Esri International User Conference | San Diego, CA

Technical Workshops | July 11 – 15 2011

ArcGIS Workflow Manager
An Introduction

Kevin Bedel

Tope Bello

Objectives of Workshop

- Present ArcGIS Workflow Manager framework
- Understand how to solve business challenges using ArcGIS Workflow Manager
- Demonstrations
- Questions

Session Topics

- Introduction to ArcGIS Workflow Manager
- Defining and executing workflows
- Integrating workflows with ArcGIS
- Tracking and reporting progress

Introduction

What is ArcGIS Workflow Manager

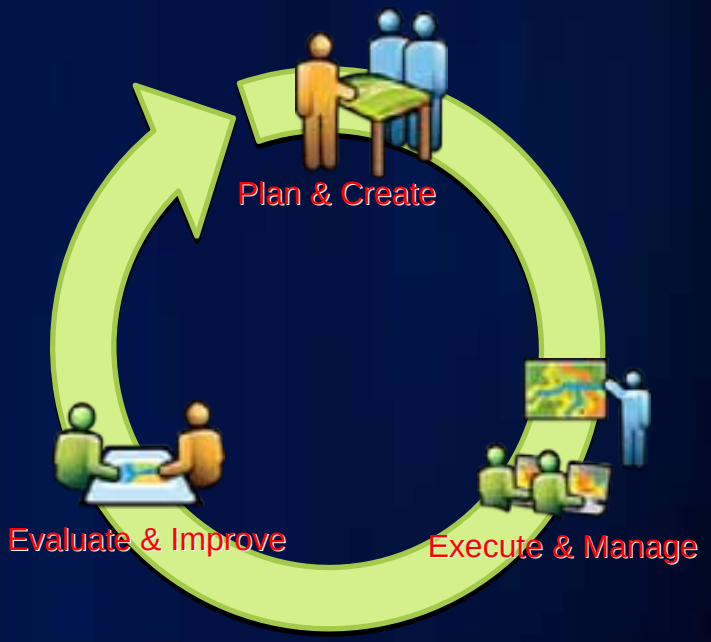
- **Enterprise workflow management application**
  - **Manages organization-wide projects**
  - **Integrates GIS and non-GIS workflows**

What is ArcGIS Workflow Manager

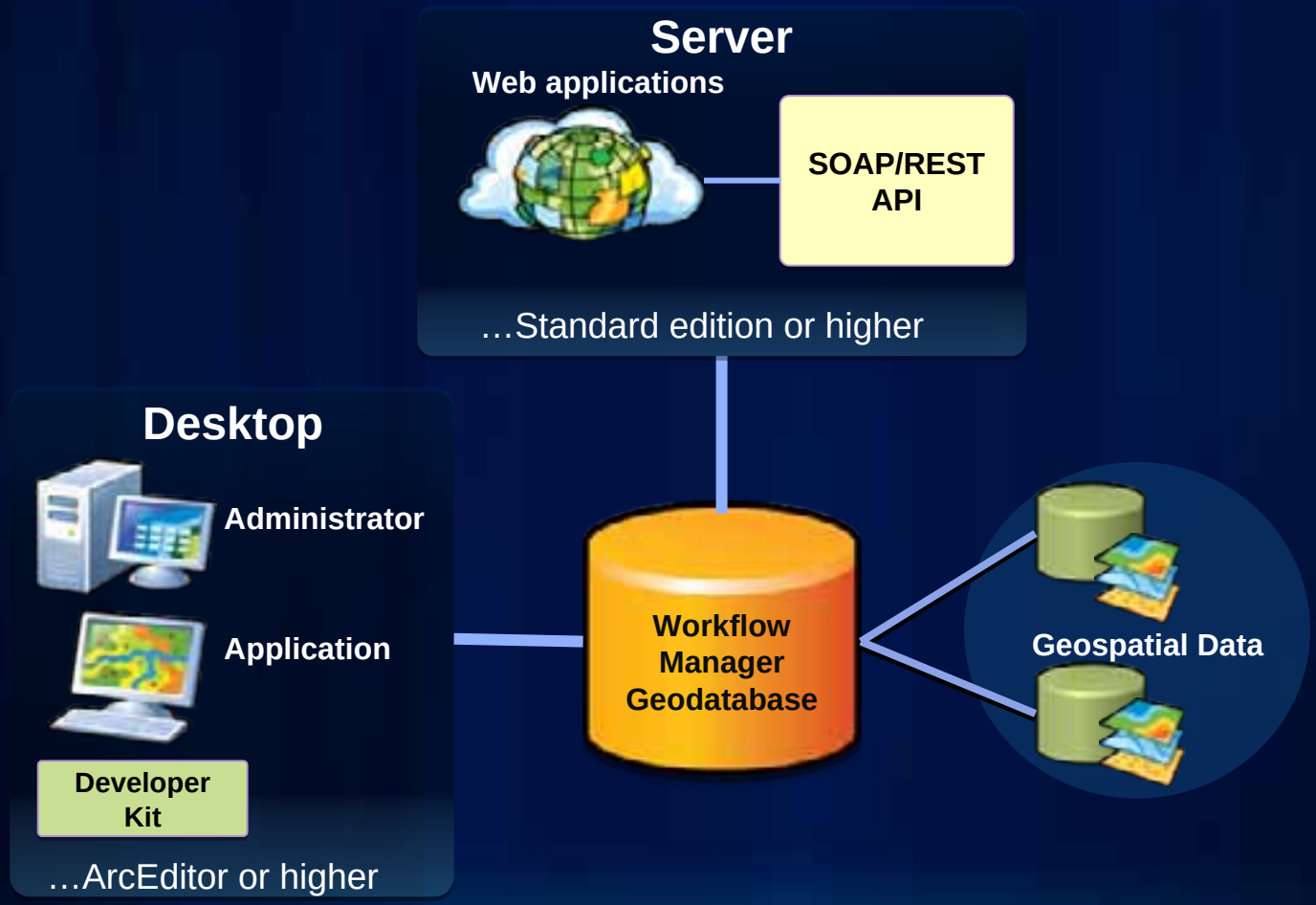
Provides a framework for continuous process improvement

Allows users to:

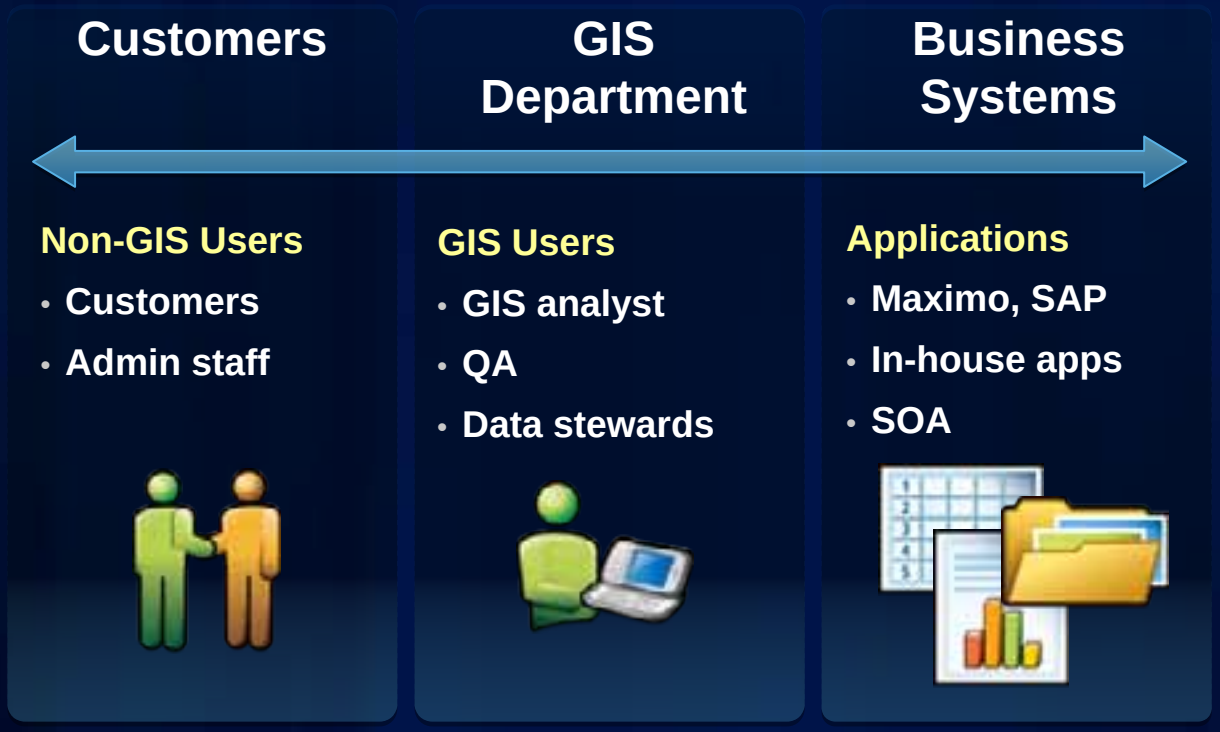
- **Plan & Create**
  workflows quickly
- **Execute & Manage**
  standardized workflows efficiently
- **Evaluate & Improve**
  performance continuously



Workflow Manager System Framework



Why ArcGIS Workflow Manager Server?



Defining your Business Processes

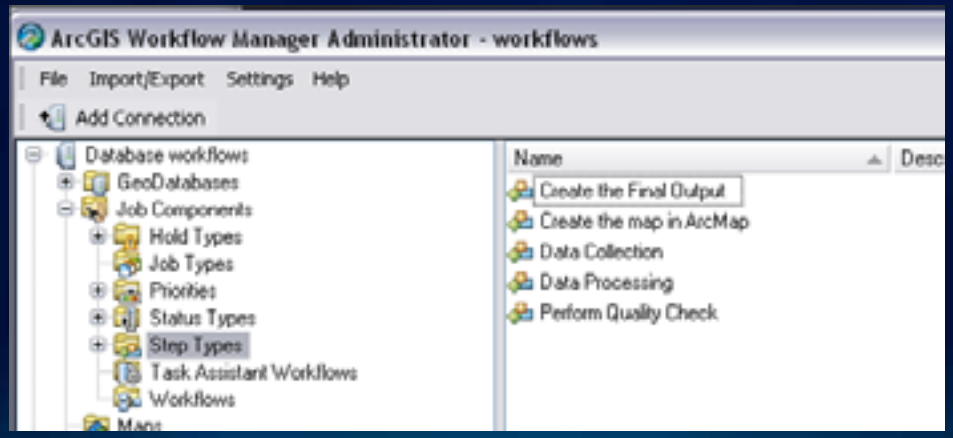
Defining Workflows

- How do I “model” my business processes?

- Using 3 steps
  - Outline steps to represent your activities
  - Connect steps with paths to define the flow
  - Update step and path properties to improve efficiency

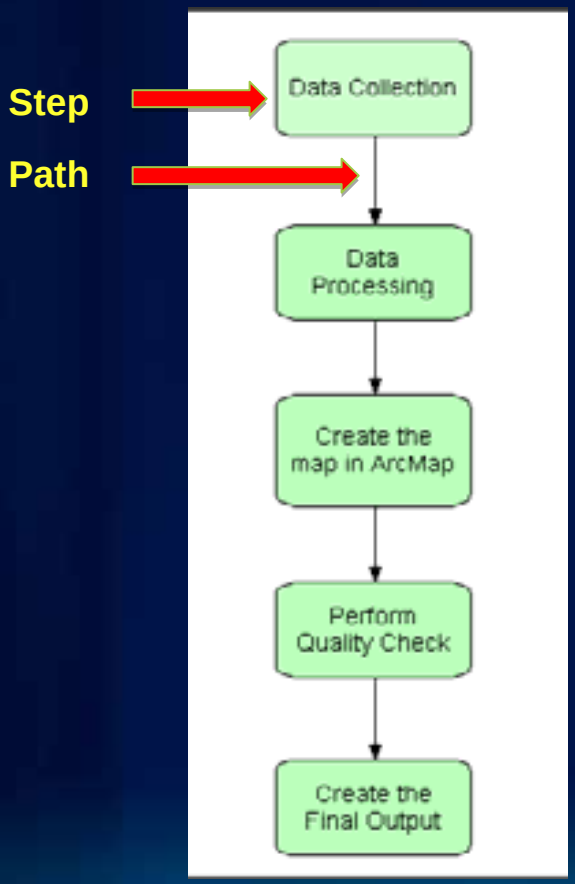
Outline Steps

- Break down your process into activities (for e.g.)
  - Data collection
  - Data processing
  - Create map product in ArcMap
  - Review quality of map content
  - Create final output
- Translate these into step types



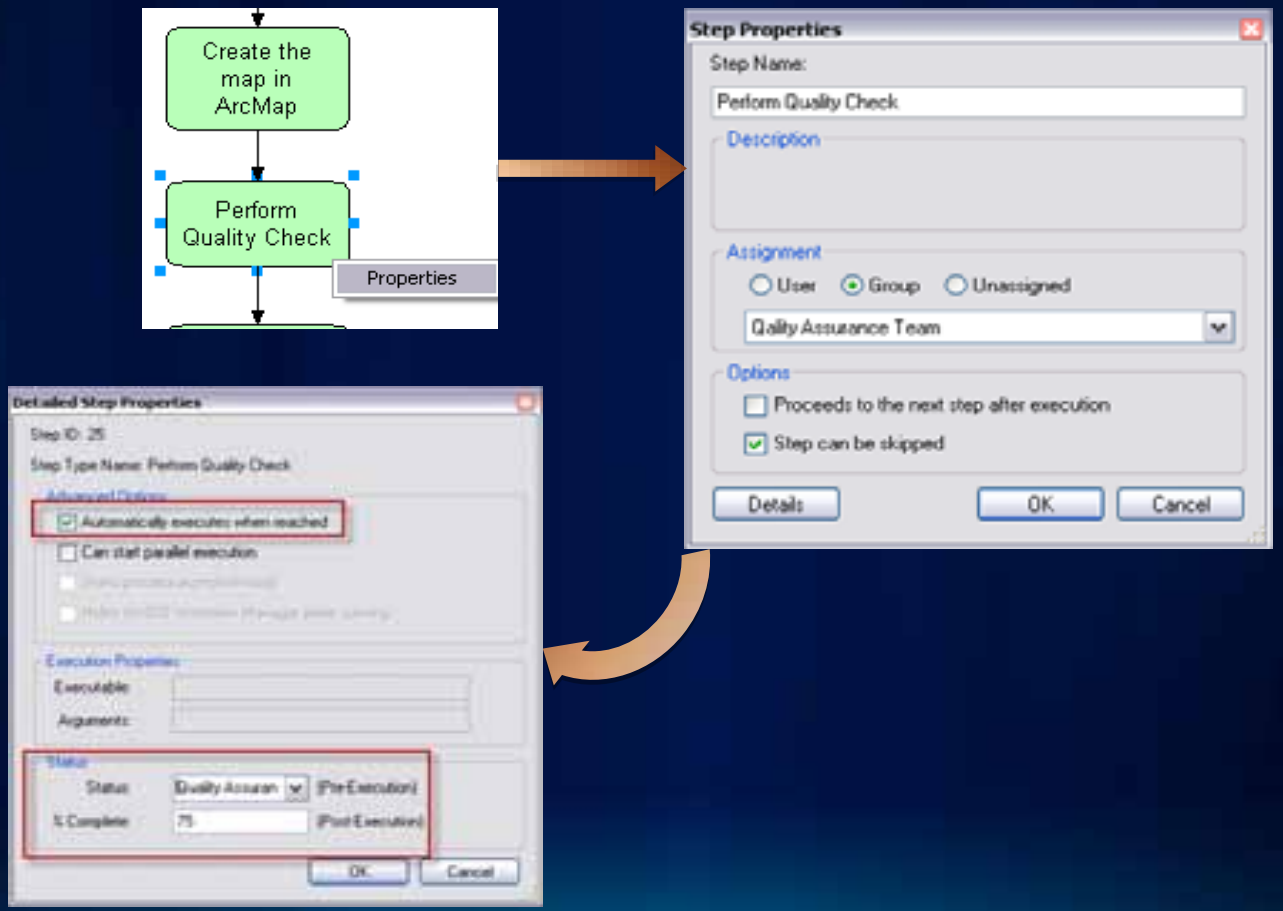
Connect Steps

- **Steps are connected by defining their paths.**



Update Step and Path Properties

- **Preset default behavior on steps and paths**



Defining Workflows

Workflow Tools

Step Properties

Utilizing your Business Processes

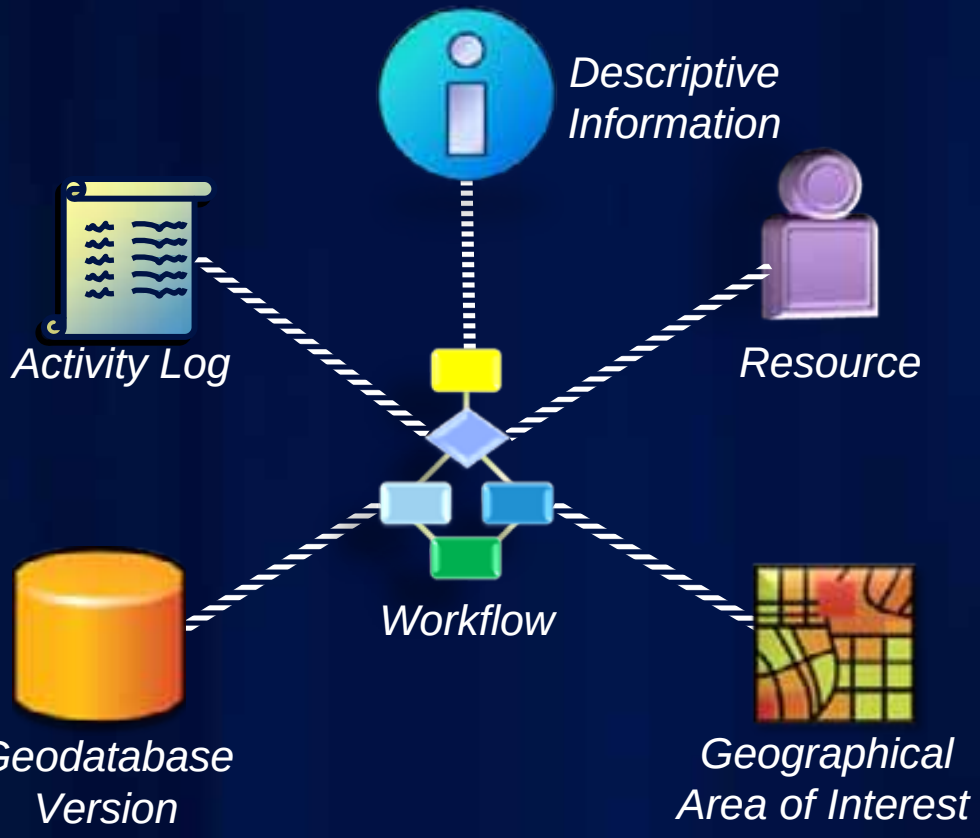
Executing Workflows

- How do I make these processes operational?
  - Associate workflow to job type
  - Create a job (an instance of the workflow)
- Examples:
  - Evaluate a new development plan
  - Create a 1:50,000 scale map product for a specific area

Accessing Jobs

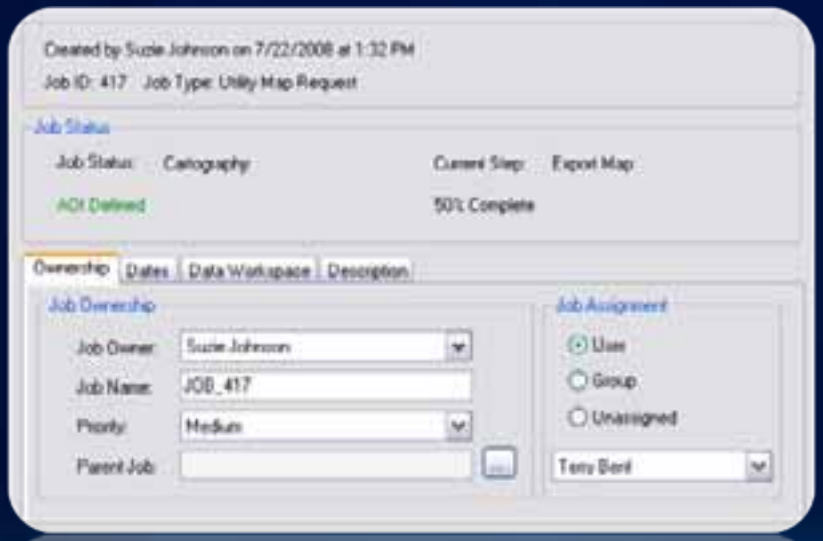
- Queries
- List / Map View
  - Filter results based on business specific rules

Components of a Job



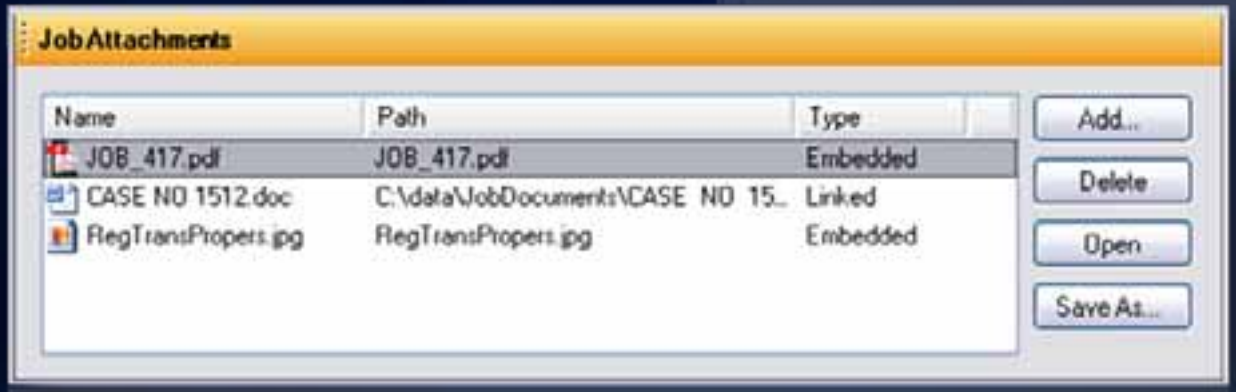
Job Properties

- **Standard**
  - **Name, due date, assignment, priority, etc.**
- **Extended**
  - **Custom, business specific**
  - **For e.g. Parcel Number, Department, Permit ID**



Notes and Attachments

- **Notes**
  - **Free form text**
  - **Miscellaneous information**
- **Attachments**
  - **Files supporting a job**



Job Resource

- Automatically assign job at any point in workflow to either:
  - User
  - Group
- User can belong to any number of groups

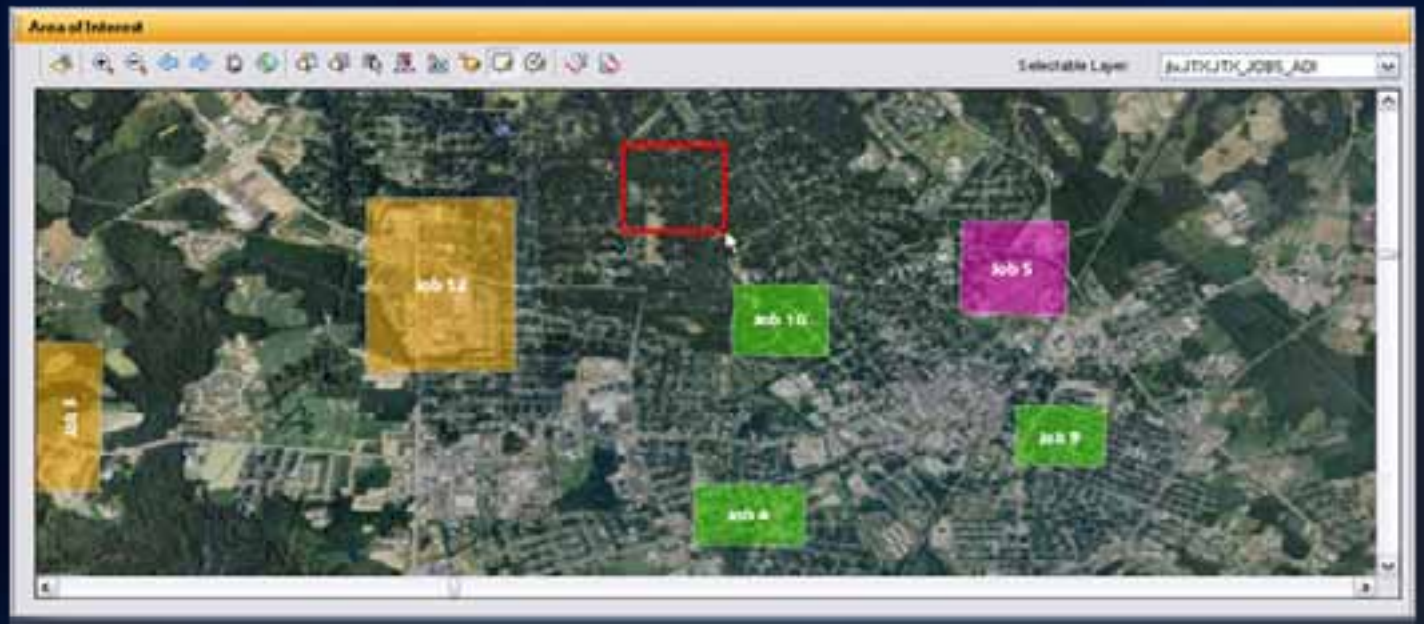
Application Privileges

- **Gate keepers of business process**
- **User group links privileges and user**

…Who is allowed to do which action?

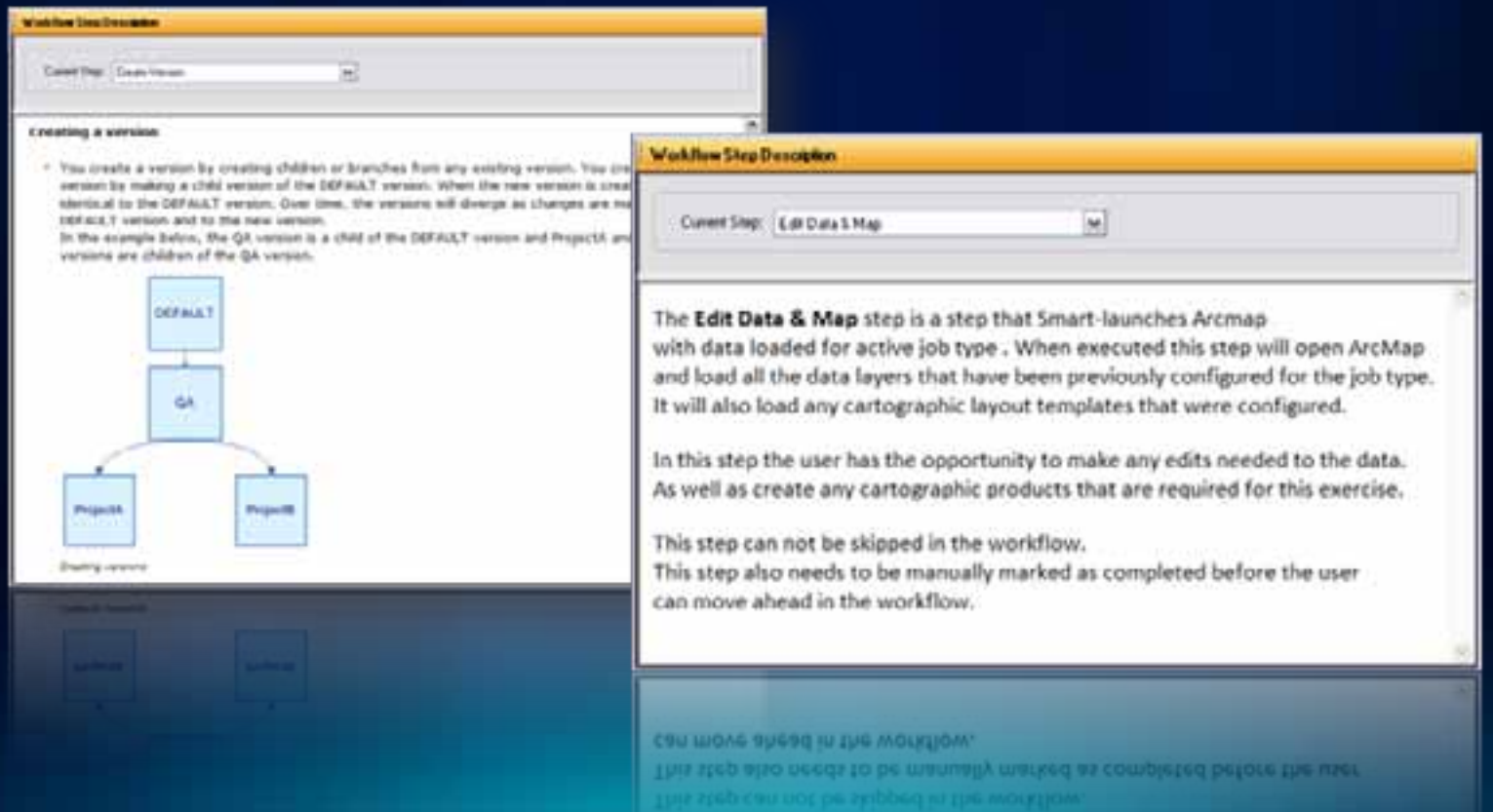
Area of Interest

- **Spatial component of job**
  - **Defines work location for users**
  - **Restrict edits to within job AOI**



Step Descriptions

- **Documentation about current task**
  - **HTML-based**
  - **Link to any URL or design your own**



Workflow Execution Tools

- **Progression defined via *Step Properties***
  - **Required**
  - **Automatically executed**
  - **Automatic reassignment of job**

Holds and Dependencies

- Holds
  - Arbitrary suspension of job
- Dependencies
  - Restricts job execution based on other jobs
  - Models relationships between jobs

Job Management

Job Creation

Job Properties

Integrating ArcGIS with your Business Processes

ArcGIS in your Business Processes

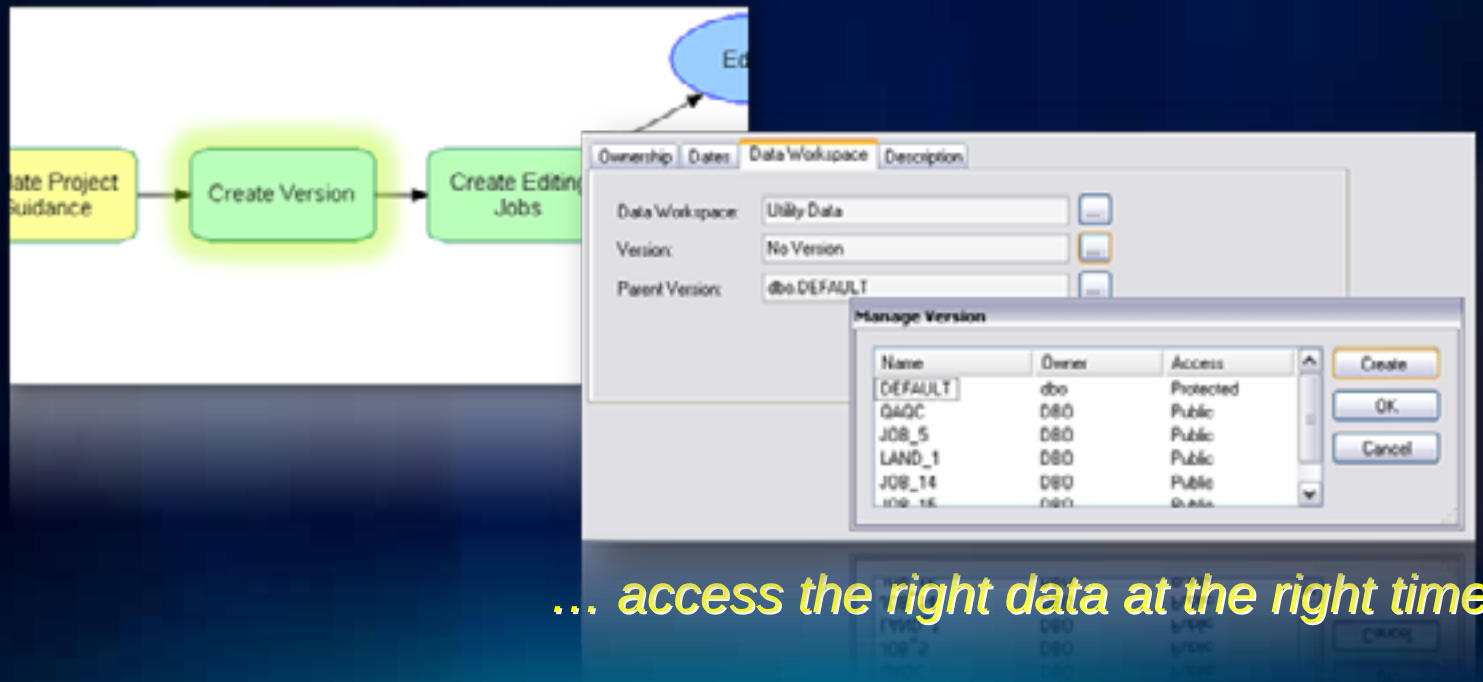
- Provide spatial orientation for your work
- Manage your geodatabase
  - Versioning
- Automate advanced GIS tasks
  - Batch execution
  - Create map templates

Version Management

- Versioning is required for multi-user data editing
- Automate version creation
- Associate version with task/job
- Automate clean up of unused versions

Data Management

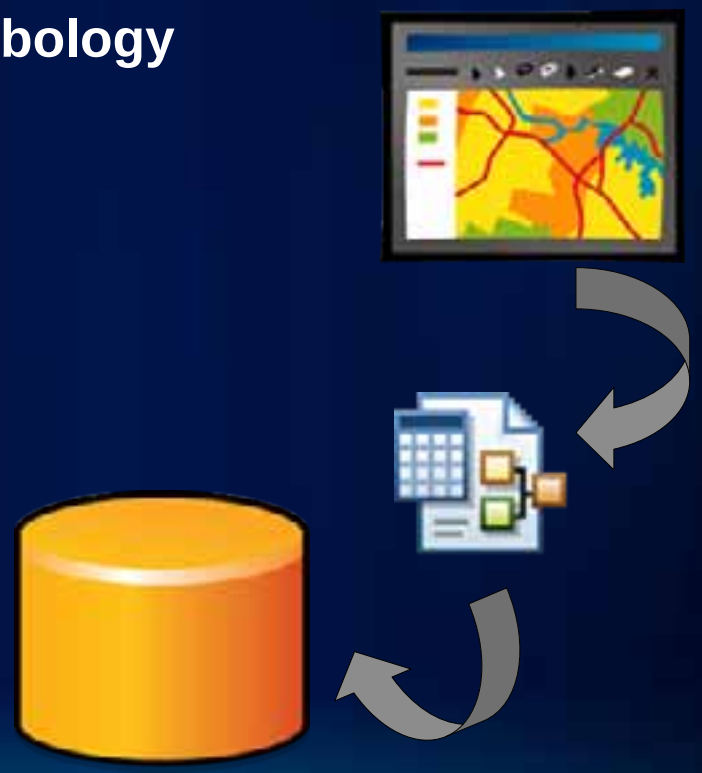
- Access data from multiple geodatabases
- Control user access to database
- Associate editing version with job
- Simplify user experience when working with versions



… access the right data at the right time

Map Document Management

- Associated and persisted with job
- Predefined layers and symbology
- Storage options
  - Central repository
  - File system

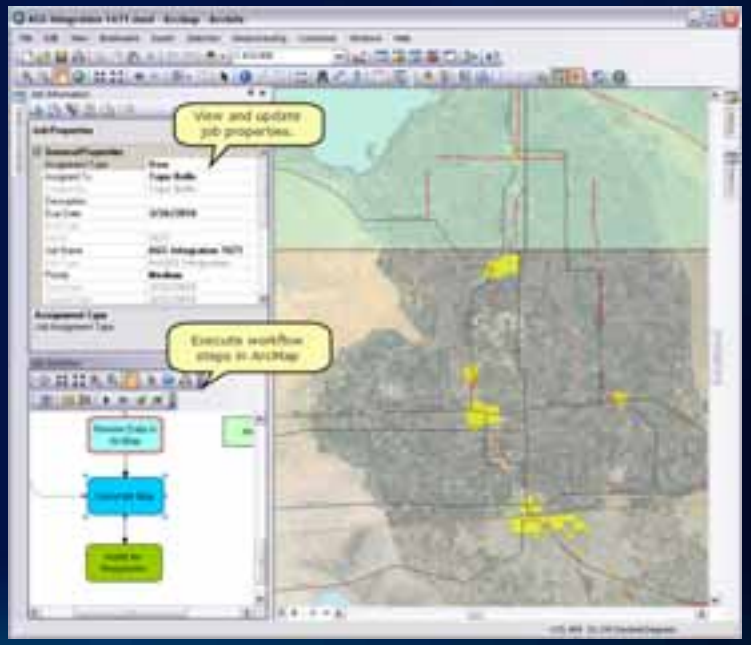


ArcMap Integration

- Step to launch ArcMap in preconfigured state
  - Load workflows within ArcMap using Task Assistant Manager
- Toolbar for ArcMap
  - Job information and properties

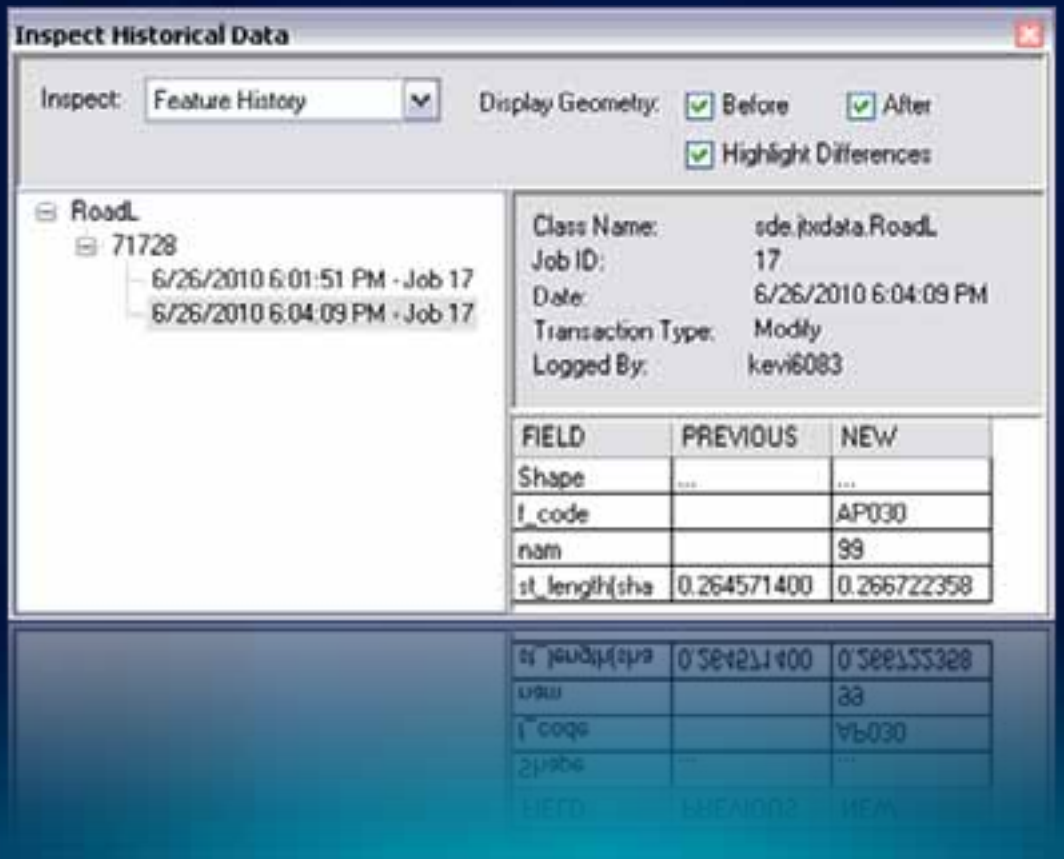
ArcMap integration

- Access to entire workflow within ArcMap
  - Manage steps
  - Set current job
- Use Job Information window to
  - Update properties
  - Add notes, attachments
  - Execute current steps
  - View history



Geodatabase Archiving

- Integrated with SDE geodatabase archiving
- Investigate edits that happened on jobs
- Revert changes to features



Geoprocessing Tools

- **Step to launch GP Tools**
  - **Increased productivity**
- **Workflow Manager Toolbox**

ArcGIS Integration

Workflow Execution

Geoprocessing

ArcMap Tools

Tracking your Work Progress

Why Track Progress?

- Enhance communication
- Automatically route work to appropriate resource
- Provide real time status to stakeholders
- Automatically capture history

Notification

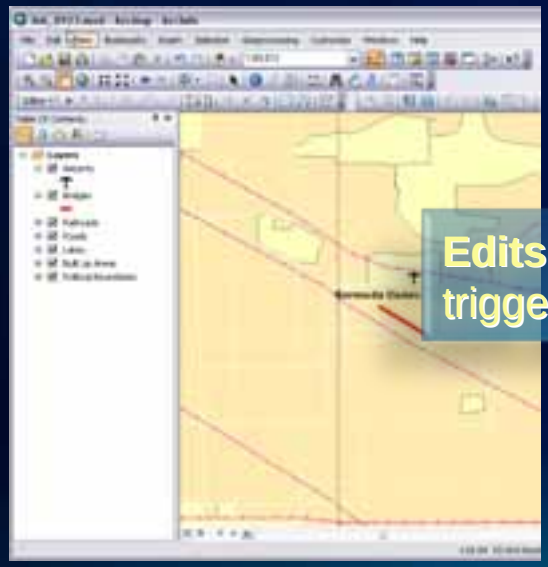
- Email notifications on
  - Job action
  - Workflow step
- Fully configurable

Spatial Notifications

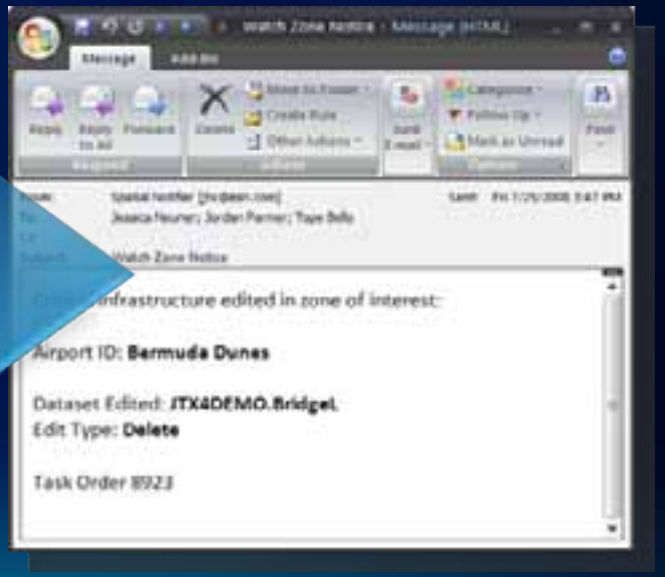
- **Be notified when feature edits made**

- **Create rules for changes to:**

  Feature class, geographic area, or specific feature

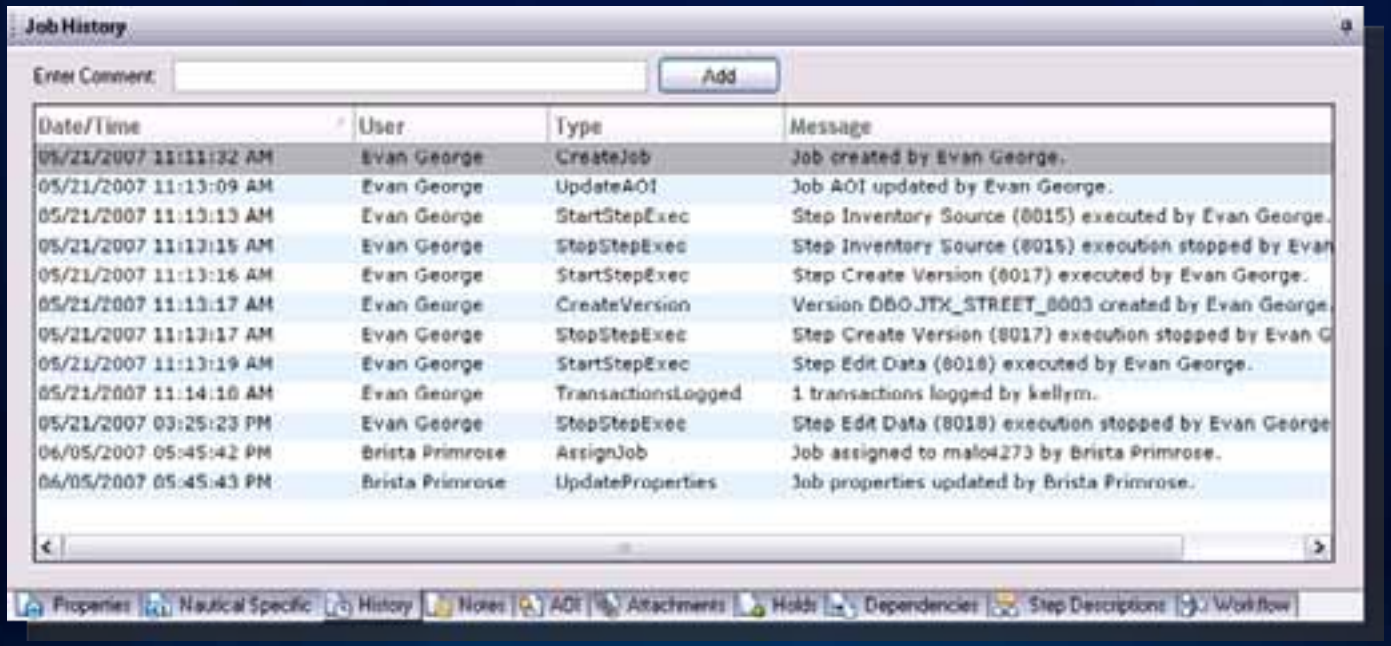


Edits to data
trigger notifications



Job History

- What's happened on this job?
- Tagged with user and date
- Supplemented with user input



Reporting Job Information

- Report on resource allocation, job status, etc.
- Information stored in central repository
- Present contents of repository using different methods
  - Built-in reports
  - Web charting
  - Crystal Reports

Tracking and Notification

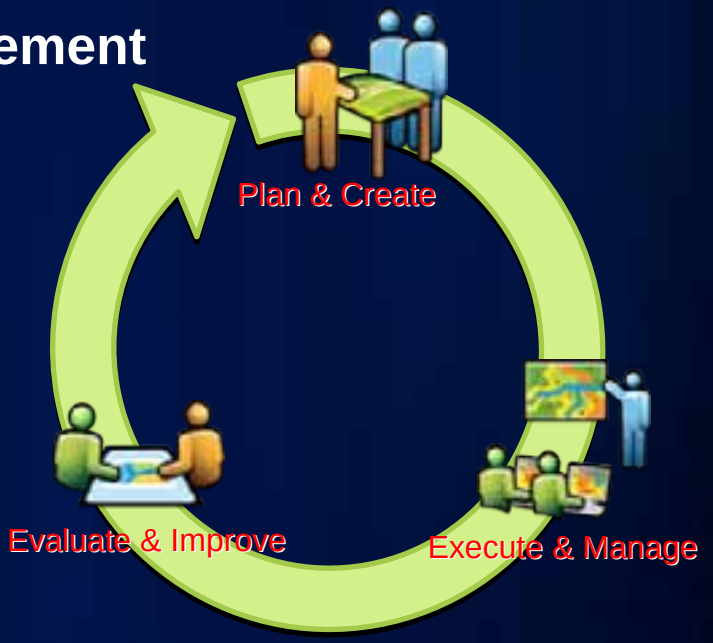
Job History

Job Notification

Reports

Summary

- Translate your business processes
  - Create and execute jobs
  - Manage and track jobs
- Evaluate for continual improvement
- This can be your process!



Where We Are

- **Geodatabase Management Island**
  - **Today until 6:00 pm**
  - **Thursday 9:00 am - 1:30 pm**

Other Sessions

ArcGIS Workflow Manager - Version management and feature tracking

- **Thur, July 14th from 3:40 - 4:00 PM in Room 23B**

Road Ahead: ArcGIS Workflow Manager

- **Thur, July 14th from 8:55 - 9:15 AM in Room 6A**

- **…and more**

Resources

- ArcGIS Workflow Manager User Guide
  - http://resources.arcgis.com/content/web-based-help
- Forums
  - http://forums.arcgis.com/
- Resource Center
  - http://resources.arcgis.com/
- Product Page
  - http://esri.com/workflowmanager

esri