

# Straight-through processing

300-level live demo script



Straight-through processing:  
300-level live demo

**Demo script**

Automation Platinum Demos

## Introduction

Welcome to the straight-through processing demonstration.

Today, I will demonstrate how the IBM Cloud Pak for Business Automation supports straight-through processing to automate customer refund requests quickly and easily. We'll take advantage of the Pak's workflow and decision management features — along with its operational intelligence capabilities — to show how business users can lead the effort to transform customer service. Let's get started.

## 1 - Model workflow

### 1.1 - Introduce refund request process without straight-through processing

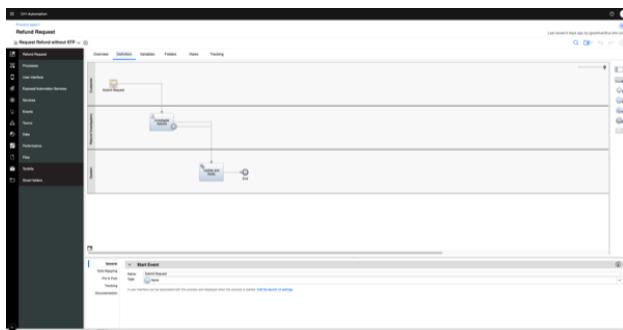
#### Narration

We are looking at the process diagram for Focus Corp's refund request process. Process diagrams are created in Process Designer. Process Designer is used to implement the refund request process logic. Within this low-code environment, the process diagram will control the execution of each process request. The process diagram adheres to the Business Process Modeling Notation (BPMN). We use drag-and-drop to build the process diagram from the palette on the right. This allows us to model the process steps and flow. From there, you can drill down to complete the implementation and testing of the process application.

Looking at Focus Corp's refund request process, customers can initiate returns directly from the company's portal. Currently, each request is routed to a customer service agent for resolution.

#### Action 1.1.1

- Show the process diagram for Focus Corp's refund process without straight-through processing in Process Designer, which you opened during your demo preparation.



## 2 - Execute workflow without straight-through processing (SaaS)

### 2.1 - Task management and execution (SaaS)

#### Note:

This is for **SaaS**. For ROKS, please refer below to **2 - Execute workflow without straight-through processing (ROKS)**.

#### Narration

The customer service agent uses the Process Portal to work on their tasks. It is also used to launch processes and view the process dashboards.

#### Action 2.1.1

- Show the **Process Portal** that you have already opened in your preparation.



#### Narration

We are looking at the task list for the customer service agent.

Process Portal is highly customizable to fit your organization's look and feel. The new responsive user interface provides flexibility to get work done anywhere, at any time, on any device type, from a desktop device in the office to a mobile device at home or at a customer site. It can be configured through a set of configuration options without having to customize the Process Portal application itself.

Process Portal has a robust search capability. You can create a customized task list, for example, with specific business data, by saving task-based searches for later use.

Customer service agents use the task list to organize and work on the tasks assigned to them. Our agent received a new investigation task.

#### Action 2.1.2

- Click any **Refund Investigation** task.

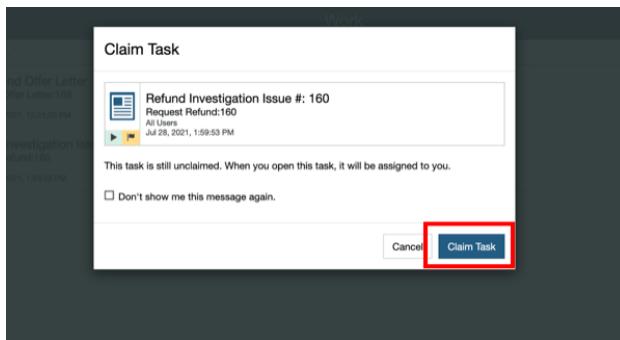


## Narration

As I open the task, I have all the information needed to investigate the refund. Now, I'll claim the task.

### Action 2.1.3

- Click **Claim Task**.

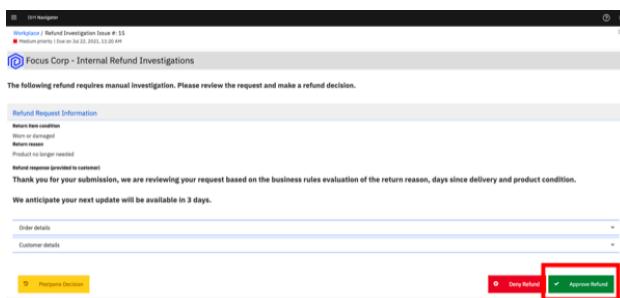


## Narration

Let's review the request data and make an approval decision.

### Action 2.1.4

- Click **Approve Refund**.



## Narration

Behind the scenes, the refund process is managed by workflow. Once the investigation task is completed, the system automatically updates Focus Corp's ordering application and notifies the customer.

Although the process is managed by workflow, there is currently no straight-through processing since every request must be examined by a customer service agent. Let's go back to the process diagram and see how we can improve things with straight-through processing.

## 2 - Execute workflow without straight-through processing (ROKS)

### 2.1 - Task management and execution (ROKS)

#### Note:

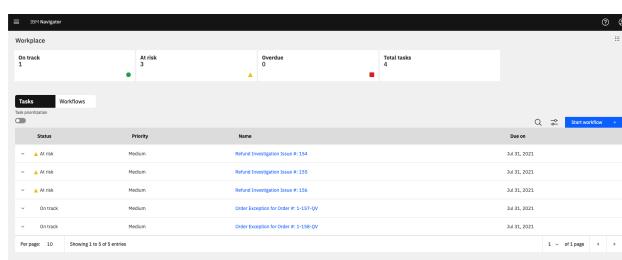
This is for **ROKS**. For SaaS, please refer above to **2 - Execute workflow without straight-through processing (SaaS)**.

#### Narration

The customer service agent uses the task list to work on their tasks. Our agent has received a new investigation task.

#### Action 2.1.1

- Go to the **Workplace** window that you have already opened in your preparation.



A screenshot of the SAP Workplace application interface. At the top, there are four status indicators: On track (1), At risk (2), Overdue (0), and Total tasks (4). Below this is a navigation bar with 'Tasks' selected. A search bar and a 'Start workflow' button are also present. The main area displays a table of tasks with columns for Status, Priority, Name, and Due on. The tasks listed are:

Status	Priority	Name	Due on
At risk	Medium	Refund Investigation Issue # 134	Jul 31, 2023
At risk	Medium	Refund Investigation Issue # 135	Jul 31, 2023
At risk	Medium	Refund Investigation Issue # 136	Jul 31, 2023
On track	Medium	Order Exception for Order # 1-S-001-QV	Jul 31, 2023
On track	Medium	Order Exception for Order # 1-S-001-QV	Jul 31, 2023

At the bottom, there are pagination controls and a message indicating 'Showing 1 to 5 of 5 entries'.

#### Narration

We are looking at the task list for the customer service agent.

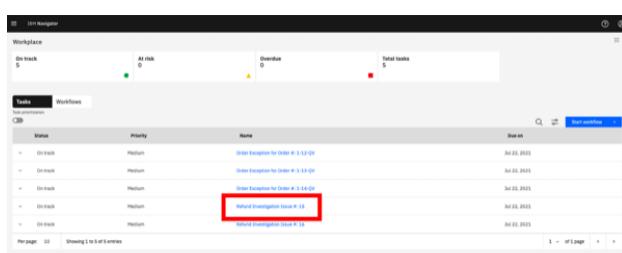
Workplace is customizable to fit your organization's look and feel. The new responsive user interface provides flexibility to get work done anywhere, at any time, on any device type, from a desktop device in the office to a mobile device at home or at a customer site. It can be configured through a set of configuration options behavior without having to customize Workplace application itself.

Workplace has a robust search capability. You can create a customized task list, for example, with specific business data, by saving task-based searches for later use.

Customer service agents use the task list to organize and work on the tasks assigned to them. Our agent has received a new investigation task.

#### Action 2.1.2

- Click the **Refund Investigation** task.



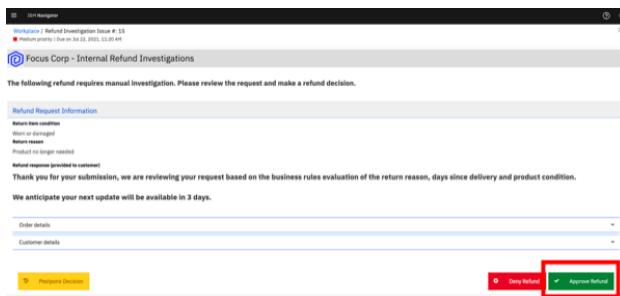
A screenshot of the SAP Workplace application interface, similar to the previous one but with a red box highlighting the 'Refund Investigation Issue # 134' task in the list. The task details are visible in a tooltip or expanded view.

## Narration

As I open the task, I have all the information needed to investigate the refund.

### Action 2.1.3

- Click **Approve Refund**



## Narration

Let's review the request data and make an approval decision. Behind the scenes, the refund process is managed by workflow. Once the investigation task is completed, the system automatically updates Focus Corp's ordering application and notifies the customer.

Although the process is managed by workflow, there is currently no straight-through processing since every request must be examined by a customer service agent. Let's go back to the process diagram and see how we can improve things with straight-through processing.

## 3 - Changing the workflow for straight-through processing

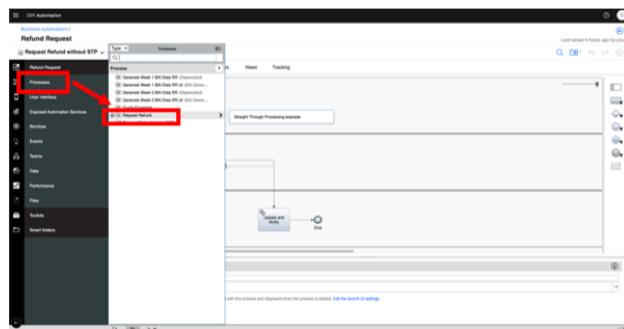
### 3.1 - Introducing straight-through process automation

#### Narration

Let's look at how we can streamline the refund process by combining workflow and decision management.

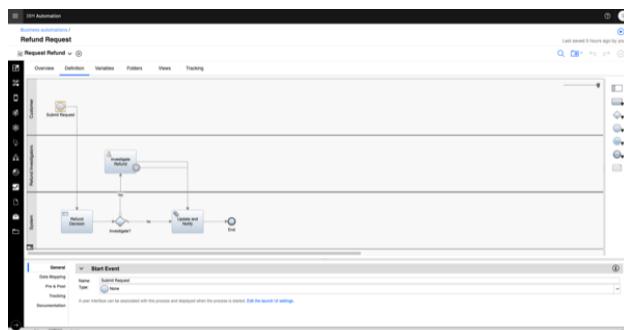
#### Action 3.1.1

- Go back to the **Process Designer** tab, and click on **Processes** in the menu on the left side. Click on **Refund Request**.



#### Action 3.1.2

- You will see the following process diagram.



#### Narration

We've added a decision task to the workflow that will automatically look at each request and make a refund decision without human intervention. This means that most requests can now be approved or declined in real time. Those that can't are still routed for manual investigation.

Therefore, we can achieve a significant amount of straight-through processing where we completely process refund requests without human intervention.

## 4 - Execute workflow with straight-through processing

### 4.1 - Refund request approved

#### Narration

Let's look at how straight-through processing transforms the refund process.

#### Action 4.1.1

- Go to Focus Corp's **Your Returns and Refunds** page.

The screenshot shows a dropdown menu titled "Select your recent order (less than 90 days)". It lists two options: "77170066-AP" and "76515363-MA". The option "77170066-AP" is highlighted with a red box.

#### Action 4.1.2

- Click to select an order. Of the three orders that display, click on the refund request ending in 'AP'.

The screenshot shows the same dropdown menu as before, but now the option "77170066-AP" is highlighted with a red box, indicating it has been selected.

#### Action 4.1.3

- Click **Submit Request** to process the refund.

The screenshot shows the "Submit Request" button highlighted with a red box. The button is located at the bottom left of the form area.

#### Action 4.1.4

- The process executes and generates a refund-approved result.

The screenshot shows a green success message at the top: "Refund Approved". Below it, a note says: "Your refund will be processed in 1 to 2 business days. The business rules confirmed your order (including product type and days since delivery) and the request details (including reason, and product condition) allow for an automated return based on current corporate policy. Thank you for your business." At the bottom, there is a link "Retrieved order number: 77170066-AP" and a "Submit Another Refund Request" button.

## Narration

In this first example, when the customer submits the refund request, the criteria is evaluated by the refund decision, and the approval is granted in real time, avoiding a time-consuming manual investigation.

### 4.2 - Refund request denied

## Narration

Let's look at a second example.

#### Action 4.2.1

- Click on **Submit Another Refund Request**.

The screenshot shows a software interface for managing returns and refunds. At the top, there is a header bar with the Focus Corp logo and the text "Focus Corp - Your Returns and Refunds". Below the header, a message says "Welcome, how may we assist you...". A green banner at the top indicates "Refund Approved". The main content area displays a message: "Your refund will be processed in 1 to 2 business days. The business rules confirmed your order (including product type and days since delivery) and the request details (including reason, and product condition) allow for an automated return based on current corporate policy. Thank you for your business." Below this message, it says "Refunded order number: 77170005-DE". At the bottom of the page, there is a button labeled "C Submit Another Refund Request" which is highlighted with a red box.

#### Action 4.2.2

- Click to select an order. Of the three orders that display, click on the refund request ending in 'DE.'

The screenshot shows a list of recent orders. The top part of the screen has a header with the Focus Corp logo and the text "Focus Corp - Your Returns and Refunds". Below the header, a message says "Welcome, how may we assist you...". Underneath, there is a section titled "Select your recent order (less than 90 days)" with a dropdown menu. The dropdown menu shows one item: "66170005-DE". This item is highlighted with a red box. To the right of the dropdown, there is a table titled "Retrieved purchase order details" which lists various order details such as Order Date, Delivery Date, Order Subtotal, Order Sales Tax, and Order Shipping Costs.

#### Action 4.2.3

- Click **Submit Request** to process the refund.

The screenshot shows the final step of submitting a refund request. The top part of the screen has a header with the Focus Corp logo and the text "Focus Corp - Your Returns and Refunds". Below the header, a message says "Welcome, how may we assist you...". The main form area contains several input fields:

- "Select your recent order (less than 90 days)": A dropdown menu showing "66170005-DE" which is highlighted with a red box.
- "Why are you returning this order?": A dropdown menu showing "Changed mind after purchase".
- "Select package condition": A dropdown menu showing "Original package".

To the right of these fields, there is a table titled "Retrieved purchase order details" with columns for Order Date, Delivery Date, Order Subtotal, Order Sales Tax, and Order Shipping Costs. At the bottom of the form, there is a large red-bordered button labeled "Submit Request".

#### Action 4.2.4

- The process executes and generates a refund-denied result.

A screenshot of a web page titled "Focus Corp - Your Returns and Refunds". The page has a header "Welcome, how may we assist you...". Below it is a red error bar with the text "Refund Denied" and "Sorry, your refund request was denied based on the business rules evaluation of the return reason, days since delivery and product condition." A link "If you wish to open a support case, click the link below." and a note "Open support ticket for your order 66570055-DE" are also present. At the bottom is a button labeled "Submit Another Refund Request".

#### Narration

This one clearly did not meet our criteria and resulted in a denial because it was well outside the time window. This refund request resulted in a denial, but it is still straight-through processing because there is no manual work.

### 4.3 - Refund request requires manual investigation

#### Narration

But what if the business rules determine this request requires investigation?

#### Action 4.3.1

- Click **Submit Another Refund Request**.

A screenshot of a web page titled "Focus Corp - Your Returns and Refunds". The page has a header "Welcome, how may we assist you...". Below it is a red error bar with the text "Refund Denied" and "Sorry, your refund request was denied based on the business rules evaluation of the return reason, days since delivery and product condition." A link "If you wish to open a support case, click the link below." and a note "Open support ticket for your order 66570055-DE" are also present. At the bottom is a button labeled "Submit Another Refund Request", which is highlighted with a red box.

#### Action 4.3.2

- Click to select an order. Of the three orders that display, click on the refund request ending in 'MA.'

A screenshot of a web page titled "Focus Corp - Your Returns and Refunds". The page has a header "Welcome, how may we assist you...". Below it is a dropdown menu titled "Select your recent order (less than 90 days)". It contains three items: "77170056-AP" and "76513363-MA", with the latter being highlighted by a red box.

#### Action 4.3.3

- Click **Submit Request** to process the refund.

A screenshot of a web page titled "Focus Corp - Your Returns and Refunds". The page has a header "Welcome, how may we assist you...". Below it is a form for selecting a recent order. The dropdown menu shows "76513363-MA" selected. To the right, a section titled "Retrieved purchase order details" displays order information: Order date (5/26/2021), Delivery date (7/15/2021), Order Subtotal (\$32.25), Order Sales Tax (\$3.23), and Order Shipping Costs (\$2.50). At the bottom left is a button labeled "Submit Request", which is highlighted with a red box.

### Action 4.3.4

- The process executes and generates a refund investigation result.

The screenshot shows a web page titled "Focus Corp - Your Returns and Refunds". A banner at the top says "Welcome, how may we assist you...". Below it, a yellow bar indicates a "Refund Investigation" status. It says "Thank you for your submission, we are reviewing your request based on the business rules evaluation of the return reason, days since delivery and product condition. We anticipate your next update will be available in 3 days." Below this, there's a reference number "Refund order number 7653360-9A". At the bottom left is a button labeled "Go to Another Refund Request".

### Narration

In that case, workflow would route the request to our customer service agent to do the investigation.

## 5 - Monitor operational intelligence

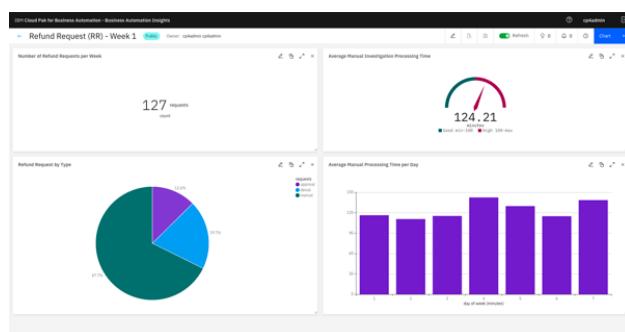
### 5.1 - Review the refund dashboard

#### Narration

Let's look at the refund dashboard to see how much straight-through processing we've achieved.

#### Action 5.1.1

- Click the **Refund Dashboard** tab, which you opened in the demo preparation. In this step, you are just speaking to the displayed dashboard.



#### Narration

So far, the percentage of manually processed requests is still above 70%, with the average manual investigation taking over two hours.

Let's look at what's behind this dashboard.

First, as the refund process runs, the system can collect and process historical data and make it available for visualization.

Next, we provide the Business Performance Center, a no-code monitoring application for the IBM Cloud Pak for Business Automation. Dashboards can be designed and shared in minutes that provide insight into important business activities and processes. You can prepare, track, and design visualizations of metrics, key performance indicators (KPIs), and other measurements of business performance in customizable dashboards.

Additionally, the historical data can be used to feed a data lake to apply machine learning to our automations. For example, to make even more sophisticated refund decisions, we could use a data lake to incorporate machine learning into our refund process. The Cloud Pak for Business Automation includes some machine learning samples to help you get started.

## 6 - Model decisions

### 6.1 - Review the refund approval decision model

#### Narration

Let's look at how the business analyst can create and manage business rules to further increase straight-through processing. The business rules replicate how experts make refund decisions.

Using no-code decision modeling, business analysts can easily author and test refund decision criteria.

#### Action 6.1.1

- Go to your **Decision Center**, having already logged in with your credentials if necessary.

The screenshot shows the 'Decision Services' section of the Decision Center. It lists various decision services with their names, descriptions, and last update dates. The services include 'Com\_CSI\_DisputeTransaction', 'DBA-SaaSOnboarding', 'Refund Processing', 'Validate Invoice', 'Basic Recommendation', 'Customer loyalty', 'Discount', 'FSS\_Playground', 'Miniloan Service', and 'Comm\_CSI\_CSP\_Sandbox'. Each service has a small icon and a dropdown arrow indicating it can be expanded or modified.

#### Action 6.1.2

- Click on the decision service named **Refund Processing**.

The screenshot shows the 'Decision Services' section of the Decision Center. The 'Refund Processing' service is highlighted with a red box. Other services visible include 'Loan Validation Service' and 'Shipment Pricing'.

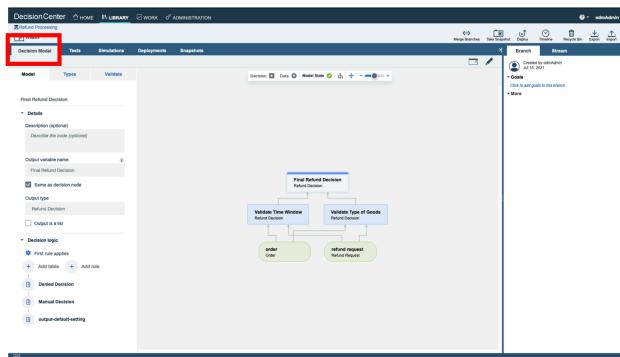
#### Action 6.1.3

- When the **Refund Processing** decision screen appears, click on **main**.

The screenshot shows the 'Decision Services' section of the Decision Center, specifically the 'Refund Processing' screen. A red box highlights the 'main' branch under the 'Branches' section. The screen also displays details about the service, such as 'Created by kyle.peacock@ibm.com on Oct 16, 2021', 'Last changed by seilowitz@us.ibm.com on Jul 16, 2021', and a 'Description' field.

### Action 6.1.4

- The next screen has several blue tabs at the top. Click on **Decision Model**.



### Narration

This is the decision model for the refund request decision service. A decision model uses a diagram to break the decision down into sub-decisions, which all contribute to the final refund decision.

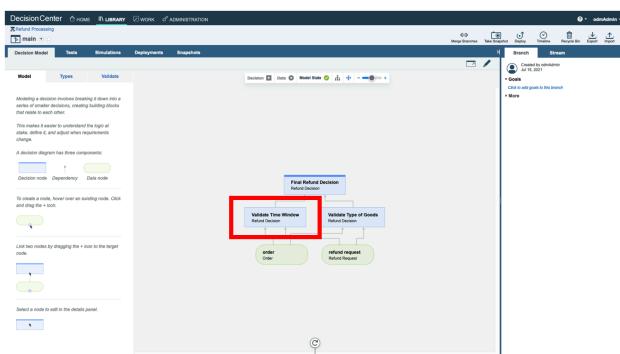
## 6.2 - Review the decision tables

### Narration

To automate the refund request process, we've used two decision tables. A decision table groups rules that have similar conditions and actions but use different thresholds.

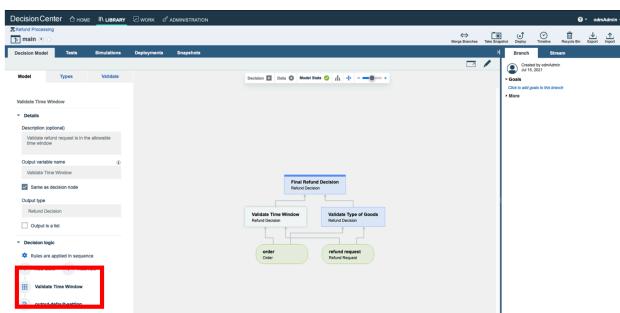
### Action 6.2.1

- Click on **Validate Time Window** in the decision diagram.



### Action 6.2.2

- Click on **Validate Time Window** in the Decision Logic section on the left side of the screen.



### Action 6.2.3

- This opens a rule table based on the refund reason, days since order, and goods condition. Close the **Validate Time Window** table.

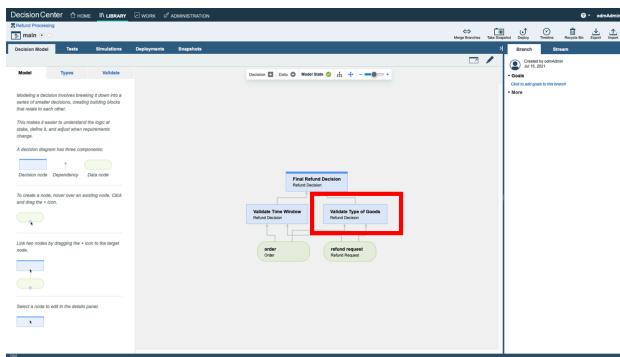
The screenshot shows the 'Validate Time Window' rule table. The left sidebar has sections for 'Model', 'Types', and 'Variables'. Under 'Model', there's a 'Decision' section with 'Validate Time Window' selected. The main area shows the rule table with columns: 'refund reason', 'days since order delivered', 'goods condition', and 'time window decision'. There are 8 rows of rules. The last row is partially visible. A red box highlights the 'X' close button in the top right corner of the table window.

### Narration

The first decision table considers the customer's reason for return, the days since delivery, and the condition of the item. These are the same criteria that a customer service agent would have used to make a refund request decision, but now, the decision is automated and executes in real time.

### Action 6.2.4

- Click on **Validate Type of Goods** in the decision diagram.



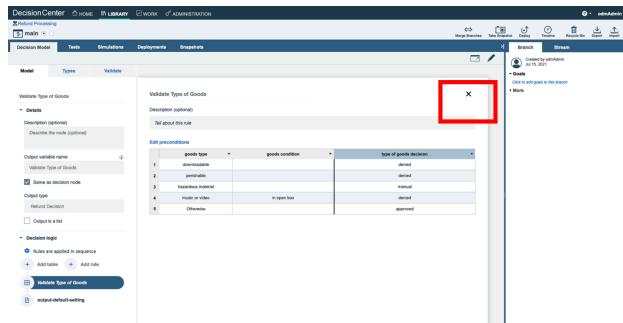
### Action 6.2.5

- Click on **Validate Type of Goods** in the Decision Logic section on the left side of the screen.

The screenshot shows the 'Decision Logic' section on the left. A list of nodes includes 'Validate Type of Goods', which is highlighted by a red box. The main area shows the decision diagram with the 'Validate Type of Goods' node highlighted by a red box in the flowchart.

### Action 6.2.6

- This opens a rule table based on goods type and goods condition. Close the **Validate Type of Goods** window.



### Narration

The second sub-decision has a table that considers the type of item being returned.

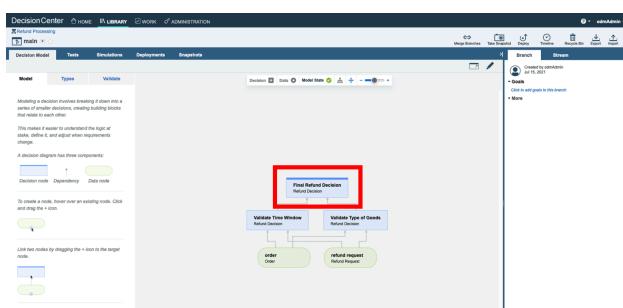
## 6.3 - Make the final refund decision

### Narration

The final refund decision is made by combining the results of the ‘Validate Time Window’ and ‘Validate Type of Goods’ decisions.

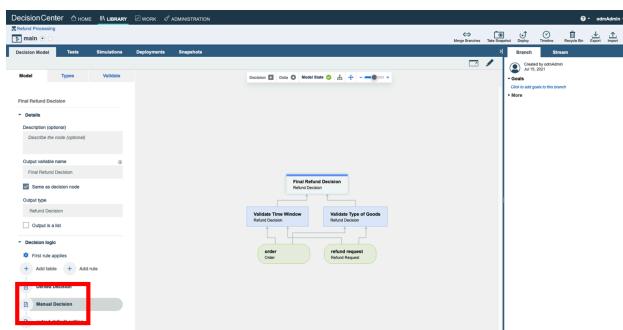
### Action 6.3.1

- Click **Final Refund Decision** in the decision diagram.



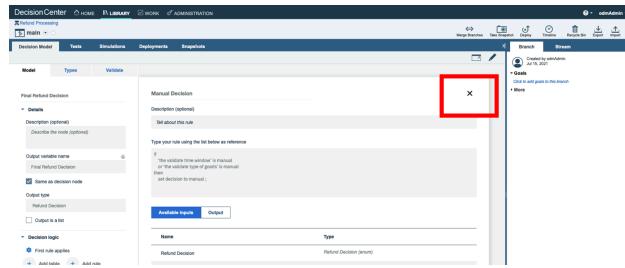
### Action 6.3.2

- Click on **Manual Decision** in the Decision Logic section on the left side of the screen.



### Action 6.3.3

- This opens a rule script based on goods type and goods condition. Close the **Manual Decision** rule logic window.



### Narration

We've combined the two sub-decisions to make the final response using a simple text rule.

Business analysts can change the rules to achieve higher levels of straight-through processing or to adapt to changing business conditions.

## 7 - Reduce manual work

### 7.1 - Compare and test a new version of the refund decision model

#### Narration

After running these rules for a few weeks, we realize we can further reduce manual investigations without increasing our risk.

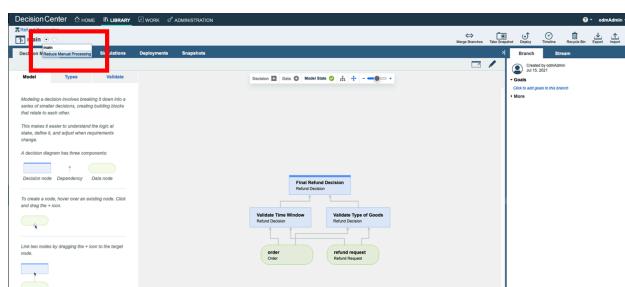
The decision models can be changed without having to change the underlying process application.

The business analyst previously created a new version of the decision model to enhance the level of straight-through processing by reducing the number of manual investigations.

Now, let's compare the before and after versions to see what changed.

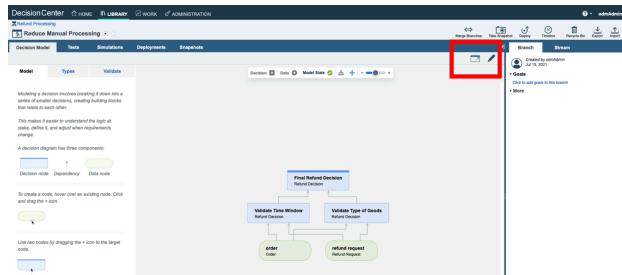
### Action 7.1.1

- On the top right of the Decision Center, click the arrow next to main and select **Reduce Manual Processing**.



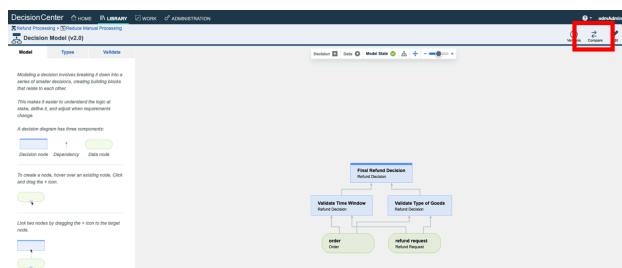
### Action 7.1.2

- Click on the **maximize** icon towards the top right of the Decision Center (right below the blue bar). This opens the Decision Model view.



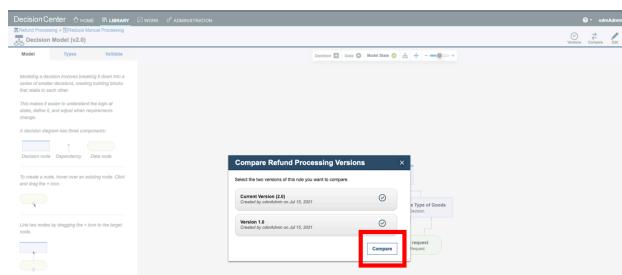
### Action 7.1.3

- Click on the **Compare** icon on the top right of the Decision Model view.



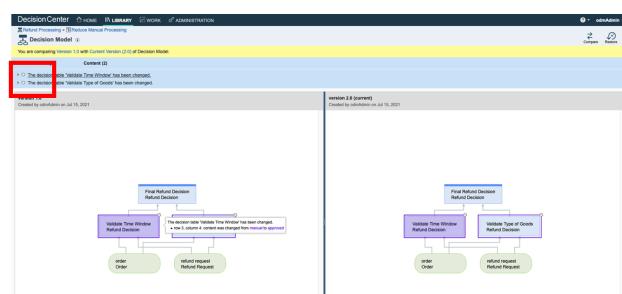
### Action 7.1.4

- When a window opens to prompt a comparison of V.1 and the current model, hit the **Compare** button.



### Action 7.1.5

- Click on the arrows next to the two changes on the top left to display rule changes above the two decision diagrams.

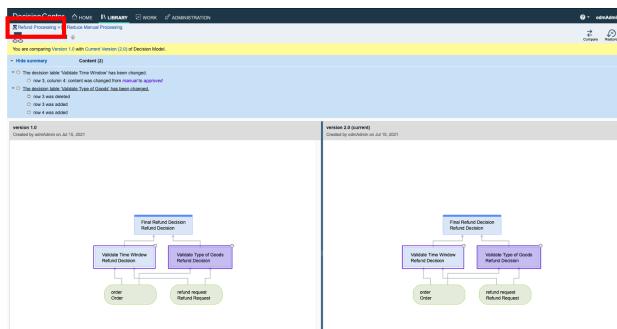


## Narration

We select the two versions we wish to compare and see a side-by-side comparison of the two versions with details of the changes highlighted in the diagram and summarized above.

### Action 7.1.6

- Click on **Refund Processing** at the top left side of the page. Then, click on **Main**.



## 7.2 - Test a new version of the refund decision model

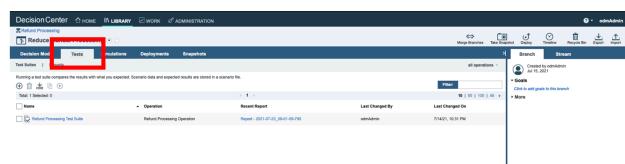
### Narration

The business analyst can also validate that the updated rules pass the regression test suite. One or more test suites can be created and executed. Let's run one now and review the results. All the scenarios succeeded, and the results were all as expected.

Once ready, the new version of the rules can be pushed into production by the business team (if they have the permission) or the IT team, depending on your governance processes.

### Action 7.2.1

- Click on the **Tests** tab.



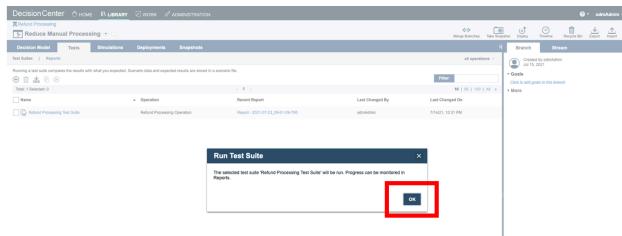
### Action 7.2.2

- Click on the **run** icon next to **Refund Process Operation**.



### Action 7.2.3

- Click **OK** on the **Run Test Suite** dialogue box. Note: Make sure you are on the **Test Suites** sub-tab and not on the Reports sub-tab.



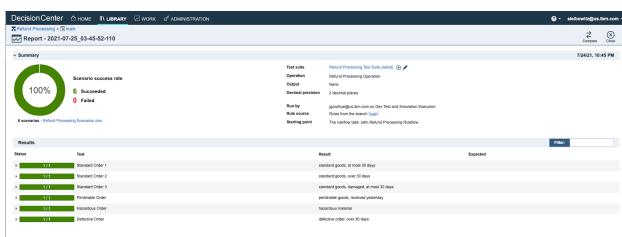
### Action 7.2.4

- Click on the report name to access the comparison report.



### Action 7.2.5

- You will see the following comparison report.



## Summary

Using the Cloud Pak for Business Automation, we had all the capabilities needed to significantly reduce the amount of manual refund processing. We combined workflow and decision automation to increase straight-through processing, which resulted in a lower average completion time, lower costs, and more consistent customer communication throughout the process.