense management program has included the following elements:

- Continued build-out of the County's fiber optic network to sites previously connected through leased circuits.
- Initiated a self-audit project to identify opportunities to reduce telecommunications costs with special focus on confirming leased circuits from AT&T. This project led to numerous disconnect orders.
- A 3<sup>rd</sup> party telecom auditing firm was contracted to verify the accuracy of telecom billings for leased circuits. The audit verified the carrier's transport billing and identified a number of services not in use resulting in significant cost reduction.
- Lower rates were negotiated in the renewal of the Master Services Agreement with AT&T.
- Frame relay circuits are being converted to metropolitan ethernet service.
- Utilization of wireless networks in some locations where the technology lends itself and fiber connectivity is not cost effective.

Further permanent cost savings will occur when the legacy phone system is replaced by a VoIP system over the next 2 to 3 years. Network expenses have also been offset by revenues received from network service agreements with external agencies.

# D. Emerging Enterprise Network Applications

With more than \$70 million invested in the County's network infrastructure, ISS is continually looking for ways to leverage this resource. Some of the emerging network applications that are relevant to our 2014-2016 are listed below.

Application	Typical Uses/ Examples	Business Rationale
Telepresence	Video     Conferencing	<ul> <li>Reduced travel costs</li> <li>Less energy usage</li> <li>Smaller carbon footprint</li> <li>Increased staff productivity</li> </ul>
Video Broadcasting and e- learning	<ul><li>Marketing</li><li>Training</li></ul>	<ul> <li>Increased worker competency</li> <li>Reduced training- related costs</li> <li>Deployment of PBC YouTube channel</li> </ul>
Video Enriched Collaboration	<ul> <li>Video Chat</li> <li>Inter- departmental Collaboration</li> </ul>	<ul> <li>Better management of virtual teams</li> <li>Improved business process execution</li> <li>Enhanced team communications</li> <li>Increased business use of social media</li> </ul>
Smart Objects	<ul> <li>Machine-to- machine communications</li> <li>"Internet of Things"</li> <li>Vehicle and Equipment Tracking</li> </ul>	<ul> <li>Maturing RFID applications</li> <li>Decreasing costs of sensors, actuators and modems</li> <li>Better equipment monitoring and troubleshooting</li> <li>Migration to IP V6</li> </ul>
Cloud Computing	Anytime, Anywhere Access to Applications, Services and Data Storage	<ul> <li>Increasing variety of cloud-based services and on-demand solutions</li> <li>Reduced on-premise network costs</li> <li>Enhanced support for mobility</li> <li>Increased agility and flevibility</li> </ul>

# Action Items

- Complete replacement of obsolete frame relay circuits with metro Ethernet circuits.
- Initiate study to determine whether the County should adopt an "Open Access Network" model and register as a CLEC (certified local exchange carrier) to permit the leasing of wholesale bandwidth to retail service providers.
- Upgrade network core from 10 Gbps to 100 Gbps.
- Redesign SmartRing for potential migration to AT&T switched Ethernet.



- Migrate from AT&T Metro Ethernet to AT&T Switched Ethernet service.
- Design network transport within new ISS Data Center.
- Migrate perimeter security to next generation firewall technology including intelligent packet Analysis.
- Complete the necessary infrastructure upgrades to support enterprise VoIP deployment.

# E. Shared Use of FDOT's Intelligent Transportation System (ITS) Network

Through the years, Palm Beach County has been very successful in securing the Florida Department of Transportation's (FDOT) approval for constructing an extensive fiber optic network which now spans more than 400 linear miles of cable. The *Intelligent Transportation System Network (ITS)* is used to operate traffic control signals, roadway cameras and informational signage along major thoroughfare roads in Palm Beach County.

The ITS network has been built with state and federal transportation grants, and its use is currently restricted to <u>transportation-related</u> purposes only.

For years, ISS has attempted to persuade the FDOT and the Federal Highway Authority (FHWA) to change their policies to allow for the shared used of ITS network facilities where unused capacity exists. More recently, the lead role in this effort has been assumed by Martin County with Palm Beach County playing a supporting role.

During February 2014, Martin and Palm Beach Counties jointly prepared a draft "FDOT-County Fiber Use Agreement." This draft document was reviewed by the respective staffs for legal clarification re: the FDOT's ability to share its assets under state statutes that were written many years ago.

A prototype agreement for designating a portion of the FDOT ITS network for shared use by local governments has been drafted and presented to the FDOT. This agreement would allow qualifying agencies to utilize a portion of the unused bandwidth capacity on the ITS network for <u>non-</u> <u>transportation uses</u>. This initial agreement requests permission to utilize a portion of the ITS network that traverses I-95 from Martin County to Dade County.

The draft agreement incorporates the following points:

- Shared service agreements will be long-term in nature (e.g., 10 years);
- The local government will incur all costs associated with splicing the user's fibers to the FDOT fibers.
- The local government will <u>not</u> incur a monthly charge for shared use of the ITS network.
- Sets forth a review process to assess available network capacity on a case-by-case basis (individual requests).
- Includes a "Replacement Guarantee" that assures the local government will either vacate the ITS network or restore an equivalent of the used bandwidth upon due notice by the FDOT that they wish to reclaim the shared bandwidth.

This represents a significant breakthrough from our past discussions with FDOT when their representatives summarily rejected the concept of shared network use. If we are successful with an initial prototype shared use agreement, this could become a model for other local governments in Florida.

Predictably, this effort has been challenged by the Florida Cable Telecommunications Association (FCTA), a lobbying organization supported by the cable television and telecommunications industry. In an October 2013 letter to the FDOT Secretary, the FCTA questioned the legality of a shared use agreement enabling county governments to access and use the FDOT fiber. Martin County and Palm Beach County jointly contracted for outside legal


services to assist in responding to the legal issues in the FCTA letter and the matter is now awaiting further consideration by FDOT officials.

Network capacity of the ITS network in Palm Beach County is substantially underutilized and a shared services agreement would be beneficial for Palm Beach County government and other local governments throughout the state who presently lease network bandwidth from private telecommunications companies.

#### **Action Items**

 Continue to coordinate efforts with Martin County to finalize a legally acceptable agreement for shared use of the FDOT's ITS network facilities by county governments.

#### IV. Voice Services

The Voice Services Section is organized under the ISS Network Services Division, and is responsible for monitoring, maintaining and coordinating the County's landline and wireless telecommunications needs. Voice Services has assigned departmental liaisons for all telecommunications services. The Section also manages contractual agreements with the various telecom service providers.

Telephone service is currently provided through 80 separate Private Branch Exchanges (PBX) which collectively host some 10,000 handsets. Voice Services also supports numerous alarm systems, contact centers, call recording systems, 2,200 cellular devices which include cell phones, satellite phones, air cards, tablets, modems and MiFis. These devices are obtained through AT&T, Verizon and Sprint.

The Northern Telecom (Nortel) Meridian System serves the downtown West Palm Beach campus including the Governmental Center, main courthouse, and offices of the Public Defender and State Attorney. This system was installed more than 20 years ago when the main courthouse was constructed. A project is currently underway to replace all of the County's existing legacy telephone systems with a single voice over internet protocol (VoIP) system (reference Unified Communications project under Section 10.II.C.).

All customer requests for services are logged as either a problem ticket in the Remedy System, or as a work order in the Project Tracking System (PTS). A newly implemented Circuit Management Database is integrated with the PTS System to capture all additions, changes and deletions involving telephone circuits.

#### Action Items

- Develop plan to provide staff with necessary training to transition from support of traditional PBX telephone systems to VoIP technology.
- Complete reconciliation of data in new Circuit Management Database.
- Schedule and coordinate bi-annual self-audit of telephone stipend levels.
- Work with wireless telecom providers to identify low and no usage cell phones and air cards which can be disconnected or otherwise require justification for continued service.

#### V. Geographic Information Systems

Geographic Information Systems (GIS) have become integrated into the fabric of our society. Location is a critical piece of information in numerous modern applications and will be increasingly important in the future, especially in the government sector. Location is integral to applications involving land management, infrastructure development and maintenance for roads, utilities and parks, political boundaries, crime prevention, transportation, disaster and emergency response, environmental conservation, business development, community services, etc.

GIS programs can save costs, improve efficiency, increase transparency, enhance communication and help solve problems by providing for the visualization and analysis of diverse data sets.



Critical geographic thinking, understanding and reasoning are essential skills for this new society.

County GIS data layers, maps and images are accessible via *myGeoNav*, a geographic navigation tool developed in-house by ISS -

http://maps.co.palm-beach.fl.us/gis/mygeonav.aspx? myGeoNav is heavily used by County employees and the public. In addition to displaying the County's aerial photography, myGeoNav also contains Pictometry images and includes buttons which activate Google Maps and Bing Maps.



Another important feature is the integration of all property parcel information within the MyGeoNav system. Detailed property data, along with tools which can generate address lists for selected properties, measure distances, and annotate related information, have made MyGeoNav a mission-critical application for realtors doing business in Palm Beach County.

Palm Beach County is a national leader in GIS technology. We host a website for the County and partner agencies – "Palm Beach Countywide GIS Forum" http://gisforum.org/ as well as a Facebook page https://www.facebook.com/gisforum. The annual South Florida GIS Expo hosted in West Palm Beach is one of the largest GIS conferences in the southeastern U.S. The most recent GIS Expo in October 2013 was attended by more than 600 participants.

#### Important components of the GIS strategy are to:

- Promote and leverage the most efficient and cost-effective utilization of resources in order to effectively integrate GIS/Geospatial technologies within the County.
- Promote collaboration and innovation throughout the County including public, private and non-profit organizations.
- Sustain the GIS enterprise integration platform (data and technology) to ensure maximum system availability of the GIS components.
- Continue providing GIS solutions to meet customer-driven needs for solving complex social and environmental issues.
- Meet and/or exceed customer service level agreements by resolving problems before the customer is impacted.
- Develop a GIS/geospatial technology training and education program for County employees to better utilize GIS solutions.
- Train and educate GIS staff in the skill sets required to maintain the geospatial leadership status.
- Proactively redesign or replace out-dated applications to include web, mobile and other emerging technologies.

Palm Beach County has a growing inventory of GIS-enabled applications some of which are listed in the following table.

#### **GIS-Enabled Applications**

- My GeoNav
- Appraisal Data Search
- Homeless Survey
- Financially Assisted Agencies
- Damage Assessment
- BCC District Locator
- PBC Interactive (Economic Development)
- Land Development ePermits



- Traffic Performance Standards
- Litter Clean-up Sites
- Fire Station Information
- Sewer Lift Station Monitoring
- Address Maintenance
- ePZB (Planning, Zoning & Building)
- Property Appraiser Public Access (PAPA)
- PBC Evacuation Tool
- Water Hydrant Inventory
- Meter Reading Routes

GIS hosting is a new line of services offered by ISS to community collaboration partners with the first such agreement entered into with the Loxahatchee River Environmental Control District in November 2013.

Future GIS-enabled projects have been identified, including:

- GIS geospatial capabilities and support for the new E911 Next Generation System;
- ArcGIS Online for Business Continuity; and
- Knowledge Base in SharePoint which is text searchable for SOP's, troubleshooting, tips, extracts from Remedy, etc.

#### Action Items

- Promote services and capabilities of GIS Service Bureau, both within the County organization and among potential community collaboration partners in the government sector.
- Research GIS applications used by leading local governments and compile a list of potential applications for implementation in Palm Beach County.
- Expand deployment of mobile applications to IOS and Android operating systems.
- Convene a project planning retreat for the Countywide GIS Project Management Team to prepare a 3-year plan of projects and initiatives for presentation to and approval by the GIS Policy Advisory Committee.
- Initiate a directed marketing campaign to

promote adoption of the Damage Assessment application and Common Addressing Module by municipalities.

# VI. SharePoint 2013

Microsoft SharePoint is a powerful, multidimensional platform with a range of capabilities, including collaboration tools, portal function, document management, and business intelligence. Since ISS' initial deployment of a SharePoint environment in 2007, departments have slowly embraced SharePoint with 13 County departments now maintaining departmental SharePoint sites.

ISS is preparing to upgrade our SharePoint software version to SharePoint 2013 which will improve the users' experience with a Window 8 look and feel, a more powerful search engine, and templates for building mobile applications, integration with social network features, and better content management and collaboration tools.

#### Action Items

- Complete SharePoint 2013 upgrade.
- Develop and maintain an annual work plan of SharePoint projects.
- After adequate training and mentoring, dedicate additional staff resources to meet departmental demand for SharePoint services.

# VII. Business Continuity/Disaster Recovery Program

ISS maintains and periodically updates a formal disaster recovery plan to assure the continuation of critical applications in the event of a disaster impacting County operations. The "Palm Beach County ISS Business Continuity/Disaster Recovery Plan" is designed as a reference guide for preparing for and responding to a catastrophic event or unplanned business interruption. A catastrophic event is one that results in damage sufficient to cause a prolonged interruption in computer services. The DR/BR Plan outlines the general strategies and actions necessary to affect a timely recovery of business operations following



such an event. Recovery Procedures for each functional group are detailed in the plan along with specific staff assignments.

Prior to hurricane season each year, ISS functional managers review their responsibilities outlined in the Plan and update the plan content, as applicable, to reflect any changes since the prior publication of the Plan. This update process is completed by mid-May and the revised document is published by June 1<sup>st</sup>. Subsequent to the October 2012 transfer of IT responsibilities and staff from Public Safety to ISS, the DR/BR Plan has been expanded to address all operational support requirements for the Emergency Operations Center (EOC) including all special needs shelters.

The Public Safety Departments works with County agencies in preparing a Continuity of Operations Plan (COOP) for the purposes of protecting the assets, records, information, well being, and safety of employees, and to provide for the continuation of essential services to the agency/department and its program constituents. Contents of the individual COOP plans include employee contact listing, individual and unit level preparations, emergency conditions procedures and action plans, other disaster preparation and response steps, and alternative facilities and communications for continuing operations in the event of partial or total destruction of government buildings.

#### Action Items

- Initiate annual tests of the system failover capabilities between the Governmental Center and the Emergency Operations Center with documentation of problems/issues encountered and lessons learned.
- Update the ISS Disaster Recovery plan to include the additional emergency management responsibilities assumed by ISS due to the IT reorganization.
- Undertake review of Emergency Management's Disaster Recovery Manual to assure the ISS Business Continuity/Disaster Recovery Plan is complete in terms of requirements and

compatible with this document.

 Update the ISS Department's Continuity of Operations Plan (COOP) per the instructions prescribed by the Public Safety Department.

#### SECTION 8 – Department-Specific Programs

The 3-year planning horizon includes a full slate of application development and maintenance projects. This planned activity is summarized in *TAB 6* - "Active and Planned Software Development Projects: 2014-2016" which identifies:

- sponsoring Department or Agency (or *Enterprise*),
- name of the business application,
- Activity Type "New Development", "Enhancement", or "Technical Refresh;"
- Summary Description of Business Application; and
- Project Start and Finish (month/year).

As shown in TAB 8, numerous County agencies rely on ISS for building and maintaining their critical business applications. These agencies include: Planning, Zoning & Building, Water Utilities, Environmental Resources Management, Engineering, Human Resources, Office of Small Business Administration, Inspector General, Risk Management, and Property Appraiser.

#### Action Items

 Prioritize department-specific application development and maintenance projects based upon available and projected programming resources.

#### I. Planned "eFDO" System

During 2013, the Facilities Development and Operations (FDO) Department began developing a long-term strategy to replace their existing systems used for tracking facilities maintenance, energy



usage, county-owned real estate and artist registration.

FDO selected ISS to build a custom application and both departments have begun planning sessions to determine business requirements for the new business application which will replace the existing point products. This new system, dubbed "*eFDO*," will provide additional functionality in a web-based environment. A departmental database will be constructed to share common data and generate meaningful management information pertaining to the various programs administered by FDO.

The scope of the FDO Departmental Database will encompass:

- Property Management (parcels, projects, contracts) to track County-owned property/facilities throughout the life cycle with a single place to access inclusive property/facility "file."
- Utility Management to track County facilities' utility costs with ability to show "Green Building" impact and improvements and improved reporting, charge-back processing, and ties into maintenance and leasing of properties.
- Time management system to reduce redundant staff time entry.
- Asset Management for tracking asset assignments and locations.
- Pooled Vehicle Management to automate the tracking and maintenance of pool vehicles throughout the County; and automate the reservation, pick up and return tracking.
- Green House Gas Emissions Management to track green house gas emissions related to Fleet vehicles.
- FDO Portal to provide customers and employees a customized site for requesting and tracking service requests.

The assigned ISS customer liaison is serving as the Project Manager for the FDO Database project. In this capacity, she is working very closely with FDO's Director of Facilities Operations.

#### Action Items

- For eFDO Project:
  - Complete requirements gathering phase.
  - Establish preliminary project plan and budget.
  - Identify funding in current fiscal year (FY 2014) to begin project and request additional funding in FY 2015 budget cycle.
  - Assemble ISS Project Team and identify FDO subject matter experts who will closely work with ISS.

# SECTION 9 – Strategic Objectives and Initiatives

The essential purposes of the planning process were to gain insight into County government's computing requirements for the upcoming years to understand the impact on staff and infrastructure resources; and to identify opportunities for improving the business processes administered internally within ISS.

Based on extensive discussions with customers, input from ISS employees serving on planning focus groups, and research of industry trends and best practices, eight key Strategic Objectives were established. Our IT Strategic Plan also contains numerous projects and initiatives necessary to accomplish these objectives. *TAB 8* links ISS Projects and Initiatives with each of the following Strategic Objectives:

- Be Trusted Business Partners
- Anytime, Anywhere Access
- Essential and Secure IT Infrastructure
- Information Gateway/Citizen Engagement
- Government Cloud and Shared Services
- Fiscal Management of IT Resources
- High Performance Culture
- Collaboration with Community Partners



# A. Be Trusted Partners

Become trusted partners by meeting our commitments, improving the engagement processes, and ensuring the most effective use of our human and financial resources. Effectively communicate information about plans, projects, and achievements to County staff and customers.

# A. Faster Delivery of Customer Applications - Agile Development Methodology

For the majority of new application development projects, ISS uses the iterative or agile development methodology. This is an adaptive approach to development based on the philosophy that changes are inevitable. The focus is on a short delivery cycle, close collaboration, and high visibility. Projects are broken up into smaller pieces called "iterations" or "sprints". Working with smaller project segments can greatly minimize the risk of project failure, given there is much less to go wrong if the cost of an individual project is kept to a minimum. Projects follow an evolutionary development strategy that provides for incremental delivery of software products and/or subsystems.

#### **Iterative Development Cycle**



1. Project Iterations (Sprints)

Projects are divided into small time boxes know as iterations or sprints. An iteration usually spans one to two months and is usually complete with a delivery. Generally, the first iteration is used for preliminary scoping, plan, and initial design. Hands-on development is done in the subsequent iterations. After completion of one development iteration, demos can be shown and feedback collected. Any changes needed in the working software are implemented in subsequent iterations. Each sprint contains a list of user stories (requirements) taken from the product backlog.

#### 2. Agile Planning

The primary objective of agile planning is to define the scope of the iteration. On the basis of the current project and business situation, features are added or removed from the backlog. The highestpriority features are selected; there may also be a few lower-priority items if they suit the overall goal of the iteration. These features are then broken down into tasks.

The planning process is sequenced as follows:

- 1. Prioritize features;
- Feature break down into tasks and subtasks (work breakdown structure or WBS);
- 3. Task duration estimation;
- 4. Task cost estimation;
- 5. Adjustments; and
- 6. Summarized/revised cost and timeline estimate for each iteration.

#### 3. User Stories

Requirements are expressed as user stories. This is a quick way of representing requirements without delving into extensive detail. The stories are written in one or two sentences in a business language. Each feature of the application is represented as a user story. User stories have the following set of features:

- Feature descriptions from anyone on the team or any customer.
  - Team features are derived.
  - Customer features are usually primary.
  - Generally use a template to improve consistency of communication.
  - Have items that can be seen and tested in the review.
  - Are estimated in terms of hours or days and relative difficulty.
  - Are independent from other stories.



# 4. Story Points

User stories must be estimated, and estimation is done in story points. A story point is a number that tells how easy or difficult it is to implement a story. It represents the size of a user story relative to other stories.

# 5. Product Backlog

The product backlog is a prioritized list of user stories which are continuously updated based on changes in the requirements. Every item in the backlog is attached with a priority.

# 6. Release Backlog

The release backlog is derived from the product backlog. It is the list of features intended for each release of the product to the customer. It is a subset of the product backlog and it is usually populated with the highest priority elements demanded by the customer or may be selected based on technical dependencies – when technical issues must be addressed before the customer function can be delivered.

#### 7. Project Tracking and Adjustment

The project is planned and tracked using Microsoft Project. The project progress is tracked in iteration, and adjustments to the project schedule are made. As a project progresses, stakeholders get a better understanding by seeing the working software and their needs can be changed as necessary. In addition, changes in the business situation or changes in priority at the user department level are also factors behind these changes. The product log gets updated based on current needs, and subsequent iterations are replanned.

#### **Action Items**

- Evaluate the current Application Services development environment.
- Prepare an ISS departmental policy to document and standardize the application

development processes across all sections of Applications Services.

#### **B.** Innovative Customer Services

Customer service is the highest calling of the ISS organization. Service excellence starts with the simple things like promptly returning telephone calls and responding to emails, and extends to every facet of ISS programs. Every interaction with a customer leaves an impression – good, bad or indifferent.

#### 2. Customer Surveys

User calls to the Help Desk often result in the opening of a service ticket which is assigned to staff and tracked via the Remedy system. When the Remedy ticket is considered closed, the User receives an email notification which provides the option to rate the quality of ISS services and include comments. This customer feedback is recorded in SharePoint.

#### Action Items

 Conduct a customer satisfaction survey of all agencies and departments supported by ISS. The survey will encompass the major service areas – data network, voice services, application development, and desktop support.

#### 3. Employee Self Service

ISS will build additional self-service functions in the HRIS System which will enable staff and customers to resolve a majority of their common problems and complete many routine service requests without needing to contact the Help Desk.

#### 4. Service Request System (SRS)

SRS is designed as a single integrated system to replace the existing standalone systems for problems, changes, and work orders. The new system will provide a consistent look and feel, make it easier for customers and staff to request and track ISS services, and significantly improve performance reporting on the delivery ISS services.



# Action Items

• Establish a project plan, including timetable, for completing program coding, testing and implementing the SRS System.

# 5. Online Requisition System (ORS)

Replacing the existing paper forms with a routable electronic form will streamline the process for initiating purchase requests and obtaining approvals.

ISS is working jointly with the Parks & Recreation Department and the Clerk & Comptroller's Office to determine whether to "buy or build" an online requisition system.

#### Action Items

 Complete buy vs. build analysis for an Online Requisition System and proceed to either implement ADVANTAGE Financial System module or develop a prototype system with Parks & Recreation.

#### C. Project and Portfolio Management

Initial efforts to establish a project management office have yielded mixed results. Although departmental policies and procedures have been established and template forms designed, these are not consistently followed or utilized. Needed improvements have been identified to assure projects and services are completed on time and utilization of staff resources is adequately tracked.

#### Action Items

- Reassess project management processes with the goal of implementing best practices for:
  - Project Initiation
  - Requirements Gathering
  - Project Plan
  - Risks and Issues
  - Project Status Reporting
  - System Documentation

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#### D. ISS Training Program

ISS maintains a Training Program designed to provide our customers with the skills required to efficiently and competently utilize the various software products employed throughout the County. As automation is ever changing, so are the options available for training. The goal of the Training Program is to deliver quality training and support by providing various training delivery strategies for County standard business productivity applications, ISS-developed enterprise applications and ISS-developed specialized departmental applications.

The ISS Training Program utilizes a variety of training strategies depending on the goals and customer needs, including:

- Instructor-led classroom training;
- Lecture style presentation;
- One-on-one instruction; and
- Computer-based self-paced training.

Instructor-led classroom training is offered via our Training and Employee Development (TED) system where customers can search and register for upcoming training classes. Lecture style presentations are available in a classroom or personal office setting via automated video presentation. One-on-one instruction is offered when there is a need for personal attention within a specialized area or application feature. Computer-based self-paced training offers both step-by-step instruction and/or interactive videos that allow the customer to participate; they also allow the customer to repeat the training videos, as necessary.

Depending on the class offered, instructors could be County employees who are expert in the various application systems employed throughout the County, or outside training experts that have been contracted by the County. The Training Program also routinely explores opportunities to host relevant technical training sessions on-site in order to impart knowledge to a larger audience in a cost effective manner.



As the Training Program continues to grow, our support services are also expanding to meet our goal of quality training and support to customers. ISS is implementing a 3-tier support system for customers, which will range from support to the most basic to the more complicated questions or issues within the various software products employed throughout the County. The tiers are organizationally established in the following functions:

- ISS Help Desk
- ISS Desktop Support
- ISS Quality Assurance & Training

The ISS Help Desk (Network Operations Center) is the 1<sup>st</sup> tier for assistance, where Technicians are standing by 24x7 to assist customers. These technicians serve as the initial point of intake for every service call and are able to assist customers in locating the Training Program website and other useful training resources. The Technicians can also assign a Help Desk Ticket should Desktop Support be required.

Desktop Support is the 2<sup>nd</sup> tier for assistance, where Desktop Administrators are available to assist customers with general Office Suite product support or any technical issues, such as, installations, configurations and access to applications. Their realm of responsibilities includes desktop computers, laptop computers and printers.

If Desktop Support is unable to resolve the customer request, they can assign the Help Desk Ticket to the 3<sup>rd</sup> tier – Quality Assurance & Training, where experts are available to assist with the more complex details involving the various software products used by County agencies.

The ISS Training Program is located on the County's home page within the *Upcoming Events* list and on the ISS home page within the *Services* list. Our Training Program offers numerous training development materials to customers, including:

- Application Manuals and Data Files for Office Suite application exercises;
- Tutorials, both interactive and step-bystep training videos;
- How To's;
- FAQ's; and
- Links to other training resources.

The Training Program provides application manuals for County standard business productivity applications, ISS-developed enterprise applications and ISS-developed specialized departmental applications. Data files are also available for the Office Suite application exercises referenced within the student manuals, which allows the customer to experience a hands-on example of the application feature they are learning. Many computer-based Tutorials are available, both interactive and stepby-step, which allows self-paced training and the convenience of participating in the training session from their personal office.

As support questions or issues are reported, we are actively creating How To's and FAQ's to assist customers as well. These quick assist guides are developed in the form of question and answer lists, step-by-step instructions or short training videos. We also publish training links for customers, which include internal County Departments and external sites for other available training resources.

As our Training Program expands, it will remain consistent in offering a variety of ways to learn and develop the skills required to efficiently and competently utilize the various software products employed throughout the County; and provide a team of training specialist experts for end-user training as well as ongoing support services.

- Create Help Desk templates to assist Tier 1 Support.
- Schedule Desktop staff for MS Office Suite training to assist Tier 2 support.
- Create Specs and RFP for contractual instructorled MS Office Suite classes.
- Update Training Program Course Catalog.



- Improve Training Program presence by advertising regularly in Count-e-Line for upcoming classes, links to self-paced training materials and Tips & Tricks.
- Prepare program measurement and management reports for: list of classes offered; # of participants; # of no-shows; and average satisfaction rating on scale of 0-5.

#### II. Anytime, Anywhere Access

#### A. M-Government

Information technologies are constantly evolving into ever more powerful mobile devices that run highly specialized software on which County government depends to conduct its day-to-day business. ISS seeks to enable a mobile workforce for County government through wireless networks, devices and applications.

Staying abreast of the mobility trend requires new forms of interaction and the capability to transact business anywhere, at anytime and on multiple devices. ISS understands the need to integrate additional internal applications with smart phones and tablets.

Examples of existing web-enabled, or online, applications include:

- Homeless Point-In-Time (PIT) Count is used to estimate the number of homeless/families living in Palm Beach County. ISS developed a survey tool that runs on smart phones, tablets, laptops and desktop computers. Field interviews of homeless individuals are conducted and data is entered directly into mobile devices. The instant uploading of data informs the community through the use of Twitter and Facebook regarding the number of surveys completed at various points throughout a 24hour period.
- ISS developed a Web-enabled application with Human Services for volunteer self registration, tools for volunteer management,

allocation of volunteers into workgroups, survey areas and shifts, assignment of group leaders, controls for lending of tablets and laptops, and reporting. Previously a cumbersome, paper-based system, this application streamlines the management and tracking of volunteers.

- Palm Tran's **Online Bus Pass System** implemented in April 2013 was designed as a mobile application.
- The Disaster Awareness and Recovery Tool (DART) enables citizens to report damages directly to the Emergency Management Division. This mobile application accepts text messages, photographs, and videos, and is accessible by smart phone or the Web at http://pbcgov.com/IDART. This information provides disaster managers with an early damage "picture" following a disaster to help prioritize response efforts.
- GIS Damage Assessment Application In 2013, the legacy Damage Assessment application was re-engineered to incorporate numerous technology updates including ArcGIS Server mobile cache to allow for active synchronization between the inspection laptops and our Enterprise GIS database. ISS is also developing a web-based Damage Assessment Administrative module to help EOC Managers develop Inspection Areas, set priorities on specific areas, and track the progress of damage assessment efforts. Dynamic reports will be built to allow EOC Managers access to ongoing damage assessment information as new data is synchronized.

- Develop a mobility roadmap which will enable County employees to use any mobile device to access the County network in accordance with enterprise security, management, application architecture and database synchronization policies.
- Prepare listing of all internal applications



currently integrated with smart phones and tablets; and identify applications for future integration with target dates for completion.

- Implement an **enterprise mobility platform** consisting of enterprise infrastructure for servers and gateways to avoid duplication of investment; and provide the capability to manage mobile devices, applications and security of applications and data on devices and transmitted to/from the device. This platform will also provide the ability to better manage BYOD (Bring Your Own Device).
- Seek to leverage inherent features such as location-based services, texting and mobile browsers provide real-time access to County applications, emergency alerts, and news releases.

#### **B. Unified Communications**

ISS is currently managing a project to replace the legacy telephone system with a new Unified Communications (UC) System. Many of the 80 separate telephone systems administered by ISS have been in service more than 20 years and are expensive to maintain.

The new unified system will serve more than 350 locations, 10,000 users and multiple Call Centers. The technology upgrade will feature a Voice over Internet Protocol (VoIP) telephone system operating on the County's data network which will dramatically reduce the need for leased telephone circuits. Beginning in year 4, the County will fully realize cost savings exceeding \$2 million per year. Additional benefits will result from the enhanced capabilities of the new system including video teleconferencing, desktop integration, simultaneous ringing of multiple devices, and improved call management functions. The project budget is being financed through a 7-year bank note in the amount of \$10 million.

#### Unified Communications System Components

- IP-Enabled Call Centers
- Video/Audio Conferencing
- Web Conferencing

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- Instant Messaging
- Unified Messaging
- Presence
- Web 2.0
- Network Optimization, Management & Security

The UC System will provide a new set of collaboration tools – audio/video/web conferencing and instant messaging, for County employees.

A structured process was established for evaluating and selecting the software vendors and equipment manufacturers. The project has been divided into two sub-projects covering: 1) the Infrastructure Upgrade; and 2) System Implementation.

The Infrastructure upgrade involves replacing 1,000 data switches in 300 closets countywide with Power over Ethernet (POE) capabilities required for VoIP handsets over a 3-year period. The infrastructure upgrades will also include, as necessary, upgrades to internal building cabling, additional power to data closets and uninterruptable power supply upgrades. The UC system will be implemented in the following phases over a 3-year timeline: Manufacturer Selection, Design and Implementation.

The first phase – Manufacturer Selection is nearly complete following a detailed technical evaluation. A short-listed group of competing manufacturers were invited to demonstrate their system capabilities through an on-site lab evaluation. This was an extensive 4-week process for each manufacturer which required them to install and demo their production-ready system live on the County's network infrastructure.

Vendor selection will occur in March 2014 and the phased system implementation will be completed countywide in 2017. Additional information about this project is available online at: http://pbcportal.pbgov.org/ISS/nas/uc/default.aspx



# C. In Building WiFi Access

The County began deploying a wireless infrastructure in 2000 to supplement the primary network infrastructure. As the workforce has become more mobile, the demand for and reliance on wireless networking has increased. The introduction of smartphones and tablets into the workforce has significantly accelerated this demand and made wireless access mission critical for many ISS customers. As the deployment of wireless services increased there was also a growing demand to provide free wireless Internet access to the public who were conducting business within County facilities.

# 1. Public and Private WiFi Service in County Facilities

Our current scope of services includes over 1,000 wireless access points in more than 100 County facilities, including every major County campus, all Courthouses, all Libraries, various Parks facilities, and Palm Beach International Airport as well as the Convention Center. Multiple networks are provided in each of those facilities including secure internal network access for County business and open free public wifi. Approximately 20 million client wireless sessions occur annually within the County WiFi network. In April 2014, ISS began selectively upgrading wireless routers to the latest 80211 ac chipset which can deliver speeds up to 10 gigabits per second.

#### 2. Public WiFi Projects

Additionally ISS deploys and maintains two other types of wireless infrastructure. The first is an outdoor wireless mesh used, in conjunction with other member agencies of the Palm Beach County Broadband Coalition, to support digital inclusion projects in economically depressed areas. Two Digital Inclusion projects are operational – one in West Palm Beach and one in Delray Beach. Several other communities are exploring opportunities for digital inclusion projects including Lake Worth, Lantana, Boynton Beach and the Glades region.

#### 3. WiMAX Service

The third type of wireless service that ISS supports is long haul connectivity, or WiMAX, both point-topoint and point-to-multi-point. WiMAX technology is used to supplement or replace traditional land based network connectivity. WiMAX reduces costs when leased circuits are disconnected. It also allows us the ability to provide County network service in locations where a traditional fiber build is not cost effective. Due to current capacity limitations of 1 Gbps with WiMAX, we limit this type of service to smaller facilities. As the technology improves it will allow us to offer the service on a greater scale.

Due to the unique nature of wireless, it presents its own set of challenges concerning security and performance. All wireless service is encrypted at the highest reasonable standard. Additionally, other than public WiFi, access is restricted through a secure authentication process which identifies both the user and the device. Security mechanisms are deployed to scan the wireless network for both unauthorized access attempts and unauthorized or rogue wireless devices.

- Continue to support new features such as fast Layer 2 roaming, Call Admission Control (CAC), and Quality of Service (QoS).
- Continue to increase the wireless coverage, accessibility and performance for all County users through new standards such as 802.11ac and deployment of additional access points.
- Support 802.11i security standards.
- Provide outdoor coverage in selected campus areas.





Map of Cisco Wireless Control System Access Points (2<sup>nd</sup> floor of Judicial Center)

#### III. Essential and Secure IT Infrastructure

# A. Server Consolidation and Virtualization

Several years ago, ISS made the strategic decision to move away from individual physical server purchases to a consolidated server model with the ability to create virtual servers as needed. This move has allowed ISS to support the growth of electronic government (eGovernment) without adding significant staff resources.

Subsequent to the October 2012 reorganization which transferred the IT staff from six Board departments into ISS, more than 200 physical servers were retired and approximately 300 servers were integrated into our virtualized server environment. Although our server computing capacity has expanded by more than 50%, the Platform Division's staffing resources have only marginally increased from additional positions gained as a result of the IT consolidation.

Consolidating server resources results in more efficient utilization of hardware, simplifies system administration, improves scalability with built-in headroom for future expansion, increases redundancy for DR purposes, and reduces the overall costs of the computing infrastructure.

Expected growth over the next 5 years will bring us to the end of life with our existing server infrastructure which will require upgrading to an enterprise level system that will meet the projected demand for server resources over the next 8-10 years.

#### Action Items

 Prior to the April 2014 date for submitting FY 2015 capital funding requests, prepare a 5-year plan for server upgrades based on anticipated growth and useful life of existing server hardware.

#### **B.** Desktop Virtualization

Desktop virtualization is a software technology that separates the desktop environment and associated application software from the physical client device that is used to access it. Application execution takes place on a remote operating system which is accessed by the local client device over the network.

Over the next 4-5 years we anticipate virtual desktops to play a bigger role within our environment. The practice of hosting the County's standard desktop operating system on a centralized server will extend the life of the desktops and simplify their management.

In 2013, using Microsoft Virtual PC, we have began working on remote locations throughout the County where specific applications can be virtualized to allow them to be managed from a central location. Employees whose computer use primarily involves standard business applications are good candidates for desktop virtualization whereas this model is not feasible for more advanced users who require high levels of computing resources.

ISS is currently evaluating several "thin client" alternatives which will have a longer useful life than the traditional desktop computers.

# **Action Items**

 Identify existing deployments of virtual desktops and establish a formal project to extend virtual desktop deployments to work groups in Board departments.



# C. Storage and SAN Upgrade

Over the past decade ISS has been working to consolidate storage to move away from physical server based storage to an enterprise Storage Area Network (SAN) solution. Much progress has been made and the final step involves consolidating the multiple storage and SAN environments into a single unified system.

ISS is working to implement an enterprise storage environment and consolidate storage islands. This will increase the efficient use of existing storage space and accordingly reduce the need for new disk storage. With this implementation, we will begin establishing tiers of data based on required access characteristics ranging from real-time to intermediate to offline storage, and determine the balance between lower and higher performance disk subsystems. This will allow for on-line data movement and transparent data migration between arrays, as well as reduce cost associated with downtime, trapped capacity and performance issues. Combining storage capacity from multiple disk systems into a reservoir of capacity will enable an enterprise approach for storage management with tools to segregate data based on access patterns.

In addition to storage system upgrades, there is a need to develop and implement comprehensive data management policies which address data retention requirements.

#### Action Items

- Finalize selection of a storage vendor for planned upgrade, acquire SAN hardware/ software, and implement first phase of SAN upgrade project.
- Prepare a multi-year plan detailing phases and annual expenditures associated with the Storage and SAN Upgrade project.
- Establish an Electronic Records Retention Committee comprised of representatives from ISS, County Attorney's Office and the Office of Financial Management & Budget. This

committee will be responsible for updating existing policies and procedures to assure compliance with state statutes pertaining to the retention of electronic records.

#### D. Vista Center Data Center

ISS utilizes three separate Data Centers in an effort to ensure critical software applications remain available, even in the event of a disaster. The two local facilities are the Emergency Operations Center (EOC) and the Governmental Center (GC) where County software applications are configured to run in either location via an active/active or a standby configuration. An active/active configuration requires no human intervention to keep business processes active should one of the sites become unavailable while standby requires human intervention to bring applications back online. The third site is a non-ISS facility available through a collocation agreement with the North West Regional Data Center (NWRDC) in Tallahassee. ISS maintains a limited amount of rack space at this facility in order to provide the County a means of using electronic communication should a regional disaster affect the availability of the two local Data Centers.

The Governmental Center Data Center has been in use since 1984 and was designed to house the County's mainframe operations complete with a UPS backup, standby generator and HALON fire suppression. Technological changes since 1984 have resulted in many transformations of the data center to the extent that the space has become inefficient to maintain. Further, the Governmental Center is located in a flood zone only several hundred feet from the Intracoastal Waterway which constitutes a high risk given the County's propensity for hurricanes and other weatherrelated events. ISS also has two rooms housing hardware at the Emergency Operations Center that were not designed as computer rooms. Consequently, there have been frequent overheating problems and the facility is operating at maximum available electrical load.





ISS Data Center - 4th floor, Governmental Center

ISS is currently working with Facilities Development & Operations (FDO) Capital Improvements Division to design and construct a new data center at the Vista Center which will reduce risks to our computing resources and provide for a more efficient operating environment. The new Data Center is being designed based on industry standards which are measured in terms of Tiers or levels of fault tolerance. Tiers range from one to four with Tier 1 being a design with little or no redundancy and Tier 4 having a design with all infrastructure components fully fault tolerant.

A Tier 4 design requires that all components have built in redundancy with sufficient capacity such that one infrastructure component can intentionally be taken offline or sustain an unplanned outage leaving the redundant component available providing sufficient resources. Tier 4 redundant components include network paths, hardware, chillers, HVAC systems, UPS and power distribution. The Vista Data Center will be designed as close to the Tier 4 standard as possible and will also incorporate energy efficient features.

#### 1. Project Benefits

The following benefits were used to justify the funding requested for this project:

- The existing GC Data Center can be repurposed and renovated for needed office space.
- The County will realize a cost savings from:

- reduced energy usage;
- downsizing or canceling the NWRDC contract; and
- entering into a reciprocal co-location agreement.
- There is sufficient room for future data center consolidation at the Vista Center, including space for other County departments and constitutional officers.
- The Vista Center power grid has FPL's highest priority for electric service restoration due to the public safety operations located on this campus.

ISS will relocate most of the computing environment from the Governmental Center to the Vista Center followed by select components from the Emergency Operations Center. Ultimately, this project will enable Palm Beach County to enter into a reciprocal agreement with a partner agency to share data center space. When the design plan is finalized and actual renovation work begins for the new Enterprise Data Center, ISS will pursue a colocation agreement with a partner agency that would enable Palm Beach County to maintain County computing assets within the data center owned and operated by our partner agency. In return, the partner agency would have the right to utilize similar space in the ISS Enterprise Data Center. These types of reciprocal agreements are not uncommon among local governments. Such an agreement with another governmental agency would make it possible for Palm Beach County to reduce the computer room resource requirements at the EOC and to discontinue the collocation agreement with the NWRDC.

- Build the Vista Center computer room as close to Tier 4 design standards as feasible by the first quarter of 2015.
- Move all relevant hardware from the Governmental Center to Vista Center and reestablish redundancy with the EOC.
- Where needed, reconfigure software to run



primary at Vista Center and in standby mode at the EOC. All active/active configurations remain unchanged.

- Begin looking for a reciprocal agreement to move select hardware from both the EOC and NWRDC locations.
- Deconstruct the HVAC, HALON and power infrastructure from the GC computer room. Extend building A/C into the vacated space and convert the space to offices.

#### E. Infrastructure Upgrades

Technology infrastructure has a finite service life. Once this infrastructure reaches the end of its service life, there is no support vendor and vital updates software patches are no longer available. As part of the annual budget process, ISS must identify critical funding requirements for replacing, renewing and improving capital assets.

*TAB 7* presents a 3-year projection of capital funding requirements for fiscal years 2015 through 2017. This list includes a summary description of each capital project.

#### F. Asset Management

A substantial commitment of ISS staff time is required each year to complete the inventory of the department's fixed assets comprised of more than 3,600 items at some 500 locations throughout Palm Beach County. All assets valued at \$1,000 or more must scanned with a scanning gun which reads the bar code tag affixed to the asset.

The wide geographic dispersion of ISS assets and the dynamic nature of our inventory, with new asset items being installed, old assets being retired and existing assets being relocated, contribute to the complexity of the inventory process. Another factor is the questionable reliability of the obsolete scanning guns. Some departments have reported guns not capturing the bar code scans or "locking up" rendering them inoperable.

A further concern is the age of the custom inhouse software programs associated with the Fixed Asset Systems. A FoxPro application is used to download the asset data from the scanning guns, and a PowerBuilder application is used to account for surplus, retired and sold assets. Both of these applications have been in use for 20 years or longer, and are based on old and increasingly unsupported technology, and are not adequately documented.

Due to the age of the asset scanning guns and custom software programs used for Fixed Assets program, ISS intends to request capital funding in FY 2015 to update the scanning guns and acquire RFID technology for tracking most network assets. This request will be presented as a "pilot" project which could potentially be extended to replace the scanning equipment countywide.

A more recent innovation for helping track fixed assets is the Fixed Assets Tracking System (FATS) which is an application developed in-house by ISS to track the location and custodian of all fixed assets. Any changes in asset custody are documented via email notification to the new custodian. This application was originally developed at the request of the Environmental Resources Management (ERM) Department and has since been adapted for use by several other County agencies, including ISS.

- Prepare FY 2015 CIP funding requests for acquisition of new scanning guns and software interfaces, as well as a pilot RFID tagging system.
- Promote adoption of FATS System for countywide use. Determine whether FATS will be implemented on a voluntary case-by-case basis, or required by Administration to be used as an enterprise application by all Board departments.
- Initiate a project to convert the existing FoxPro and PowerBuilder legacy applications associated with the Fixed Asset Systems to newer software versions.



# G. IPv6 Support

Internet Protocol Version 6 (IPv6) expands address space from our current 32-bit numeric addresses to 128-bit addresses to support a greater number of interconnected devices and efficiently support external agencies that have a need to interoperate. IPv6 eliminates the Network Address Translation (NAT) enabling true end-to-end connectivity at the IP layer. Peer networks will be easier to maintain and services such as Quality of Service (QoS) will be enhanced by native ability within the protocol.

In addition to offering more addresses, IPv6 also implements features not present in IPv4 including simplification of address assignment, network numbering and router announcements.

The IPv6 subnet size is standardized by fixing the size of the host identifier portion of an address to 64 bits to facilitate an automatic mechanism for forming the host identifier from link layer addressing information (MAC address). DHVPV6 also exists and may be used for configuration of other items in addition to IP address.

Deployment of IPv6 will ultimately reduce some issues introduced by NAT. It will make the largest growing segments of our client base easier to manage (i.e., public and internal wireless) and will make connectivity to PBC possible of IPv6 addressed devices without a V4 to V6 gateway/ proxy. It will also allows us to connect to IPv6 only hosts (few if any presently exist) without a gateway, and will make some function, such as financial transactions, FTP and other file transfers, easier to secure. Interoperability with other agencies will also be easier when all parties have deployed IPv6.

#### Action Items

- Begin advertising IPv6 space on hosts currently running IPv4 via gateway services.
- Deploy IPv6 addressing space schema for devices connected to the network.

# H. Bring Your Own Device (BYOD)

Bring your own device (BYOD) refers to the practice of allowing employees, business partners and other users to utilize personally selected and purchased client devices to execute enterprise applications and access data. Typically BYOD devices refer to smart phones and tablets, but may also include PCs and laptops.

The convenience of mobile devices and their capacity for business and personal productivity have put IT departments in a challenging position. Increasing numbers of County employees are expecting to connect personally owned smartphones and tablets to the County's network to access email and other County applications. From June 2012 to October 2013, the number of mobile devices connected to the County's email system has grown to approximately 1,725.

While the benefits of personally owned mobile devices are obvious, these devices present security challenges which require enhanced controls. For example, should a device containing sensitive or confidential County information be lost, stolen, or misplaced, the information on that device must be protected from unauthorized access. Additionally, these devices must be protected from hacking and virus threats as effectively as the desktops and other computer equipment which connect to the network and process the County's information. Fortunately, there are "mobile device" management tools specifically designed to assist in securing these devices. However, one of the complexities is the variety of device models and different operating systems in use. Therefore, standards, training, cooperation and compromise between the device owner and the County's security experts will be a critical part of incorporating the use of these devices for conducting County business.

# Action Items

 Establish a technical architecture and security controls for supporting the growing use of personally owned mobile devices for accessing the County's network and applications.



 Develop and publish policies and procedures addressing the appropriate use of BYOD devices in County government.

# I. IT Security Program

ISS maintains a security program as a framework within which people, processes, standards and automation operate together to provide a secure IT environment. The goal of the program is to achieve the optimal level of technical, operational, and procedural security controls which will ensure the confidentiality, integrity and availability of the County's information technology infrastructure, systems, and data.

The County's IT Security Policies are developed and maintained as part of this program. Also critical to success of the security program is that it be driven by the continued analysis and understanding of IT security risk factors which may become threats to Palm Beach County's information resources. Coordination of IT security objectives, standards, and priorities is accomplished through the ISS Security Committee.

The ISS Security Committee provides a collaborative forum through which different areas of the IT organization can meet to establish program priorities, update policies and procedures, analyze incidents, assess risks, design the security architecture and standards, and ensure that information security best practices are integrated with the application and business environments of Palm Beach County. Each member serves as a liaison for addressing security issues from the perspective of technical and functional exposures. Expectations are for the members to be proactive in educating and keeping their respective business units informed of security risks, strategies, plans, priorities and best practices formulated by the committee. The Committee members are also expected to assist in coordinating and collaborating with County departments, constitutional offices and others on security-related issues.

#### **Fundamental Security Objectives**

Data and Services		
Confidentiality	Availability	Integrity

Among the trends which are expected to have an impact on IT security are increased mobility of users and devices, the sophistication of attacks, exposures through social networking, and the use of personally owned devices in the workplace.

Wireless access is closely tied to mobility as it is the technology supporting the ability to function anytime, anywhere. In addition, there is a greater risk that the devices used for "mobile computing" could be lost, stolen, or hacked. So, remote management becomes increasingly important to protect the information assets stored on the device or accessed by the device. All of the above risks are factored into the strategies and plans of the IT security program in deploying a multi-tier, multiproduct approach across the server and desktop environments for anti-virus protection from zeroday exposures.

The people side of IT security is also critical. Therefore, training and awareness programs must be, and will be, a continued part of the IT security program. Users of technology must be skilled in recognizing threats and attempts to compromise computer systems, and know the right steps to take for effective defense. They must also incorporate behavioral changes to protect the equipment and systems they use. This training will be provided through online classes, the ISS Security website, notifications of current threats, and distribution of materials to promote IT Security awareness.

Other recently completed security initiatives include:

• Continuity of Operations Plan (COOP) was updated in 2012. Mission-critical systems have been confirmed and contingency plans



established for continuing operations in the event of a catastrophic event. These plans include staffing assignments, alternative office sites for key government functions and backup systems for critical business applications.

- Revamped the Information Security web site to include resources for users and administrators, including email links for reporting incidents as well as to NIST 800, FIPS guidelines and USDOJ Cyber Crime Reporting web site.
- SharePoint is used for security awareness with a link to the SANS monthly newsletter to heighten risk awareness. A link to the Storm Center shows active vulnerabilities.
- Recent upgrades to firewalls using IDS/IPS to monitor downloads to minimize external threats.
- Automated tools deploy critical security patches and minimize deployment delays. System administrators also configure WSUS to approve certain classes of updates automatically, and clients to ensure that end-users can't circumvent County update policies.
- PKI is used for employee authentication and email, and in support of critical applications.
- Escalation channels are published on the Security web site to minimize delays in reacting to multi-agency intrusion exposures. Centralized scanning of emails and internet reputation services supplement fraud detection.
- The IT reorganization led to consolidation of multiple Active Directories into a single LDAP source used for the integration of third party, directory aware applications.
- Extensive external audit confirmed the sound state of application security.

- Upgraded wireless security by using WPA2-E to meet continuing demands for secure wireless access.
- Proactive security audits of system access with alerts generated for attempts to use unauthorized credentials.
- Performed real-time monitoring of Active Directory and quarterly network scans.

#### Currently Active Projects include:

- Re-write of 10-year old IT Security Policies
- Replacement of McAfee with Forefront for enterprise desktop security suite
- Enhancement of data traffic inspection on firewalls

#### **Action Items**

- Finish the update to existing policies for IT security administration and issue the revised countywide policy (CW-O-059), in conformity with applicable provisions of the FBI CJIS Security Policies.
- Implement advanced authentication to meet CJIS requirements.
- Offer online security awareness training.
- Document plan for implementing security projects.
- Implement controls for managing privileged IDs across all systems.
- Implement ECCS module for mobile applications.
- Implement multi-factor authentication in all applications, e.g. mobile or in-house
- Define and implement standardized periodic internal security reviews and audits of databases.

#### J. Enterprise Information Technology Architecture

In accordance with our IT Governance Policies, ISS establishes, updates, and retires technical standards to ensure alignment, consistency, and



modernization in the selection design of business solutions across the County. Standards are essential in order to implement effective cost controls for software licensing and maintenance, hardware, services, training, and system integration. Having fewer platforms in use enables resources to better support the information systems and produces technology savings through component commonality, joint purchases, and reuse. Additionally, maintenance costs are reduced with fewer platforms, operating systems and other software.

# 1. Network Architecture

The County's network infrastructure includes the network topologies, services, diagnostics, performance management, backup and restore, voice and data technologies, transmission services and protocols to facilitate the interconnection of server platforms, intra-building and office networks (LANs), and inter-building and campus networks (WANs) connected by the 10Gb Ethernet backbone. All systems connected on the PBC network are based on well-recognized open standards such as TCP/IP. Furthermore, compliance with published standards is required for any network connected device or system. All platforms are interconnected via the enterprise network including PCs, servers, multifunction printers, etc. Additionally, various wireless technologies are rapidly expanding throughout the County's network.

# 2. Platform Architecture

The platform architecture defines the technical components of the infrastructure including the client and server platforms, middleware, operating systems (mobile, PC, server), and interfaces supported, as well as other software tools needed to operate the business applications. The desktop PCs are used for office productivity software, email and client software, internet/web access software. The standard desktop operating system is Windows 7 and the mobile environment includes Windows 8, Android, and iOS. The standard office suite is MS Office 2007. The standard anti-virus tool for the desktop is MS Forefront.

The enterprise servers include IBM Power Systems (AIX o/s), SunFire Blade Servers (Solaris o/s) and standalone UNIX hosts (FDO, SAP Business Intelligence, Tax Collector, and TimeServ applications).

Server consolidation and virtualization (VMware) is implemented wherever possible and the server environment includes both Intel (Windows Server) and UNIX-based systems (AIX, Linux, Solaris). These systems support highly robust, high availability applications such as Exchange, Active Directory, Oracle, Citrix, and major business systems such as GIS, HRIS, and Advantage.

# 3. Application and Data Architecture

The applications architecture defines design of and correlation among software programs and applications. The architecture promotes common development and presentation standards, enables optimum system integration, provides opportunities for use of shared infrastructure environments, servers, and storage-related tools, enables shared use of data, and facilitates the reuse of phones, the rapid deployment of applications in response to changing business requirements.

In Palm Beach County, a large inventory of enterprise-wide and agency specific applications have been developed by ISS. New applications and application enhancements are constantly evaluated, developed or acquired, and implemented as older "legacy" applications are retired, or as new needs arise.

ISS uses industry-standard application development tools language environments such as MS Visual Studio 2012 that are adopted in Webenabled models. Furthermore, ISS positions itself to take advantage of emerging technologies and trends such as Web Services, XML, SOA, cloud and mobile computing to implement a truly ubiquitous computing environment.



SharePoint is our strategic technology for collaboration, County intranet/internet portal, document and file management, performance management, and workflow. Our SharePoint environment is being upgraded to SharePoint 2013 this year.

The ArcGIS software suite provides high-end geospatial technology, GIS tools functionality and presentation to the GIS user community. The software integrates visual graphic data in the form of maps, descriptive word attribute information from Palm Beach County's internal databases. As a result, a number of mission-critical GIS-based applications have been developed by ISS. The County uses Crystal Reports as its standard reporting tool. The standard enterprise database management system (DBMS) is Oracle and many departmental systems run on MS SQL Server.

#### 4. Security Architecture

Server security utilizes physical, software and data security measures to guarantee system availability, data confidentiality, and integrity of the server systems and application resources. Servers are at risk from internal and potentially external attacks. Therefore, the controls established to secure the environment take into consideration accidental and intentional risks. Servers are routinely upgraded to appropriate versions of the operating systems and are analyzed and tested on a regular basis to ensure that changes have not been made to the system configuration settings. Mechanisms are in place to secure the partitioned and multiple execution environments associated with "virtualized" machines due to the increased amount of distributed processing and federated information sources that are available across the internet. Furthermore, all servers must be placed in locked computer rooms and only authorized persons performing their specific job functions are allowed access to the facilities which held the County servers.

Software security mechanisms are in place to identify and manage threats to both standalone and networked IT systems resulting from the use of out of date operating systems, as well as

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malicious code protection for spyware protection software. To mitigate operating system vulnerabilities, computers are kept in compliance with the latest vendor software patch levels and utilize best practice configurations. Newly released security patches, service packs and hot fixes are promptly installed. Patch requirements discovered during security assessments, continuous monitoring or incident response activities are address expeditiously. Malicious code and spyware protection software is employed on all workstations on the network.

The network security technologies include antivirus and spam filtering tools, extranet access, firewalls, intrusion detection, directory services, encryption and authentication. State-of-the art identity management software (Novell IDM) is in place for user provisioning and password management.

The Enterprise Information Technology Architecture document can be accessed via: <u>http://pbcgov.com/iss/pdf/EITA.pdf</u>. This document contains a list of our key system and application software. However, this document does not represent a comprehensive list of all the products in use across the County. The list is intended to convey the primary standards for the major solutions to be supported by ISS and delivered with ISS resources.

The EITA was utilized when the Technical Architecture Committee (TAC) was active.

#### Action Items

 Re-establish a Technical Architecture Committee to review the EITA model for content relevance, format and presentation, as well as frequency and method of updates. The TAC will be convened ad hoc as issues or projects require.

# IV. Information Gateway and Citizen Engagement

The Internet Age and open access philosophy have enabled new levels of citizen engagement. Palm



Beach County's methods for citizen engagement began with basic websites and evolved to include: interactive web sites for access to government services ("e-government"), live web/video streaming of Board meetings on Channel 20; podcasts of meetings; social networks on Facebook and Twitter; and mobile applications. As technology progresses, we can expect more knowledge sharing and greater levels of citizen interest and involvement.

ISS projects pertaining to Citizen Engagement are coordinated with Public Affairs and County Administration. Relevant priorities reflected in our Strategic Plan include increased mobility for accessing County services and applications, additional online services for citizens, promoting the concept of Open Government, and greater use of social media.

# A. Reengineering Websites

The County homepage – <u>www.pbcgov.com</u> is one of the most frequently visited websites is the County's main homepage. This site has undergone numerous changes since its introduction in 2000. Last year the County's homepage was further revamped to create a more streamlined look with social media areas as well as expanded support for mobile devices. Frequently used links and an area for banner marketing were also added.

Our website again earned a prestigious Standard of Excellence award in the Web Marketing Association's annual Web Awards international competition. Entries were evaluated on their design, innovation, content, technology, interactivity, copywriting and ease of use.

A number of departments, including Parks & Recreation and Library, have implemented sites with mobility features that are accessible from smart phones and tablets.

Per countywide PPM# CW-O-073, the Public Affairs Department is responsible for setting standards applicable to departmental websites. They are also responsible for the design and content of the County's homepage. The PPM states that ISS "is responsible for monitoring web site traffic, providing stable and high speed connectivity to the PBC Enterprise Network, and managing the firewalls to protect County systems and data from outside intruders." Additionally, the PPM requires that all custom web applications accessing a database be developed by ISS and all purchased applications be approved and centrally managed through ISS.

# Action Items

- In conjunction with Public Affairs, initiate a project for the next generation of website upgrades, including additional interactive functions, user friendly database for opinion and complaint information, and increased mobility.
- Undertake a joint project with Public Affairs to review current departmental Internet and Intranet websites to identify candidates for design and content improvements, and collaborate with departments to upgrade sites.
- Utilize SharePoint, where applicable to improve departmental Intranet sites.

#### B. Open Access to Public Records

Open government data is public data that is machine readable, raw and not in aggregate form, accessible to anyone without any requirement for identification registration, available for any purpose (possibly in an open format), and not subject to any trademark or copyright.

The purpose of open government data is to increase transparency, encourage the participation of citizens and other stakeholders, and support for the emergence of new services that are based on that data.

Palm Beach County's openness and willingness to share public records is exemplified by the following logo prominently displayed on the PBC Internet home page – <u>www.pbcgov.com</u>:





In addition to supporting the principle of transparency and accountability in County government, economic value can be created from open data by making data more "liquid" (e.g., open, widely available, and in readable formats). Palm Beach County can set the tone for open data both by releasing data and shaping the policy environment.

As a key source of open data, an important first step for the County is to set priorities for data releases that are based on potential value. The County will need to establish clear rules to govern the type of data that should, or should not, be released, with particular focus on safety, security, privacy, liability, intellectual property rights, and confidentiality. ISS can champion the focus on open data across agencies and help make sure that the default decision is to release data whenever possible. The County can also seek public – private partnerships or collaborations to support open data activities.

#### **Action Items**

 Conduct further research to identify potential categories of open data and determine whether County Administration and our elected officials are interested in expanding the accessibility of large data sets to the public.

#### C. Crowd Sourcing

An example of how Palm Beach County can benefit from crowd sourcing is based on open data (as discussed above), where citizens are encouraged to invent new ways of applying public data to inform public policy decisions. While County agencies will always need to manage multiple information channels and services, the internet and crowd sourcing tools make it possible to draw on talent and creativity from outside their boundaries.

For example, some public sector organizations make vast stores of data ("Big Data") available at a relatively low or no cost and let users design innovative applications. In this way, citizens may design uses for public data that the agencies never contemplated. Such innovation can be a catalyst for economic growth in PBC and create new commercial opportunities, saving the County money and benefitting the private sector as well.

#### D. Social Media

Within the past year, the **pbcgov.com** homepage was completely revamped to give it a more streamlined look with social media areas as well as support for mobile devices. Frequently used links and an area for banner marketing were also added. County agencies and ISS are also incorporating social media technologies in our inhouse developed applications and departmental websites.

"Stay Connected" is a new, one-click area of our homepage to access Palm Beach County's agencies and elected officials engaging in social media. Facebook, Twitter, YouTube, Flickr, Linked In, Enews, Pinterest, MySpace and Google+ are available through this page. The site may be accessed by going to www.pbcgov.com and clicking on Stay Connected in the top right-hand corner of the page. A listing by department name, elected official or affiliated agency is located there. The County's Public Affairs Department and ISS continue to provide technical support for agencies interested in incorporating social networking applications into their operations.

The PBC Public Affairs Department hosts social media classes for County staff. These classes offer hands-on learning about the many tools for outreach such as Twitter, YouTube, Facebook and Hootsuite. The training material also covers the county policy for social networking as well as how to use the most popular social media tools.

#### E. GIS

#### 1. Countywide GIS Coordination

Many pieces of data intersect the 2,200 square miles of land in Palm Beach County. Countywide GIS Coordination builds the relationships necessary to collaborate and communicate effectively with the 38 municipalities, public entities such as the South Florida Water Management District, Solid Waste Authority, School Board, and other taxing



authorities, beyond to neighboring counties and cities. By supporting the Palm Beach Countywide GIS Forum, significant outreach and education is provided to the public sector, private sector and non-profit organizations. Countywide GIS Coordination works with Palm Beach County agencies to help define ways of leveraging the County's investment in the enterprise GIS platform that is developed and maintained by the GIS Service Bureau in ISS Platform Services.

# 2. GIS Service Bureau

The GIS Service Bureau includes the people and technology that sustain the enterprise GIS Platform and integrate spatial solutions which enable internal and external customers to make well informed decisions. From application development, to data management, to data distribution, to spatial analysis, the GIS Service Bureau proactively supports their customers' needs for solving complex social and environmental issues. The GIS Service Bureau fosters innovation and promotes collaboration, training and education to provide leadership in all things geospatial.

#### **Action Items**

- Prepare and distribute quarterly reports of program activity to the GIS Policy Advisory Committee.
- Track revenues received from County agencies (enterprise/internal service funds) and external agencies.

# F. ISS Resource Guide

ISS offers a variety of IT and communication services that are available either on demand (selfservice), or by request. These services have the capacity to inform employees and improve productivity. Although these capabilities have been available for years, they have not been adequately publicized with the result that many employees are not aware of their purpose, or even their existence. Examples of these resources include:

- **e-Guide** first or last name look-up capability showing individual's job title and home department
- **Document Scanning and CINEMA** conversion of paper records to digital images stored in a searchable database
- FaxCore desktop fax solution
- Fixed Assets Tracking System (FATS) automates asset recordkeeping by tracking custodian and location of all asset items with \$1,000 or more acquisition cost
- myGeoNav presents base map, aerial photography, data layers and tools
- Video Conferencing Sessions establish video and audio connectivity via the County network and Internet
- VPN for Remote Access secure remote access to County intranet through a Virtual Private Network token
- **Crystal Report Writing** County's enterprise report-writing tool
- PBC Archive (email) storage of all previously sent and received emails and calendar appointments
- Instant Messaging (Lync) ability to send text messages to co-workers on the PBC Intranet
- SAI Call Management local and long distance call details for land-line and cellular telephones, as well as all data and voice circuits, and air cards
- PBC Archive (Mimosa) tool for searching pre-2008 emails by key word, author or date.

- Prepare a description of each of the above listed resources and publish this information in an "ISS Resource Guide" which will be included as a selection on the ISS home page.
- Where applicable, prepare instructions for each service along with a published link to direct the user to the instructions.



# V. Government Cloud and Shared Services

Agreements for shared services between governments and other public sector organizations are becoming increasingly common as taxpayer supported agencies seek to reduce costs while minimizing impact on service levels.

An interlocal agreement to connect the School District of Palm Beach County facilities to the County network in 2005 marked the first such agreement where ISS provided services to a non-County agency. This original agreement became the prototype for all future agreements for shared IT services.

In late 2008, ISS entered into similar agreements with the City of Palm Beach Gardens and the Town of Jupiter. Since then, our shared services program has expanded to include 35 organizations and other types of IT services, including application hosting, scanning and GIS. Partnerships born out of budget necessity have matured into trusting relationships such that Palm Beach County is now the provider of choice for numerous municipalities, educational institutions and non-profit organizations.

#### A. Benefitting From the Florida LambdaRail



In 2008, the Board of County Commissioners approved an agreement for

Palm Beach County to connect to the Florida LambdaRail, a non-profit broadband network created to facilitate advanced research, education, and economic development activities in the State of Florida. This network is jointly owned by Florida's state universities. This was the first such agreement of its kind between the FLR and a county government.

This agreement provides the County with faster broadband services for Internet access and reduces annual operating costs by approximately \$29,000 per year. This inter-connection also facilitates connection to our remote disaster recovery site in Tallahassee, provides access to library resources, and most importantly, led to other public sector agencies entering into agreements with Palm Beach County in order to access the Florida LambdaRail via the County network.

#### B. Full-Service IT Shop

The broad scope of IT services performed by ISS sets us apart from most local IT organizations. ISS maintains capabilities in Cisco networks, telephony, application development, Oracle database administration, GIS; and we manage a large inventory of server platforms and office computing equipment.

Awareness of the County's IT resources and capabilities began to build as a result of ISS presentations to the Palm Beach County League of Cities, memberships on the Palm Beach Broadband Committee, and sponsorship of shared services symposiums for government, educational institutions and non-profit organizations. This lowkey marketing approach led to substantial growth in the IT collaboration program, both in terms of types of services offered and number of partner agencies. In addition to network services, ISS offers application licensing and hosting, document scanning, data backup and storage, and GIS services. These shared services agreements will generate approximately \$440,000 in FY 2014.

Standard rates for IT services provided to external customers were approved by the Board of County Commissioners and are published in the ISS Rate Schedule.

#### C. Existing Community Partners

Agreements for shared services are now in place with the 35 agencies listed in the following table.

Category	Organization
Government	Boynton Beach
	Delray Beach
	Greenacres

Florida's Research and Education Network



	Juno Beach
	Jupiter Beach
	Lake Worth
	• Lantana
	Palm Beach
	Palm Beach Gardens
	Riviera Beach
	Royal Palm Beach
	Martin County
	U.S. Virgin Islands
Taxing	<ul> <li>Children's Services Council</li> </ul>
District	Health Care District
	Loxahatchee River Environmental
	Control District
	South Florida Water Management
	District
Authority	Seacoast Utilities
Educational	<ul> <li>Early Learning Coalition</li> </ul>
Institution	<ul> <li>Florida Atlantic University</li> </ul>
	Learning Excellence School
	Palm Beach State College
	Oxbridge Academy
	School Board of PBC
Non-Profit	<ul> <li>Alzheimer's Community Care</li> </ul>
Organization	ARC of Palm Beach County
	<ul> <li>Boca Raton Regional Hospital</li> </ul>
	Center for Family Services
	<ul> <li>Families First of PBC</li> </ul>
	Jewish Fed. of the Palm Beaches
	Kravis Center
	Nonprofits First
	Primetime
	South Florida Fair
	Workforce Alliance

# D. Palm Beach County Broadband Coalition

Palm Beach County is one of six charter members of *The Palm Beach County Broadband Coalition* (PBCBC) which was founded in June 2006 to promote the expansion of broadband networks to serve the public and taxpayer supported institutions. Other members include the School District of Palm Beach County, Florida Atlantic University, Palm Beach County, Florida Atlantic University, Palm Beach State College, South Florida Water Management District, and the Palm Beach County Education Commission. The Palm Beach Broadband Coalition is chaired by Palm Beach County Commissioner, Steven Abrams. After a two-year hiatus, the PBCBC recently met to discuss restarting an effort to bring affordable high-speed network access in the Glades Region – "The Glades Fiber Initiative." The group's membership now also includes representatives from the Florida LambdaRail, the PBC Housing Authority, and the PBC Office of Community Revitalization.

The PBCBC's primary focus is promoting the Glades Fiber Initiative. Past efforts to obtain federal grant funding for this project have been unsuccessful. Another attempt to compete for grants funds was initiated in March 2014 with a Letter of Interest submitted re: the FCC's Rural Broadband Experiments. Our proposed project includes the following elements:

- 1) Construct a fiber connection to the Florida LambdaRail near South Bay;
- From the FLR connection, build a 57-mile fiber network ("The Glades Fiber Loop") to connect South Bay, Belle Glade and Pahokee;
- 3) Interconnect almost 70 Community Anchor Institutions (schools, governments, health care, non-profits) to the fiber loop; and
- Implement free public WiFi service in downtown business districts, target neighborhoods and housing developments.

The numerous benefits of this project for education, public safety and economic development are outlined in the Letter of Intent. This project also supports the mission of the Lake Okeechobee Regional Economic Alliance (LORE).

The next step later this year will involve actual application for a Rural Broadband Experiments grant (under the Connect America Fund) later this year (2014).



#### **Action Items**

- Apply for Rural Broadband Experiments grant upon notification by the FCC.
- Seek other potential sources of grant funds for the Glades Broadband Initiative.
- Continue to promote community awareness and support for the Glades Broadband Initiative.

#### **Digital Inclusion Projects**

In 2010, the County and the School District completed a project to close the "Digital Divide" in the Pleasant City neighborhood of West Palm Beach. The primary beneficiaries of this project were the more than 200 families with school-age children who received refurbished desktop computers, computer training and wireless internet access. This project created a two-square mile public WiFi zone where residents, businesses and visitors can access the internet free of charge.

The participating families were selected based on school age children on the free and reduced lunch programs.

In April 2013, a second Digital Inclusion project was completed to provide WiFi coverage in the Delray Beach neighborhoods surrounding S.D. Spady High School. Additional projects are planned for Boynton Beach, Lantana, Lake Worth, and Belle Glade. These projects involve multiple community partners as summarized in the following table.

Project Component	West Palm Beach	Delray Beach
Network Engineering	ISS	ISS
Network Installation	ISS	ISS
Network Maintenance	ISS	ISS
Radio Antennas	Quantum Foundation	Community Redevelopment Agency
Computer Donation	School District	School District
Computer	School District	School District

Refurbishment		
Computer	Urban League	TED Foundation
Training		
Help Desk	Palm Beach	
Support	State College	

Affordable internet access is now seen as a fundamental societal need. Being connected is vital for full participation in education, economic development and health care programs. Palm Beach County is home to numerous impoverished communities where residents can neither afford nor have the requisite computer skills to utilize broadband Internet access.

#### Action Items

- Seek grant funding to pay for radio antennas to implement additional Digital Inclusion projects.
- With School District and other community partners, initiate Digital Inclusion projects in additional qualifying neighborhoods in Lake Worth, Boynton Beach, Riviera Beach and other interested cities.

#### E. Law Enforcement Exchange (LEX)

The LEX System is an information sharing program serving law enforcement agencies in Palm Beach County, and has fostered close cooperation among the member agencies. With the LEX membership representing 25 law enforcement agencies including the Palm Beach County's Sheriff's Office, municipal police departments, and the State Attorney's Office, it has superseded jurisdictional boundaries and its influence is expanding to multiple levels and beyond our region.



Through the LEX system and governance structure, LEX regions are able to identify crime trends, share



information about criminal activity, encourage countywide and regional investigative cooperation, enhance solvability of crimes and provide information to the State Attorney's Office which may assist in establishing priorities and aid in successful prosecutions.

In 2013, the LEX System was integrated with another data sharing system – "FINDER" which was originally developed by the University of Central Florida and is currently used by various law enforcement agencies along the I-4 corridor. The 1<sup>st</sup> phase of the FINDER implementation enables LEX agencies to query all 100 plus agencies in the FINDER network. LEX agencies have access to RMS data, pawn shop data and scrap metal transactions for participating FINDER agencies in Regions 3, 4 and 6. The LEX portal also provides document management, calendaring and discussion boards.

ISS is responsible for maintaining the LEX application and the servers on which the application and database reside. In 2011, LEX was recognized by the Center for Digital Government and NACo as a "best in class" example of a law enforcement data sharing program. LEX facilitates a strong governance structure and collaboration which builds trust and enables data sharing between law enforcement agencies. LEX provides coordination between:

- PBSO Fusion Center;
- Police Chief's Association;
- Criminal Justice Commission;
- Law Enforcement Planning Council;
- LEX Regional Centers; and
- CLEAR Initiatives.

Under the direction of the LEX organization, three initiatives are currently underway:

1) Implementation of a new **data sharing system** is in progress to replace the existing Metatomix connectors to the Records Management Systems used by Information Technology Strategic Plan: 2014 - 2016 Palm Beach County Information Systems Services

the various local law enforcement agencies.

- ISS is creating a data foundation to support analytical tools under the Countywide Law Enforcement Analytic Resources (CLEAR) initiative.
- 3) A work-space portal, currently referred to as the LEX Portal is being deployed to provide a comprehensive computer environment where tools and information are combined with communication and collaboration. Applications, structured report generators and viewers, and situational awareness dashboards will be combined with collaboration tools.

- Complete the 3 active projects referenced above.
- Integrate some of the Palm Beach Sheriff Office's data to LEX until the Sheriff completes the record management system upgrade.
- Share additional data from Sheriff's Office after completion of their record management system project.
- Implement FBI CJIS security requirements in newly revised IT Security Policies as applicable to the LEX program.



Old 1916 Courthouse and "New" 1992 Main Courthouse, West Palm Beach, FL



# F. Marketing ISS Services – Growth Potential

# 1. Network Services

Most of the larger municipalities, with the exceptions of Palm Beach and Boca Raton, have connected to the County network. Non-profit organizations are the greatest potential for expansion as many of their locations are reasonably close to the County's fiber-optic network. Proximity to the network is a key factor given the "last mile" costs to build a connection to the County's network. For some locations, WiMAX microwave access technology will be used to enable the delivery of last mile wireless broadband access as a less costly alternative to the County's fiber optic cable network.

#### 2. Business Applications

ISS has developed numerous custom software applications which, with slight modifications, could be used by other local governments. Our inventory of marketable business applications includes:

- Human Resources
- Development Permitting
- Fixed Assets
- Justice Services

# 3. Co-Location Services

A new 3,200 sq. ft. data center built to Tier 4 specifications is scheduled for completion in the second half of 2015. When completed, this facility will have sufficient space to accommodate additional County agencies as well as non-county agencies. This facility will be offered to qualifying external agencies as either a primary or secondary data center. Many local and regional agencies do not have adequate disaster recovery planning programs.

# 4. Document Scanning

Demand for scanning services is increasing and will continue to rise as agencies initiate projects to convert archival paper record into digital images. This strategy provides a search capability for locating records as the need arises and reduces the need for physical space to store the records. Adequate storage space for electronic records is provided through the County's Storage Area Network (SAN) infrastructure.

Future growth will occur from County departments and agencies which currently store substantial volumes of paper records. Some agencies (e.g., Clerk & Comptroller) contract with outside commercial vendors who provide scanning services. ISS has contacted these agencies and offered our scanning services.

These efforts have begun to show results as ISS now scans Board financial records for the Clerk and will begin to scan a portion of their court records. This could lead to an extensive increase in scanning volumes with a corresponding saving to the County taxpayers. The Town of Palm Beach's recent decision to utilize ISS for scanning services is a positive sign for the potential to expand this service to other municipalities.

ISS began offering internal scanning services several years ago after witnessing County agencies utilizing outside scanning vendors and paying as much as \$1.50 per scanned page. ISS scanning rates are currently set at \$.045 ( $4\frac{1}{2}$ ) cents per image for most standard size documents.

This new service has not required any additional positions as the scanning work is performed by existing computer operations staff. Paper documents are converted to digital images through the use of Kofax scanning equipment capable of handling large scale documents. A second scanning shift was recently added to accommodate the increased scanning workload.

# 5. Enterprise Platform Services

Recent discussions with our public sector partners have confirmed interest in ISS providing backup and disaster recovery services to external agencies already connected to the County's network. In February 2014, the Board approved a rate structure for this new line of ISS services, along with a related additional monthly transport fee for network services. The proposed rates were



established based on an analysis of market pricing for similar services. The network services transport fee is based on ISS' internal costs of peak network usage required for data backups.

#### **Action Items**

- If service demand escalates further, ISS will consider bringing in temporary personnel to assist with document preparation and scanning.
- Information presented on the ISS webpage for "IT Partnering" will be updated as well as the service brochures and other printed material.
- Seek opportunities to make presentations to the Palm Beach County League of Cities and other community organizations. These presentations will showcase our IT collaboration projects todate and provide information about additional services offered by ISS.
- Build upon past successes by continuing to market and promote ISS as a service provider to public sector organizations in Palm Beach County.
- Identify public sector facilities that could potentially access the County's network via WiMAX.

#### VI. Fiscal Management of IT Resources

*In response to the declining economic conditions* which began in 2007, ISS has implemented several cost-containment measures including:

- Partial centralization of IT resources both staff and hardware;
- Aggressive renegotiation of on-going maintenance contracts;
- Elimination of numerous vacant positions, and reallocation of some vacant positions into areas of greater need; and
- Implementation of a telecommunications expense management program, including circuit audits and replacement of the legacy phone system.

More in-depth management review of assigned projects and work orders.

# A. Staffing

Staffing is the key cost driver for ISS. Staff costs are by far the largest cost element in ISS and it is therefore a management imperative to ensure the department has the right number of staff, with the right skill sets to support current and future needs of the County. To that end, ISS staffing strategies must:

- Ensure that the ISS staff are adequately trained and well managed;
- Continually evaluate those functions and processes that are deemed core to ISS operations; and,
- Identify opportunities for internal and external collaboration where staff resources can be leveraged to the benefit of all involved parties.

#### B. Technology Standardization

Technology standardization is an important component of our fiscal management strategy and is based on business needs and research regarding "industry best practices". Technology standardization assists in leveraging our technology investments and related know-how to help control fixed and variable costs relative to IT and non-IT assets. Adherence to standards results in fewer technologies to support and provides greater synergies between various technology solutions.

In accordance with the Countywide IT Governance Policies, the ISS Director approves all IT standards adopted by the County and serves as the IT Resource Manager. The IT Resource Manager is responsible for reviewing and approving all purchases of IT-related goods and services (agencies under the BCC), to ensure technical compatibility and compliance with the County's Enterprise Information Technology Architecture (EITA), as maintained by ISS.



# C. Project Expenditures

ISS addresses project and infrastructure requirements through a multi-year planning and funding strategy. Therefore it is critical that ISS routinely review project expenditures to ensure alignment with actual project progress. This level of project monitoring depends upon accurate and timely project status reporting.

# D. Business Case

To determine which technology projects deserve funding, initiatives must be assessed to gauge their value to Palm Beach County based on a consideration of costs and benefits. A business case presents a systematic identification, analysis and documentation of the relative attractiveness of a proposed investment alternative compared to alternative solutions. The business case lays out the reason for the investment, the expected benefits of the initiative, the related costs, and an analysis of risks.

Business Case Development Guidelines were prepared by the Project Office several years ago but have not yet been adopted.

# Action Items

• Finalize draft for Business Case Development Guidelines and publish document as a formal departmental policy for the ISS Department.

#### VII. High Performance Culture

# A. Benchmarking and Performance Measurement

Whereas all governments know how much they spend on programs and how many approved positions are on their complement, many do not track the quantity (or units) of services delivered, service costs, or program outcome (results) of the service.

A further level of analysis involves comparing key performance indicators of Palm Beach County with benchmark information compiled by other agencies (e.g., peer Florida counties or leading examples Information Technology Strategic Plan: 2014 - 2016 Palm Beach County Information Systems Services

nationally). This type of comparison ("benchmarking") helps provide context to the County's local indicators and identify areas with significant deviation from the benchmark averages.

# 1. Key Performance Measures

The County Administrator's mission statement affirms that "Accountability of public expenditures will be provided through the use of performance measurement, and organizational excellence will be encouraged by example and sponsorship of quality improvement programs."

Each Department identifies a limited number of "key performance measures" for publication in the County's annual operating budget. The number of reported measures is limited by the space constraints on the budget page. Beginning in FY 2014, County Administration renewed its focus on improving the performance measurement process for the Board of County Commissioners' department. Each department was directed to identify performance measures that provide meaningful information about the program and then begin tracking the actual data for each measure in a new SharePoint site established for this purpose.

ISS has identified a mix of measures that provide *quantitative* information (input, output, costs) and *qualitative* information (efficiency, outcome). Measures are categorized as <u>Workload</u> (demand, input, output), <u>Cost</u>, <u>Efficiency</u> (input/output ratio, response time), and <u>Outcome</u> (end result). ISS "key" performance measures published in the FY 2014 budget book are listed below.

Program	Performance Measure
Application	Percentage of billable to non-billable time
Services	<ul> <li>Number of applications supported</li> </ul>
Computing	Average volume of data backed up weekly
Platforms	Number devices supported per technician
Network	Number devices connected to network
Services	<ul> <li>Percent change in leased circuit costs</li> </ul>
Finance &	Number procurement documents
Administration	processed
Department-	<ul> <li>Revenues from external sources</li> </ul>
wide	<ul> <li>Percentage customer satisfaction rating</li> </ul>
	Percentage Service Level Agreements met
	<ul> <li>Administrative overhead factor</li> </ul>



ISS tracks many other types of operating statistics beyond the key measures published in the budget document. These secondary measures also provide relevant metrics about program activities and will be part of the performance measurement database established in SharePoint.

Some performance-related information is automatically generated from a computer application or system log, whereas other types of information are produced through manual processes. *Percentage of SLAs Met* is an example of system generated performance data.

ISS Service Level Agreements (SLAs) are based on response times which are tracked in detail by the ISS Remedy System. A time and date stamp is logged for each stage of a problem ticket – call intake, service dispatch, initial customer contact, and service restoration. This information is aggregated for each customer agency to determine an overall percentage rating for *Initial Response Time* and *Service Restoration Target.*<sup>5</sup>

The full complement of measures currently tracked by ISS is listed in *TAB 9*.

#### **Action Items**

• Involve all ISS program managers in a special project to improve the first generation of performance measures selected for ISS.

This project will involve researching the performance measurement systems used by leading local governments, determining which of these best-in-class measures are applicable to ISS, and developing a plan and process to begin actively tracking the expanded set of performance measures.

- Periodically compare benchmark measures with peer Florida counties and selected leading organizations.
- Continue implementation, in conjunction with OFMB, of Phase II of the Performance

Measurement Project to improve the process for selecting and tracking performance data using Microsoft SharePoint.

#### **B.** Service Level Agreements

Formal service level agreements (SLAs) are <u>not</u> currently in place for any of the <u>internal</u> customers of ISS. However, as referenced in the preceding section on Performance Measures, ISS does maintain SLA "Targets" for problems reported in the Remedy System as follows:

Service Priority	Initial Response Time (Business Hours)	Initial Response Time (After Hours)	Service Restoration Target
Urgent	30 minutes	30 minutes	2 hours
High	1 hour	1 hour	4 hours
Medium	2 hours	next business day	1 business day
Low	4 hours	next business day	2 business days

All other services requested by customers are tracked on individual work orders in the ISS Project Tracking System (PTS). The "Requested Delivery Date" specified for each work order is another informal SLA where the customer has an expectation the work will be completed by a specific date.

The PTS System flags overdue work orders and provides various management level reports, but the database contains numerous work orders which have not been updated with timely and complete information regarding date revisions and status comments. ISS has initiated a project to clean-up the PTS database and expect this project to be completed in the first quarter of 2014.

- The ISS Directors, through subordinate managers and supervisors, will increase and maintain their focus on the status of overdue work orders.
- A survey to be conducted during 2014 will help determine whether ISS customer agencies wish to establish formal Service Level Agreements with ISS.

<sup>&</sup>lt;sup>5</sup> Additional information (for PBC Intranet users only): http://pbcportal.pbcgov.org/ISS/Documents/RemedyR eports.aspx



ISS responsibilities for services provided to <u>external</u> customers <u>are</u> formally set forth in attachments to the shared services agreements. Each shared service agreement requires approval by the Board of County Commissioners.

# C. Skills Enhancement

During the current and preceding six fiscal years, funding for staff training has been sharply curtailed due to budget cutbacks. Our limited training program has relied upon training vouchers, on-site classroom training, on-the-job training, and occasional trips to seminars and conferences.

With the long-term technology shifts that have taken place, some skills have less demand whereas the demand has increased for other IT skills. Likewise, in ISS, the service demands are growing in some areas where staff resources are not adequate to address the workload. Conversely, in some functional work areas within ISS, service demand has leveled off or diminished.

This mismatch of available skill sets with prevailing demand presents a quandary in government organizations such as Palm Beach County. Work experience and training are highly specialized and considerable retraining is required in order to reassign staff positions from one IT discipline to another.

#### **Action Items**

- Undertake a staffing skills assessment to identify candidates for potential retraining and reassignment.
- Prepare a staff training plan as part of the FY 2015 budget preparation process.

#### D. Management Reporting

Challenges associated with management reporting are two-fold. Not only must meaningful and accurate reports be produced, the organizational culture has to place a value on reviewing and, most importantly, utilizing this information to make decisions or take actions. Management reports currently available in ISS include:

*Remedy Reports* – detailed information on all problem tickets reported to ISS Help Desk;

*PTS Reports* – detailed information on all ISS work orders and projects;

*Project Initiation Statements* – description and authorizations for larger projects (based on defined criteria); and

*Project Status Reports* – monthly milestone reporting on select "dashboard" projects.

#### Action Items

- Update records, remove stale items and generally clean-up the PTS database.
- Pro-actively review monthly reports with responsibilities for follow-up assigned, as appropriate.

#### E. Creating a Great Place to Work

The old adage that "our employees are our greatest asset" is definitely true in an organization such as ISS. We rely upon a highly skilled staff to maintain the complex IT ecosystem which supports County government. Our interactions with one another, and the organization at large, must be constructive in order to effectively carry out our duties as a service provider. ISS work groups contain specialized skill sets, each which must work in concert with one another in order for the layers of technology – desktop, server, application, database, network, telephones to likewise work in unison. Therefore, teamwork and good communication are required to achieve optimal performance.

ISS' record as the perennial leader in the County's United Way campaign gives testimony to the caring nature of our employees. A further example is the "We Are ISS" Fund created from donations by ISS employees to recognize significant events in the lives of ISS employees or their family



members. When misfortune touches upon an ISS employee, they know their co-workers will be there for them.

From time-to-time, ISS engages in team building events, such as the ISS Picnic and the ISS Holiday Party. Our "Kudos" program provides an opportunity to recognize employees who are complemented by their co-workers or customers. A commemorative certificate and award of incentive leave serve as tangible rewards for Kudos.

Having to contend with budget challenges and a 5year salary freeze has limited the ability to increase employee compensation, invest in training, and even replace furniture and computers. Such factors can potentially impact staff morale.

In the 1<sup>st</sup> quarter of 2014, a group of managers in the Applications Services Division convened to look at ways to foster teamwork and camaraderie, both within the Division and the ISS Department as a whole. This manager subcommittee identified a number of specific suggestions and established the "Think Inside the Box" program to solicit and collect employee suggestions. The program was presented to Application Division employees during an April 2014 "Meet and Treat" meeting. The following ideas were shared as examples of employee suggestions.



#### **Example Employee Ideas:**

- 1. Implement Employee of the Quarter recognition program.
- 2. Implement a formal intern program as this provides opportunity for career advancement.
- 3. Define a career ladder for technical employees who wish to remain on the

technical side rather than becoming a manager.

- 4. Provide opportunity for staff at all levels to showcase their successes.
- 5. Provide equitable training opportunities among all levels of staff.
- Conduct regular teambuilding meetings among all levels of staff. Include cross-section of staff from various divisions.
- 7. Assess need for new office furniture, computers and other equipment.
- 8. Clean-up all work areas and hallways.
- Remove the mailboxes on the 4<sup>th</sup> floor and move towards a self-service mail center.
- 10. Establish a centralized surplus area.

- Attain a higher level of direct interaction between managers and staff.
- Promote an "Open Door" policy to assure employees know they have a ready venue to air ideas, concerns or any issue they wish to bring forward.
- Involve employee committees in event planning team building projects, or other organizational improvement programs.
- Broadly solicit employee ideas for improving the work place in terms of the work environment, equipment, work rules, etc.
- Take action to address employees' suggestions and concerns with a communication loop to keep all parties informed of related decisions made or actions taken.





# Section 10 – Additional Projects and Initiatives Identified by Customer Agencies

Multiple planning sessions with departments and agencies helped identify a wide range of projects and initiatives not addressed elsewhere in this report. The following table presents a selection of proposed projects which will directly involved ISS.

Agency	Project Summary
Community Services	<ul> <li>Accept online credit card payments – interface with Advantage</li> </ul>
	<ul> <li>Online scheduling and appointments for clients</li> </ul>
Court Administration	Implement Video Remote Interpreting for non-English speaking court users
Criminal Justice	Implement CJC Gang Resistance Education and Training (GREAT) Internet web application to allow scheduling of GREAT classes by Law Enforcement in support of communities, schools, and other organizations
Environmental Resources Management Fire-Rescue	Enhance ERM's SharePoint website – Better document management and enhanced communication Assist in implementing the Kronos cloud-based payroll system which will interface with existing
Human Resources	TeleStaff system Scanning of paper applications – Replacement of the Scantron software and process
Information Systems Services	In conjunction with County Administration, Purchasing and Public Affairs, implement countywide program for leasing multi-function devices (copiers) to streamline administration and reduce copier cost
Library	<ul> <li>Implementation of new content filter – improved technology with more accurate filtering capabilities</li> </ul>

[	
	<ul> <li>Full gigabit connectivity between library branches to enable implementation of regional Citrix servers</li> </ul>
Palm Tran	Implement Interactive Voice Response (IVR) system for reservation calls and a new County developed web based bus pass program.
Property	Complete conversion to iasWorld
Appraiser	(new CAMA and AA system)
Public Affairs	<ul> <li>Archive outdated content and improve process for content management</li> </ul>
	<ul> <li>Embed MP4 videos with Live Web Stream and archived videos so that videos can be streamed on any device regardless of player.</li> </ul>
	<ul> <li>Online Event RSVP – Allows attendees to RSVP online and for County events. Can run - reports.</li> </ul>
Public Defender	<ul> <li>Continue records destruction program to decrease need (and costs) of warehouse storage</li> </ul>
	<ul> <li>Replace McAfee anti-virus software with Symantec</li> <li>Endpoint Protection to enable</li> <li>PD to maintain full control</li> <li>over its own virus protection</li> <li>software and licensing</li> </ul>
	<ul> <li>Install new EqualLogic SAN –</li> <li>Will add an additional 13TB of usable storage for e-filing efforts currently underway</li> </ul>
	<ul> <li>Implement Dell Open Manage for server based monitoring</li> </ul>
Purchasing	Implement use of FaxCore and other alternatives to standalone fax machines.



#### Section 11 – Looking Further Ahead

What seemed fantastic 20 years ago is commonplace today. GPS mapping technology, wireless communication, and mobile devices connected to the Internet are examples of critical technology advances. Wearable technology is a rapidly developing field today and future breakthroughs will involve **biotechnology**, the integration of technology within the human body itself, e.g., microchip implants. Futurists also predict advances in the following fields:

- **Nanotechnology** further miniaturization of the housing for the computer itself, e.g., nano chips and atomic transistors.
- Ubiquitous Connectivity "the Internet of Things" where all objects of the world are tagged with minuscule identifying devices or machine-readable identifiers. According to Gartner, there will be nearly 26 billion devices on the Internet of Things by 2020.<sup>6</sup>
- Mass Data further sophistication of complex data mining tools which can sort data and discern patterns at the speed of light.
- Superfast Wireless Networks latest chipsets can deliver 1.3 gigabits per second speeds and new algorithms enable simultaneous data transmission to multiple users.
- **Dark Networks** cyber security will become critical as infrastructures are vulnerable to attacks by hackers, criminals and state-sponsored cyber warfare (e.g., China, Iran).
- Universal Translators real-time translation technology which enables two people speaking different languages to communicate with one another in their own voices in languages neither understand.

 Avatars, Surrogates, Robotics – virtual personalities taking on more active human-like roles, and intelligent robots programmed to perform specialized tasks in the home, office and outdoors.

Although these new technologies may not directly impact the County over our 3-year planning horizon, they will be factors in future plans.



#### Summary

ISS exists to serve the information technology needs of our customers. As an organization, we enjoy a long history of close business partnerships with numerous County departments and agencies, and more recently, with numerous external organizations.

We are constantly seeking ways to better serve the County organization and assure that ISS remains a great place to work for our employees.

ISS staff collectively began this planning process from a position of stability and strength. Our organization is performing relatively well be we realize that planning is necessary to not only preserve service quality, but also to improve and expand services.

Information technology systems maintained by ISS are comprised of hundreds of software applications and thousands of individual equipment items. A primary measure of our success as a service provider is the avoidance of system downtime. Another key metric involves service response.

 <sup>&</sup>lt;sup>6</sup> Jump up ^ "Gartner Says the Internet of Things Installed Base Will Grow to 26 Billion Units by 2020". Gartner.
 2013-12-12. Retrieved 2014-04-11.


Information Technology Strategic Plan: 2014 - 2016 Palm Beach County Information Systems Services

When system component fail, as will inevitably occur in a complex technical environment, ISS prides itself in how quickly we are able to respond and restore service to a normal operational level. This document underscores the strong attributes of ISS as a provider of IT services and sets the stage for these strengths to continue in the years ahead. Palm Beach County's long time slogan - "The Best of Everything" sheds all pretenses of modesty and sets a high benchmark of performance for County services. Many county departments, including Environmental Resources, Water Utilities, Parks & Recreation, Airports, and the Information Systems Services have received national awards. Our paramount goal is to deliver high guality services to our customers.

We appreciate the participation of the numerous individuals who participated in this planning effort. They helped identify projects and evaluate services, and were instrumental in helping us determine overall strategic direction for the next three years.



Main Entrance of Original 1916 Palm Beach County Courthouse with Governmental Center in background West Palm Beach, FL



This is to acknowledge the many contributions of ISS staff and our customers in the preparation of this Strategic Plan.

Steven Bordelon Director, Information Systems Services

> County Administrator Robert Weisman

#### Palm Beach County Board of County Commissioners

Priscilla Taylor, Mayor Paulette Burdick, Vice Mayor Hal R. Valeche Shelley Vana Steven L. Abrams Mary Lou Berger Jess R. Santamaria



ISS Division		Description of Action Item	Assigned Lead	Target Date	Docur Refere	nent ence
Administration	1)	As positions become vacant through normal attrition, determine on a case-by-case basis	Bordelon, S	On-going	3 / VI.C.	p14
		whether these positions can be reallocated to the Application Services Division to provide				
		additional staff resources to help meet the demand for programming services.				
	2)	Continue to work with Martin County in an effort to finalize an agreement with the FDOT	Bordelon, S	On-going	7/III.E	p31
		and FHWA for shared use of networks.				
	3)	In conjunction with Public Safety Department, prepare formal reorganization proposal for	Bordelon, S	7/2014	4 / II.	p19
		presentation to the County Administrator and reflect transfer of staff and budget for the 9-				
		1-1 System (excluding dispatchers) to ISS in FY 2015 budget.				
	4)	Develop a list of specific opportunities for further IT reorganization and seek the direction	Bordelon, S	10/2014	4/II.	p19
		of County Administration to determine whether a more in-depth study should be				
		undertaken.				
	5)	Draft bylaws for the proposed CIO Council and determine interests of self-managed IT	Hipps, J	10/2014	5 / II.C.	p21
		organizations in participating in such a group.				
	6)	Update IT governance policies to reflect various changes that have occurred since the	Hipps, J	10/2014	5 / III.	p22
		original adoption of PPM # CW-O-079 in 2005, and expand to address additional identified				
		areas.				
	7)	Train and direct line manages to undertake a more active review of the Remedy and PTS	Davidson, P	9/2014	6 / IV.	p24
		reports to identify variances and initiate corrective action when necessary.				
	8)	Assure the reporting databases contain current and accurate data; otherwise the value of	Davidson, P	9/2014	6 / IV.	p24
		the reports is greatly diminished.				
	9)	Reinstate the Project Management Office requirements for 1) Project Initiation Statements	Bordelon, S	9/2014	6 / IV.	p24
		and 2) Monthly Status Reports for Selected "Dashboard" projects.				
	10	) Initiate a project to review previous and present reporting practices with the goal of	Bordelon, S	1/2015	6 / IV.	p24
		improving the quality of information presented.				
	11	) Based on recently approved Management Control Agreement, revisit the prior proposal for	Bordelon, S	6/2015	7/ III.B.	p30
		the Sheriff's Office to join the County's network rather than leasing network circuits from a				
		private service provider.				
	12	) Continue to coordinate efforts with Martin County to finalize a legally acceptable	Bordelon, S	On-going	7 / III.E.	p32
		agreement for shared use of the FDOT's ITS network facilities by county governments.				
	13	) Evaluate the current Application Services development environment.	Satchell, A	1/2015	9/ I.A.	p38

ISS Division	Description of Action Item	Assigned Lead	Target Date	Docum Referei	ent nce
		-			
	14) Prepare an ISS departmental policy to document and standardize the application	Satchell, A	3/2015	9 / I.A.	p38
	development processes across all sections of Applications Services.				
	15) Conduct a customer satisfaction survey of all agencies and departments supported by ISS.	Bordelon, S	1/2015	9/ I.B.	p39
	The survey will encompass the major service areas – data network, voice services,				
	application development, and desktop support.				
	16) Reassess project management processes with the goal of implementing best practices for:	Hipps, J	1/2015	9 / I.C.	p39
	- Project Initiation				
	- Requirements Gathering				
	- Project Plan				
	- Risks and Issues				
	- Project Status Reporting				
	- System Documentation				
	17) Establish an Electronic Records Retention Committee, comprised of representatives from	Bordelon, S	6/2015	9 / III.C.	p45
	ISS, County Attorney's Office and the Office of Financial Management & Budget, with				
	responsibility for updating existing policies and procedures to assure compliance with State				
	statutes pertaining to the retention of electronic records.				
	18) Begin looking for a reciprocal agreement to move select hardware from both the EOC and	Davidson, P	9/2015	9 / III.D.	p47
	NWRDC locations.				
	19) Prepare FY 2015 CIP funding requests for acquisition of new scanning guns and software	Manning, I	3/2015	9 / III.F.	p48
	interfaces, as well as a pilot RFID tagging system.				
	20) Promote adoption of FATS System for countywide use. Determine whether FATS will be	Manning, I	12/2014	9 / III.F.	p48
	implemented on a voluntary case-by-case basis, or required by Administration to be used				
	as an enterprise application by all Board departments				
	21) Re-establish a Technical Architecture Committee to review the EITA model for content	Hipps, J	3/2015	9 / III.J.	p53
	relevance, format and presentation, as well as frequency and method of updates. The				
	TAC will be convened ad hoc as issues or projects require.				
	22) Conduct further research to identify potential categories of open data and determine	Hipps, J	6/2015	9 / IV.B.	p54
	whether County Administration and our elected officials are interested in expanding the				
	accessibility of large data sets to the public.				
	23) Prepare a description of each of the above listed resources and publish this information in	Bordelon, S	12/2014	9 / IV.F.	p56
	an "ISS Resource Guide" which will be included as a selection on the ISS home page.				
	(Resources listed include:				

Assigned Target Document **ISS** Division **Description of Action Item** Reference Lead Date - e-Guide - FaxCore - Video Conferencing Sessions - VPN for Remote Access - Crystal Reporting Writing - PBC Archive - Instant Messaging - SAI Call Management) 12/2014 9/ IV.F. p56 24) Where applicable, prepare instructions for each service along with a published link to Bordelon, S direct the user to the instructions. 12/2015 9/V.D. p58 25) Apply for Rural Broadband Experiments grant upon notification by the FCC. Bordelon, S 9/V.D. 26) Seek other potential sources of grant funds for the Glades Broadband Initiative. On-going p58 Bordelon, S 9/V.D. p58 27) Continue to promote community awareness and support for the Glades Broadband Bordelon, S On-going Initiative. 9/V.D. p58 28) Seek grant funding to pay for radio antennas to implement additional Digital Inclusion Bordelon, S 12/2015 projects. 9 / VI.D. p62 29) Finalize draft for Business Case Development Guidelines and publish document as a formal Hipps, J 3/2015 departmental policy for the ISS Department. 9 / VII.A. p63 30) Involve all ISS program managers in a special project to improve the first generation of 3/2015 Bordelon, S performance measures selected for ISS. 31) Periodically compare benchmark measures with peer Florida counties and selected leading 9/VII.A. p63 Bordelon, S 3/2015 organizations. 32) Continue implementation, in conjunction with OFMB, of Phase II of the Performance 3/2015 9 / VII.A. p63 Bordelon, S Measurement Project to improve the process for selecting and tracking performance data using Microsoft SharePoint. 9 / VII.B. p64 33) The ISS Directors, through subordinate managers and supervisors, will increase and Davidson, P On-going maintain their focus on the status of overdue work orders. 9 / VII.B. p64 34) A survey to be conducted during 2014 will help determine whether ISS customer agencies Bordelon, S 12/2014 wish to establish formal Service Level Agreements with ISS. 3/2015 9/VII.C. p64 35) Undertake a staffing skills assessment to identify candidates for potential retraining and Davidson, P reassignment.

ISS Division	Description of Action Item	Assigned Lead	Target Date	Docum Referer	ent nce
	36) Prepare a staff training plan as part of the FY 2016 budget preparation process.	Davidson, P	3/2015	9 / VII.C.	p64
	37) Attain a higher level of direct interaction between managers and staff.	Bordelon, S	On-going	9 / VII.E.	p65
	38) Promote an "Open Door" policy to assure employees know they have a ready venue to air	Bordelon, S	On-going	9 / VII.E.	p65
	ideas, concerns or any issue they wish to bring forward.				
	39) Involve employee committees in event planning team building projects, or other	Bordelon, S	On-going	9 / VII.E.	p65
	organizational improvement programs.				
	40) Broadly solicit employee ideas for improving the work place in terms of the work	Bordelon, S	4/2014	9/ VII.E.	p65
	environment, equipment, work rules, etc.				
	41) Take action to address employees' suggestions and concerns with a communication loop	Bordelon, S	8/2014	9 / VII.E.	p65
	to keep all parties informed of related decisions made or actions taken.				
Application	1) Completely populate the database for the Software Inventory of Business Applications	Satchell, A	9/14	1 / IV.A.	p5
Services	and Tools to include all relevant information pertaining to each application.				
	2) Prepare plan with projected dates for "technical refresh," software version update, or	Anderson, K	12/2014	3 / V.A.	p12
	replacement of all business applications maintained by ISS.				
	3) As part of our application modernization initiatives, rewrite our legacy applications to take	Satchell, A	12/2016	3 / V.A.	p12
	advantage of mobile computing power and other modern platforms.				
	4) Identify critical and high impact business applications and software tools.	Davidson, P	5/2015	3 / V.A.	p12
	5) Identify primary and backup staff resources for each application to assure sufficient staff	Satchell, A	9/2014	3 / V.A.	p12
	coverage. Institute additional staff assignments and cross-training for applications which				
	presently have inadequate coverage.				
	6) Review system documentation for critical and high-impact applications/tools to assure	Satchell, A	9/2014	3 / V.A.	p12
	documentation is maintained at an acceptable level.				
	7) Phase II objectives for Circuit Management Database (CMDB) application:	Lessard, C		6 / III.	p24
	5. Billing Import AT&T Landline		4/2014		
	6. Billing Import Mobility		5/2014		
	7. Billing MTM Reports		6/2014		
	8. Wire Map Support		6/2014		
	9.E911 Support		9/2014		
	10. Dial Plan		9/2014		
	11. Cost Allocation Plan		9/2014		

ISS Division	Description of Action Item	Assigned Lead	Target Date	Docu Refer	ment rence
	8) Planned projects for Phase III functionality for CMDB application:	Lessard, C	12/2015	6 / III.	p24
	- SAI Call Accounting replacement.				
	9) Future design elements for CMDB application:	Lessard, C	6/2015	6/ III.	p24
	<ul> <li>Increased mobile device support for, tablets, and notebooks.</li> </ul>				
	<ul> <li>Improving and streamlining functions as necessary.</li> </ul>				
	10) Complete all active HRIS-related projects:	Aulakh, G		7/1.	p26
	- ADA Routing		6/2014		
	- TimeServer Replacement		6/2014		
	12. Complete Testing & Recruitment		6/2014		
	13. TEA Roll-out		10/2014		
	14. FMLA Module		10/2014		
	11) Planned HRIS-related projects for future functionality:	Aulakh, G		7/1.	p26
	- W4 and W2 Forms		9/2014		
	- Direct Deposit		9/2014		
	- Travel Voucher		10/2014		
	- Certification Tracking		4/2015		
	- Employment Eligibility		4/2015		
	- Safety Sensitive Training		6/2015		
	- Disciplinary Action		10/2015		
	- Reclassification Request		6/2016		
	12) Future HRIS-related design elements:	Aulakh, G		7/1.	p27
	- Increased mobility for smartphones, tablets				
	- More integration with social networking tools				
	13) Upgrade Advantage System to 3.10.1 version.	Templeton, L	5/2015	7 / II.	p27
	14) Implement Vendor Self-Service (VSS) Phase 2.	Templeton, L	7/2015	7 / II.	p27
	15) Advantage System enhancements prioritized by FSAT Team:	Templeton, L		7 / II.	p27
	- Archiving of Advantage data.				
	- Online real time validation of Tax Payer Identification number (TIN).				
	- "Punch Out" procurement feature in Advantage.				
	- Vendor provided web service capability within the Advantage Financial System.				
	- Streamline process for entering requisitions, purchase orders, and receivers in				
	Advantage, including use of workflow for approval processing.				

ISS Division	Description of Action Item	Assigned Lead	Target Date	Docu Refer	ment ence
		•			
	- Associate order type with a particular procurement type based upon Document code.				
	- Add "Invoice Pending" box.				
	<ul> <li>Add "Go to Line" feature on the INSRCH page.</li> </ul>				
	<ul> <li>Add the option to see only ten lines at a time or check a box and display all lines.</li> </ul>				
	CGI will be requested to provide cost estimates for each of the above enhancements.				
	16) Expand deployment of mobile applications to IOS and Android operating systems.			7 / VI.	P34
	17) Complete SharePoint 2013 upgrade.	Dang, S	5/2014	7 / VI.	P34
	18) Develop and maintain an annual work plan of SharePoint projects.	Dang, S	8/2014	7 / VI.	P34
	19) After adequate training and mentoring, dedicate additional staff resources to meet	Dang, S	9/2014	7 / VI.	P35
	departmental demand for SharePoint services.				
	20) Prioritize department-specific application development and maintenance projects based	Satchell, A	12/2014	8	p37
	upon available and projected programming resources.				
	21) For eFDO:	Boyett, A	9/2014	8 / I.	p37
	- Complete requirements gathering phase.				
	- Establish preliminary project plan and budget.				
	- Identify funding in current fiscal year (FY 2014) to begin project and request additional				
	funding in FY 2015 budget cycle.				
	- Assemble ISS Project Team and identify FDO subject matter experts who will closely				
	work with ISS.				
	22) Establish a project plan, including timetable, for completing program coding, testing and	Satchell, A	10/2014	9 / I.B.	p39
	implementing the SRS System.				
	23) Complete buy vs. build analysis for an Online Requisition System and proceed to either	Templeton, L	3/2015	9 / I.B.	p39
	implement ADVANTAGE Financial System module or develop a prototype system with				
	Parks & Recreation.				
	24) Prepare listing of all internal applications currently integrated with smart phones and	Satchell, A	1/2015	9 / II.A.	p42
	tablets; and identify applications for future integration with target dates for completion.				
	25) Seek to leverage inherent features such as location-based services, texting and mobile	Satchell, A	On-going	9 / II.A.	p42
	browsers to provide real-time access to County applications, emergency alerts, and news				
	releases.				
	26) Initiate a project to convert the existing FoxPro and PowerBuilder legacy applications	Anderson, K	10/2014	9 / III.F.	p48
	associated with the Fixed Asset Systems to newer software versions.				

ISS Division	Description of Action Item	Assigned Lead	Target Date	Document Reference
		•		
	27) Implement controls for managing privileged IDs across all systems.	Lessard, C	12/2014	9 / III.I. p50
	28) Implement ECCS module for mobile applications.	Satchell, A	6/2015	9 / III.I. p51
	29) Implement multi-factor authentication in all applications, e.g. mobile or in-house.	Satchell, A	8/2015	9 / III.I. p51
	30) Define and implement standardized periodic internal security reviews and audits of	Fargo, D	12/2014	9 / III.I. p51
	databases.			
	31) In conjunction with Public Affairs, initiate a project for the next generation of website	Dang, S	12/2014	9 / IV.A. p53
	upgrades, including additional interactive functions, a user friendly database for opinion			
	and complaint information, and increased mobility. The most frequently visited of these			
	is the County's main homepage.			
	32) Undertake a joint project with Public Affairs to review current departmental Internet and	Dang, S	6/2015	9/IV.A. p53
	Intranet websites to identify candidates for design and content improvements, and			
	collaborate with departments to upgrade sites.			
	33) Utilize SharePoint, where applicable to improve departmental Intranet sites.	Dang, S	On-going	9/IV.A. p53
	34) Complete the 3 active projects referenced above.	Bennette, D	TBD	9/V.E. p59
	(Projects listed include:			
	- A new "data sharing system" to replace the existing Metatomix connectors to the			
	Records Management Systems used by the various local law enforcement agencies.			
	- A data foundation to support analytical tools under the "Countywide Law Enforcement			
	Analytic Resources" (CLEAR) initiative.			
	- A work-space portal, currently referred to as the "LEX Portal", to provide a			
	comprehensive computer environment where tools and information are combined with			
	communication and collaboration.)			
	35) Integrate some of the Palm Beach Sheriff's data to LEX after completion of their record	Bennette, D	TBD	9/V.E. p59
	management system project.			
	36) Share additional data from Sheriff's Office after completion of their record management	Bennette	TBD	9/ V.E. p60
	system project.			
	37) Implement FBI CJIS security requirements in newly revised IT Security Policies as	Bennette	6/2015	9/V.E. p60
	applicable to the LEX program.			

<b>ISS</b> Division	Description of Action Item	Assigned Lead	Target Date	Documer Referenc	nt ce
Network Services <i>(incl. Voice</i> <i>Services)</i>	1) Complete replacement of obsolete frame relay circuits with metro Ethernet circuits.	Alvarez, A	9/2014	7 / III.D.	p31
	<ol> <li>Initiate study to determine whether the County should adopt an "Open Access Network" model and register as a CLEC (certified local exchange carrier) to permit the leasing of wholesale bandwidth to retail service providers.</li> </ol>	Butler, M	9/2014	7 / III.D.	p31
	3) Upgrade network core from 10 Gbps to 100 Gbps.	Allen, E	9/2016	7 / III.D.	p31
	4) Redesign SmartRing for potential migration to AT&T Switched Ethernet.	Allen, E	9/2016	7 / III.C.	p31
	5) Migrate from AT&T Metro Ethernet to AT&T Switched Ethernet service.			7 / III.C.	p31
	6) Design network transport within new ISS Data Center.	Loveless, A	6/2015	7/ III.D. p	p31
	<ol> <li>Migrate perimeter security to next generation firewall technology including Intelligent Packet Analysis.</li> </ol>	Schwartz, R	6/2015	7 / III.D.	p31
	8) Complete the necessary infrastructure upgrades to support enterprise VoIP deployment.	Alvarez, A	6/2017	7 / III.D.	p31
	<ol> <li>Develop plan to provide staff with necessary training to transition from support of traditional PBX telephone systems to VoIP technology.</li> </ol>	Butler, M	6/2015	7/IV. J	p32
	10) Complete reconciliation of data in new Circuit Management Database.	Zawacki, S	9/2014	7/IV. j	p32
	11) Schedule and coordinate bi-annual self-audit of telephone stipend levels.	Farrell, S	On-going	7/IV. j	p32
	12) Work with wireless telecom providers to identify low and no usage cell phones and air cards which can be discontinued or otherwise require justification for continued service.	Farrell, S	On-going	7/IV. I	p32
	13) Develop a "mobility roadmap" which will enable County employees to use any mobile device to access the County network in accordance with enterprise security, management, application architecture and database synchronization policies.	Schwartz, R	9/2014	9 / II.A.	p42
	14) Implement an "enterprise mobility platform" consisting of enterprise and infrastructure for servers and gateways to avoid duplication of investment by departments; and provide the capability to manage mobile devices, applications and security of applications and data on devices and transmitted to/from the device. This platform will also provide the ability to better manage BYOD (Bring Your Own Device).	Schwartz, R	9/2015	9 / II.A.	p42
	15) Continue to support new features such as fast Layer 2 roaming, Call Admission Control (CAC), and Quality of Service (QoS).	Allen, E	On-going	9 / II.C.	p44

ISS Division	Description of Action Item	Assigned Lead	Target Date	Docum Refere	nent nce
	16) Continue to increase the wireless coverage, accessibility and performance for all Palm	Schmitt, T	On-going	9 / II.C.	p44
	Beach County users through new standards such as 802.11ac and deployment of				
	additional access points.				
	17) Continue to design the system in such a way that it is self configuring and self healing.	Allen, E	On-going	9 / II.C.	p44
	18) Support 802.11i security standards.	Schmitt, T	On-going	9 / II.C.	p44
	19) Provide outdoor coverage in selected campus areas.	Schmitt, T	On-going	9 / II.C.	p44
	20) Begin advertising IPv6 space on hosts currently running IPv4 via gateway services.	Allen, E	12/2018	9 / III.G.	p48
	21) Deploy IPv6 addressing space schema for devices connected to the network.	Allen, E	12/2018	9 / III.G.	p48
	22) Establish a technical architecture and security controls for supporting the growing use of	Schwartz, R	On-going	9 / III.H.	p49
	personally owned mobile devices for accessing the County's network and applications.				
	23) Implement advanced authentication to meet CJIS requirements.	Butler, M	TBD	9 / 111.1.	p50
	24) With School District and other community partners, initiate Digital Inclusion projects in	Butler, M	On-going	9/V.D.	p58
	additional qualifying neighborhoods in Lake Worth, Boynton Beach, Riviera Beach and				
	other interested cities.				
	25) Identify public sector facilities that could potentially access the County's network via	Butler, M	On-going	9/V.F.	p61
	WiMAX.				
Other IT	1) Train and direct line managers to undertake a more active review of the Remedy and PTS	Davidson, P	On-going	6 / IV.	p24
Operations	reports to identify variances and initiate corrective action when necessary.				
	2) Assure the reporting databases contain current and accurate data; otherwise the value of	Davidson, P	On-going	6 / IV.	p24
	the reports is greatly diminished.				
	3) Initiate annual tests of the system failover capabilities between the Governmental Center	Ratchinsky, K	5/2016	6 / VII.	p35
	and the Emergency Operations Center with documentation of problems/issues				
	encountered and lessons learned.				
	4) Update the ISS Disaster Recovery Plan to include the additional emergency management	Davidson, P	3/2015	6 / VII.	p35
	responsibilities assumed by ISS due to the IT reorganization.				
	5) Undertake review of Emergency Management's Disaster Recovery Manual to assure the	Davidson, P	2/2015	7 / VII.	p35
	ISS Business Continuity/Disaster Recovery Plan is complete in terms of requirements and				
	compatible with this document.				
	6) Update the ISS Department's Continuity of Operations Plan (COOP) per the instructions	West, K	12/2014	7 / VII.	p35

prescribed by the Public Safety Department.

<b>ISS Division</b>	Description of Action Item	Assigned Lead	Target Date	Document Reference
			•	
	7) Create Help Desk templates to assist Tier 1 Support.	Davidson, P	12/2014	9/I.D. p41
	8) Create Specs and RFP for contractual instructor-led MS Office Suite classes.	Sandman, S	1/2015	9/I.D. p41
	9) Update Training Program Course Catalog.	Sandman, S	6/2014	9/I.D. p41
	10) Improve Training Program presence by advertising regularly in Count-e-Line for	Sandman, S	On-going	9/I.D. p41
	upcoming classes, links to self-paced training materials and Tips & Tricks.			
	11) Prepare program measurement and management reports for: list of classes offered; # of	Sandman, S	9/2014	9/I.D. p41
	participants; # of no-shows; and average satisfaction rating on scale of 0-5.			
	12) Build the Vista Center computer room as close to Tier 4 design standards as feasible by	West, K	1/2015	9/III.D. p47
	the first quarter of 2015.			
	13) Move all relevant hardware from the Governmental Center to Vista Center and reestablish	West, K	12/2015	9/III.D. p47
	redundancy with the EOC.			
	14) Where needed, reconfigure software to run primary at Vista Center and in standby mode	West, K	12/2015	9/III.D. p47
	at the EOC. All active/active configurations remain unchanged.			
	15) Deconstruct the HVAC, HALON and power infrastructure from the GC computer room.	West, K	2/2016	9/III.D. p47
	Extend building A/C into the vacated space and convert the space to offices.			
	16) Offer online security awareness training.	Manning, S	3/2015	9 / III.I. p50
	17) If service demand escalates further, ISS will consider bringing in temporary personnel to	West, K	7/2014	9/V.F. p61
	assist with document preparation and scanning.			
	18) Information presented on the ISS webpage for "IT Partnering" will be updated as well as	Sandman, S	12/2014	9/V.F. p61
	the service brochures and other printed material.			
	19) Seek opportunities to make presentations to the Palm Beach County League of Cities and	Sandman, S	6/2014	9/V.F. p61
	other community organizations. These presentations will showcase our IT collaboration			
	projects to-date and provide information about additional services offered by ISS.			
	20) Build upon past successes by continuing to market and promote ISS as a service provider	Sandman, S	On-going	9 / V.F. p61
	to public sector organizations in Palm Beach County.			
	21) The ISS Directors, through subordinate managers and supervisors, will increase and	Davidson, P	On-going	9 / VII.B. p64
	maintain their focus on the status of overdue work orders.			
	22) Update records, remove stale items and generally clean-up the PTS database.	Davidson, P	On-going	9 / VII.D. p64
	23) Pro-actively review monthly reports with responsibilities for follow-up assigned, as	Davidson, P	On-going	9 / VII.D. p65
	appropriate.			

ISS Division	Description of Action Item	Assigned Lead	Target Date	Docum Refere	ient nce
Platform	1) Promote services and capabilities of GIS Service Bureau, both within the County	Ratchinsky, K	On-going	7/V.	p34
Services	organization and among potential community collaboration partners in the government				
(incl. GIS)	sector.				
	2) Research GIS applications used by leading local governments and compile a list of	Benkly, C	11/2014	7/V.	p34
	potential applications for implementation in Palm Beach County.				
	3) Convene a project planning retreat for the Countywide GIS Project Management Team to	Anderson, P	11/2014	7/V.	p34
	prepare a 3-year plan of projects and initiatives for presentation to and approval by the				
	GIS Policy Advisory Committee.				
	4) Initiate a directed marketing campaign to promote adoption of the Damage Assessment	Ratchinsky, K	6/2015	7/V.	p34
	application by municipalities.				
	5) Schedule Desktop staff for MS Office Suite training to assist Tier 2 support.	Beno, J	TBD	9/I.D.	p41
	6) Prior to the April 2014 date for submitting FY 2015 capital funding requests, prepare a 5-	Ratchinsky, K	5/2014	9 / III.A.	p44
	year plan for server upgrades based on anticipated growth and useful life of existing				
	server hardware.				
	7) Identify existing deployments of virtual desktops and establish a formal project to extend	Santhosh, S	11/2014	9 / III.B.	p45
	virtual desktop deployments to work groups in Board departments.	-			
	8) Finalize selection of a storage vendor for planned upgrade, acquire SAN	Ratchinsky, K	1/2016	9 / III.C.	p45
	hardware/software, and implement first phase of SAN upgrade project.				
	9) Prepare a multi-year plan detailing phases and annual expenditures associated with the	Ratchinsky, K	6/2015	9 / III.C.	p45
	Storage and SAN Upgrade project.				
	10) Prepare and distribute quarterly reports of program activity to the GIS Policy Advisory	Benkly, C	6/2014	9 / IV.E.	p55
	Committee.				
	11) Track GIS revenues received from County agencies (enterprise/internal service funds)	Anderson, P	6/2014	9 / IV.E.	p55
	and external agencies.				
		•			
Strategic	1) Develop and publish policies and procedures addressing the appropriate use of BYOD	Manning, I	1/2015	9 / III.H.	p49
Services	devices in County government.				
	2) Finish the update to existing policies for IT security administration and issue the revised	Manning, I	4/2014	9 / 111.1.	p50
	countywide policy (CW-O-059), in conformity with applicable provisions of the FBI CJIS				
	Security Policies.				
	3) Document plan for implementing security projects.	Manning, I	2/2015	9 / 111.1.	p50

#### Baseline IT Information Worksheet for Agencies and Departments

The **<u>Baseline IT Information Worksheet</u>** includes the following sections:

#### • Matrix of Existing and Additional IT Services

The first part of the worksheet consists of a listing of 25 categories of services provided by ISS with a check-off column for "Existing" to indicate whether the agency is currently receiving the IT service and "Additional" to indicate a desire to begin receiving the service or enhancing or expanding an existing service.

#### • Inventory of Key Business Applications

This section lists the most essential business applications utilized in the day-to-day operations of the agency or department. The template included columns for recording the Application Name, Description, Client Platform (i.e., native software language), and Source (i.e., in-house developed or 3<sup>rd</sup> party vendor). Additionally, a link<sup>7</sup> to a separate worksheet was provided for documenting the additional non-essential business applications used in their operations.

#### • Enterprise Applications

The primary applications maintained by ISS for countywide use are listed with check-off boxes to indicate the applications actually used by the agency. This selection included HRIS, Advantage Financial System, Outlook, myGeoNav, Time Entry, Project Tracking, SharePoint and Secure Identity Management.

#### • Active and Planned IT Initiatives

This section describes the IT projects currently underway as well as projects planned during the planning horizon 2014 – 2016. This information will enable us to better prioritize multiple projects and anticipate potential future budget impacts.

#### • IT-Related Objectives for FY 2014

ISS pre-populated the worksheet with all IT-related objectives published in the FY 2014 budget book. This section was applicable to Board departments only.

#### • Ideas for Service Improvement/Enhancement

Space was provided for free-form narrative to generate ideas for improving services provided by ISS to customer agencies. Two generic questions were posed: 1) What new IT initiatives or investments would assist your organization in accomplishing its objectives; and 2) how can ISS improve its delivery of IT services?

#### • Other Factors Relevant to IT Planning

Additional space was provided in this section to identify other factors not referenced elsewhere in the worksheet.

The completed Baseline IT Information Worksheets for each department and agency are presented under *TAB 3*.

<sup>&</sup>lt;sup>7</sup> http://pbcportal.pbcgov.org/ISS/aps/managers/Lists/BusinessApplicationDoc/AllItems.aspx

#### Baseline IT Information Worksheet for Agencies and Departments

	ISS Strategi	c Plan Development	
form is designed for propar s identify commit IT service 1.	ing an Enformation IT Planning Pr levels and future technology requi	offic for each department and agency a memories and will help set the direction	cryed by E25. This information of the enterprise-level T St
Denist, efferent general.	Its colector	dada Tikkar	
Survey Respondent Parrie:	8	Phone Munizer:	
Assigned Labor Name:	KAN BOGROOF	Phone Mandaers	
each tas service currently p a service that it is not carry not.	rowded to the agency, check the antity receiving from ISS. Also die T Services	appropriate exeting box. Check the A sol the Additional box if the agency wa Existing /A	dditional bex if the spency in into to enhance or expend an dditional
74-hour Help Desk		Edisting	Additional
Application Development	& Maintenence	LOCKO	Additional
Backup and Receivery		Pristra	Arieltimat
<b>Rusmest System Admini</b>	tration	Edisting	Additional
Computer Operations		Edisting	Additional
Countywide GIS		Pristing	Additional
Usta Storage		Edisting	Additional
Catabase Support		Edisting	Additional
Desicop and Client Supp	ort	patting	Additional
Disaster Recovery		Edisting	Additional
Document / Hecords Han	egement	Existing	Additional
Emel/Hessaging/Calence	s trig	parting	Additional
Network		Edisting	Additional
Princing		Existing	Additional
Procuenters à Contract	Rategeneri	Edisting	Additional
Project Management		Edeard	Additional
Science,		Fosting	Additional
Server Administration		casarg	Additional
Shared Data Center		Relation	Additional
SCIDNERS Upenses		Ediction	Additional
Standards & Policies		Ediction	Additional
Telephones		Edition	Additional
User Training		Edistra	Additional
Video Conferencing		Edisting	Additional
interis:			

http://picponalpicponap/. %20%/Dybecon/M2Depor/M2Depor/M2Deporeme/ADDeporture/Address/M2Deporture/Address/M2Deporture/Address/M2Deporture/Address/M2Deporture/Address/M2Deporture/Address/M2Deporture/M2Dep

# Baseline IT Information Worksheet for Agencies and Departments

Tax Collector and

Application Name	Application De	scription	Application Client Platform	Application Source
A complete	isting of all business applications	for the department/ager	try is available at	
Enterprise Applications	a supported by FDT for the stars	al use of the Relation Decision	strength and Constitution	al Officers
Te coulitionade approach	Enterprise A	pplications	scrients are consolution	an unice su
http://whenestel.cheney.com/l	A description of ISS enterprise	applications can be found	d at: heli 203v:tems%200esc	detion off.
		Contentar esta macementar		advanta har i
k an unit ablid.				
RES Advantage Financial Svittem C	CEEDE INVISIONIAN TEA 10	es pris paris con	IENA	
to an concorrectory are	reran, cartred Menagement C	TEN REQUIRE		
ments: A fee a liset connerts				
ctive and Planned IT Initiative	<b>2</b> 1			
ctive and Planeed IT Initiative	a way as well as future projects. In	clucing a summary of the	project costs and benefi	5
ctive and Planeed IT Initiative ify the IT projects currently under	E way as well as future projects. In	cluding a summary of the	project costs and benefi	ь.
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# TAB 3Data Collection Sheet – Software Inventory of Business Applications and<br/>Tools

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Pain Pain	n Beach County	
ou are here: PSC Ins	ide > Information Systems Servi	ces > Applications Services
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	Applications Services > AC Paraliting (e-Permits)	s/Managers > Business Application Documentation > ENG - Electro
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	Page This	
	Demostraest	Evid - Electronic Permitting (e-Permitta)
	Division	Land Development
	Application Contact	Lance Seller H
	Name(s)	Director of Land Development
		Engineering and Public Works
		Laura Yorkers
		Professional Brighteen
		Engineering and Public Works
	Service Area Responsible	AP8 - Amit Sewent
	Application Description	Web and Client Server based application used by County businesses who nee to apply for Roedway modification permits. The applications and associated support plans and documents are electronically routed thru. Engineering for evolution and accurved.
	Application Client	YD.HET; ASP.NET
	Application Client Pletform Version	Framework 4.0
	Application Schema Name	LANDDEV; LANDDEV_APP; LANDDEV_CONINECT
	Database Production Tostance	PHOD
	Database Production Version	ORACLE 11.3.0.2
	Database Production Alias	WEDPROD, WIDP, WEDP, WEDP
	Database Production Host/Server	EOCD02
	Dotabase Development	WDEV
	Version	ORACLE 11.2.0.2
	Database Development Alles	WEBDEV, W10D, DEV9
	Database Bevelopment Host/Server	GCDeVSV2
	Database QA Instance	NQA.
	Database QA Version	

http://poperal.pbcgev.org/\_a/%2Epbcgev%2Eptg%2E155%2Eptr/%2Enzanger%2ELint%2EBusiner.ApplicationDoc%2EAIDates%2EAiptif464014-0049/08-AMI

# TAB 3Data Collection Sheet – Software Inventory of Business Applications and<br/>Tools

Dusiness Application Documentation - ENG - Electronic Permitting (e-Permits)

Datamase QA Allas	WEBQA, W10Q
Database QA Host/Server	GODEV9V2
Source Control Solution	Harvest ; TPS
Source Control Project Name	
Reports Platform	Crystal
Reports Platform Varsion	2038
Runtlime Environment	Client Server: Internet
Authentication Source	Application
Application Source	In House Developed
Redwood Jebs	No
Cron John	No
Key Application	Yes
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# Focus Group Worksheet

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ets and initiatives support your and	b:		
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# Focus Group Worksheet

Beach County. Examples are mobile	edal interest to your focus Group. Discuss I computing, cloud computing, big data, 670	now these trands may impact ISS and (D, storage, etc.)	10.
te your focus Group's Goals in the Te nglish the Focus Group's Vision.	ort Box below. A gool is a broad statement o	of the long tarm results needed to	
ctive and Planned Internal Proje	cts and Initiatives Pertaining to the Foc	us Group Area	
fy the internal projects currently and acts and initiatives support your goals	larway, or planned, which will impact your F	oce: Group area. Explain how the	
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Technology	Description	s							0
		Application	Database	Desktop	Servers	Networks	GIS	Security	Countywide
Active Archiving	Active Archive is a method of tiered storage which gives the user access to data across a virtualized file system. Data migrates between multiple storage systems and media types such as hard disk drives and optical disks. Offloading data to cost effective storage where immediate access is not required will help reduce storage infrastructure costs.		x		X				This will increase efficiency and reduce storage infrastructure costs.
Big Data Management	Big data management is the organization, administration and governance of large volumes of both structured and unstructured data. The goal is to ensure a high level of data quality and accessibility for business intelligence and big data analytics applications. Big data management strategies are important to help contend with fast-growing pools of data. These include Binary Large Objects (BLOB) for images, multi-media, audio, large database systems, etc. The data storage requirements are significant involving many terabytes, or even petabytes, of information saved in a variety of file formats. Therefore, we will need to plan for how to store, manage, backup, archive, host and process and present big data. Policies for data retention will need to be further developed. Finally, new methodologies for supporting large data sets including BLOB storage need to be defined.		x		x				Effective big data management will help agencies locate valuable information in large sets of unstructured data and semi- structured data from a variety of sources, including call detail records, system logs and social media sites.
Biometric Applications	Biometric applications incorporate cryptographic technologies which support security features that enhance identity management (e.g., the new iPhone Fingerprint Scanner and U-Prove).	X						х	The biometric applications will enhance hardware, software, and data security.
Business Intelligence (BI) Platforms	BI platforms enable enterprises to build be Business Intelligence applications by providing capabilities in three categories: analysis, such as online analytical processing (OLAP); information delivery, such as reports and dashboards; and platform integration, such as Business Intelligence metadata management and			x	X				The BI technologies will provide the underlying platforms for implementing the County's Performance Management Program.

Technology	Description	Applications	Database	Desktop	Servers	Networks	GIS	Security	Countywide
	development environment. This intensive use of data will require increased processing power and more DBA involvement.								
Cloud Computing	Cloud computing is a style of computing in which scalable and elastic IT-enabled capabilities are delivered as a service using Internet technologies. Specifically, a government cloud refers to a particular type of community whose members are government organizations, presumably from the same or closely related jurisdictions and/or domains such as human services, public safety, etc. Palm Beach County operates a government cloud as a shared service to its external customers.	X	X	Х	Х	X	X	X	Cloud services are currently offered to municipalities and nonprofit organizations to enhance their operations and services and reduce operational costs. The program provides the County with an additional source of revenue.

Technology	Description	s							0
		Application	Database	Desktop	Servers	Networks	GIS	Security	Countywide
Crowdsourcing	Crowdsourcing is the practice of attaining needed services, ideas, and content by soliciting contributions from a large group of people, and especially from an online community, rather than from traditional employees or suppliers. It combines the efforts of numerous self identified volunteers where each contributor of their own initiative adds a small portion to the greater result. Crowdsourcing is distinguished from outsourcing in that the work comes from an unidentified public rather than being commissioned from a specific, named group.	X							An example of how Palm Beach County can benefit from crowdsourcing is based on open data, where citizens are encouraged to invent new ways of applying public data to today's challenges. While the County agencies will always need to manage multiple information channels and services, they can now draw on talent and creativity from outside their boundaries to promote better knowledge, understanding and performance. Engaging citizens in this manner will require the publication of county data sets ("data mashups").
Desktop Virtualization	Desktop virtualization is a technology that decouples a PC desktop environment from a physical device so that the virtual machine (VM) of the PC desktop stored in a centralized server can be accessed from a remote client device through a network. The technology is also used as a means of providing access to Windows applications on non-Windows endpoints including tablets, smart phones and non-Windows-based PCs and laptops.			X					Desktop virtualization provides low- cost, highly accessible, desktop computing services. The technology reduces support costs and improves manageability of the environment.
Disconnected Architecture	Disconnected architecture is a method of retrieving a record set from the database and storing it giving the ability to do many CRUD (Create, Read, Update, Delete)		Х						This technology assists in increasing the efficiency and performance of the databases.

Technology	Description	S							
		Applications	Database	Desktop	Servers	Networks	GIS	Security	Countywide
	operations on the data in memory. It can be re- synchronized with the database when reconnecting. This synchronization of local data stores with enterprise databases could have an effect on availability requirements.								
GIS Advanced Analytics	GIS advanced analytics provide tools to transform data into useful knowledge and understanding to support decisions. Decision-makers need situational and location- awareness.						X		Ideas and alternatives can be tested and evaluated in virtual environments to minimize risk, increase understanding and potential impacts of decisions, and to enhance performance.
GIS Cloud Technology - ArcGIS Online	ArcGIS Online facilitates access and sharing of maps and geographic information across workgroups, organizations, enterprises, communities, and the public to use, create, analyze, share, and to do collaborative work using a shared information.					X	X		Fully leveraging the ArcGIS cloud infrastructure may result in lower infrastructure costs.
GIS Applications for Mobile Devices	With the growth in mobile devices and applications, GIS mobile applications are critical components of the infrastructure. The technology enables our staff to develop once and publish into multiple platforms (e.g., Android, iOS, and Windows 8) as with our Damage Assessment applications.						X		These applications will empower more mobile decision-support capabilities.
GIS Data Hosting	The GIS Service Bureau provides data hosting services that ensure the cost-effective use of the Enterprise GIS system. Marketing approaches will need to be developed for offering these services outside of the BCC agencies.						X		GIS data hosting provides updated information for municipalities. It also supports adherence to standards.
GIS Data Integration Technologies	GIS data integration technologies link tabular data from business systems across the enterprise with the GIS spatial data offering powerful decision-making support.						X		As departments realize the efficiencies, the value of new information created, along with visual representation; there will be increased demand for integrating GIS data with other types of business data.

Technology	Description	S							
		Application	Database	Desktop	Servers	Networks	GIS	Security	Countywide
Globalized Search	Globalized search or context-less search, takes user input and searches across numerous disparate sources for matching text. The user inputs information, the parser identifies potential sources and displays most likely matches from all sources.	X							An example of how this technology may be used is a website that combines contact information, document libraries and other public records.
Hybrid Mobile Technologies (HTML5, CSS 3, JQuery)	Hybrid mobile technologies are critical for developing highly interactive, modern web interfaces which can be used across modern platforms. Developers write applications targeting mobile platforms without learning the platform native language. HTML, CSS and JavaScript are used to interact with the device peripherals. A single project can be recompiled to different devices without rewriting the code (e.g., PhoneGap).	X							
IP version 6	Internet Protocol version 6 (IPv6) is the next version of Internet Protocol (IP), designed to overcome several key limitations of IP version 4 (IPv4), the most widely used networking protocol. The main benefits of IPv6 are vastly increased address space, integrated security and quality-of-service mechanisms, as well as support for auto-configuration and mobility.					X			IP v6 allows Network Services to support a greater number of interconnected networks and efficiently support external agencies that use common IP addressing by providing routable IPv6 addresses.
Location-aware Applications	Location-aware applications use the geographical position of a mobile worker or an asset to execute a task. Position is detected mainly through satellite technologies, such as a GPS, or through mobile location technologies in cellular networks and mobile devices.	X					X		Examples of location-aware applications are fleet management and mass transit applications with mapping, navigation and routing functionalities, government inspections and integration with geographic information system applications.
M-Government	M-Government is the adoption of mobile technologies to support and enhance government performance as well to foster a more connected society.	X	X	X	X	X	X	X	Mobile applications facilitate anytime and anywhere computing such as mobile payments for government

Technology	Description	S							
		Applications	Database	Desktop	Servers	Networks	GIS	Security	Countywide
									services.
Mobile Device and Wireless Technologies (Employee Use)	County issued as well as employee owned mobile devices (BYOD) are currently in use and require policies and procedures to support them. It is projected that over the next three years, employees will increasingly use mobile devices to access email, manage projects, manage documents and purchase orders, fill out invoices and receipts, etc. Our increasingly mobile enterprise will leverage the existing Internet infrastructure and TCP/IP installations for administration of a wide range of devices and operating systems as well as GIS applications. The use of mobile devices will add more responsibility for assets, and increased security threats. Applications will have to support multiple browsers.	x	x	x	x	x	x	x	These devices connected to our network will have the advantages of increasing staff mobility, improved productivity and should help increase job satisfaction.
Mono	Mono is an open source project that allows Microsoft .NET developers to target multiple platforms using C#. Mono applications can be written to run on Windows platforms, Android, Linux and a number of other platforms.	X							Users can use a variety of platforms to applications and data.
Near Field Communications (NFC)	Near Field Communication (NFC) is a wireless technology that enables a variety of contactless and proximity-based applications, such as payments, information retrieval, mobile marketing and device pairing. It has an operating range of 10 cm or less using the 13.56 MHz frequency band.	X				X			NFC incorporates NFC tags which provide real-time information (e.g., visitors to a County wildlife refuge can describe the trees, birds or other wildlife simply by placing their phone next to a decal).
Open Data	Open government data is public data that is machine readable, raw and not in aggregate form, accessible to anyone without any requirement for identification registration, available for any purpose (possibly in an	X			X			X	Palm Beach County can set the tone for open data both by releasing data and shaping the policy environment. The County can be a key source of

Technology	Description								
		Applications	Database	Desktop	Servers	Networks	GIS	Security	Countywide
	open format), and not subject to any trademark or copyright. The purpose of open government data is to increase transparency, encourage the participation of citizens and other stakeholders, and support for the emergence of new services that are based on that data.								open data. We will need to establish clear rules to govern the type of data that should, or should not, be released, with particular focus on safety, security, privacy, liability, intellectual property rights, and confidentiality. ISS can champion the focus on open data across agencies and help make sure that the default decision is to release data whenever possible. The County can also seek public – private partnerships or collaborations to support open data activities.
Platform as a Service (PaaS) – Database	PaaS is a broad collection of application infrastructure (middleware) services including application platform, integration, business process management and database services.		х		Х	Х			PaaS can be used for leasing of database services to non-County entities providing additional sources of County revenue.
Server Virtualization	Virtualization is the abstraction of IT resources that masks the physical nature and boundaries of the server resources from resource users.			Х	Х				There will be continued consolidation of County servers, reduced Oracle licensing costs, and ease of use from newer, faster technology.
SharePoint 2013	SharePoint 2013 has been optimized for the way people work, providing the familiar, consistent view of information, collaboration, and process. It also provides a more comprehensive, easily managed and integrated platform than previous versions.	X	X	X	X	X	X	X	The technology has a number of strategic uses for the County including performance management, content management, and collaborative and business process applications.
SharePoint Site for Desktop Group	Enhancements to the SharePoint software will provide opportunities to streamline existing processes. A SharePoint site for the Desktop Group could be used for sharing training documents, and Wiki answers with read and search capabilities, and videos. In addition, the Helpdesk could search the Desktop Site for similar			x					Desktop resources will be more efficiently utilized.

Technology	Description	Ś							<i>c</i>
		Applications	Database	Desktop	Servers	Networks	SIS	Security	Countywide
	problems and resolutions.								
Single Sign on	This technology involves the merging of user IDs and passwords across systems.				Х			Х	There are security challenges and support issues between application systems and Secure Identity Management (SIM).
Social Media Technology	Social media technologies provide an online environment in which content is created, consumed, promoted, distributed, discovered or shared for purposes that are primarily related to communities and social activities, rather than functional, task-oriented objectives. "Media" in this context is an environment characterized by storage and transmission, while "social" describes the distinct way that these messages propagate in a one-to-many or many-to-many fashion.	x	x	x	X	x	x	x	Social Media is being adopted by various County agencies such as Public Affairs, Libraries, Fire Rescue, Emergency Management, and Palm Tran. The technologies being incorporated are mainly Facebook, Twitter, and YouTube.
Speech Interaction/ Recognition and Natural Language Parsing	This technology provides developers with the ability to accept more natural language input from a user (through voice or text input), parse and then process the request (e.g., Siri and Android).	X							Speech interaction and recognition will be incorporated in applications where appropriate.
Storage Technologies	Binary storage is expected to rapidly increase due to audio/video in a database. Applications development on the Linux server platform will require additional funding and staff. Policies for data storage lifecycle will be developed, including impact analysis for retaining data beyond its intended use.	X	X	X	X	X	X	X	Providing enterprise applications and data management services to local government agencies will require the ability to rapidly expand storage capabilities. This will result in increased infrastructure costs as well as increased revenues.
System Center Configuration Manager	SCCM is a systems management software product by Microsoft for managing large groups of computers running a variety of platforms. It provides remote	Х	X	Х	X	Х			SCCM will improve customer service and increase IT support staff efficiency through increased

Technology	Description	S							a)
		Application	Database	Desktop	Servers	Networks	GIS	Security	Countywide
(SCCM)	control, patch management, software distribution and operating system deployment, network access protection and hardware and software inventory. It provides a centralized, unified IT infrastructure thus reducing duplication and effort previously required by locally administered systems. It also increases productivity by enabling desktop management, administration and reporting capabilities.								standardization, and streamlining business processes, while recognizing the varying differences in business needs cross departmental lines.
System Center Operations Manager (SCOM)	SCOM is a cross-platform data center management system. It uses a single interface that shows state, health and performance information of computer systems. It also generates alerts according to some availability, performance, configuration or security situation.			X	x				SCOM will assist ISS by being proactive in assuring system performance and availability.
Touch Technology for Desktop	The next operating system for the desktop will most likely utilize touch technology. This will impact budget, applications and training requirements. Integration requirements for existing internal applications will have to be addressed. The timing of project implementation will be critical.			X					Although a significant amount of training may be required, touch technology will improve the user interface and application usability.
Unified Communications	With the implementation of VoIP there will be new ways of providing support. VoIP will combine voice and data networks in an effort to deliver cost savings. There will be new devices to support such as cameras and microphones. Ways of capturing Chat documentation will need to be defined. The Desktop Group can use the IM and videoconferencing technologies to enhance personal interaction with customers.				x	X		x	Streamline support delivery.

Department/ Agency	Business Application	Activity*	Summary Description	Start	Finish
Enterprise	HRIS				
•		New Development	Emergency Activation time management	2/201 4	6/2014
			Automation of the creation of the Training and Experience (T&E) criteria and rating of applicants	3/201 3	6/2014
			Development of the Disciplinary Action module and retire current FoxPro application	2/201 5	10/201 5
			Development of the I-9 Immigration module	10/20 14	4/2015
			Development of the Travel Reimbursement module	7/201 4	10/201 4
			Development of the Job Reclassification module	1/201 6	6/2016
			Development of the W2 and W4 Module	4/201 4	9/2014
			Development of the Direct Deposit module	4/201 4	9/2014
			Document Management Module	4/201 4	7/2014
		Enhancement	Integration of the Workers Compensation functionality	1/201 4	4/2014
			Add Mobile capability for the Online Application Module inclusive of Job announcements	7/201 4	9/2015
		Technical Refresh	Implement functionality so the application will be "browser unaware" meaning, the ability to function across all browser platform	10/20 14	12/201 4
			Migrate to Dot.Net Framework 4.5	6/201 4	11/201 4
	TEA				
		New Development	Develop the Work Schedule Management module	11/20 14	9/2015

Department/ Agency	Business Application	Activity*	Summary Description	Start	Finish
		Enhancement	Add the flex time functionality	10/20	12/201
				14	4
			Addition Earning Codes and Leave Type management	1/201	4/2014
				4	
			Add Mobile capabilities	5/201 5	9/2016
		Technical	Implement functionality so the application will be "browser unaware"	2/201	9/2015
		Refresh	meaning, the ability to function across all browser platform	5	-,
	Time Entry	New	Development of the Phase 1 for the Migration from Time Server	1/201	4/2014
		Development		4	
			Development of Phase II additional functionalities need for Time Entry	5/201	5/2015
				4	
	TED	Technical	Migrate to ASP.NET and enable the ability to function across all browser		
		Refresh	platforms		
Clerk Board	Advantage Financial				
Community		New	Client Self Service and Common Service Eligibility	1/201	9/2014
Services		Development		4	
	All Applications		Develop automated process for interfacing all Direct Payments to Advantage	4/201 4	10/201 4
	All Applications	Technical	Reengineering of all the Code Table maintenance from PowerBuilder to .NET	1/201	12/201
		Refresh		4	4
	Human Services	Technical	Reengineering of the Human Services application from PowerBuilder to .NET	9/201	9/2015
		Refresh		4	
	Senior Services	Technical	Reengineering of the Human Services application from PowerBuilder to .NET		
	(DOSS)	Refresh			
	All Applications		Migrate to ASP.NET and enable the ability to function across all browser platform		

Department/ Agency	Business Application	Activity*	Summary Description	Start	Finish
Engineering &	Common	New	Develop and implement a common login module for all Engineering users to	2/201	5/2014
Public Works		Development	access present and future applications	4	,
			Project Tracking System for all divisions	4/201 4	8/2014
	IMS	Enhancement	Modify the Intersection Maintenance System (IMS) to integrate with PTS	10/20 14	3/2015
	ePermitting	Enhancement	Integrate the project tracking for Zoning Applications (currently in FoxPro)	6/201 4	12/201 4
		Technical	Implement functionality so the application will be "browser unaware"	1/201	3/2014
		Refresh	meaning, the ability to function across all browser platform	4	
	COTS	Technical	Implement functionality so the application will be "browser unaware"	1/201	3/2015
		Refresh	meaning, the ability to function across all browser platform	5	
	PICS	Technical Refresh	Reengineer to Dot.Net. will utilize the Commodities application developed for Public Safety	6/201 4	2/2015
	Pavement	Technical	Reengineer to Dot.Net	4/201	8/2015
	Markings	Refresh		5	
	Personnel	Technical Refresh	Reengineer to Dot.Net and SharePoint	4/201 5	6/2015
	Pink-Blue Slip	Technical Refresh	Reengineer to Dot.Net	10/20 15	3/2016
Environmental	EEDB				
Resource					
Management					
		New	Equestrian Online Permitting	3/201	3/2014
		Development		4	
			Permit Acquisition Tracking	7/201 4	3/2015
			Inspections - common screen for all of ERM's various inspections, and	1/201	6/2015
			individual custom screens for specific inspections.	5	
			Online Permitting, one stop shop for the different permits issued by ERM	1/201 5	6/2015
			NRS Monitoring and Acquisition QA/QC Lockdown. Create the ability for	6/201	9/2014

Department/ Agency	Business Application	Activity*	Summary Description	Start	Finish
			designated staff to review and approve entered monitoring & acquisition	4	
			information and to lockdown the entries in order to prevent the possibility of		
			non-authorized/accidental user changes.		
			NRS Hydro Data Loggers Upload. NRS uses several rain gauge and well data	10/20	1/2015
			loggers but there is no mechanism to upload that data directly into our	14	
			Hydrological Monitoring module.		
			NRS GIS Station Upload. The NRS section of EEDB makes extensive use of	10/20	1/2015
			"Stations" which are any object (gate, fence, staff gauge, well, wildlife)	14	
			that has a geographic component. Each station must be typed into EEDB		
			and then the GIS file must be entered into the County's Enterprise GIS		
			database separately. This feature would seek to combine the two whereby		
			when the coordinates of a station are entered into EEDB, it would		
			automatically be created in the GIS.		
			Online Permitting, one stop shop for the different permits issued by ERM	1/201	6/2015
				5	
		Enhancement	Invoice component of Agreement Module. This will enhance and complete	1/201	5/2014
			expense agreements by tracking and routing vendor invoices	4	
			and recording SBE payments.		
			Records Management. This module will handle records management from	3/201	9/2014
			the point of staff request for storage to storage location and then destruction	4	
			of the records based on state/federal/ERM standards.		
			Routing Module enhancement to allow ERM staff to maintain the steps	10/20	3/2016
				15	
			Add the Ability to be fully integrated with mobile devices	10/20	3/2016
				15	
			NRS Planning & Support Cleanup & Overhaul and Fence Installation	3/201	9/2015
			Master/Sub relationship management	5	
			Natural Resources Stewardship (NRS) Monitoring and Acquisition QA/QC	3/201	9/2015
			Lockdown – Create the ability for designated staff to review and approve	5	
			entered monitoring and acquisition information and to lockdown the entries		
			in order to prevent the possibility of non-authorized/accidental user changes.		
			NRS Incident and Species Reporting modifications to allow for the generation	10/20	1/2016

Department/ Agency	Business Application	Activity*	Summary Description	Start	Finish
			of customized reports and a supervisor routing component	15	
			NRS Wildfire/RX update. The current wildfire module does not address Rx	10/20	1/2016
			burns. In addition, RX burn planning is integrated into the management plan	15	
			module. This update would combine those two areas into their own module		
			outside of the management plan.		
		Technical	Migrate Crystal Reporting to Crystal Enterprise	3/201	6/2014
		Refresh		4	
			Enable the ability to function across all browser platforms	3/201	12/201
				4	4
	ERM Intranet	New	Create a SharePoint Website	1/201	3/2014
		Development		4	
	Sea Turtle				
	Tracking				
		Technical	Migrate to ASP.NET and enable the ability to function across all browser	6/201	9/2014
		Refresh	platforms	4	
Facilities	Website	Technical	Replace current intranet website with SharePoint	12/20	2/2014
Development		Refresh		14	
& Operations					
	Enterprise**	New	Property Management and Tracking System:	10/20	12/201
		Development	Tracking of County Owned Property / Facility through life cycle. Single place	14	6
			Ouery Access to Property records for other County Staff		
			<ul> <li>Project Request Tracking</li> </ul>		
			Contractor Tracking		
			Site Survey Documentation		
			Land Acquisition Process Tracking		
			<ul> <li>County Acquire</li> <li>County Divect</li> </ul>		
			County Divest     Project Design Phase Tracking		
			Financial Definition Tracking		
			Property Maintenance Tracking		
			• Maintain		

Department/ Agency	Business Application	Activity*	Summary Description	Start	Finish
	Entormaioo	Enhancoment	<ul> <li>Renovate</li> <li>Vacate</li> <li>Demolish</li> <li>Utility Management:</li> <li>Track County Facilities' utility costs;</li> <li>Ability to show "Green Building" impact and improvements;</li> <li>Reporting functionality improvements;</li> <li>Charge back processing;</li> <li>Ties into Maintenance and Leasing of properties</li> </ul>	10/20	2/2015
	Enterprise	Enhancement	<ul> <li>Maximo - Time Entry tracking for;</li> <li>Maximo - Time related back to work orders         <ul> <li>80 Hour Crystal Report</li> </ul> </li> <li>Fleet System - Time related back to work requests</li> <li>Time cards         <ul> <li>Supervisors must verify work completed matches Maximo and HRIS</li> <li>Supervisors fill out a spreadsheet of staff time to be re-entered into HRIS &amp; Time Server.</li> </ul> </li> <li>HRIS - Time not worked for County HR processing     </li> </ul>	10/20	3/2015
			Fixed Asset Tracking. Deployment of FATS	7/201 4	9/2014
	Fleet Management	Enhancement	<ul> <li>Countywide Impact: Fleet Management system</li> <li>Pooled Vehicle Management</li> <li>Automate the tracking and maintenance of pool vehicles throughout the</li> <li>County; Automate the reservation, pick up and return tracking</li> </ul>	7/201 4	12/201 4
			<ul> <li>Countywide Impact: Fleet Management system</li> <li>Track green house gas emissions related to Fleet vehicles.</li> <li>Automate the tracking and maintenance of pool vehicles throughout the County; Automate the reservation, pick up and return tracking.</li> </ul>	2/201 5	12/201 5
Palm Tran	BPT (Bus Pass Tracker)	Enhancement	Ability for the Agencies to track sales by individual social workers; Interaction with One E-App, a state initiative for a single application for all agencies; Tracking bus passes at the sub agency level	3/201 4	8/2014
		Technical Refresh	Enable the ability to function across all web browser platforms.	2/201 4	3/2014
	Service and	New	Service and Complaint tracking for Palm Tran Connection call center	3/201	12/201

Department/ Agency	Business Application	Activity*	Summary Description	Start	Finish
	Complaint	Development		4	4
	Iracker				
	Lost & Found	New	Online Web application for staff to track items on let on buses. Will have a	9/201	8/2015
		Development	public interface access to search for items.	4	
	Office Supply	New	Track office supplies for multiple office locations.	9/201	8/2016
	Tracker	Development		5	
	Online Job	New	Online Job Application for Palm Tran	2/201	12/201
	Application	Development		4	4
Planning	ePZB	Enhancement	Condition Monitoring – Enhancements in progress will allow easy tracking of	In	3/2014
Zoning &			BCC conditions of approval and give agencies the ability to monitor & close	Progress	
Building			their own conditions.		
			Building Holds & Flags module will provide the ability for improved	In	9/2014
			communication by integrating into existing ePZB modules. Holds can be	Progress	
			placed or informational messages given when events occur.		
			Records Tracking (Permits/Request) Will eliminate the Records access	In	6/2014
			database that does not easily accommodate multiple users and will also	Progress	
			provide enhanced records tracking.		
			Hearing Maintenance – Enhancements to the existing Zoning module for	4/201	6/2015
			better historical record keeping and simplified processing. New functionality	4	
			in other modules.		
			Fines & Liens – Provide better integration among the ePZB modules that	1/17	6/17
			produce & process liens.	-	
			Contractor Investigations – Re-design of the existing module to improve	10/17	3/18
			efficiency.		
			Confidential Records – Allow records to be flagged to prevent accidental	4/18	6/18
			release		
		New	Electronic Plan Review and Online Applications.	10/20	12/201
		Development		14	5
			Official Digital File – This will simplify the records request process saving staff	4/201	6/2015
			time and effort.	4	
			Planning Module	7/201	6/2016
				5	

Department/ Agency	Business Application	Activity*	Summary Description	Start	Finish
			Kiosks – Will eliminate access databases and allow for consolidated reporting	4/17	9/17
			from ePZB.		
			Foreclosures/Unsafe Structures – An automated way of tracking foreclosed	6/17	12/17
			properties and unsafe structures is needed.		
			Mobile Application for ULDC	6/18	12/18
		Technical	The older ePZB modules (Addressing, Accounting and Zoning) need to be	4/201	6/2015
		Refresh	upgraded to be able to eliminate unsupported technology inclusive of the	4	
			ability to function across all browser platforms.		
			TabFusion Image load and index – Loading all data into ePZB will eliminate	1/201	3/18
			the need for TabFusion.	4	
Parks &	Main Trac	New	Work Order, Fixed Assets, and Warehouse inventory system. Will allow	6/201	6/2015
Recreation		Development	Parks to track cost associated with maintenance Parks system.	4	
	Rec Trac –	New	Will allow for league scheduling to be input in RecTrac. Will streamline	10/20	10/201
	Athletic League	Development	existing process	14	5
	Rec Trac –	New	Will allow Parks staff to take back control of lighting systems by	10/20	10/201
	Musco Lighting	Development	scheduling/programming use through RecTrac.	14	5
	Rec Trac –	New	Will allow staff to view permits via a smartphone and Tablet devices.	2/201	1/2015
	Mobile	Development		4	
	Rec Trac –	New	Possible replacement for Campground Manager	TBD	10/201
	Campground	Development			5
	Web Trac	Technical	Website redesign	1/201	6/2014
		Refresh		4	
	Nova Time	Enhancement	Interface Nova Time with TAS	10/20	3/2015
				14	
	Volunteer	New	System that allows for automated tracking of volunteer hours and volunteer	7/201	12/201
	System	Development	employees. Would like to replace existing application, Volunteer Works, with	4	4
			a web-based application that allows for users to apply as a volunteer on the web.		
Public Safety	Special Needs	Enhancement	Modify to allow for a more integrated system for both ACC and EM usage and	1/201	12/201
			integrate with the Health Department and Hospitals	4	4
	DART	Enhancement	Add the capability to operate on the Windows Mobile Platform	10/20	3/2015
				14	
# Active and Planned Software Development Projects: 2014-2016

Department/	Business	Activity*	Summary Description	Start	Finish
Agency	Application				
	Consumer	Technical	Convert the current Consumer Affair Web application to ASP.NET.	2/201	8/2014
	Affairs	Refresh		4	
	CATS	Technical	Convert current PowerBuilder CATS application to DOT.NET	2/201	10/201
		Refresh		4	4
Purchasing	Tab Fusion	New	Phase II - Procurement and Contracts		
		Development			
	VSS	New	Online bids and solicitations		
		Development			
	Advantage	Enhancement	Further integration with WebEOC		
Water Utilities	CIP	Enhancement	Modifications needed to support new contract types for Standalone	2/201	09/201
			Professional Services contracts and Design Build contracts. Several modules	4	5
	Accel		within CIP will need to be modified to support these changes.		
	Asset		Implement an asset management program to help the transition from a growth to custoinable utility. An asset management program provides a		
	Management		systematic method of minimizing the life cycle costs of utility assets meeting		
			desired service levels and controlling risk in the most efficient manner.		
		Technical	Upgrade to PowerBuilder 15	10/20	9/2016
		Refresh		15	
			Upgrade to Oracle 12	10/20	9/2016
				15	
	CIS	Enhancement	Enhance current Backflow module in CIS to support the input, tracking and	1/201	12/201
			management of Backflow Test Results from the new external web based	4	5
			application, including Notification changes.		
			Modifications to CIS to support the AMI Project Initiative. Interface with	2/201	12/201
			Sensus for MR Import/Export, Billing. Including MDM File Layout and Testing.	4	4
			COM: Provide the functionality to post Boil Water Notifications	2/201	12/201
				4	4
	Credit card Payments for Web, Kiosks, Over the Counter, and IVR		1/201	6/2016	
			4		
	Cash Receipts (CR) interface with PBC Finance		10/20	3/2015	
				14	
	Ability to interface between CIS and Maximo for Complaint Tracking.		3/201	3/2016	
			Including entry of the complaint by the call center and updates from Maximo	4	

# Active and Planned Software Development Projects: 2014-2016

Department/ Agency	Business Application	Activity*	Summary Description	Start	Finish
			on the status of the complaint for the account and/or service location.		
			Ability to transfer customer security deposits from their current but closing	2/201	9/2014
			account to their new opening account as requested by their customers.	4	
			Deferred Payment Plan enhancement to allow Payments over the counter,	2/201	10/201
			IVR, and Web	4	4
			Modifications and enhancements to the DTS module to support WUD's Line	4/201	9/2015
			Connection Policy, Plan Review/Approval, Rate Quote quests, and	4	
			Redevelopment. Additional enhancements to allow look up of documents from CIS for Lots.		
			Enhancement to improve the ability to associate lift stations to service	3/201	9/2015
			locations, required for notifications and better management during line 4 breaks, hurricane season, and other significant events.		
		Outbound Campaign, ability to notify customers with regard to collections, delinguent turn-off, and backflow preventer notices. 6/2		6/201 4	9/2015
			Service Order module changes include a new SO Location map (GIS) and the	2/201	9/2014
			ability to auto assign service orders to meet new requirements.	4	572021
			Support for recent and potential UPAP changes including Removal of the	2/201	9/2014
			Secondary Customer policy and their Tampering Policy.	4	
		Technical	Upgrade to PowerBuilder 15	10/20	9/2016
		Refresh		15	
			Upgrade to Oracle 12	10/20	9/2016
				15	
	eCIS	Enhancement	Add functionality to support AMI including the ability for customers to access	2/201	9/2014
			their usage data and to an alert for customers	4	
		Enhancement	Ability for WUD Customers to maintain their contact information for	2/201	9/2014
			notifications by phone, text or e-mail.	4	
		Technical	Upgrade .NET	10/20	9/2016
		Refresh			
			Upgrade to Oracle 12	10/20	9/2016
	eLien	Enhancement	hancement Enhancements to current Lien Reports to improve usability for customers,		9/2014
needed to reduce calls to WUD for additional support.		4			
		Technical	Upgrade .NET	10/20	9/2016

### Active and Planned Software Development Projects: 2014-2016

Department/ Agency	Business Application	Activity*	Summary Description	Start	Finish
		Refresh		15	
			Upgrade to Oracle 12	10/20	9/2016
				15	
	SAS	Technical	Upgrade to PowerBuilder 15	10/20	9/2016
		Refresh		15	
			Upgrade to Oracle 12	10/20	9/2016
				15	
	NEW	New	Backflow Entry System (.NET) Ability to have Plumbing Contractors enter	3/201	9/2015
		Development	their test results directly, this will interface with the existing Backflow module in CIS.		

#### \*Activity Categories are "New Development", "Enhancement", or "Technical Refresh".

#### **Categories of Programming Work**

New Development: development of new software applications, interfaces and modules.

**Application Maintenance**: maintenance of existing software applications, interfaces, and modules (e.g., legislative changes, reorganizations, break/fixes).

**Application Enhancement:** addition of new features and functionality to an existing software application.

**Technical Refresh:** implementation of software updates required for continued operation of applications and interfaces; typically involves upgrading to latest software release.

# Capital Project Funding Approved for FY 2014 and Projected for FYs 2015-2017

Project Title	Project Description	FY 2014	FY 2015	FY 2016	FY 2017	Total
Microsoft Enterprise Agreement	Renew license to upgrade to latest version of Microsoft Office suite (Word, Excel, PowerPoint).		\$1,800,000	\$1,800,000	\$1,800,000	\$5,400,000
Enterprise Back Storage Growth	Upgrade replacement of the Data Domain Appliance system head with faster processor, additional memory and more disk capacity; purchase additional Enterprise backup software storage licenses.		450,000	250,000	150,000	850,000
Server Replacement and Growth	Purchase additional IBM Power7 CPU processor core licenses to meet the growing demand in system utilization by web application database systems.		350,000	100,000	500,000	950,000
Server Replacement and Growth	Replace blade server chassis hardware, CPU and memory boards for existing and new Wintel Enterprise virtual server systems.		350,000	300,000	300,000	950,000
Network Attached Storage (NAS) File Storage System	Purchase additional storage space for existing IBM V7000 Unified Storage system (to support storage growth and IT agency consolidation of file system shares.		250,000	250,000	250,000	750,000
Storage Director Hardware	Replace Fiber Channel Storage Director hardware which connects Unix and WinTel Server systems to HDS and IBM storage arrays.		350,000	70,000	50,000	470,000
Archive and E- Discovery Replacement	Replace existing archive solution (Mimosa) and e-discovery appliance which were purchased in 2007. This will require the purchase of a replacement product (software, storage and server hardware) and professional services support to migrate the data from Mimosa to the new product.		500,000	200,000	200,000	900,000
CITRIX Expansion	Purchase of additional Citrix software server and client licenses and server system resources (CPU & Memory cards) to support Virtual Application and Desktop hosting solution.		250,000	70,000	70,000	390,000
Block Storage Systems Consolidation	Consolidate storage platforms for Microsoft/Intel Exchange, VMware, SQLServer and Unix Power (Oracle Database) systems platforms to facilitate DR failover capabilities, leverage internal staffing skill sets, reduce maintenance costs and better utilize storage assets.		1,500,000	500,000	300,000	2,300,000
Server Management System	Implement system monitoring software for security compliance management and auditing of system user accounts, file systems, patch management and system resources for Enterprise and Wintel platforms.		220,000	80,000	50,000	350,000
BUSINESS	Purchase of two additional SAP BUE Server Processor licenses.					

# Capital Project Funding Approved for FY 2014 and Projected for FYs 2015-2017

Intelligence	ISS will have consolidated two separate Business Objects				
System	environments onto 1 by OCT 2014. The additional CPU license				
Expansion	will allow us to scale up to meet the increased processing	140,000	72,000	70,000	282,000
	demand on the single application environment.				
Disaster	Hardware for WinTel and Unix systems to support multi-site				
Recovery &	failover capabilities.	200,000	200,000	200,000	600,000
Business	'	,	,	,	,
Continuity					
WinTel Server	Purchase of additional IT system components needed for the				
Platform	new data center and establishing DR failover capabilities for	350,000	150,000	250.000	750,000
	Vista Center.		,	,	,
Network	Purchase software to assist in monitoring the availability of IT				
Operations	resources including bardware and applications	100.000	150 000		
Center		100,000	130,000		
Video	Maintain and enhance delivery of streaming video services to				
Conferencing	the Internet as well as the use of enterprise video conference				
and Distribution	cervices between facilities and to remote locations outside the				
	County This includes the phased replacement of all enterprise	100.000	100 000		
	conferencing systems	100,000	100,000		
Windows					
Wireless	Expansion of wireless network to eliminate AT&T circuits at				
Connectivity	existing locations and also bring new locations online where				
	fiber is not a cost effective option; also includes funding for				
	maintenance of >900 existing in-building wireless access points.	250,000	250,000		
Network	Replace end of life equipment pursuant to Cisco's best practices				
Equipment	recommendations. This project also accounts for the upgrade				
RR&I	of network capacity to support increasing customer demand and				
	transitioning the core transport service to optical wave-length				
	switching to accommodate increases in bandwidth demand.	750,000	750,000		
Fiber Build-out	Continue expanding the County's private fiber network to PBC		•		
of PBC Network	facilities for maximizing performance and reducing ongoing				
	expenses paid to AT&T.	750.000	750.000		
Belle Glade	Extension of the County's fiber network to the West County				
Fiber Run	Administration Campus where the fiber will be connected to the				
	School District's tower which will enable network access to				
	several nearby County facilities. The savings from decreased				
	reliance on AT&T will have back the capital investment in lass	000 000	500.000		
	them 4 waves	900,000	500,000		
	unan 4 years.				
Core Network	Re-architect the Network core to mitigate the risk of a single				
Upgrades	failure impacting more than one method of network transport.				
	These architectural changes will layer the network transport				

# Capital Project Funding Approved for FY 2014 and Projected for FYs 2015-2017

	across multiple tiers increasing survivability and performance.	400,	000	400,000	
Network	Manage the design and daily operation of the County's Network				
Security/	Security including firewalls, foreign networks, virus control, mail				
Threat	handling, authentication and intrusion management systems.				
Management	This also includes encryption necessary to meet certain Federal				
	and State data privacy requirements.	300,	000	200,000	
Cable	Provide funding for data and voice moves, and other adds and				
Infrastructure	changes in County facilities.	100	000	100,000	
Maintenance					
Fiscal Year Totals		\$9,162,	000	\$7,242,000	

### Linking ISS Projects and Initiatives with the ISS Strategic Objectives

Project Title	Project Description		Strategic Objectives Supported By Projects and Initiatives							
		1	2	3	4	5	6	7	8	
Agile Development Methodology	Evaluation of our current application development processes and the implementation of a consistent agile methodology across development teams.	S						S		
Asset Management	ISS is reviewing its asset management program with the objective of improving the processes and support systems. Of particular concern is the still questionable reliability of the obsolete scanning guns. A CIP is being prepared for FY 2015 requesting funding for acquisition of new scanning guns and software interfaces. ISS is also promoting adoption of the FATS system for Countywide use. ISS will also initiate a project to convert existing FoxPro and PowerBuilder legacy applications to newer software versions.			L			L			
Benchmarking and Performance Measurement	ISS has identified the mix of measures that provide quantitative information (input, output, costs) and qualitative information (efficiency, outcome). To that end, ISS "key" performance measures are published in the FY 2014 budget book. This is an ongoing initiative and the project also involves comparing key performance indicators of Palm Beach County with benchmark information compiled by peer counties.						L	L		
Bring Your On Device (BYOD) Customer Surveys	BYOD refers to the practice of allowing employees and other users to utilize personally selected and purchased client devices enterprise applications and access data. One of the primary strategic initiatives of the IT Security Committee is the establishment of technical and security architectures for the mutual support and protection of mobile devices as part of the County's infrastructure. The committee will develop and publish policies and procedures addressing the appropriate use of BYOD devices in County government.	P		L						
	departments supported by ISS (annually).									
Crowd Sourcing	An example of how Palm Beach County can benefit from crowd sourcing is based on open data, where citizens are encouraged to invent new ways of applying public data to inform public policy decisions. While County									

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- Legend: S = Short term
  - M = Medium term L = Long term P = Periodic

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		1	2	3	4	5	6	7	8
	agencies will always need to manage multiple information channels and services, the Internet and crowd sourcing tools make it possible to draw on talent and creativity from outside their boundaries. Crowd sourcing could also create new commercial opportunities, saving the County money and benefit the private sector as well.								
Desktop Virtualization	Desktop virtualization is a software technology that separates the desktop environment and associated application software from the physical client device that is used to access it. ISS will identify existing deployments virtual desktops establish a formal project to extend virtual desktop deployments to work groups in Board departments.			L					
Employee Self Service	ISS will build additional self-service functions in the HRIS system. This will enable staff and customers to resolve the majority of the common problems and complete many routine service requests without needing to contact the Help Desk.	L							
Existing Community Partners	Agreements for shared services are in place with 36 external agencies including governments and other public sector organizations. This is possible through Palm Beach County's government cloud and shared services network infrastructure. Everyone benefits from this arrangement by reducing costs while maintaining, or improving, service levels. ISS continues to promote shared services to other governments and public sector organizations.					L			
Fourth Generation (4G) Wireless Service	Agencies need high speed wireless Internet for their mobile workforce.		L	L					
GIS	The Countywide GIS Coordination works with Palm Beach County agencies to help define ways of leveraging the County's investment in the enterprise GIS platform that is developed and maintained by the GIS Service Bureau in ISS.								
Infrastructure Upgrades	ISS is identifying critical funding requirements for replacing, renewing and improving capital assets.			L					

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		1	2	3	4	5	6	7	8
IPv6 Upgrade from IPv4	IPv6 allows Network Services to support a greater number of interconnected devices. This will enable the efficient support of external agencies that use common IP addressing by providing routable IP addresses. Peer networks will be easier to maintain and services such as VoIP and Quality of Service will become more robust.			L					
ISS Resource Guide	ISS offers a variety of IT and communication services that are available either on demand (self-service) or by request. The services inform employees and increase productivity. ISS will prepare a list of each resource and publish this information in order to create better awareness.				S				
ISS Training Program	The training program will be restructured in 3 tiers beginning with the Help Desk for remote diagnostics and support; to Desktop Support for site visits and hands-on service; to Quality Assurance for end user training.	L							
IT Security Program	ISS maintains security program is a framework within which people, processes, standards and automation operate together to provide a secure IT environment. The IT Security Committee will publish the revised countywide policy (CW-O-059). Advanced authentication will be implemented to meet CJIS requirements. Awareness training and controls will be implemented.			L					
Law Enforcement Exchange (LEX)	The LEX information sharing program serving law enforcement agencies in Palm Beach County has fostered close cooperation among the member agencies. Three issues are currently underway: (1) implementation of a new data sharing system; (2) ISS is creating the data foundation to support analytical tools under the CLEAR initiative; (3) a workspace portal is being deployed to provide a comprehensive computer environment where tools and information are combined with communication and collaboration.					L			
Management Reporting	Management reports currently available in ISS include: (1) Remedy Reports; (2) PTS Reports; (3) Project Initiation Statements; and (4) Project Status Reports. An important action item is in progress to cleanse the PTS database of stale items. The monthly review will be much more focused.						L	L	

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Project Title	Project Description	1	Strategic Objectives Supported By Projects and Initiatives						
		1	2	3	4	5	6	7	8
Marketing ISS Services – Growth Potential	A number of marketing initiatives are currently underway: (1) most larger municipalities have connected to the County network and the nonprofit organizations represented greatest potential for expansion; (2) ISS has developed numerous custom software applications which, with slight modifications, could be used by other local governments; (3) once the new data center is completed, the facility will have sufficient space to accommodate additional County agencies as well as non-County agencies for application hosting purposes; (4) demand for scanning services is increasing and will continue to rise is agencies initiate projects to convert archival paper records to digital images; (5) our public sector partners have confirmed interest in ISS providing backup and disaster recovery services to external agencies already connected to the County's network.					L			
M-Government	ISS will develop a mobility roadmap and platform. This will enable a mobile workforce through wireless networks, devices and applications.		L						
NG911	The County is implementing a \$30 million Next Generation (NG) 911 network based on a diverse set of IP-based communications including text, data, photos, and video exchanges that will enhance the speed, accuracy, and preparation of first responders. Furthermore, ISS will have an expanded role in supporting the 911 System; including serving as the initial intake point for all system help desk calls.								L
Online Requisition System (ORS)	Replace paperless systems. The routable electronic form will streamline the process for initiating purchase requests in obtaining approvals.	S					S		
Open Data and Big Data	The purpose of open government data is to increase transparency, encourage the participation of citizens and other stakeholders, and support for the emergence of new services that are based on data. Further research is required to identify potential categories of open data and determine whether County Administration and our elected officials are interested in expanding the accessibility of large data sets to the public.				L				
Project and Portfolio Management	ISS will reassess project management processes. The assessment outcomes will help facilitate the implementation of best practices for	М							

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	Project Initiation, Requirements Gathering, and Project Plan.								
Reengineering Websites	In conjunction with Public Affairs, ISS has launched a project for the next generation of website upgrades, including additional interactive functions and increased mobility. Current departmental websites will be reviewed to identify candidates for design and content improvements.				Μ				
Server Consolidation and Virtualization	Consolidation has allowed ISS to support the growth of electronic government without adding significant staff resources.			S					
Service Level Agreements (SLAs)	ISS only has formal SLAs with our external customers. We are in the process of evaluating whether to implement formal SLAs with our internal customers. The ISS Directors, through subordinate managers and supervisors, will increase and maintain their focus on the status of overdue work orders.							L	
Service Request System (SRS)	ISS is developing a single integrated system replacing stand alone internal reporting systems. The new system should make it easier for customers and staff to request and track ISS services, and significantly improve performance reporting on the delivery of ISS services.	M					L		
Shared Use of Intelligent Transportation System (ITS) Network	It is anticipated that ISS and other local governments will enter into an agreement with the Florida Department of Transportation (FDOT). The purpose is to designate a portion of the FDOT's Intelligent Transportation System (ITS) for shared use by local governments.								L
Skills Enhancement	ISS will undertake a staffing skills assessment to identify candidates for potential retraining and reassignment. We will also prepare a staff training plain as part of the FY 2015 budget preparation process.							L	
Social Media	County agencies and ISS are incorporating social media technologies in our in-house developed applications and developmental websites.				М				
Storage and SAN Upgrade	ISS is working to consolidate storage to move away from physical server- based storage to an enterprise Storage Area Network (SAN) solution. This will allow for online data movement and transparent data migration,			М					

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		1	2	3	4	5	6	7	8
	as well as reduce costs associated with downtime, trapped capacity and performance issues. It will also enable an enterprise approach storage management.								
Unified Communications (UC)	ISS has commenced a project to replaces legacy telephone system. This system will serve 10,000 users and multiple call centers.		L	L					
Vista Data Center	ISS is currently working with Facilities Development and Operations (FDO) to design and construct a new data center at the Vista Center which will reduce risk to our computing resources and provide for more efficient operating environment.			L					
Wi-Fi Access (In-building)	County agencies need the ability to securely conduct business wirelessly and also provide wireless access to the public and visitors. ISS will continue to deploy and support secure and public Wi-Fi service in all County facilities.		L	L					

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### **ISS Performance Measures and Other Operating Statistics**

### **Department-wide**

### Monthly: **<u>Remedy SLA Statistics</u>**

SLA % for Initial Response SLA % for Problem Resolution Customer Satisfaction Rate

### Monthly: **PTS Statistics**

Number of PTS Opened Number of PTS Closed Number of PTS Overdue

## **ISS Administration**

### **Fixed Assets**

- Quarterly: Number of Asset Items Included in Inventory Dollar Value of Assets
- Annually: Number of Assets Not Accounted For Dollar Value of Assets Written Off

### Personnel and Payroll

Annually: Number of New Hires Processed Contract Slots Currently Filled Number of Positions Reclassified Number of Internal Promotions Number of Employees Enrolled in DROP Staff Overtime Hours Staff Comp Time Hours Net Productivity Factor

## **Network Services**

### Monthly: Network Availability

Fire Stations Libraries Tax Collector WUD

## **ISS Performance Measures and Other Operating Statistics**

### Clerk Tier 1 Operating Statistics

VPN Requests WiFi Requests Device Configurations Completed Move Tickets Processed

### Video Conferencing

Sessions Duration (Cumulative Hours)

### <u>WiFi</u>

WiFi Sessions (tracked separately for 8 locations)

### **Network Monitored Devices**

Routers Switches AP-Wireless LAP Wireless Telephone UPS's Total Number of Devices

### **Voice Services**

Number of County-Issued Cell Phones Number of County-Issued Air Cards

### **Telecom Expense Management**

Monthly Telecom Expense Breakdown Number of Leased Data Circuits Number of Leased Telephone Circuits

## **Platforms and GIS**

### Annually: Server Administration

Number of Wintel Servers Number of UNIX Servers Storage Requirements

### **ISS Performance Measures and Other Operating Statistics**

### Annually: **Desktop Administration**

Number of Desktops Maintained Number of Laptops Maintained Number of Printers Maintained

### <u>GIS</u>

Monthly: Number of Maps Created Number of Data Layers Maintained

## **IT Operations**

### **Computer Operations**

Monthly: Images Scanned Pages Printed Staff Overtime Hours Worked Number of Change Controls Processed

### Law Enforcement Exchange

Monthly: Number of LEX Sessions Number of Unique Users

## **ISS Help Desk (Call Center)**

- Monthly: Calls to the NOC Calls Transferred to Tier 1 % Calls Answered Average Answer Delay Maximum Answer Delay Average Activity Time Total Activity Time Remedy Tickets Created
  - Generated by phone callsGenerated by emails
  - Generated by walk in
  - Generated by walk-ins

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