Sustaining An Enterprise Geospatial Information Program Supporting Water Resource Management

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Southwest Florida Water Management District
District Overview

What we are
- One of 5 districts created under Chapter 373, F.S. - Water Resources Act
- 10,000 square miles
- 16 counties
- Population of 4.7 million
- Revenue from voter-approved ad valorem property taxes

What we do
- Permitting
- Scientific data collection
- Modeling
- Habitat restoration
- Land management
- Water resource projects
- Structures operation
What Leads to Sustainability?

**Boring**
- Consistency
- Metadata
- Processes & Procedures
- Standards
- Understand the business
- ...

**Exciting**
- Cutting Edge Remote Sensing
- Drones
- Latest Hot Application
- Three Dimensional Visualizations
- ...

What Do We Mean By “Enterprise”?

- Mission critical (when something doesn’t work for 5 minutes my phone rings)

- Multiple Use (data and models)
  - Many users
  - Many organizational units
  - Many business functions
Issues Faced by Government IT/GIS Managers

- Shrinking Budget and Staff
- Electronic Records Management
- What Goes to Cloud?
- Aging Infrastructure
- Rising SW Maintenance Costs
- BYOD
- Chasing the Google
- Security Risks
- Aging Workforce
- Competing Business Priorities
- Modernizing Legacy Systems
- Increased Data Volumes
- Consumerization of IT and GIS
- Aging Staff Retention
Technology Infrastructure

Scientific Support Systems
- KISTERS
- SQL*LIMS
- SAS
- Groundwater Vistas
- Trihedral VTSCADA
- Esri ArcGIS
- ArcGIS Online

Application Development
- Microsoft .NET
- PL/SQL
- HTML 5
- PHP
- JavaScript

Database Management Systems
- SQL Server
- FME ETL
- MySQL
- Oracle

Business Support Systems
- CGI ADVANTAGE
- CGI Performance Budget
- NeoGov Recruiting
- NuView Human Resources/Payroll
- Kronos Time Matters
- OpenText Content Management
- Daptiv Project Portfolio Management

Data Center Systems
- HP
- Window Server OS
- Linux
- EMC
- Cisco
- MS Exchange
- Citrix
- VMware
- Zscaler Content Filter

Microsoft Office
SilkRoad Learning Management
AssetWorks Fleet Management
Drupal Web Content Management
Geospatial Infrastructure

AGIS Desktop
- Local
- Citrix

ArcGIS Desktop

AGIS Desktop

Watershed Data (File GDB)

Topographic Data (LAS/DEM/FGDB)

ArcGIS Online

Arc Server

Arc SDE

Non-SDE

Oracle/Data

Oracle

Linux

Custom Applications

Windows
How To Ensure Long Term Success

- Step One - Identify components of a modern geospatial program
- Step Two - Identify where geospatial components fit in your organization
- Step Three - Establish, monitor and adhere to processes
Geospatial Program Components

- Spatial
- Non-Spatial

Data

- Structured
- Unstructured

Information Technology

Business Needs
Key Processes for Success

**IT and Data Governance**
- Architecture
- Business Continuity
- Capacity Management
- Change Management
- Customer Relationship Management
- Standards
- Incident Management
- Metadata (spatial and non-spatial)
- Project Prioritization and Management
- Security
- Software Development Lifecycle

**Financial**
- Budget Development
- Cooperative Grants Program
- Long Range Planning

**Human Capital**
- Career Latticing
- Position Profiles
- Succession Planning
Consistency Example – IT Project Approval

1. Idea
2. Complete Initiative Profile
3. IT Management Review
4. Impact Level
   - High: ITDGC Review
      - Yes: Approve
         - Yes: Implement Using IT Project Lifecycle
         - No: Cancel Initiative
      - No: ITDGC Review
   - Low: Approve
      - Yes: Implement Using IT Project Lifecycle
      - No: Cancel Initiative
Example - Extended to AGOL Projects

1. Idea
2. Complete Initiative Profile
   - High
3. GIS Manager Review
   - Low
4. IT Project Review
   - Yes
   - Implement Using IT Project Lifecycle
   - No
   - Cancel Initiative
5. Approve
   - Yes
   - No
6. Impact Level
Summary - Long Term Success

- Identify the components of your geospatial program
  - Data
  - Information technology
  - Business needs
- Put the components in the correct place in your organization
- Create, maintain and adhere to processes and procedures
Contact Information

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