

# Straight-through processing

300-level live demo script



## 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 capabilities - along with operational intelligence - to show how business users can lead the effort to transform customer service.

Let's get started.

## 1 - Modeling the workflow

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

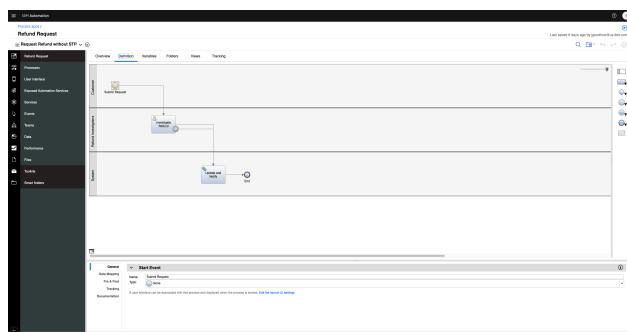
#### Narration

We will look at the process diagram for Focus Corp's refund request process in Process Designer. Within this low-code environment, the process diagram will control the execution of each refund request. The process diagram adheres to the Business Process Model and Notation (BPMN) standard. 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 **Request Refund without STP** (straight-through processing) in Process Designer, which you opened during your demo preparation.



## 2 - Executing the workflow without straight-through processing

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

#### NOTE

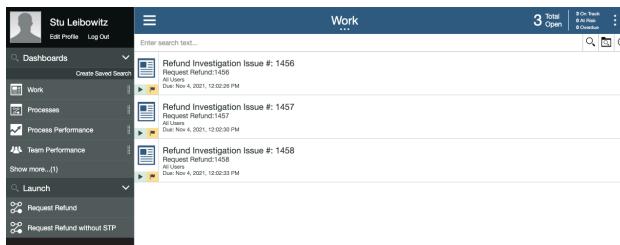
The first part of this section is for **SaaS only**. For ROKS, please refer below to **2a - Executing the workflow without straight-through processing (ROKS only)**.

#### 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 opened during your preparation. Navigator's Work Dashboard may also be used but note the capabilities are different and the default narration does not match.



#### 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 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 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 Issue** task.

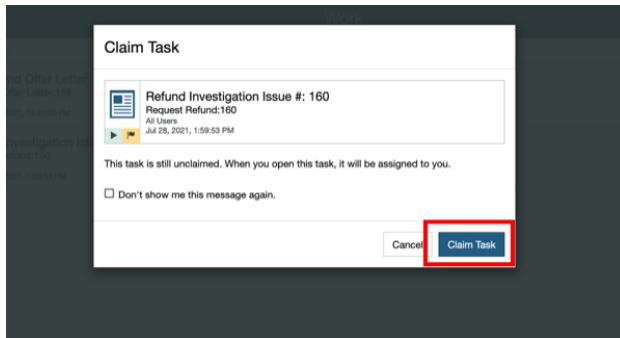


## Narration

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

### Action 2.1.3

- Click **Claim Task**.

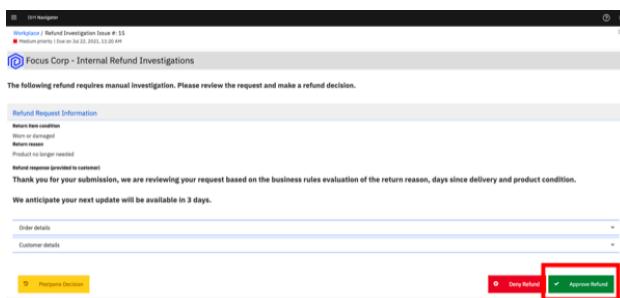


## Narration

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.

## 2a - Executing the workflow without straight-through processing (ROKS)

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

#### NOTE

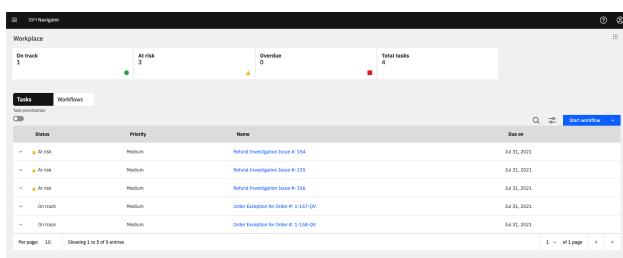
This section is for **ROKS only**. For **SaaS**, return above to **2 - Executing the workflow without straight-through processing**.

#### Narration

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

#### Action 2.1.1

- Show the **Workplace** window that you opened during your preparation.



#### Narration

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

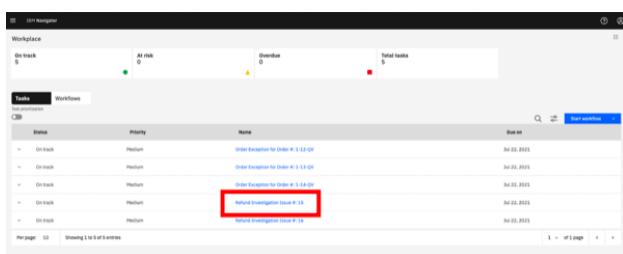
Workplace is highly customizable to fit your organization's look and feel. The responsive user interface provides flexibility to get work done anywhere, at any time, on any device type, from a desktop device in the office to a mobile device at home or at a customer site. It can be configured through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

#### Action 2.1.2

- Click any **Refund Investigation Issue** task.

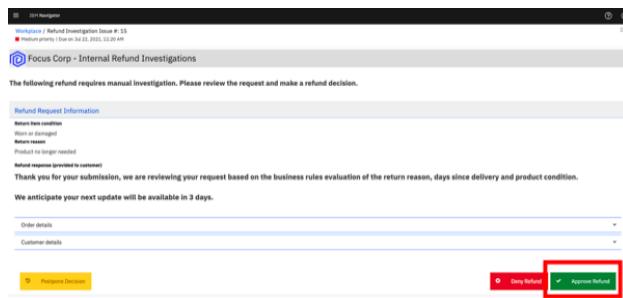


## Narration

Once I open the task, I will 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

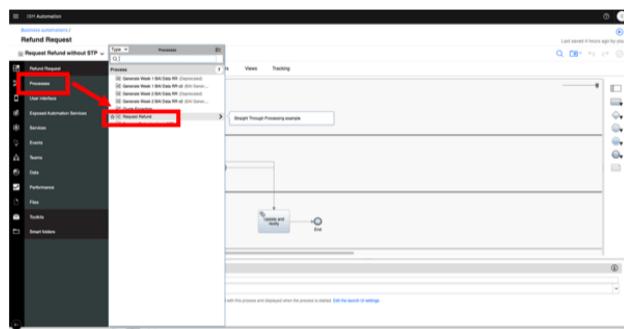
### 3.1 - Introduce straight-through processing automation

#### Narration

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

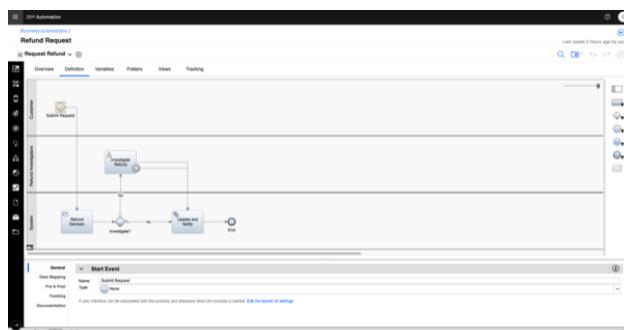
#### Action 3.1.1

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



#### 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 - Executing the workflow with straight-through processing

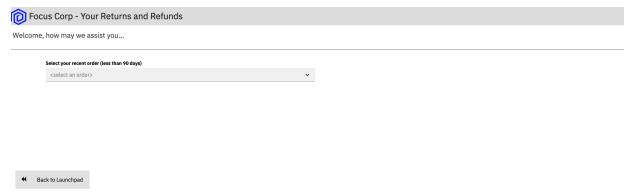
### 4.1 - Refund request approved

#### 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.



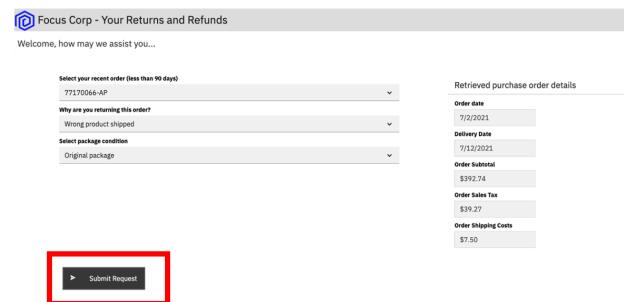
#### Action 4.1.2

- Select the order ending in 'AP.'



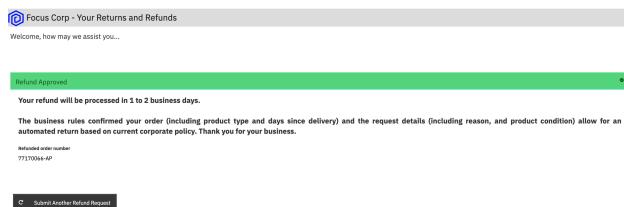
#### Action 4.1.3

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



#### Action 4.1.4

- The process executes and generates a **Refund Approved** result.



## Narration

In this first example, when the customer submits the refund request, the criteria are evaluated by business rules and 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 **Submit Another Refund Request**.

The screenshot shows a green header bar with the text "Refund Approved". Below it, a message states: "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 button labeled "C Submit Another Refund Request" which is highlighted with a red box.

#### Action 4.2.2

- Select the order ending in 'DE.'

The screenshot shows a search interface where the user has selected an order with the number "64370005-DE". This selection is highlighted with a red box.

#### Action 4.2.3

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

The screenshot shows the "Submit Request" button, which is highlighted with a red box, indicating the final step in the process.

#### Action 4.2.4

- The process executes and generates a **Refund Denied** result.

The screenshot shows a web page from Focus Corp. The header says "Focus Corp - Your Returns and Refunds" and "Welcome, how may we assist you...". A red box highlights the "Refund Denied" section. Inside, it says: "Sorry, your refund request was denied based on the business rules evaluation of the return reason, days since delivery and product condition." Below that, it says: "If you wish to open a support case, click the link below." and "Open support ticket for your order 66570095-DE". At the bottom, there is a button labeled "Submit Another Refund Request".

#### Narration

This request clearly did not meet Focus Corp's criteria and resulted in a denial because it was well outside the time window. Even though this refund request resulted in a denial, it was 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 a request requires investigation?

#### Action 4.3.1

- Click **Submit Another Refund Request**.

The screenshot shows a web page from Focus Corp. The header says "Focus Corp - Your Returns and Refunds" and "Welcome, how may we assist you...". A red box highlights the "Submit Another Refund Request" button at the bottom of the page.

#### Action 4.3.2

- Select the order ending in 'MA.'

The screenshot shows a web page from Focus Corp. The header says "Focus Corp - Your Returns and Refunds" and "Welcome, how may we assist you...". A dropdown menu is open under "Select your recent order (less than 90 days)". It lists two options: "77170088-AP" and "76913363-MA". The option "76913363-MA" is highlighted with a red box.

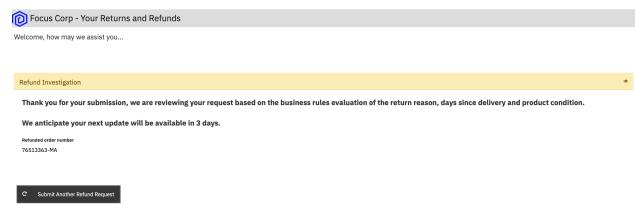
#### Action 4.3.3

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

The screenshot shows a web page from Focus Corp. The header says "Focus Corp - Your Returns and Refunds" and "Welcome, how may we assist you...". On the left, there are dropdown menus for "Select your recent order (less than 90 days)" (set to "76913363-MA") and "Why are you returning this order?". The "Why are you returning this order?" dropdown has three options: "Product no longer needed", "Select package condition", and "Worn or damaged". On the right, there is a section titled "Retrieved purchase order details" with fields for 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, there is a button labeled "Submit Request" with a red box around it.

#### Action 4.3.4

- The process executes and generates a **Refund Investigation** result.



#### Narration

In this case, workflow routes the request to a customer service agent to do the investigation.

## 5 - Monitoring operational intelligence

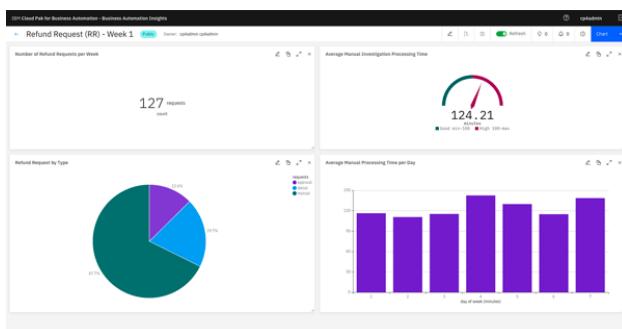
### 5.1 - Review the refund dashboard

#### 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 that you opened during your preparation. In this step, you are just speaking to the displayed dashboard.



#### Narration

So far, the percentage of manually processed requests is still around 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, the Business Performance Center is a no-code monitoring application in 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, design, and track 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 your 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 - Modeling 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** tab that you opened during your preparation.

The screenshot shows the IBM Decision Center interface. The top navigation bar includes links for HOME, LIBRARY, WORK, and ADMINISTRATION. The user is signed in as 'slbowitz@us.ibm.com'. The main area is titled 'Decision Services' and displays a grid of service cards. The cards include:

- Com\_CSI\_DisputeTransaction
- DBA-SaaSOnboarding
- Refund Processing
- Validate Invoice
- Basic Recommendation
- Customer loyalty
- Discount
- FSS\_Playground
- Minilcon Service
- Comm\_CSI\_CSP\_Sandbox

Each card shows a small icon, the service name, a dropdown arrow, and a creation date.

#### Action 6.1.2

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

The screenshot shows the same Decision Center interface as before, but the 'Refund Processing' service card is highlighted with a red box. The other services listed are:

- Refund Processing
- Scan Validation Service
- Shipment Pricing

#### Action 6.1.3

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

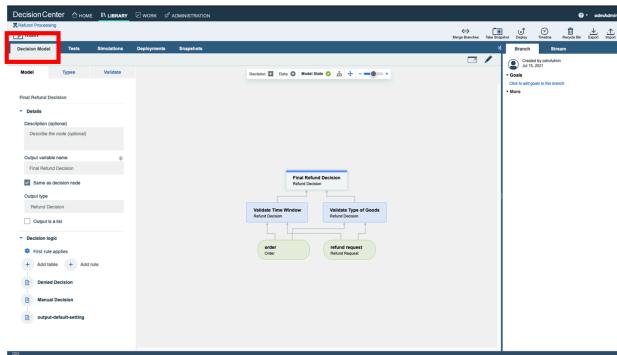
The screenshot shows the detailed view of the 'Refund Processing' decision service. The top navigation bar has 'Refund Processing' selected. The main content area is titled 'Decision Services' and shows the following details for the service:

- Created by slbowitz on Oct 18, 2021
- Last changed by slbowitz on Jul 16, 2021
- Description: Click to add a description to this decision service
- Build Options

A red box highlights the 'main' link in the left sidebar.

#### Action 6.1.4

- The next screen has several blue tabs at the top. Make sure **Decision Model** is selected.



#### Narration

This is the decision model for the refund request decision service. A decision model uses a diagram to break the decision (the top blue box) down into sub-decisions (additional blue boxes) and input data (green ovals), which all contribute to the final refund decision.

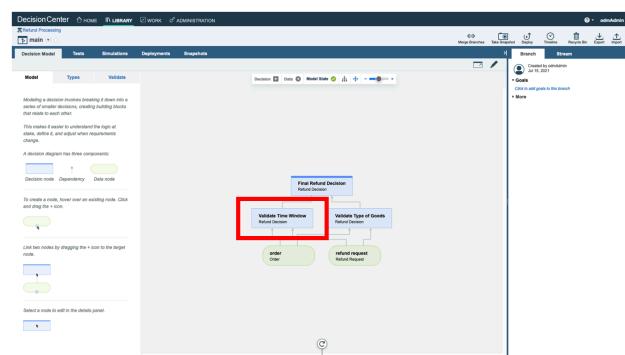
### 6.2 - Review the decision tables

#### Narration

To partially automate the refund request process, we've used two main decision tables. A decision table groups rules with similar conditions and actions but use different thresholds or values.

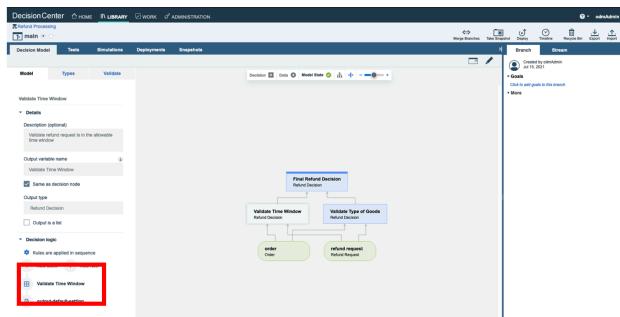
#### Action 6.2.1

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



### Action 6.2.2

- Click **Validate Time Window** in the **Decision Logic** section on the left side of the screen, scrolling down as needed.



### Narration

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

### Action 6.2.3

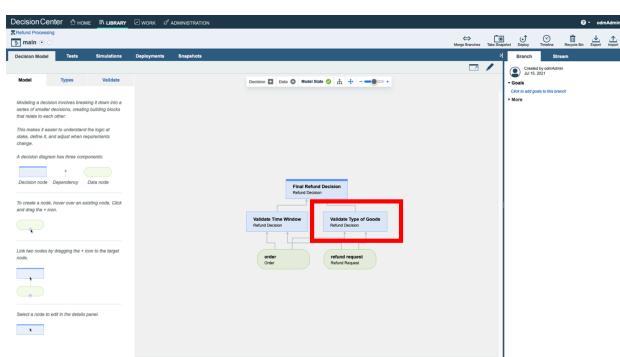
- Close the **Validate Time Window** table.

The screenshot shows the 'Validate Time Window' decision logic table. The table has four columns: 'return reason', 'days since order delivered', 'goods condition', and 'time window decision'. There are seven rows of data:

return reason	days since order delivered	goods condition	time window decision
accidental order	> 7	open box	denied
accidental order	> 15	# open box	denied
no longer need	> 30	worn or damaged	denied
damaged product	30	40	denied
damaged product	> 40		denied
Otherwise			approved

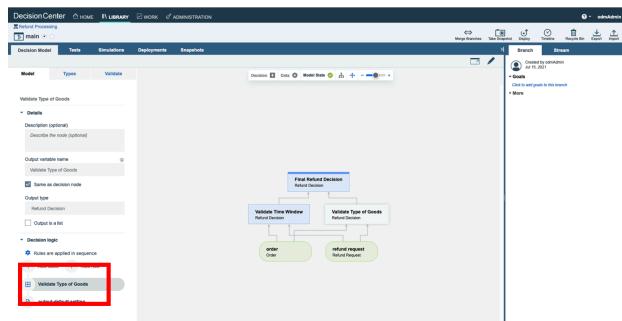
### Action 6.2.4

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



### Action 6.2.5

- Click **Validate Type of Goods** in the **Decision logic** section on the left side of the screen, scrolling down as needed.

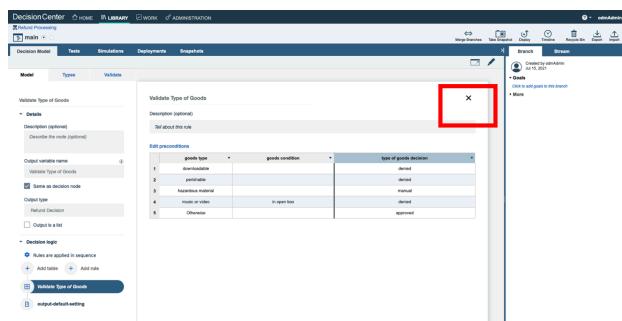


### Narration

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

### Action 6.2.6

- Close the **Validate Type of Goods** table.



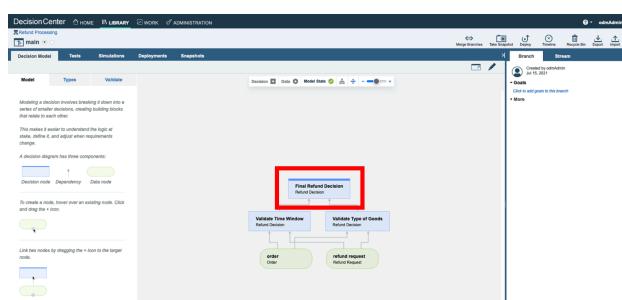
## 6.3 - Make the final refund decision

### Narration

The final refund decision is made by combining the results of the 'Validate Time Window' and 'Validate Type of Goods' sub-decisions.

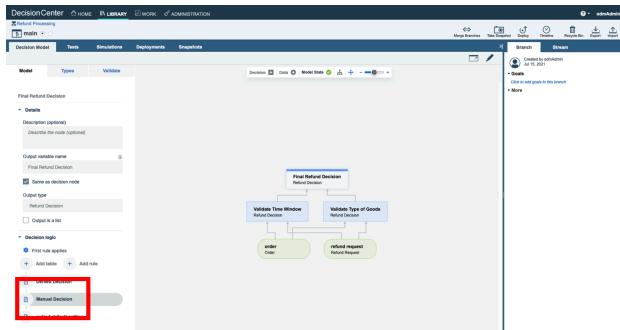
### Action 6.3.1

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



### Action 6.3.2

- Click **Manual Decision** in the **Decision logic** section on the left side of the screen, scrolling down as needed.



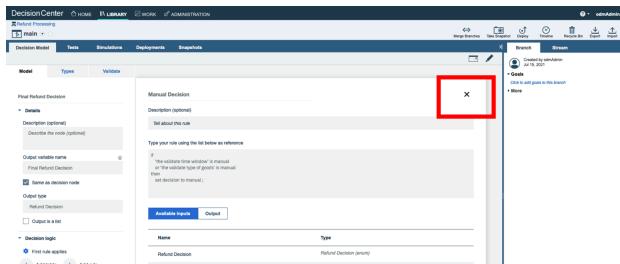
### Narration

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.

### Action 6.3.3

- Close the **Manual Decision** text rule.



## 7 - Improving and testing the decisions

### 7.1 - Compare two versions 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.

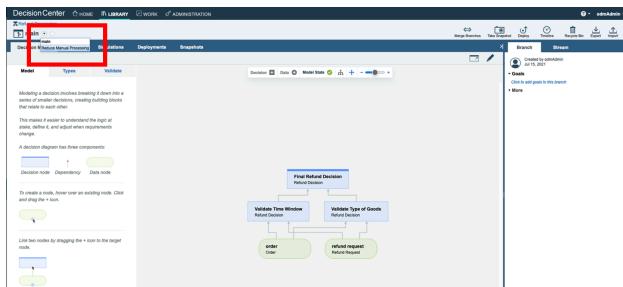
The decision model can be changed without having to change the underlying process application.

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.

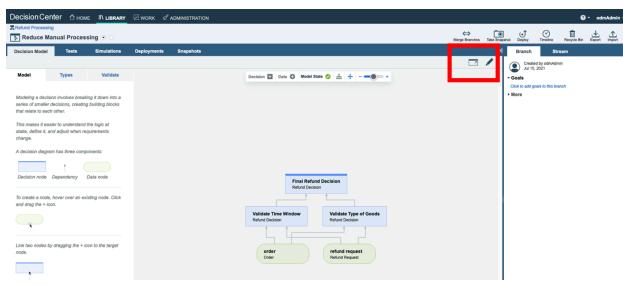
#### Action 7.1.1

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



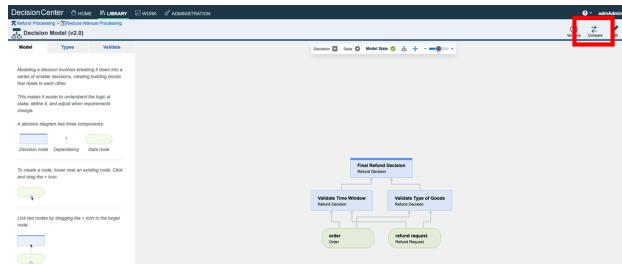
#### Action 7.1.2

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



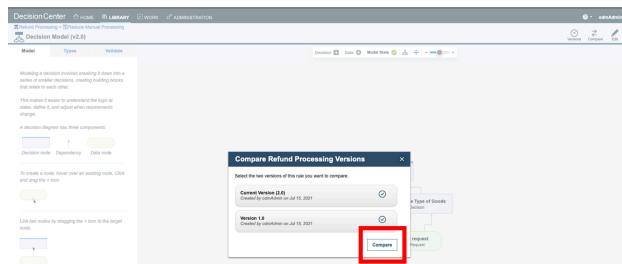
### Action 7.1.3

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



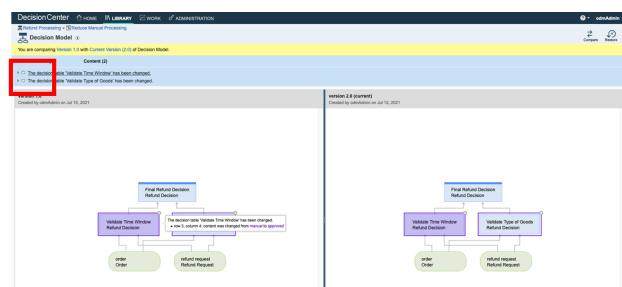
### Action 7.1.4

- When a window opens to prompt a comparison of V1.0 and the current version, click the **Compare** button.

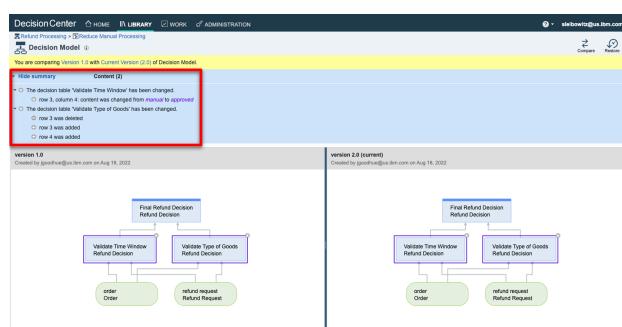


### Action 7.1.5

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



The comparison details will appear.

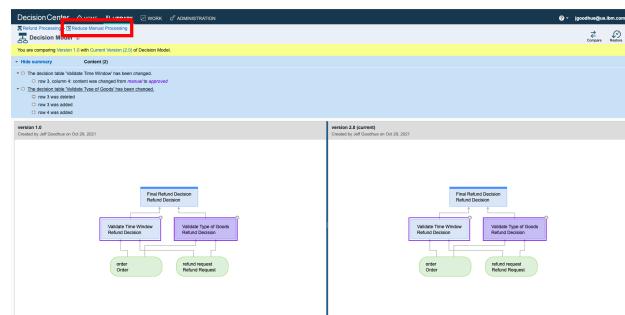


## Narration

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

- To prepare for the next section, click **Reduce Manual Processing** at the top left side of the page.



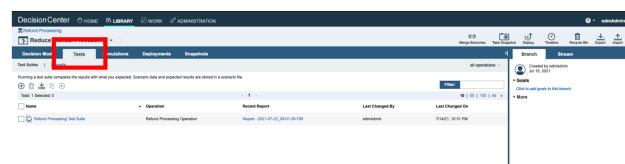
## 7.2 - Test a new version of the refund decision model

## 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.

### Action 7.2.1

- Click the **Tests** tab.



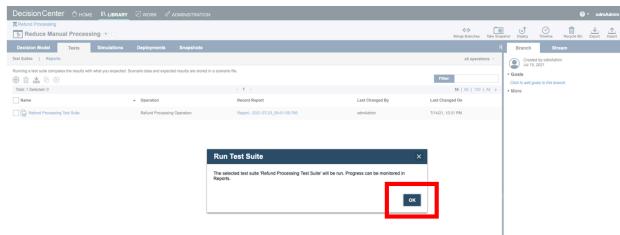
### Action 7.2.2

- Click the **run** icon next to **Refund Process Operation**. **Note:** Make sure you are on the **Test Suites** sub-tab and not on the **Reports** sub-tab.



### Action 7.2.3

- Click **OK** on the **Run Test Suite** dialog box.



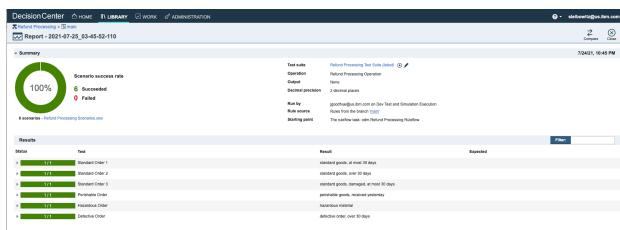
### Action 7.2.4

- Click the name of your report to access it.



### Action 7.2.5

- You will see the following comparison report.



### Narration

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.

## 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.