

# Manage Workflows

## Agenda:

- Adobe Experience Manager (AEM) workflows
- Process to create, edit, start, and execute workflows
- Workflow terminology, console, models, and steps



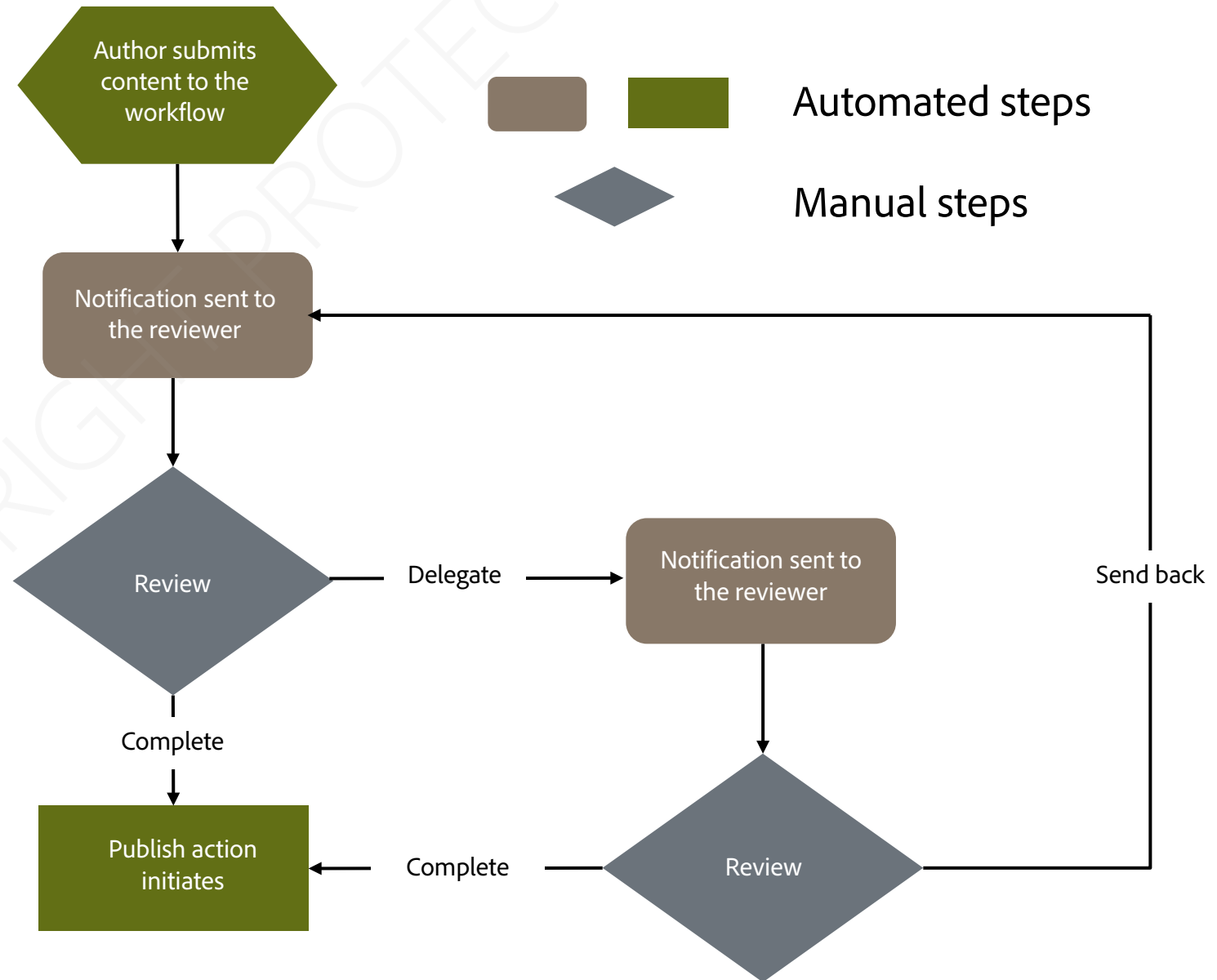
# Workflows

- Formalize and support content management processes
- Consist of sequential steps
- Increase efficiency through:
  - Automation of steps
  - Coordination of steps and resources



# Steps in workflows

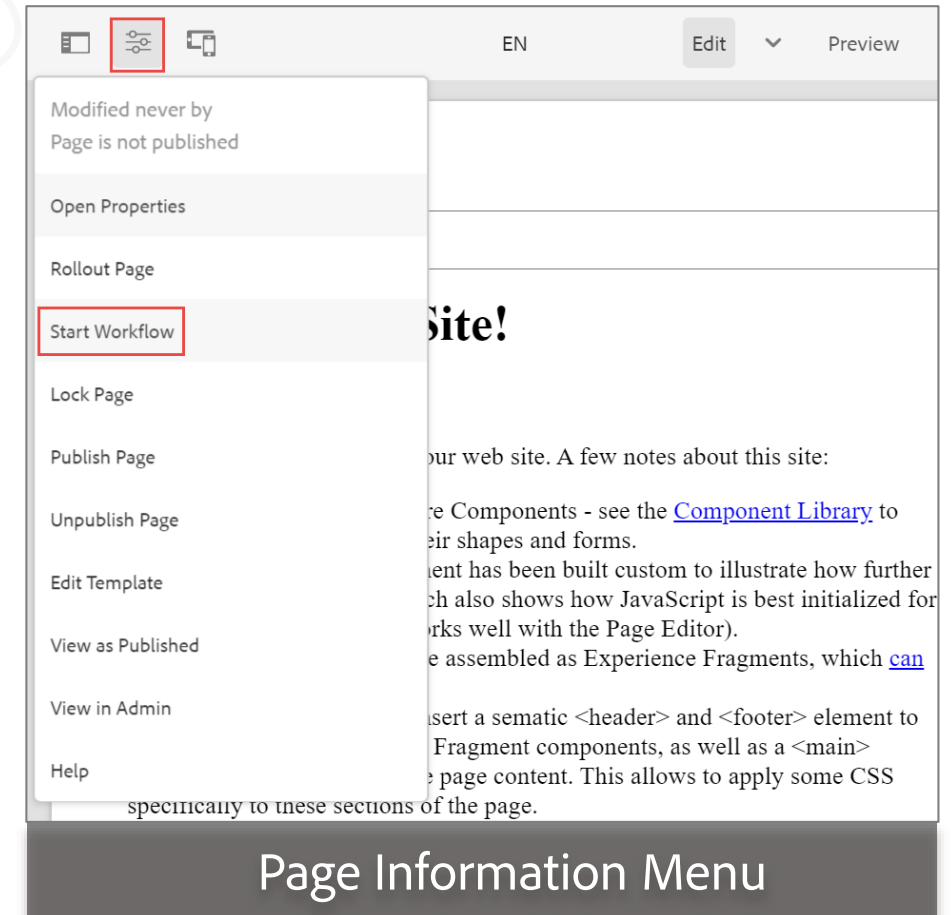
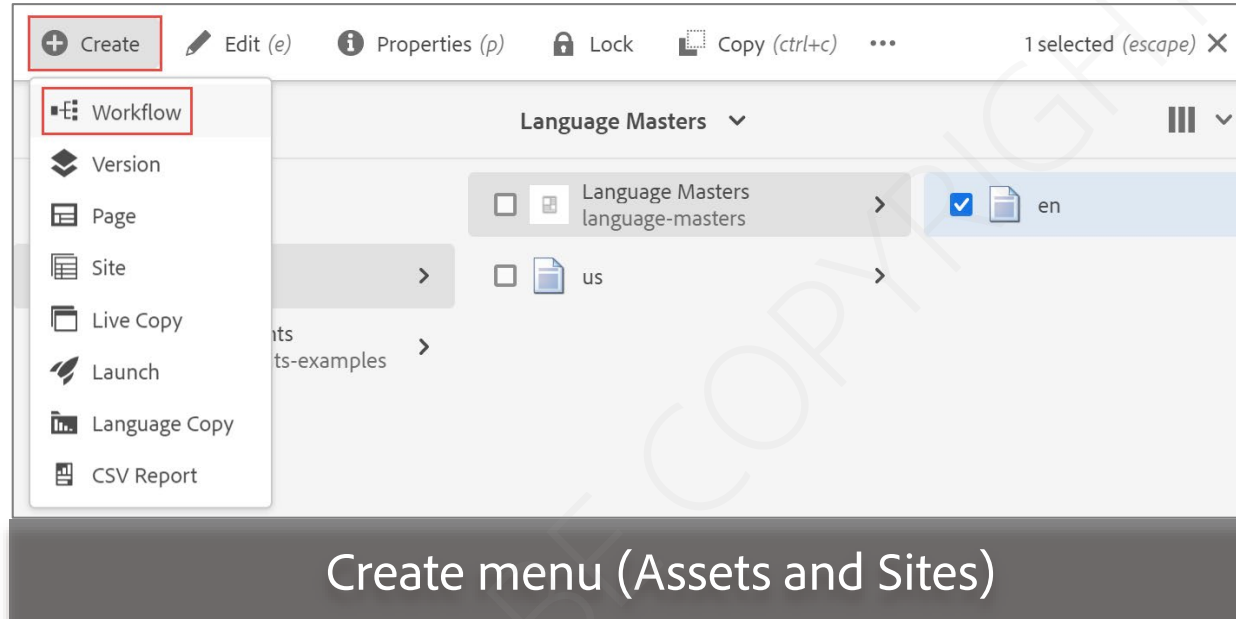
- A workflow is a sequence of steps.
- Automated steps:
  1. AEM performs the step automatically.
  2. Trigger the next step of the workflow to be started.
- Manual steps:
  1. User or group is notified of the newly assigned steps.
  2. Require a user to take an action.



# Start a workflow for content

Authors, Librarians, and general users can start workflows

- Must be apart of *workflow-users* group

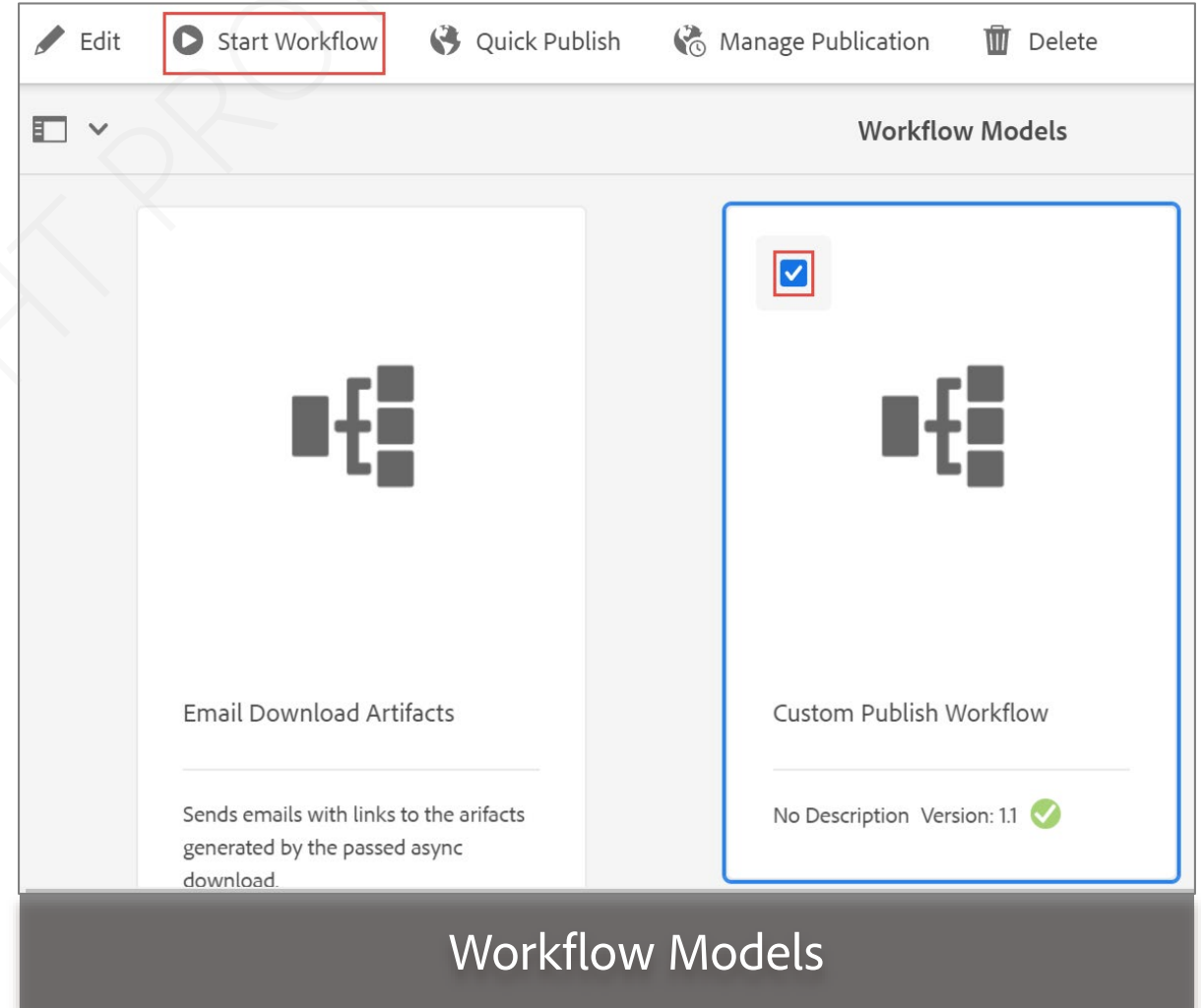


# Start a workflow for platform activities

Is useful for:

- Manual execution of activities
- Content cleanup
- Adhoc workflow steps
- General background processes

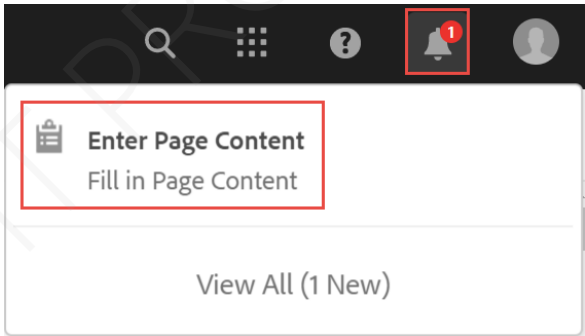
Not recommended for normal authoring workflow activities





# Notification Inbox

View all steps, workitems, and notifications:

- Assigned to the current user
- Assigned to groups the user is a member of

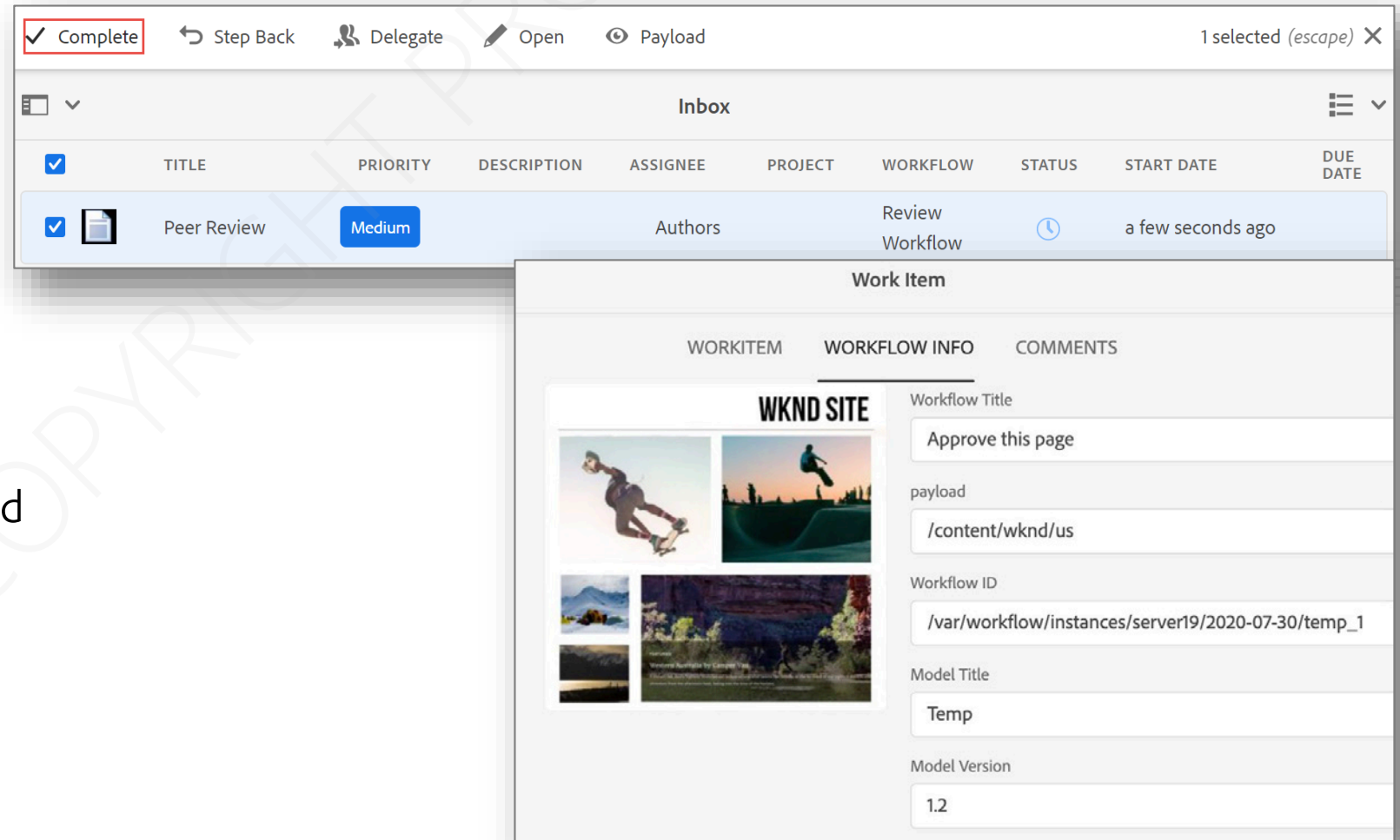


<div>✓ Complete    ↶ Step Back    👤 Delegate    ✎ Open    👁 Payload    1 selected (escape) ✕</div>									
<div><div>☰ ▼</div><div>Inbox</div><div>☰ ▼</div></div>									
☑	TITLE	PRIORITY	DESCRIPTION	ASSIGNEE	PROJECT	WORKFLOW	STATUS	START DATE	DUE DATE
☑	 Peer Review	Medium		Authors		Review Workflow		a few seconds ago	

# Actions on an Inbox item

To learn about the workflow, click:

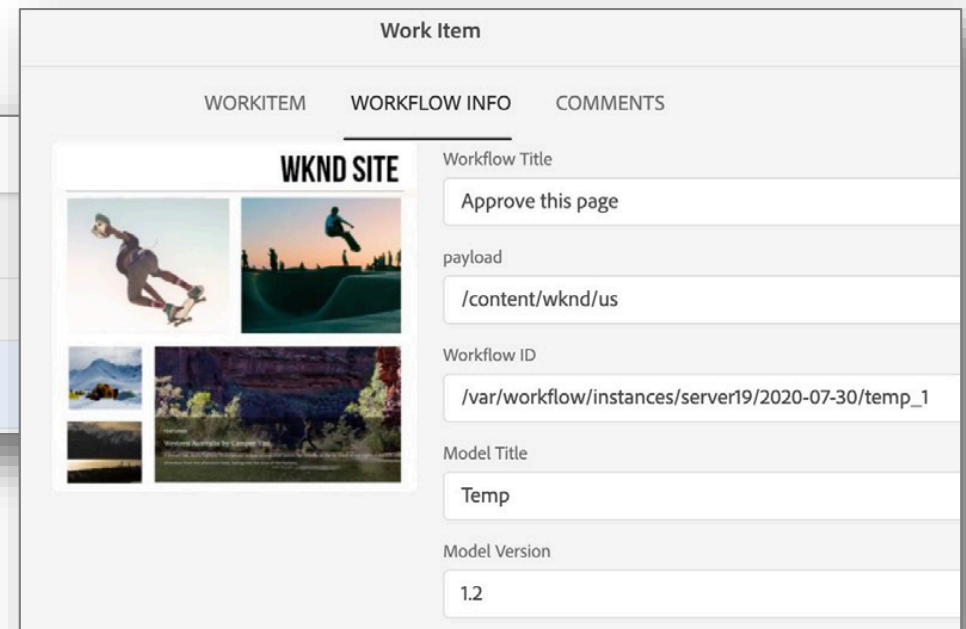
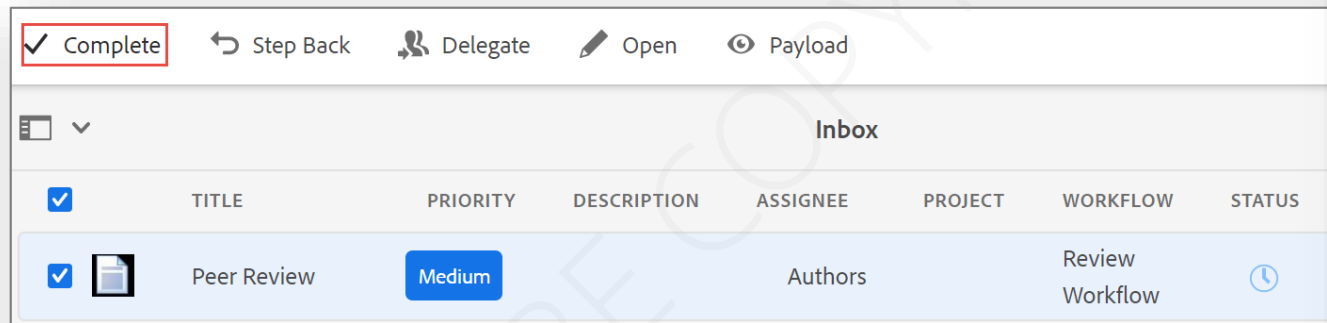
- **Open** displays:
  - Workitem info
  - Workflow info
  - Comments on workflow
- **Payload:**
  - Reveals the content attached



# Actions on an Inbox item

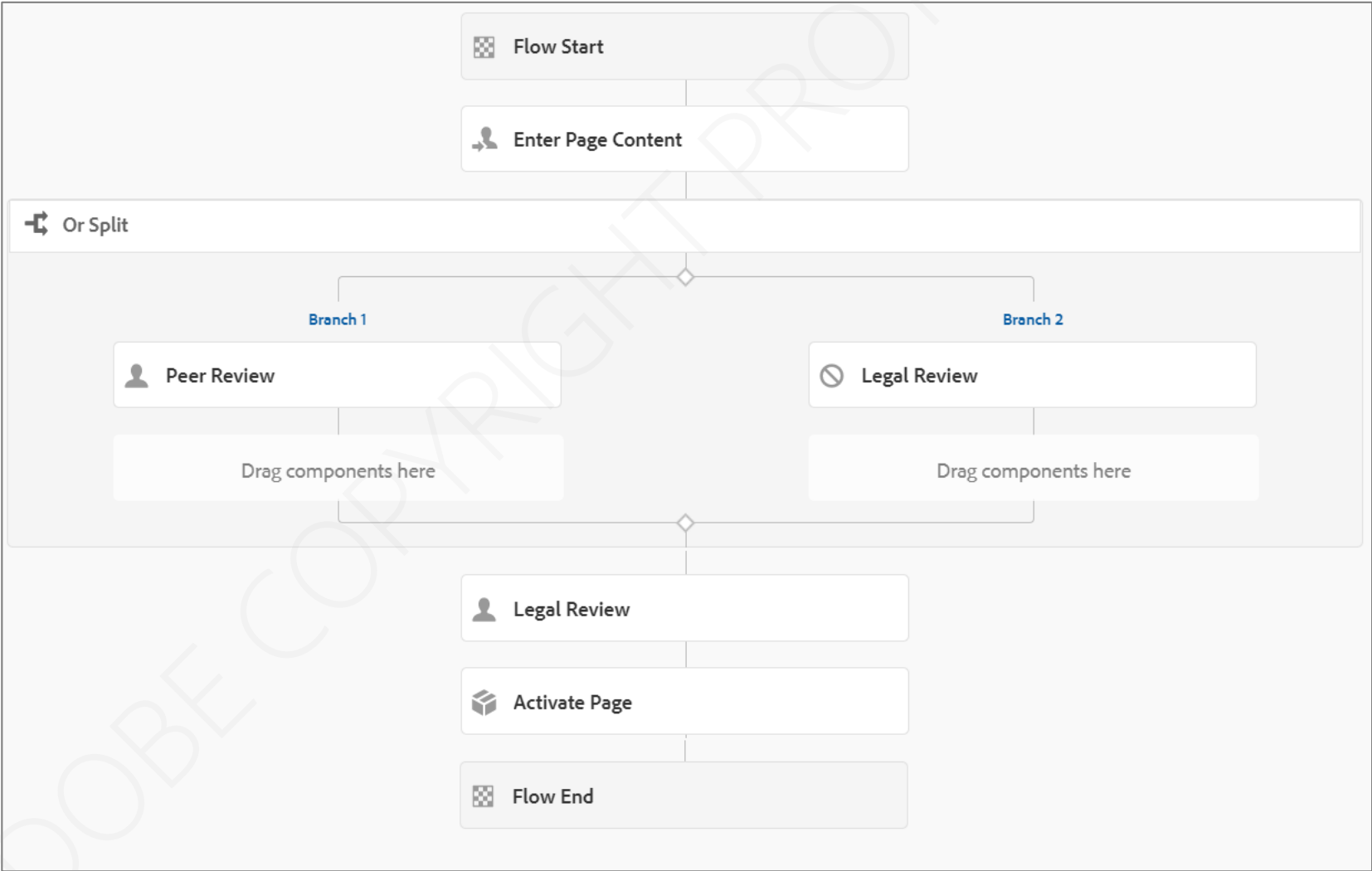
To continue the workflow, click:

- **Complete** – Marks the item as completed
- **Step back** – Sends back to the previous participant
- **Delegate** – Assigns the item to another user or group





# Sample workflow



# Workflow terminology

## Models

Structure of steps configured

## Steps

Building blocks for manual or automated actions

## Payload

Content attached to the workflow

## Inbox

Displays the workitems and steps assigned to a user

## Workitem

Generic step assigned to a user

## Task

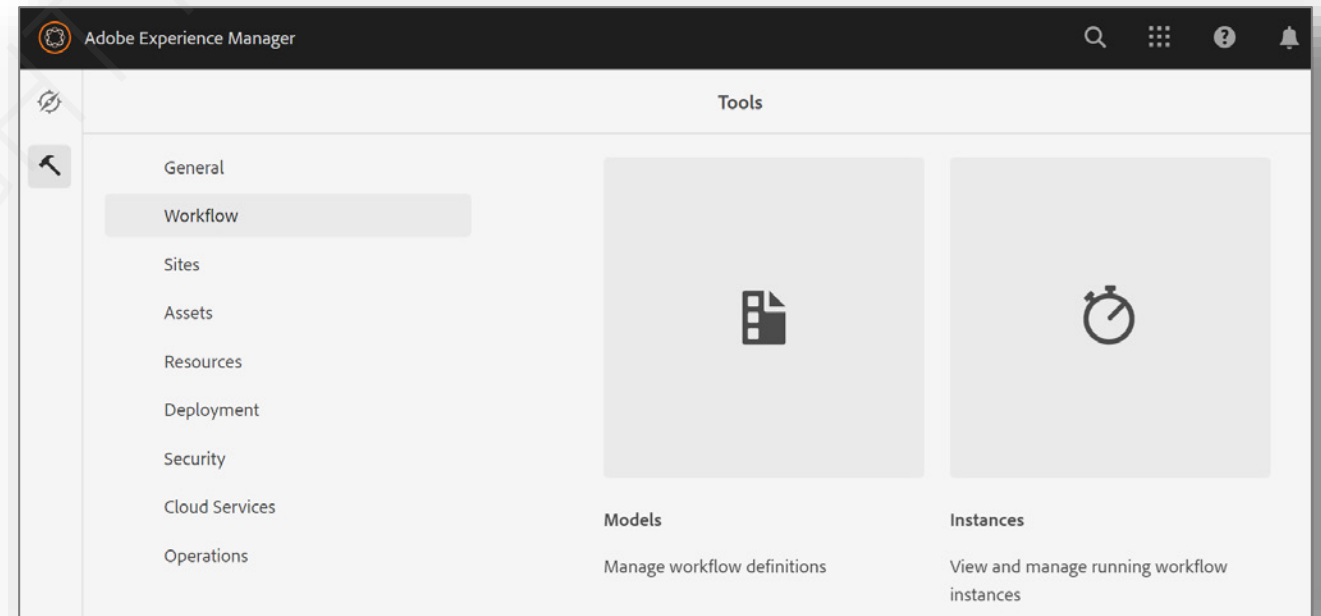
Special step specific for AEM Projects assigned to a user

## Instance

An actively running workflow model

# Managing workflows | Workflow console

- Tools > Workflow
- Administer the workflow capability:
  - Define and implement how a workflow works as a workflow model by using an editor
  - Monitor and manage the current and past workflow instances
  - Define triggers to start a workflow automatically



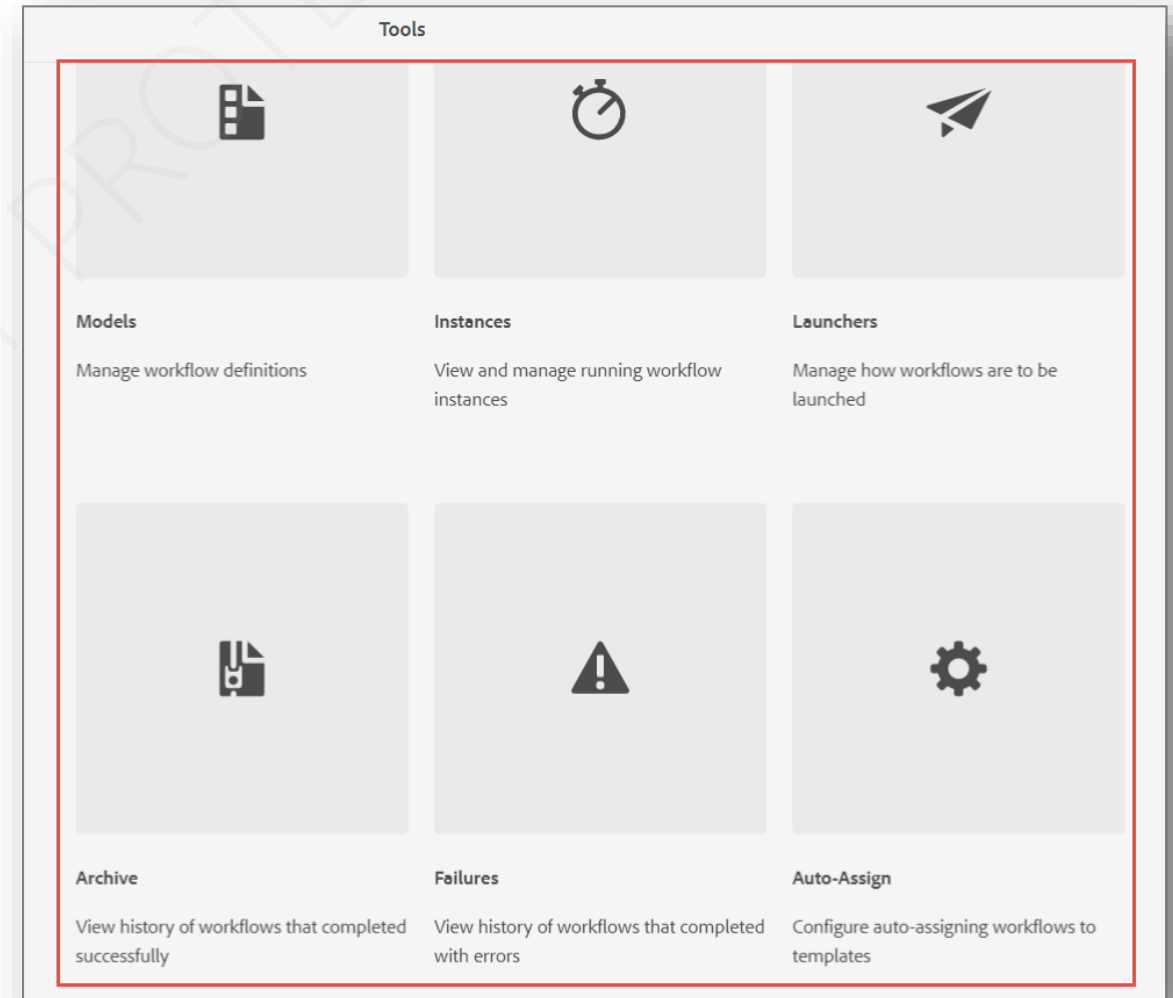
# Workflow tools

## Process modeling

- Models: Create and edit workflow models
- Launchers: Start workflows automatically
  - Define triggers to start a workflow instance

## Process monitoring

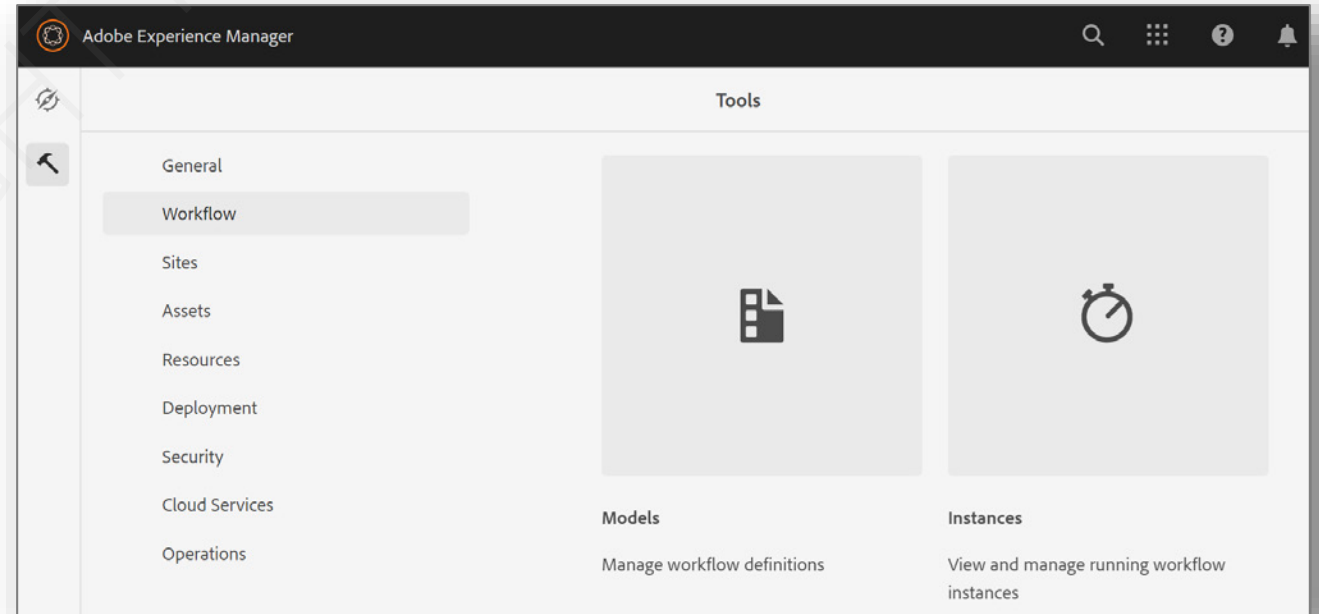
- Instances: View instances of running processes
- Archive: View finished workflow instances
- Failures: View failed workflow instances



# Permissions

AEM permission groups for workflows

- *workflow-users*
  - Can start workflows and participate
- *workflow-editors*
  - Create/Update workflow models
- *workflow-administrators*
  - Full control over all workflow consoles



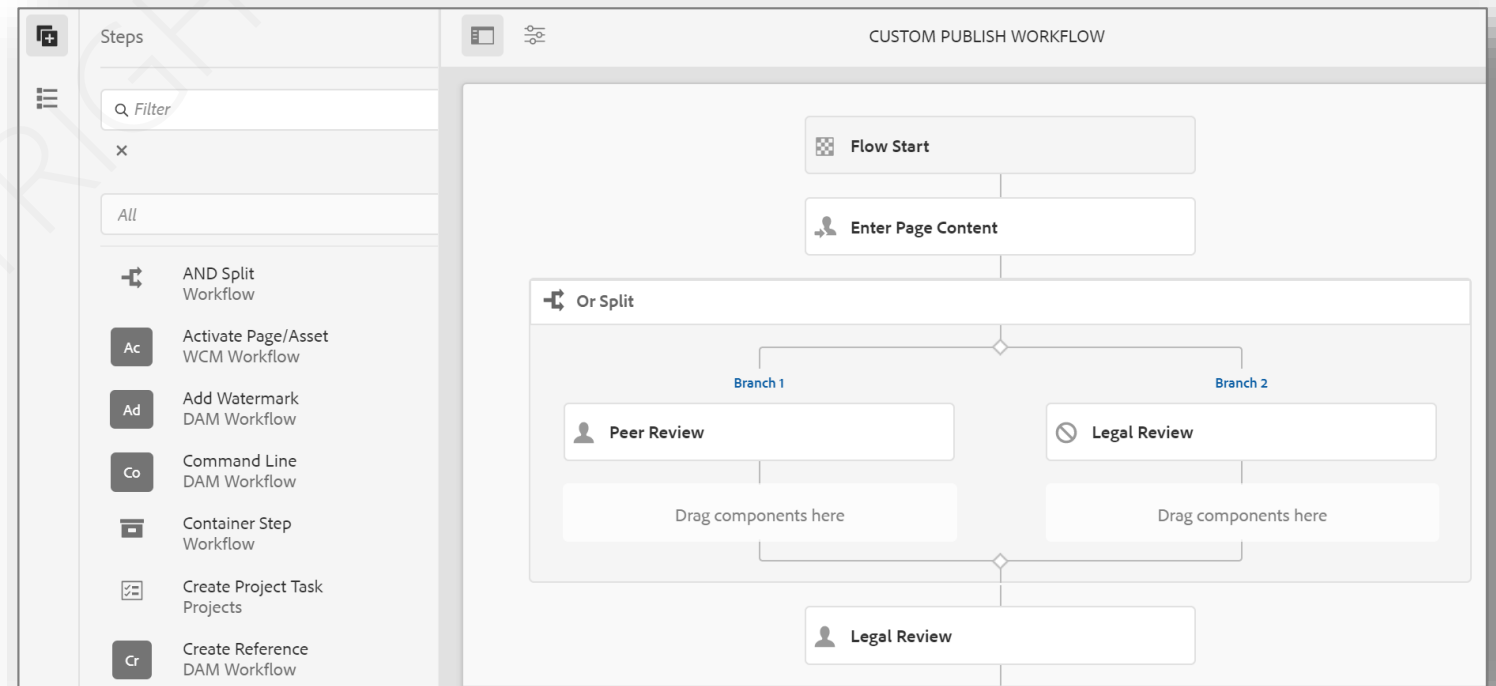
# Workflow Models

## Tools > Workflow > Models

- Create or edit workflow models

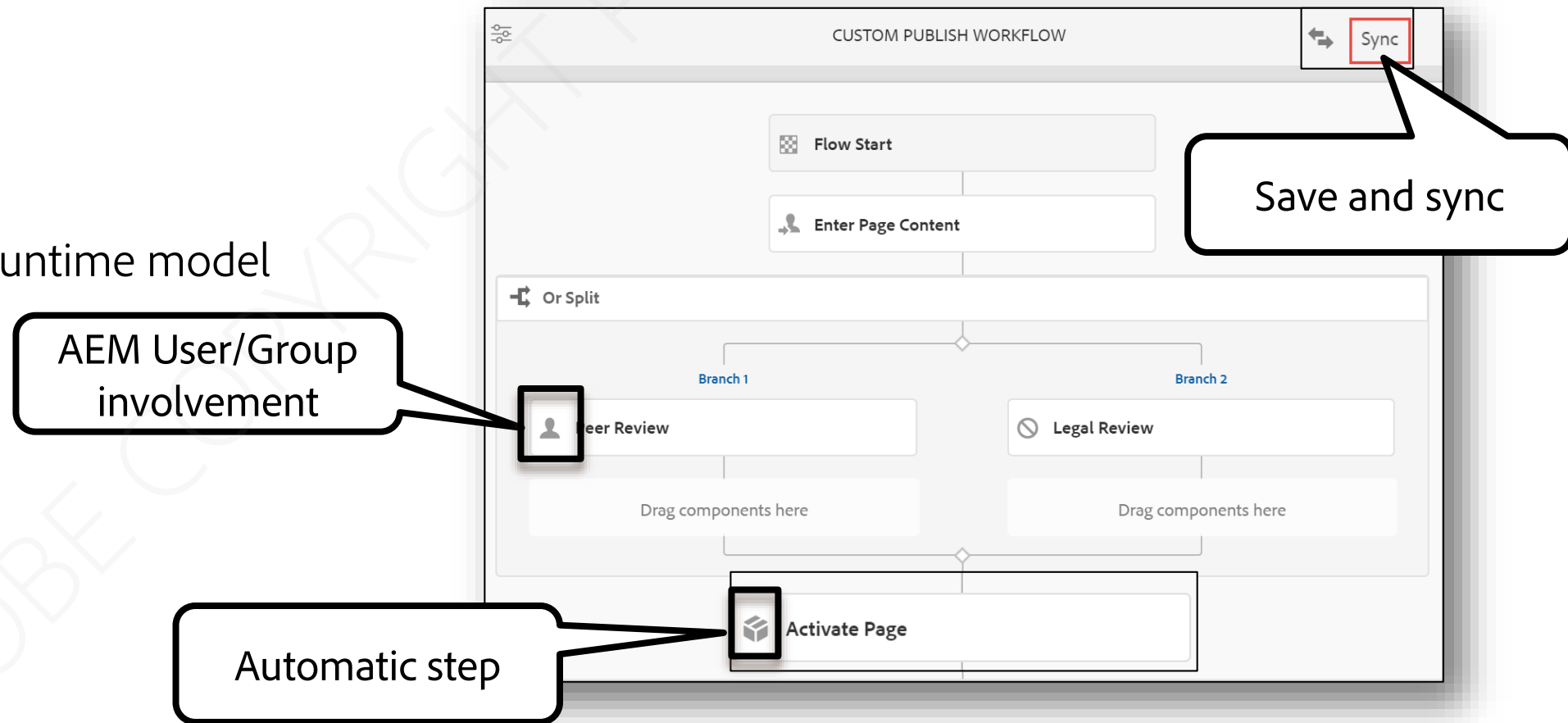
## Workflow Editor

- What You See Is What You Get (WYSIWYG) editor
- Syncs with runtime
- Out-of-the-box (OOTB) workflow steps
- Workflow variables
- Workflow stages



# Workflow model editor

- Defines the order and function of every step in the process
- Configure workflow model
- Automatic steps
- User steps
- Decision steps
- Synchronize with runtime model



# Workflow model properties

## Basic

- Metadata
- Console tags to limit use
  - WCM = AEM Sites
  - DAM = AEM Assets
  - Projects = AEM Projects
- Transient Workflow
  - No archive or history is stored
- Multi-resource Support
  - 1 to many assets or pages can be attached (typically only 1)
- Thumbnail – optional visual for workflow

The screenshot shows the 'Basic' tab of the 'Workflow Model Properties' dialog. At the top are four tabs: 'Basic', 'Thumbnail', 'Stages', and 'Advanced'. The 'Basic' tab is selected. Below the tabs is the 'Title and Tags' section. It contains a 'Title \*' field with the text 'Request for Deletion'. Below that is a 'Description' field, which is empty. Under the 'Description' field is a 'Tags' field, also empty, with a small icon to its right. Below the 'Tags' field are three buttons: 'X Workflow : WCM', 'X Workflow : DAM', and 'X Workflow : Projects'. At the bottom of the dialog are two checkboxes: 'Transient Workflow' and 'Multi Resource Support', both of which are unchecked.

Basic Thumbnail Stages Advanced

**Title and Tags**

Title \*

Request for Deletion

Description

Tags

X Workflow : WCM X Workflow : DAM X Workflow : Projects

☐ Transient Workflow

☐ Multi Resource Support



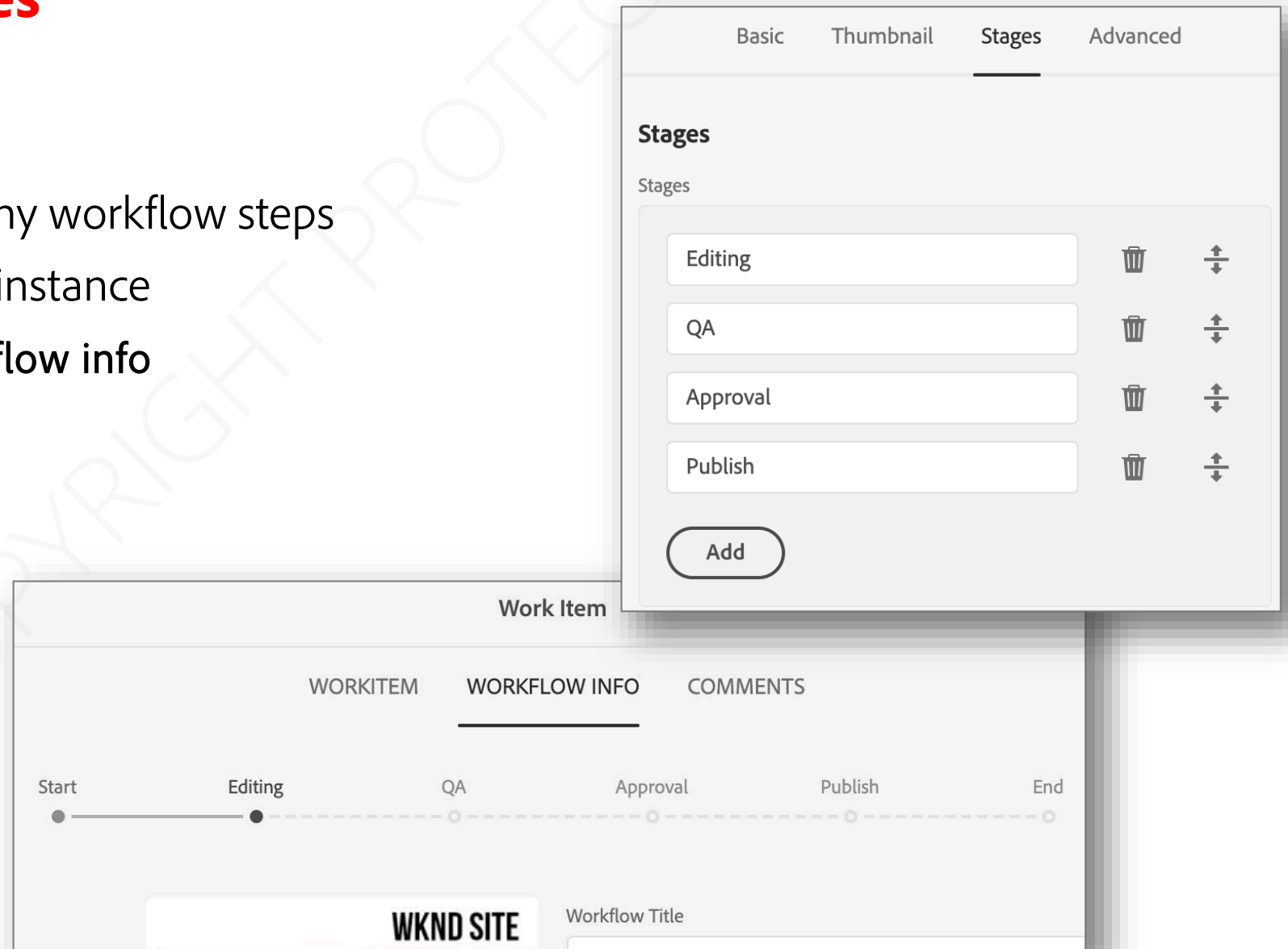
# Workflow model properties

## Stages

- Can be attached to one or many workflow steps
- View current stage in running instance
  - Inbox > Item > Open > Workflow info

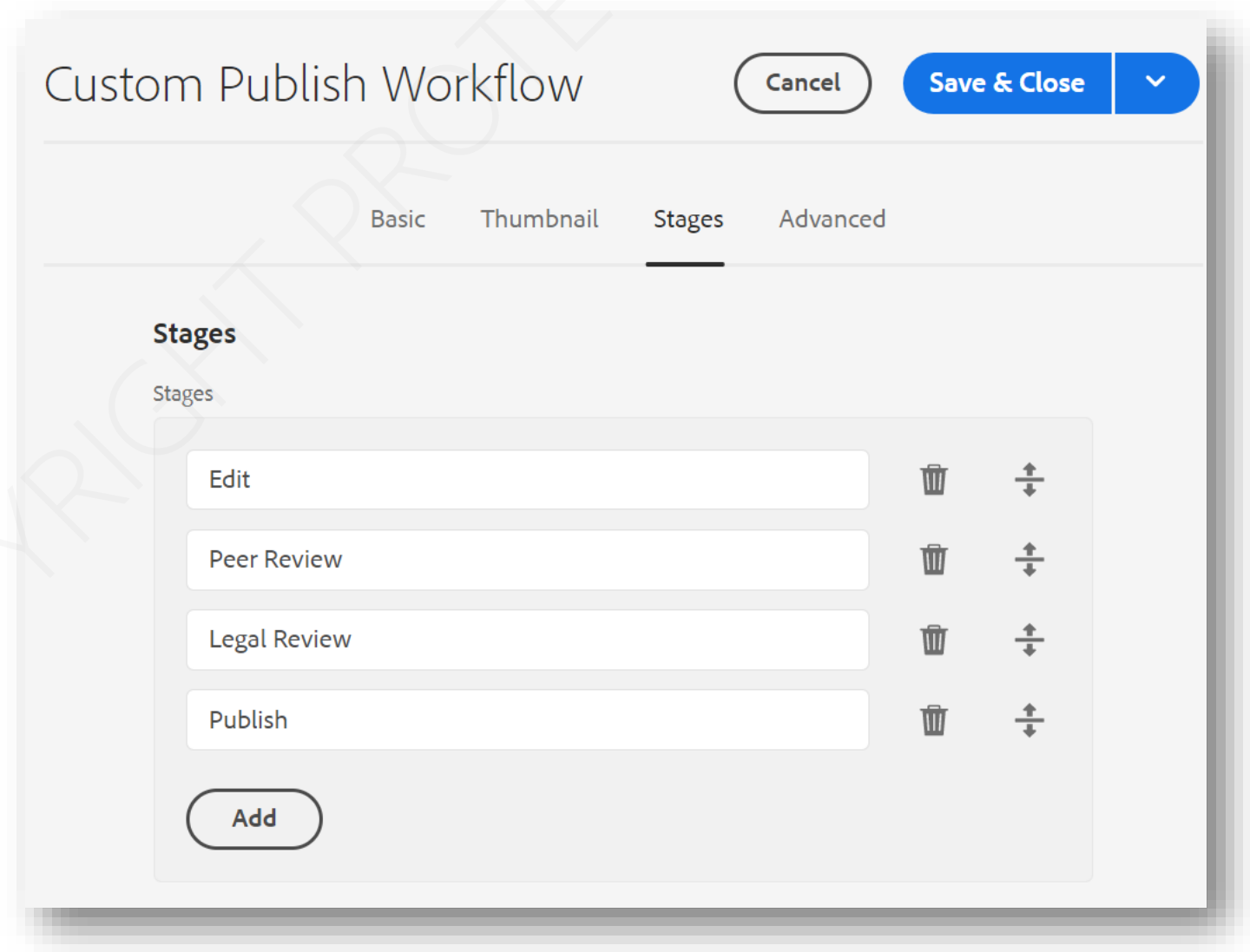
## Advanced

- Change styling of dialogs



# Workflow stages

- Help visualize the progress of a workflow when handling steps
- Are used to provide an overview of how far the workflow is through processing
- Can be configured and appropriate steps can be assigned to each stage in the workflow



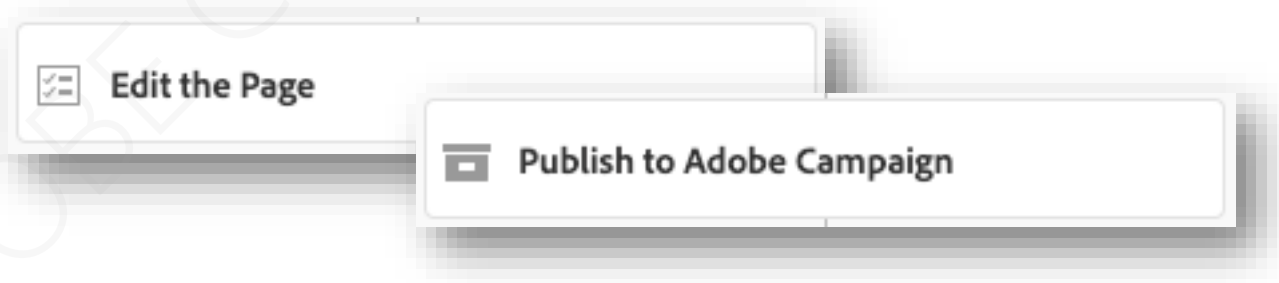
# Workflow steps

- Participant step:
  - Enables you to assign a step to a user or a group of users
  - Notifies participants of their required action through email
  - Helps configure timeouts and timeout handlers for this step
- Process step:
  - Executes JavaScript or calls an OSGi service (Java) to automate the process



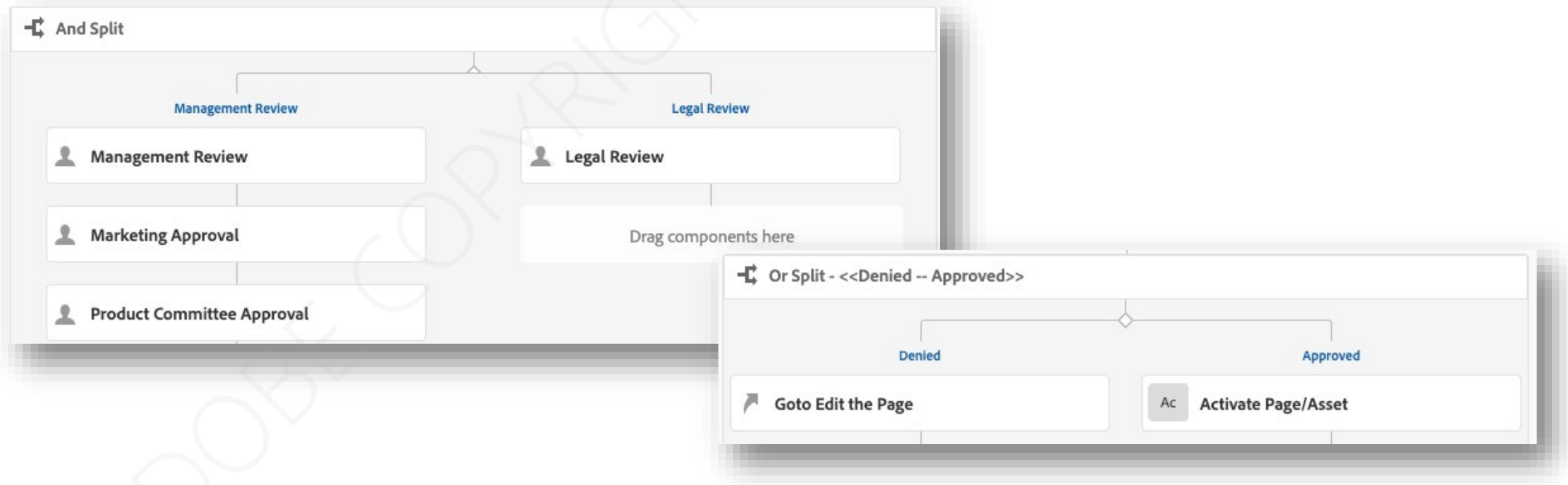
# Workflow steps

- Task step:
  - Is an enhanced participant step that works well for Project workflows
  - Can also execute JavaScripts
  - Can set priority, due dates, and decision options
- Container step:
  - Starts another workflow that executes as a child workflow
  - Allows reuse of workflow models to implement common sequences of steps



# Workflow steps

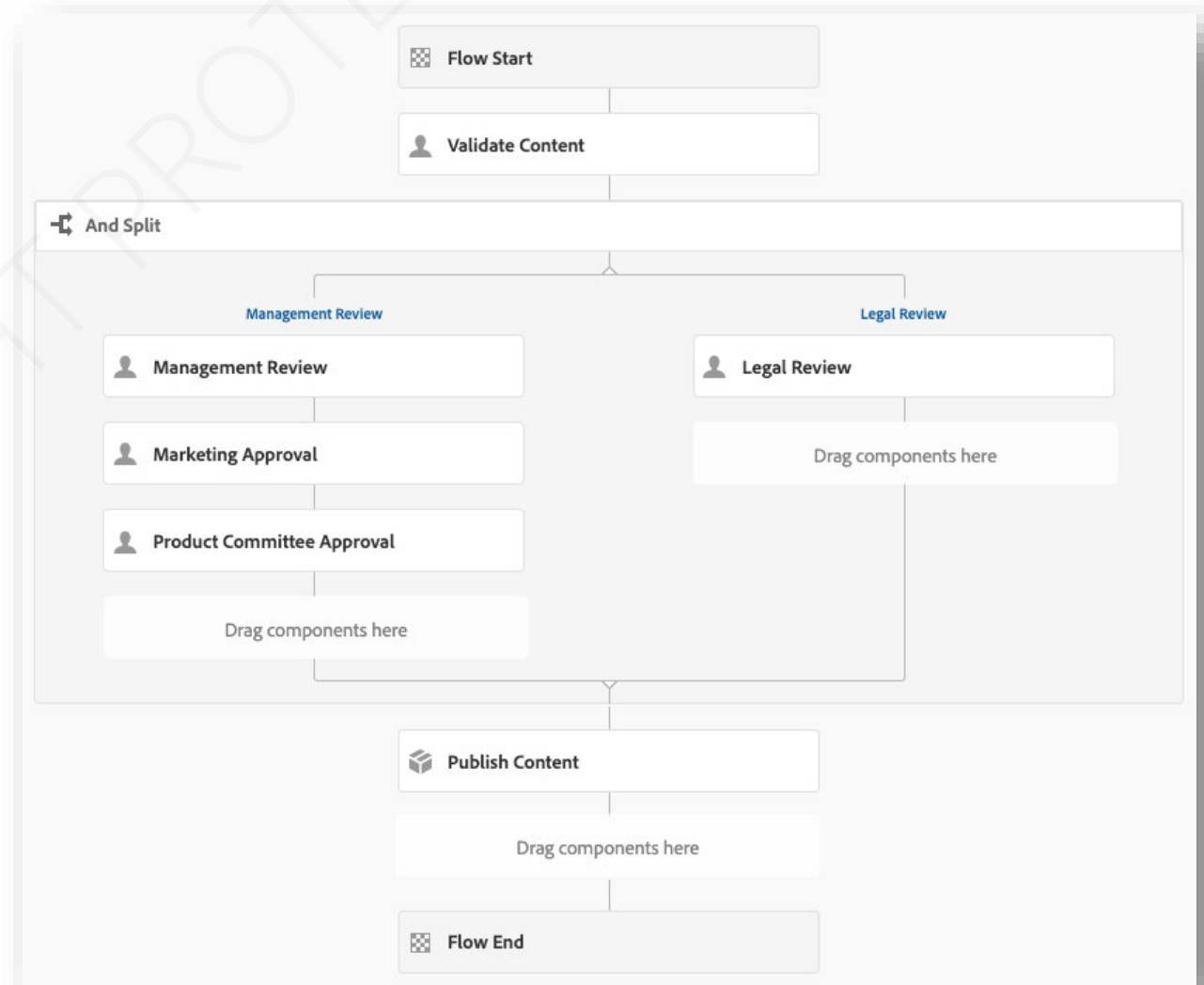
- Splits
  - Create multiple processing paths in the flow
  - Processing flow can be controlled by routing expressions



# AND Split

Splits the processing path

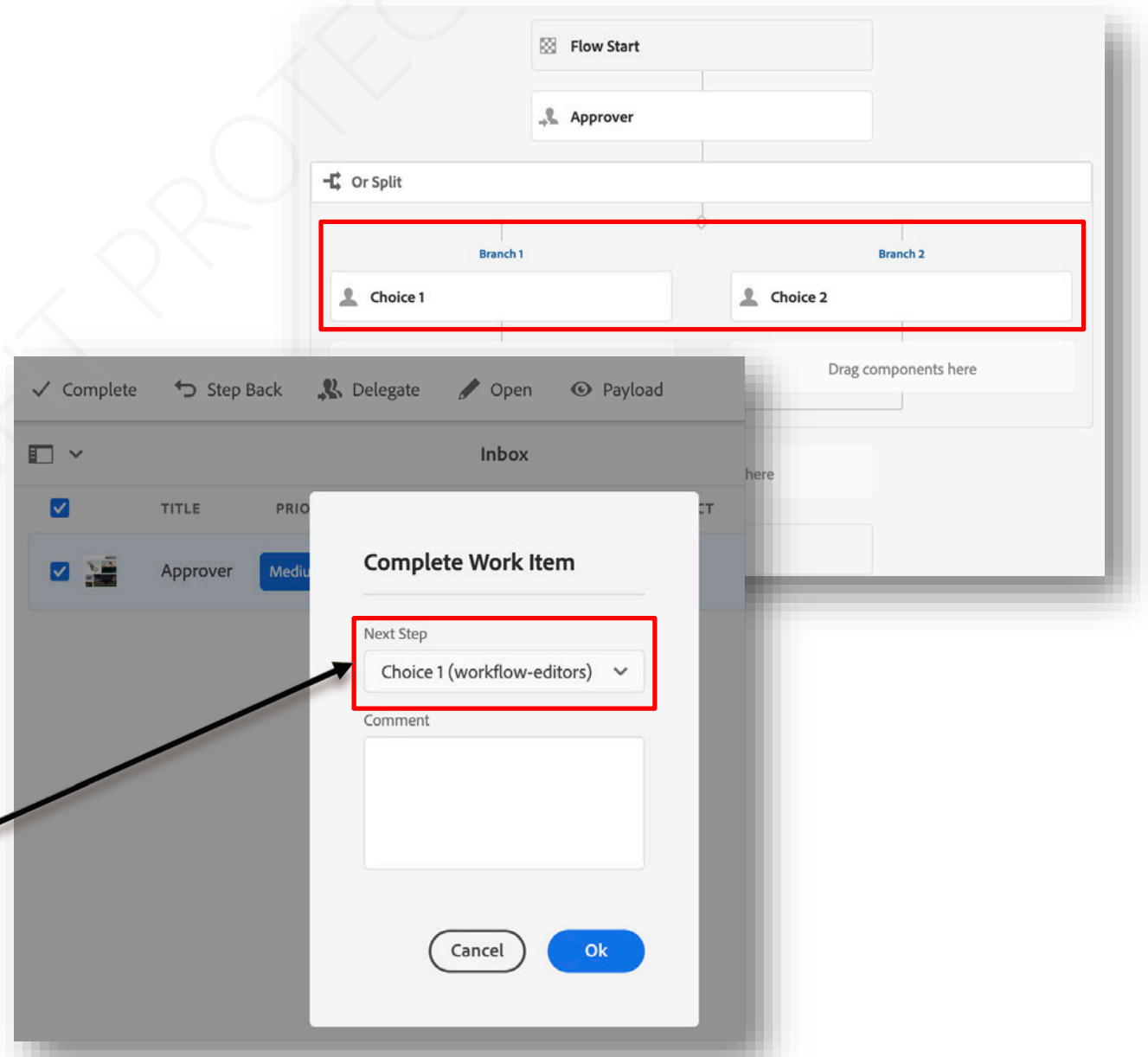
- Two or many branches
- **All** branches **must** complete to move the process forward
- Branches are all active at the same time



# OR Split

Splits the processing path

- Two or many branches
- Exactly one branch activates
- Active branch must complete to move the process forward
- Active branch controlled by:
  - Rule definitions (workflow variables)
  - JavaScript
  - User decision in workflow inbox



# Goto step

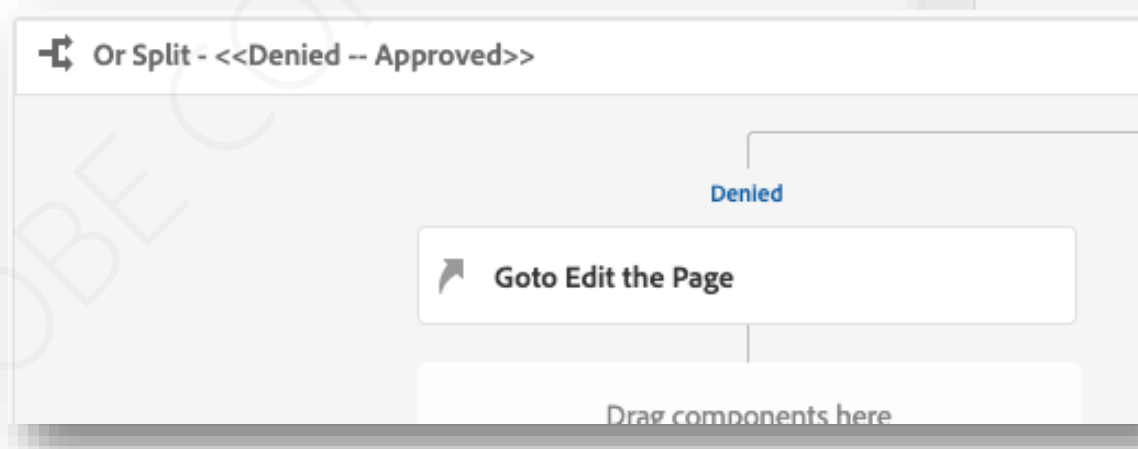
- Specify the next step to execute in the workflow model
- Define advanced routing structures in your workflow models based on rule definitions or scripts
  - Useful to implement loops

The 'Goto Step' dialog box is shown with the 'Process' tab selected. It contains the following fields:

- Target step:** A dropdown menu with 'Edit the Page' selected.
- Routing Expression:** A dropdown menu with 'ECMA Script' selected.
- Script:** A text area containing the following code:

```
function check(){  
  return true;  
}
```

At the bottom right, there are 'Cancel' and 'Done' buttons.

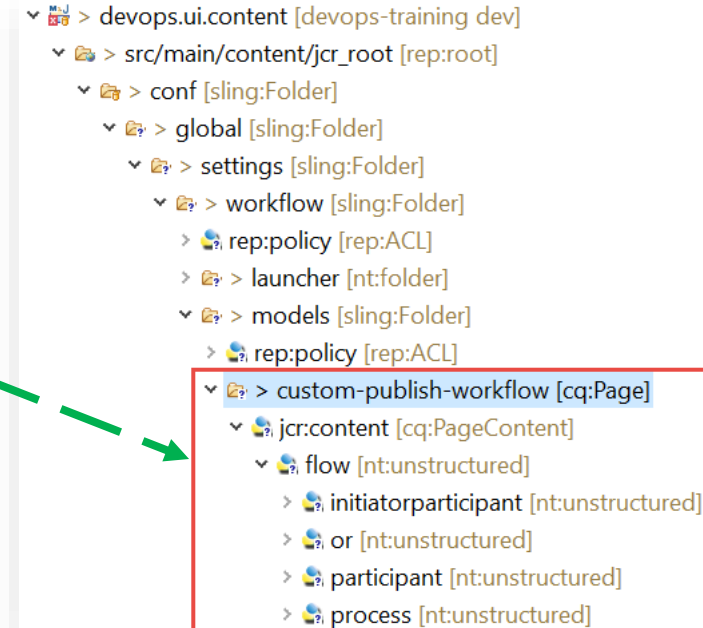




# Import workflows into the Maven project

- Update ui.content > src/main/content/META-INF/vault > filter.xml with the workflow as needed:

```
<?xml version="1.0" encoding="UTF-8"?>
<workspaceFilter version="1.0">
  <filter root="/conf/training" mode="merge"/>
  <filter root="/content/training" mode="merge"/>
  <filter root="/content/dam/training" mode="merge"/>
  <filter root="/content/experience-fragments/training" mode="merge"/>
  <filter root="/conf/global/settings/workflow" mode="merge"/>
  <filter root="/var/workflow/models/custom-publish-workflow" mode="merge"/>
</workspaceFilter>
```



- Right-click the ui.content > src/main/content/jcr\_root and select Import from server



## Key takeaways

- Workflows automate and coordinate content management processes.
- You can administer the workflow capability from the Workflow console.
- You can access the Workflow console from Tools.
- Participant and Process are the two commonly used steps in a workflow.