RADS

Designing your first Process

https://github.com/radservice/rad-community/fork

Last Revised on Oct 2021

Prerequisites

- Installed RADS.
- Understand various components of RADS.
- General understanding of RADS as an end user.

Content

Chapter 1

Business Process Design (BPE)

Business Process Management

- BPM is a management approach focused on aligning all aspects of an organization with the wants and needs of clients.

- Wants & needs = business goals.

- BPM attempts to improve processes continuously.

Business Process Engineering

1. Identify a **process**
2. Identify **start** and **end** of the process
3. Identify process **participants**
4. Identify **as-is** process **activities**
5. Identify **business rules**
6. Identify **areas for optimization**: process activities and business rules that can be:
   - Improved
   - Eliminated
7. Draw the improved / **to-be** process as flowchart

Identify a Process

- E.g:
  - **Purchase Request Process**
  - **Purchase Order Process**

Note: Let's start simple by focusing **only** on **purchase request process** first**.**

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Start & End of Purchase Request Process

- **Start**:
  - Applicant submits **purchase request** form
- **End**:
  - Applicant informed with **purchase request** result

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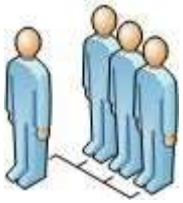
Process Participants

-  Request applicant.
-  Request approver.
-  Purchasing department (PD).

Note: The approver can also be the same participant that handles the purchase orders.

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As-Is Process Activities

-  Applicant **submits** purchase request form to PD.
-  PD staff **checks** available stock.
-  PD staff **approves / rejects** purchase request.
-  PD staff **informs applicant** on the request status.
-  PD staff **escalates** approved requests to the purchaser in the department to perform purchase ordering.

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Business Rules

1. If **requested item in stock is low**:
   –Approver processes purchase request
   Else if **many more stock is available**:
   – Reject purchase request

2. If purchase request is **approved**:
   – Escalate approved request to purchaser to handle ordering.
   – Inform applicant on the approved request
   Else if purchase request is **rejected**:
   – Inform applicant on the rejected request

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To-Be Process Activities

As-Is

1. Applicant **submits purchase request** form to PD
2. PD **checks available stock**
3. PD **informs** applicant on **existing abundance of stock**
4. PD **approves / rejects** purchase request
5. PD **informs** applicant on **request status**
6. PD **escalates** approved requests **to purchaser** to handle purchase ordering

To-Be

1. Applicant **submits purchase request** form to PD
2. System **checks available stock**
3. System **notifies** applicant on **existing abundance of stock**
4. PD **approves / rejects** purchase request
5. System **notifies** *applicant* on **request status** & *purchaser* on **new approved request** via email

improved

Business Process Engineering

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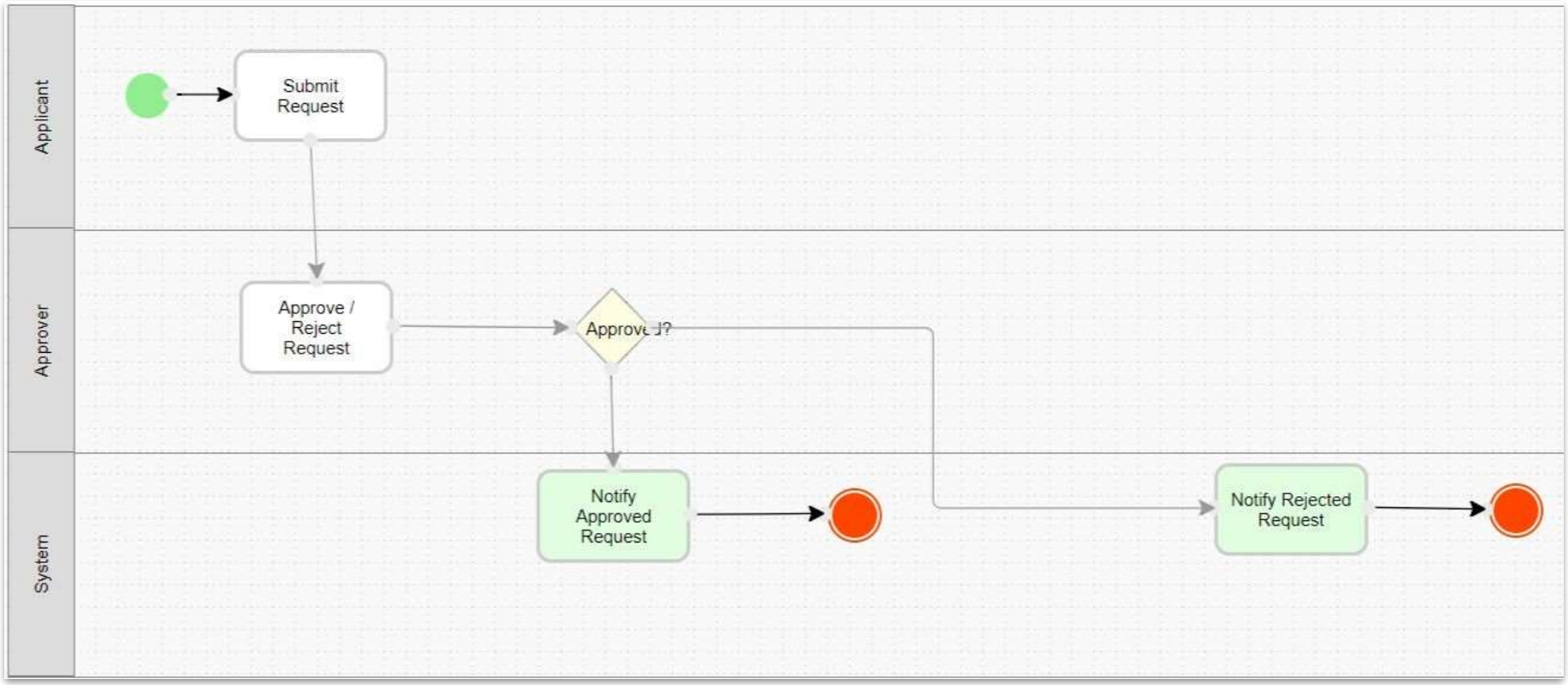
To-Be Purchase Request Process



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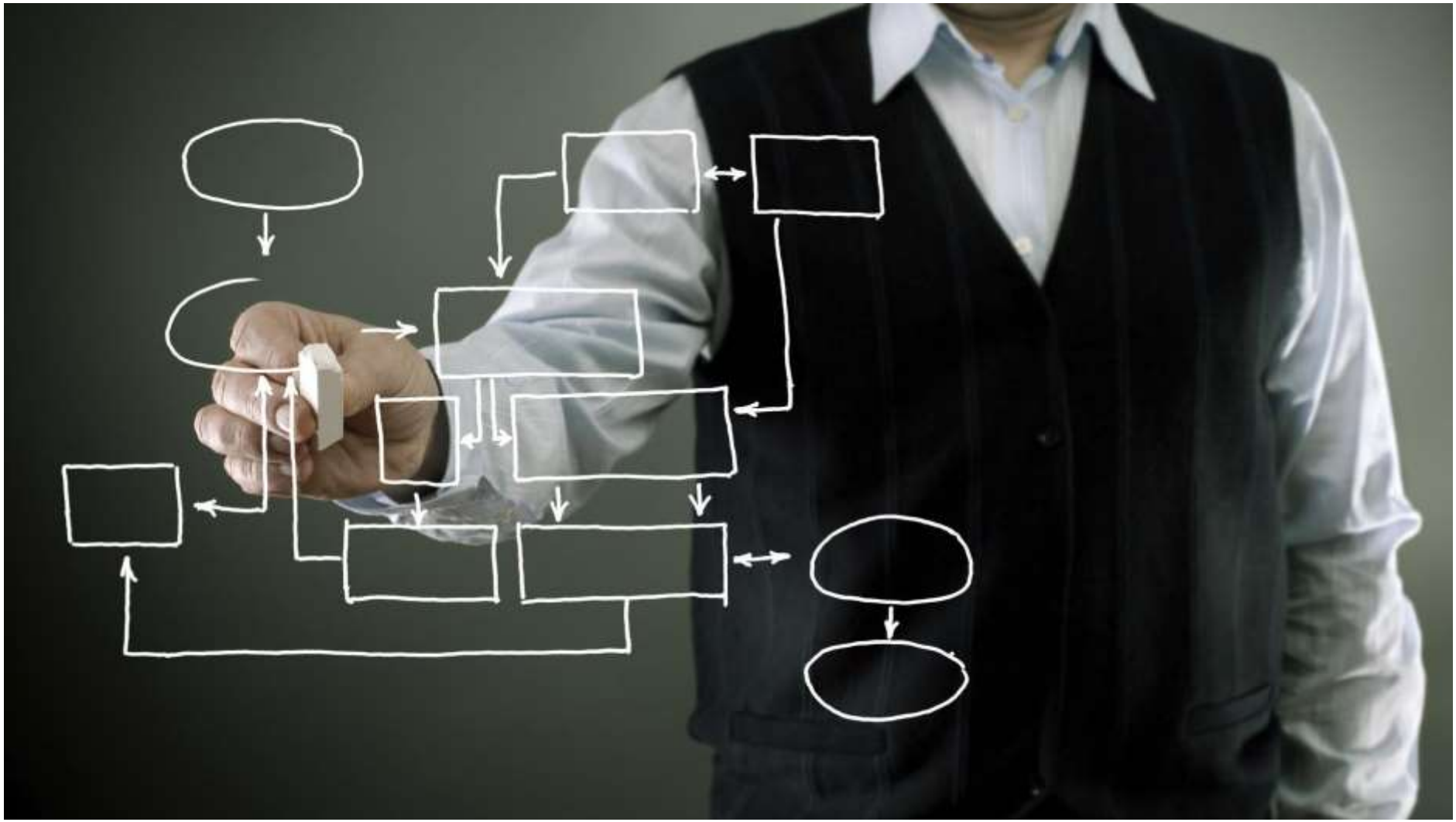
Now, Identify a Process, and Engineer It!



Sample Process Statement

- Jane needs to get some stationeries.
  The request that she submits must be first approved by PD staff before being sent to another respective staff in the department to handle the order.
  The department will then notify Jane accordingly.

Hands-On: Business Process Engineering

1. Process Name

2. Start and End

3. Participants

4. As-Is Activities

5. Business Rules

6. Optimize

7. To-Be Process

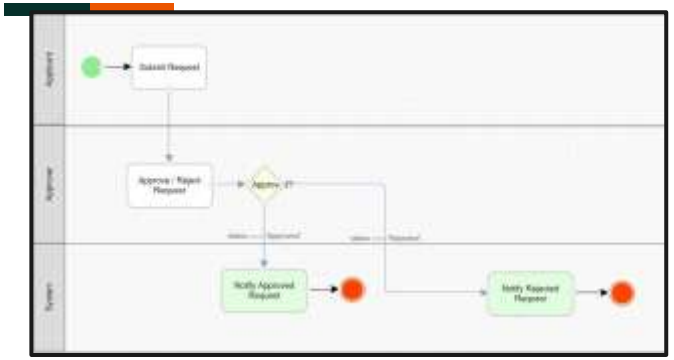
Chapter 1 Review

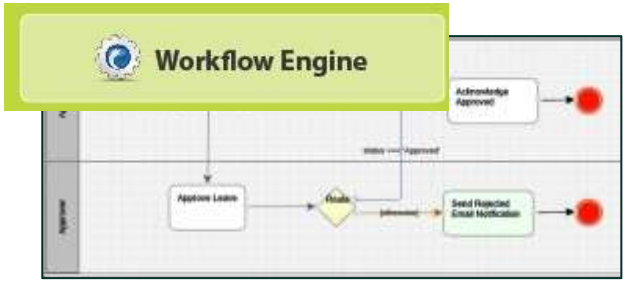
- General understanding on how to best design a Process.
- With the finished process design, one can now bring the finished process design/flow and implement it in RADS.

Chapter 2

Designing your first Process with Process Builder

Business Process Automation





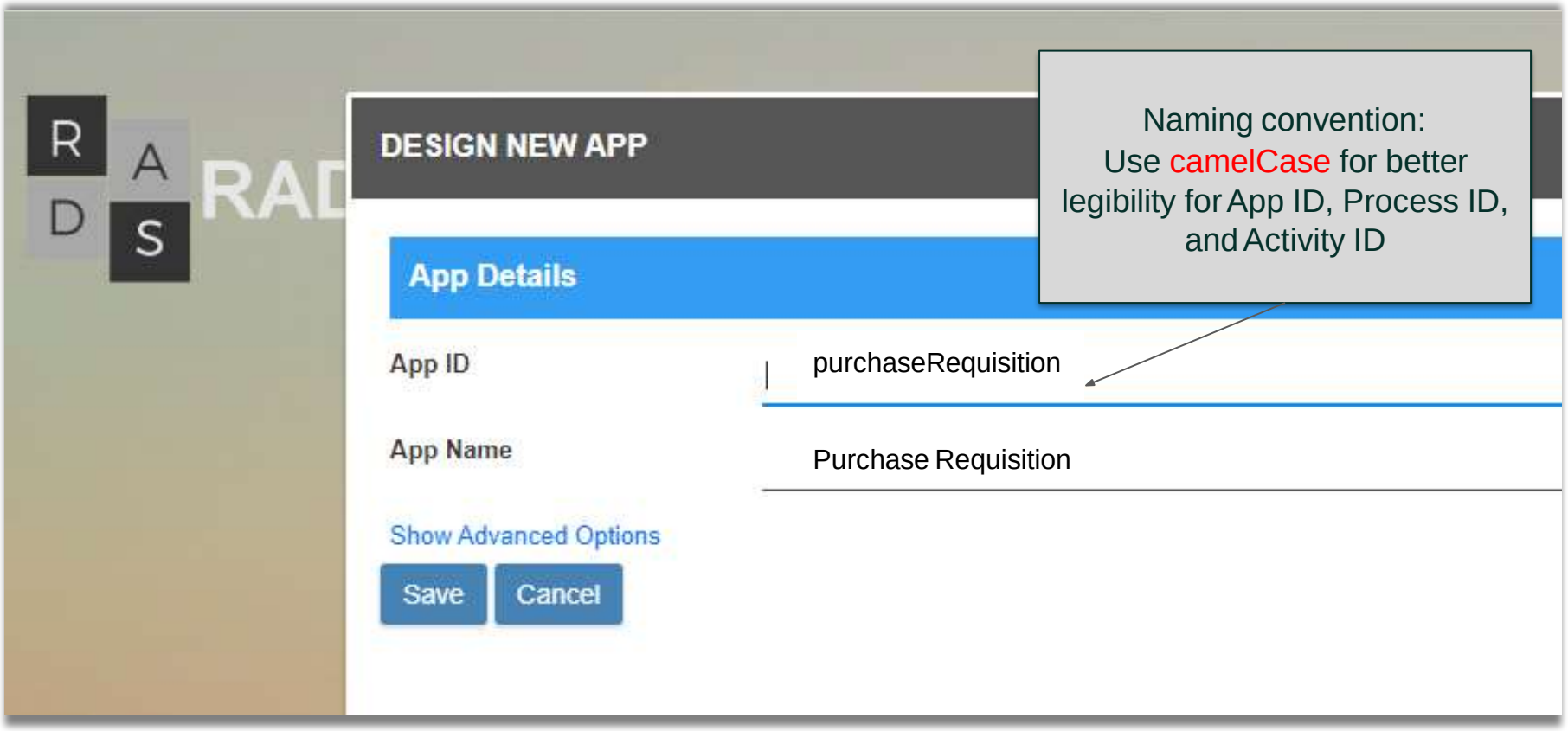
Business Process Design

Process Design

Process

Create Your First App

- Design Apps -> Design New App



Naming Convention

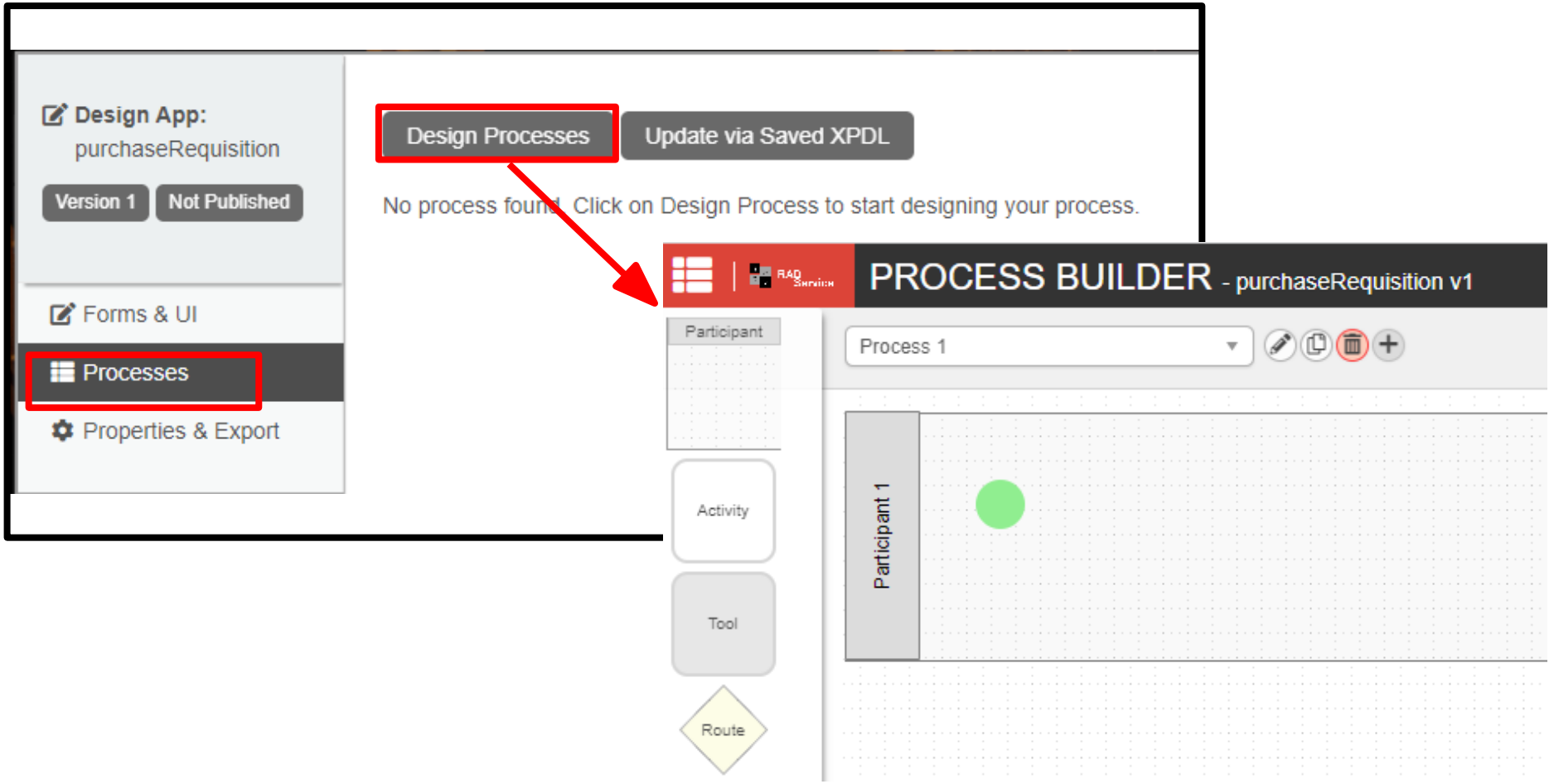
- Use **camel case** for App ID, Process ID, Activity ID.
  For example:-
  - **purchaseRequisition**
  - **purchaseRequestProcess**
  - **submitRequest**
- Do not use **snake case** as it conflicts with process instance ID naming convention:-
  1_purchaseRequisition_purchaseRequestProcess_submitRequest
- Maintain consistent naming convention that you have decided across the board.

Create Your First App

- Purchase Requisition Application
  - Purchase Request Process
    - Applicant **submits**
    - Approver **approves**
    - Applicant is **notified** of the request result

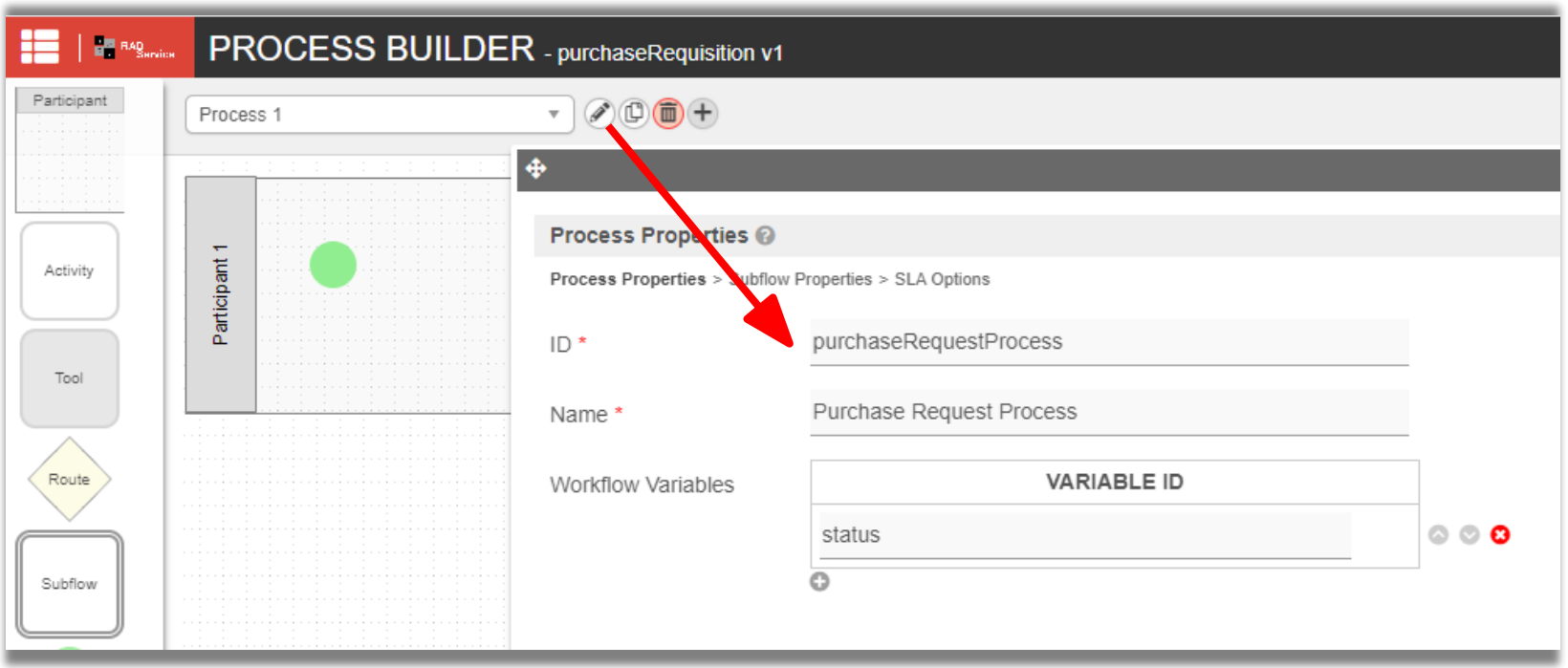
Design Your First Process

- Launch Process Builder – **Processes > Design Processes**



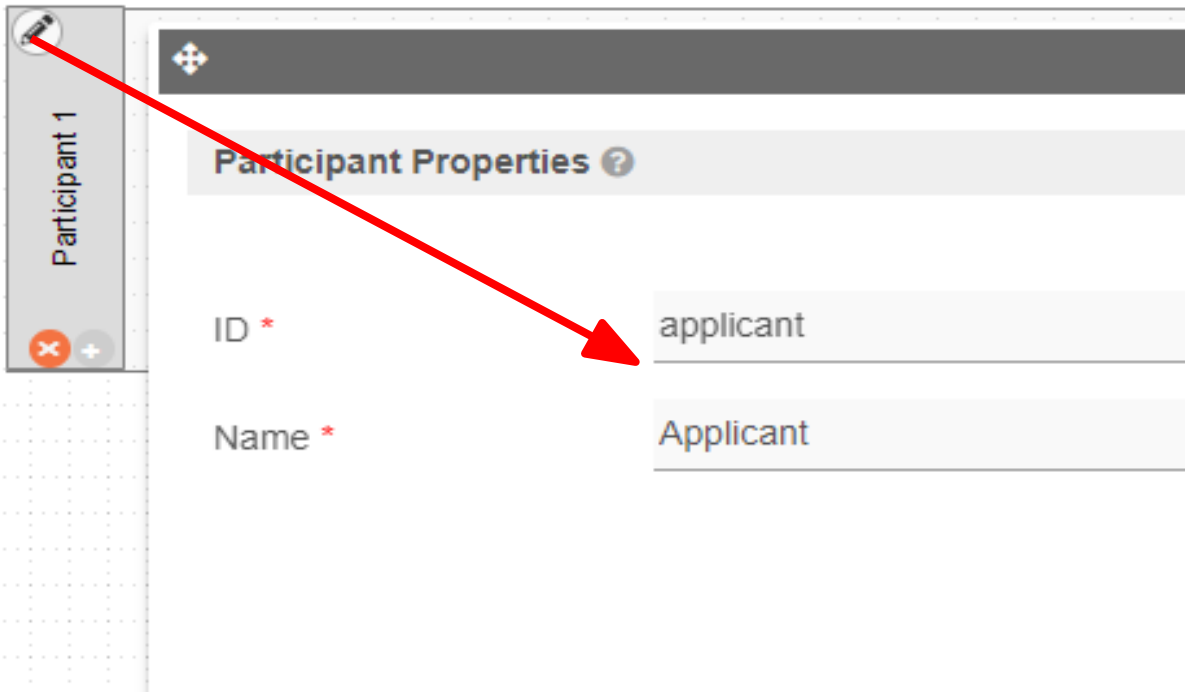
Defining Your Process

- Rename Process ID and Name
  - –Use **camel case** for ID - **purchaseRequestProcess**
  - –Do not use **snake case** as it conflicts with process instance ID naming convention



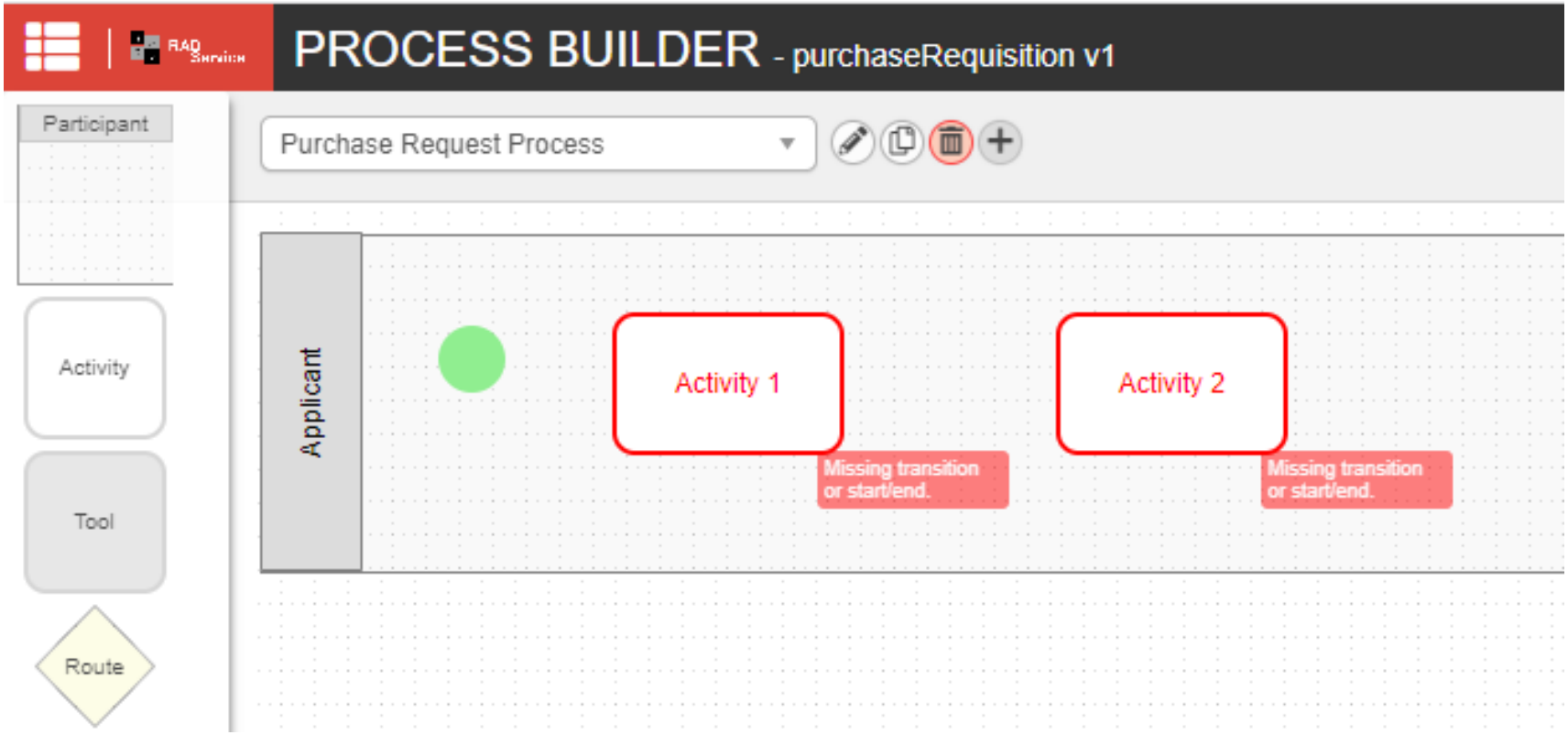
Defining Your Participant

- Rename the existing participant to **Applicant.**



Smart Guide

- The Process Builder will highlights logical errors as you design.

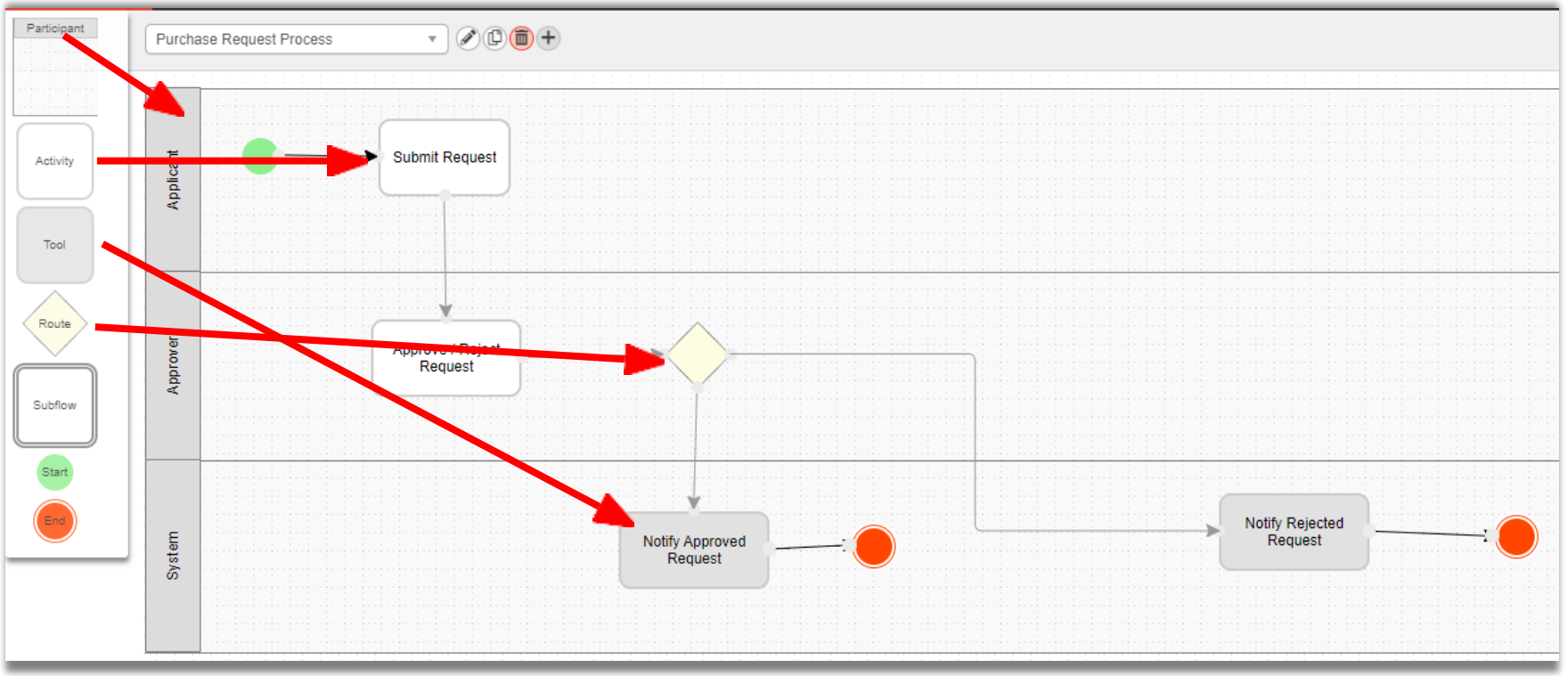


About Smart Guide

- Advises only on possible design errors.
- Will **NOT** advise on flawed business logic, design inefficiency.

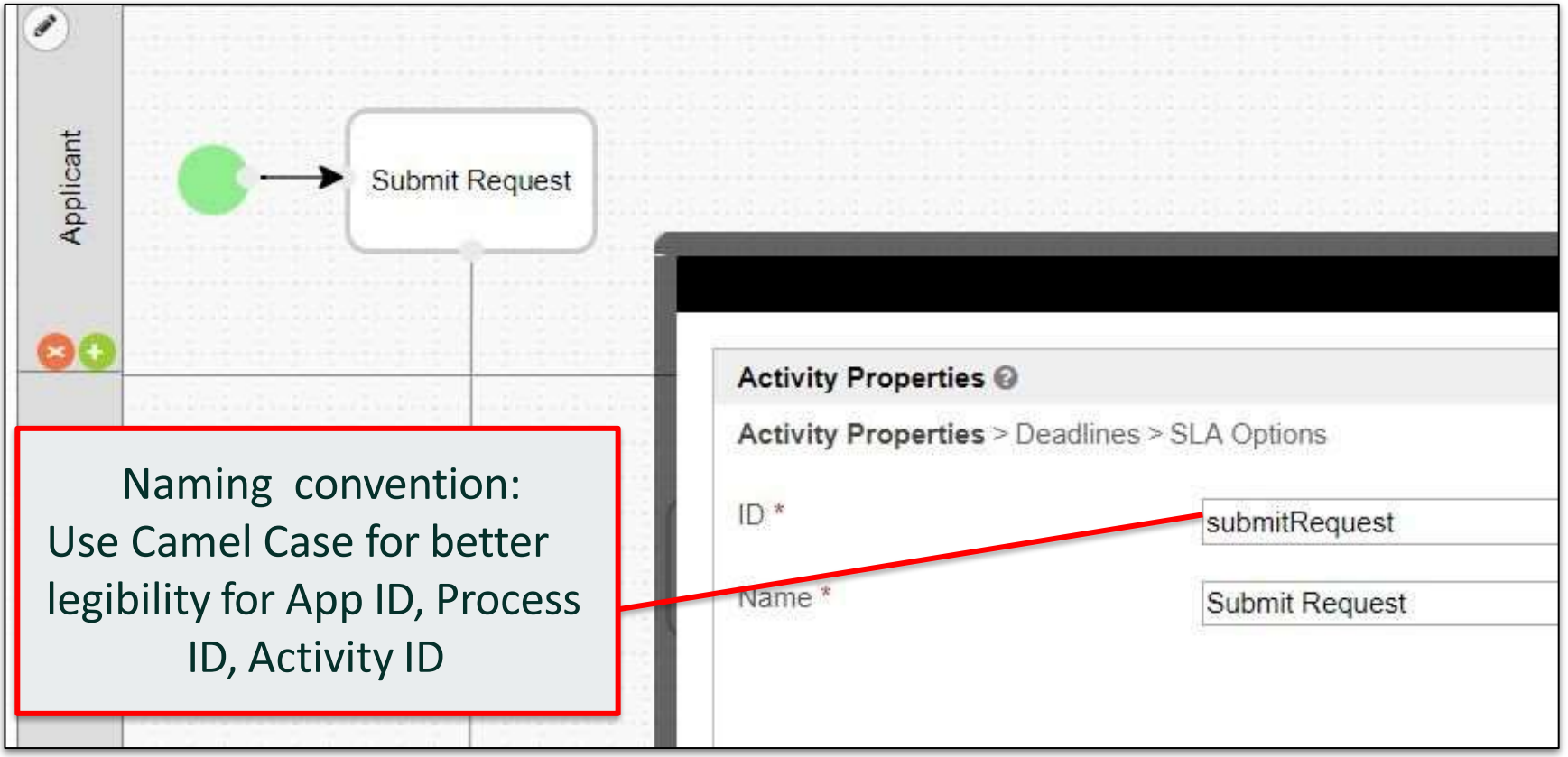
Insert Activities and Transitions

- Drag and drop, select the appropriate nodes to build the Process.



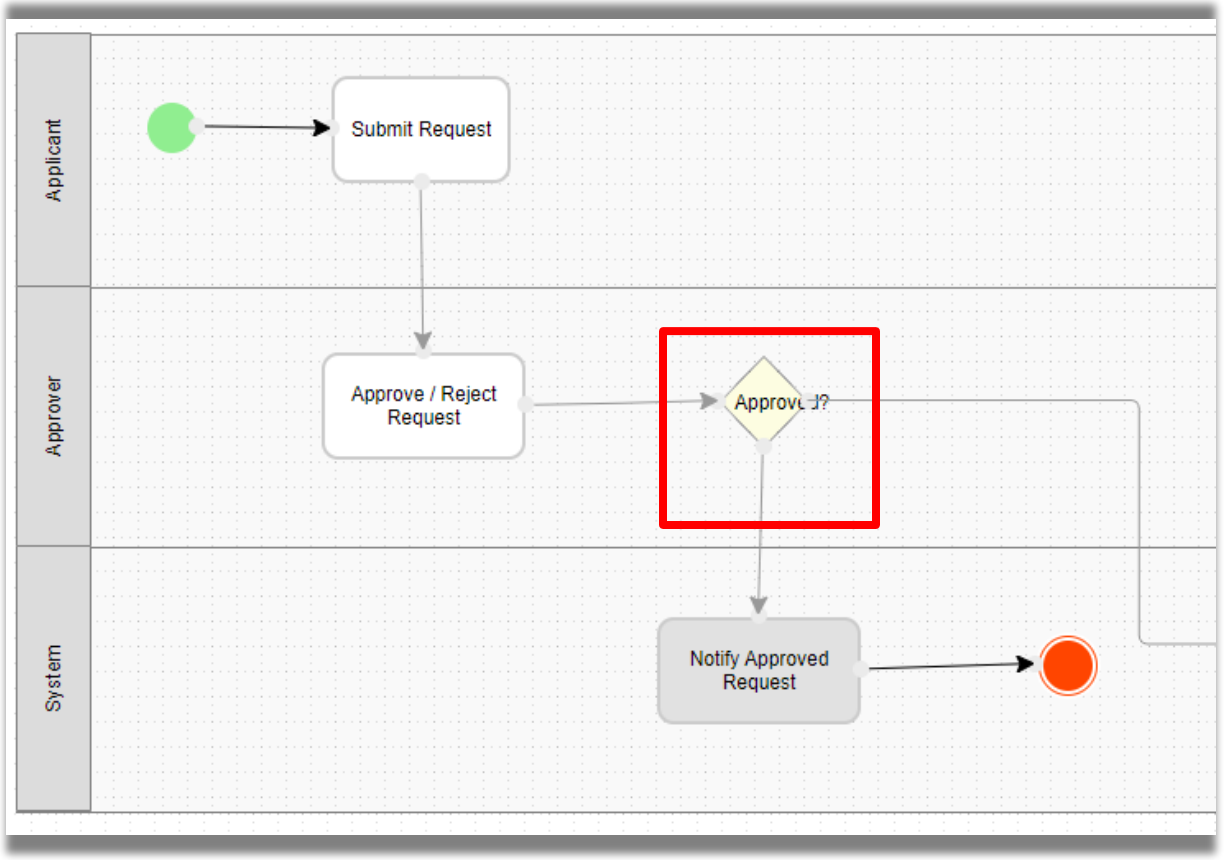
Rename Activity ID and Name

- Rename the activity node to make it meaningful.
- Use **camelCase** naming convention for ID (submitRequest).



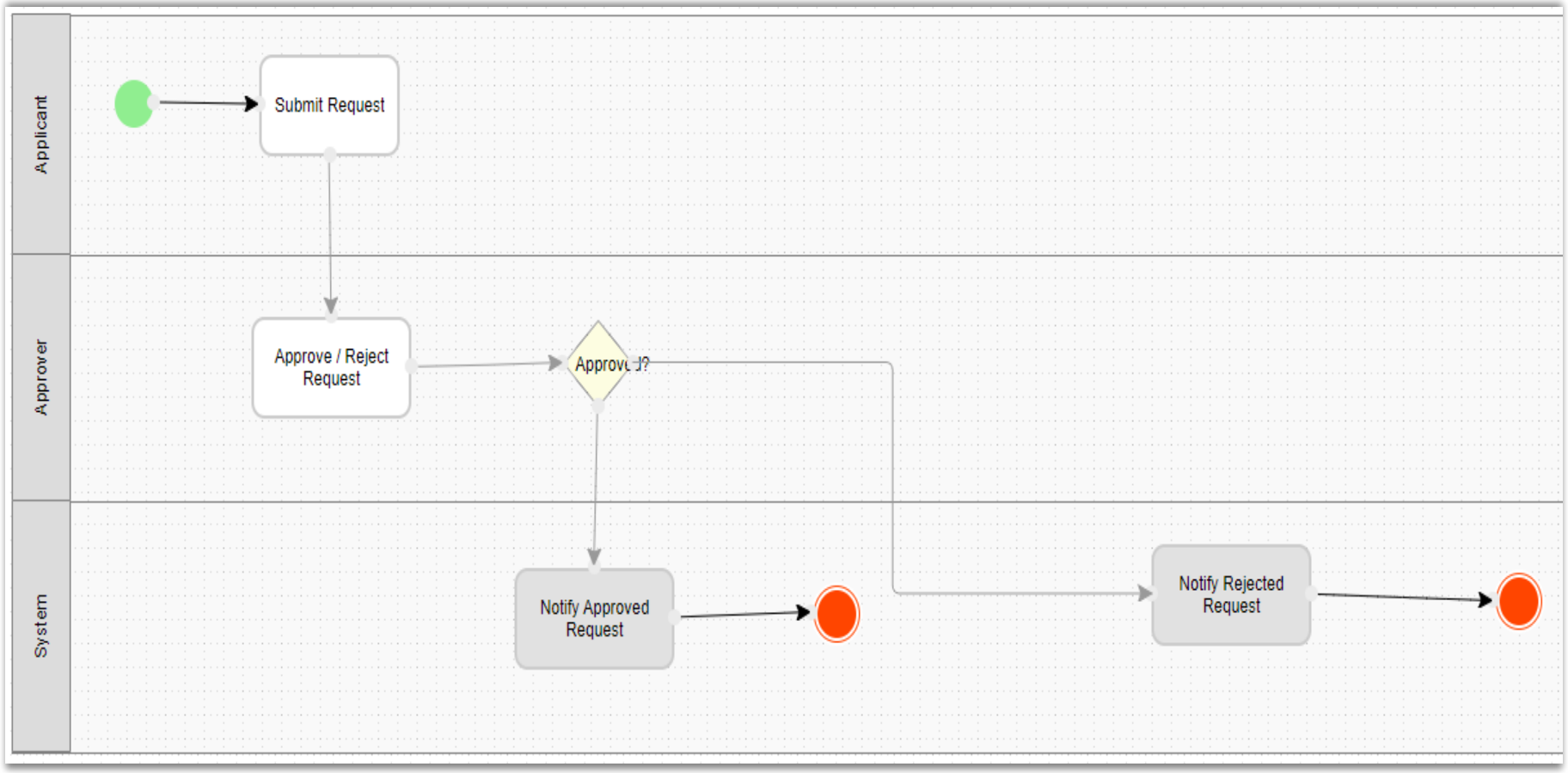
Implementing the Business Rule

- Route: Diamond-shaped node – Used to implement business rules.



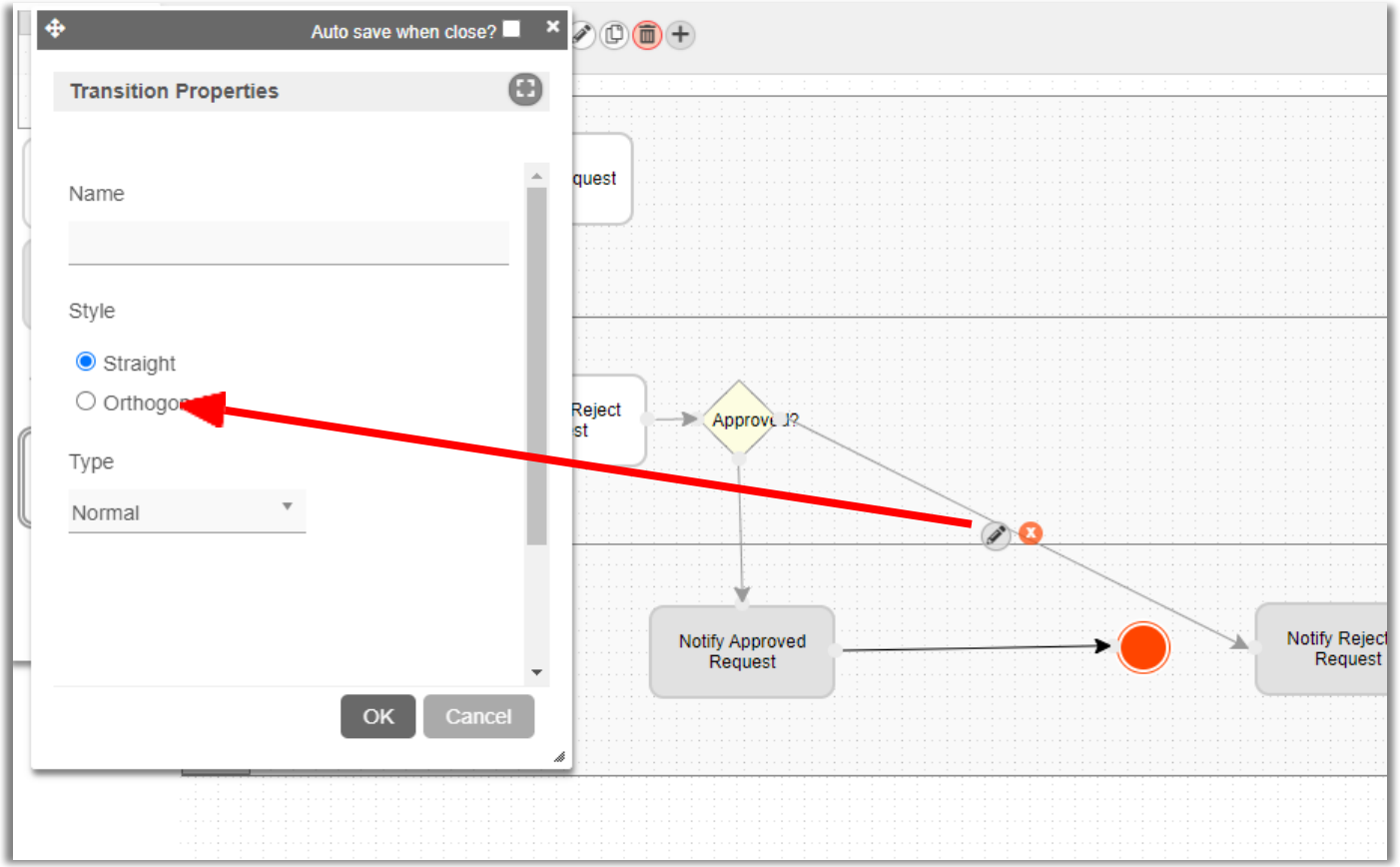
Completing the Design

- Insert the rest of the activities.



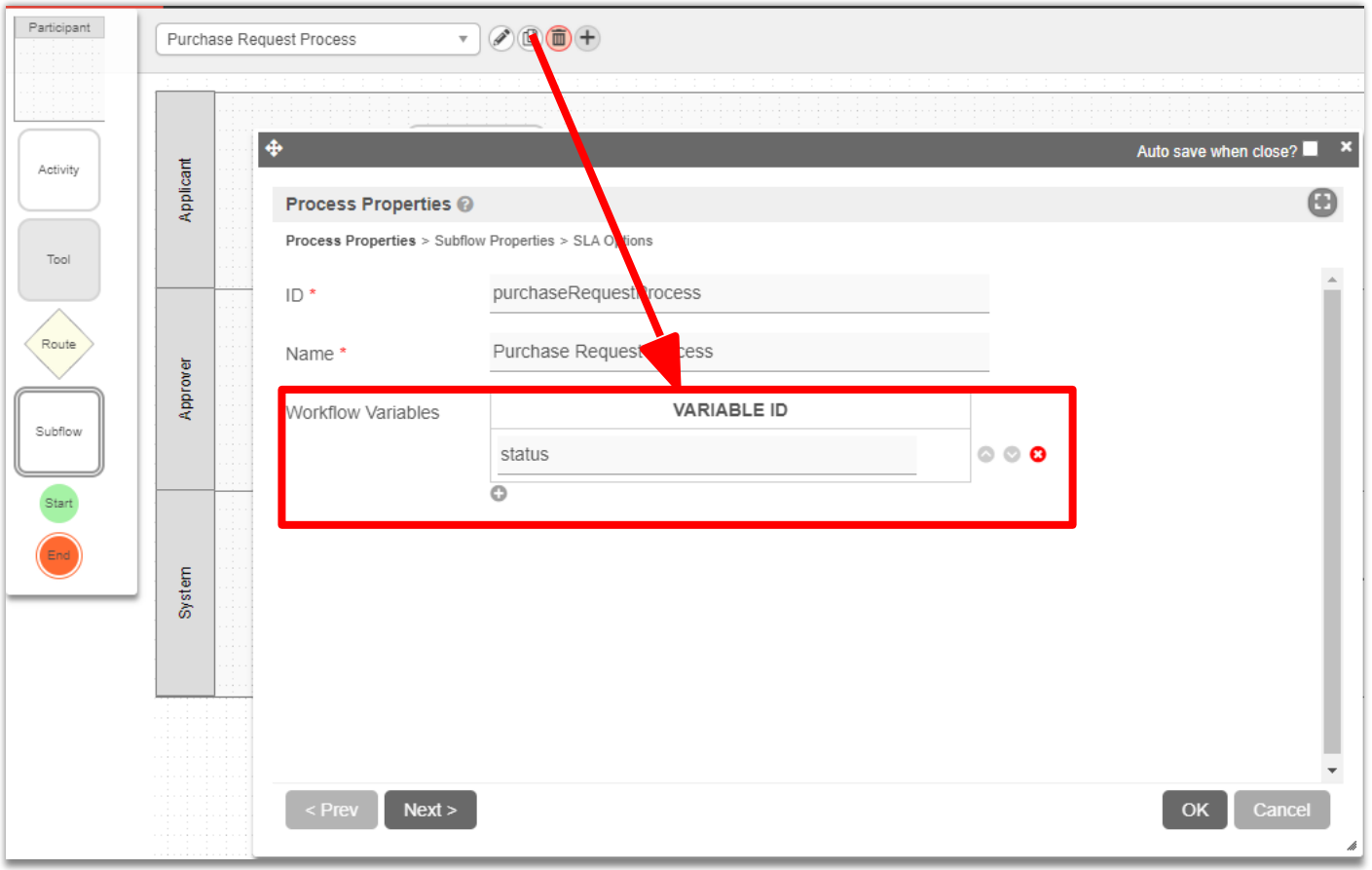
Managing the Transition Style

- Set shape to Straight / Orthogonal to shape your transition.



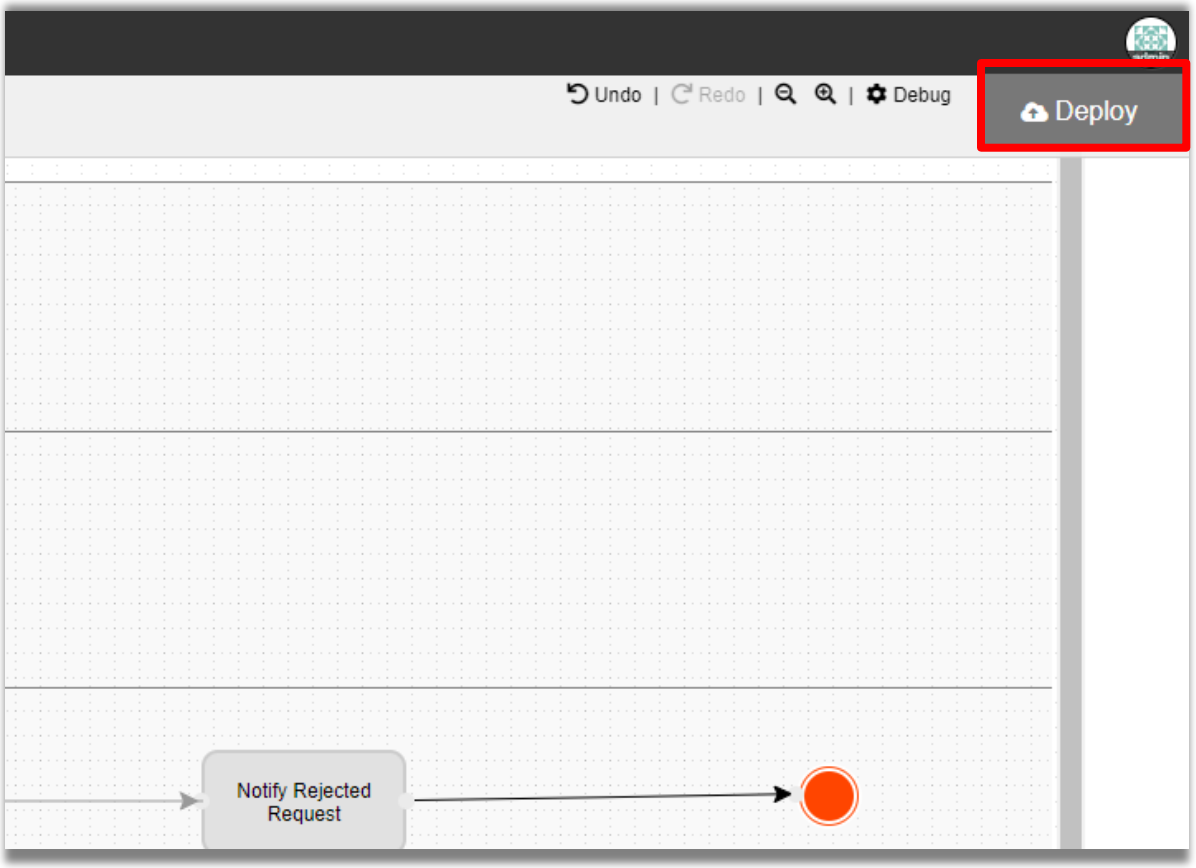
Declaring the Workflow Variable

- Variables used in the Process must be declared in the Process's properties.



Deploying Your Process Design

- On the top right corner of the designer, click on “Deploy” to push your finished design back into your RADS App.

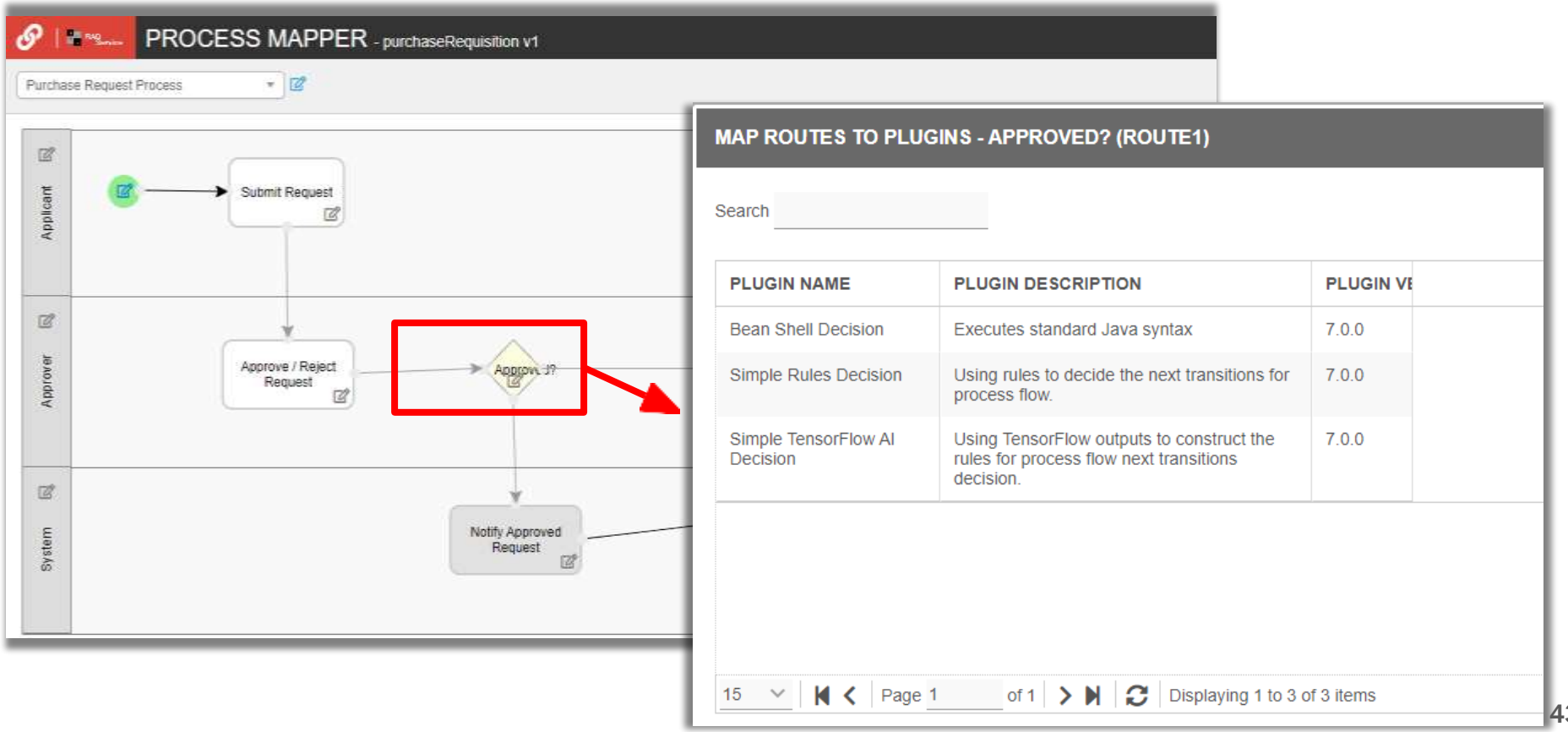


Implementing the Business Rules

- Launch Process Mapper.
  App Design > Processes > Configure Mapping

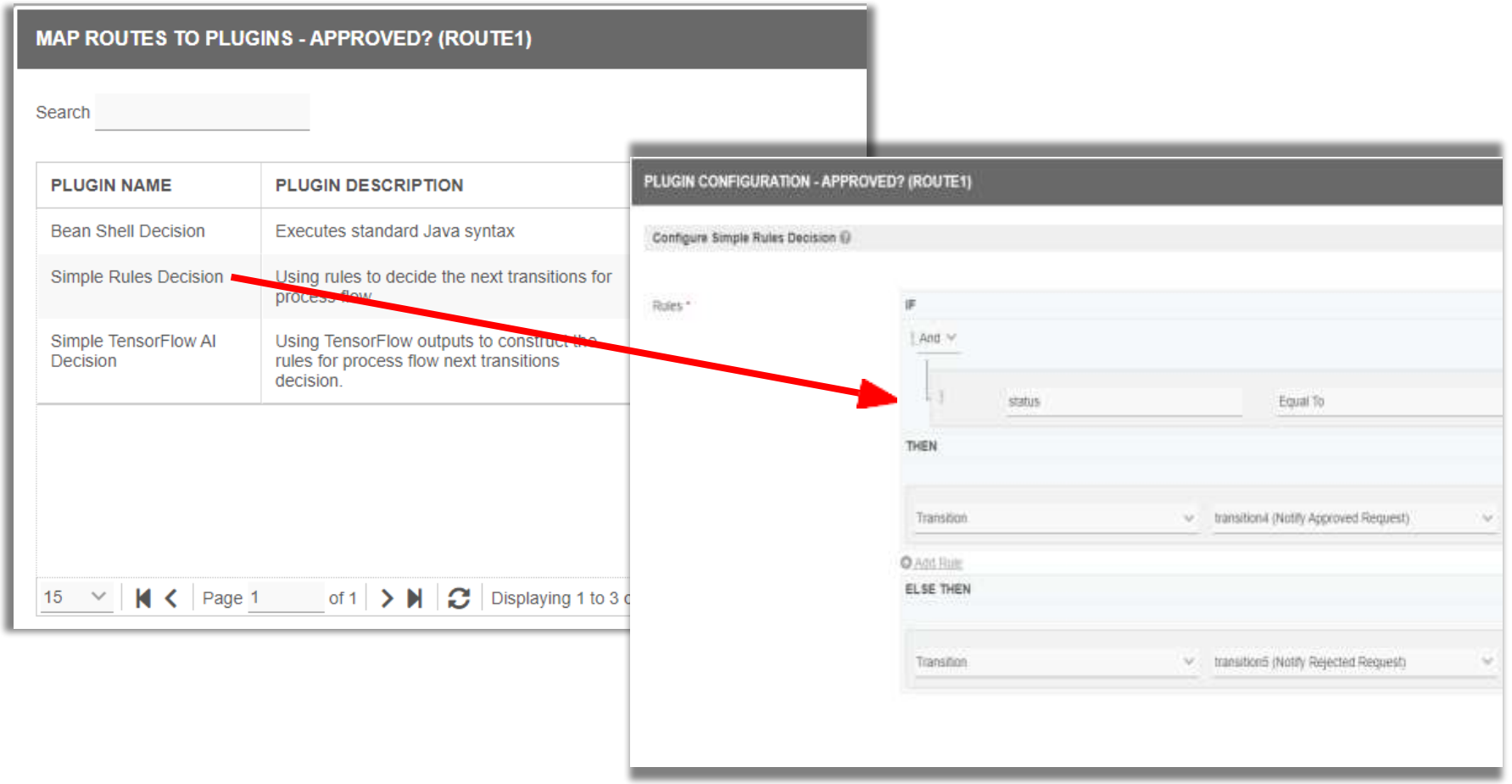
Implementing the Business Rules

- Route: Diamond-shaped node – Used to implement business rules.



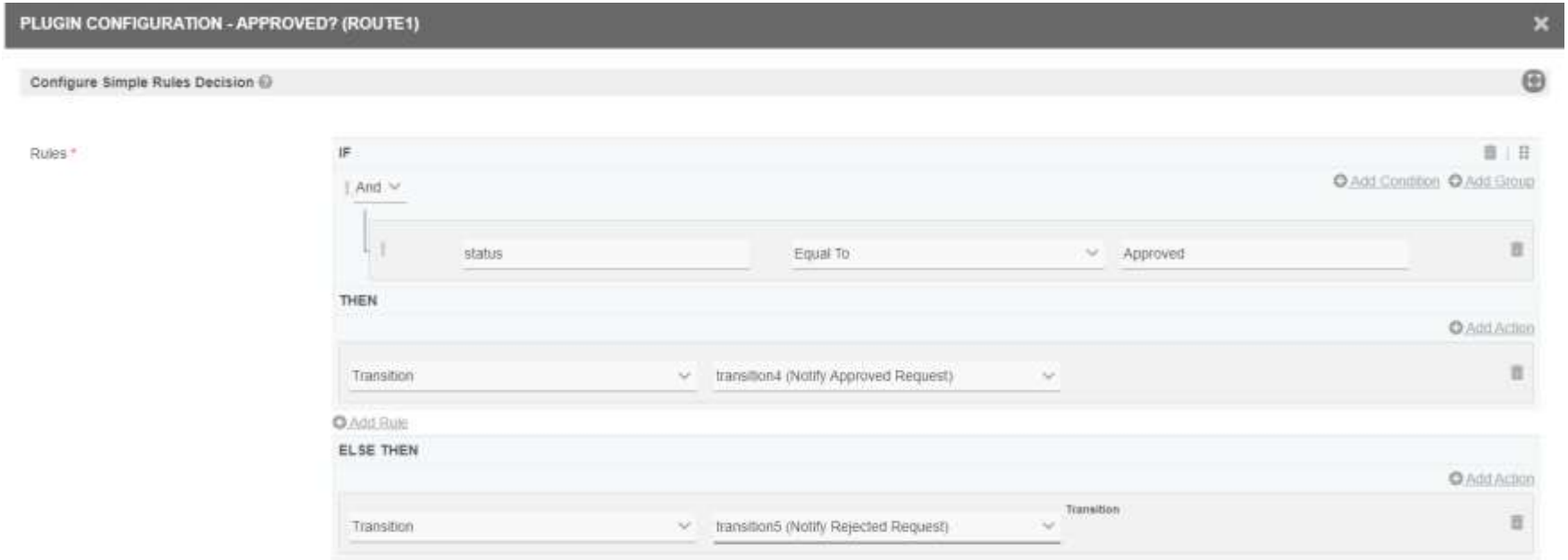
Implementing the Business Rules

- Choose **Simple Rules Decision.**



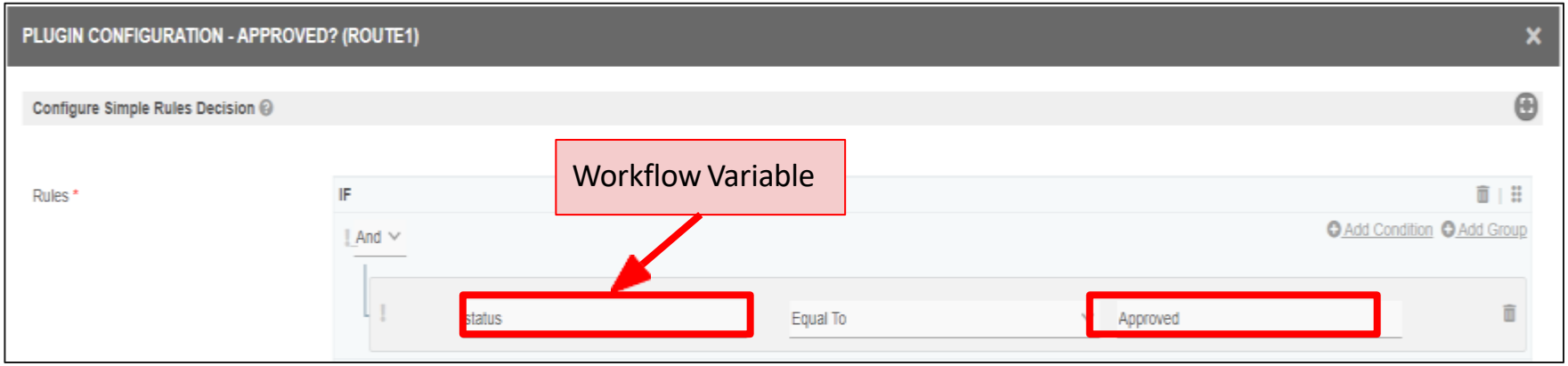
Setting the Rules for Transition Condition

- When the **status** variable is met with certain condition(s), route accordingly.



Simple Rules Decision Plugin

- **Hash variable** is supported in input fields as well for complex use cases.



Note: This means you don't even need workflow variables to control the route!

e.g.: using Form Hash variable to read form field value to route

Simple Rules Decision Plugin

- **Hash variable** is supported in input fields as well for complex use cases.

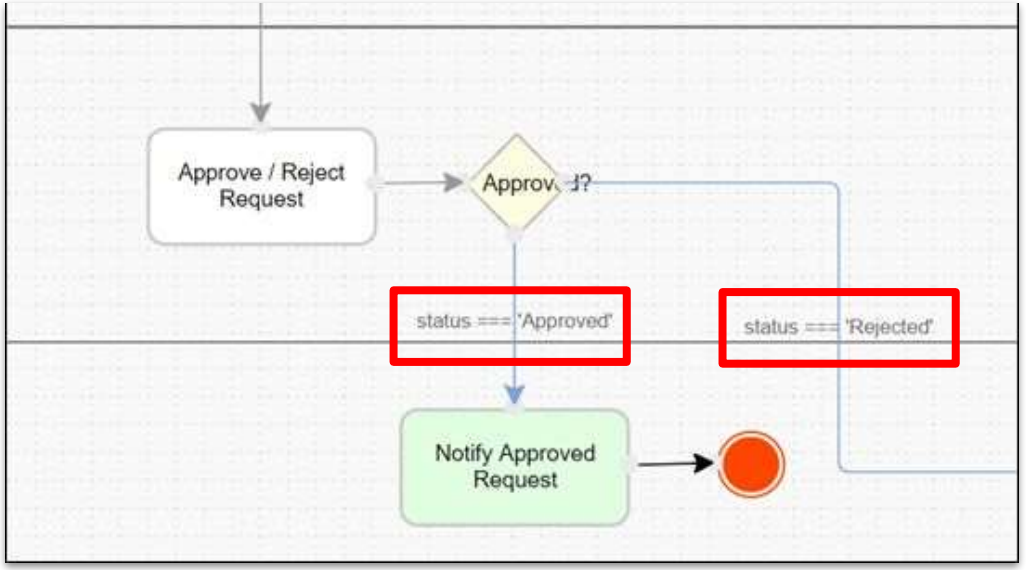
e.g.: using *Form Hash Variable* to read form field value to route **#form.purchase_requests.approval#**

If and otherwise...

- Does this resemble the typical programming if-else condition block?
- Is this the best design?
- Why not if-else-if-else everything? (In other words, explicitly set all possible conditions)

Alternative Business Rule Implementation

- Prior to DX, business rules implementation must be done in the Process Builder.
- This approach is **no longer recommended** as it is difficult to change business logic without redeploying the whole process design of the entire app.

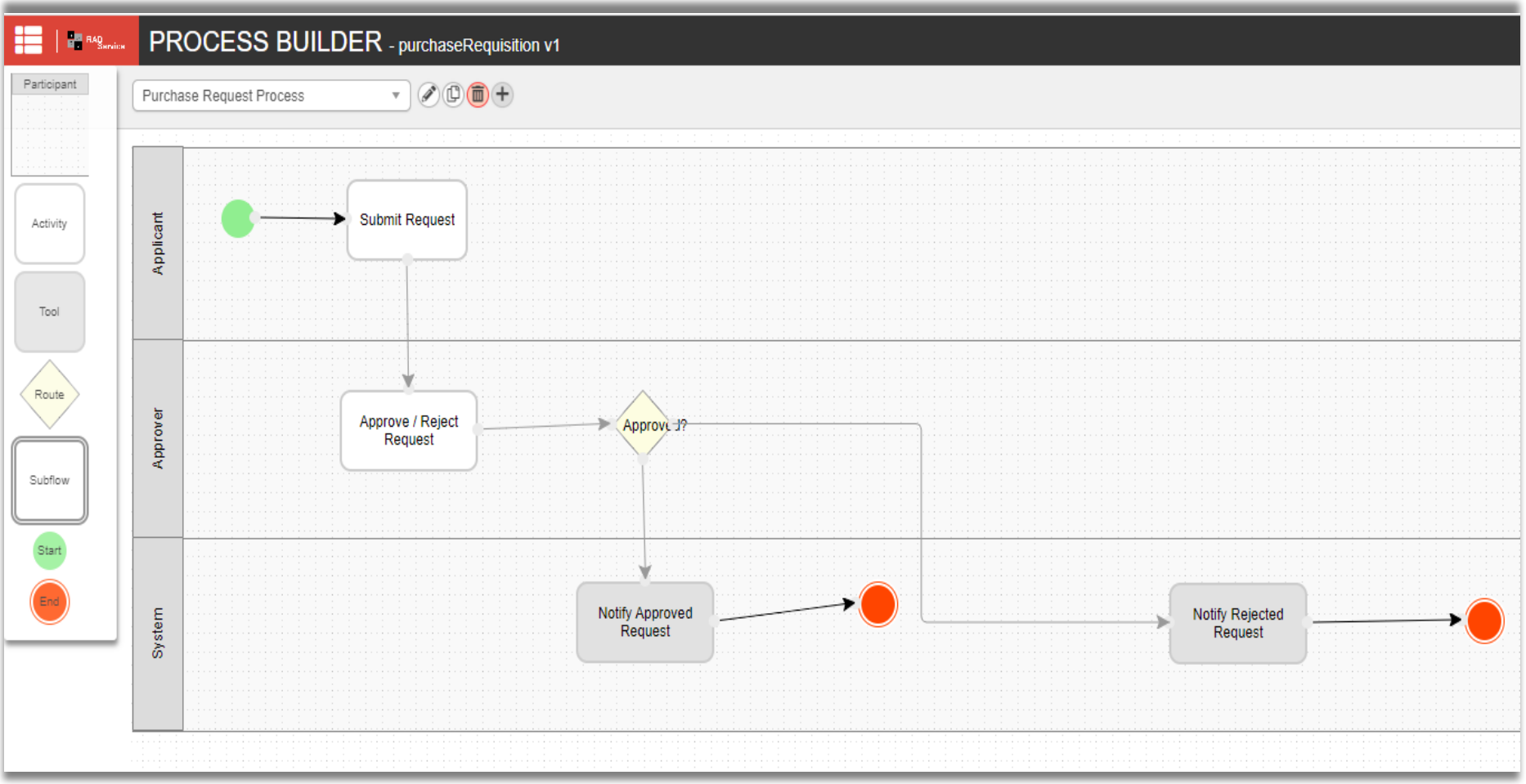


Advantages of using Process Mapper

- No need to constantly deploy the Process Builder when changing the business logic.
- Decision Tool Plugin takes precedence over Process Builder conditional setup.

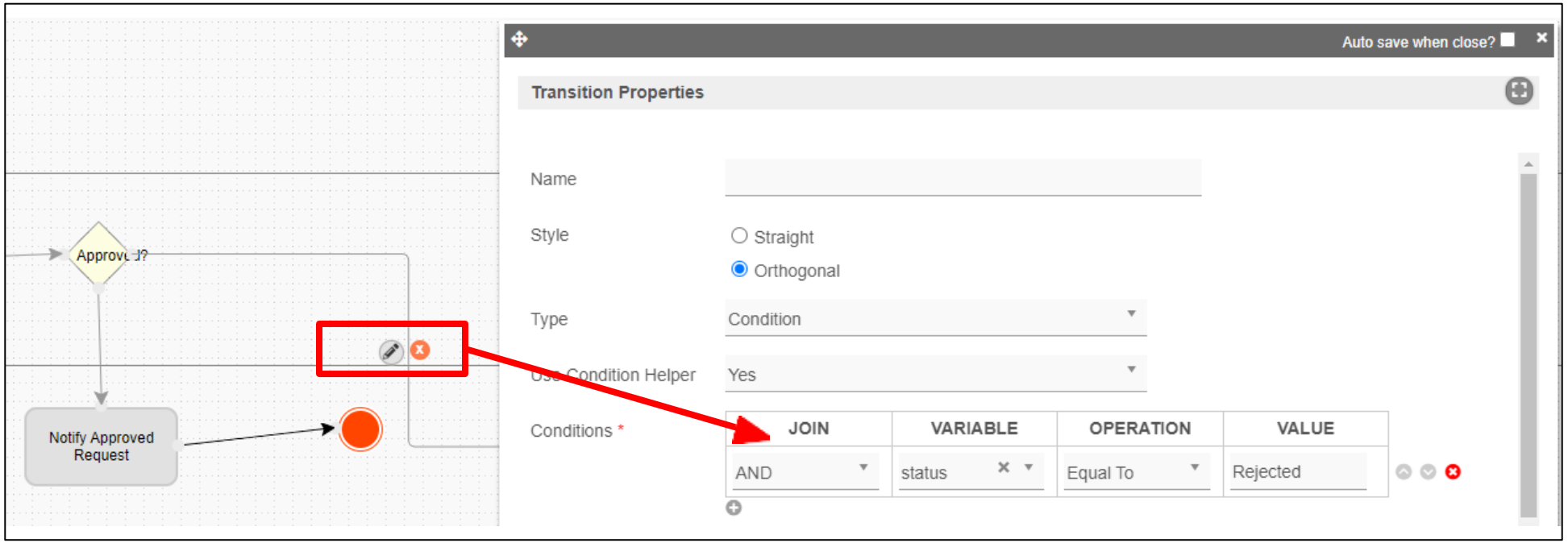
Alternative Business Rule Implementation

- App Design > Processes > Design Process.



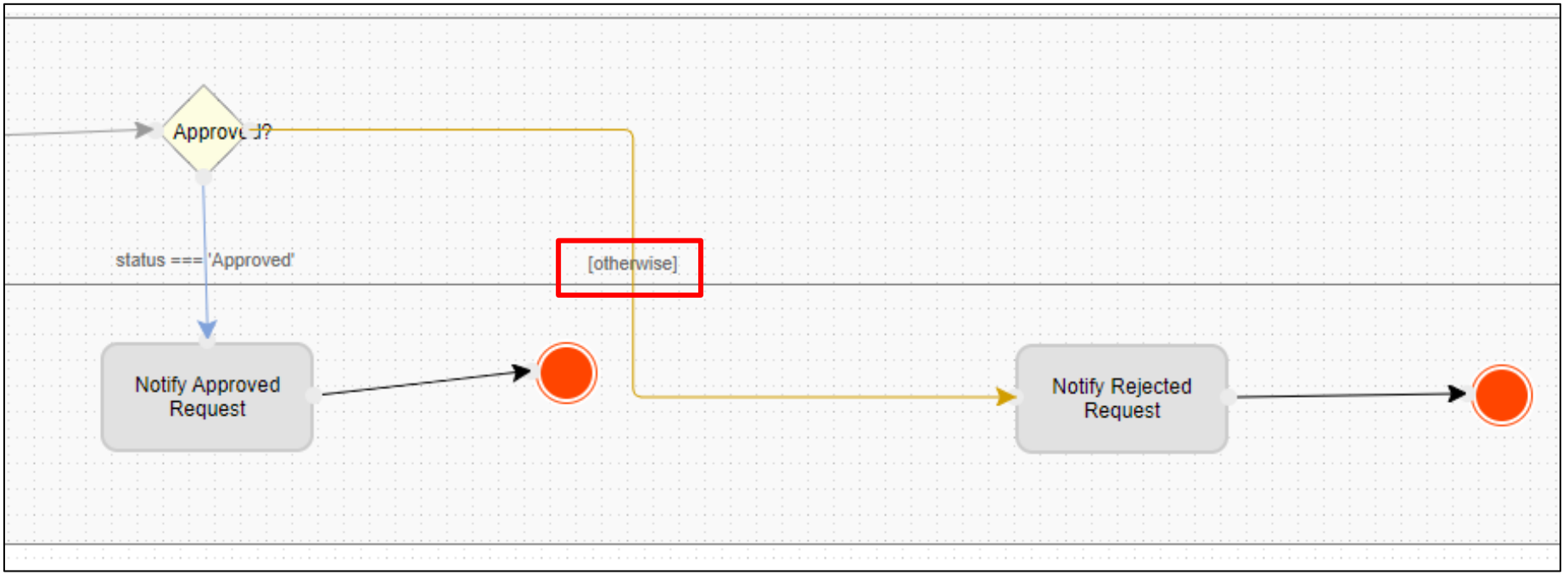
Alternative - Defining the Transition Condition

- When the **status** variable is met with certain condition(s), route accordingly.



Alternative - Anything else...

- Handling the “otherwise”, if any.



Note: In this case, “otherwise” is also correct. All conditions are set explicitly for educational purposes.

Good to Know

- Expressions in “Condition” are evaluated in JavaScript.
- Workflow variable are stored as data type **string**.

Good to Know

- Native Javascript functions are accepted. For example...

```
status == "Approved" && parseInt(balance) > 0
```

- Make sure of debugger tool such as **Firebug / Developer Tools** to test the expression before deploying.

Chapter 2 Review

- Create a new App.
- Design and deploy Process design into the App.
- Understand the naming convention.
- Define various kind of process design elements.
- Define workflow variable.
- Deploying process design to RADS.

Chapter 3

Running your First Automated Process

How to Test?

- There are 2 ways in general.
  - Make use of the “**Run Process**” button in App Design > Processes (only for admin)
  - Make use of **Userview** (for all users)

How to Test?

- There are 2 ways in general.
  - Make use of the “**Run Process**” button in App Design > Processes (only for admin)
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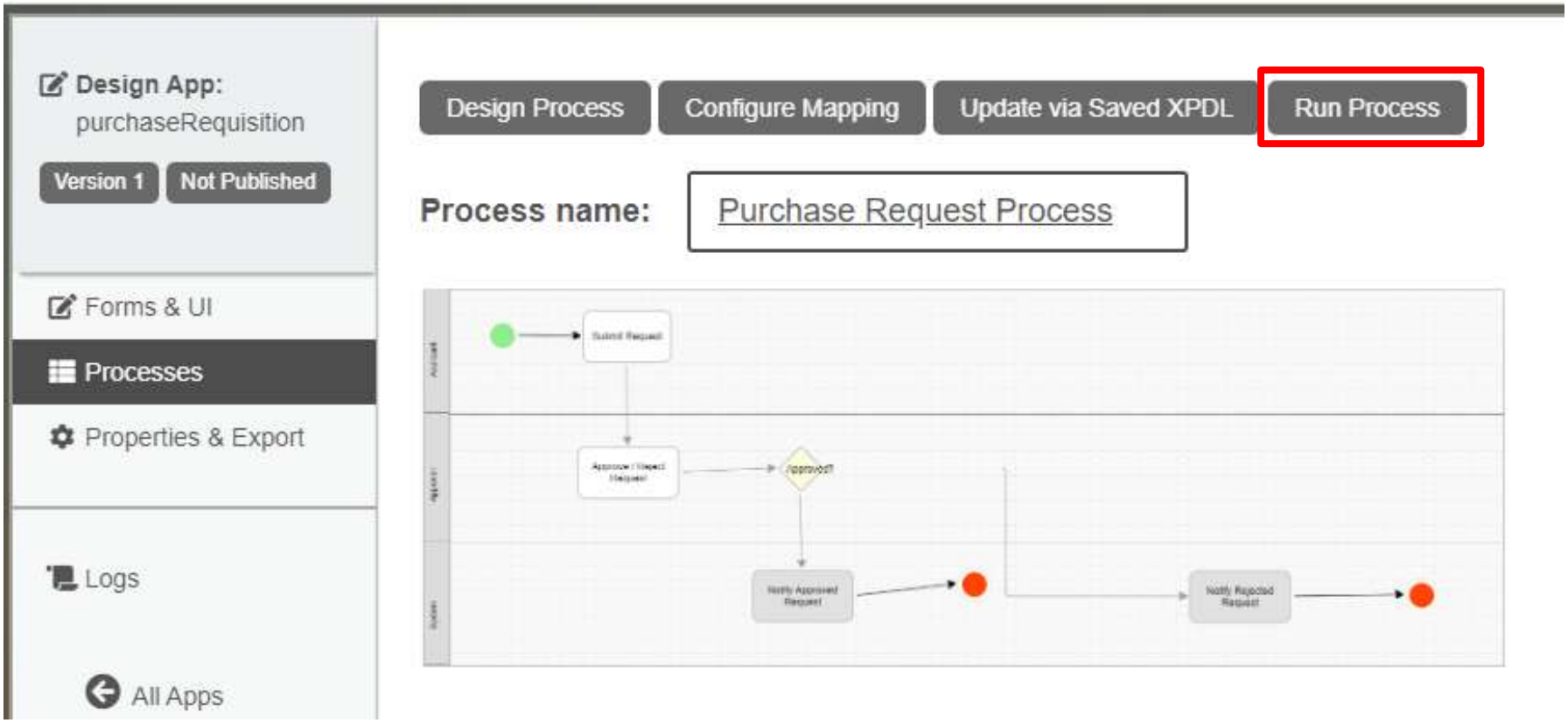
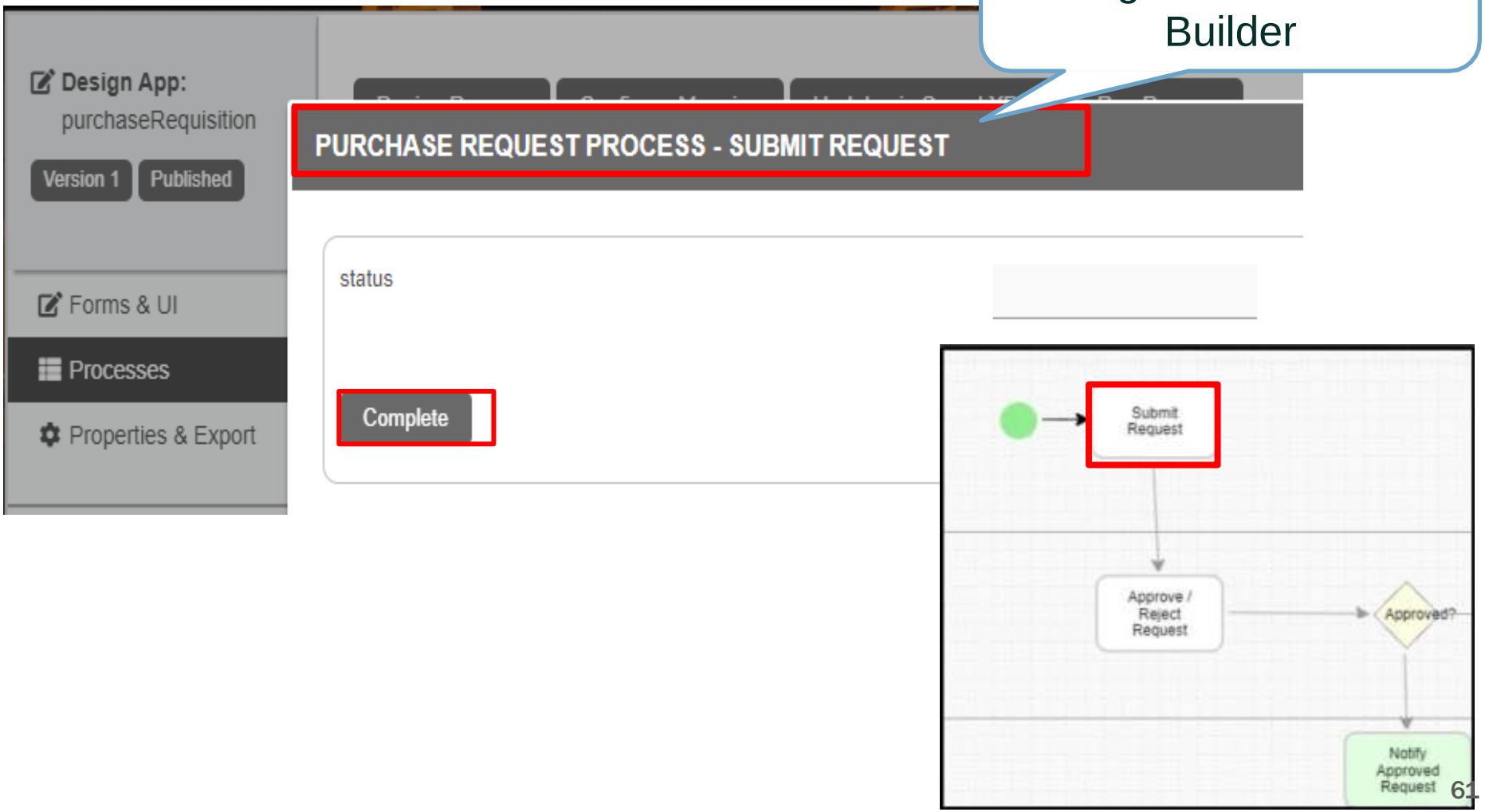
Verify the Process Using Run Process

- Run through the Process to verify.



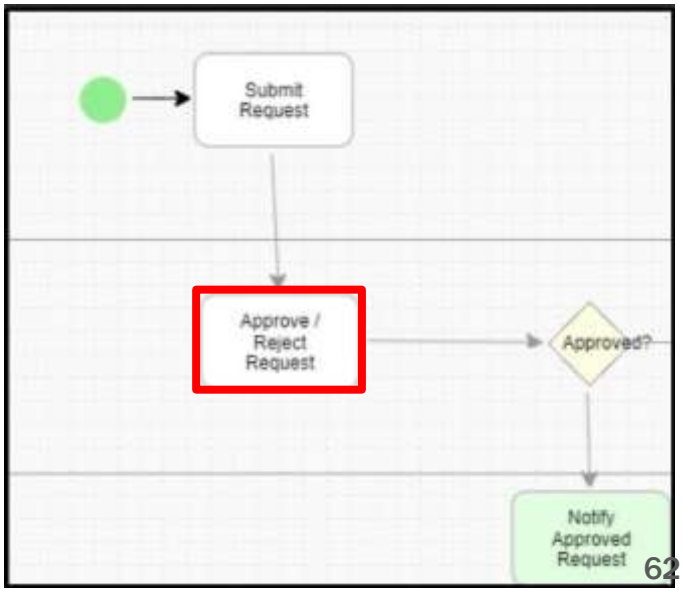
Verify the Process

- Complete the assignment to proceed.



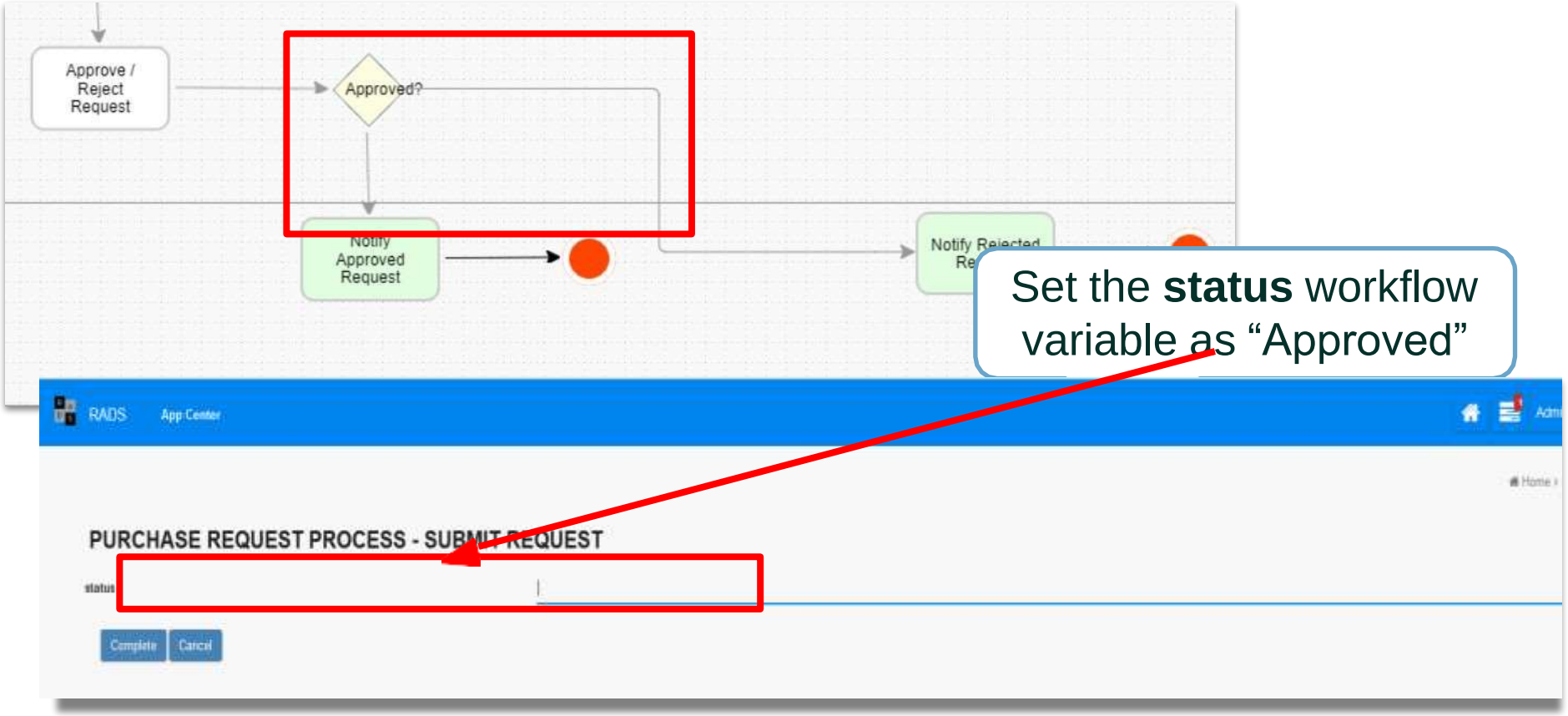
Accessing the Assignments

- App Center -> Universal Inbox



Determining the Flow Using Route

- Manipulate the Process using Workflow Variable and complete the process.



Exercise

- Run through the process from the start again to test out the “Rejected” case scenario.
- The last chapter will inform you how to be *exactly* sure if your process flows properly.

Good to know

- At this point of time, the App is NOT published yet, therefore end user would not be able to run it.
- “Run Process” button at the App Designer’s Processes tab is a convenient way to verify your process flow.

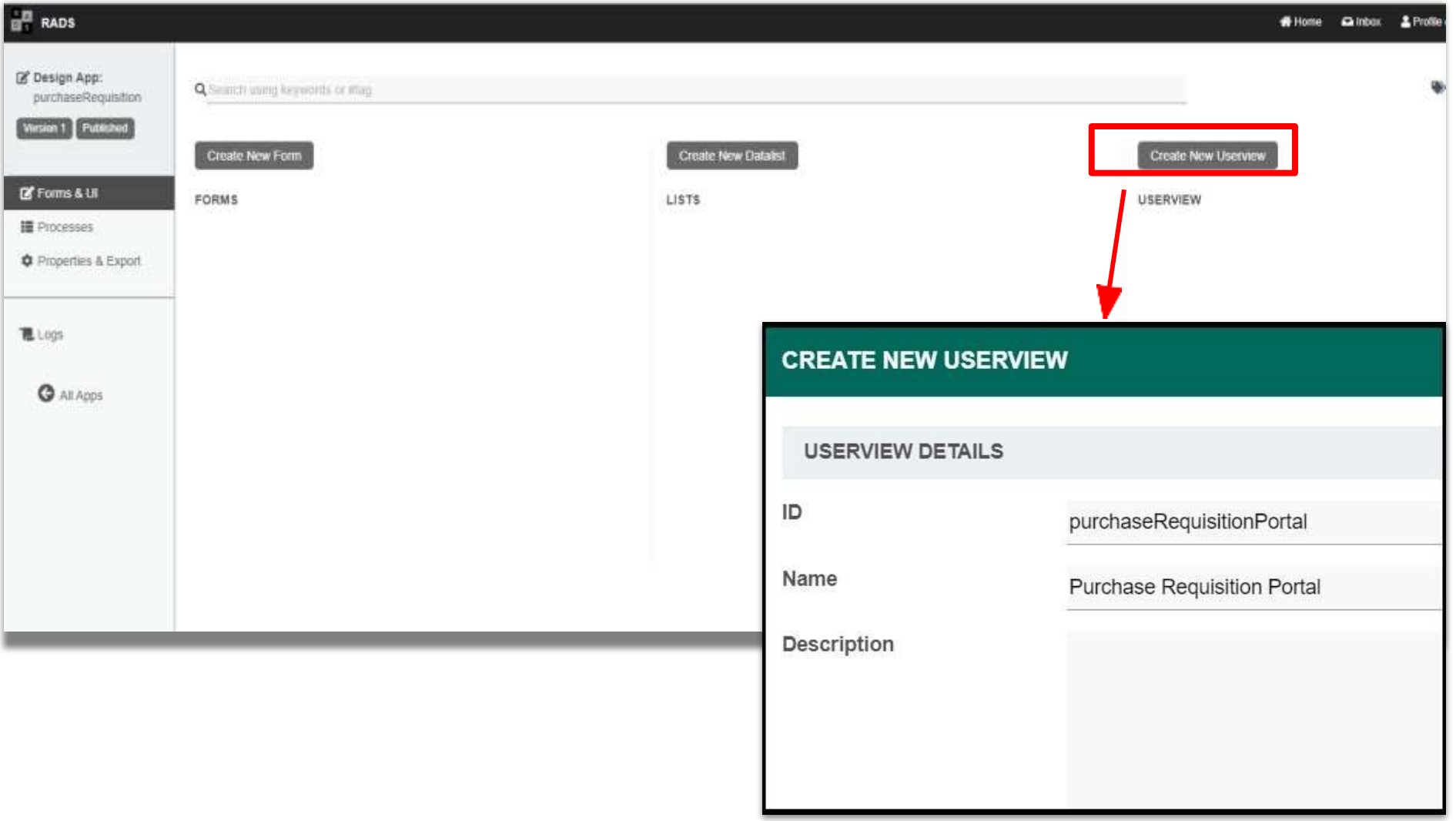
How to Test?

- There are 2 ways in general.
  - Make use of the "**Run Process**" button in App Design > Processes (only for admin)
  - Make use of **Userview** (for all users)

Verify the Process Using Userview

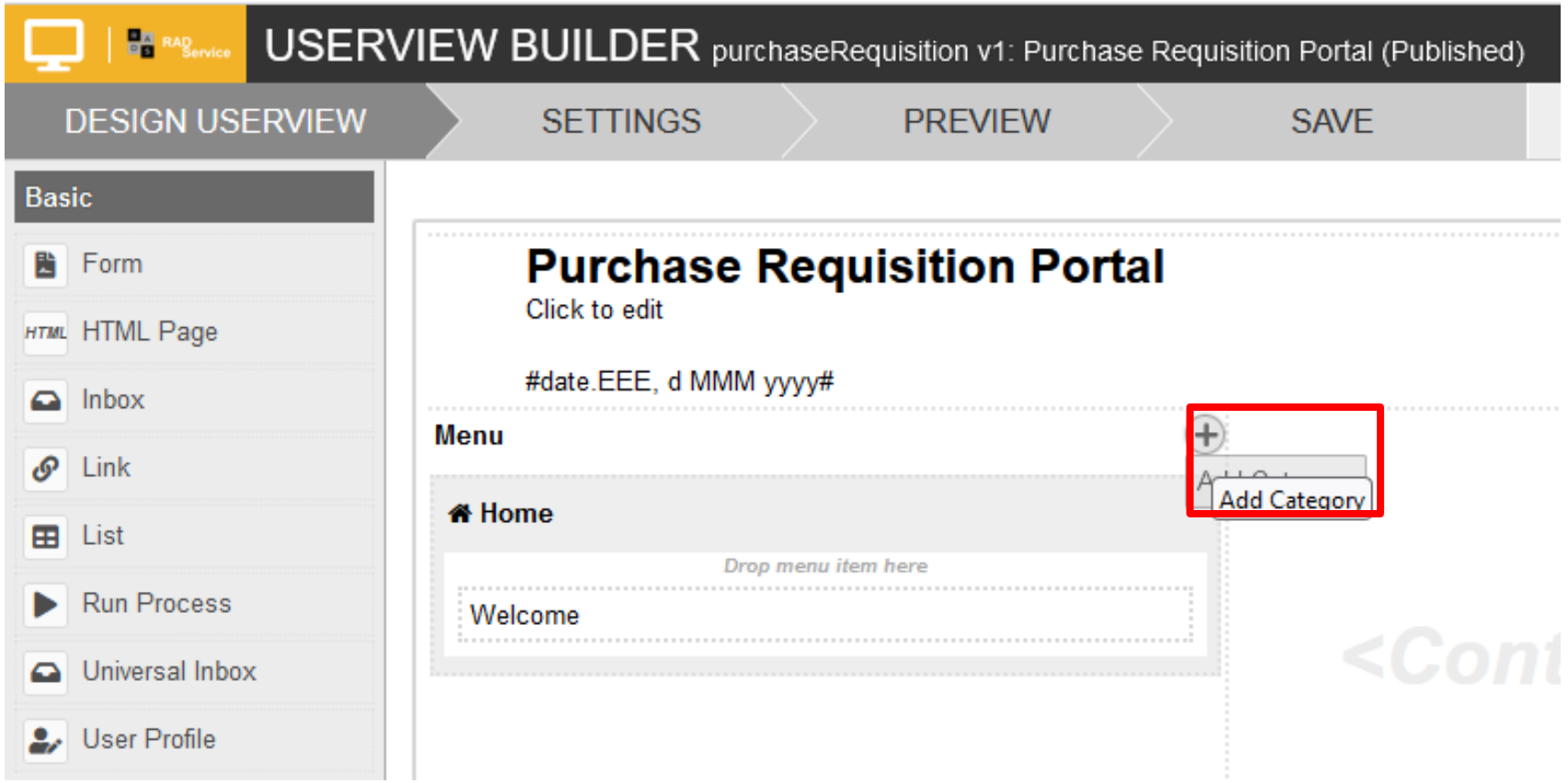
- Create a new userview.
- Add **Run Process** and **Inbox** element.
- **Publish** the App.
- Try running the whole process again by accessing the userview from the app center.

Create New Userview



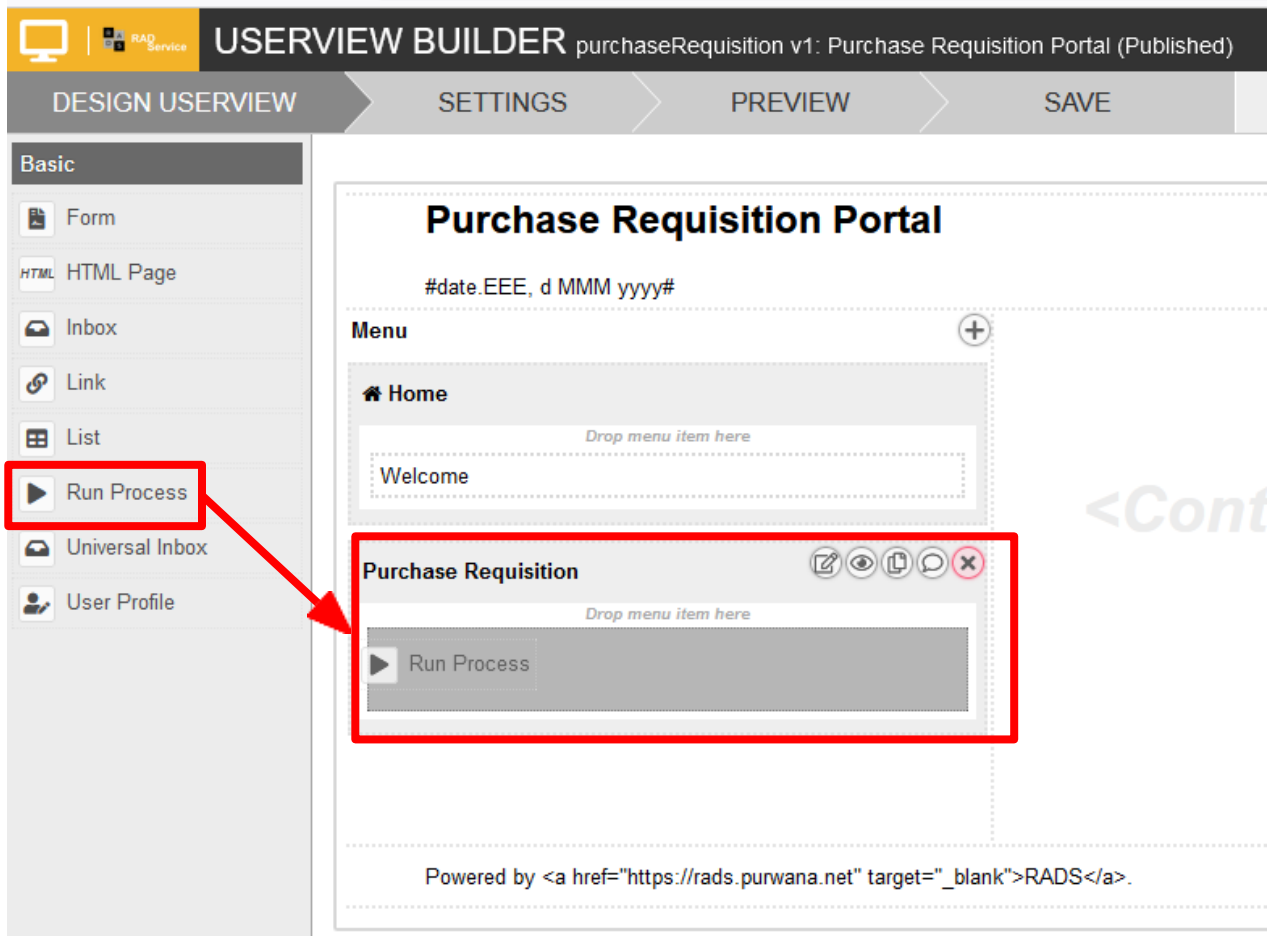
Userview Category

- Items are organized by Category.
- Add 1 new category – Purchase Requisition.



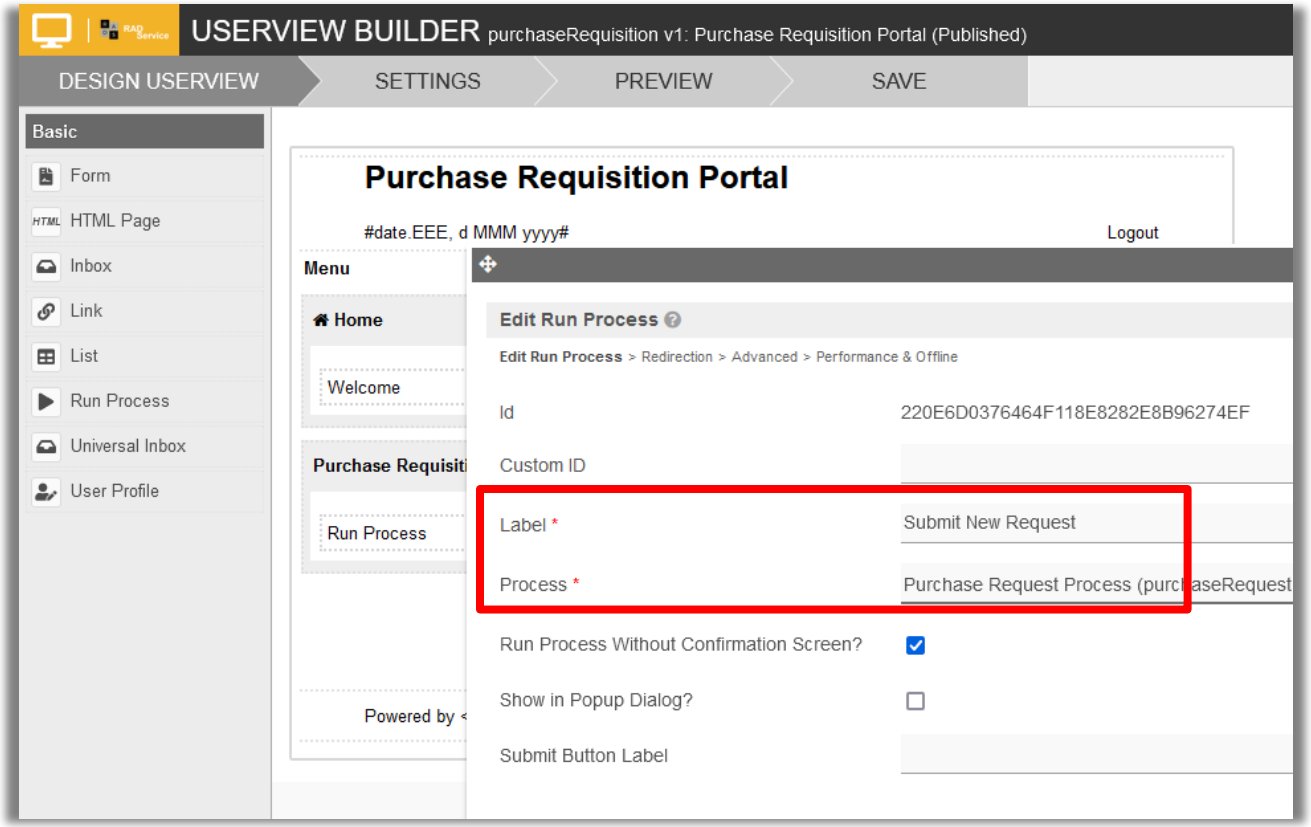
Add Run Process Into Userview

- Drag-n-drop **Run Process** into **Purchase Requisition** category.



Integrate Run Process Into Userview

- Set the appropriate label.
- Select Purchase Request Process in Process.



Add Inbox Into Userview

- Add **Inbox** into **Purchase Requisition** category.
- Configure it to show **All Assignments**.

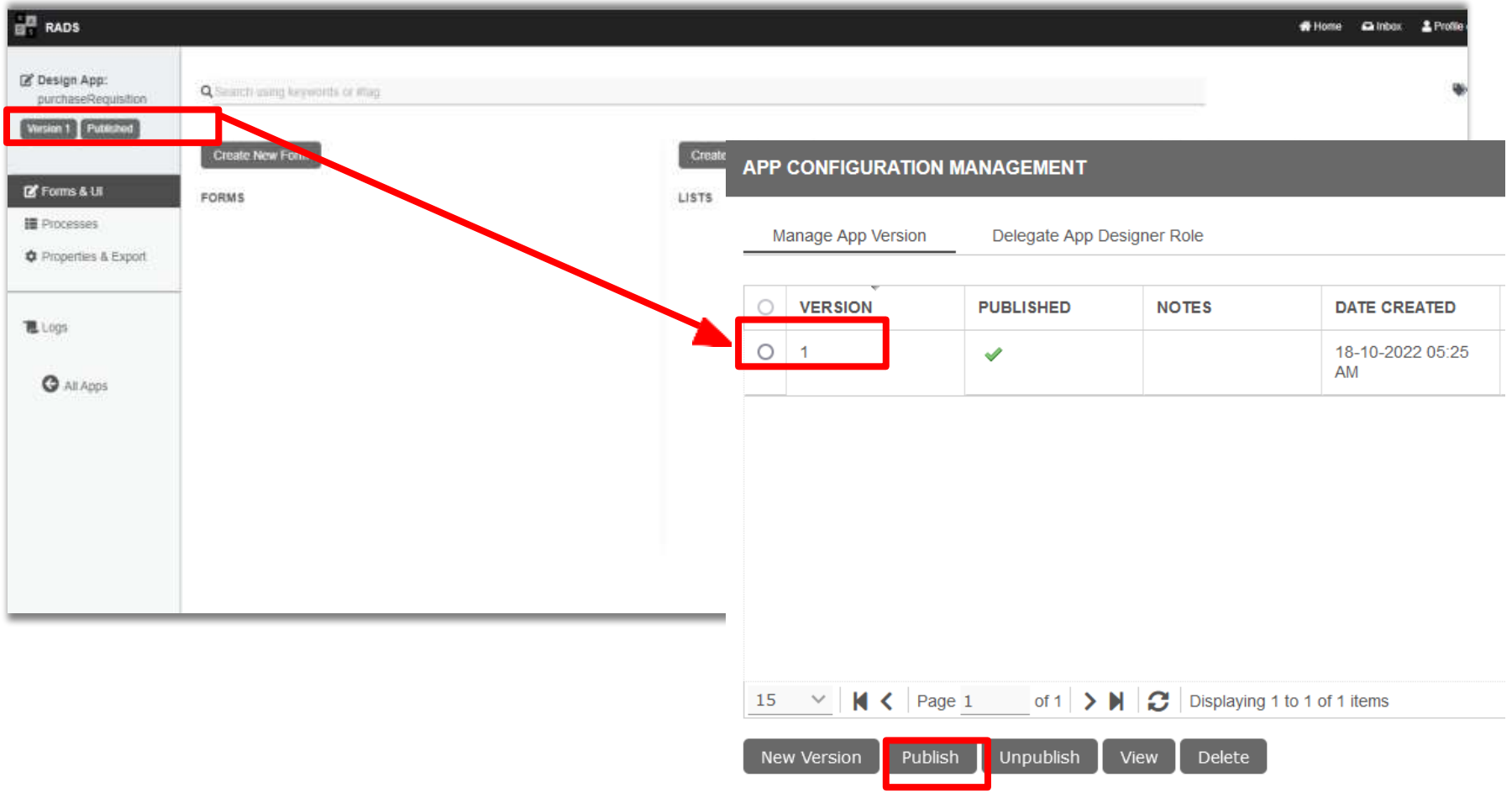
Publish the App

- With the Userview created, it is now ready for prime time.
- End users can now access them through this interface when the App is made published.

Note: Only **ONE** App version can be made published at any point of time.

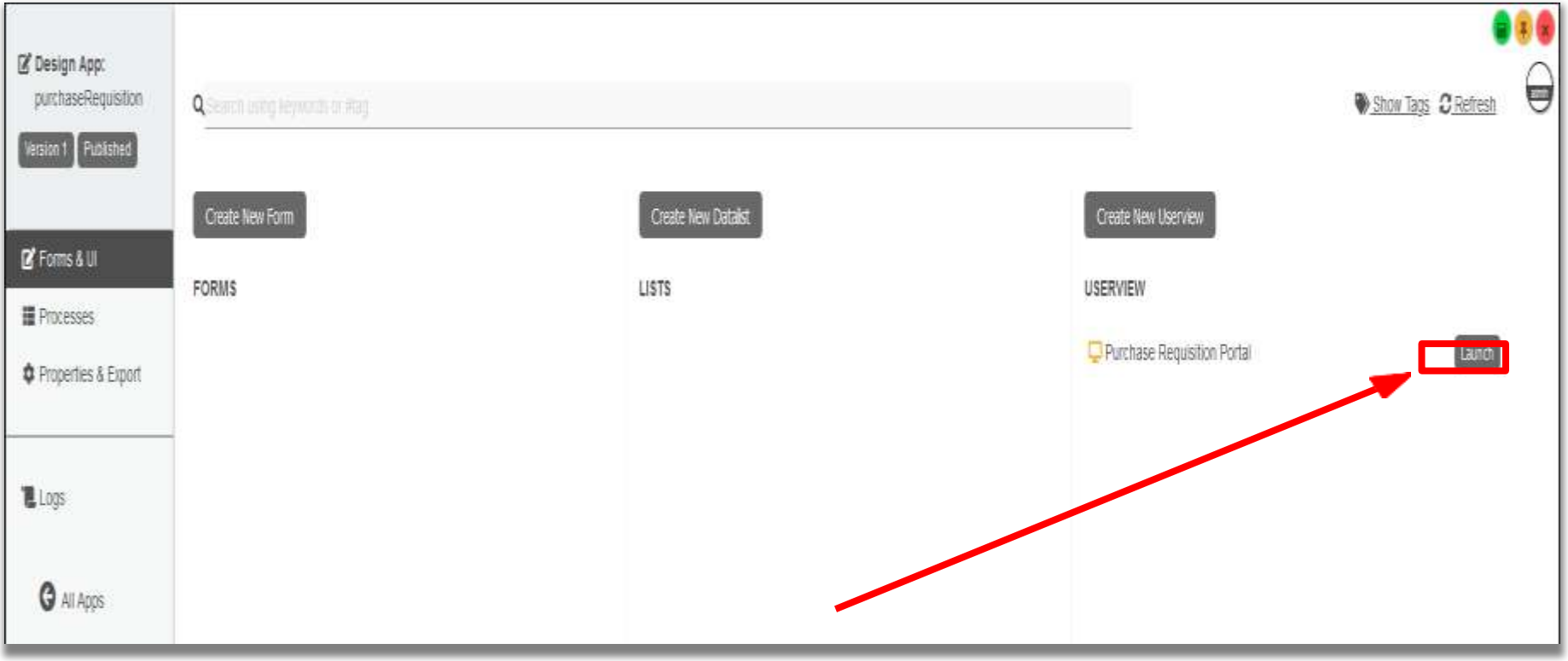
Publish the App

- Click on **Version/Publish** button, select the version to publish.



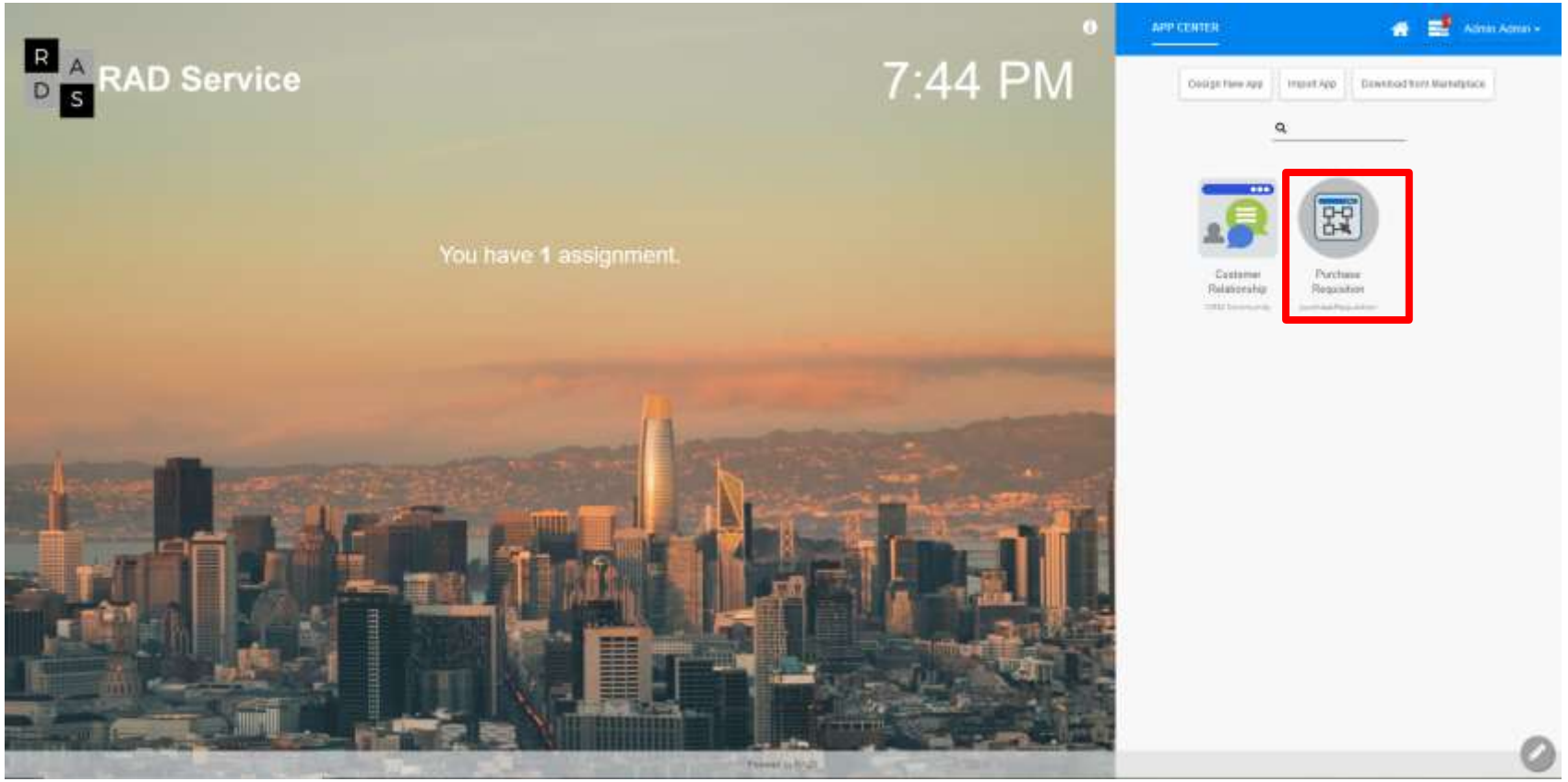
Launching the Published App

- Click on **Launch** under Userview pane.



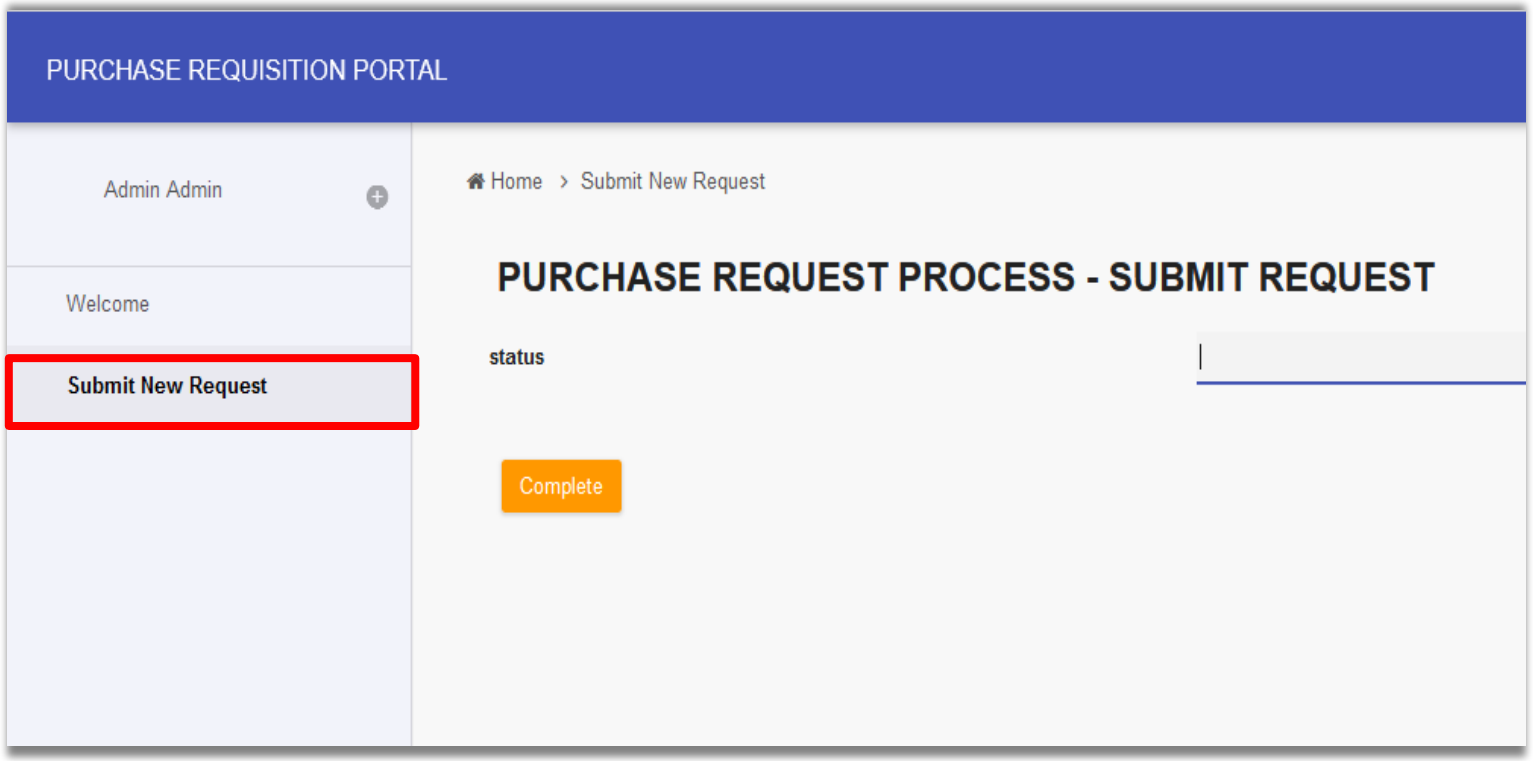
Launching the Published App

- One can also access it through the **App Center** itself.



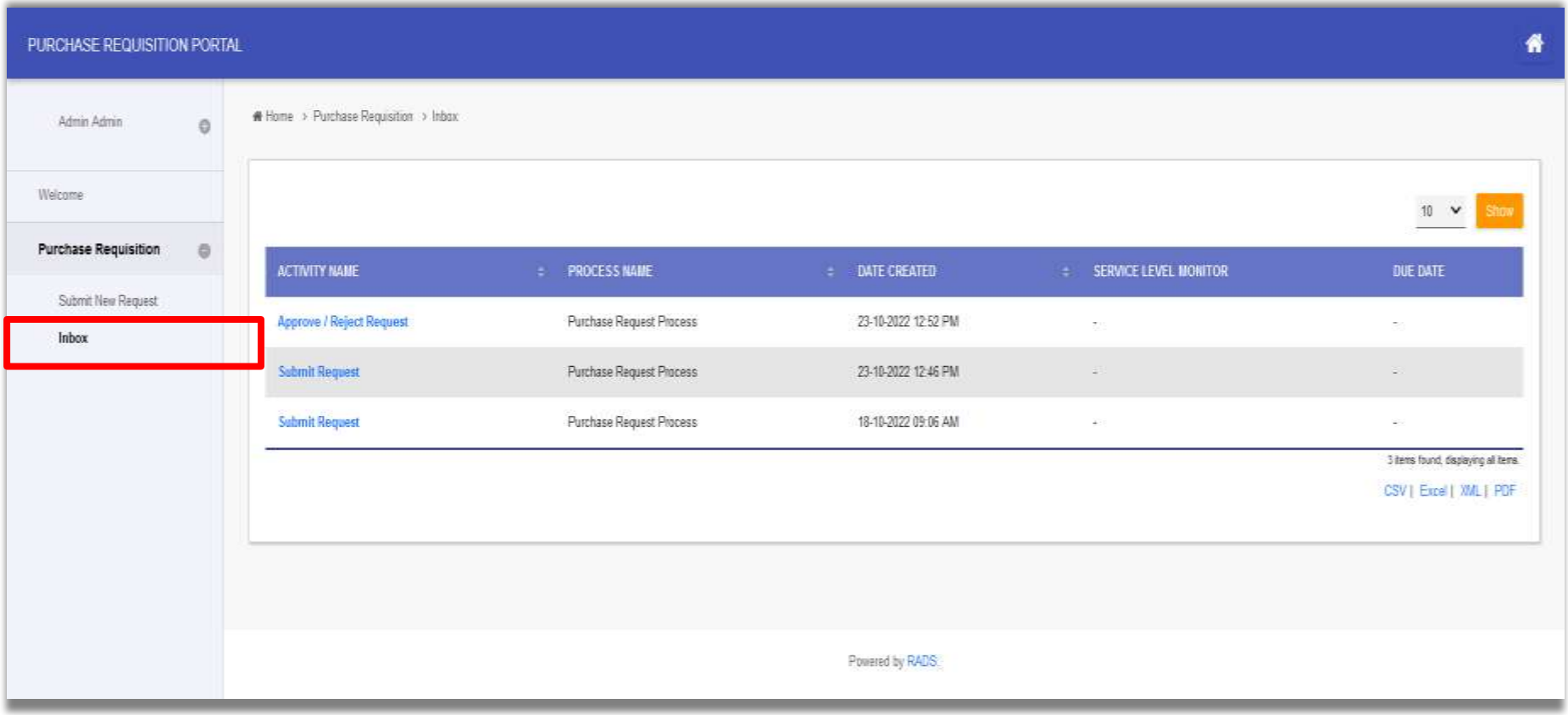
Run Through the Process

- With the Userview created, run through the entire **Purchase Request Process** again by using the userview.



Run through the Process

- Access subsequent assignment through the Inbox menu.

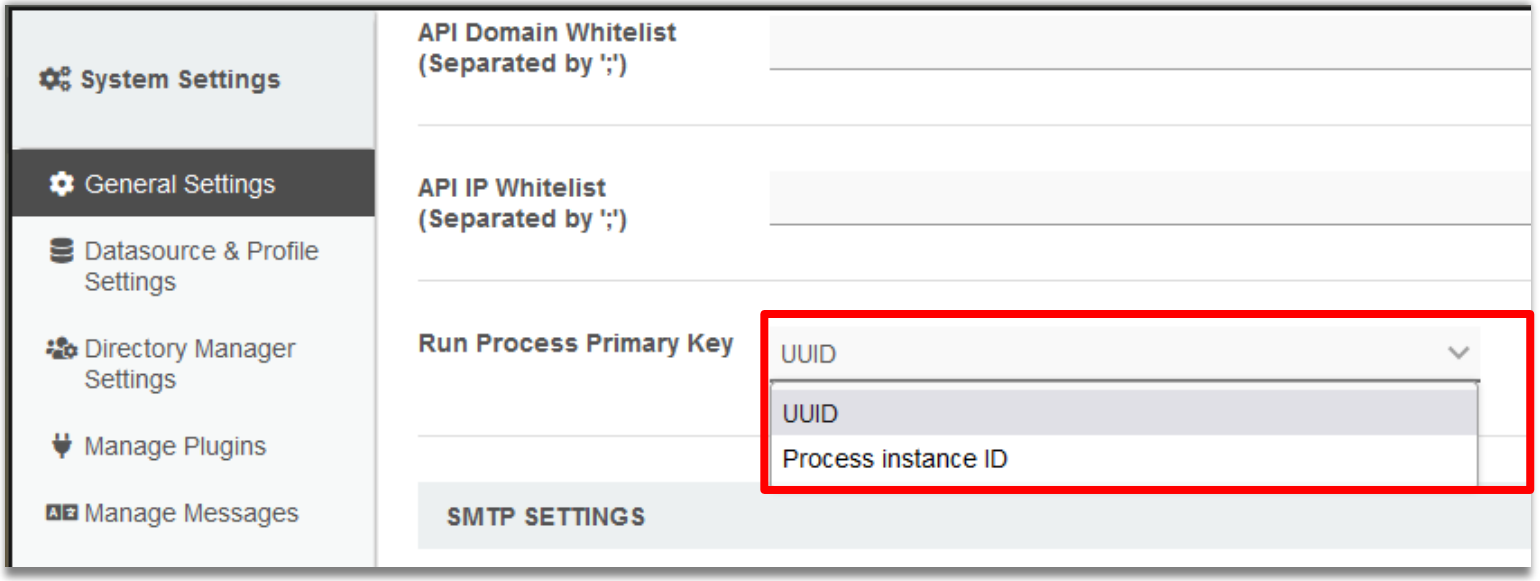


Good To Know

- At this point of time, the App is published, therefore end user would be able to access it.

Important Note!

- In DX, by **default**, Run Process will generate **UUID** as the Primary Key instead of **Process Instance ID**.
- You can **change** it back at Admin Bar > Settings > General Settings > System Administration Settings > Run Process primary key.



Discussion

- Who is Applicant? Who is Approver?

  Have we actually defined who they really are?

Chapter 3 Review

- Evaluate and verify the process by using:-
  - Run Process button available to only the App Designer/Admin.
  - Userview which is accessible by end users.

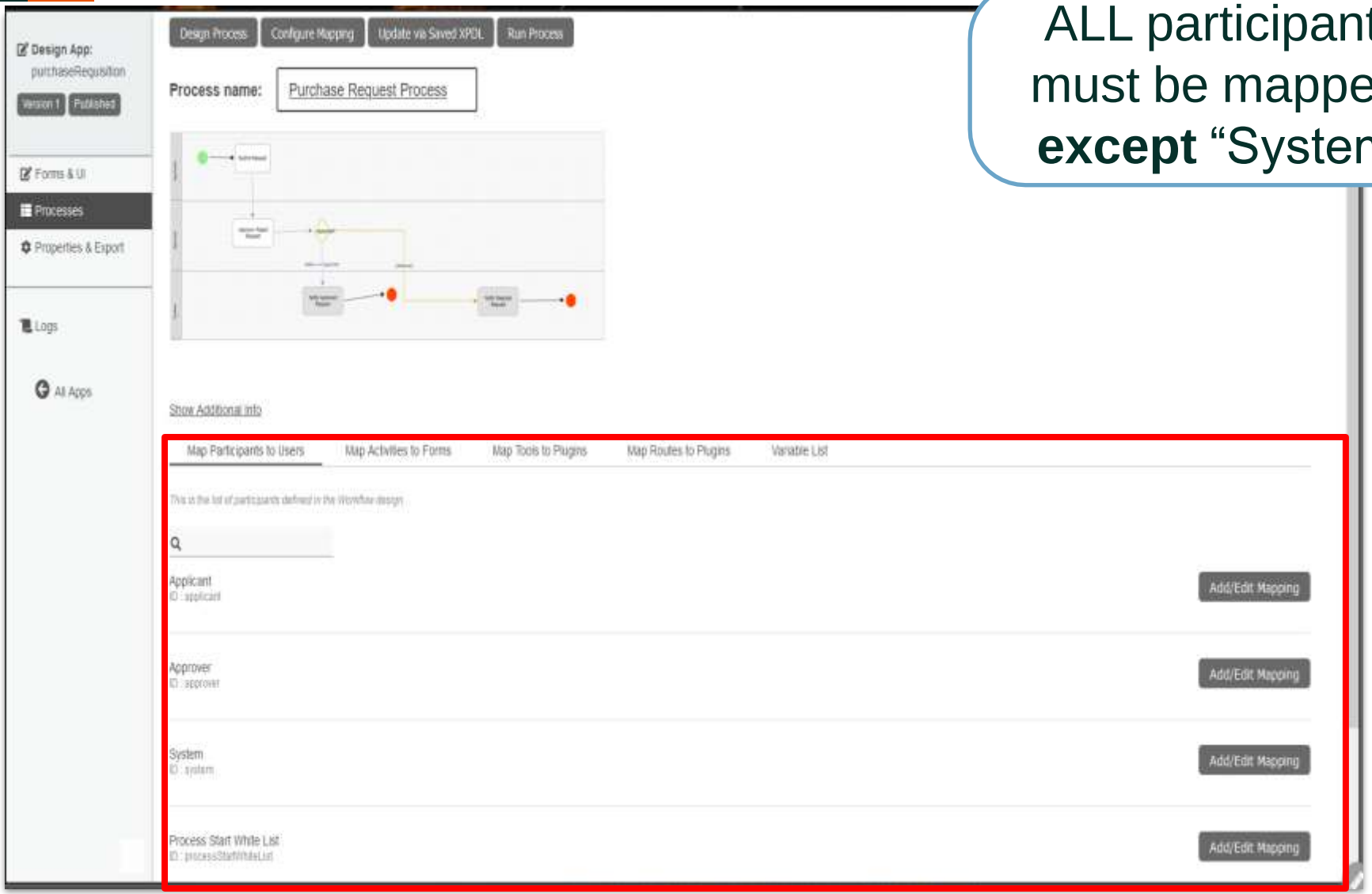
Chapter 4

Participant Mapping

Participant Mapping

- User Mapping Categories.
  - Map to User or Group
  - Map to Org Chart
  - Map to Workflow Variable
  - Map to Plugin

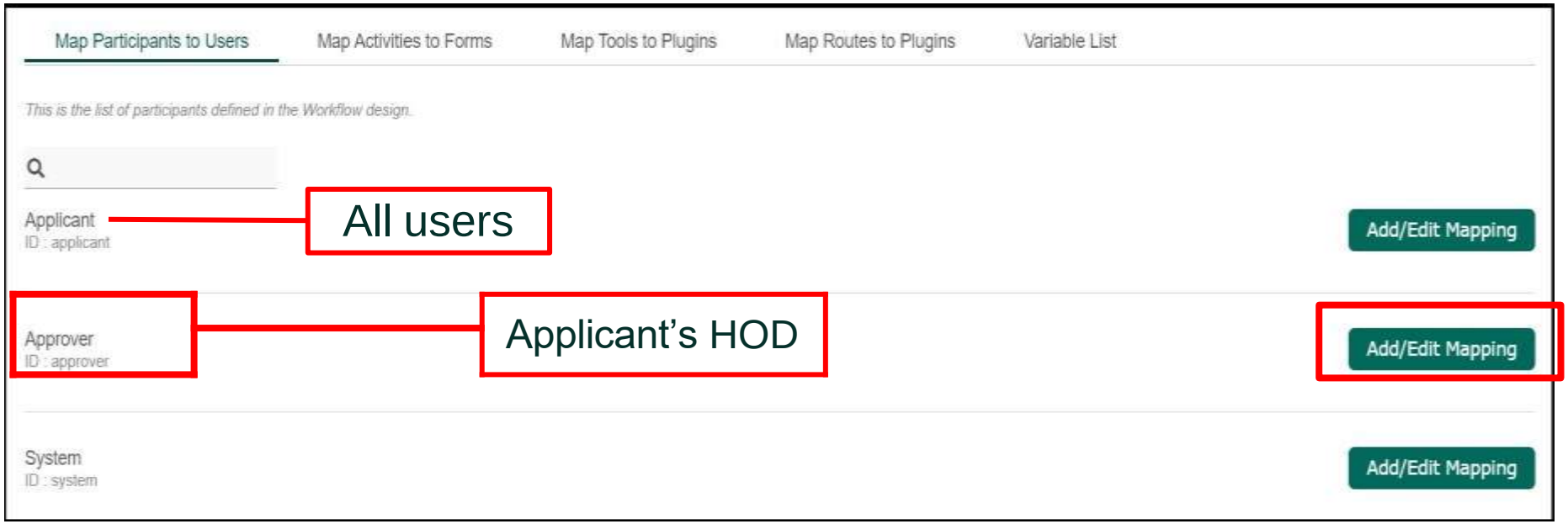
Where to map participants?



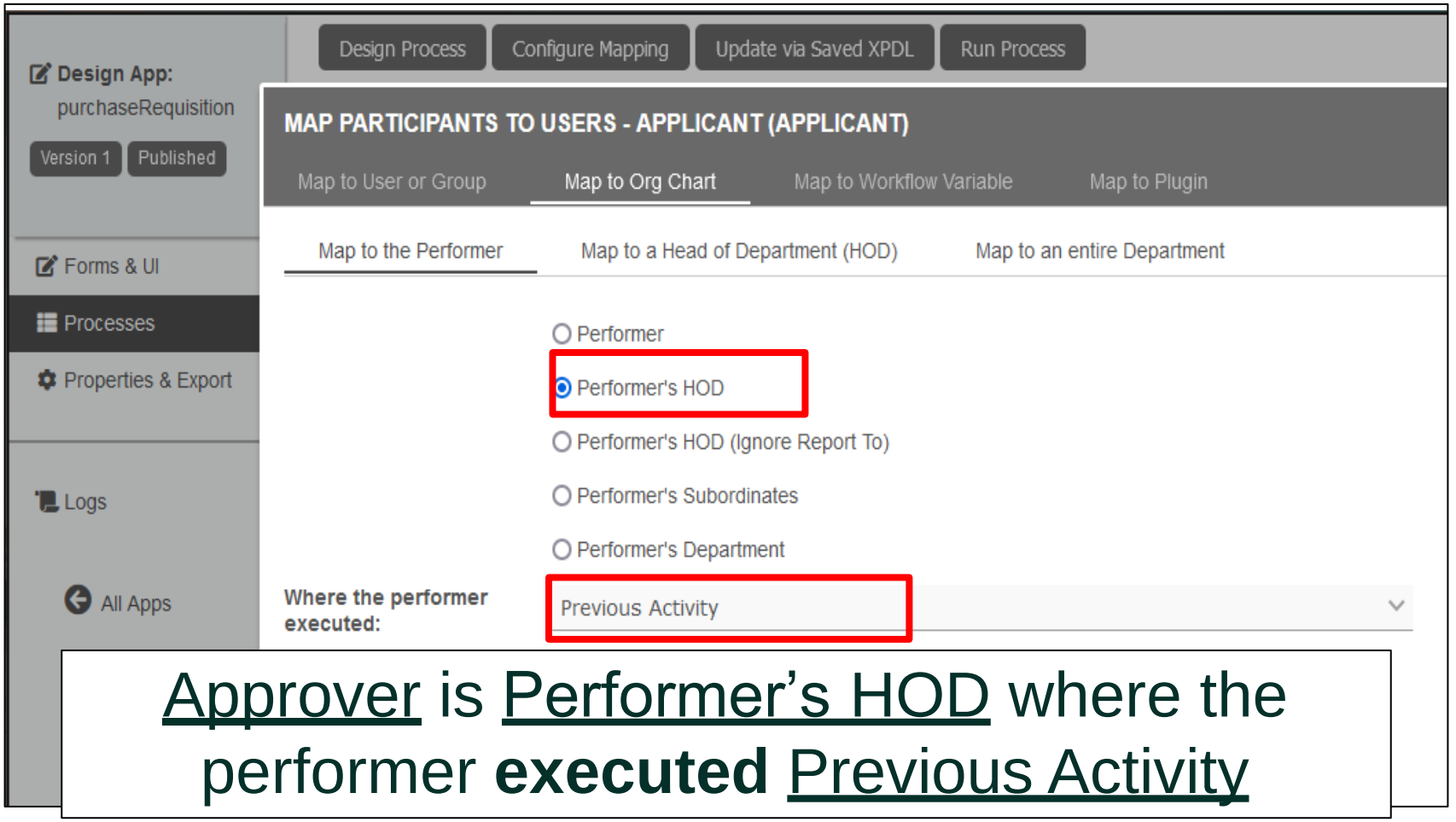
ALL participants must be mapped, **except** “System”

Participant Mapping

Let's assume that, applicant's HOD is responsible to approve any purchase requests made by the applicant.

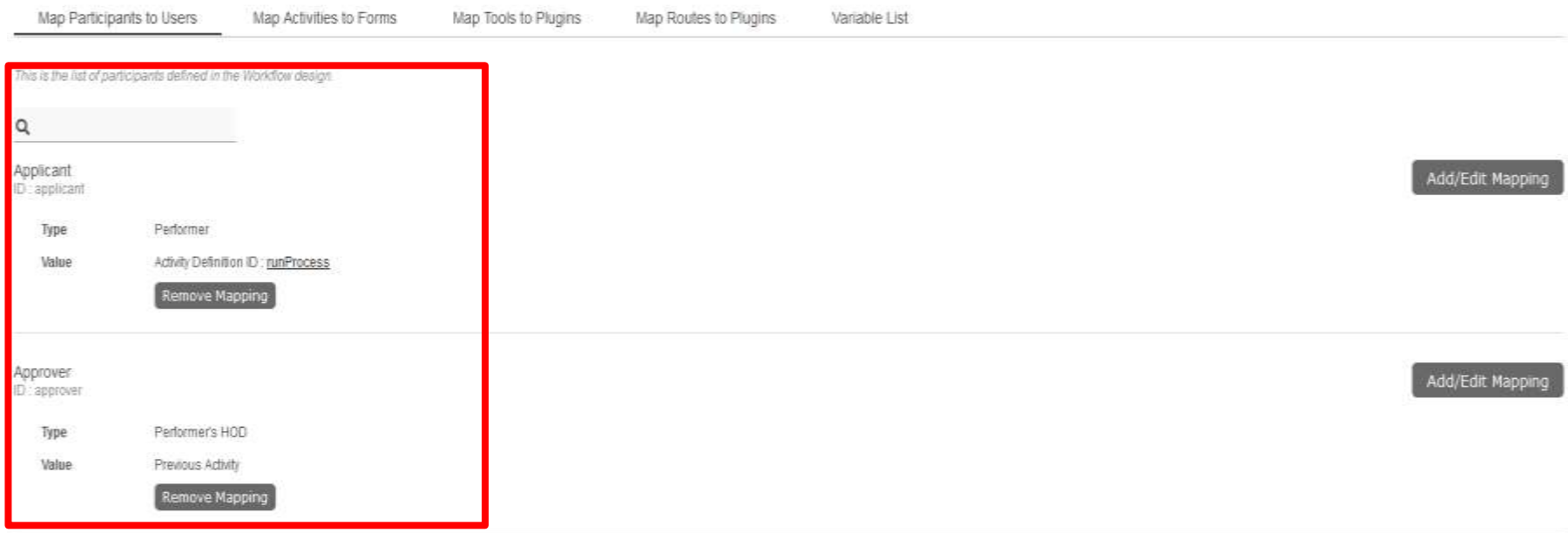


Approver: Performer's HOD



Approver is Performer's HOD where the performer **executed** Previous Activity

Process Participant Mapping

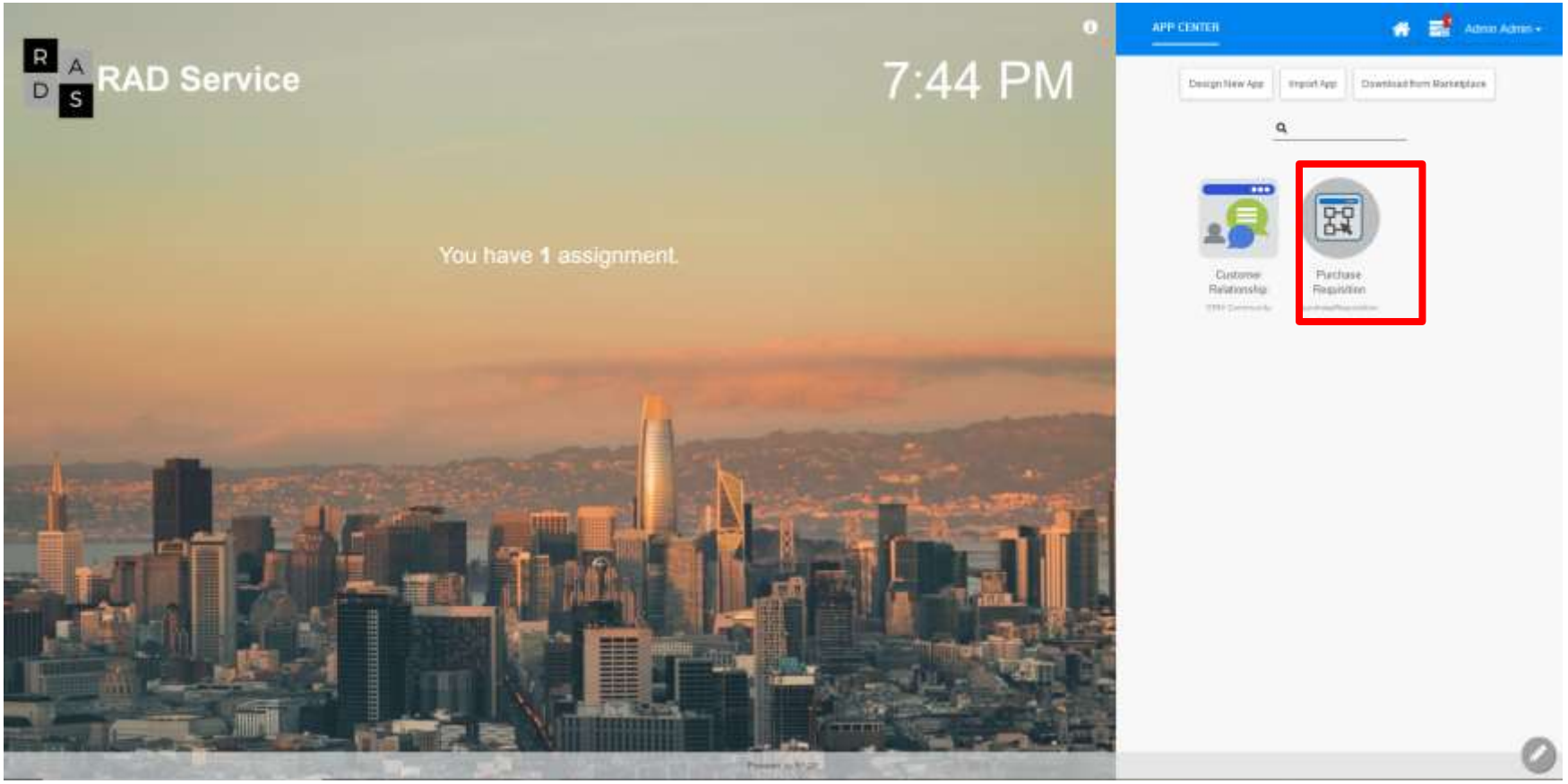


Test Run the Process

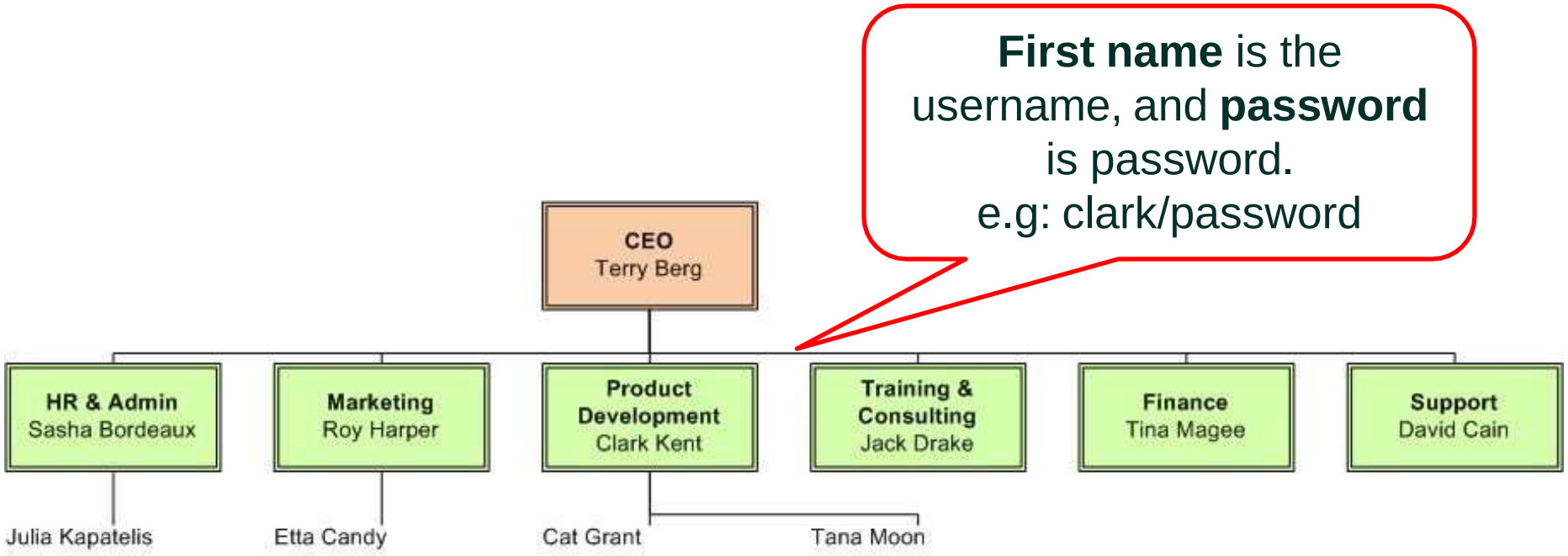
- With the participant mapping set, run the process again as the user “cat”, through the **Purchase Requisition Portal**.

Login As cat/ password

- Open up App Center to access Purchase Requisition portal.



Who Is Cat Grant's HOD?



Note: This is the sample organization chart provided upon initial installation, for your testing convenience. The 3 users: *cat*, *clark*, and *admin*, is free by default.

Important Notes

- All participants MUST be mapped.
- Do NOT choose activity from the same swimlane as the participant that is being mapped unless it is intended so.
- Choose only activity that has been completed.
- If NO user is found, it will be defaulted to the last performer. (Possibly, the current logged in user who had just completed the prior activity OR the process requester)
- If mapped to an inactive user, do delegate, re-assign, or change mapping and re-evaluate the assignment.

Chapter 4 Review

We have learnt to:

1. Understand various Participant Mapping options available.
2. Understand the important rules in Participant Mapping.
3. Able to relate and manage participant mapping with the administrative process monitoring module.

Chapter 5

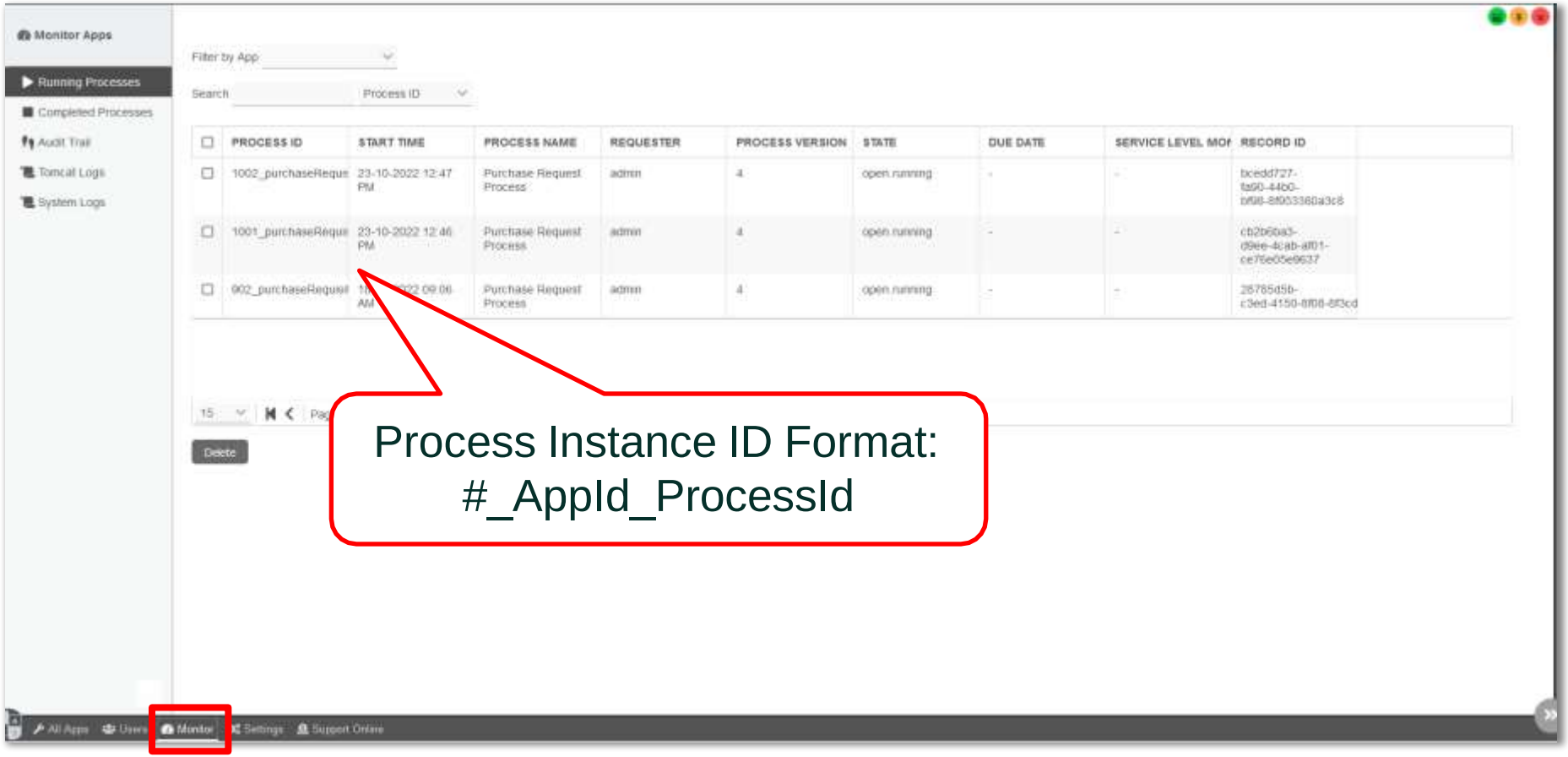
Process Monitoring

Monitoring Processes

- Allows you to monitor the status of processes, both **running** and **completed**.
- Allows you to view an **audit trail** of process actions.
- Captures process data to allow for the generation of reports.

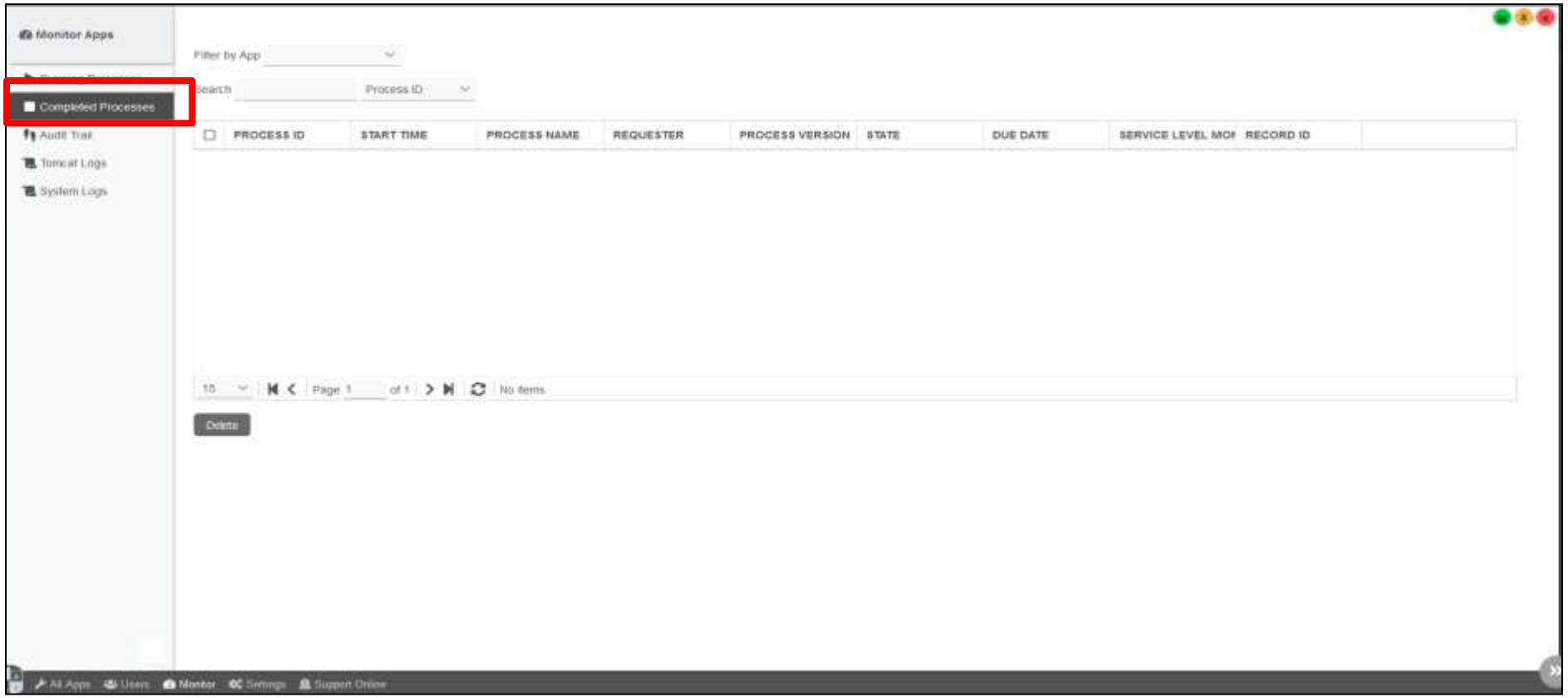
Monitor Running Processes

- Click on Monitor from the Admin Bar to access.



Monitor Completed Processes

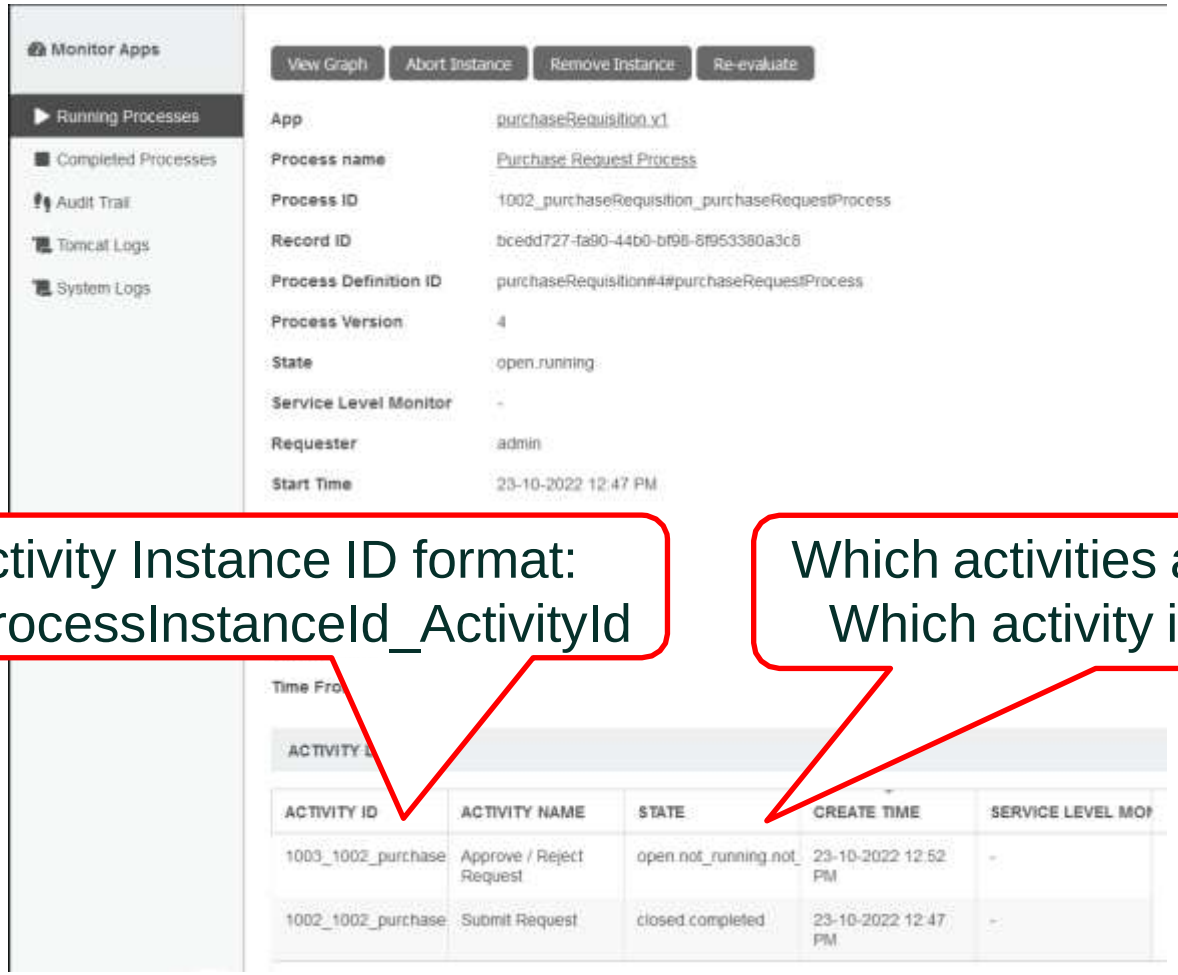
- Click on “Completed Processes” to see completed process instances.



View the Details of a Running Process Instance

- From the list of running processes, **click into any instance**.
- **Details on the current state** of the selected process instance will be shown.

View the Details of a Running Process Instance

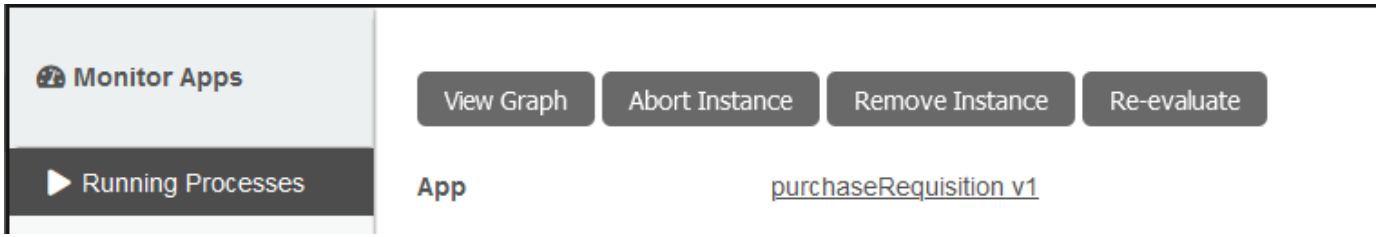


Activity Instance ID format:
#_ProcessInstanceId_ActivityId

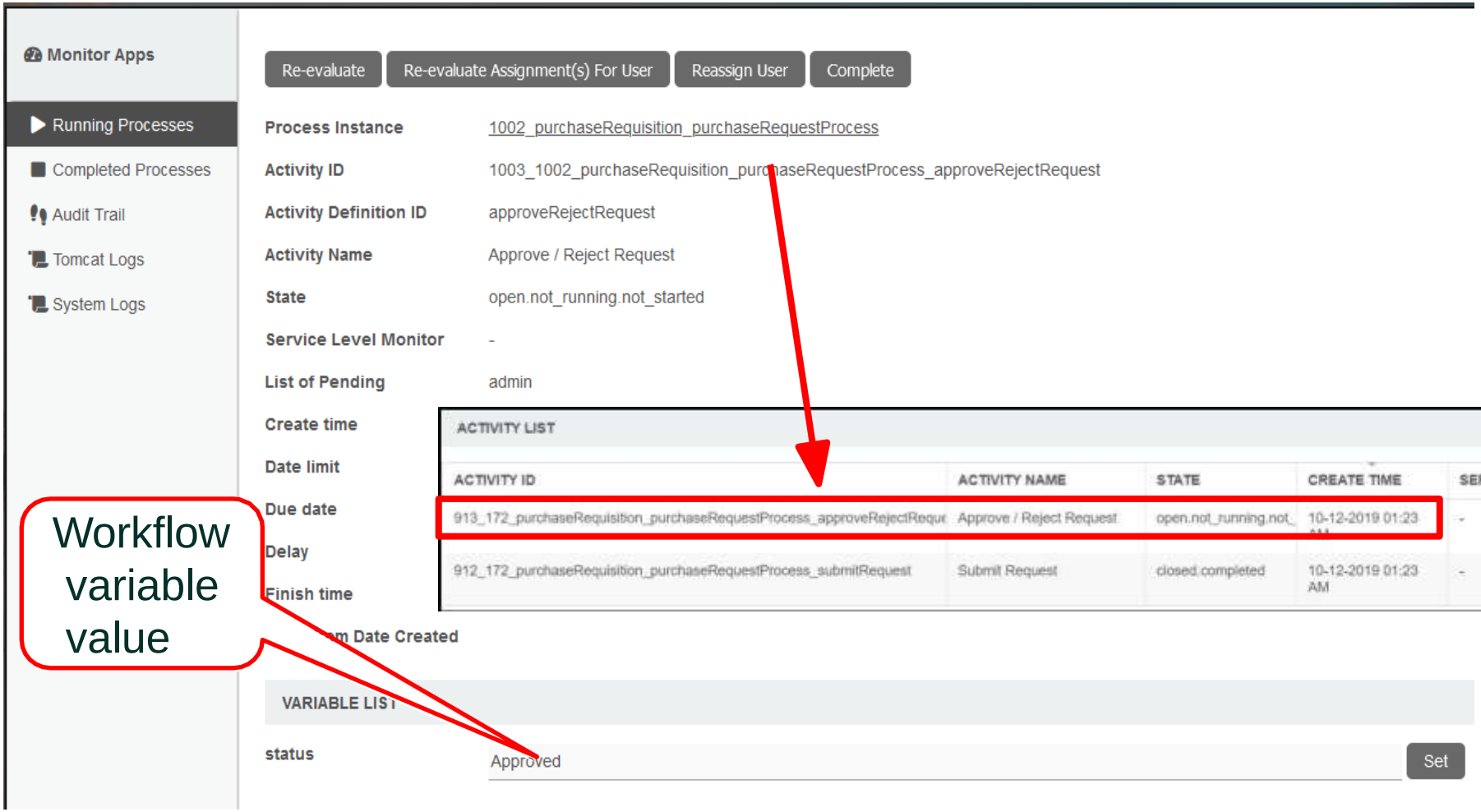
Which activities are completed?
Which activity is active now?

View the Details of a Running Process Instance

- These are actions that can be taken on a **process instance**.
  - **View Graph**
    - Displays the process diagram, where the current activities are highlighted in yellow.
  - **Abort Instance**
    - Terminates the process instance, leaving the process data intact
  - **Remove Instance**
    - Permanently delete the process instance, process data will be removed as well
  - **Re-evaluate**
    - In cases where participant mappings are changed before the process is completed, this action will allow pending assignments to be reassigned to the newly mapped participants.

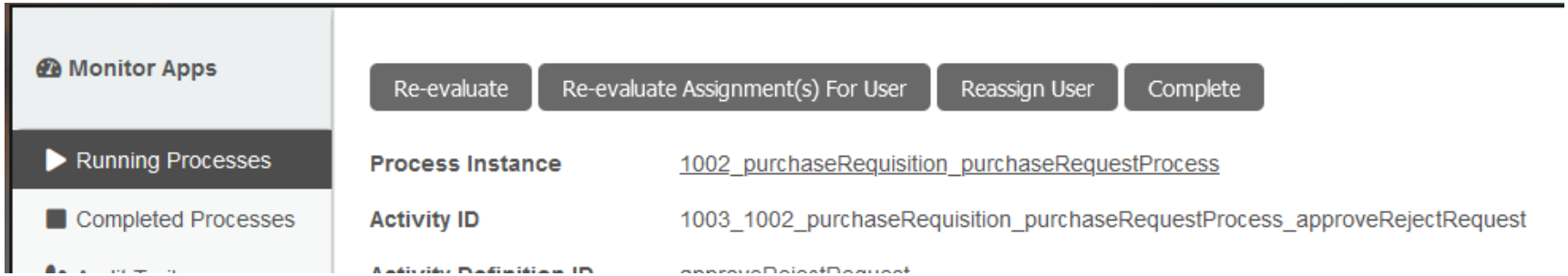


View the Details of an Activity



View the Details of a Running Activity Instance

- These are the actions that can be taken on an **activity instance**.
  - **Re-evaluate**
    - Re-evaluate the participant mapping for the current activity instance.
  - **Re-evaluate assignment(s) for user**
    - Re-evaluate all assignments of a particular user.
  - **Reassign user**
    - Reassign one of the assignee(s) of this activity instance to another user.
  - **Complete**
    - Complete the activity instance as the current logged in user.



Discussion

- What if a person who is assigned to an assignment has left the organization? What can we do?

Chapter 4 Review

We have learned to:

1. Monitor running and completed processes.
2. Drill down into activity details of each process that is running or completed.
3. Debug processes by examining workflow variable value.
4. Appreciate the “Re-evaluate” feature in process monitoring.

Module Review

1. Business Process Design (BPE)
2. Designing your first Process with Process Builder
3. Running your first Automated Process
4. Participant Mapping
5. Process Monitoring

Recommended Further Learning

- Designing Forms for the activities created in your Process Flow.
- Configure Process Tool plugin for the tool created in your Process Flow.

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