



Activity – Centric Asset Management for Bridges

Paradigm Devolution

Your Destination...Our Priority



History

- ▶ Built GIS tools for updating Pontis db
- ▶ Multi-year project outside Bridge
- ▶ LRS



Why?

- ▶ What prompts a change of this significance?
 - Tools don't work
 - Requirements change
 - Core values and strategic direction change
 - Event of significance



Review Findings

- ▶ No written policy setting forth a timeline for follow-up on maintenance and repair to address conditions that are not determined to be critical deficiencies.
 - None critical/routine maintenance needs
- ▶ Flow of information regarding the condition and safety of structures was informal and incomplete.



Review Findings

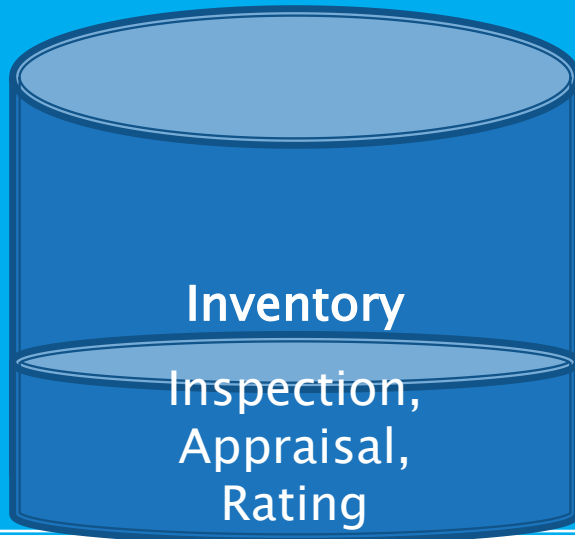
- ▶ Expert advice regarding the condition and safety of structures was not effectively utilized.
- ▶ Organizational hierarchy/structure did not adequately address structure condition and safety
 - (rehabilitating or replacing the existing transportation infrastructure, including the budget buster bridges while responding to the intensely expressed need for new construction and expansion.)



State of Asset Management

▶ All dependencies:

- Focused on asset first, conditions second
- Aggregate reporting and Lifecycle Projection based
- Business requests diluted condition and safety details to generalized categories.



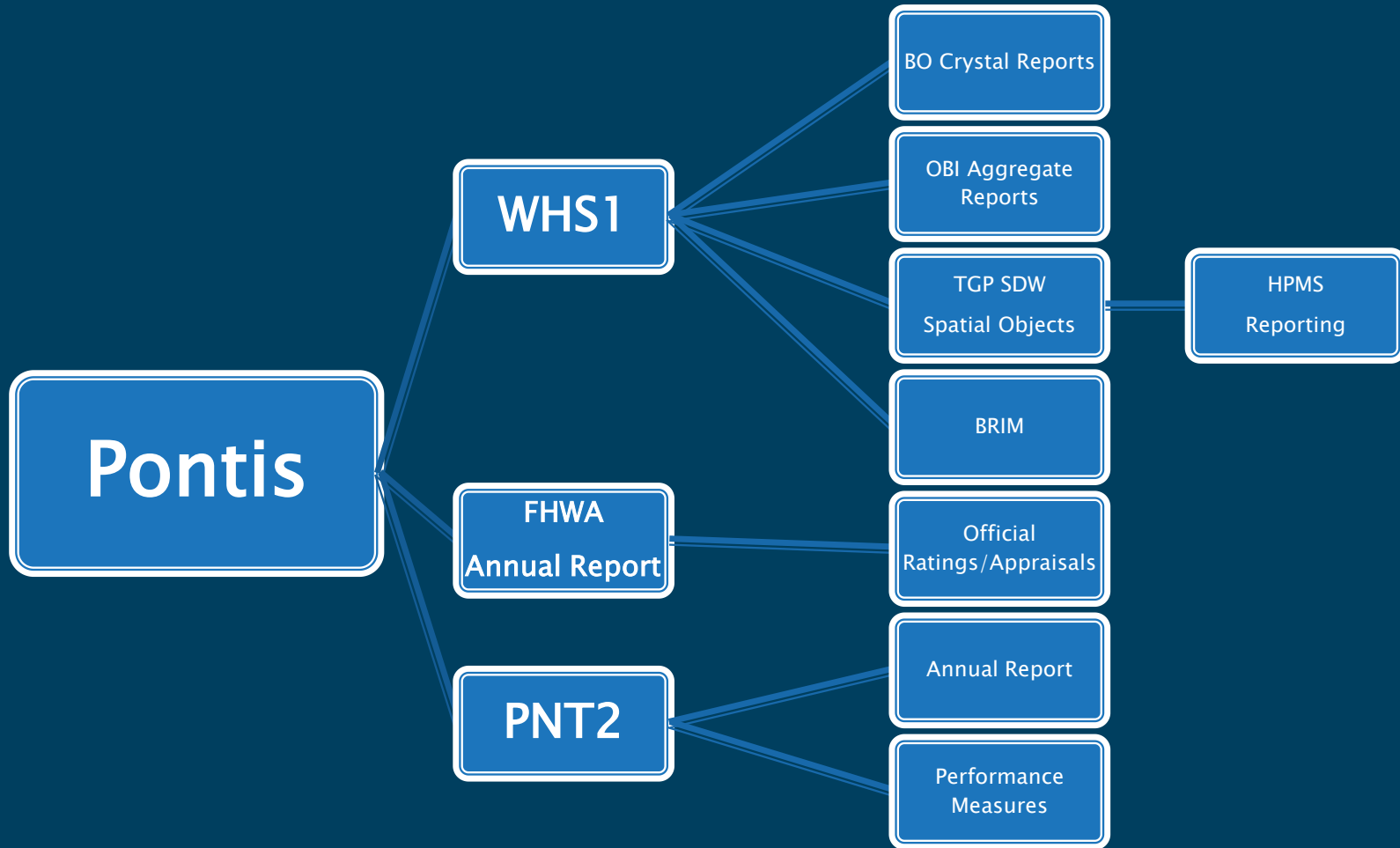
Data Dependencies

- ▶ FHWA Data Submittal (Ext)
- ▶ BRIM (WHS1 +)
- ▶ BO Crystal Reports (WHS1)
- ▶ OBI Aggregate Reports (OBWHS)
- ▶ GIS Spatial Objects (TGP+)
- ▶ Performance Measures Reports (WHS1 +)
- ▶ Annual Report (PNT2)

- ▶ > 500 reports, queries, exports, downloads or spatial view



Data Flows/Dependencies



Automated Updates

- ▶ Improvement cost for local Fed. Aid needs
- ▶ AADT & HCADT updates
- ▶ Legislative districts
- ▶ Location updates
 - Coordinate
 - LRS



Proposed Projects Goals?

- ▶ Reduce manual/duplicate entry of data
 - Structure & Inspection
- ▶ Spend less time
 - Manipulating data
 - Preparing reports
- ▶ Provide means to track and inspect non-bridge structures
- ▶ Reduce the time to perform, enter & review structure inspection



Proposed Projects Goals?

- ▶ Improve quality, accuracy & timeline of structure inspection
- ▶ Reduce the time it takes to manage maintenance recommendation
- ▶ Reduce disparate systems used to track inspection and maintenance data
- ▶ Improve inspection and inventory data accuracy



Activity Focused

- ▶ Program Administrator reviews / approves inspections
- ▶ Inspection Activities
 - Workflow tied to inventory state – always
- ▶ Maintenance Task
 - Workflow tied to inspection activity – loosely
 - Feed back loop tied to inspection activity



Maintenance Tasks

Bridge Maintenance Supervisor

- Inspect Bridge and Assess Condition
- Create Inspection Report and Enter Data
- Submit Inspection Report

Inspector

- Review Inspection Report
- Add/Edit and Prioritize Maintenance Tasks
- Submit Maintenance Tasks for Approval

- Review Inspection Report
- Review Maintenance Tasks
- Approve Inspection Report and Maintenance Tasks

Program Administrator

Inspection Report Condition Ratings



Project Direction

- ▶ Initial phases Lead primarily by Inspection Unit
- ▶ Maintenance Goals phase set to immediately follow implementation
- ▶ Project Manager did not have benefit of ALL SMEs
 - Data management and dependencies unrepresented



Project Direction

- ▶ Production implementation 'pushed' by season
- ▶ To meet customer delivery needs
 - 3rd party hosted solution
 - Increase in tool management
 - Accounts
 - Permissions
 - Workflow roles & responsibilities



What Is Working?

- ▶ Ease of delivery to primary users
- ▶ Interface is reasonably intuitive
- ▶ Users, Managers and Support see a single dataset
- ▶ Process continuity
- ▶ Flexible and easily updated
- ▶ Developed using agile techniques



What is not working?

- ▶ Flexible and easily updated
- ▶ Developed using agile techniques
- ▶ Paradigm change
 - Inspectors were trained
 - Program Administrators were offered training
- ▶ Dependencies under – estimated/valued
- ▶ Seasonal timelines and obligations pushed delivery
- ▶ “Culture of Change” has not caught up with dependencies



Definition

- ▶ Devolution
 - Degeneration
 - A transfer or allocation of authority, especially from a central government to regional or local governments or authoritative entity



Continuing Focus of Project

- ▶ Complete Maintenance module
- ▶ Replacement and Improvement Management for local customers
- ▶ Fully feed dependencies loop with current data
 - Bring data back in-house to provide for Reporting, Planning, Needs
- ▶ Rebuild tools/modules to update ancillary data



Questions?

