

Federal GIS Conference 2014

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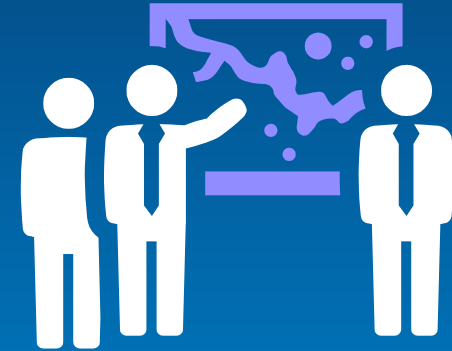


Using Enterprise Workflows to Manage your GIS

Kevin Bedel

Session Topics

- **ArcGIS Workflow Manager Overview**
- **Executing Jobs**
- **Configuring ArcGIS Workflow Manager**
 - **Designing Workflows**
 - **Integrating Business Data**
 - **Modeling Relationships Between Jobs**
- **What Do I Need?**

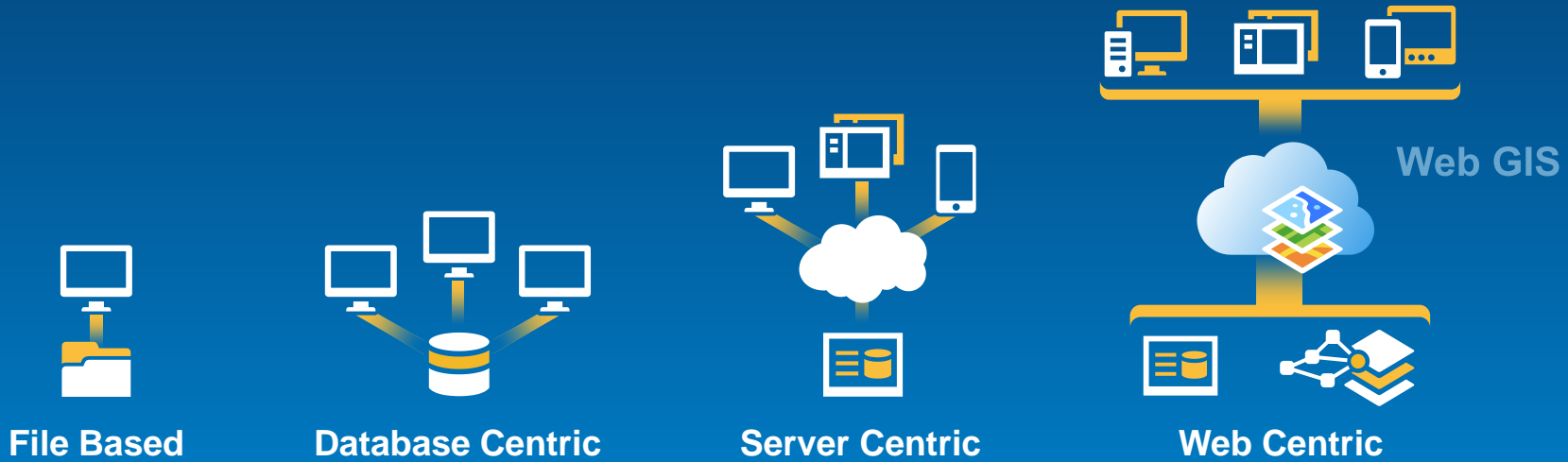


ArcGIS Workflow Manager Overview

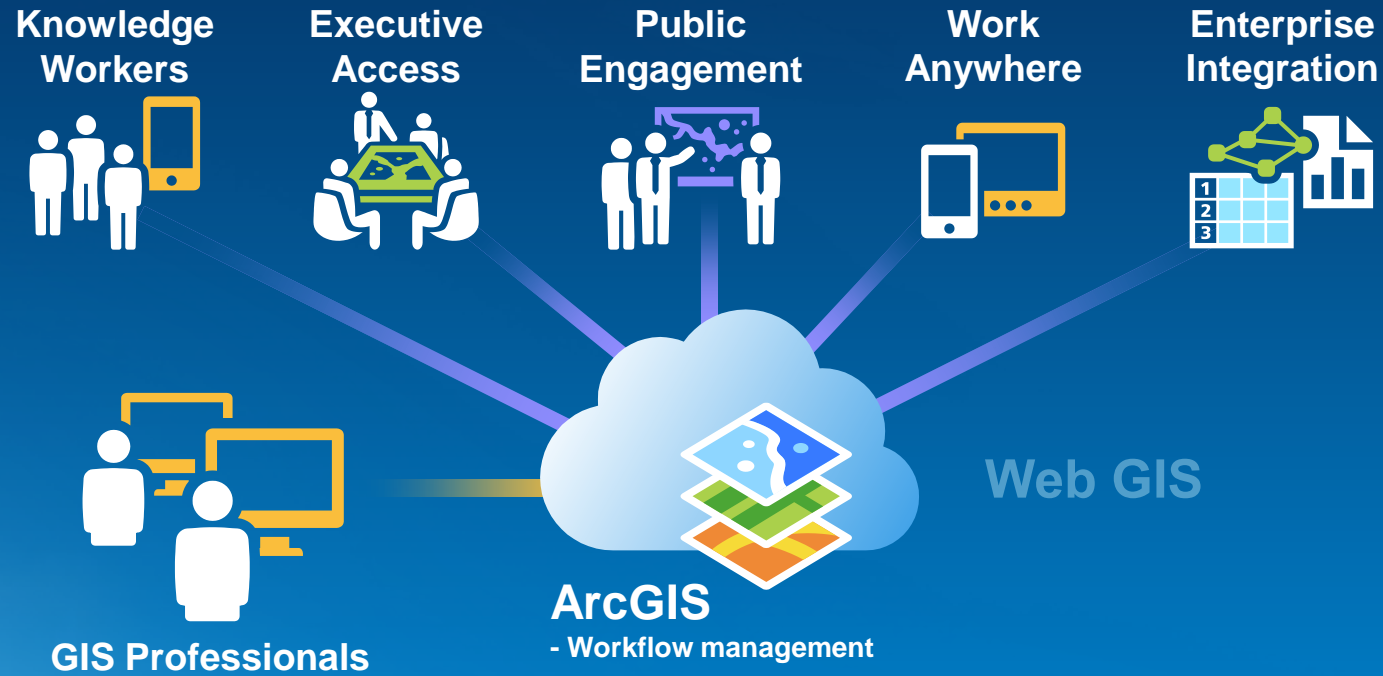


ArcGIS Supports Multiple Implementation Patterns

Leveraging Common Computing Architecture



ArcGIS Supports the Enterprise



**Making Mapping and GIS
Available Across Your Organization**

Transforming the Role of GIS

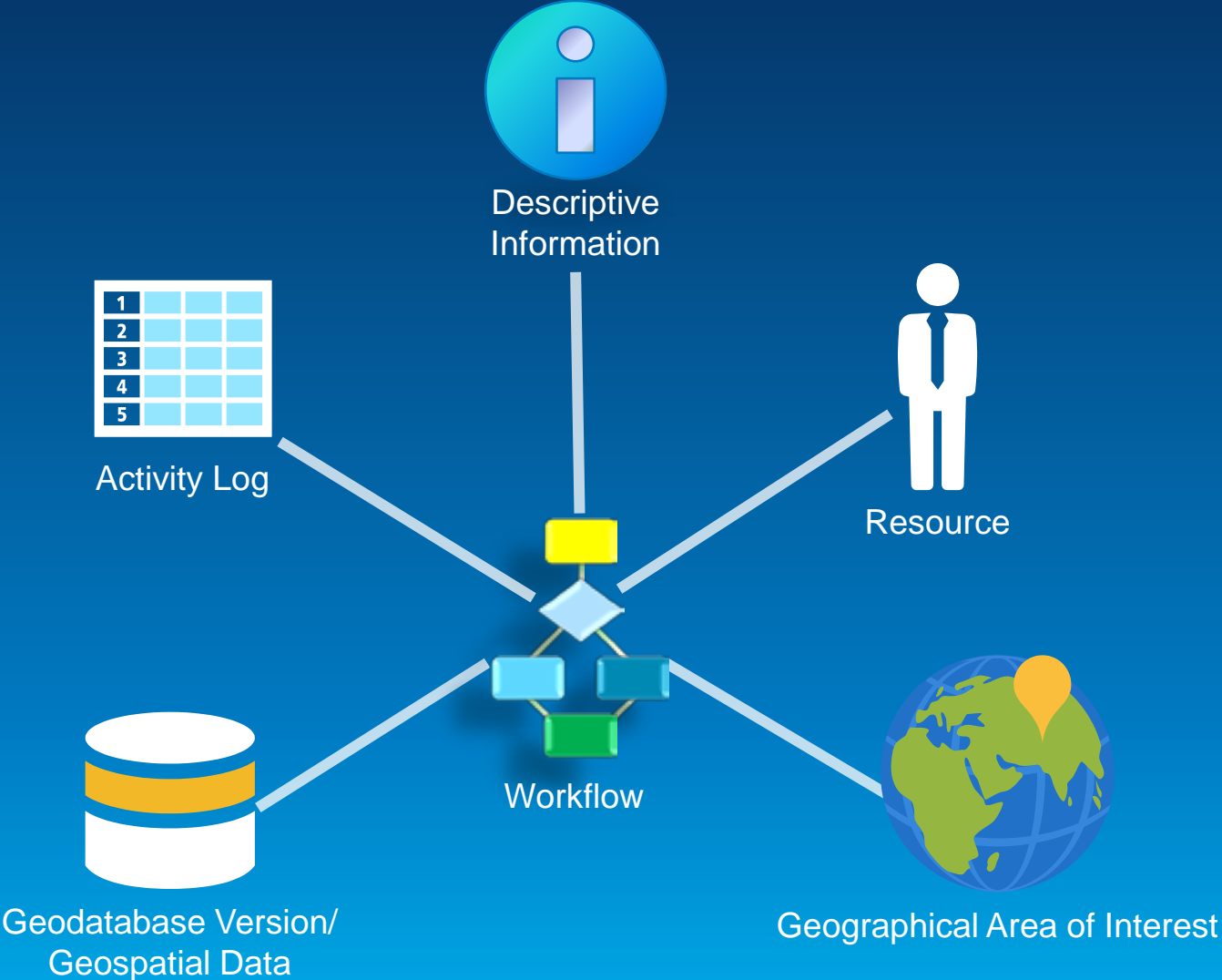
What is ArcGIS Workflow Manager

- Allows users to:
 - Plan and create workflows efficiently
 - Execute and manage standardized workflows
 - Evaluate and improve performance continuously



A framework for continuous process improvement

Workflow Organization



Workflows are organized as jobs

Demo

Executing Jobs

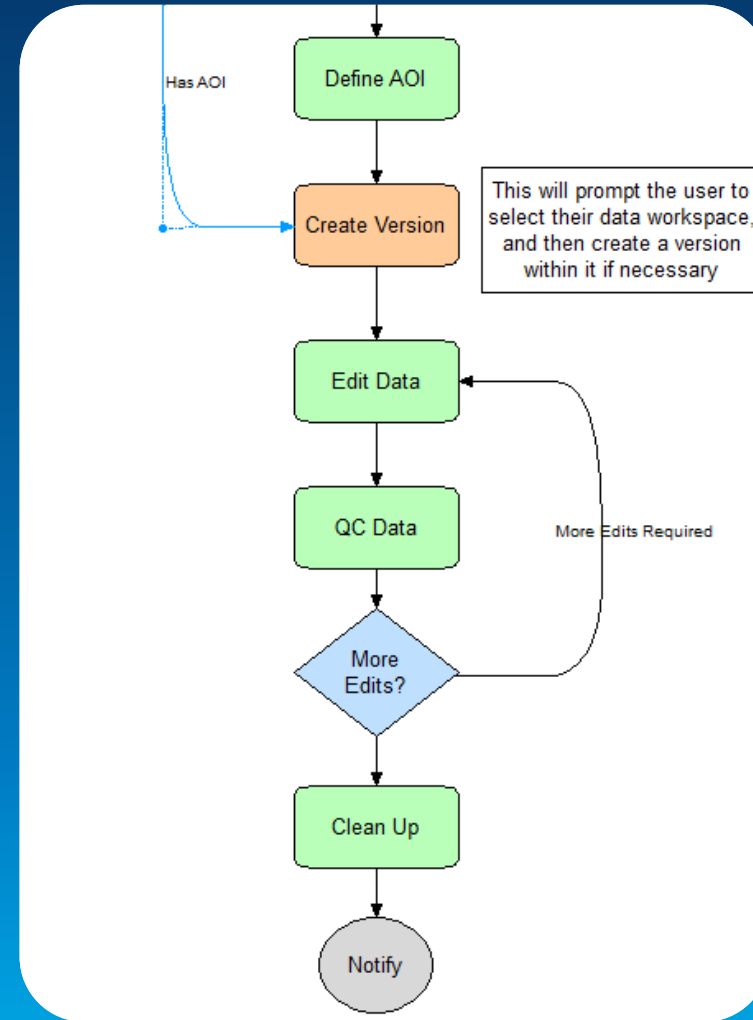


Configuring ArcGIS Workflow Manager



Designing Workflows

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



Designing Workflows

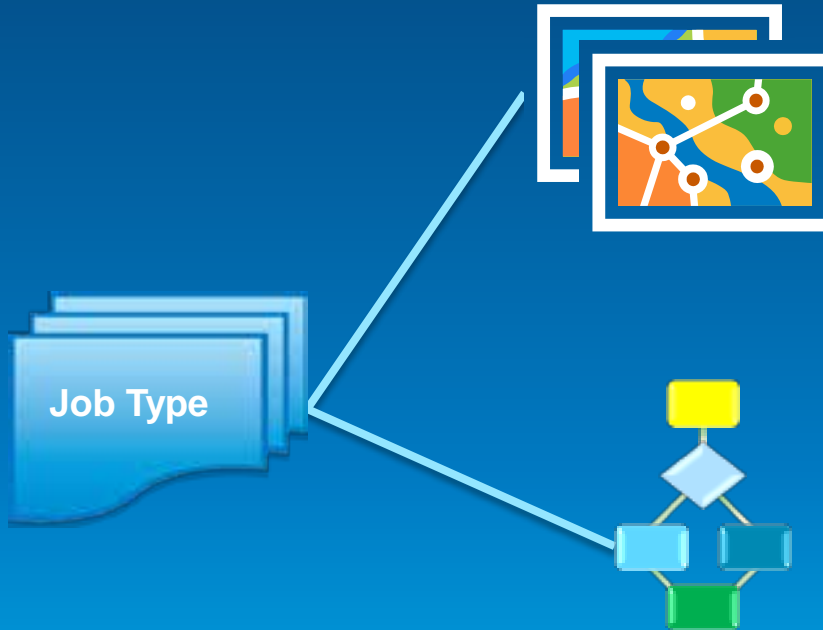
Workflow Design Cycle

- **Create step types**
- **Create workflow**
 - Drag step types into canvas
 - Connect steps using paths
- **Configure step properties and path conditions**

Designing Workflows

Configuring Job Types

- Choose a workflow
- Associate maps
- Set default properties



Sharing Workflow Manager

- **Desktop**
 - Share connection information or file with users
- **Server**
 - Publish a Workflow Manager service using Workflow Manager Administrator
 - Managed like other ArcGIS services
- **Users are connecting directly to data**

Demo

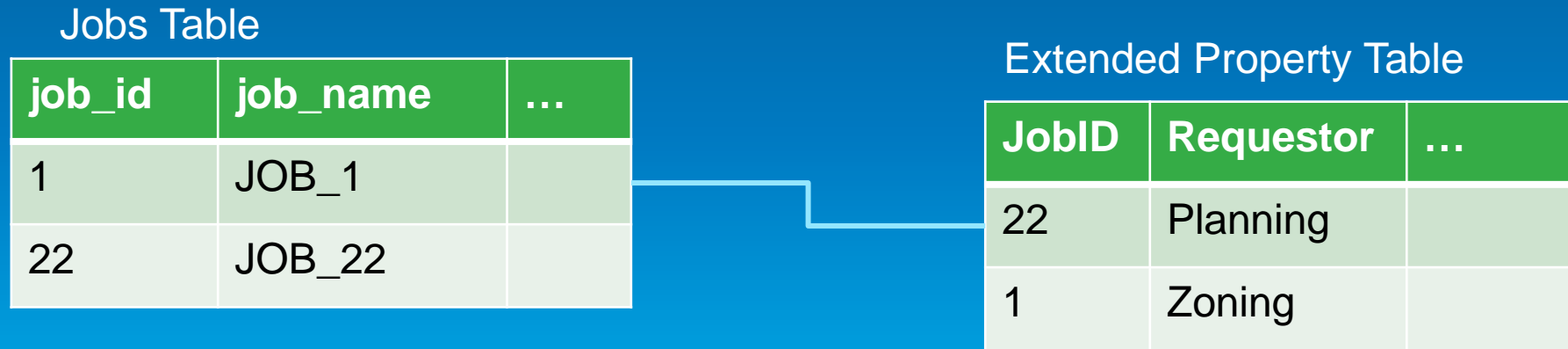
Configuring ArcGIS Workflow Manager

Designing Workflows



Integrating Business Data

- **Extended Properties for business-specific data**
- **Bound to an ArcGIS Workflow Manager job**
- **Support for *One-to-One* or *One-to-Many* relationships**
- **Stored in separate geodatabase tables**
- **Must contain a long integer field that joins to job ID**



Integrating Business Data

Configuring Extended Properties

- **Create table in Workflow Manager geodatabase**
- **Add as an extended property table using Administrator**
- **Configure Job Type to display the extended properties**

Extended Property Display Types

Date

Text

GIS
Dataset

Files

Folders

Value
List

Integrating Business Data

Utilizing Tokens

- **Intelligent text substitution (Variables)**
 - For job and system related information
- **Examples**
 - Job naming schemes and history messages
 - Queries
 - Step arguments
- **Types of Tokens**
 - Job Properties, Extended Properties, System Properties, Functions, Environment Variables

[JOBEX:request.Requestor]



Planning

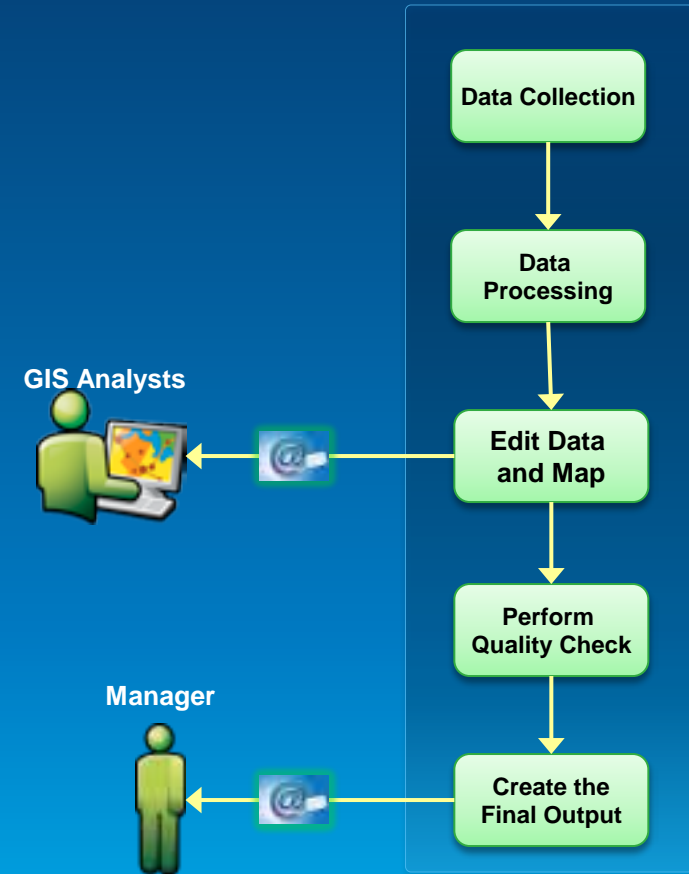
[EMAILOF([JOB:ASSIGNED_TO])]



john43484@esri.com

Sending Notifications

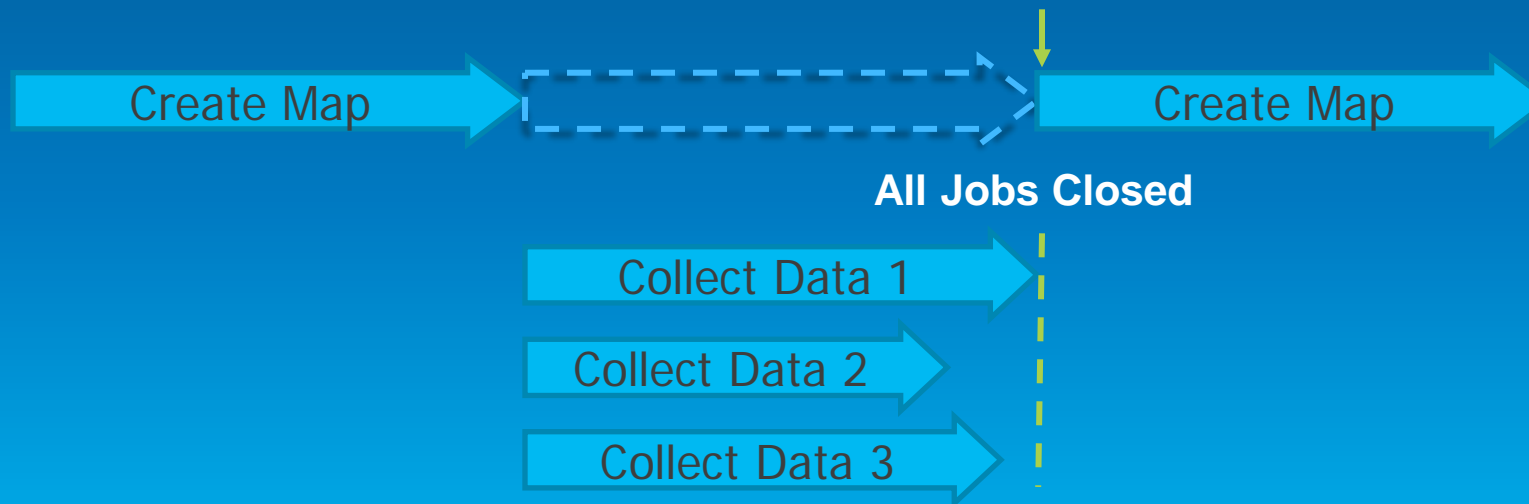
- **Spatial notifications**
 - What's happening in a certain area
 - When a change happens to a dataset
 - When editing outside a certain area
- **Job notifications**
 - Job events and activities
 - Important work milestones



Modeling Relationships Between Jobs

Child Jobs and Dependencies

- Parent/child relationships between jobs
- Dependencies restrict workflow based on state of another job
- Combining these concepts allow you to divide work



Modeling Relationships Between Jobs

Child Jobs and Dependencies

- **CreateJobAdvanced** step can create child jobs
 - Can also create a dependency
 - Split parent job by geographic area



Demo

Configuring ArcGIS Workflow Manager

Extended Properties
Tokens
Job Relationships



What do I need?



Workflow Manager Administrator Roles

- **Basic Administrator**
 - Manage configuration items
- **Workflow Author**
 - Designs and authors Workflows
- **Workflow Developer**
 - Extends workflow with custom scripts/code



Basic Administrator

- **Understanding of workflows in general**
 - **Some tasks can be automated; others are manual**
- **Basic understanding of Geodatabases**
- **Understanding of security role management**
- **Basic understanding of SQL**
 - **Can create queries visually, but options limited**

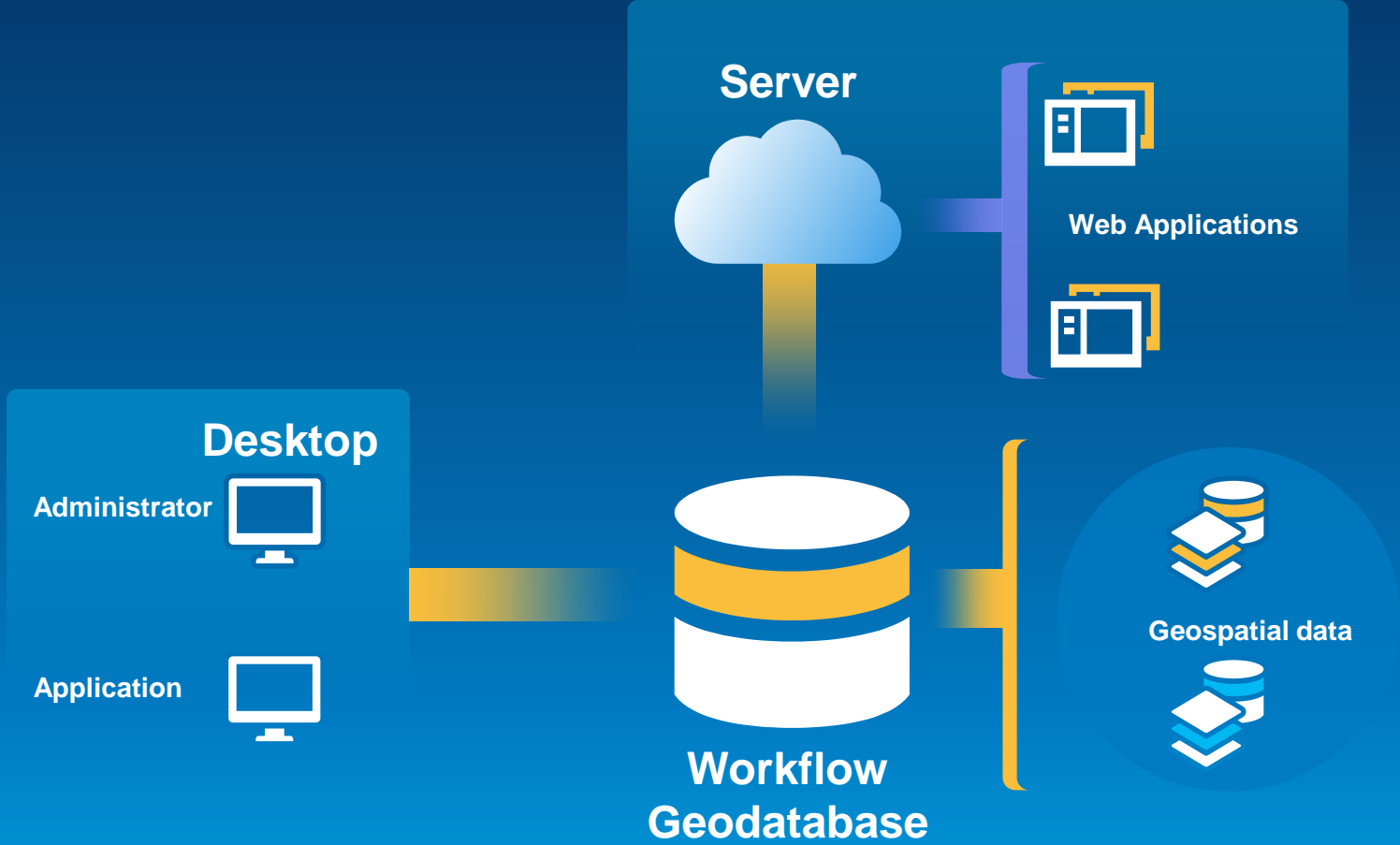
Workflow Author

- **Breadth of GIS knowledge**
 - Versioning, Production Mapping, Geoprocessing, etc.
 - Knowledge of Model Builder is advantageous
- **Understanding of the business domain**
 - Cartography, Analysis, GIS System Administration, etc.
- **Understanding of the Workflow Manager steps**

Workflow Developer

- Knowledge of Python and ArcPy
- Understanding of building libraries in a COM language
- Knowledge of JavaScript/Flex/Silverlight
- Examples:
 - Custom step development
 - Geoprocessing tools/scripts
 - Web application development
 - Custom commands and tools
 - Embedded application views

Workflow Manager System Framework



Session Recap

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Resources

- **Product Page**
 - <http://esri.com/workflowmanager>
- **Resource Center**
 - <http://resources.arcgis.com/en/communities/workflow-manager/>
- **Training**
 - <http://training.esri.com/>
- **Forums**
 - <http://forums.arcgis.com/forums/71-Workflow-Manager>



Understanding our world.