ArcGIS Workflow Manager:Centrally Manage and Streamline GIS Operations

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Our plan today

- Reasons for process improvement of GIS and non-GIS workflows

- ArcGIS Workflow Manager
  - Configure
  - Organize
  - Centralize
  - Execute Workflows

- Additional Resources
Our Organizations

People

Processes

Products
Meet the Team!

- Business/Product Manager
- Survey Manager
- GIS Specialist
- Field Acquisition
I’d like to easily track the progress of projects I’m interested in while on the go.
I’d like to easily task people with work, provide them on-demand help, and standardize our business processes.
GIS Specialist

I’d like to automate repeatable tasks, reduce data errors and minimize post project data clean-up
I’d like field work and data resources provided to me when ready and an easy way to mark my work as complete.
Are your workflows automated and documented today?
Without Standards
What is ArcGIS Workflow Manager?

- Configure & Create
- Execute & Manage
- Evaluate & Improve

A framework for operational efficiency
System Framework

ArcGIS Pro

Enterprise

Web Applications

Workflow Geodatabase

Geospatial data

Administrator

Client Applications
Workflow Management System

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

...and more
Workflow Assignment
Simplify workforce management

- Automatically route work
- Target specific groups
- Varying staff skills
- Manage large workforces

QA team
Editing team
Technical Writer
QA team
Workflow Manager and Tasks
Macro and micro workflows

- Tasks are tailored for repeatable steps inside an ArcGIS Pro Extension
- Workflows are Enterprise wide
- Workflow Manager steps can load tasks
Software Demonstration
What’s the Census Data for a Given Block Group?

Survey Manager
Create a Workflow and Job
• Workflow to collect Census data for a given block group
• Assign the job to the GIS Specialist

GIS Specialist
Edit the Data and Notify Field
• Update the block group data
• Notify Field Crews of pending work
• Send data to field to assist

Field Crew
Perform Field Work and Mark Job as Complete

Business Manager
View Job Progress, History and Reporting
Demo Recap

- Create a job in ArcGIS Pro
- Review job properties
- Define Location of Interest
Administer

Creating and designing workflows
Workflow Manager Administrator Roles

- Basic Administrator
- Workflow Author
- Workflow Developer
Designing Workflows

- Drag-n-drop workflow designer
- Step type library
  - Procedural
  - Ask question
  - Run executable
  - Open file
  - Launch URL
  - Custom
- Execution paths
Workflow Adornments

- Display on steps and paths in workflow to indicate more information
  - Automated Step
  - Notification
  - Assignment

- Create more informative workflow images
Job Types

Workflow

Maps

Properties
Default and Custom Properties

Default Properties

Data

Priority

Dates

Assignee

Owner
Default and Custom Properties

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

**Custom Properties**
- Parcel ID
- Station ID
- Vessel ID
- Meter Number
- Surveyor Info
- Vessel ID
- Surveyor Info
Geographic Location of Interest (LOI)

- Spatial orientation of all work
- Restrict work to a spatial extent
- Location of Interest can be:
  - Polygon (AOI) or Point (POI)
Version Management
Version Management
Software Demonstration

What’s the Census Data for a Given Block Group?

System Admin

Configure and Design System

- Set up the database repository
- Incorporate Business Data
- Build workflows
Demo Recap

• Explored the Workflow Manager geodatabase / repository
• Explored job components: job and step types, workflows, extended properties
• Configuring workflows
Configure
Notifications, Reporting, and Security
Notifications

Job

Email and Text Alerts

Spatial
Reporting

- One stop shop for all job information
- Built-in reporting capabilities
- Database tables
  - Supports additional reporting tools
Identity Stores and Credentials
Controlling access to the system

• Operating System Users
  - Active directory
  - Manual entry

• ArcGIS Online/Portal Users
Advanced Workflow Modeling

Python API

Access → Configuration, Jobs and Tools

Edit → Configuration and Jobs

Execute → Jobs
Extensibility
Developer Options

- Integrate with other systems
  - Extended Properties
  - Desktop APIs
  - Web APIs
- Dashboards for GIS Work
### Compatibility with Esri Apps

<table>
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<tr>
<th>Workforce</th>
<th>Create Workforce Assignments from Workflow Manager</th>
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<td>Collector</td>
<td>Create Feature Service for collection and distribute the URL using Workflow Manager</td>
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<tr>
<td>Operations Dashboard Widget</td>
<td>See the Status of Jobs in your Organization</td>
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<tr>
<td>Web AppBuilder Widget</td>
<td>Create Workflow Manager jobs</td>
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</tbody>
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*Coming soon*

Samples available on Github
Software Demonstration

What’s the Census Data for a Given Block Group?

System Admin

Advanced Configuration

- Set up job notifications and tokens
- Design reports
- Extend workflows using APIs
Demo Recap

- Set up notifications using tokens
- Explored job queries
- Built and customized reports
- Viewed security and roles
Web Ready
Browser based applications
Enterprise Offering

- Non-GIS staff
- Ready to use web apps
  - No programming
Launching the Workflow Manager Web Viewer
Access job properties through the Web Viewer
Offline Jobs
Continue Workflows in a Disconnected Environment
Reporting through the Web Viewer
Software Demonstration

**What is the Census data for a given block group?**

**Survey Manager**
- Create a Workflow and Job
  - Workflow to update a Census data for a block group
  - Assign the job to the GIS Specialist

**GIS Specialist**
- Edit the Data and Notify Field
  - Update the block groups
  - Notify Field Crews of pending work
  - Send data to field to assist

**Field Crew**
- Perform Field Work and Mark Job as Complete

**Business Manager**
- View Job Progress, History and Reporting
Demo Recap

- Viewed Dashboard metrics over the web, queries, reports
- Access jobs, attachments, LOI, workflows
Workflow Manager to automate and document your workflows!
Team – Wrap Up

- Project tracking with the Javascript Viewer
- Ops Dashboard Widget
Team – Wrap Up

Job Creation, Step Help, Task Integration

Standard Workflows and Templates
Team – Wrap Up

GP and Python Integration, Extended Properties, Version Management
Team – Wrap Up

Workforce Integration
Embedded Job URLs, Email Notifications
Resources

• Geonet

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

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

• Samples
  - https://github.com/Esri/workflowmanager-viewer-js
  - https://github.com/Esri/workflowmanager-samples
Please Take Our Survey on the Esri Events App!

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Select the session you attended

Scroll down to find the survey

Complete Answers and Select “Submit”
Print Your Certificate of Attendance
Print stations located in the 140 Concourse

Monday
12:30 PM – 6:30 PM
GIS Solutions Expo, Hall B

5:15 PM – 6:30 PM
Expo Social, Hall B

Tuesday
10:45 AM – 5:15 PM
GIS Solutions Expo, Hall B

6:30 PM – 9:30 PM
Networking Reception, Smithsonian National Air and Space Museum