

# Escalating Your Workflow in a Timely Manner

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## About the speaker

### Pete Markovic – Sr. Solutions Consultant

Pete Markovic is a Sr. Solutions Consultant with IMAGINiT Technologies specializing in PLM/PDM systems. He has over 25 years of experience working in various industries, including Construction Equipment, Automotive, Aerospace, Consumer Products, High Tech Electronics and Medical Device Manufacturing.

Pete specializes in working across multiple business areas, analyzing and streamlining their processes to adapt them to a PLM/PDM environment. Pete especially enjoys developing efficient data management processes/workflows and solutions that address the challenges and business issues faced by manufacturing companies.

# Agenda

- Background
- Putting Escalation to Work – ‘How to’
- Demonstration
- Best Practices
- Summary
- Questions

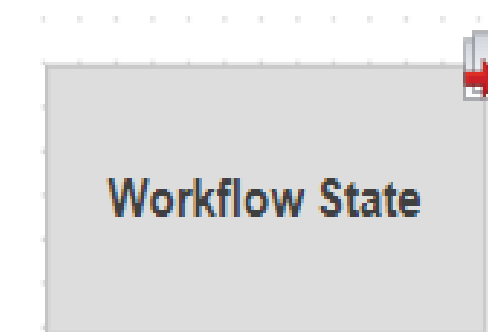
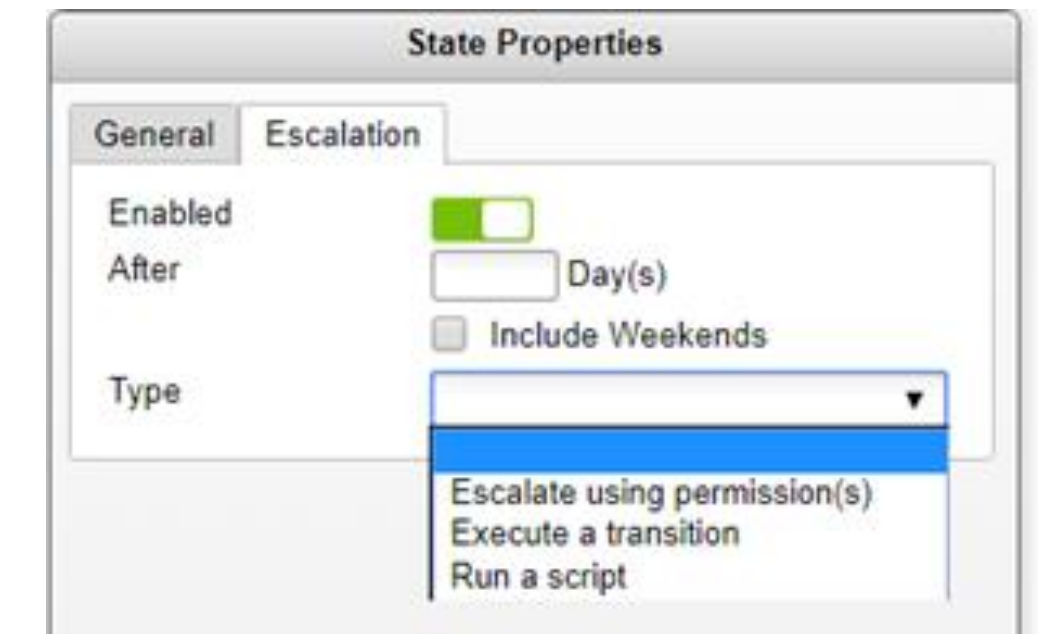
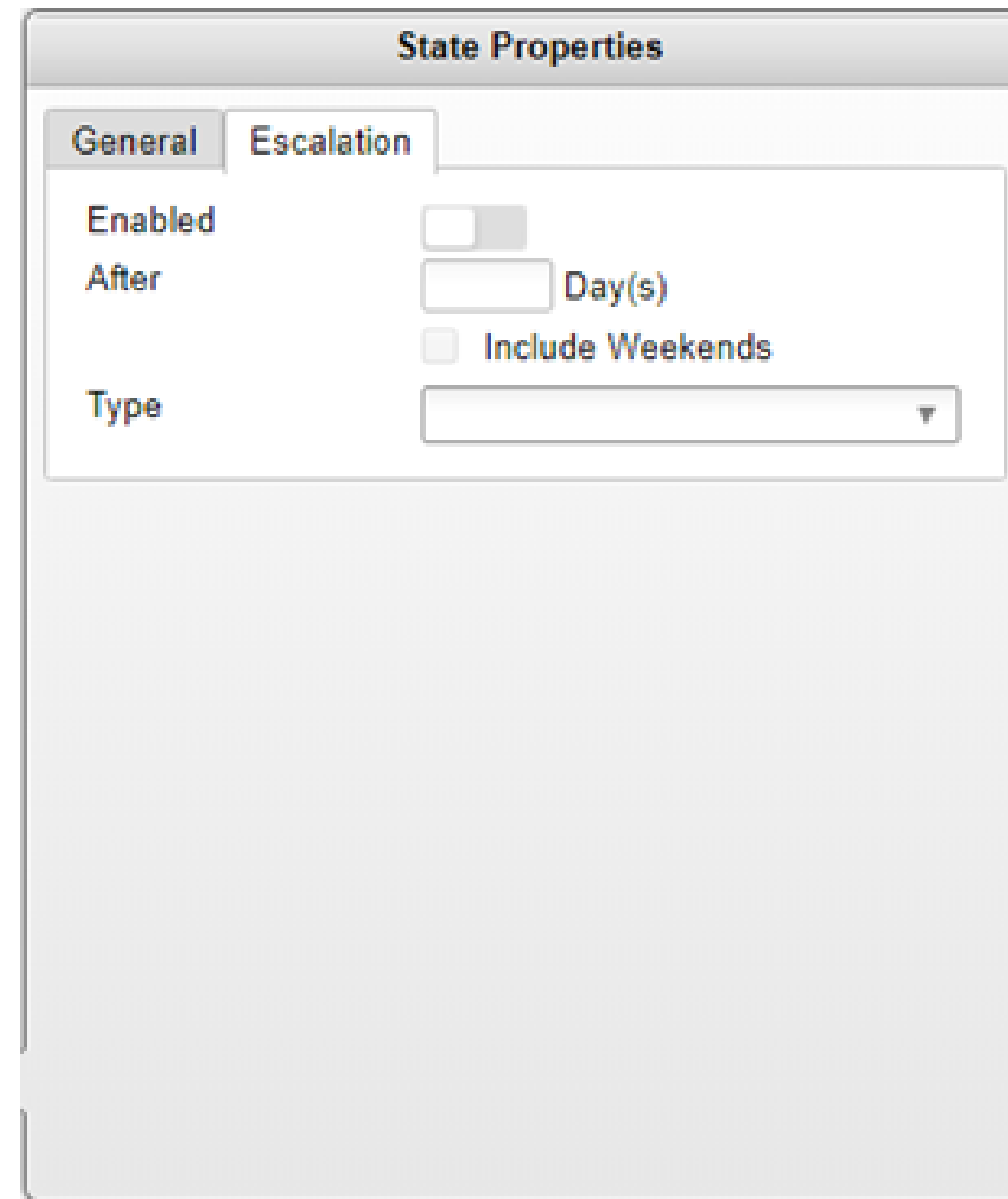
# Background



# Escalation

What is Escalation?

- Out of the Box
- Available on all workflow states
- Three types
  - Escalate using permissions(s)
  - Execute a transition
  - Run a script
- Schedule / Interval

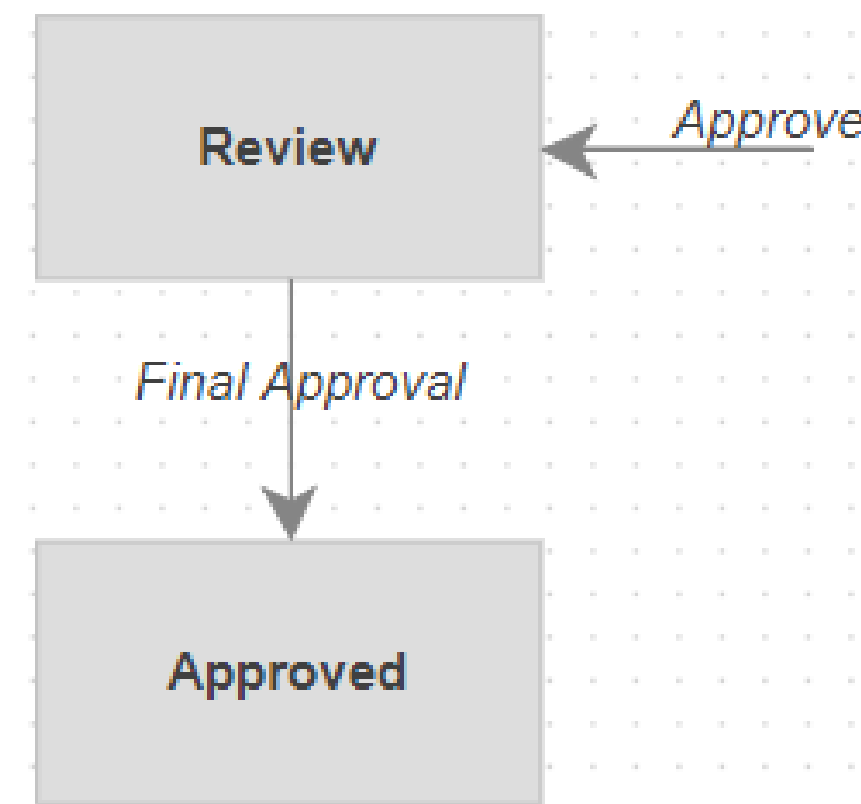


WORKFLOW STATE WITH ESCALATION ENABLED

# Looping Transition

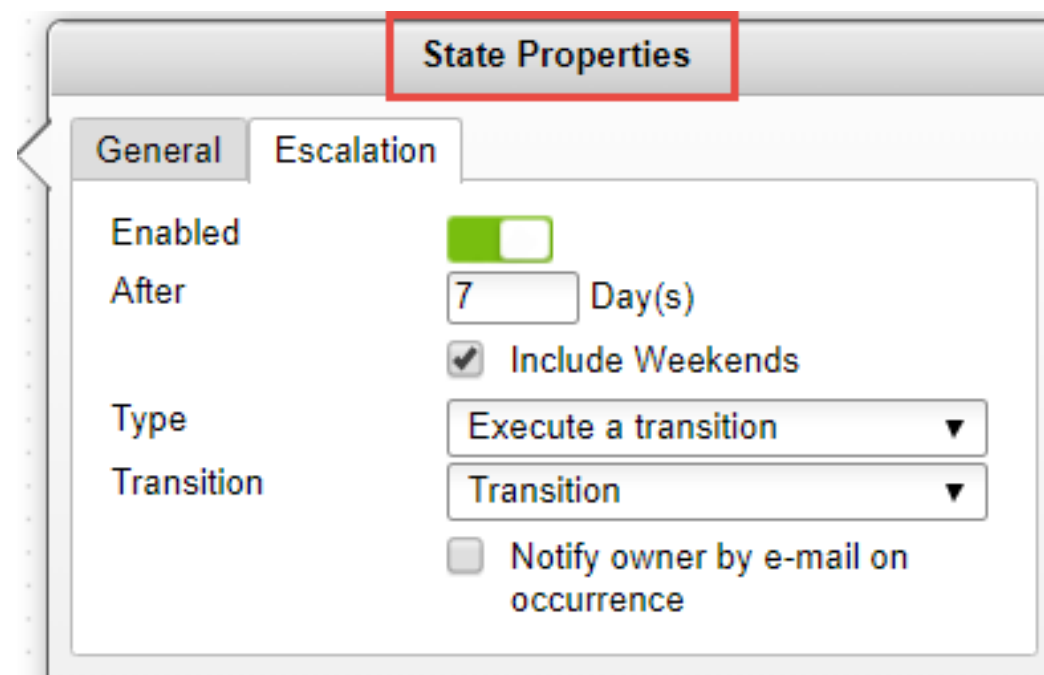
What is a Looping Transition?

- Transition out and back in to the same workflow state
- Commonly used on Approvals
- Execute a script
  - Action script
- Resets the state

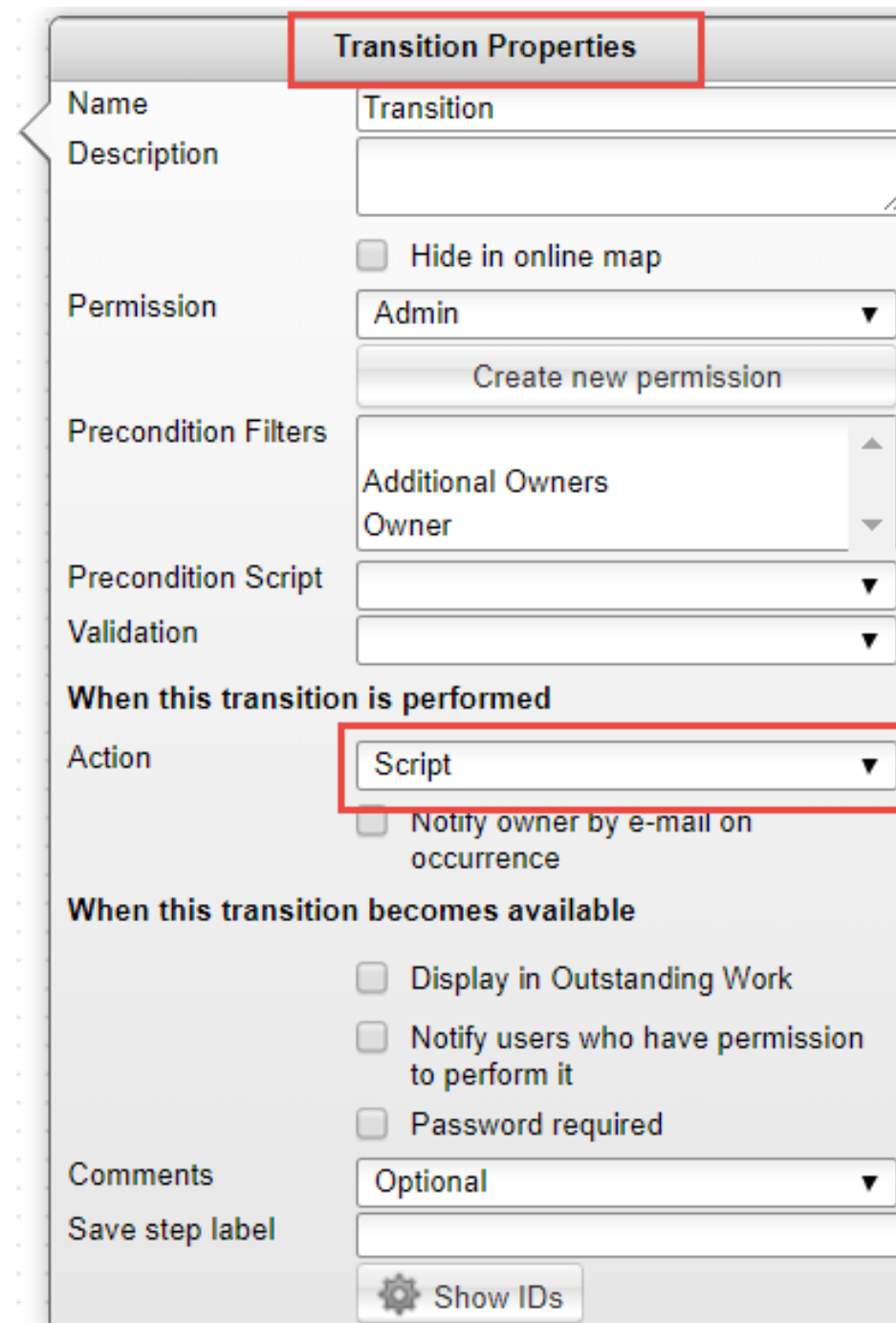


# Combining the Escalation with the Looping Transition

When we combine Escalation with a Looping transition, we are able to execute a script on a schedule/interval. This allows us to repeat an action until logic says we no longer need to do the action.



The screenshot shows the 'State Properties' dialog box with the 'Escalation' tab selected. The 'Enabled' checkbox is checked. The 'After' field is set to '7 Day(s)'. The 'Include Weekends' checkbox is checked. The 'Type' dropdown is set to 'Execute a transition'. The 'Transition' dropdown is set to 'Transition'. There is also an unchecked checkbox for 'Notify owner by e-mail on occurrence'.



The screenshot shows the 'Transition Properties' dialog box. The 'Name' field is 'Transition'. The 'Permission' dropdown is set to 'Admin'. The 'Precondition Filters' list includes 'Additional Owners' and 'Owner'. The 'Precondition Script' and 'Validation' dropdowns are empty. The 'When this transition is performed' section has the 'Action' dropdown set to 'Script'. There are several unchecked checkboxes for notification and display options. The 'Comments' dropdown is set to 'Optional'. There is a 'Show IDs' button at the bottom.



# Putting Escalation to Work – ‘How to’

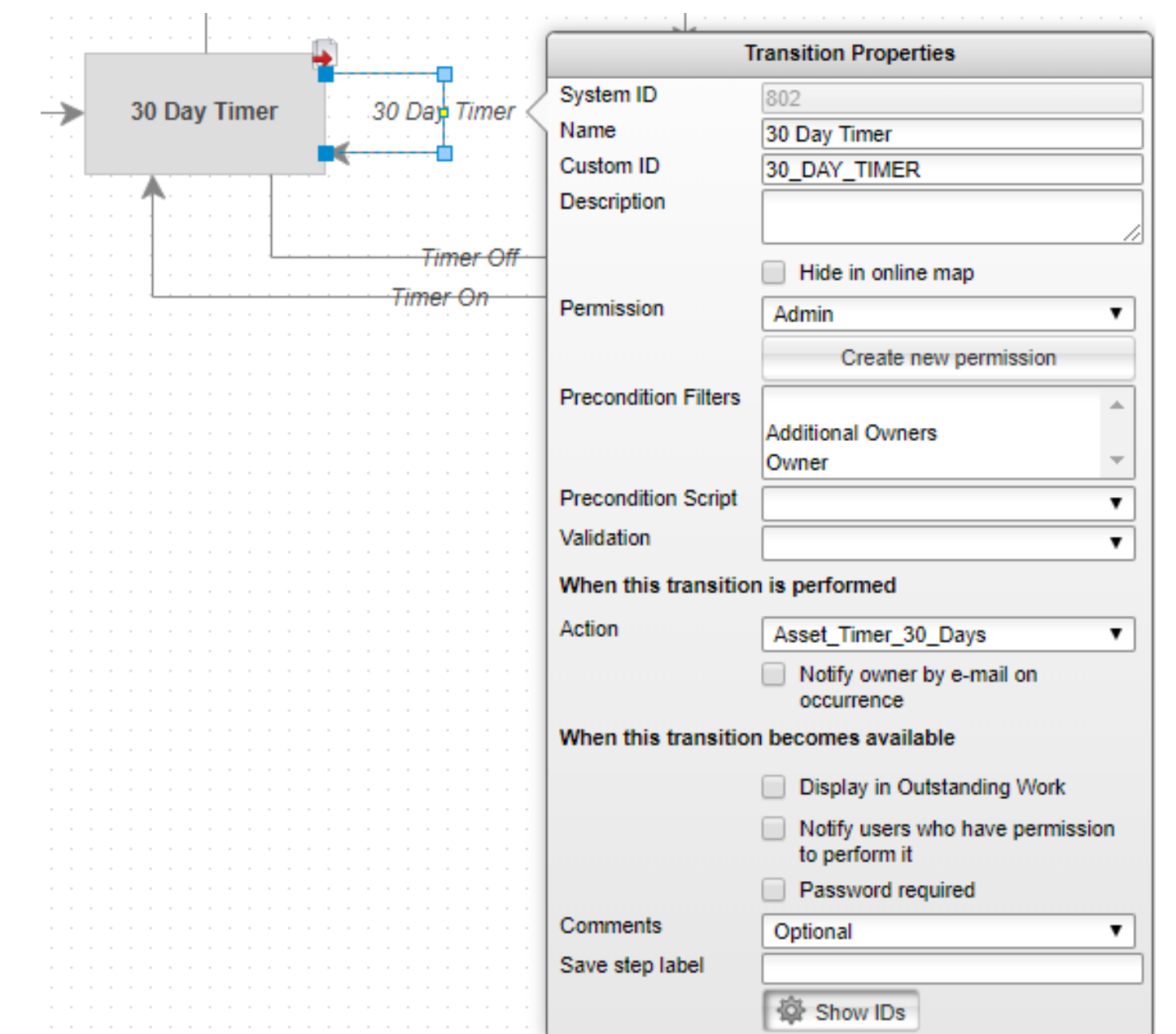
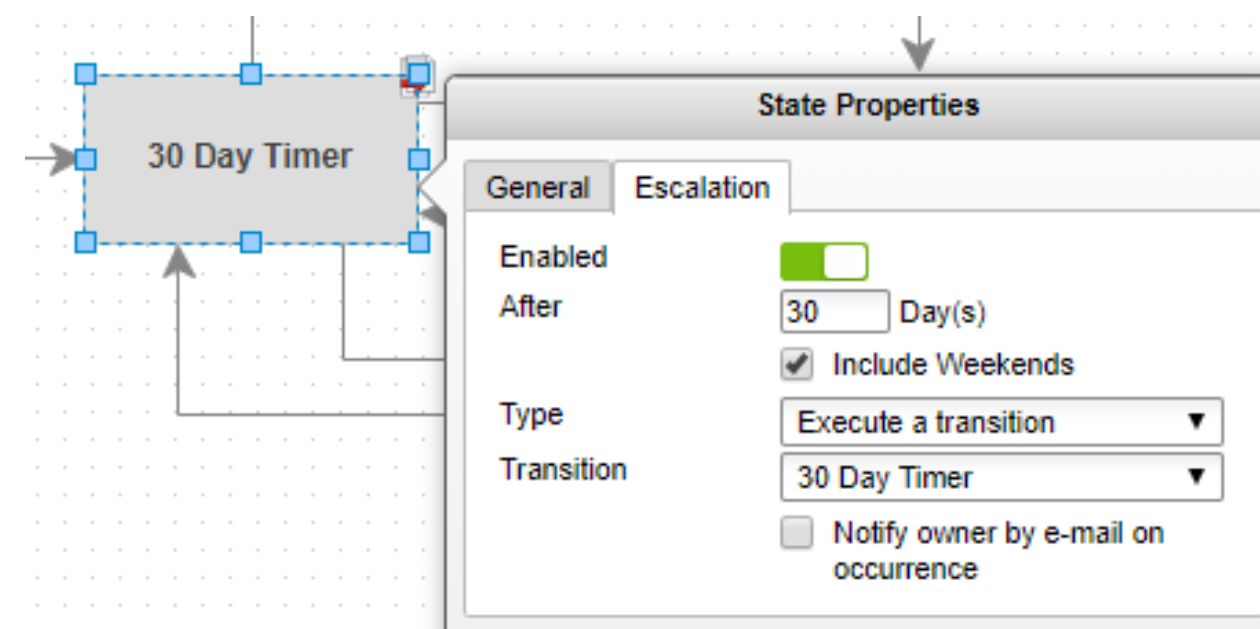
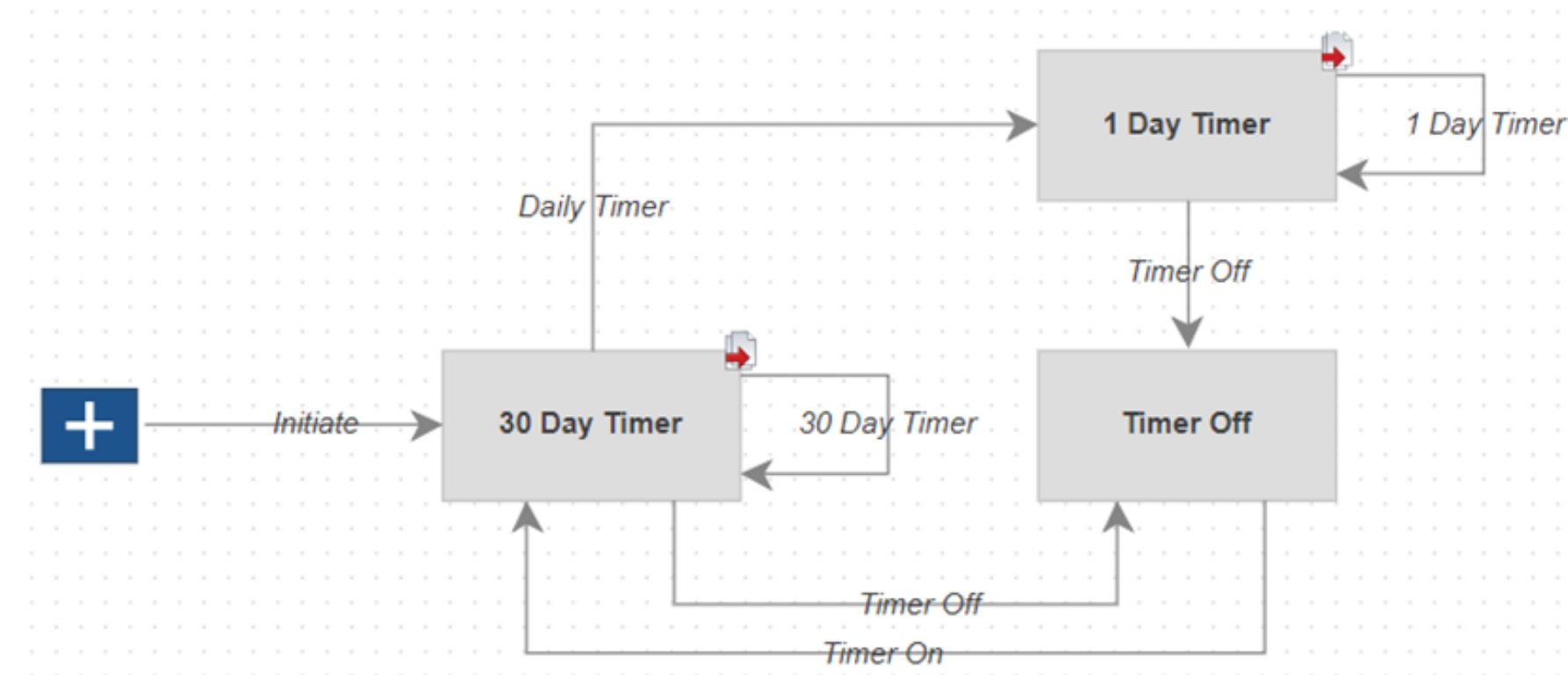
The background features a complex geometric design. A prominent element is a curved, blue-tinted surface that resembles a grid or a series of parallel lines curving away from the viewer. This surface is set against a lighter, white background with a subtle grid pattern. The overall aesthetic is clean, modern, and technical.



# The Timer Workspace

## Basic workspace w/workflow

- What are we watching?
  - Intervals will drive timer design
  - One timer state or multiple?
- Allow for a 'Timer Off' state
- Easy to implement
  - Set the escalation interval
  - Select the transition to execute
  - Select the Action script on the transition



# The Timer Scripts

## 30 Day Timer Script

- Establish the connection to the Watched Record
- Write the logic for criteria met
- Perform the action if criteria is met

### Maintenance Schedule (4 of 5)

Note: Select either a Maintenance Frequency Interval or Maintenance Not Required.

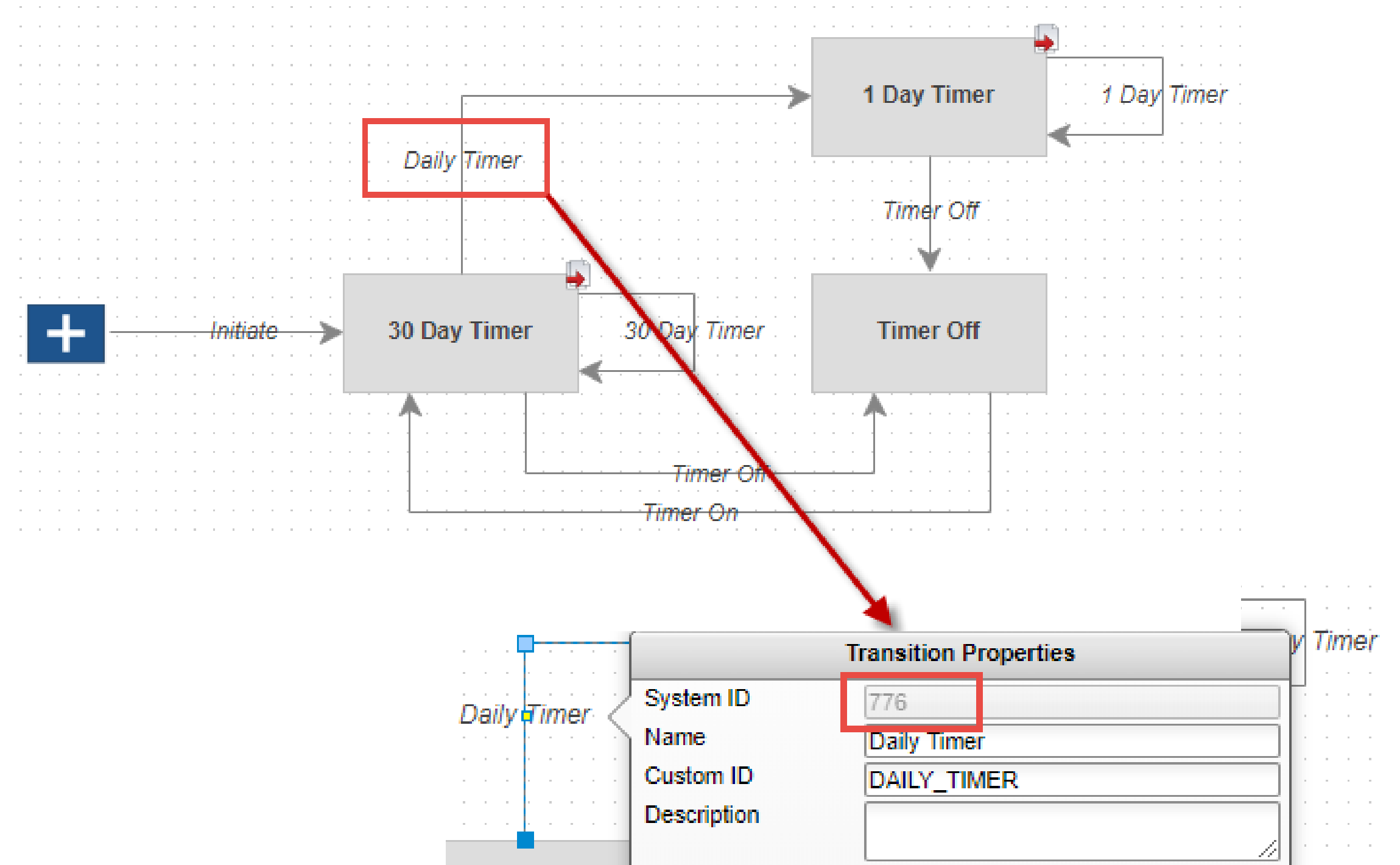
Maintenance Frequency (Months) 06  
Last Maintenance 06/11/2018  
Next Maintenance 12/07/2018

Time to Next Maintenance 26 (Days)

```
//Check time to next Maintenance Due
var watchedAsset = item.ASSOCIATED_ASSET;
var daysOut = watchedAsset.TIME_TO_NEXT_MAINTENANCE;

if (daysOut !== null){

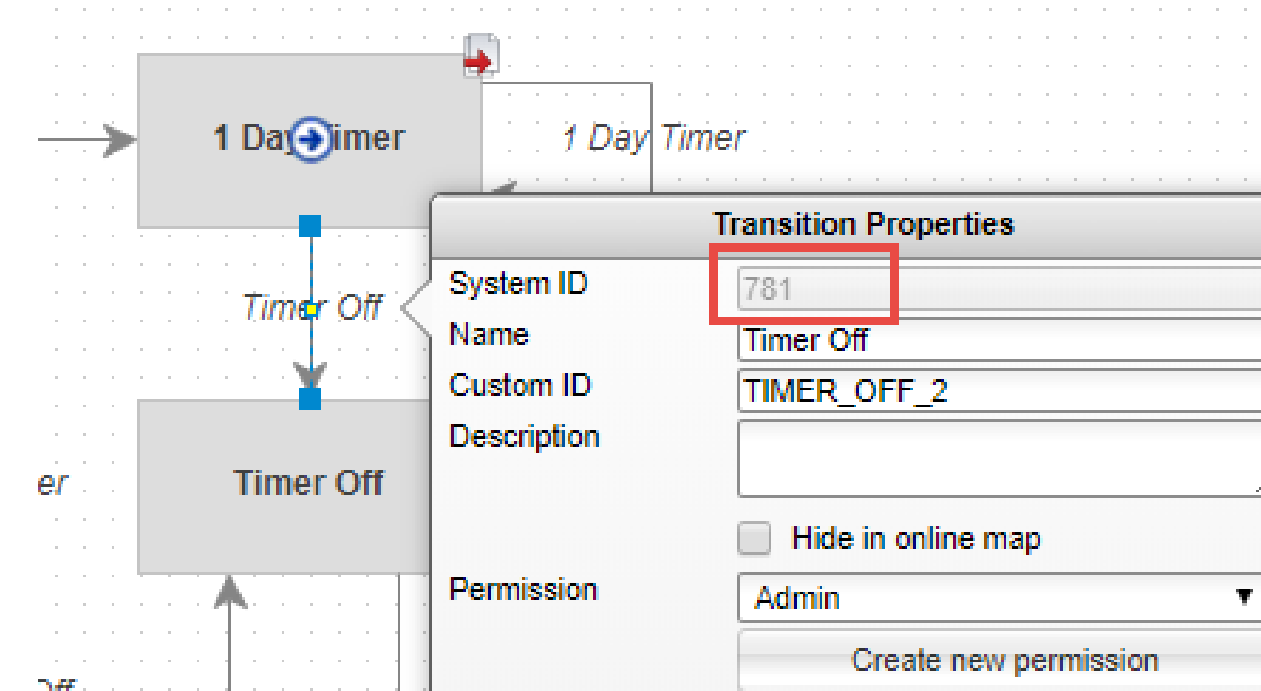
    if (daysOut < 31){
        item.performWorkflowTransition(776, 'Auto Transitioned by the System'); //Daily Timer transition
    }
}
```



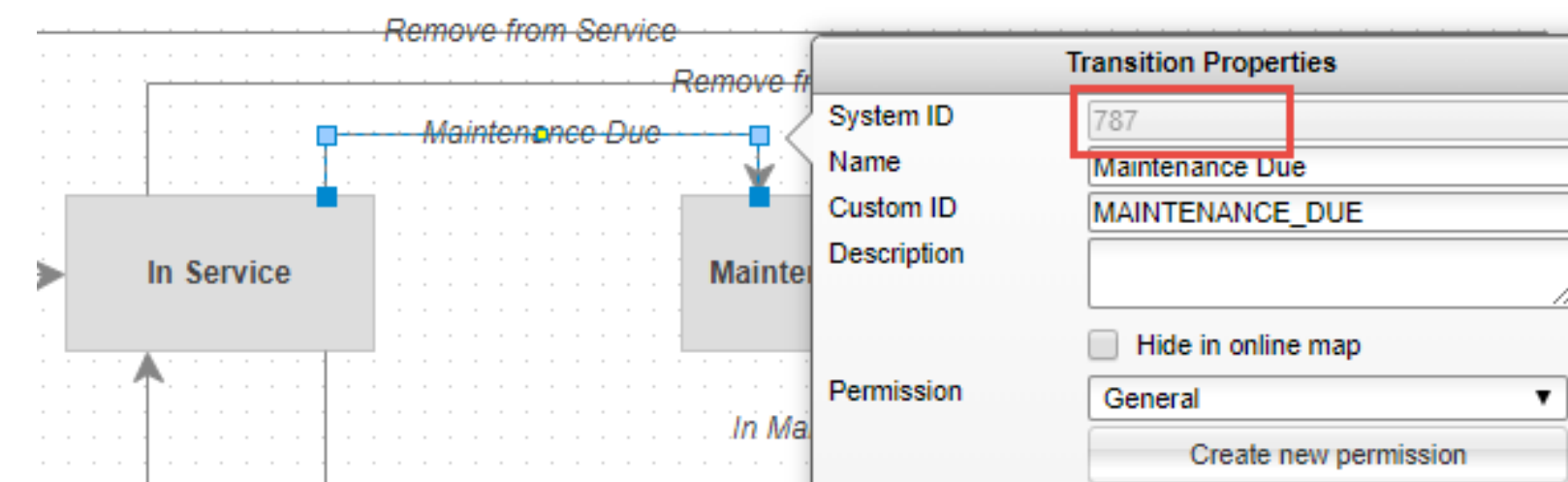
# Criteria Met

1 Day Timer's logic has been met

- Move the Watched Asset's workflow
- Move the timer's workflow to Timer Off



Timer Workflow



Watched Asset Workflow

## Maintenance Schedule (4 of 5)

Note: Select either a Maintenance Frequency Interval or Maintenance Not Required.

Maintenance Frequency (Months) 06  
 Last Maintenance 05/16/2018  
 Next Maintenance 11/11/2018

Time to Next Maintenance 0

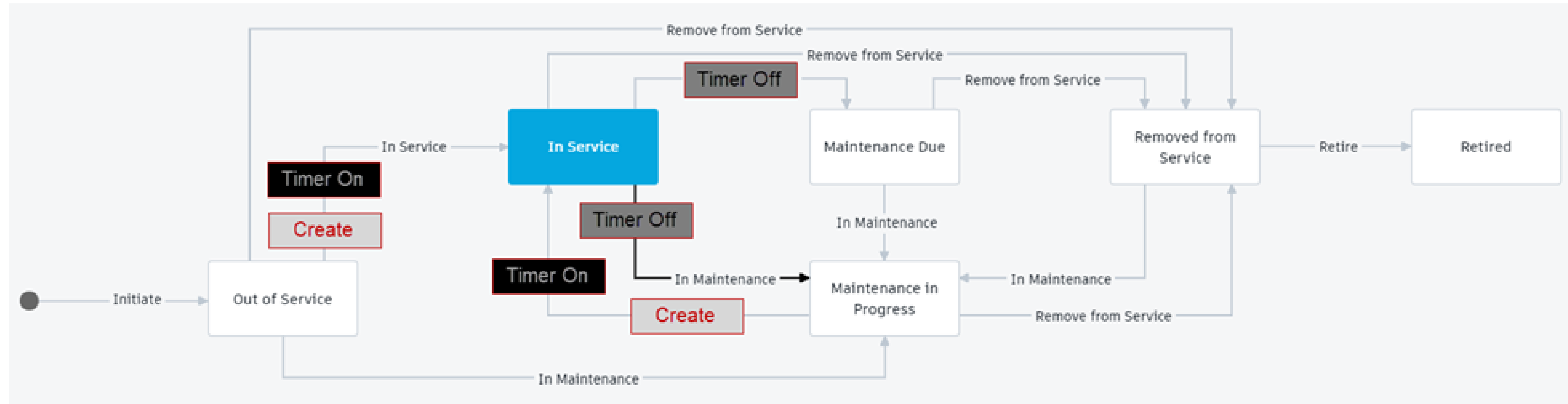
```
//Check time to next Maintenance Due
var watchedAsset = item.ASSOCIATED_ASSET;
var daysOut = watchedAsset.TIME_TO_NEXT_MAINTENANCE;

if (daysOut !== null){

    if (daysOut < 1){
        watchedAsset.performWorkflowTransition(787, 'Auto Transitioned by the System'); //Transition watched record
        item.performWorkflowTransition(781, 'Auto Transitioned by the System'); //Timer Off transition
    }
}
```

# Coordinating the Workflows

Create a diagram for see how the two workflows will interact



# Calculating the Watched Value

Timers are generally setup to watch a value in another record

- Common uses...
  - Maintenance Records, Supplier Audits, Internal Audits
- Combination of Scripting and Computed fields

```
//Check for Maintenance Required
if (item.MAINTENANCE_FREQUENCY !== 'Scheduled Maintenance not Required'){
  if (item.MAINTENANCE_FREQUENCY !== null && item.LAST_MAINTENANCE !== null){
    var noMonths = item.MAINTENANCE_FREQUENCY;
    var noDays = noMonths*30;
    var newDate = DatePlusDays(item.LAST_MAINTENANCE, noDays);
    item.NEXT_MAINTENANCE = newDate;
  }
}
else if (item.MAINTENANCE_FREQUENCY === 'Scheduled Maintenance not Required'){
  item.NEXT_MAINTENANCE = null;
}

function DatePlusDays(date, days){
  var d = date;
  d = date.getTime() + (1000 * 60 * 60 * 24 * days);
  d = new Date (d);
  return d;
}
```

▼ Maintenance Schedule
Note: [Paragraph]
Maintenance Frequency (Months) [Radio Button]
Last Maintenance [Date]
Next Maintenance [Date]
Time to Next Maintenance [Integer]

Field name

Time to Next Maintenance

Computed Field Formula

(DATEDIFF('DAY', LOCALTIMESTAMP, NEXT\_MAINTENANCE))

# Demonstration



# Best Practices



# Best Practices

- Monitor escalation run times (what time of day)
- Use stepped timers for long lead times
- Diagram the workflow movements between the workspaces
- Create a report to monitor the timers
- Simple timer workflow
- Watch for abandoned records
- Heavy testing of the workflow paths to ensure they stay 'in sync'





# Summary



# Summary

## COMBINING ESCALATIONS WITH LOOPING TRANSITIONS

- Escalations combined with looping transition can take your workflows to the next level
- Enables one record to watch another record and act upon it when pre-defined criteria is met

## EFFECTIVE AND EFFICIENT

- We are always looking for ways to enhance our automations and make them robust
- Scheduled events are not missed

## REGULATORY

- Regulated industries can utilize this technique to validate their processes are followed
- Assist with Audits

## TIMER WORKSPACE TECHNIQUE

- This technique can be implemented for any workspace where scheduled events need to be monitored

# Questions





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