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Basic Workflows without GEL

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Agenda

- Overview of Clarity workflows
 - Understanding processes and components
- Process design and managing processes
- MUX Automations
- Considerations



Introductions

- Where do you work?
- What's your role?
- What area/topic would you like to learn more about?
- Anyone still exclusively on the Classic UI?



Workflows

Introduction

Manual vs Automation



Processes: Overview

- What is a process?
 - Processes in Clarity are workflow-based automations intended to streamline> business workflows, manage approvals, execute actions, and allow for custom scripts
 - They help ensure consistent execution of automations across Investments and Objects.
- Why use processes
 - Automatically update, lock down or import data
 - Reduce manual entry and avoid pitfalls of manual procedures
 - e.g.,
 - Approve a cost plan
 - Send Action Item to manager when status is updated
 - Open project for time entry once status is approved
 - Approve timesheets

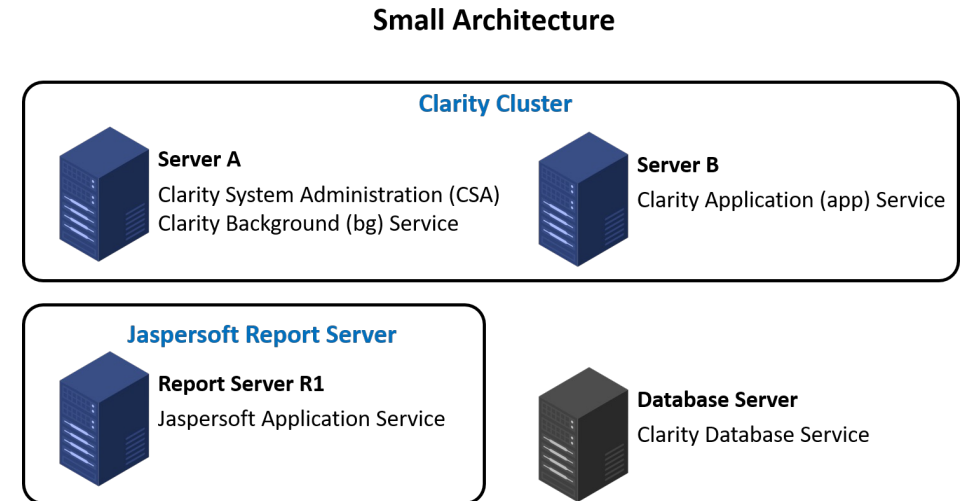
Survey

- Have you created a process before
- What kind of process was it
- Can you think of any activities that could be automated in Clarity



Architecture

- Processes run through the Background (BG) service.
- It's an independent service from the app/UI, which is constantly monitoring for actions, process executions and jobs.
- Processes are near real time but run async and independent of the UI.
- As a service, it has finite capacity and resources. Ensuring volume and best practices is key for a healthy environment.



Processes

Processes: Design Basics

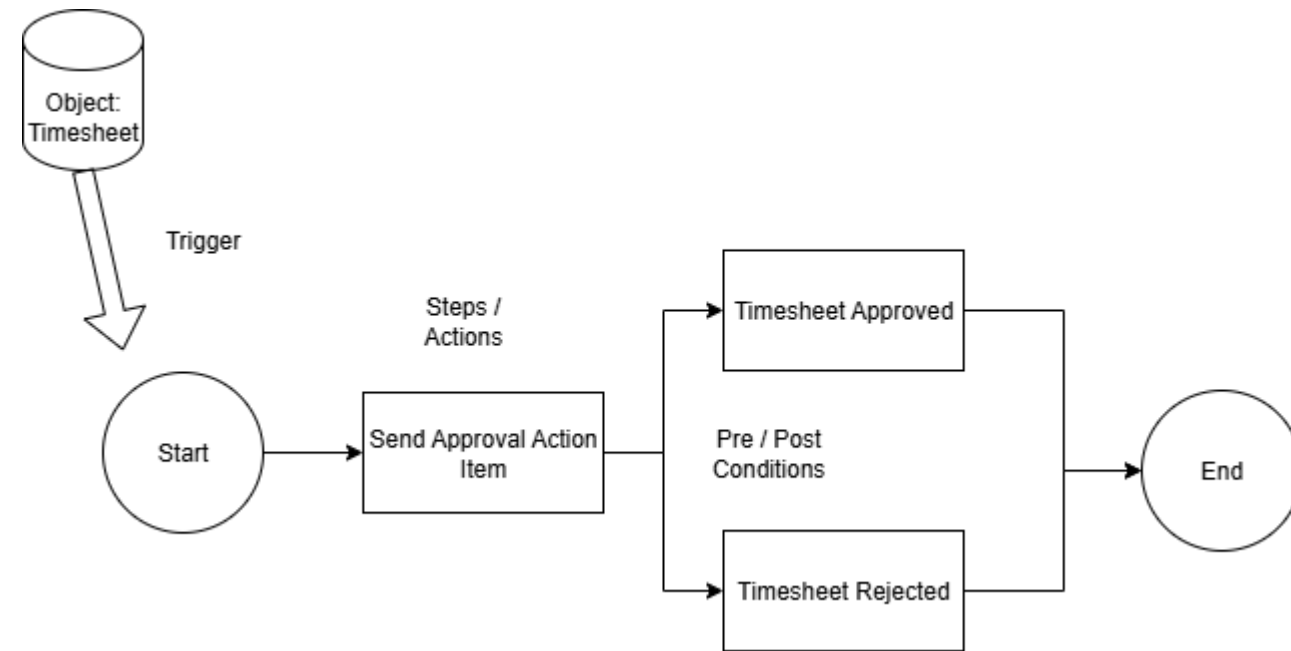
- The first step to processes is design:
 - Define the Process properties and description
 - Determine its trigger and associated objects
 - Define the steps and actions to properly represent the flow of the process.
 - Leverage pre and post-conditions to branch throughout the process.
 - Validate, activate and rollout the process



Process X-Ray: Timesheet Approval Process

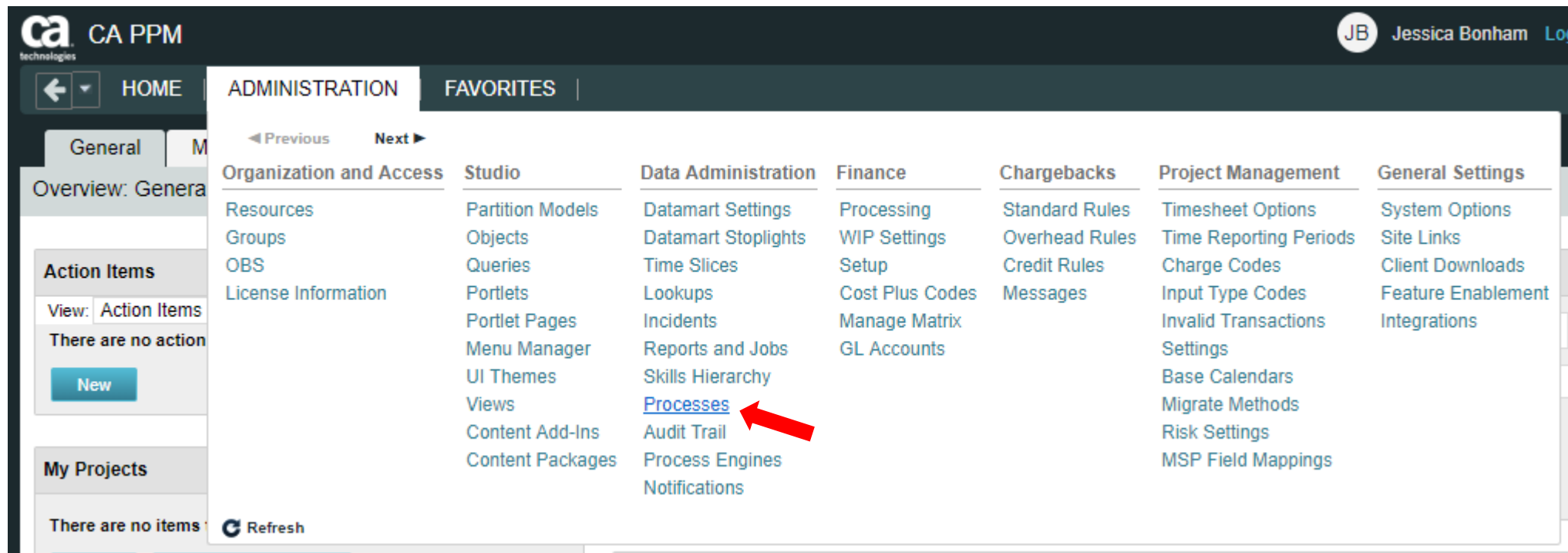
Imagine a Timesheet Approval process, where the Resource's Manager gets an Action Item to approve or reject a timesheet. Let's X-Ray the components of a process:

- **What (Object):** defines the associated object of a process which will drive the trigger and attributes available to the process; e.g., Timesheet.
- **When (Trigger):** Defines when the process triggers on creation or update. It can also be a manual or scheduled process; e.g., Timesheet submitted.
- **Steps / Actions:** the tasks/activities the process will perform; e.g., Send an action item or update the timesheet.
- **Pre/Post Conditions:** define when the step transitions to the next step, allowing for conditions to choose the path the process will take.



Processes: Creating a Process

- Process definitions are accessed via the Administration menu:



Processes: Properties

- Define Process Properties
 - Set the name and ID of the process
 - Processes are always created in “Draft” mode (default)
 - Processes in “Draft” can be modified, and they won’t trigger/be available

Process Definition: Properties

General

Process Name: MM Idea Approval

Process ID: mm_idea_approval

Content Source: Customer

Description:

Status: Not Validated

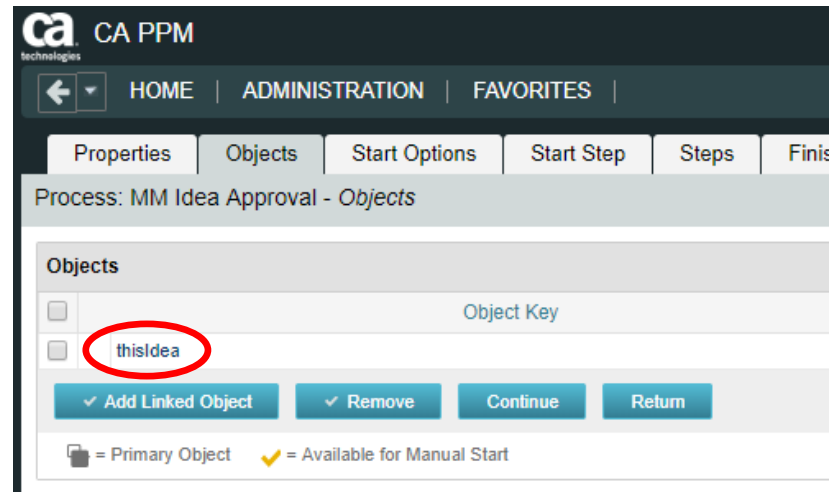
Mode: ☐ Active ☒ Draft ☐ On Hold
(To change the mode, first validate the process.)

Save and Continue Save Save And Return Return

Required Enter Once Unique

Processes: Objects

- Objects - Define the primary entities like projects, ideas, or custom objects that the process will act upon
- Associate the process with a Clarity object if:
 - The process should be triggered by a user update (or create)
 - The process will include system actions, manual actions or sub-processes
 - Defines the attributes and actions available to a process
- In this example the process is associated with Ideas:



Processes: Start Options

- Start Options will define how the process will trigger. The start options can be set to:
 - On Demand: process will be kicked off manually, scheduled or by another process calling that process (although sub processes are to be used with caution)
 - Auto-Start: process will be kicked off when a user updates or creates an object instance based on the defined conditions

The screenshot shows the CA PPM Administration interface. The top navigation bar includes a back arrow, a dropdown menu, and links for HOME, ADMINISTRATION, and FAVORITES. Below this is a tabbed interface with tabs for Properties, Objects, Start Options (which is currently selected), Start Step, Steps, and Finish. The main content area displays the title 'Process: MM Idea Approval | Primary Object: Idea - Process Start Options'. Under the 'Start Options' section, there is a 'Start Option' label with two radio button options: 'On-demand' (which is selected) and 'Auto-start'. At the bottom of the form, there are four buttons: 'Save and Continue', 'Save', 'Save And Return', and 'Return'.

Processes: Steps

- Process Steps will include the actions a process will perform. The Steps define the logical diagram of the process.
 - Allow for sequential actions that guide the process flow from initiation to completion with defined outcomes.
 - A process includes a Start step, a Finish step, and any number of steps in between
 - Each step performs one or more actions that move the process toward completion

Steps	
Group > Steps	
	Email Intake Manager
	Manage Intake Manager Rights

CONTINUE

RETURN



Processes: Pre/Post Conditions

- Process logic is the Pre-Condition or Post-Condition of each step
 - When defining a pre-condition or post-condition to a step, you can use attributes from objects added to the process or action item properties.
 - Pre-conditions will determine whether the step should begin
 - After defining the pre-conditions that trigger a step, you must define post-conditions that connect this step to the next step, choose a path or the Finish step
 - Post-conditions will determine where and whether the step will move
 - Examples of pre- and post-conditions include:
 - Checking the status of action items
 - Checking between object attributes values (except for MVL attributes)
 - Waiting for a sub-process to complete before joining the master

Processes: Splits and Joins

- Splits / Joins control the flow of the process. Allowing to define what the next step(s) will be and how they merge back into a single path to completion.
 - A Split branches into multiple directions
 - A Join brings multiple branches back together

Split Types

- Serial: One path only
- Parallel: runs 2 or more paths at the same time
- Decision Point (XOR): Runs one path only
- Multi choice: Runs one or more paths.

Join Types

- Rendezvous (AND): waits for all paths to complete.
- Merge (XOR): waits for one path only.
- Wait and Merge: merges multiple paths once they all complete.
- Multi-thread: As soon as one path finishes it continues.
- First in Line: first path to complete, continues.

Processes: Post-conditions

Example of Post-conditions and Split Type:

Process: Assign Incidents | Step: Acquire Incident - Step Details

General

Step Name:

Step ID:

Status:

Description:

Group:

Raise a Warning After: Days

Milestone: ☐

Referring Steps

Assign IT Worker.Incident Not Resolved

Pre-conditions

Join Type:

There is no precondition to display.

Post-conditions

Split Type:

Post-conditions will be checked in the order they are listed below.

If ...	Then Go To	Description
(Action Item.AcquireIncident.AcquireIncident Number of assignees with Status Done >= 1)	Work On Incident	Incident Acquired
(Action Item.AcquireIncident.AcquireIncident Number of assignees with Status Rejected >= 1)	Incident Escalated	Incident Not Acquired

Notifications

Send Notification ☐ When step is started
☐ When step is completed
☐ When step is in error

Send Notification To:

Notify Owner: ☐

Escalation

There is no escalation rule setup to display.

Actions

Name	Description
Send acquire incident action item	Please review and acquire incident.

Processes: Pre-conditions

Example of Pre-condition Join Type:

Process: Assign Incidents | Step: Incident Escalated - Step Details

General

Step Name: Incident Escalated

Step ID: IncidentEscalated

Status: Validated

Description:

Group: [--Select--]

Raise a Warning After: Days

Milestone: ☐

Referring Steps

Resolution Verification, Acquire Incident

Pre-conditions

Join Type: Merge (XOR)

There is no precondition to display.

Post-conditions

Split Type: Serial

Post-conditions will be checked in the order they are listed below.

If ...	Then Go To	Description
Incident Not Resolved		

Notifications

Send Notification: ☐ When step is started
☐ When step is completed
☐ When step is in error

Send Notification To:

Notify Owner: ☐

Escalation

There is no escalation rule setup to display.

Actions

Name	Description
Escalate Incident	Set incident status to Escalated.

Processes: Actions

- A step will contain multiple Actions. Actions can be one of the following:
 - Manual Action – Trigger an Action Item to notify a resource of the expected manual actions required. Manual Actions can be customized to use object attributes as part of their content.
 - System Action – Allows to execute system actions. Allowing to Lock / Unlock Attributes, Set Attribute Values for the selected object and certain System Actions for the selected object (e.g., copy a financial plan from a template).
 - Run a Job – Executes a Clarity job and can optionally wait for the job to complete. (e.g., Post Timesheets)
 - Custom Script – Allows for custom Gel scripts to be executed. One of the most powerful customizations in Clarity.
 - Subprocess - Sub processes are invoked as embedded processes within the context of the current process. (Subprocesses should be used with caution and are normally not recommended as a best practice.)

Processes: Manual Action

- Manual Action – Trigger an Action Item to notify a resource of the expected manual actions required. Manual Actions can be customized to use object attributes as part of their content.
- Manual Actions allow:
 - A friendly name and description
 - Define the responses/actions available to the users
 - Define the message properties and assignees
 - Assignees can be a specific resource, group or based on an attribute (E.g. Project Manager)

Process: Demo Process | Step: Start - Manual Action Properties

General

Action Name: Manual Action - Send Manager Action Item

Action ID: r_manager

Description:

Actions

Actions	Available	Selected
	Approved With Conditions	Approved
	Done	Rejected
	Escalate	
	Resolved	
	Resubmit	

Action Item Message

Subject: Please approve status change "\${thisProject.name}"

Description: The status of the project "\${thisProject.name}" has been updated to "\${thisProject.status}". Please approve or reject.

Priority: Low

Enter Assignees: [Quick Add Assignee]

Assignees: Manager

Processes: System Action

- System Action – Allows to execute system actions. Allowing to Lock / Unlock Attributes, Set Attribute Values for the selected object and certain System Actions for the selected object (e.g., copy a financial plan from a template)
- System Action allows:
 - Locking / Unlocking fields
 - Set a specific value for attributes
 - System actions based on the selected object(s)

Process: Demo Process | Step: Start - Create System Action

General

★ Action Name

★ □ ★ Action ID

Description

System Action

Object

Action

Status Indicator

Status Indicator

★ = Required □ = Enter Once ★ = Unique

Processes: Run a Job Action

- Run a Job – Executes a Clarity job and can optionally wait for the job to complete. (e.g., Post Timesheets)
- When running a job, the job parameters are fixed based on the action configuration.

Process: Demo Process | Step: Start | Job Type: Post to WIP - Job Properties

General		Notifications	
Action Name	Run Post to WIP	Send Notification	☐ When step action is performed ☐ When step action is in error
Action ID	r_runWip	Enter Recipients	 [Quick Add Recipients]
Description		Send Notification To	
		Notify Owner	☐
Job			
Job Name	Post to WIP		
Job ID	5112048		
Job Status	Job Template For Process Engine		
Completion Mode	☒ Mark step complete when job finishes (synchronous) ☐ Mark step complete when job starts (asynchronous)		

Processes: Subprocess

- Subprocess - Sub processes are invoked as embedded processes within the context of the current process (Subprocesses should be used with caution)
- When running a subprocess, the parent process can:
 - Synchronous – complete the action until the subprocess completes
 - Asynchronous – complete the action when the subprocess starts, subprocess will later join the master process
 - Independent – action is completed when process starts. Subprocess will not join the master

Process: Demo Process | Step: Start - Subprocess

The screenshot shows the configuration interface for a subprocess within a process named 'Demo Process' at the 'Start' step. The interface is divided into two main sections: 'General' and 'Subprocess'.

General Section:

- Action Name:** Invoke Set Work Status to Complete
- Action ID:** r_invokeSubProcess
- Description:** (Empty text box)

Subprocess Section:

- Subprocess:** Set Work Status to Complete
- Initiating Object:** thisProject
- Subprocess Object Key:** thisSet Work Status to Complete
- Completion Mode:** ☒ Synchronous - Mark step action complete when process finishes. Other options include Asynchronous and Independent.

At the bottom, there are buttons for 'Save and Create New', 'Save', 'Save And Return', and 'Return'. A legend indicates that a red square icon means 'Required', a green square icon means 'Enter Once', and a green asterisk icon means 'Unique'.

Processes: Custom Script

- Custom Script – Allows for custom Gel scripts to be executed. One of the most powerful customizations in Clarity.
- Based on Gel language (variant of Jelly), which allows for development.
- Highly customizable and flexible, allows interactions with the Database, APIs, etc.

Custom Script Custom Script Parameters

Process: Rego MUX-Export Json File | Step: Start - Custom Script Properties

General

Action Name

Action ID

Description

Custom Script

Completion Mode ☒ Mark step action complete when script finishes (synchronous)
☐ Mark step action complete when script starts (asynchronous)

Custom Script

```
<gel:script xmlns:core="jelly:core" xmlns:email="jelly:mail" xmlns:file
xmlns:gel="jelly:com.niku.union.gel.GELTagLibrary" xmlns:quer="http://
xmlns:soapEnv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:sql="
xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3
<!--
*****
```

Using Processes



Processes: Validate and Activating

- **Process Status:**
 - Active – Process will be available and can be triggered
 - On Hold – Process was disabled, has at least one execution and will not be triggered
 - Draft – Project has not been activated or executed
- **Validate and Activate Process**
 - Use the process validations page to submit for validation
 - In case of any errors, the validation page will detail the errors
- When releasing a process, ensure the proper Access Rights are set

Process: Assign Incidents - Process Validation

Validation Object	Status
Record Effort	Validated
Resolution Verification	Validated
Incident Not Resolved	Validated
Incident Escalated	Validated
Process	Validated
BPM-0664: The process contains cycle. Cycle steps: Acquire Incident Work On Incident Record Effort Resolution Verification Incident Escalated Incident Not Resolved Entry steps: Acquire Incident Exit steps: Resolution Verification	Re-validation Required
BPM-0664: The process contains cycle. Cycle steps: Acquire Incident Incident Escalated Incident Not Resolved Entry steps: Acquire Incident Exit steps: Acquire Incident	Re-validation Required

Validated = Validated Errors Encountered = Errors Encountered Re-validation Required = Re-validation Required Not Validated = Not Validated

Validate Activate Process Validate All and Activate Continue Return

Access Right	Object	Description
☐ Process - AutoStart	Process Definition	Allows resource to auto start a new process instance from a process definitions in the system.
☐ Process - Start	Process Definition	Allows resource to start a new process instance from the specific process definitions.

Processes: How to Start a Process Instance

- A process can be triggered
 - Manually
 - When not associated to an object:
 - Organizer
 - Execute a Process Job
 - Action on the UI
 - Via the Processes Tab of an Instance (Classic UI)
 - Automatically, when the update or create conditions are met

Job Type: Execute a Process - Job Properties

General

Job Name: Execute a Process

Parameters

Allow only one running instance: ☒

Process ID: Rego OData Refresh

Save Parameters

When

When: ☒ Immediately

Projects ▶

Project from my RegoU Template PRJ0000014

Conversations Tasks Links Status Risks Issues Changes Documents **Properties**

▼ Collapse all

Rego OData Refresh

▼ Project Summary

Name *

Project from my RegoU Template

Processes: Monitoring a Process

- To review process instances, users can navigate to the Organizer or the Processes Tab in Classic UI when associated to an object.
- Under the Initiated Processes list, users can:
 - Filter/View processes they have Access Rights to
 - See the status of a process, execution details and associated object instance
 - Review Instance execution details by clicking on the ID field
 - Review process messages by clicking on the Messages icon

AVAILABLE

INITIATED

ESCALATIONS

Initiated Processes

PROCESS NAME

PROCESS ID

PRIMARY OBJECT

FROM START DATE

TO START DATE

STATUS

All

INITIATED BY

FILTER

SHOW ALL

CLEAR

☐	Process	ID			Primary Object	Object Name	Progress	Steps In Progress	Status	Messages	Initiated By	Start Date	Finish Date
☐	Rego - Synch Roadmap Item Role Allocation	rego_roadmapitem_role_alc					»»»»»»»»		◆	🚩	Ian Arpel	9/11/25 7:05 AM	9/11/25 7:06 AM
☐	Load Database Dump File Names	get_data_dump_v1					»»»»»»»»		◆	🚩	Ian Arpel	9/11/25 6:30 AM	9/11/25 6:30 AM

MUX

Modern UX

- Modern UX (a.k.a. MUX) is the latest UI, providing a more reactive experience, supporting new functionality and being heavily invested into.
- Provides the latest functionality for:
 - MUX specific modules like CITs, To Dos, Checklists, etc.
 - Views, Grids and Blueprints
 - Provides a reach UX experience leveraging a powerful Grid allowing per user views, Widgets, Canvas and the new reporting module.
- New functionality for automations through the UI, allowing admins to create:
 - Business Rules
 - Notifications
 - Action Items

Action Items

- Available under the Admin Menu. Using Action Items allows:
 - An Action Item to be triggered based on a condition
 - Provides a similar experience allowing to define the assignees, content and available actions


[Action Items](#)

Create New Action Item - Step 1 of 3

Description
Identify and map the action item.

Name * Target Object *

Description

Content
Configure the message to recipients.

Subject * Priority

[+ Add attribute](#)

Message

[+ Add attribute](#)

[Cancel](#) [Next](#)

Create New Action Item - Step 2 of 3

Recipients
Assign the action item.

Resource Attribute

Access Group

Resource

Actions

Add Actions *

[Back](#) [Next](#)

Action Items

Action Items can then be selected in a blueprint to define the trigger and actions based on the selected response.

New Rule

Rule Name *

Send Action Item

Target Object

Project

Rule Type

Determine when the below actions are executed. Only one rule type may be selected per business rule.

- ☐ View Page - Runs every time a user views page, supports only one complex condition (UI action only)
- ☒ Attribute Update - Run only when a selected attribute is updated, supports multiple conditions blocks (Data and UI action)
- ☐ Security Update - Runs only when a selected resource attribute is updated (Data action only)
- ☐ Conditional Required Modal - Runs only when a selected attribute is updated, supports only one condition (UI action only)

Target Attribute

Status

If Is Not Empty, then;

Data Actions- Runs once, when condition becomes true

↳ Send Action Item

Send Manager Action Item

+ Add actions

UI Actions- Runs persistently, as long as condition is true

+ Add actions

+ Add condition

Notifications

- Available under the Admin Menu. Using Notifications allows:
 - Define the properties of a notification
 - Define the conditions to trigger the condition
 - Define the recipients of the notification (When using lookup attributes, ensure the lookup is associated to the User object)
- e.g., Notify PM Group that idea status has changed to submitted

Update Notification - Step 1 of 3

Description

Identify and map the notification.

Name *

Notify Idea Status Change - to Submitted

Target Object *

Idea

Description

Please review the idea as the status has changed to submitted for Approval

Content

Configure the message to recipients.

Subject*

Please review the idea as the status has changed. Idea ID - \${idea.unique_code}

Priority

Low

+ Add attribute

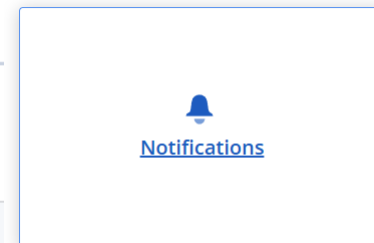
Message

Please review the idea as the status has changed. Idea ID - \${idea.unique_code} , Idea name - \${idea.name}

+ Add attribute

Cancel

Next



Notifications

- Step 2: Define the send condition

Update Notification - Step 2 of 3



Condition Type

☐ Simple ☒ Complex

Send Conditions

Establish when this notification will be sent.

Target Attribute *

Status

If Target Attribute

Is Equal To

Submitted for Approval



+ Select

, then;

↳ Send notification to recipients

Cancel

Back

Next

Notifications

- Step 3: Define the recipients

Update Notification - Step 3 of 3



Recipients

Establish to whom this notification will be sent.

Resource Attribute

Manager



Access Group

PM Group - JD



Resource

Ciavarella, Chris



Cancel

Back

Save

Blueprint Rules

- Blueprint Rules are available on a per blueprint basis.
- A more advanced concept than processes, allows actions to execute instantly when navigating the MUX without relying on the BG.
- Because of this design, they don't execute in all cases like a DB update or REST API calls.
- Blueprint Rules allow for:
 - Disable Editing (Attributes, objects)
 - Hide (Actions, attributes, modules, sections)
 - Required attributes
 - Set attribute values
 - Transfer / Grant / Revoke access rights
 - Enable conditional update of attributes

New Rule

Rule Name *

Update Status Indicator

Description

Enter the rule description

Target Object

Project

Rule Type

Determine when the below actions are executed. Only one rule type may be selected per business rule.

- ☐ View Page - Runs every time a user views page, supports only one complex condition (UI action only)
- ☒ Attribute Update - Run only when a selected attribute is updated, supports multiple conditions blocks (Data and UI actions)
- ☐ Security Update - Runs only when a selected resource attribute is updated (Data action only)
- ☐ Conditional Required Modal - Runs only when a selected attribute is updated, supports only one condition (UI action only)

Target Attribute

Status

If Is Not Empty, then:

Data Actions- Runs once, when condition becomes true

↳ Set Attributes

Status Indicator

On Track

+ Add actions

UI Actions- Runs persistently, as long as condition is true

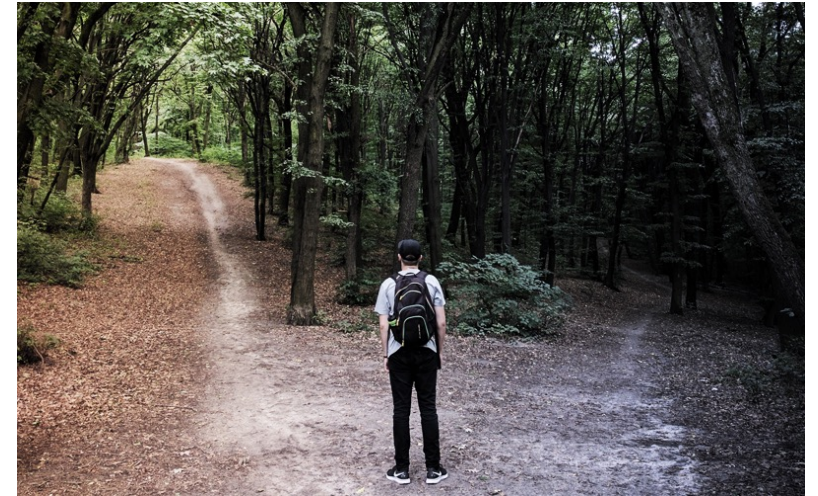
+ Add actions

Considerations



Deciding the Best Approach

- Automate using Blueprint rules, Action Items, Notifications or Processes?
- Defining the triggers and best approach to ensure a responsive automation.
- Be mindful of best practices and performance.



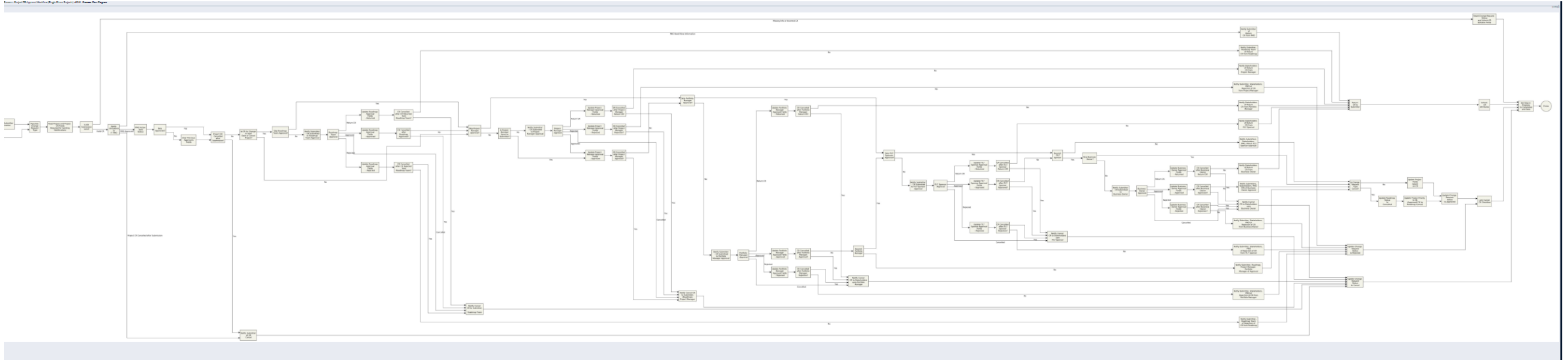
Processes: Best Practices

- Keep processes as simple as possible, they are intended to be short lived
- Avoid complex processes that involve long running logic or a high number of steps as it represents a load to the BG service
- Sub processes – Use with extreme caution
- Limit the number of processes that might be triggered at the same time
- Be careful with what jobs you call from processes
- Ensure error handling and logs are incorporated when using scripts
- Ensure Process and Action Item retention and errors are monitored recurringly
- Ensure proper documentation is kept for all Clarity customizations and tracking
- Properly test and plan for rollout of any customizations
- Housekeeping, Housekeeping, Housekeeping! Review, cleanup and monitor your customizations and volume of data:
 - In a scheduled basis
 - When assessing/designing new customizations
 - When rolling out new customizations

Want to know more? Join our Housekeeping class!

Processes: Best Practices

Friends don't let friends create processes like this:



Questions?





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and Technical Proficiency

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Elevate Your Professional Expertise with Rego University Certifications

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Certification Requirements:

✓ **Completion:** 12 units per certification track

✓ **Eligibility:** Open to all Rego University attendees



Important Reminder:

To have your certification **credits tracked**, ensure you **complete the class surveys in the app** after each session. This step is critical for certification progress.

Surveys

Please take a few moments to fill out the class survey.
Your feedback is extremely important for future events.



Thank You for Attending Rego University

Instructions for PMI credits

- Access your account at pmi.org
- Click on **Certifications**
- Click on **Maintain My Certification**
- Click on **Visit CCR's** button under the **Report PDU's**
- Click on **Report PDU's**
- Click on **Course or Training**
- Class Provider = **Rego Consulting**
- Class Name = **RegoUniversity**
- Course **Description**
- Date Started = **Today's Date**
- Date Completed = **Today's Date**
- Hours Completed = **1 PDU per hour of class time**
- Training classes = **Technical**
- Click on **I agree** and **Submit**



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