ArcGIS Workflow Manager: An Introduction

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Our plan today

• Definition of workflow
• Importance of standardizing GIS and non-GIS workflows
• ArcGIS Workflow Manager allows you
  - Configure
  - Organize
  - Centralize
  - Execute Workflows
• Additional Resources
What is a Workflow?

- A workflow is a sequence of steps that a piece of work has to pass from initiation to completion.
Are your workflows **automated** and **documented** today?
Common Methods of Managing Work

- Individual approach
- Mock-up workflows
- Whiteboards
- Ticketing systems
- Spreadsheets
What is ArcGIS Workflow Manager?

A framework for operational efficiency

Configure & Create

Evaluate & Improve

Execute & Manage
ArcGIS Supports the Enterprise

Making Mapping and GIS Available Across Your Organization
System Framework

Desktop

Administrator

Application

Workflow

Geodatabase

Server

Web Applications

Geospatial data
Workflow Manager Administrator Roles

• Basic Administrator
  - Manage configuration items

• Workflow Author
  - Designs and authors Workflows

• Workflow Developer
  - Extends workflow with custom scripts/code
Key Features
Workflow Management System

- Graphical Representation
- Data Entry Form
- Identity Based Access
- User Reassignment
- Report Generation
- Document Integration
- Geospatial Integration
- Email Notifications

….and more
Workflows

• **Document and automate processes**

• **Graphical representation of the work**
  - Canvas with shapes

• **Organized as Jobs**
  - Create data packet for field data collection
  - Updating data for vegetation boundaries
Anatomy of a Job

- Descriptive Information
- Activity Log
- Geodatabase Version/Geospatial Data
- Workflow
- Resource
- Geographical Area of Interest
Anatomy of a Workflow

Start → Check Version → Create version → Clip Imagery → Prepare → Inventory Update → Documentation → Edit Data → QC Data → Notify

- Step
- Path
- Starting step
- Conditional path
- Concurrent steps
- End step
- Merge Point (Dependence)
Workflow Assignment

• Automatically route work
• Target specific groups
• Varying staff skills
• Manage large workforces
Default and Custom Properties

**Default Properties**
- Data
- Priority
- Dates
- Assignee
- Owner

**Custom Properties**
- Parcel ID
- Station ID
- Meter Number
- Vessel ID
- Surveyor Info
- Vessel ID Surveyor
- Info
- Station ID Parcel ID
Identity Stores and Credentials

• Operating System Users
  - Active directory
  - Manual entry

• ArcGIS Online/Portal Users
Application Access Control

- Control User actions
  - Creating jobs
  - Assigning jobs
  - Closing jobs

- Show/hide functionality
  - History
  - Map view tab
  - Reports

- GIS Managers
- Quality Team
- GIS Analysts
Software Demonstration

• Is vegetation growth encroaching on a rail line?

Survey manager
• Create a workflow to update a vegetation boundary
• Create a job and assign it to a GIS specialist

GIS specialist
• Update a versioned Vegetation feature class
• Notify field crews of pending work
• Send locations that need to be trimmed (including data)

Field crew
• Perform field work
• Verify job is complete
Key Features

.....continued
Geographic Area of Interest

- Spatial orientation of all work
- Restrict work to a spatial extent
Version Management

• Automate version management
  - Create version per job/user
  - Reconcile and post changes
  - Cleanup versions
Tasks

- Repeatable interactive workflows
- Represent a micro level workflow in Pro
- Integrates with Workflow Manager
  - Support macro level workflows
  - Associate task with many users
  - Ensures consistency across organizations
Tasks and Workflow Manager
Micro and Macro workflows

- Tasks are tailored for GIS tasks
- Workflows are enterprise wide
- Allows multiple sessions
- The right tool in the right time
Map Management

- Step to open a map in preconfigured state
  - Predefined layers and cartography in 2D and 3D
  - Zooms to job’s area of interest
  - Update layer source
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Key Features

…..continued
Offline Jobs

- Consistent workflows across organizations is key!
- Provide documentation for staff in and around
- Support remote staff
• Attachments are key
  - Linked to existing DMS
  - Linked to existing website
  - Embed in workflow database
Alerts and Notifications

• Job Notifications
  - Assign Job
  - Create Job
  - Close Job

• Workflow Notifications
  - QC step alert
  - Data received

• Spatial Notifications
  - Feature modification
Reports

- One stop shop for all job information
- Built-in reporting capabilities
- Database tables
  - Support additional reporting tools
Enterprise Offering

- Non-GIS staff
- Ready to use web apps
  - No programming
Extensibility
Developer Options

• Integrate with other systems
  - Extended Properties
  - Desktop APIs
  - Web APIs
• Dashboards for GIS Work
• Is vegetation growth encroaching on a rail line?

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Prepare workflow geodatabase
• Import users and templates

Manage user access
• Add users to groups
• Assign privileges to groups

Configure Business process
• Author workflows and job types
• Configure notifications

Deploy to all users
• Install and share connection

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Workflow Manager to automate and document your workflows!
Resources

• Geonet

• Product Page
  - http://esri.com/workflowmanager

• Training
  - http://training.esri.com/

• Resource Center