Williams GIS Data Management
July 17, 2014
Agenda

> What we do
> Vision
> Challenges
> Approach
> Defined Future State
The Williams Companies

- Provider of natural gas, petroleum, and electricity
- 4,700 employees throughout 25 U.S. states and Canada
- 30K miles of pipeline infrastructure, plus an additional 6K miles recently acquired.
- $7.4 billion in revenue (2012)
- ~300 IT Systems – CMS, GIS, etc.

What we do...
Word for the day:

**Omphaloskepsis**
The study of one’s navel
Enterprise GIS at Williams

Integrate systems with GIS & make available

GIS that supports internal and external customers

Make GIS easy to understand
Vision

Enterprise GIS

Vision

centralized

dependable

secure

easy to use

supportive

facilitated

Sustainable

Understandable

integrated

Foundation

quality

centralized
“…I can’t find the data I need…”

“…Nothing is **organized**…”

“…**multiple** data access points…”
A partnered solution

Our approach...

Enterprise
GIS
Data
Management
Strategy
& Solution
Approach

1. Capture ‘Current State’
   - Data Discovery
   - Data Analysis

2. Design ‘Future State’
   - Policies & Standards
   - Data Requirements
   - Data Classification
   - Data Modeling

3. Implementation
   - Data Migration
     - Data Mapping
     - Data Movement

4. Maintain & Audit
   > Monitor Data
   > Audit Data

Our approach...
1. Current state

Our approach...

GIS Maturity Model

Level 0: No GIS
Level 1: Individual Efforts
Level 2: Departmentalized
Level 3: Centralized
Level 4: Integrated
Level 5: Enterprise

Return On Investment

Current

Target
1. Current State: Catalog & Analyze

> **Discovery Application**
- Crawling specified data locations
  - Servers
  - File shares
  - Databases (GIS)
- Sorts data in several ways, including geospatially
- Isolates duplicate data

> **Cataloging Application**
- Data is inventoried and tracked
  - New data
  - Modified data
- Beginnings of change management

Our approach...
1. Data Analysis

Over 2,000,000 Files Found!

File Shares
- Disconnected data silos
- Duplicate data
- Limited metadata
- No standards
- Low usage overall

SDE Instances
- Minimal standards
- Duplicate data
- Limited metadata
- No naming standards

Our challenges...
2. Future State

Our approach...
3. Implementation

Data Mapping & Migration

Our approach...
4. Maintain & Audit

Our approach...
Enterprise GIS - Williams

Pre-Construction

1. CSD
2. Survey
3. Land
4. Environmental Permits

Construction

5. Data Management & Integration
6. Knowledge Management

Operations

7. Safety & Regulatory Compliance
8. Asset Integrity

Geospatial Applications

- Unifier / GIS
- Pipeline Route
- Mobile Inspection
- Land ROW
- Survey App
- EIS
- Intrepid
- Sheet Cutter
- ARAS
- Class App
- HCA
- UDS
- Risk Modeler
- BAP
- External Web Viewer
- Facility Locator
- Google Earth
- Facility Locator
- Permit Tracking
- Voyager
- Blue Sky
- DvTDM
- EDMS
- Public Awareness
- DOT Calc
- ILI
- CPDM
- Dig List
- HDD / Feasibility
- Purchase Data
- Compliance Monitoring
- Basin Watch
- Flair Docs
- Mapping
- Arial Imagery
- One Call
- CADD
- CP Lines
- Valve Spacing
- CUI
- Pipeline Studio
- IDMS

Enterprise GIS Program

- Common Application Development - Geocortex
- Common Vendor Software
- Enterprise SDE Database
- Enterprise PODS Database
- Common Technology - ESRI ArcGIS / Oracle / Citrix
- Enterprise GIS Hardware Platform – Common Servers, Storage, and Security

Future vision...
Questions??