GIS in Palm Beach County



Organization **Operations** **Applications**

The Palm Beach Countywide GIS Organization

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Introduction

The breath and transparency of the Countywide Geographic Information Systems (GIS) in Palm Beach County necessitates documentation of the organization, operation and enterprise application development. This document details the organization of the Countywide GIS operations. The complexity of the system is, for the most part, transparent to the user; and therefore, it is important that the overall system is well documented and made available as an overview and roadmap to those that use, direct and maintain the system. The plan to disseminate these documents will continuously evolve to meet the needs of the users and the available technology. Periodic review of the documents will be done to ensure its ongoing relevance.

I. Overview

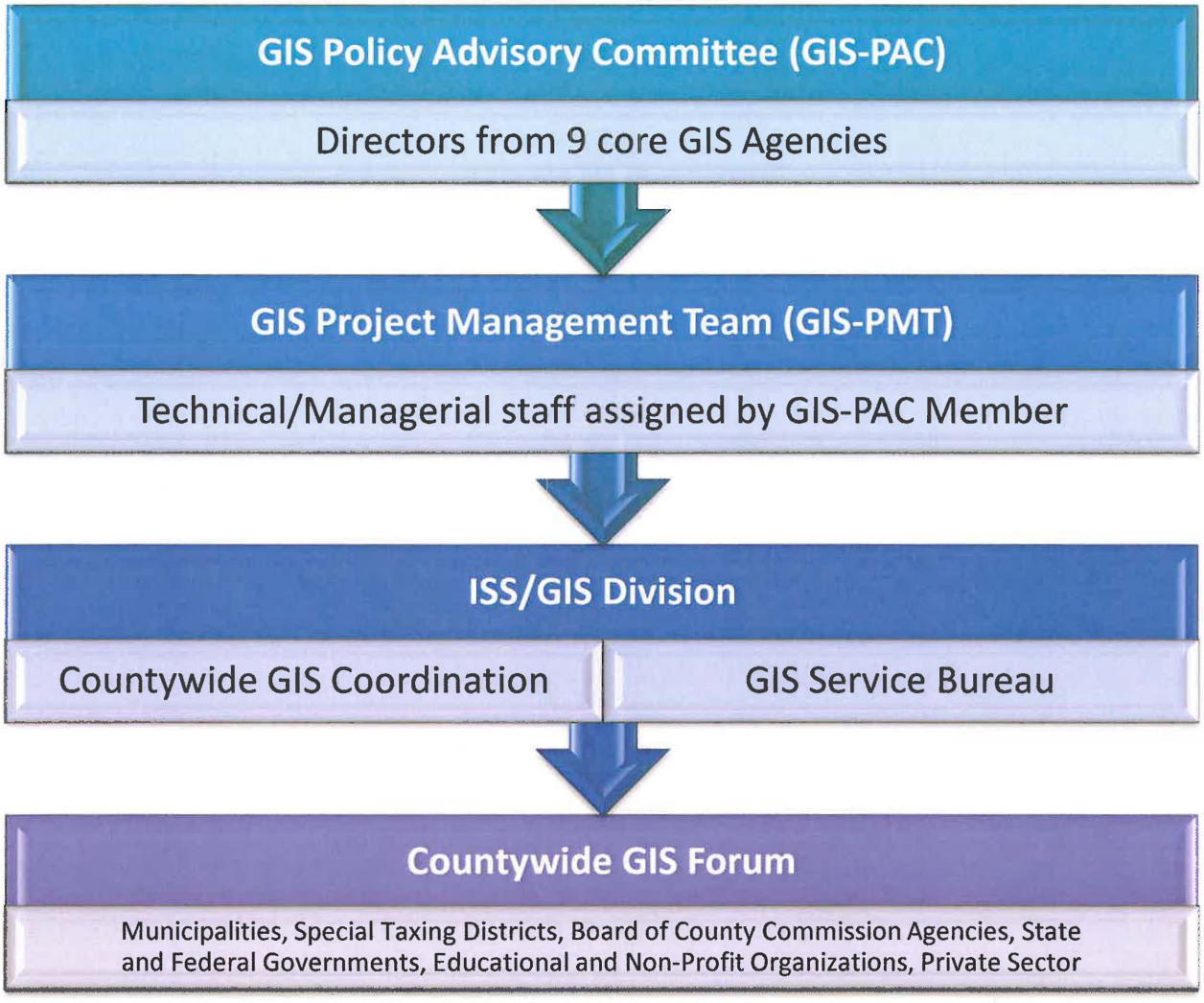
Palm Beach County has built an information infrastructure for local government to utilize geographic and land data to support informed decision making, cost efficiency and responsible management for coordinated growth. We have used this infrastructure to promote enhanced taxpayer benefits through efficient information access. This ensures that we do not lose touch with the taxpayers and business interests, and prevents the risk of making processes more important than the end result. GIS can now show the effects of positive and negative growth, thereby assisting County government in planning for future needs and taxpayer demands. By facilitating citizenry access to government data and providing timely answers and feedback, government can be strategically directed to respond to the needs of the taxpayers, and can stimulate productive business partnerships. The impact of implementing the Countywide GIS environment has been:

1. More standardization of software, procedures and processes.
2. Cost savings through less redundancy achieved with integrated systems.
3. An emphasis on benefits, not technology.
4. Quick return of information and faster implementation of new tools.
5. Generating revenue through cost savings to offset technology costs.
6. Transparency of the data used to make decisions.
7. Empowerment of users to obtain data and information for themselves.
8. Increased public awareness and support.
9. Improved citizen access and citizen services.

II. Countywide GIS Structure

Palm Beach Countywide GIS is an enterprise system (EGIS) that links location (spatial) and database (tabular) information enabling a person to visualize patterns, relationships and trends. This process gives an entirely new perspective to data analysis that cannot be seen in a table or list format. The five components of the system are: People, Hardware, Software, Data and Methods.

The Countywide GIS structure consists of the GIS Policy Advisory Committee, the GIS Project Management Team, the Countywide GIS Forum and Palm Beach County's ISS/GIS Section which consists of Countywide GIS Coordination and the GIS Service Bureau. Working independently and together, each distinct area of the structure efforts to build and maintain a sophisticated Countywide GIS enterprise. The enterprise, structured this way, ensures the efficient processing and access to the County's investment in data and technology.



Below is a description of the duties and responsibilities for each area of the GIS structure:

1. **GIS Policy Advisory Committee (GIS-PAC)** – The GIS-PAC is established and designed to serve all users who have agreed to participate in a cooperative geographic information processing system. It consists of nine voting members representing GIS agencies identified as creators and users of geographic information, including:

   A. Engineering & Public Works
   B. Environmental Resources Management
   C. Fire Rescue
   D. Information System Services
   E. Palm Beach County Sheriff's Office
   F. Planning, Zoning and Building
   G. Property Appraiser's Office
   H. Public Safety
   I. Water Utilities

   The GIS-PAC vision statement is:

   "Continue to build and maintain the Palm Beach County GIS infrastructure while developing innovative and sustainable ways to improve business processes and services countywide."

   The GIS-PAC is responsible for recommending long range goals and objectives for GIS. They establish GIS development and operation priorities for utilizing funding and expanding Countywide GIS to encompass agencies, local governments, private sector and citizens of Palm Beach County. This group cooperatively recommends GIS operating standards and procedures, issues RFPs and awards contracts to support joint GIS development efforts, including the maintenance of the common GIS base map.

2. **GIS Project Management Team (PMT)** – The PMT consists of representatives appointed by each of the GIS-PAC members. Members include technical and managerial staff responsible for the review and recommendation of matters concerning GIS issues. The PMT operates as a self-directed team that establishes work plans to implement the priorities of the GIS-PAC through subcommittees and multi-agency participation. The Team develops standards

and processes necessary to sustain the enterprise environment commonly referred to as EGIS. They maintain the Countywide GIS website http://www.pbcgov.com/iss/itoperations/cwgis/cwgis.htm. Through outreach, this group identifies ways of leveraging the existing infrastructure to create efficiency and quality throughout Palm Beach County's many public agencies.

3. **Palm Beach Countywide GIS Forum** – The Forum is open to all who have an interest in learning and sharing ideas about GIS topics, including government agencies, educational associations, non-profit organizations, private sector entities and citizens. It is established to provide a forum for the exchange and dissemination of ideas regarding technical GIS issue; to educate and inform the community on GIS developments, enhancements and future technologies; and to make recommendation on technical matters. The Countywide GIS Forum is a non-profit organization that holds bi-monthly meetings that include presentations and training. The Forum has three standing subcommittees.

   The Expo Subcommittee facilitates the annual South Florida GIS Expo in coordination with surrounding counties. The Expo began as the Palm Beach County GIS Expo in 1994, and rapidly grew into a regional event. The Expo is structured as a public/private partnership where the public sector produces and advertises the event that is paid for through private sectors sponsorships, which allows the committee to provide free admittance to all attendees. This model maximizes the benefit for all involved while meeting the goals of the Palm Beach Countywide GIS Forum. The website for the Expo is www.sfgisexpo.com.

   The IT Subcommittee is a subset of GIS technical staff across the county that looks for opportunities to cost effectively leverage and integrate technologies and data. Cities with GIS websites are also listed on the Countywide GIS Data Catalog webpage.

   The Florida Utility User Group (FUGG) is a subset of utilities, engineering and public works staff across both Palm Beach and Broward counties. The attendees range from beginners to experts who meet monthly to discuss GIS, how to build one inexpensively, and the benefits of using GIS in workflow processes. Utilities discussed include, but are not limited to water, sewer, drainage, gas and electrical. Members are kept informed through an internet group located at: http://tech.groups.yahoo.com/group/fuug.

   The Palm Beach Countywide GIS Forum maintains an email mailing list for notifying members of upcoming meetings, events, training and workshops. It

also communicates to its members via the Palm Beach Countywide GIS Forum website: www.gisforum.org.

4. **The Palm Beach County ISS/GIS Section** is in the County's Information Systems Services Department, Platform Services Division. It includes both Countywide GIS Coordination and the GIS Service Bureau.

   Countywide GIS Coordination (CWGIS) is responsible for project management, contract management, meeting coordination, interactive communication maintaining GIS intergovernmental relations, and planning functions. CWGIS acts as a point of contact with the GIS community at large. This includes the GIS-PAC, GIS-PMT, the Forum, the GIS Service Bureau, the municipalities and other public sector entities such as Solid Waste Authority, the South Florida Water Management District, the School District, the private sector, etc. CWGIS looks to leverage the GIS investments for standards, partnerships, synergy between agencies and jurisdictions. They are responsible for issuing and maintaining the aerial mapping contracts, encouraging GIS data and system sharing and supporting the self-directed team environment that completes the tasks identified by both the GIS-PAC and the GIS PMT. CWGIS participates in both the Forum and the annual GIS Expo.

   The GIS Service Bureau maintains the sophisticated enterprise GIS technical environment. This includes system planning, software updates, database maintenance and data recovery. The Bureau develops and maintains GIS applications and data layers for various agencies, and for countywide navigation and access to data. Data that is maintained by other agencies is made centrally available to all the agencies through the enterprise environment and through integration into business processes. Quality control and GIS data dissemination to both public and private sectors is handled by the Service Bureau. The GIS Service Bureau maintains a content sharing site for standard operating procedures, project documents, software documentation, lists and links.

III. Agency uses of GIS

There are many uses of GIS in Palm Beach County, and the list is ever growing due to the cooperation and data sharing environment that is EGIS. By easy access to frequently updated data, individual agencies have incorporated valuable geographic information into their business processes. While it is true that "a picture is worth a thousand words", geographic information is so much more than the display of data on a map. It is also the ability to ask questions of that data to allow discovery and analysis of

information for decision making. By linking tabular data from business systems across the enterprise with spatial data, GIS offers powerful knowledge for intelligent decision making support. Geographic technology is becoming more and more integral to the everyday operations and management of the County. Some of the uses of GIS include areas such as:

A. Children services
B. Community revitalization
C. Damage assessment
D. Economic sustainability
E. Emergency management
F. Environmental resources management
G. Health and human services planning
H. Land management
I. Transportation planning
J. Utilities management

IV. Data Sharing Partners

Countywide GIS Coordination has facilitated data sharing agreements with several agencies and organizations to accomplish the following:

A. Maximize taxpayers' investment in mapping efforts.
B. Assist agencies in their GIS implementations.
C. Establish a cost-effective way to continually enhance and maintain geographic data.
D. Implement a common base map in Palm Beach County.

The terms and types of data for each agreement are determined on a case-by-case basis. For a list of GIS data sharing partners, go to:

http://www.pbcgov.com/iss/itoperations/cwgis/gisdatashare.htm.

By having agreements in place, all participants have access to the most current and up-to-date data. Steps are underway to automate two-way data exchange with the municipalities. Many municipalities have joined Palm Beach County's wide area network to access geographic applications and data. The County ISS Department also offers system hosting services to Palm Beach County public entities and non-profit organizations.

V. Cost Sharing Partners

Palm Beach County is a large county making it expensive to map at the level required for GIS and appraisal purposes. Countywide GIS adopted the concept of cost sharing partners as a way to broaden the funding options available. Below are examples of the cost-effective mapping partnerships that the County has entered into:

A. A partnership with the South Florida Water Management District on infrared imagery and planimetric mapping.
B. Multiple partnerships with the Property Appraiser's Office and various municipalities on planimetric mapping.
C. A multi-year partnership with the Property Appraiser's Office and Sheriff's Office, with contributions from Fire Rescue and various municipalities for oblique imagery.
D. Annual partnerships with the Property Appraiser's Office for digital ortho photography updates.

VI. Where to find GIS Data

GIS data can be found on the internet, embedded in various applications (including mobile applications), in databases on servers, on desktops and on paper. Palm Beach County has developed a model of centralized access to geographic data that is developed and maintained by County agencies. The agencies throughout the County diligently collect data, input it electronically, associate metadata that explains the data and continuously update the data. Depending on the changeable nature of the data, the datasets are updated frequently or periodically.

The easiest way to locate GIS data is to go to the Countywide GIS Data Catalog: www.pbcgov.com/iss/itoperations/cwgis/GISdatasearch/ where you can:

A. Download the data directly to your computer.
B. Find out when it was last modified.
C. Search for specific data layers.
D. See which agency maintains a particular data layer.
E. View all the data layers.

The Data Catalog can be accessed via the PBC GIS intranet and internet websites. Another place to locate and download GIS data is through the myGeoNav application. After launching the application, you can click the Map Layers button, which drops down a list of data layer categories. Wherever you see a red arrow, you can click the

associated box, and then the red arrow to download the data. http://maps.co.palm-beach.fl.us/gis/mygeonavOther.aspx?

The digital ortho photography and oblique imagery are larger datasets and for those with permissions, images can be downloaded from the server. Anyone who does not have server access can contact the GIS Service Bureau at (561) 233-5491 and staff will provide the requested data on appropriate media. Data and mapping services are provided to the public for minimal costs of reproduction.

VII. Where to find GIS Applications

Agencies that develop GIS applications normally include a link to that application on their agency's website. Sometimes a department's applications are for internal use only, though many applications are accessible to the public via the internet. Agency internet applications can be accessed on the agency's website or via the Countywide GIS website. Many agencies also have a link to the Countywide GIS website on their website to make it easy for visitors looking for data and information to find what they need.

The GIS Service Bureau maintains an internal collaboration work site for providing GIS application support. This includes links to development and production applications, as well as documentation, administration and job scheduling information.

GIS application changes are driven by customer business requirements or changing technology. The GIS Service Bureau takes significant changes through the ISS change management process. This process ensures the appropriate communications to customers, database, server and network staff regarding the change that will take place. Change management also requires that a back-out plan is in place in case the application change fails. This process ensures that the customer will be able to continue to use the original application that was in place prior to the change.

When new GIS applications are under consideration, agencies typically introduce their idea to the ISS/GIS Service Bureau staff. Additional meetings are then held to gather requirements. These requirements are translated into technical specifications to be integrated into a project plan for implementation.

VIII. GIS – Continuous Improvement

Palm Beach County GIS underwent a Best Practices Assessment where it was established that Palm Beach County is a leader in GIS. The following section is taken directly from the Best Practices Assessment.

EGIS is innovative. The use of GIS as an embedded, transparent part of business process is unique and powerful. The engagement of stakeholders in EGIS vests those agencies in EGIS as a driver for their own success. While the interests of stakeholder agencies and EGIS are not always perfectly aligned, the level of collaboration and, indeed, comity is special. The success of GIS in Palm Beach County is the result of a team effort – from the PMT to the GIS-PAC to CWGIS to users.

When judged against the comparable counties and others, it is clear that Palm Beach employs many innovative and traditional best management practices (BMP's). These BMP's address all system components and all topical areas identified in the Baldridge quality survey. Palm Beach has built its Enterprise GIS (EGIS) on the foundation of a strong organizational model and technical innovation. The approach to GIS in the County embraces the human dimension of systems development, management, governance, and operations.

The technical infrastructure for EGIS mirrors that of a level 3 organization in the Information Evolution Model. There is consistent, enterprise data accessible to users, systems, and services. The EGIS technical infrastructure is as sophisticated and effective as any to our knowledge. It is innovative in that it leverages the best aspects of multiple technologies. Moreover, it employs a services oriented architecture to deliver both data and application services in an innovative way. In addition, business systems across the County seamlessly access and use these services.

As with any organization though, there are many opportunities to improve. As noted above, Best Management Practices, by their very nature, must be dynamic and adaptable to circumstances as they change over time. In addition, there are opportunities to further develop existing practices to optimize outcomes. (*The following figures show how Palm Beach County ranks in Best Practices, and relative to comparable Counties across the nation).*

Several areas have been identified for improvement and are in various stages of being addressed to achieve continuous improvement of GIS in Palm Beach County. The areas include:

1. Business planning must be done on a regular basis to align with changing organizational strategies; adaptation to evolving fiscal issues; and aligning with changing priorities.

2. Staff efforts have been focused on the execution of key GIS initiatives, such as Enterprise Addressing, Damage Assessment and Mobile applications.

3. Evolution of the infrastructure to a full intelligence architecture is necessary, not only for spatial intelligence, but to position EGIS to be a source for decision support for the County at the operational, departmental and enterprise levels.

4. Documenting and communicating what data is available, how to access it and the appropriate use of the information. This document, GIS Communications Procedures, the GIS Data Catalog and associated metadata are examples of the commitment to continuous improvement. In addition, a continuous feedback loop is important for corrections and enhancements.

5. Technology evaluation and sustainability review. These include web, server, network, database and application hardware and software. EGIS is mission critical to many agencies which forces a level of complexity and the need for high availability. Continuous evaluation of EGIS and the forces upon it is essential to sustainability.

6. The level of executive engagement and operational structure must continuously be reviewed to ensure the strategic advancement of EGIS and the distinction between Countywide GIS Coordination and the GIS Service Bureau.

7. The human element is the critical key to GIS excellence. Ongoing succession planning is necessary to include personnel management, cross training and crisis management. It is essential that the system does not become dependent on specific individuals. Considering human resource issues with regards to career ladders, pay grades and training are necessary to provide growth paths to address long term sustainability.

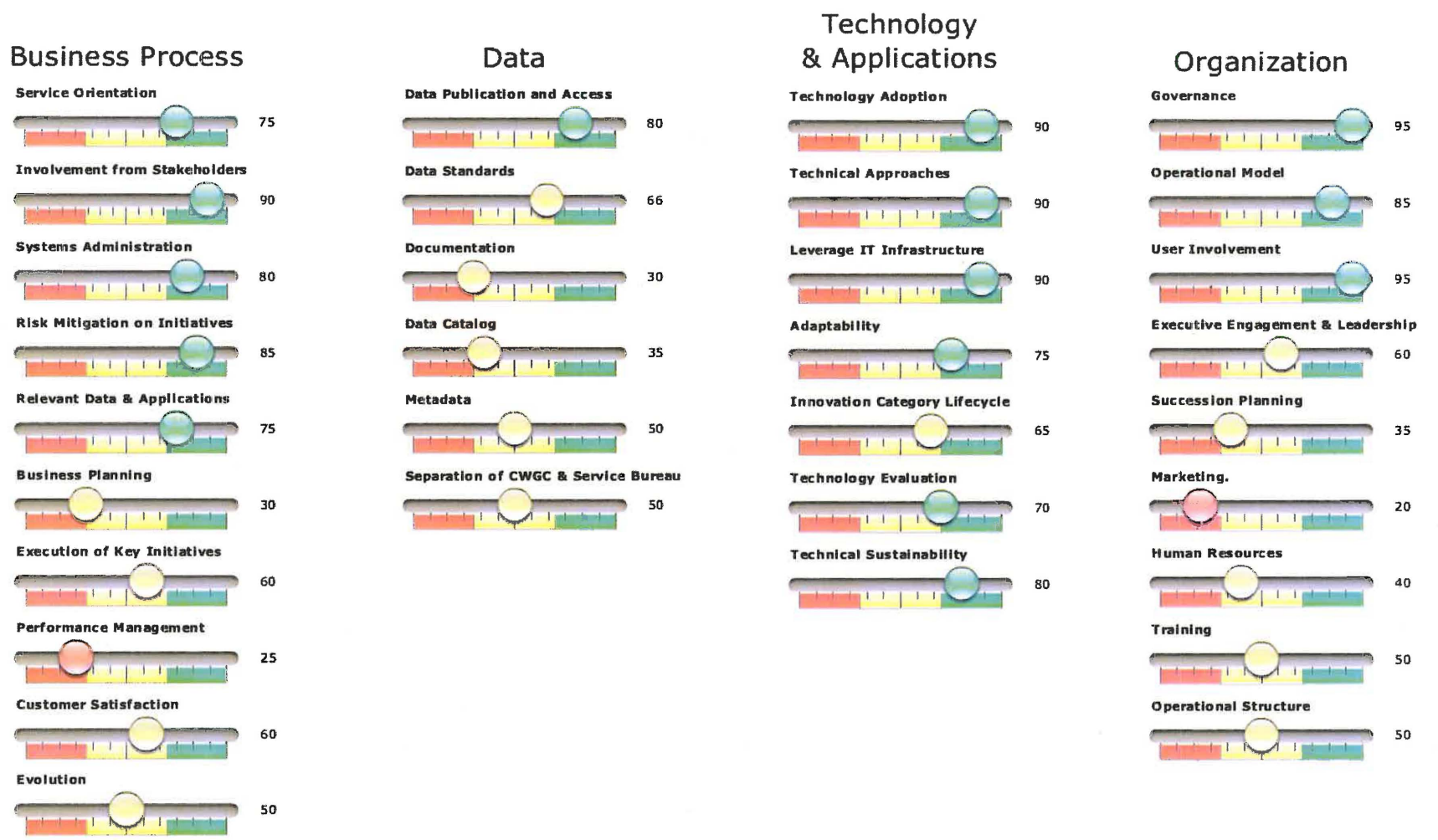
8. Raising the visibility and building the "brand" of EGIS is important to advance the program. This is done by communicating with decision makers, stakeholders, users and the public regarding the value of EGIS to build support for funding and new initiatives.

9. Data is government's key strategic asset. Even when data is accessible, it may not be used to create information or intelligence. EGIS must evolve from using geographic technology for routine and repetitive transactional work processes, to leveraging geographic information and analysis to develop business intelligence, and provide decision-support. Organizations that embrace intelligence frameworks over simply managing data stores will be positioned to exploit data investments to be efficient, effective and responsive to dynamic events and circumstances. If spatially enabled, those intelligence frameworks will be contextual and visually powerful.

For multiple years, Palm Beach County has ranked in the top 3 among counties with populations of 500,000 and more by the Center for Digital Government. The 2012 survey references the County's advanced GIS capabilities as one of the reasons for its high national ranking.

Few organizations can stand the test of time when it comes to multi-jurisdictional participation efforts. The South Florida GIS Expo is an example of this and it has continued to thrive for over 20 years as a well attended and successful event. It is successful in its efforts to provide attendees educational presentations and exposure to new technologies relative to GIS.

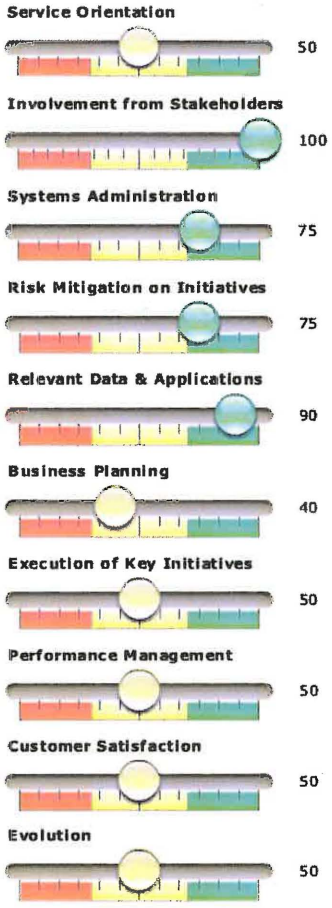
Status of Best Practices in Palm Beach County



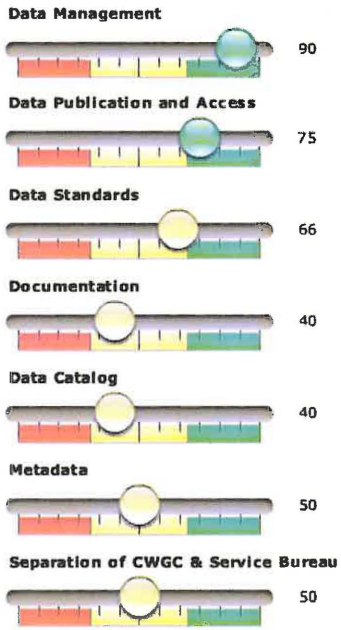
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Relative to Comparative Counties

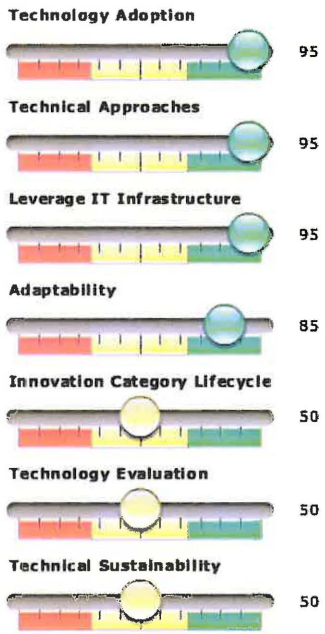
Business Process



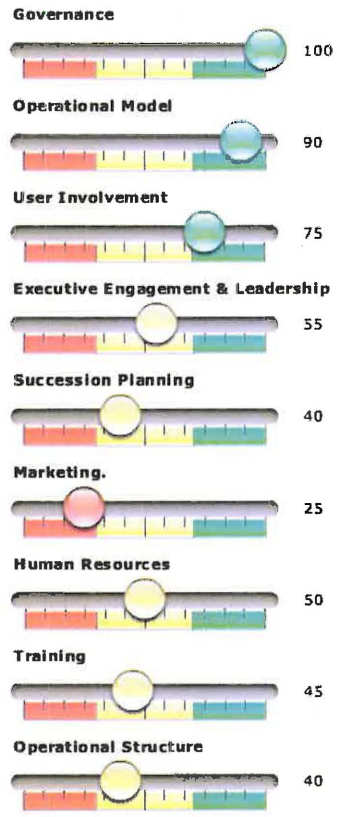
Data



Technology & Applications



Organization



The Palm Beach Countywide GIS Operations

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Introduction

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II. Data Management/Maintenance Procedures

While it is prudent for many agencies to maintain their own geographic information, sophisticated technology has been put in place to make this data available to other agencies and the public. Not only technology, but maintenance procedures and interagency coordination are crucial to keeping up-to-date data available for critical business applications and processes. Several data layers require updates to be done as close to real time as possible, what is often referred to as "transactional" updates. This ensures that the assumptions being made by the user are as accurate as possible. While no process or data is perfect, through communications and coordination, every participant strives to further improve the accuracy of the information being shared.

1. New Data Layers

   As a data custodian develops and decides to publish a new data layer, it is communicated to Countywide GIS (CWGIS) staff. CWGIS announces this during the stages of development to the GIS Project Management Team (PMT) and GIS Forum during meetings. Information may also be posted on the Countywide GIS website.

2. Changes to Data Layers

   Many data layers are continuously changing. Custodial agencies determine the frequency with which their data layers are updated and published on the EGIS environment. Periodically the PMT will perform a review of aging data layers to determine relevance. The age of the data layer is viewable in the Countywide GIS Data Catalog.

3. Deleting Data Layers

   Data layers, or applications, may become obsolete or may need to be replaced by changes in business requirements. The GIS Service Bureau will follow current data retention policies when deleting Service Bureau data layers. Prior to deleting other agency data layers, staff will confirm with the originating agency that it is acceptable to delete the enterprise data layer, to ensure that the originating agency has saved the data in another format before it is deleted from the database

4. Data Errors

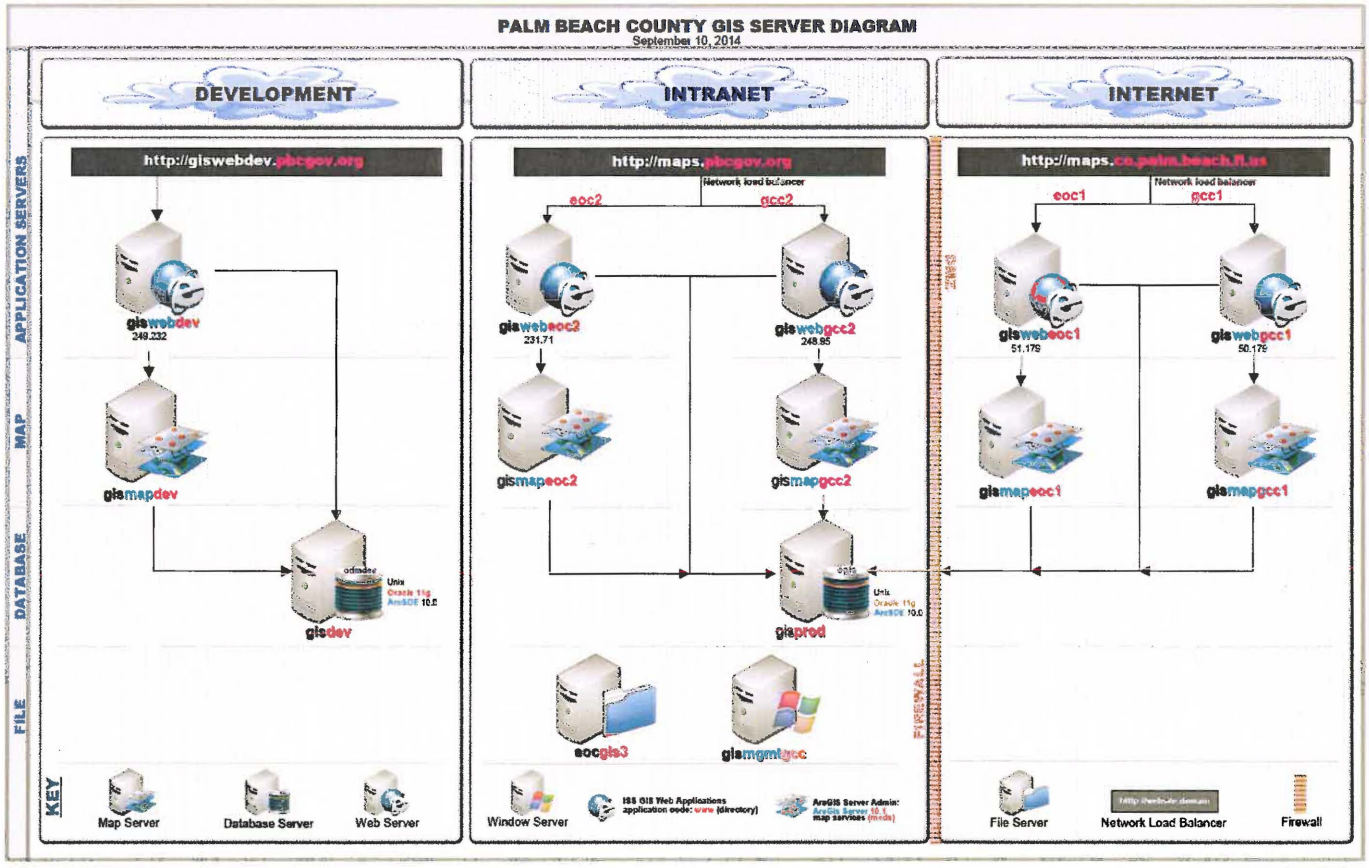
Agencies strive to keep their GIS data as current and accurate as possible. When errors are found, this feedback is welcomed as part of a continuous improvement process. This feedback can be given directly to the agency responsible for maintaining the data, or if unknown, an email can be sent to CWGIS through the website where it will be directed to the appropriate agency responsible for maintaining that particular data.

5. Data Development Needs

If a new GIS data layer is required for an agency application or a multi-agency application, the initiating agency communicates this to CWGIS. They determine whether the data will be published on the enterprise and whether it is for internal use or access via the internet. The GIS PMT will discuss which agency will be the custodial agency of the new data layer and what it will take to develop the data layer, metadata and frequency of updates.

III. Technical Infrastructure

1. Palm Beach County GIS Server Diagram



2. Software and Server Maintenance

   GIS software and hardware will be part of an overall lifecycle management process for upgrading or replacement prior to obsolescence.

3. Level of Service

   a. Planned Production Outage

      Server maintenance, upgrades or replacement may result in scheduled outages. Notification is given to the PMT Members, the Countywide GIS Forum IT Subcommittee and other GIS contacts through meetings and email prior to the scheduled outage. Notifications will also be posted on web pages so that those who frequent the application will be prepared.

   b. Unplanned Server Outage

      Unplanned outages are often discovered when staff begin their workday. Customers can call the ISS Help Desk at (561) 355-4357 to report problems with GIS applications or servers. Through the Help Desk, the details can be documented and the appropriate technical staff will be notified for remedy. Most problems are quickly resolved, however, in the event that a problem exceeds one (1) business day, then communications will be initiated as described under the Planned Production Server Outage section.

4. Technical Refresh of Applications

   Applications will be refreshed as technologies change to take advantage of new features and enhancements; or as technologies become obsolete.

IV. Other Communications

1. New Staff Orientation

   As staff changes occur, every attempt will be made to transfer knowledge to new staff and introduce them to the appropriate customer representatives that they will be providing support for, as well as ISS and GIS Section staff. This document will be provided to new GIS staff members as part of their orientation.

2. New Application Development

When new GIS applications are being developed, they are discussed and presented to the customer, to the PMT, to the GIS-PAC, the GIS Forum and at the South Florida GIS Expo. Customers, in turn, often publish information on new GIS applications in the County newsletter, in press releases, and in industry journals. The Countywide GIS website includes links to the various GIS applications at: www.pbcgov.com/iss/itoperations/cwgis/cwgis.htm. The PMT looks for opportunities to coordinate between agencies that may require the same functionality in a new GIS application. The GIS Service Bureau looks to re-use existing code whenever possible to expedite development and to ensure consistency for maintenance purposes.

V. Basemap Data Acquisition, Publication and Maintenance

1. Acquisition, Publication and Distribution of Countywide Orthophotography

Contracts for mapping services such as digital orthophotography and planimetric mapping are put in place using the Consultant Competitive Negotiations Act (CCNA) process that is administered by the Engineering Roadway Production Division. Members from the PMT participate in shortlisting the consultants. This qualifications-based process results in contracts being put in place with three firms to ensure availability of consultants to complete multiple projects simultaneously. The contracts are for two years with three each, one-year renewable options. Projects are allocated based on adequate proposals for the work to be performed, reviewed by the Countywide GIS Coordinator, and following a vendor rotation model. Due to the length of time to establish these contracts, other agencies and municipalities sometimes "piggy-back" off the process or contracts to efficiently move forward with their mapping activities.

As part of a cost-sharing partnership with CWGIS and the Property Appraiser's Office, color digital orthophotography is acquired across the County for the areas required by the users of this data every other year. Updating the photography provides a visual history of changes that have occurred. Up-to-date photography enhances the County's ability to perform agency business objectives and to develop partnerships with other organizations.

Once the orthophotography is received from the vendor, quality assurance review is performed by the GIS Service Bureau, and in cooperation with other County GIS

staff when required. Rejected data is returned to the consultant for correction and resubmission.

After reviewing the data it is published on the enterprise server EOCGIS3 and in myGeoNav. Other public sector partners can obtain the imagery by contacting the GIS Service Bureau. The general public and private sector can request the imagery for the cost of duplication by contacting the GIS Service Bureau at 561-233-5491. Due to the size of the imagery files it is normally copied onto DVDs or hard drives. Updates regarding the imagery are provided at the PMT, GIS-PAC and Palm Beach Countywide GIS Forum meetings.

2. Acquisition and Publication of Oblique Imagery

Another cost-sharing program is in place with CWGIS, the Property Appraisers Office, and municipalities for licensed oblique imagery that shows the sides of buildings from multiple angles. A two-year contract is in place with two each, two-year renewable options. The coverage area is determined by the Countywide GIS Coordinator with input by the PMT. The imagery is flown once every two years and the costs are split with half due the first year, and the remaining due the second year. CWGIS processes the contracts, renewals, amendments and cost-sharing contributions. An agreement is in place that ensures new imagery will be flown in areas of up to 200 square miles in the event of a Category II hurricane, EF4 or higher tornado, a terrorist attack, a 6.0 or higher Richter scale earthquake or tsunami. The licensed imagery can be shared with the County's data sharing partners or public agencies below the County jurisdictional level.

Upon receipt of the imagery, it is reviewed by the GIS Service Bureau and then published on the enterprise server (fill in) and via myGeoNav. A subscription service is also in place for easy access by County agencies. County Data Sharing Partners can schedule to sign out a hard drive of the imagery to copy it onto their own servers by calling the GIS Service Bureau at 561-233-5491. Updates regarding the imagery are provided at the PMT, GIS-PAC and Palm Beach Countywide GIS Forum meetings.

3. Maintenance of Parcels

Parcels and parcel data are maintained by the Property Appraiser's Office and uploaded to EGIS nightly.

4. Maintenance of Centerline roads

The GIS Service Bureau staff maintains the street centerline file daily based on updates from Engineering, Fire Rescue and Planning, Zoning and Building.

VI. GIS Budgeting Process

Each agency maintains within their operational budgets funds needed to support their GIS endeavors. In addition, for enterprise related GIS costs, funding is requested annually through Capital Budget Supplements administered through the ISS Department. The Capital funding allows for expenditure of funds beyond a fiscal year and often occurs when issuing mapping contracts. The PMT discusses initiatives and proposes the annual GIS Capital Supplemental budget to the GIS-PAC for approval. The GIS-PAC reviews, discusses and approves what will be submitted to County Administration. Members of the GIS-PAC then support the request as it goes through the Capital Budget approval process.

Funds from cost-sharing initiatives, such as those with the Property Appraiser's Office and other public entities, are directed back into the GIS Capital Budget to pay for the partnership initiatives.

The Palm Beach Countywide GIS Applications

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Introduction

The breadth and transparency of the Countywide Geographic Information Systems (GIS) in Palm Beach County necessitates documentation of the organization, operation and enterprise application development. This document details the enterprise applications included in the County's EGIS, including identification of the owner, the URL and a description of each application. The EGIS accommodates the needs of many and diverse customers, and therefore, it is important that identification of applications is communicated from the onset to insure inclusivity and avoid redundancy. Continuous review and update of this particular document would be key to the countywide enterprise spirit.

I. Appraisal Data Search

1. Departments: Property Appraiser's Office
2. Contact: John Enck
3. Audience: Property Appraiser's Office
4. URL: http://maps.pbcgov.org/adss
5. Description: Search PAPA for parcels based on neighborhood, property type, square feet of land, square feet of land, square feet of building space and sale date.

II. Child Care Locator

1. Departments: Palm Beach County Health Department
2. Contact: Brian Rock, PBC ISS / GIS Service Bureau
3. Audience: General public
4. URL: http://maps.co.palm-beach.fl.us/childcare
5. Description: Internet search for child care centers, religious, commercial, family or school. Search by owner name, address, intersection, facility type or zipcode.

III. Children's Services Council

1. Departments: Children's Services Council
2. Contact: Krassi Stavrev, PBC ISS / GIS Service Bureau
3. Audience: Children's Services Council
4. URL: http://maps.pbcgov.org/csc
5. Description: Locate and identify Children's Services Council clients and generate reports for the purpose of resource allocation.

IV. Community Services

1. Departments: Community Services
2. Contact: Krassi Stavrev, PBC ISS / GIS Service Bureau
3. Audience: Community Services
4. URL: http://maps.pbcgov.org/csd
5. Description: Display clients by agency and program, US Census or CSD indicators by tract or zipcode.

V. Community Services Homeless Survey

1. Departments: Community Services
2. Contact: Krassi Stavrev, PBC ISS / GIS Service Bureau
3. Audience: Internet, general public
4. URL: http://maps.co.palm-beach.fl.us/gis/homeless_survey.aspx
5. Description: Provides homeless center locations to be used by CSD business application

VI. Community Services Financially Assisted Agencies

1. Departments: Community Services
2. Contact: Krassi Stavrev, PBC ISS / GIS Service Bureau
3. Audience: Community Services
4. URL: http://maps.pbcgov.org/faa
5. Description: Display locations of agencies supported financially by CSD

VII. Damage Assessment - Administrative Tool

1. Departments: Planning, Zoning and Building
2. Contact: Anne Cowan, PBC ISS / GIS Service Bureau
3. Audience: PZB and municipal managers
4. URL: http://maps.pbcgov.org/DAAdmin
5. Description: Prioritize, schedule and monitor damage assessment activities post-disaster, QA field surveys and generate reports for SERC and FEMA

VIII. Damage Assessment - Mobile

1. Departments: Planning, Zoning and Building and municipalities
2. Contact: Chris Benkly, PBC ISS / GIS Service Bureau
3. Audience: Field staff conducting Initial Assessments for Individual Assistance
4. URL: N/A, Windows application
5. Description: Drive-by field collection of Initial Damage Assessment for Individual Assistance data to be provided to the State to request a Presidential Declaration of Disaster

IX. Damage Assessment – PBC DART

1. Departments: Public Safety
2. Contact: Ben Perez, PBC ISS
3. Audience: citizens
4. URL: http://www.pbcgov.com/dart/
5. Description: For use by the citizens of Palm Beach County to both help citizens prepare for and to help the County respond to an emergency. This tool allows users to:
   a. Keep up to date with the current activities at the Emergency Operations Center
   b. Check a location to see whether it is in an evacuation zone and, if so, whether or not that zone is currently under an evacuation order
   c. View a list of shelters and get driving directions from their location to the shelter
   d. Report damage to their home or business

X. Damage Assessment – RIA (planned)

1. Departments: Planning, Zoning and Building, Fire Rescue
2. Contact: Chris Benkly, PBC ISS / GIS Service Bureau
3. Audience: PZB and municipal managers, EOC
4. URL: N/A
5. Description: Application for collection of Rapid Impact Assessment data

XI. Damage Assessment - Viewer

1. Departments: Planning, Zoning and Building, Public Safety, Administration
2. Contact: Anne Cowan, PBC ISS / GIS Service Bureau
3. Audience: EOC and public
4. URL: http://maps.co.palm-beach.fl.us/daviewer
5. Description: Executive level summary of final estimates for Initial Damage Assessment for Individual Assistance

XII. District Locator

1. Departments:
2. Contact: Krassi Stavrev, PBC ISS / GIS Service Bureau
3. Audience: Internet, general public
4. URL: http://www.pbcgov.com/districtlocator
5. Description: Internet application to search by address or owner name to identify County Commissioner and District. Also displays municipality, if applicable

XIII. Economic Sustainability – PBC Interactive

1. Departments: Department of Economic Sustainability
2. Contact: Krassi Stavrev, PBC ISS / GIS Service Bureau
3. Audience: Business community, General Audience
4. URL: http://maps.co.palm-beach.fl.us/edo
5. Description: Business locator and research tools for business information in Palm Beach County

XIV. Engineering – ePermits

1. Departments: Engineering and Public Works
2. Contact: Krassi Stavrev, PBC ISS / GIS Service Bureau
3. Audience: Engineering staff
4. URL: http://maps.pbcgov.org/epermit
5. Description: Provides online access to e-permit applications and related projects

XV. Engineering Right of Way

1. Departments: Engineering and Public Works
2. Contact: Chris Benkly, PBC ISS / GIS Service Bureau
   Michael Sadowski, Roadway Production
3. Audience: Engineering Roadway Production, Right-of-Way staff
4. URL: http://maps.pbcgov.org/gis/row.aspx
5. Description: This application is to enable the Engineering Department's Right-of-Way staff, to access right-of-way and easement ownership information in a digitized format. It will help to reduce the time spent researching right-of-way ownership data, thereby increasing the efficiency of the Roadway Production Division.

XVI. Engineering SAS

1. Departments: Engineering and Public Works
2. Contact: Krassi Stavrev, PBC ISS / GIS Service Bureau
3. Audience: Engineering staff
4. URL: http://maps.pbcgov.org/gis/sas.aspx?title=Engineering+SAS&function=multipcn
5. Description: Provides GIS interface to Engineering SAS (aka Municipal Service Taxing Unit application)

XVII. Engineering Traffic Performance Standards (TPS) Database

1. Departments: Engineering and Public Works
2. Contact: Chris Benkly, ISS / GIS
3. Audience: Public

4. URL: http://maps.co.palm-beach.fl.us/tps
5. Description: Web application to make Traffic Performance Standards data for all new project concurrency approvals as well as the build out status of previously-approved projects available for the public.

   The Development Review Section is responsible for the review of Subdivision, Planned Unit Development, and Concurrency Application plans to ensure compliance with all applicable codes and standards. This section is also charged with the administration and interpretation of the Countywide Traffic Performance Standards Code and assisting with the Fair Share Impact Fee Ordinance.

   Article 12 of the ULDC requires that each proposed development analyze their impacts on our roadway network, the TPS Database is the tool used by Consulting Traffic Engineers and Developers to determine the base from which to start their analysis, it includes ADT count information, committed development information(approved projects), and the ability to project impacts into the future. This information is used to help determine the County's 5 year road program, as well as other required roadway improvements (turn lanes, signals, etc.).

XVIII. Engineering TPS Administrative Tool

1. Departments: Engineering and Public Works
2. Contact: Chris Benkly ISS / GIS
3. Audience: Traffic Engineering staff
4. URL: http://maps.pbcgov.org/tpsadmin
5. Description: Support compilation and analysis from existing traffic counts as well as approved but not built developments for each Link and Major Intersection on the County's Major Thoroughfare network in order to provide Background Traffic volumes for use in traffic studies addressing compliance with Test 1 and Test 2.

XIX. Fire Rescue – Fire Station Information

1. Departments: Fire Rescue
2. Contact: Chris Benkly or Krassi Stavrev, PBC ISS / GIS Service Bureau
3. Audience: Intranet, Fire Rescue Dispatch staff
4. URL: http://maps.pbcgov.org/gis/firestations.aspx?
5. Description: Application to identify Fire Station for First Response and backup beat. Search for location by address, owner, PCN and intersection. Results also returned for ESZ, Grid and RTS.

XX. myGeoNav

1. Departments: Enterprise
2. Contact: Chris Benkly PBC ISS / GIS Service Bureau
3. Audience: County staff and the public
4. URL: Intranet http://maps.pbcgov.org/mygeonav
   Internet http://maps.co.palm-beach.fl.us/mygeonav
5. Description: View PBC GIS data layers from many different county agencies. View property lines, current and historical aerial photography, political boundaries, parks, schools and school boundaries, coastal and environmental features, County land use and zoning information, Palm Tran bus stops and routes and much, much more.

XXI. PBC EGIS Data Catalog

1. Departments: Enterprise
2. Contact: Chris Benkly PBC ISS / GIS Service Bureau
3. Audience: County staff and the public
4. URL: http://www.pbcgov.com/iss/itoperations/cwgis/GISdatasearch/
5. Description: Search to find geographic data that has been created by/for Palm Beach County and download ESRI shapefiles of the available data.

XXII. Pictometry Imagery

1. Departments: ISS / GIS Service Bureau
2. Contact: Chris Benkly or Krassi Stavrev, PBC ISS / GIS Service Bureau
3. Audience: County staff and the public
4. URL: http://pol.pictometry.com/
5. Note: POL is only available to registered users. Please contact the GIS Service Bureau for access.
6. Description: Oblique geo-referenced photography with tools for measurement and analytics. Imagery and application are hosted by Pictometry. Pictometry is integrated with myGeoNav and PAPA. Intranet Pictometry has basic measurement tools.

XXIII. Planning, Zoning & Building – ePZB

1. Departments: Planning, Zoning and Building
2. Contact: Krassi Stavrev, PBC ISS / GIS Service Bureau
3. Audience: County staff
4. URL: http://maps.pbcgov.org/gis/epzb.aspx?function=viewonly&qvalue=00424322160220000&viz=1421%2c1084%2c1132%2c1159%2c1160%2c1117%2c1208%2c1104%2c1051%2c1411&title=ezInfo#

5. Description: This multi-function interactive web map provides planners in the Zoning & Planning Divisions using ePZB to see the development information such on a map. Information results include zoning designations, zoning approvals, zoning resolution numbers, and future land use designations. This tool provides users with the ability to query, print, and export information.

XXIV. Planning, Zoning & Building – Flood Zones

1. Departments: Planning, Zoning and Building
2. Contact: Krassi Stavrev, PBC ISS / GIS Service Bureau
3. Audience: County staff and the public
4. URL: http://maps.co.palm-beach.fl.us/gis/floodzones.aspx
5. Description: This tool provides users with the ability to find the Flood Zone within an area. Look up flood zone by either entering a name or street address or nearest intersection.

XXV. Planning, Zoning & Building – PZB Search Tool

1. Departments: Planning, Zoning and Building
2. Contact: Patricia Behn, Planning Division,
   Krassi Stavrev, PBC ISS / GIS Service Bureau
3. Audience: PBC PZB Planning Division staff
4. URL: N/A
5. Description: Provides Planning staff-on-call the ability to use an Add-in search tool to find parcels, addresses, intersections, or cities utilizing an ArcView license.

XXVI. Property Appraiser Public Access (PAPA)

1. Departments: Property Appraiser
2. Contact: John Enck, PAO
3. Audience: General public
4. URL: www.pbcgov.com/PAPA
5. Description: PAPA, **P**roperty **A**ppraiser **P**ublic **A**ccess, is the Property Appraiser's multi-function interactive website. Known for its quick and easy navigation, PAPA is a favorite research tool for business people in the real estate industry and the public in general. PAPA's advanced GIS system includes interactive sales searches that can be emailed or exported to share with clients or colleagues. PAPA's specialized mapping features also include historical aerial photography, precise measuring tools to help pinpoint a specific parcel and surrounding properties, links to Google and Bing maps, variance creation and links to school district boundaries.

XXVII. Public Safety – Palm Beach County Evacuation Tool (old SAMS)

1. Departments: Public Safety
2. Contact: Rob Shelt, Emergency Management
3. Audience: General Public
4. URL: http://maps.co.palm-beach.fl.us/gis/sams.aspx
5. Description: Tool for the general public as part of the "Know Your Zone" campaign to assist with making a plan. When a user submits their address they will get information on evacuation zone, shelters nearest their home, gas stations with transfer switches, grocery stores and building supply stores with generators. Additionally, the user can enter their e-mail address and have the results sent to them.

XXVIII. Redistricting

1. Departments: PBC ISS/GIS Department
2. Contact: Kelly Ratchinsky
3. Audience: County Administration
4. URL: http://giswebdev.pbcgov.org/redistricting
5. Description: Planning / analysis application for 2010 redistricting

XXIX. Water Utilities – Lift Station Monitoring

1. Departments: Water Utilities
2. Contact: Danny Thorpe, IT Department
3. Audience: Water Utilities Staff
4. URL: http://maps.pbcgov.org/gis/wudgis.aspx?
5. Description: Utility infrastructure location map. Status of lift stations, power on, off or on generator.

XXX. Water Utilities – Maps (Utility)

1. Departments: Water Utilities
2. Contact: Danny Thorpe, WUD IT Department
3. Audience: Water Utilities Staff
4. URL: http://maps.pbcgov.org/gis/wudgis.aspx?
5. Description: Utility infrastructure location map

XXXI. Water Utilities – Routes

1. Departments: Water Utilities
2. Contact: Danny Thorpe, IT Department
3. Audience: Water Utilities Staff
4. URL: http://maps.pbcgov.org/wmroutes
5. Description: Meter reading route reassignment application

XXXII. Water Utilities – SAS

1. Departments: Water Utilities
2. Contact: Danny Thorpe, IT Department
3. Audience: Water Utilities Staff
4. URL: access from SAS application.
5. Description: Parcel selection application for utilities assessment projects

XXXIII. Water Utilities – Service Order

1. Departments: Water Utilities
2. Contact: Danny Thorpe, IT Department
3. Audience: Water Utilities Staff
4. URL: http://maps.pbcgov.org/gis/wudso
5. Description: Customer Service work order tracking by service representative