

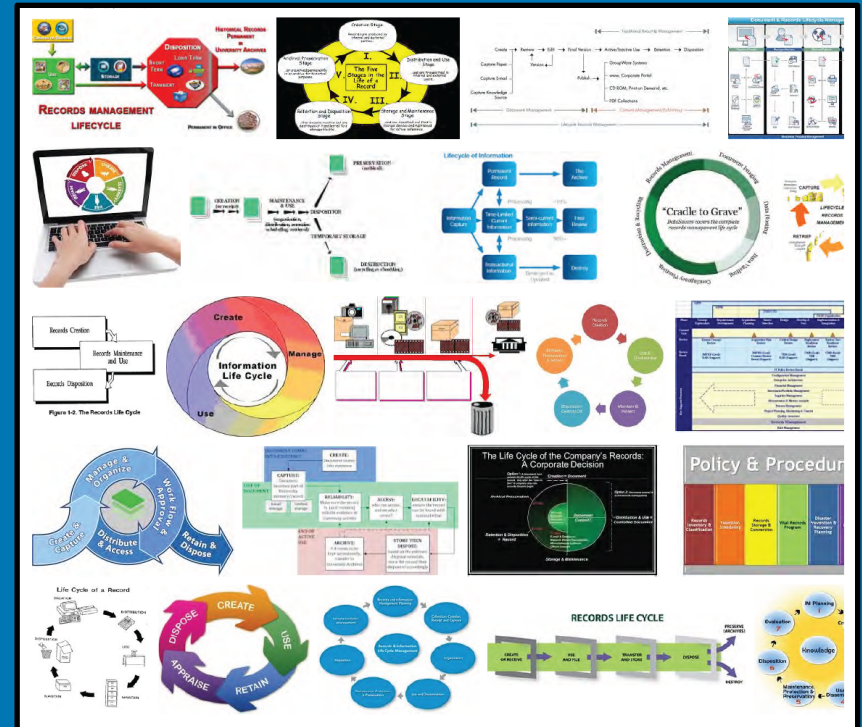


The Evolution, Approval, and Implementation of the U.S. Geological Survey Science Data Lifecycle Model

**Geological Society of America
2015 Annual Meeting
Baltimore, Maryland
1- 4 November**

Outline

- **Beginnings**
- **Steps**
- **Management Interaction**
- **Outcomes**
- **Impacts**
- **Importance**
- **Summary**



Beginnings

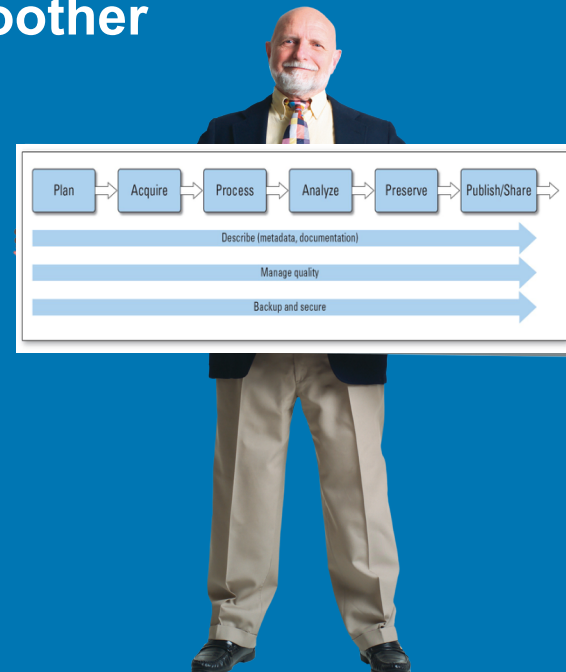
- **Group formed to develop Data Management (DM) *Best Practices***
 - 15 cross-agency, multi-disciplinary
 - Passionate about DM
- **Ramping up**
 - Worked through diverse perspectives within the agency
- **Recognized a foundation needed**

Steps

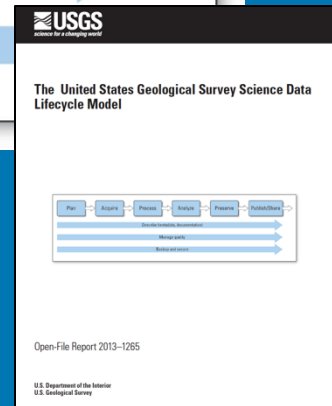
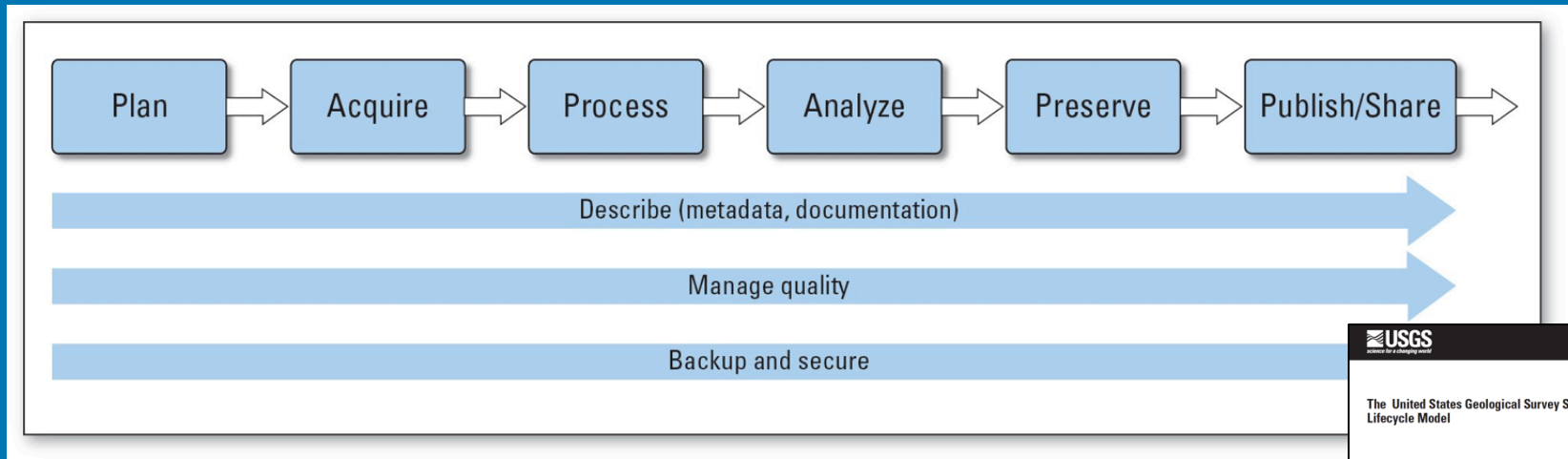
- Literature search
 - Goal: Find and adopt a model
 - 50-plus existing models
 - Weekly reviews
- Ended up lifting pieces/adding others
- NSF sponsored data lifecycle model workshop
- Two-day, face-to-face meeting
- Curves or lines...
- Reviews

Management Interaction

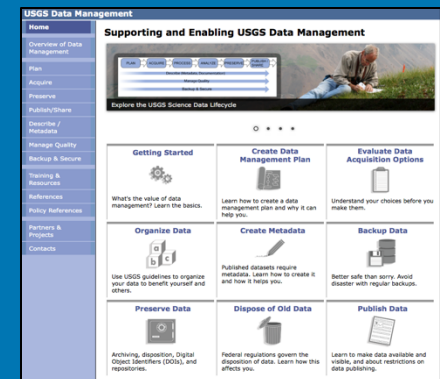
- Approval path for concurrence
 - DMWG > CDI > CDI Sponsors > FSPAC > ELT
- Sponsors took forward to senior management
 - Critical for upper management buy-in
 - Path much shorter
 - Follow-on activities smoother



Outcomes



- Single, agency-representative model
- Agency publication (<http://pubs.usgs.gov/of/2013/1265/>)
- Agency DM website build around model (<http://www.usgs.gov/datamanagement/index.php>)



Impacts

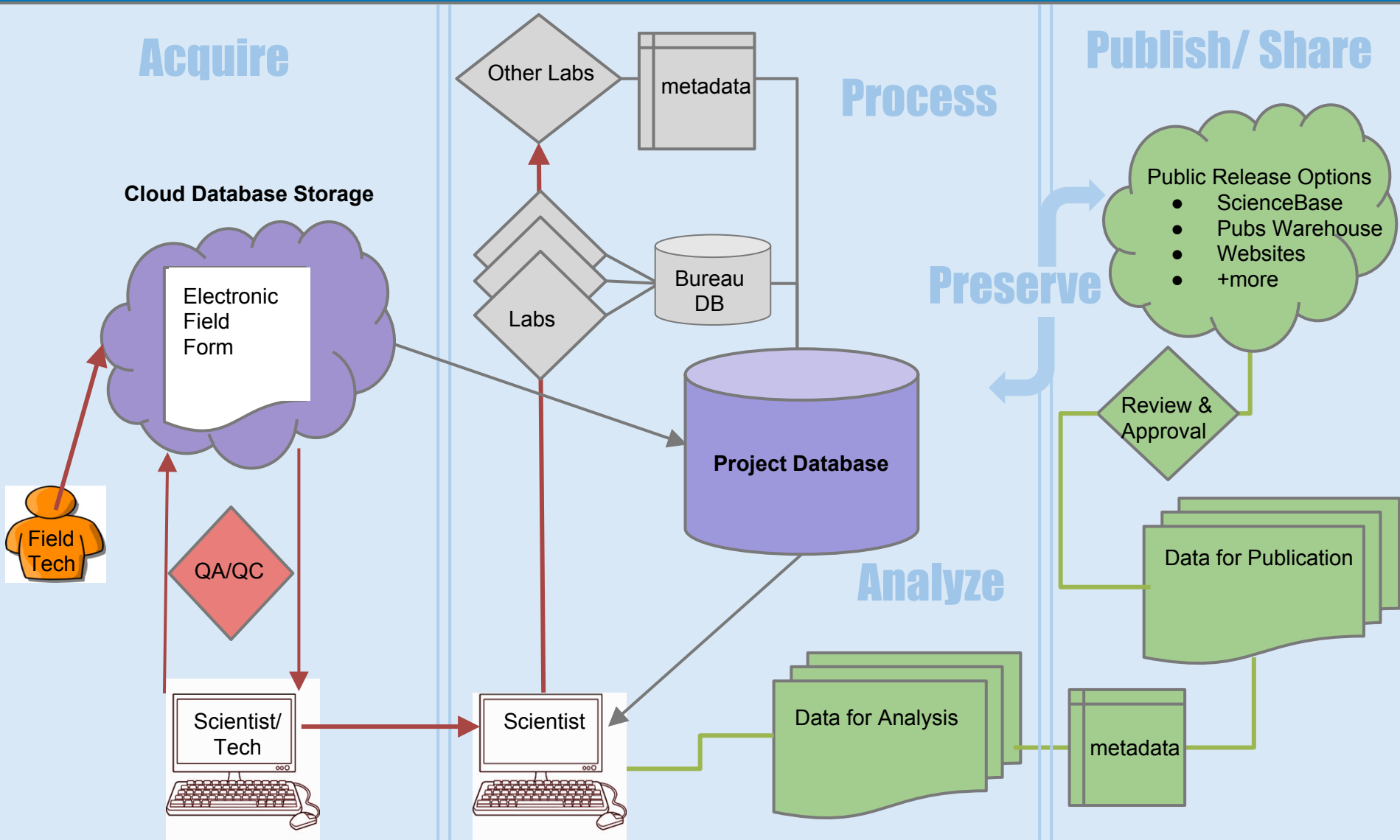
- Basis for new USGS DM policies
 - Foundation
 - Metadata
 - Data Release
 - Preservation
- Case Studies
 - Chesapeake Bay
 - Texas



Impacts

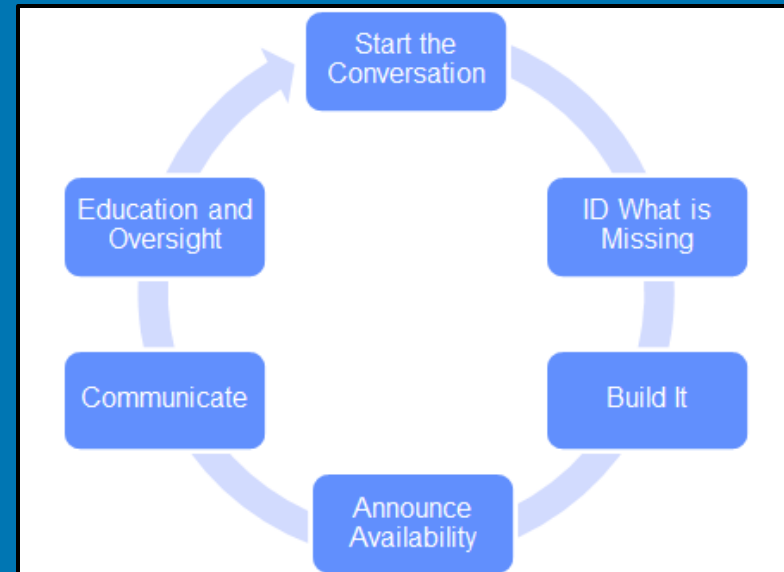
- **Case Study: Chesapeake Bay**
 - The Data Lifecycle is the building block for Data Management in the USGS Chesapeake Bay studies
 - Data Management Plan Template
 - Data Workflow Model
 - Putting project workflows in context of the Data Lifecycle helped:
 - Scientists relate actions to steps
 - Helped identify gaps in preserving and documenting data

Chesapeake Bay Case Study



Texas Water Science Case Study

- Impetus for operational introspection
- Data Lifecycle used to conduct an internal assessment of scientific study DM
 - Project and data lifecycle workflows
 - Existing discipline-specific DM plans
- Staff discussions and survey
 - DM in general
 - Roles and resources
 - Operational needs
- Identified next steps



Importance

- **Agency management buy-in**
 - For Model
 - For DM
- **Formal DM policies established**
 - Preservation and accessibility of agency data
- **Opportunity to engage science staff on DM**
 - Tools, examples, communication
- **Address OSTP and OMB Directives**

Summary

- Looking Back...
 - Took twice as long as originally expected
 - 2 versus 1 year
 - Was much harder to develop
 - weekly meetings
 - Broad applicability
 - DM policies
 - Real use-Cases
 - Establish a “new normal” for USGS science
- Well worth the investment!

Team Members

