Camunda 8 - Getting Started with Optimize

What You Will Learn

This course provides a brief introduction to using Camunda to manage and improve your BPMN processes. You will use Optimize to create reports in order to detect potential bottlenecks or incidents in your process, and you will save those reports to collections and custom-built dashboards. Then you will improve your process based on the information you have identified.

What You Will Learn

At the end of this course you will be able to:

- Access a Camunda environment
- Access an existing process model
  - Read the process model
  - Deploy the process model using the Modeler
  - Execute several instances of the process using the Modeler
- Review the process executions to identify possible issues
  - Create three predefined reports using Optimize
  - Link the reports to a dashboard in Optimize
  - Understand how to get valuable information out of the reports
- Improve a process
  - Improve the existing process model
  - Deploy the updated process model using the Modeler
  - Execute several instances of the updated process using the Modeler
- Verify whether the process updates resulted in process improvements
  - Create new reports for the updated process using Optimize
  - Link the new reports to a dashboard using Optimize
  - Confirm that updates met identified business objectives
- Evaluate additional reports
  - Create two customized reports using Optimize
  - Understand how to get valuable information out of the reports

Business Requirement

A fictitious organization, the Camundanzia Insurance Company, is used in the scenario for this course.

Camundanzia

Scenario

The Camundanzia Insurance company has successfully applied process automation throughout their organization. As a next step they would like to detect potential bottlenecks in their main process, *Car Policy Request*. If any issue is detected the process should be updated. You have recently joined Camundanzia as a new **Process Owner** and have been assigned to the Camunda project team to handle the process improvements.

User Story

Four user stories that capture Camundanzia's requirements can be found below:

- As a **Process Owner** I want to know the average **execution time** of the *Car Policy Request* process in order to understand how much time is spent completing requests.

- As a **Process Owner** I want to know what **percentage** of policies are either rejected or approved in order to measure the quantity of requests that are successfully completed.

- As a **Process Owner** I want to know the average **task duration** time in order to identify which tasks are the most time-consuming.

- As a **Process Owner** I want to implement **decisions** based on the above information in order to improve the performance of my process.

Acceptance Criteria

You will take a Minimum Viable Product (MVP) approach to developing a dashboard that meets these requirements.

The initial acceptance criteria that you will work to are as follows:

1. The **Process Owner** can identify the average **execution time** of the *Car Policy Request* process.
2. The **Process Owner** can identify the **percentage** of policies that are either rejected or approved.
3. The **Process Owner** can identify the average **task duration** time.

Course Scope

This course is focused on the analysis and improvement of processes, rather than implementation.

Outline Solution

You now have a clear set of requirements and acceptance criteria for monitoring the Camundanzia *Car Policy Request* process. The sections below provide an overview of how to **develop reports and dashboards using Optimize** in order to meet these requirements.

Camundanzia Scenario

You recently joined Camundanzia as a new Process Owner and have been assigned to the Camunda project team. The company is already managing car policy requests with a BPMN process called *Car Policy Request*. However, some of the requesters complain about the time it can take to get the policy request approved or rejected.

As a Process Owner you know how important it is to have good **Key Performance Indicators (KPIs)**, and tools to track them. In this way it'll be easy to identify potential issues and take actions in order to improve the business process.

Your first assignment will be to **use Optimize to create reports and dashboards** in order to monitor these indicators.

Fortunately for you, a more experienced Camunda Process Owner has drafted an outline solution for you. Your task is to implement a solution based upon the outline that has been provided.

Outline Solution

An outline of the work that has to be done for each of the mentioned acceptance criteria has been provided by the more experienced Process Owner. This covers the configuration that you must perform and the Camunda components that offer the required functionality.

Review & Adjust Existing Processes

First you will need to take a look at the existing processes and prepare the environment to deploy and start multiple process instances.

Review Existing Processes

Review the *Car Policy Request* and the *Create Multiple Policy Requests* processes and make some adjustments.

Upload Existing Processes

Upload the processes to the Camunda Web Modeler.

Deploy Existing Processes

Deploy the processes using the Camunda Web Modeler.

Execute Existing Process

Execute the processes using the Camunda Web Modeler.

Define Key Performance Indicators (KPIs)

You received some feedback that some of the requesters are unhappy about the time it can take to get the policy request approved or rejected. You'll need to **define metrics**, or KPIs, that provide valuable information about about the performance of your process execution.

After a brainstorming session with the more experienced Process Owner, you have identified three KPIs:

- **Average process time execution** (the average time a process instance takes to complete).
- **Percentage of policies rejected or approved** (how many times a request is accepted and rejected).
- **Average duration of flow nodes** (how long it takes for a flow node to execute).

Evaluate Process

After creating multiple instances of the *Car Policy Request* process and defining which KPIs to measure, you'll **create a collection** for your reports and dashboards, which will display all the reports at once. Thanks to these new tools, very useful overall information about your process will be available, and potential bottlenecks will be identified.

You will evaluate reports to identify possible bottlenecks and ideas on how to improve the existing process.

Create Collection

Create a collection for your reports and dashboards.

Create Reports

Create three reports for the average process time, flow node count, and flow node duration.

Create Dashboard

Create a dashboard to display all your reports.

View Dashboard

View the dashboard that you created.

Evaluate Reports

Identify possible bottlenecks and ideas to improve your existing process.

Improve Process

You will improve the business process by **introducing new logic** in order to reduce the time to approve the policy request.

You brainstorm with other stakeholders at the company and decide to modify the process in the following way:

- Automatically **reject requests** from drivers with **less than two years** of experience.
- Automatically **approve requests** from drivers with **more than four years** of experience.
- For other cases, policy requests will continue to be **validated manually**.

Business analysts and developers will bring you a new updated business process.

Update Process

Modify the existing process in order to reduce the execution time.

Update Reports

You will update the reports and then verify whether the newly updated process meets the desired improvements, using Optimize.

Update Reports

Update the existing reports to reflect the new process updates.

Evaluate Additional Reports

You will be asked for a few more reports to find out how many years of driving experience the applicants have, and how many applications are received over time.

Create Report: Driver Experience

Create a report to measure how many years of driving experience applicants have.

Create Report: Application Requests Over Time

Create a report to measure how many applications are received over time.

Development Plan

Now that you have identified the components and features of Camunda that will be used to implement the solutions, you can create a plan of the work that needs to be performed and the tools that will be required.

- **Create a Camunda SaaS account**
    - To access the Modeler
    - To create a cluster
- **Create a cluster**
    - To access the Zeebe Engine, Operate, Tasklist, and Optimize (main tool for the objectives)
- **Create a project**
    - A convenient place to store all of the solution components
- **Upload process definitions**
    - To the Modeler
- **Deploy the process definition**
    - From the Modeler
- **Start several process instances**
    - From the Modeler
- **Create reports and dashboards**
    - From Optimize
- **Load a new version of the process definition**
    - Configured using the Modeler
- **Deploy a new version of the process definition**
    - Performed from the Modeler
- **Start several process instances for the new process definition**
    - Performed from the Modeler
- **Evaluate the reports and dashboards related to the new process definition**
    - Performed from Optimize
- **Create a new report based on process data**
    - Performed from Optimize

Create Account

In this lesson you will learn how to create a free, 30-day Camunda SaaS Trial account. This account is hosted by Camunda, and doesn't require any technical setup or installation, so it's the quickest way to get started.

With a Camunda SaaS Trial account, you can:

- Instantly start to design, automate, and monitor your processes.
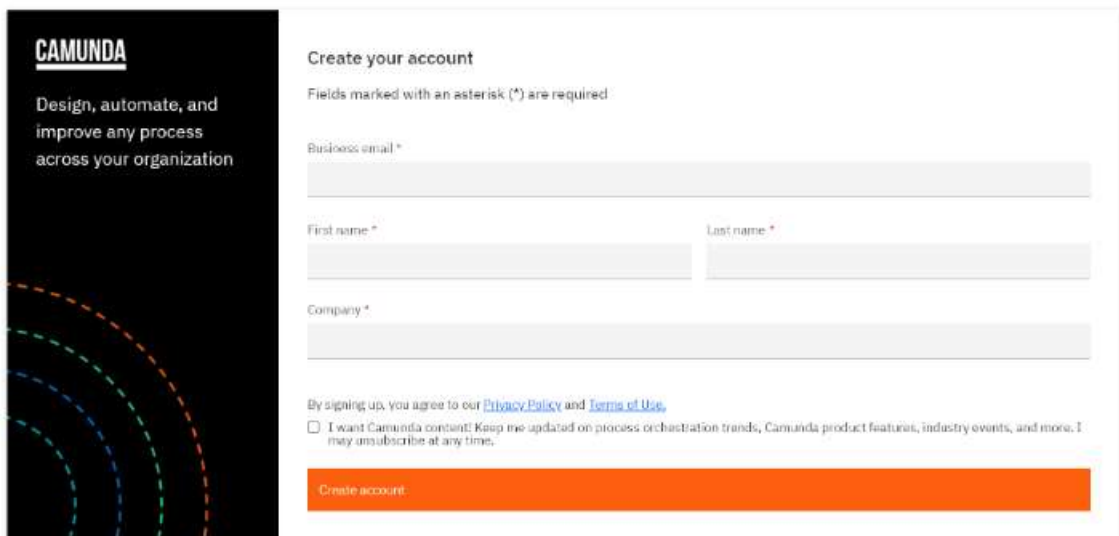
- Gain access to reporting and process intelligence, an integrated form designer, and community support.
- Upgrade to an enterprise plan, if you like.

This lesson can be skipped if you already have a *Trial*, *Starter* or *Enterprise* plan for Camunda SaaS.

Create a Camunda SaaS Account

1. Navigate to the Camunda SaaS signup page.

2. Enter your information into each of the fields, and then proceed through each of the following signup pages.
3. When you arrive at the plan recommendation page, click **Confirm SaaS Trial**.

4. Create a password, then click **Log in to Camunda**, or you can log in using a [Google](#) or [GitHub](#) account.

Log in to Camunda Console

1. Log in with your email and password, or by using the **Continue with Google** or **Continue with GitHub** buttons.
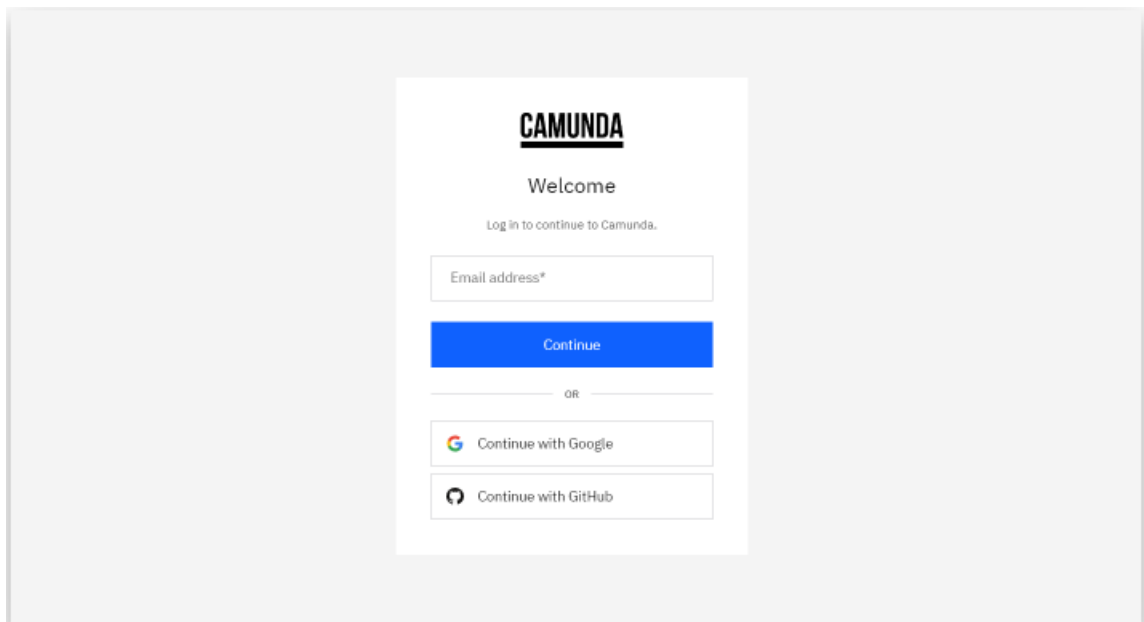
2. After logging in, you will arrive at the Camunda Console Dashboard, where you can manage the clusters, diagrams, and forms that you will deploy to Camunda.
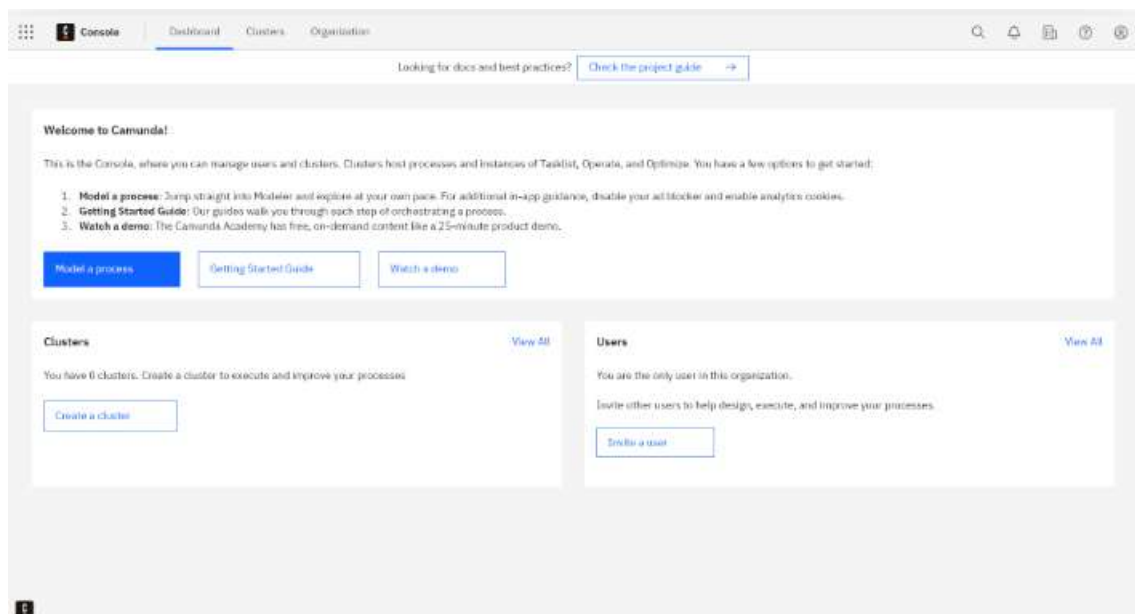
Navigate to each of the Camunda tools by using the **Camunda components** navigation.

Congratulations! You created a Camunda SaaS account and successfully logged in.

Create Cluster

We will first need to create a **Cluster** in our Camunda account which can be used to launch new process instances from the process definition that we will be creating.

When using the Trial Plan of Camunda SaaS, it is only possible to create one cluster (The **Create New Cluster** button will be disabled if a cluster already exists). To create a new cluster, you must first delete the existing cluster using the steps below.

You can view the details of any clusters that have been created in your account by clicking on **Clusters** in the top menu bar of the Camunda Console.
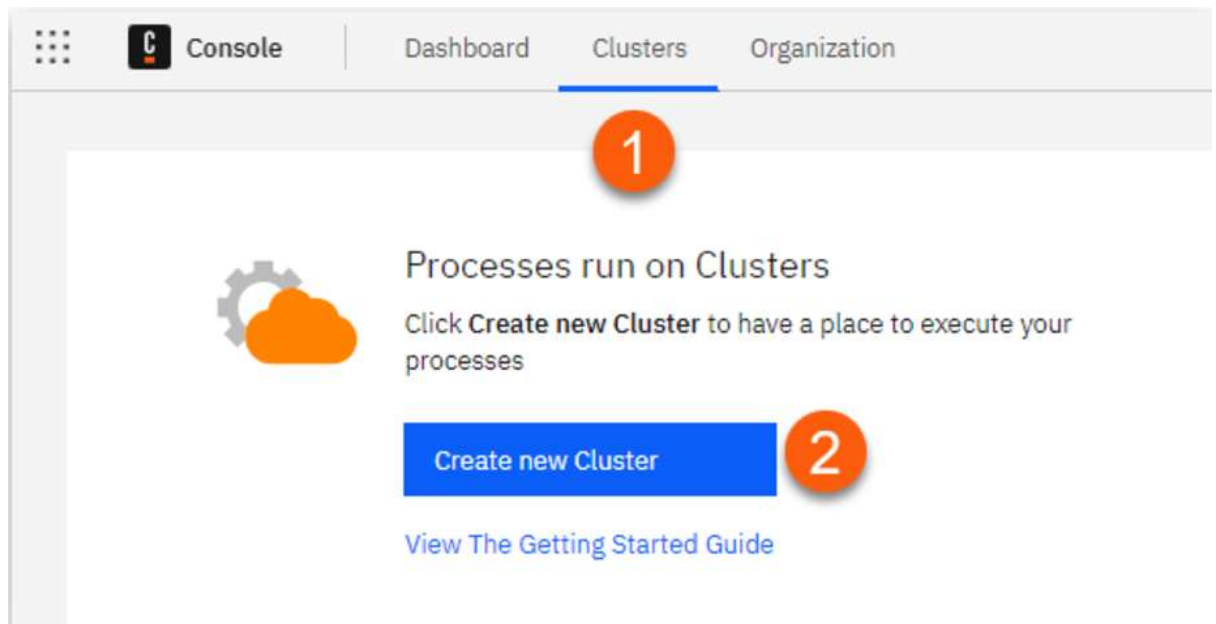
Create a Cluster

This section can be skipped if you already have access to a Cluster in Camunda SaaS

Follow the steps below to create a new **Cluster**:

1. Navigate to **Clusters** from the top menu of the Camunda Console.
2. Click the **Create New Cluster** button in the center of the screen.

3. Type a **Name** for the cluster. For this course we will be using *Camundanzia*.
4. Select a **Type** for the cluster. For this course we will be using a *Trial Cluster*.
5. Select a **Region** for the cluster. For this course will be using *Iowa, North America*.
6. Select from either *Stable* or *Alpha* for the **Channel**. For this course we will be using *Stable.*

Stable: Provides the latest feature and patch releases ready for most users at a minimal risk. The releases follow semantic versioning and can be updated to the next minor or patch release without data loss.

Alpha: Provides preview releases in preparation for the next stable release. They provide a short-term stable point to test new features and give feedback before they are released to the stable channel. Try these to ensure the upcoming release works with your infrastructure. These releases cannot be updated to a newer release, and therefore are not meant to be used in production.

7. Select a **Generation** for the cluster. For this course we will be using *Camunda 8.5.*

Generation refers to the version of **Camunda** that will be deployed to the cluster.

8. Enable **Automatic cluster updates** to eventually update the cluster once a new patch release is available
9. Select a **Cluster tag** to clearly distinguish between different stages of the software development lifecycle. For this course we will be using **dev**
10. Click the **Create cluster** button to create the cluster

11. You will now be re-directed to the **Clusters** page where you will be able to see your cluster being created (you may need to refresh the page before the cluster appears). The state of the cluster will start with *Creating* and will reach *Healthy* after a couple of minutes.

12. When the cluster is in the *Creating* state, click on the cluster name to view the cluster details.

13. The **Cluster Details** page will open which will show the current status of all components. The cluster will change to a *Healthy* status once all four components have been successfully created.

14. Your cluster is available for use once all four applications are displaying *Healthy*.

Congratulations! You have now created a Camunda cluster which can be used to execute process instances.

Review & Adjust Process

The Camundanzia Insurance Company is currently managing car insurance policy requests with a main BPMN process called *Car Policy Request*. However, some requesters are unhappy with the resolution time of this process.

Review the Car Policy Request Process
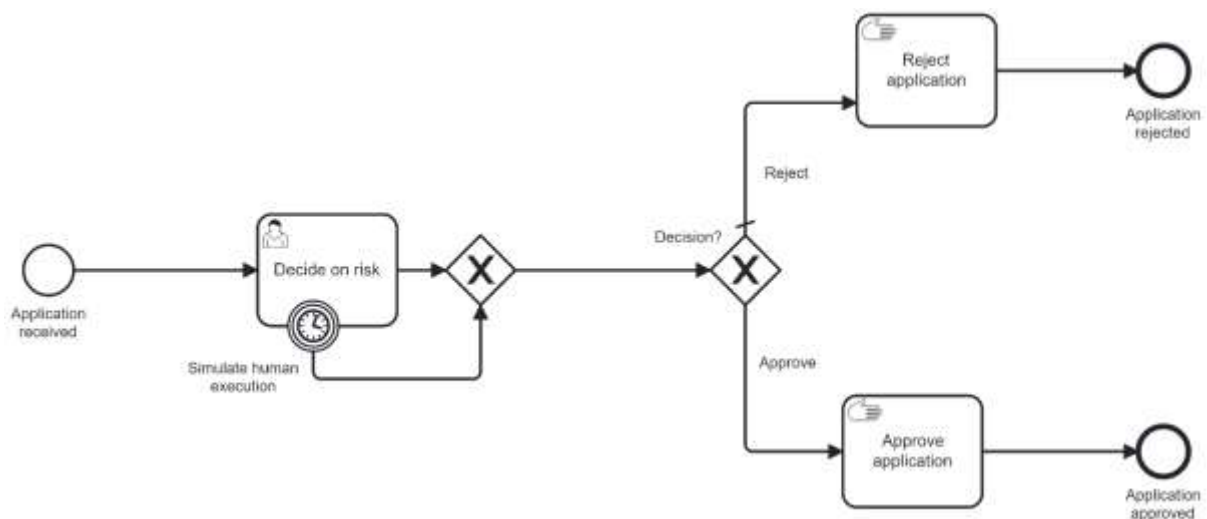
Car Policy Request Process

- *Application received*: A start event that initiates the process.
- *Decide on risk*: A user task that is assigned to the manager who will decide whether to approve or reject the application.
  - *Simulate human execution*: An interrupting timer boundary event that simulates the time required for the manager to complete the task.
- *Reject application* and *Approve application*: Manual tasks that represent which action the process will take based on the manager's decision.

Adjust the Process for Automatic Execution

In order to monitor the process and verify the defined metrics, you will **create several process instances**. To avoid waiting for the manager to approve or reject the application for each process instance, you **added a *boundary timer event* to the *Decide on risk* task**. This timer event simulates the time required for the manager to execute the task.

In this scenario, the *Approve application* and *Reject application* tasks are manual tasks to simplify the configuration, but in a real life scenario they would likely be service tasks.

Create Another Process to Run Multiple Instances of Car Policy Request

You created another process called *Create Multiple Policy Requests* that contains a task called *Call multiple policy requests*. This process will execute 20 instances of the *Car Policy Request*, and uses out-of-the-box BPMN functionalities:

- 👓Call activities
- 👓Multi-instance

Create Multiple Policy Requests Process

The technical description of these two processes is out of scope for this exercise. For the purpose of this course, you will only deploy and execute them on your Camunda cluster.

Review Existing Processes

You successfully reviewed and adjusted the *Car Policy Request* and the *Create Multiple Policy Requests* processes.

Configure Environment

Create a New Project and Upload the BPMN Diagrams

1. Download the process definitions from GitHub ☞ here.
2. Navigate to **Camunda Web Modeler** and click **New project**. Name the new project *Camundanzia*. (Note: If you already have a **Camundanzia** project due to completing other Camunda courses, you can skip this step.)
3. In the *Camundanzia* project, create a new folder (**Create new** > **Folder**), and name the folder *Car Policy Requests*.
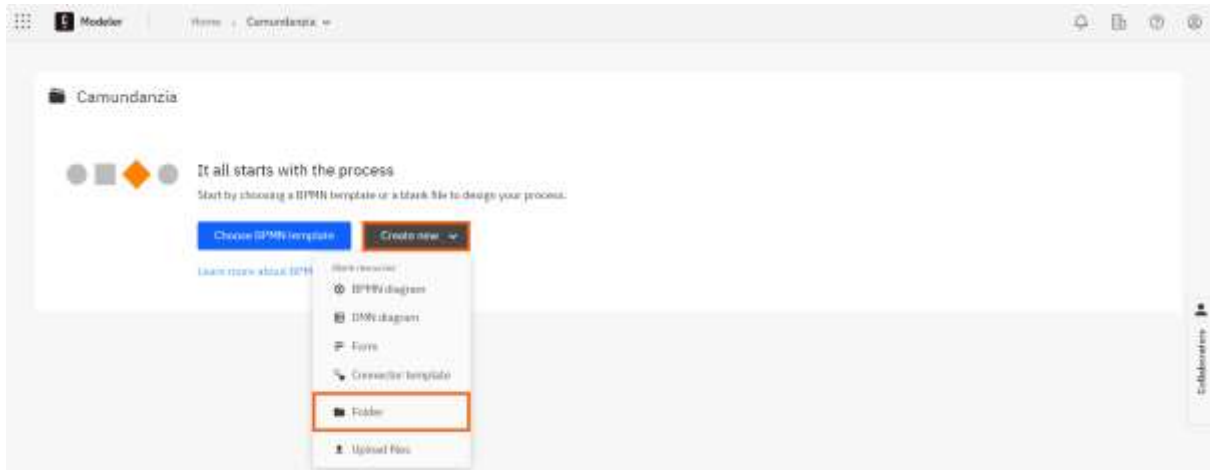
4. In the *Car Policy Requests* folder, upload the two BPMN files that you downloaded in step 1 (click **Create new** > **Upload files** and select the files).
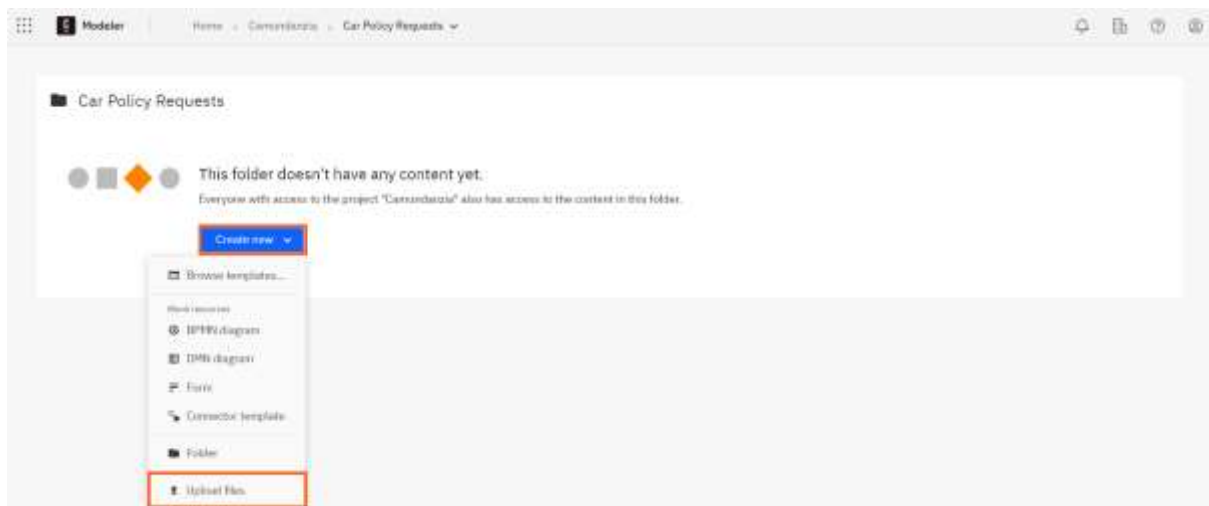
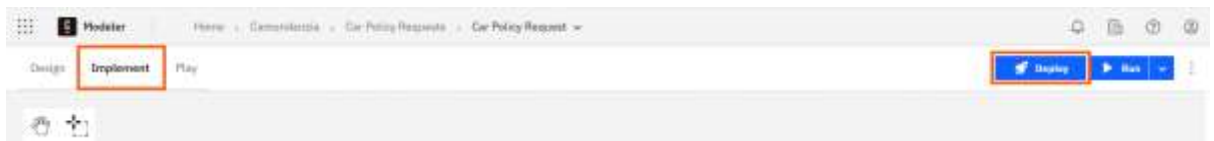5. Your project now contains the two processes:

You succesfully uploaded the existing processes using the Camunda Web Modeler.

Deploy Process Definitions

Deploy Process Definitions

1. Open the *Car Policy Request* process.
2. Verify that you are in **Implement** mode (top left), and then click **Deploy**.

3. Be sure the *Camundanzia* cluster is selected, and then click **Deploy** again.

4. Repeat these same steps to deploy the *Create Multiple Policy Requests* process.

Verify the Deployment

Use *Operate* to verify that both processes were correctly deployed in the engine.

1. Switch to **Operate** by using the navigation in the top left corner.

2. From the Operate dashboard, notice that the *Car Policy Request* and *Create Multiple Policy Requests* processes were deployed.

You succesfully deployed the existing processes using the Camunda Web Modeler and checked them in Operate.

Run Process Instances

Execute the Processes

Now that you've deployed the processes you can execute them. You only need to run the *Create Multiple Policy Requests* process, because it will automatically call the *Car Policy Request* process using a call activity.

1. Return to the **Camunda Web Modeler** and then open the **Create Multiple Policy Requests** process.
2. At the top right, click **Run**. In the dialog box that appears, ensure the *Camundanzia* cluster is selected, leave the variables section empty, and click **Run** (at the bottom).
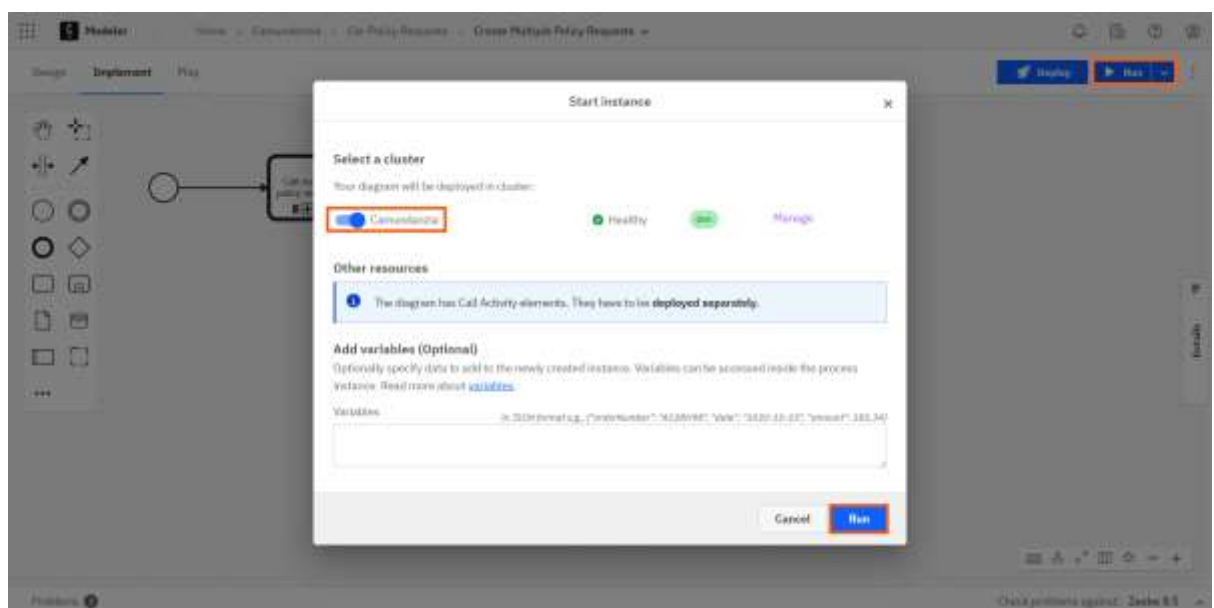
The process instance calls the *Car Policy Request* process, and 20 new instances of this process are completed.

It takes about 20 seconds for all the instances to complete.

Check the Result

1. Navigate to **Operate** and then click on the *Car Policy Request* process.
2. Ensure that **Finished Instances** is selected. Notice that 20 process instances were executed. In the diagram, notice how many processes were approved (12) and how many were rejected (8).

You succesfully executed 20 process instances of the existing process using the Camunda Web Modeler and then verified the instances in Operate.

Create Collection

Evaluate Against KPIs

It's time to evaluate how the process is behaving against the KPIs that you defined. As a reminder, you want to know:

1. The **average completion time** for a process instance.
2. **How many requests** are either accepted or rejected.
3. **How long it takes for a flow node to execute** (specifically, the execution time of the *Decide on risk* task).

A flow node is any BPMN element (such as an event, task, gateway, etc.).

Introducing Optimize

You'll use ∞**Optimize** to create **three reports** to track these KPIs and then combine them together into a dashboard. Optimize is part of Camunda SaaS and allows users to collaboratively access reports, share process intelligence, analyze bottlenecks, and examine areas of improvement in business processes by leveraging data collected during process execution. To get started with Optimize, start by creating a collection to store the reports that you will create.
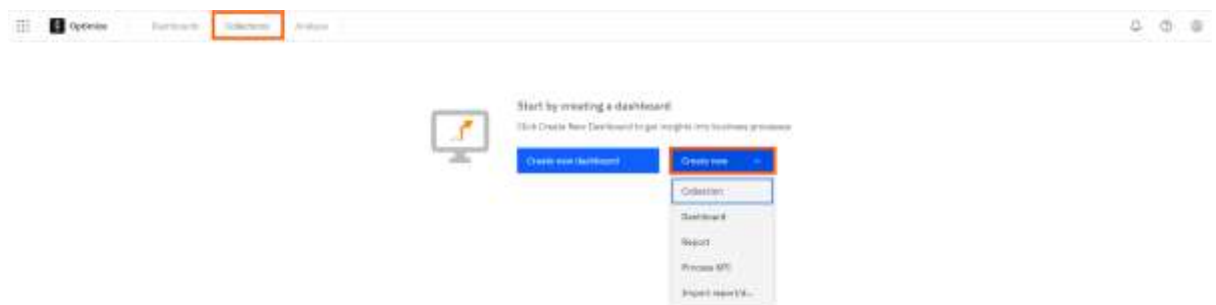
Create a Collection in Optimize

A collection is a group of data sets, similar to project folders, used for housing dashboards and/or reports.
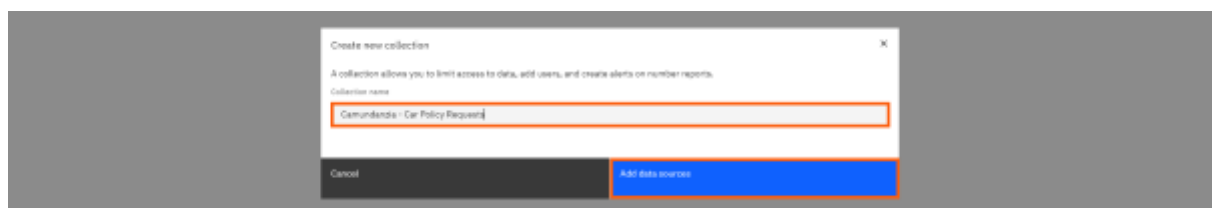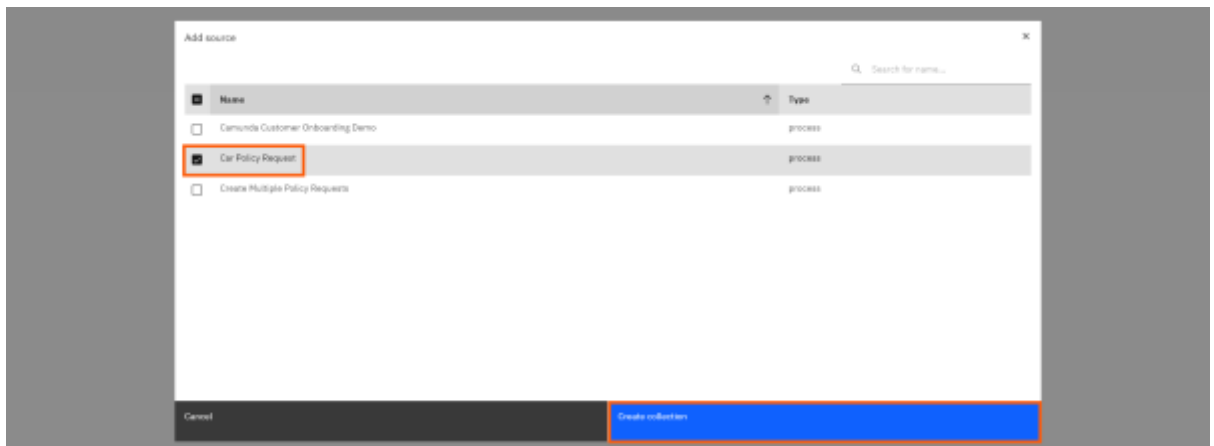
1. Navigate to **Optimize**.
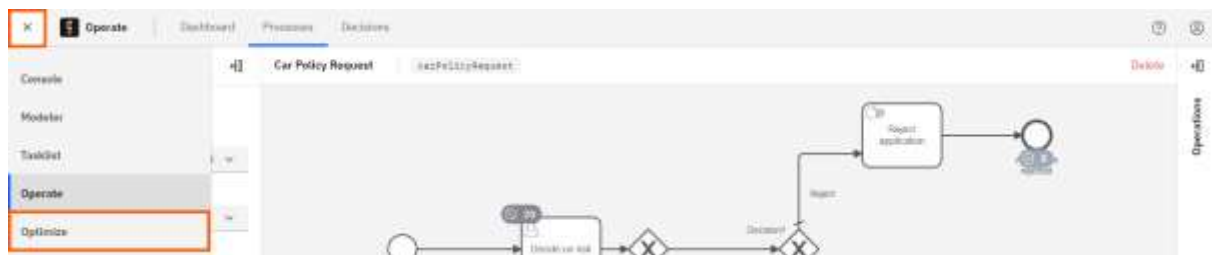
2. Click the **Collections** tab, then click **Create new** > **Collection**.

3. Name the collection *Camundanzia - Car Policy Requests* and then click **Add data sources**.

4. In the **Add source** dialog box, **select only** *Car Policy Request* and then click **Create collection**.

5. There is nothing in the collection yet, but this is where you will add your reports and dashboards.

You succesfully created a collection for your reports and dashboards.

Create Report: Average Duration
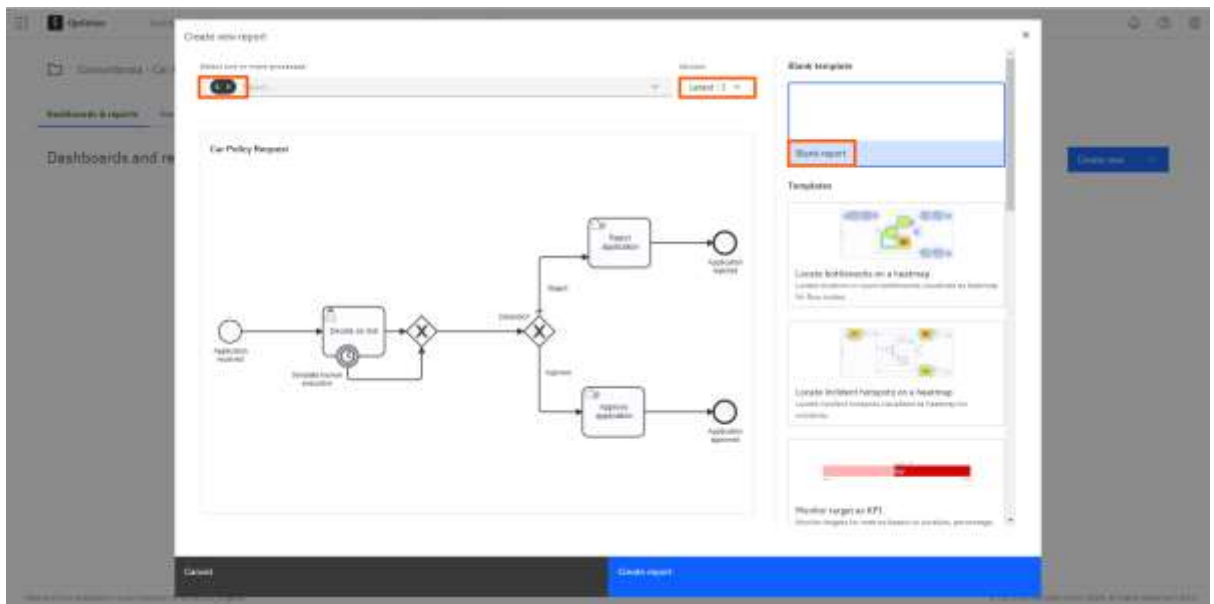
Create Average Duration Report

It's time to create your first report, which tracks the **average process instance duration**.

1. From within the **Camundanzia - Car Policy Requests** collection in Optimize, click **Create new** > **Report** (located at the top right)

2. In the **Create new report dialog** that appears, set the following:

- Select one or more processes: **Car Policy Request**
- Version: **Always display latest**
- Blank template: **Blank report**
 - This is a template that helps you to customize reports.

3. Click **Create report**. On the next screen, set the following:

- Rename the report to *Car Policy Request - Average Process Time*
- Enable **Update preview automatically**
- Report Setup
  - View: **Process instance**
  - Measure: **Duration**

After setting these parameters, the average process time will appear on the screen.
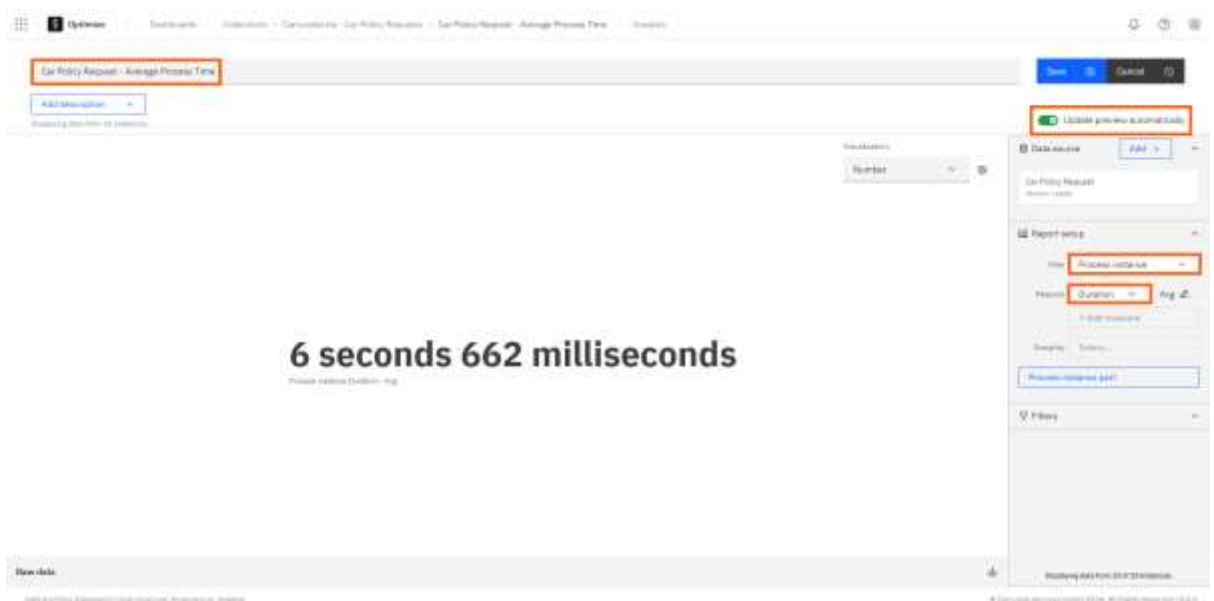
4. Click **Save** to save the report to the collection. The report will look similar to this:
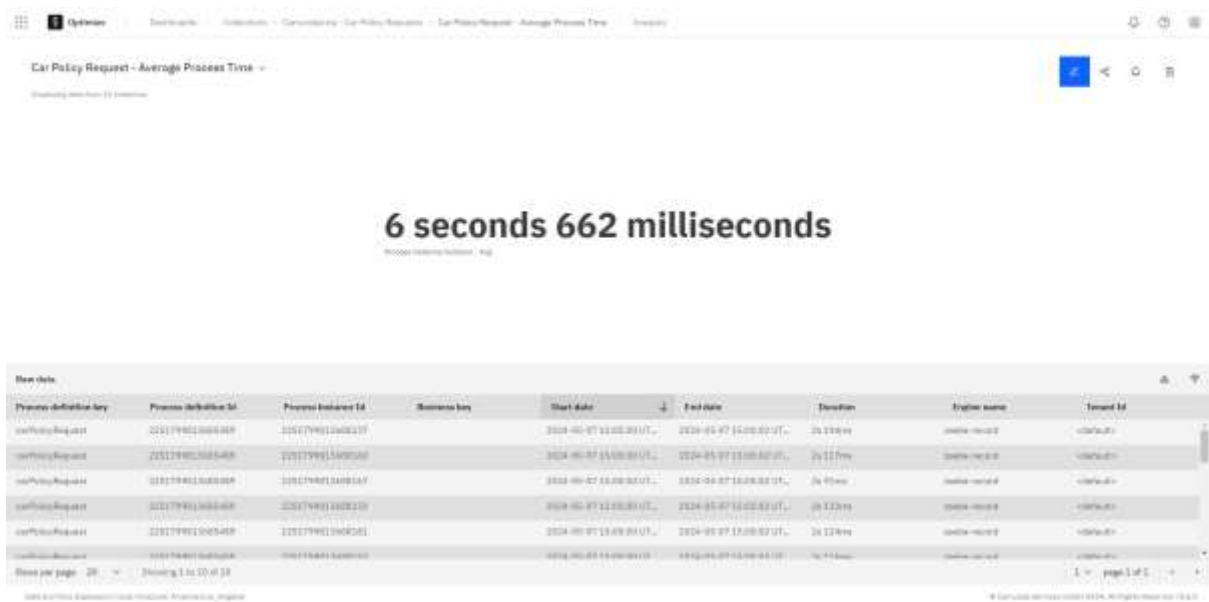
Review

This report uses pre-configured **Process instance** and **Duration** properties. Modifying the properties of a report will lead to different report visualizations. Properties for your reports include:

- **Data source**: the source for collecting data.
- **Report setup**: the configuration of your report regarding the information you want to use and display.
  - o **View**: the data to be displayed (raw data, process instance, incident, flow node, user task, variable).
  - o **Measure**: the way you collect the data (count, percentage, duration) and the aggregations you can set (sum, minimum, maxium, average), percentile aggregations included. You can also add more measures.
  - o **Group by**: display the collected data into groups.
  - o **Process instance part**: set what part of your process definition to collect.
- **Filters**:
  - o **Filter process instances** by instance state, instance date, flow node date, instance duration, flow node execution, incident, variable.
  - o **Filter flow nodes** by flow node state, flow node date, flow node duration, incident, flow node selection.

In the next report you will use a different report template that is already pre-configured.

Create Report: Flow Node Count

Create Flow Node Count Report

Now create another report to track **how many times a flow node is executed**.

1. Return to the **Camundanzia - Car Policy Requests** collection using the breadcrumb navigation in the top header.
2. Repeat the same steps to create a new report, but this time select **Locate bottlenecks on a heatmap**. Then click **Create report**.
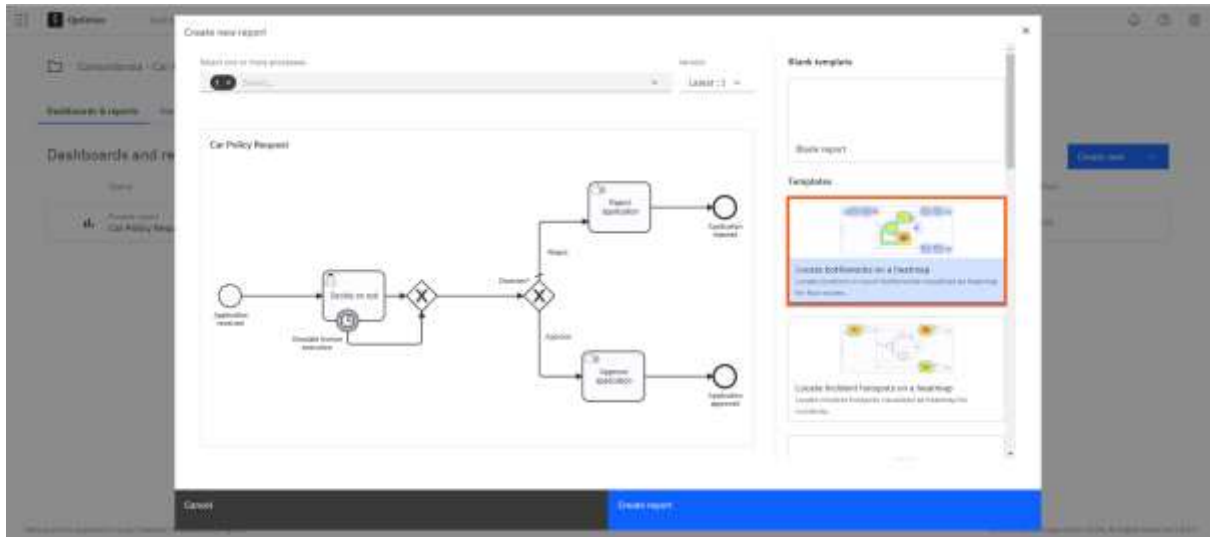
3. Rename the report to *Car Policy Request - Flow Node Count*.
4. In the property panel at the right, set **Measure** to **Count** and enable **Update Preview Automatically** to immediately see the result.

5. **Save** the report. It will look similar to the following:

Review

This time you used the **Heatmap: Flow Node Count** template, which is useful for displaying the counts (flow node executions) for any flow node in the selected data source.

Here is a quick review of the properties you used:

- The **Data source** is the *Car Policy Request* process.
- The **View** is **Flow Node**, because you want to display the flow nodes of the process.
- The **Measure** is **Count**, because you want to count its execution.
- The **Group by** is **Flow Nodes**, because the count is grouped by each flow node.

Locate the **Visualization** dropdown selector at the right. It is set to **Heatmap** to easily display the execution frequency of each flow node on the process diagram. You can select a different visualization to display the data in a table, bar chart, line chart, or a pie chart.

Create Report: Flow Node Duration

Create Flow Node Duration Report

Now create the final report to show the **average flow node duration**.

1. Repeat the same steps to create a new report. Like last time, choose **Locate bottlenecks on a heatmap** and click **Create report**.
2. Update the report name to *Car Policy Request - Flow Node Duration*.
3. Ensure **Measure** is set to **Duration**, and then save the report.
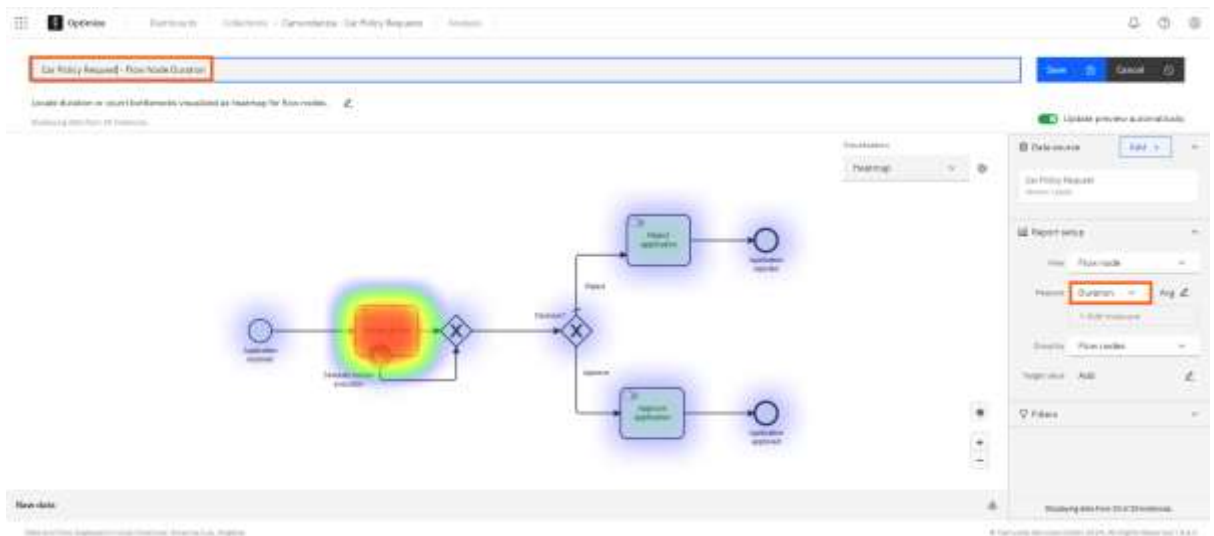
Review

The template used here is the same as the one used for flow node count, but you slightly changed the way it collects the data. Instead of measuring the count of flow nodes, you got the **average duration** of each flow node by using **Duration** as measure. The **Heatmap visualization** is convenient for easily displaying the duration of each flow node on the process diagram.
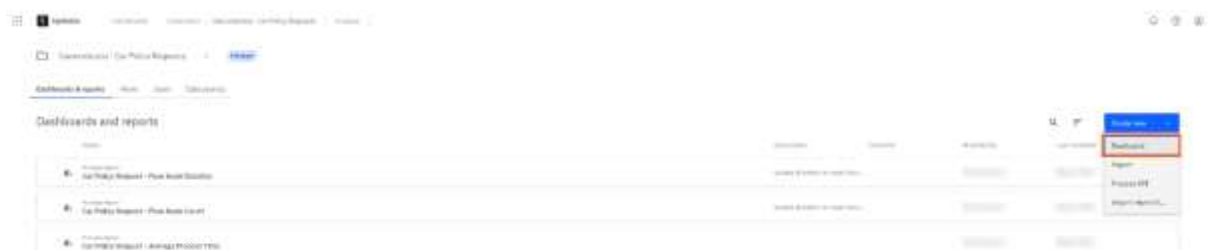
Create Reports

You succesfully created three reports for the average process time, the process flow node count, and the process flow node duration.
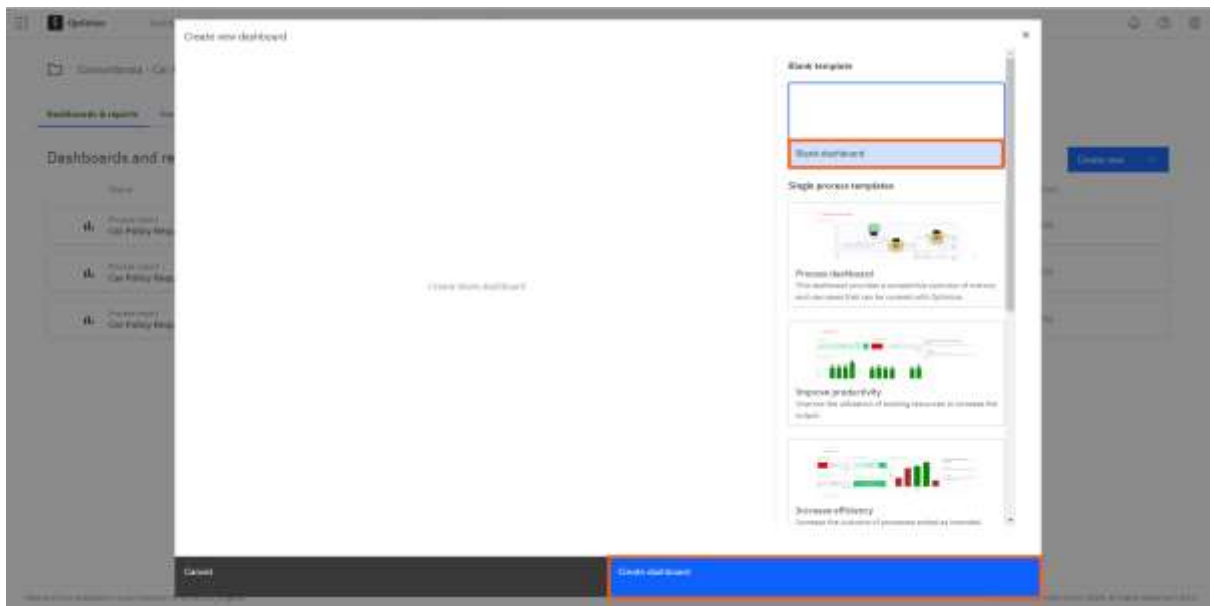
Create Dashboard

Now that you have the three reports, create a dashboard to display them all.

Follow these steps to create your dashboard:

1. Return to the **Camundanzia - Car Policy Request** collection using the breadcrumb navigation in the page header.
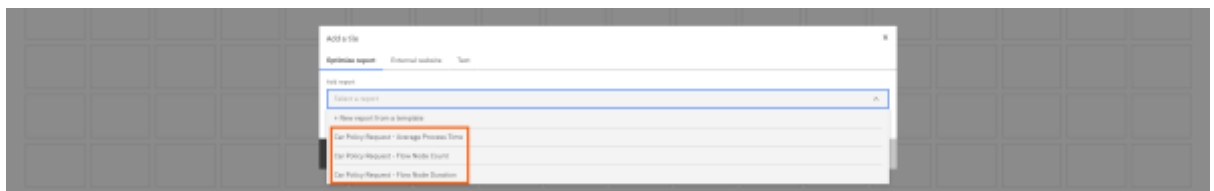2. Click **Create new** > **New Dashboard**.

3. Choose the **Blank dashboard** template option and then click **Create dashboard**.

4. Rename the dashboard to *Car Policy Request Dashboard* and then click **+ Add a tile**.

5. One at a time, select each of the three reports you created and click **Add tile**.

6. Place each tile on the dashboard as you like. As you arrange the tiles, they appear slightly dim, which indicates they have not yet been saved. You can click and drag the tile size from the bottom corner of each tile, if you like. When you are happy with the arrangement of the tiles, click **Save**.
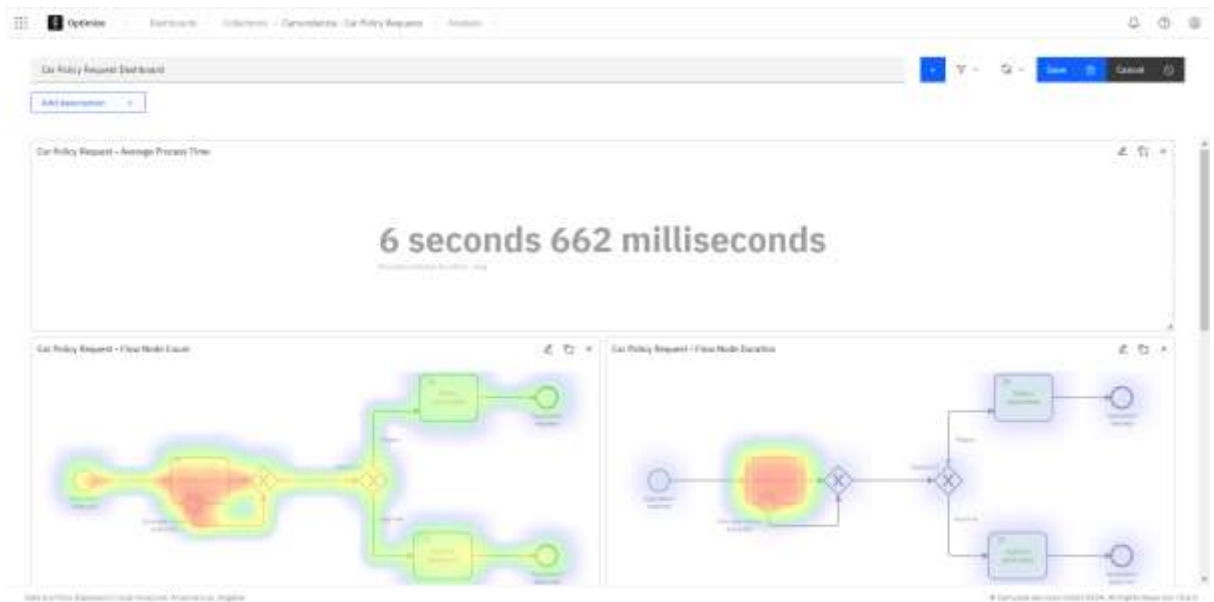
7. After saving your dashboard, the tiles will look more vibrant, similar to the following:
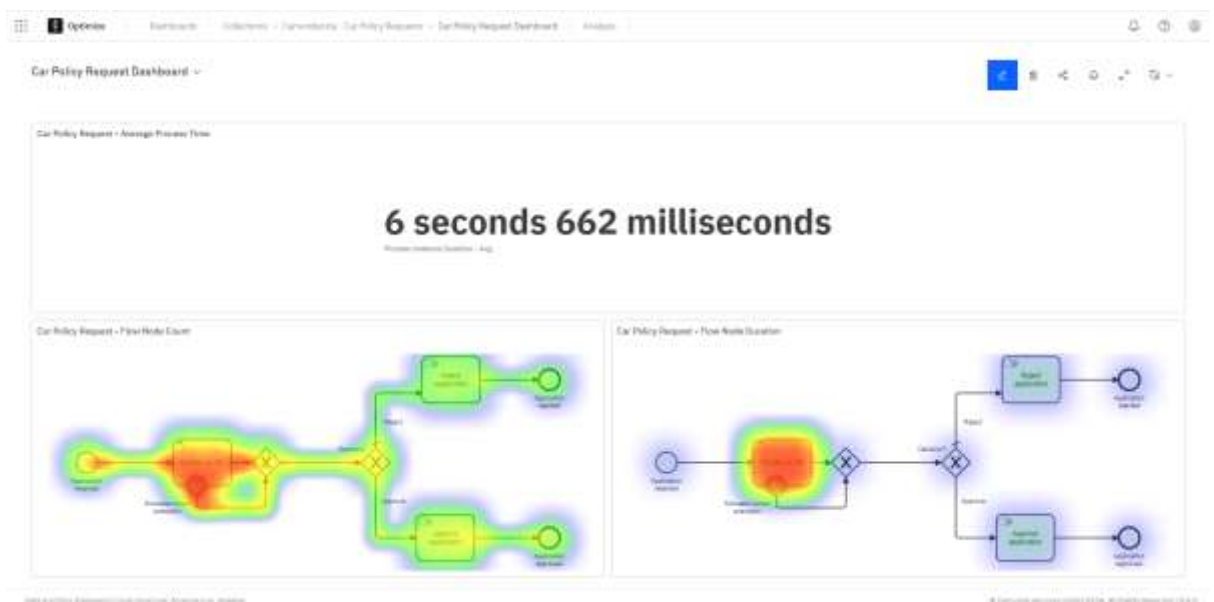
Single Process Templates
You went through the process to create a dashboard manually from scratch, but there is also the option to use templates for dashboards, which can save some time. To use the template, select the **Single process templates** option instead of **Blank template** when you create a dashboard, and you will get a dashboard with a couple of pre-defined reports.

Create Dashboard
You successfully created a dashboard to display all your reports.

Evaluate Reports

Take a moment to analyze the reports in the dashboard that you created.

Average Process Time

The data you initialized at the beginning of this course was populated in seconds. For the purpose of this course, **pretend that the process took days, instead of seconds,** to complete.
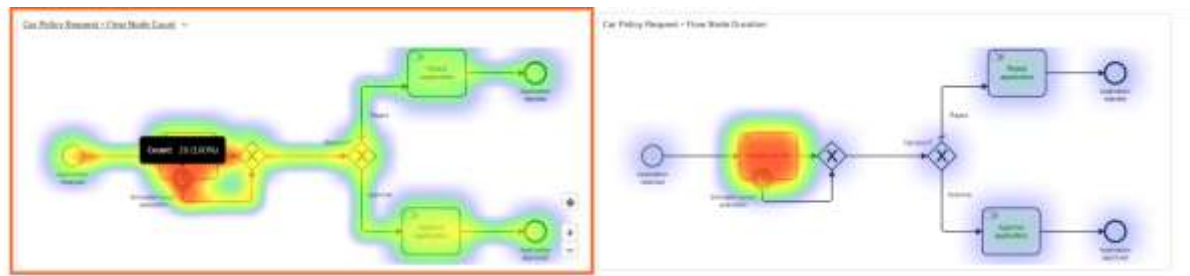

Notice the *Car Policy Request - Average Process Time* report. In your simulation, the process took **more than six days** to complete, on average. This is how long it takes for a car policy request to be approved or rejected. The Camundanzia management feels that this is too long, and would like to reduce the process completion time to **less than three days**. How can you reduce the process completion time?

Tip

If you know which task takes longest to complete, you can modify the process to try to shorten its duration.

Flow Node Count

Locate the *Car Policy Request - Flow Node Count* report. Notice that the task *Decide on risk* is highlighted in **red**. This is because it is the first task in the process, and was **executed 20 times - once for each time the process was executed**.

By hovering over the *Reject application* and *Approve application* tasks, you can see that **eight applications were rejected (40%)** and **twelve applications were approved (60%)**.

Flow Node Duration
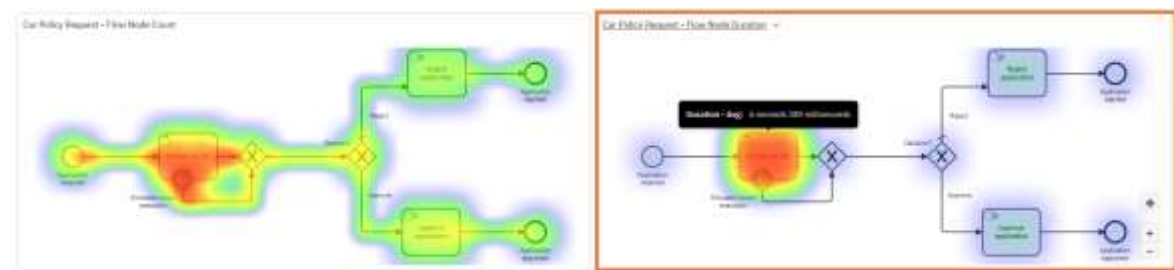
Locate the *Car Policy Request - Flow Node Duration* report. Notice that the *Decide on risk* task, is also highlighted in **red** here, which indicates that this task occurs more frequently than the others. **This could be a potential bottleneck**. By hovering over the task you can see that it takes **almost 7 days to complete**, on average.

Conclusion

You review these reports with the Camundanzia Business Analysts, Subject Matter Experts, and other stakeholders to identify ideas for how to **improve the process in order to reduce the execution time**.

Tip

If you reduce the time for executing the *Decide on risk* task, you'll also reduce the global process time.

Evaluate Reports

You have successfully identified possible bottlenecks and ideas to improve your existing process.

Explore Dashboards

Explore Optimize Dashboards

You have created custom dashboards to display the information from your reports. Now, familiarize yourself with the default dashboards that Optimize provides.
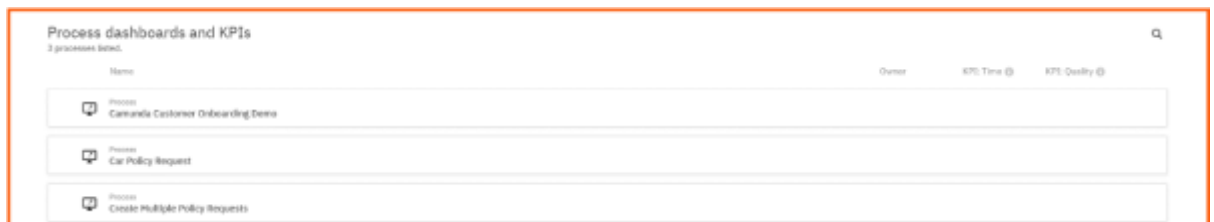
1. Navigate to **Dashboards**, using the navigation at the top left. This is where you can find the default dashboards that Optimize provides.

2. Notice the **Adoption** dashboard, which is located at the top of the page. This integrates data from all processes in one view.


3. Below that, the **Process dashboards and KPIs** section gives you an overview of all the processes and their status on a single page. This section also allows you to set a process owner and take responsibility of a process, viewing time, and quality KPIs to track process performance. Visit Camunda Documentation to learn more about process dashboards.
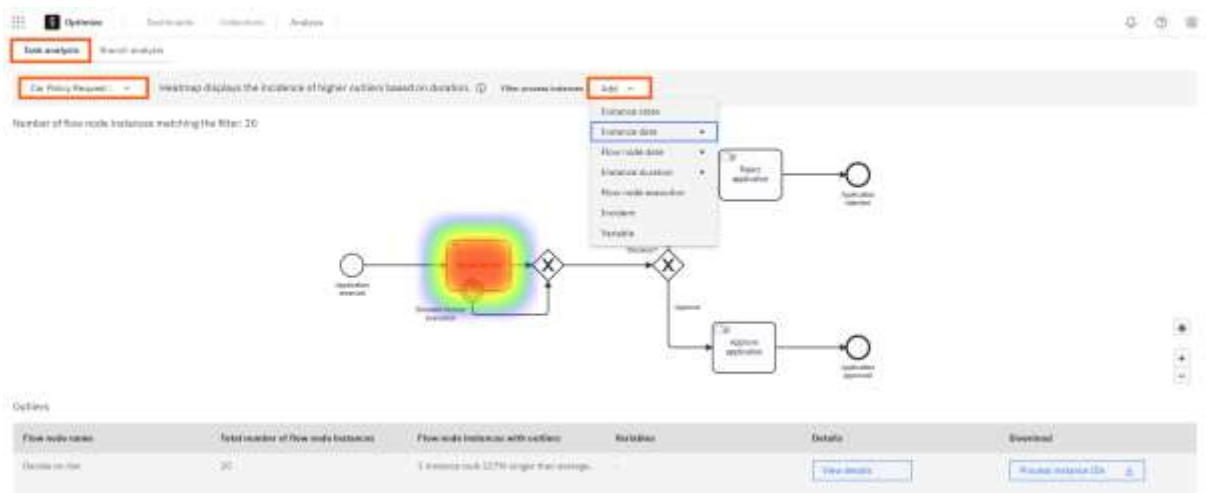

4. (Optional) If you'd like to explore further, navigate to the **Analysis** section using the breadcrumb navigation in the header.
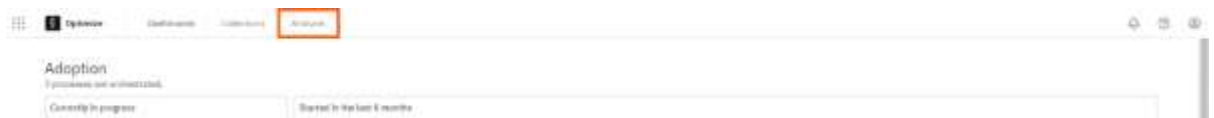
5. From here you can dig further into the data about your process, by choosing the **Task analysis** tab, selecting the **Car Policy Request** process, and then filtering by available parameters:

6. Or you can choose the **Branch analysis** tab, select the **Car Policy Request** process, and then select individual flow nodes in the process to get more granular data.
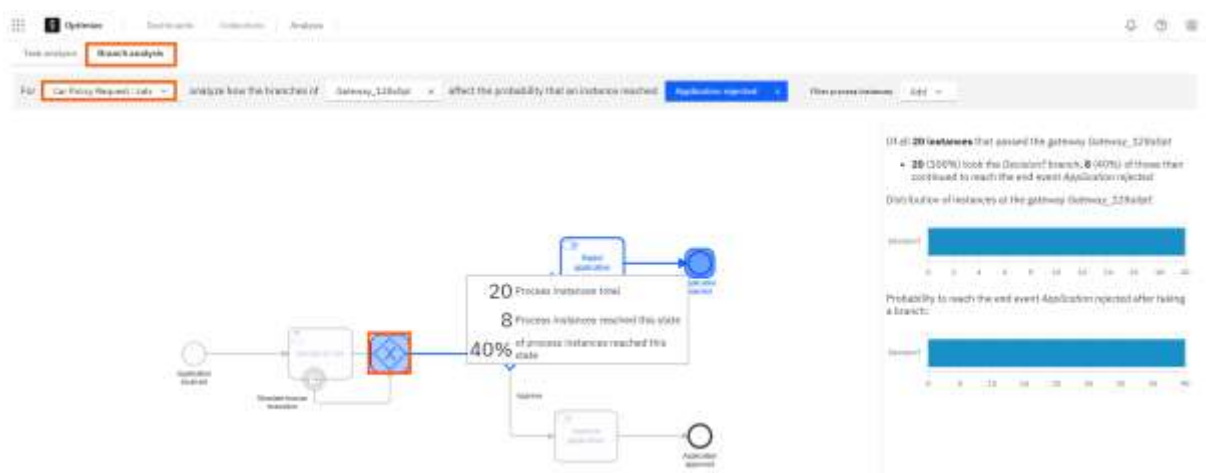
You explored the default Optimize Dashboards and gained more familiarity with the data insight and analysis features that Optimize provides.

Analyze Process

As you have seen in the previous lessons, the *Decide on risk* task takes longer than management would like. After further analysis, it looks like the team responsible for the task is very busy and have too many tasks to perform. The Camundanzia Business Analysts have identified a solution to speed up the process time.

Business Analysts Solution

Automatically approve or reject some requests based on the data of the requester. By doing this, the manual work needed for an employee to analyze the applicant risk will be reduced.

There are several factors to consider when automatically approving an applicant, including: driver experience, the car type, the number of previous car accidents, and so on.

For the sake of simplicity, consider only the **driver experience** variable in this course.

Along with your coworkers, you've arrived at this approach for improving the process:

- Automatically **reject requests** from drivers **with two or less years of driving experience**.
- Automatically **approve requests** from drivers **with four or more years of driving experience**.
- For other cases, requests will continue to be **validated manually**.

After additional brainstorming with the team, you arrive at the following updated process:

Updated Car Policy Request Process
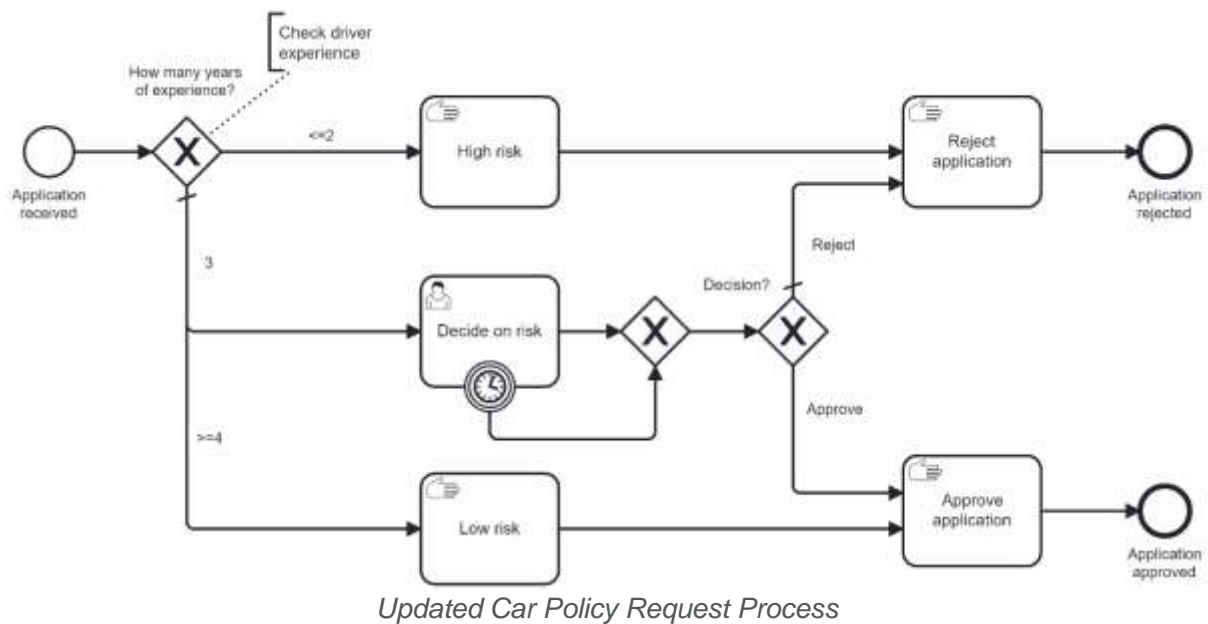
Requests are now filtered with an **XOR gateway**. Only the requests from drivers with **three years of experience** will arrive at the *Decide on risk* task and require human intervention. All other requests will either be rejected or approved automatically.

Business Rules

This is a typical example of a business rule. You could have achieved the same result by using a **decision table**, according to the DMN standard.

Update Process
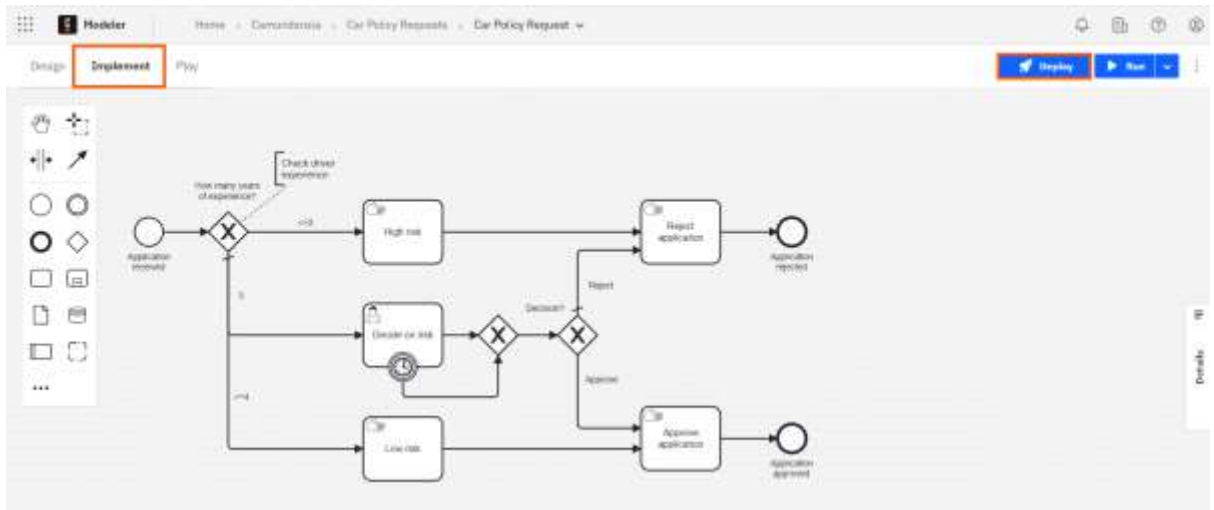
Replace the Car Policy Request Process Definition

Updated Process Definition

Download the updated process definition ☞ here.

1. Navigate to **Camunda Web Modeler** and open the **Car Policy Request** BPMN diagram.
2. In the header, click **Car Policy Request** > **Replace via upload**.

3. Upload the updated BPMN diagram that you downloaded. From the **Implement** mode, click **Deploy**.

The engine is aware that this is not a fully new process, because the ID of the diagram is recorded in the BPMN file and it **did not change**. It will deploy this one **as a new version** for the *Car Policy Request* process.

4. Navigate back to **Operate**. Now there are two versions for the *Car Policy Request* process.
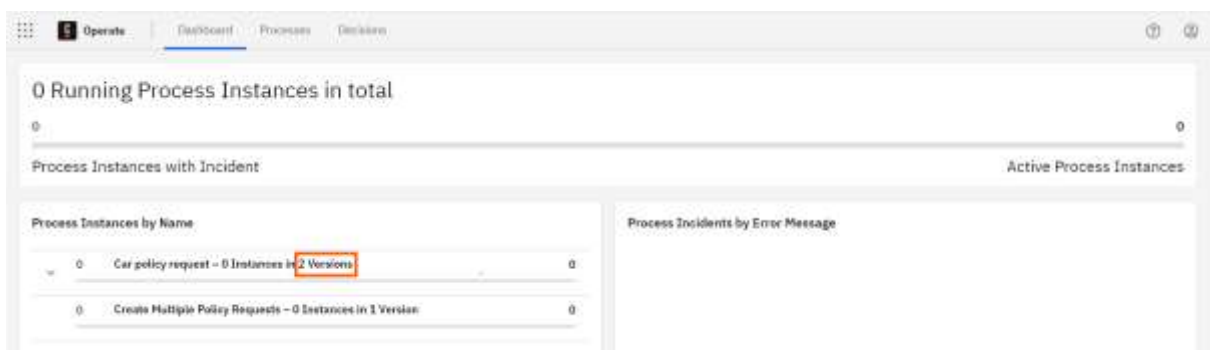
Now that the new version of the process is deployed, you can re-execute the process. This time it will call the updated version of the *Car Policy Request* process.

5. Return to the **Modeler** and open the **Create Multiple Policy Requests** process.
6. Run the **Create Multiple Policy Requests** process. This will automatically call the *Car Policy Request* process through the call activity.
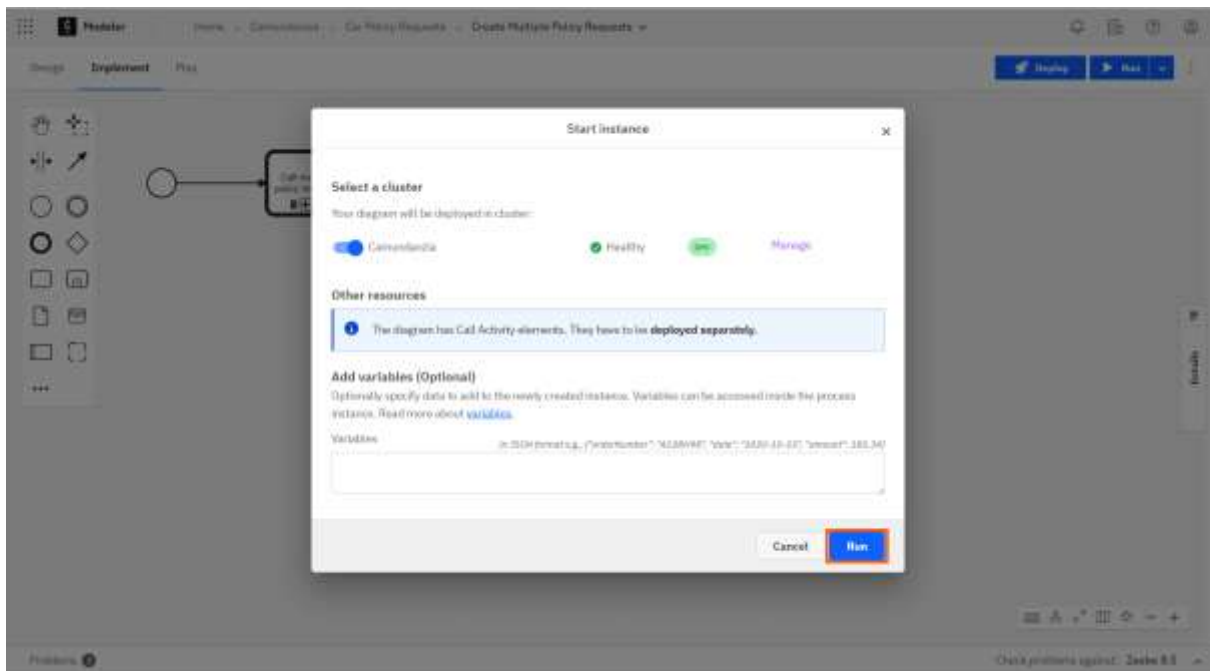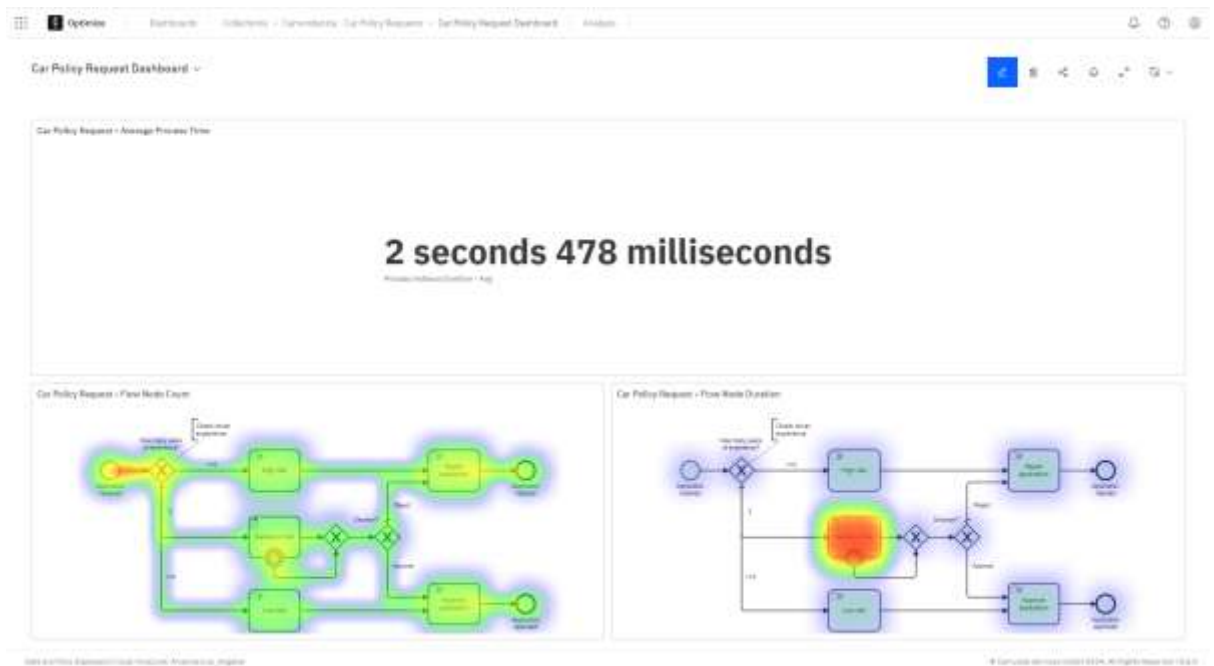
You successfully modified the existing process in order to reduce the process completion time.

Verify Improvements

Did you get the desired result?

Verify whether the updated process is improved in terms of execution time.

1. Return to the dashboard that you created (**Optimize** > **Collections** > **Car Policy Request Dashboard**).

As you can see in the dashboard, the process now has a shorter completion time than what it started with. You can identify where the time reduction takes place by exploring each of the reports.
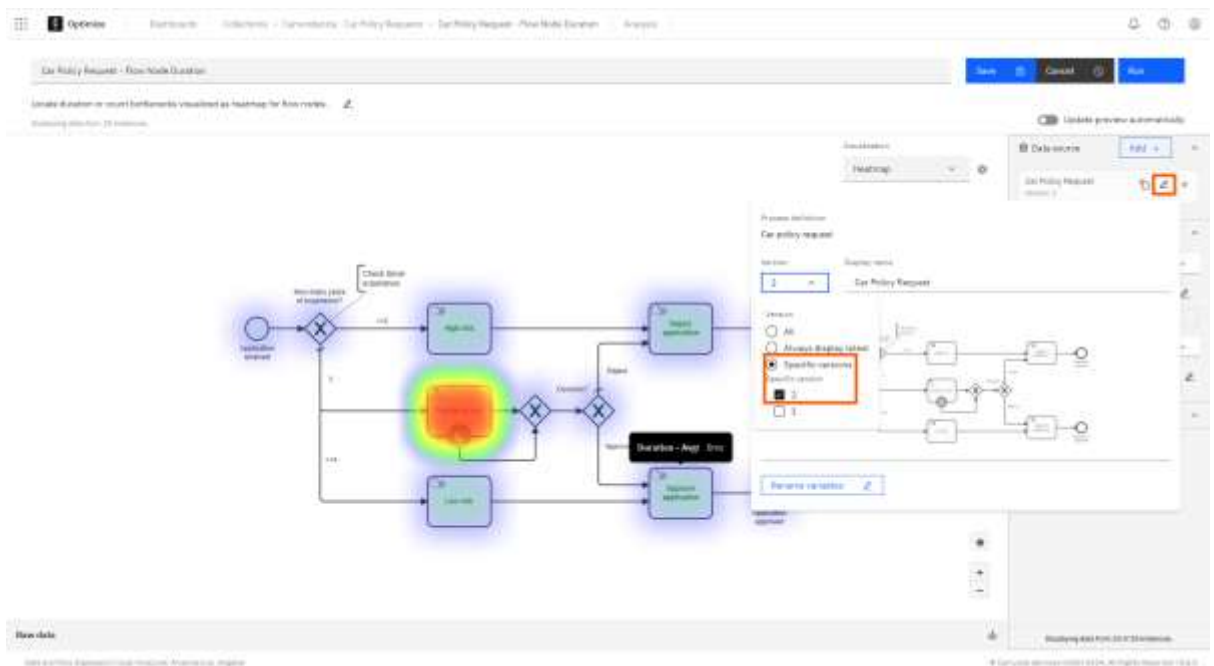
2. Navigate to the *Car Policy Request - Flow Node Count* report and then click **Edit**.

3. In the **Data source** property field, click the **pencil icon** and then switch from *Always display latest* to **Specific versions** > **2**.
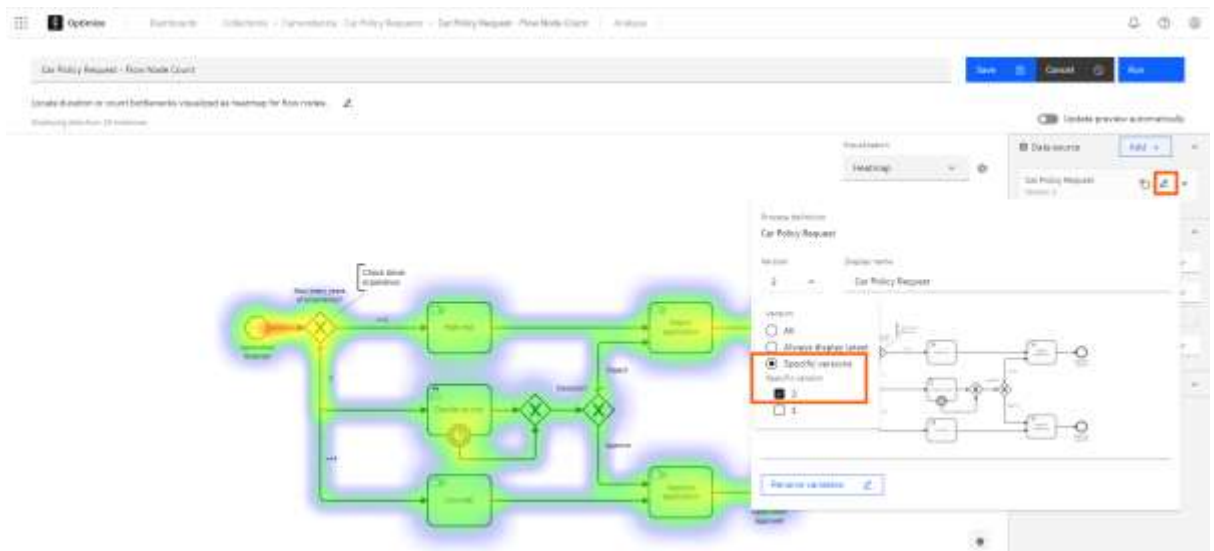
4. **Save** the report and then repeat this process for the *Flow Node Duration* report.

5. The second report reveals that the *Decide on Risk* task now finishes in a quicker time period than before.

Process Improvements Verified

With the updates to the process, it now takes less time for the process to complete. As a result, both the Camundanzia management and the policy requesters are satisfied. This demonstrates that your process upgrades have been successful!

Update Reports

You succesfully updated the existing reports to reflect the new process updates.

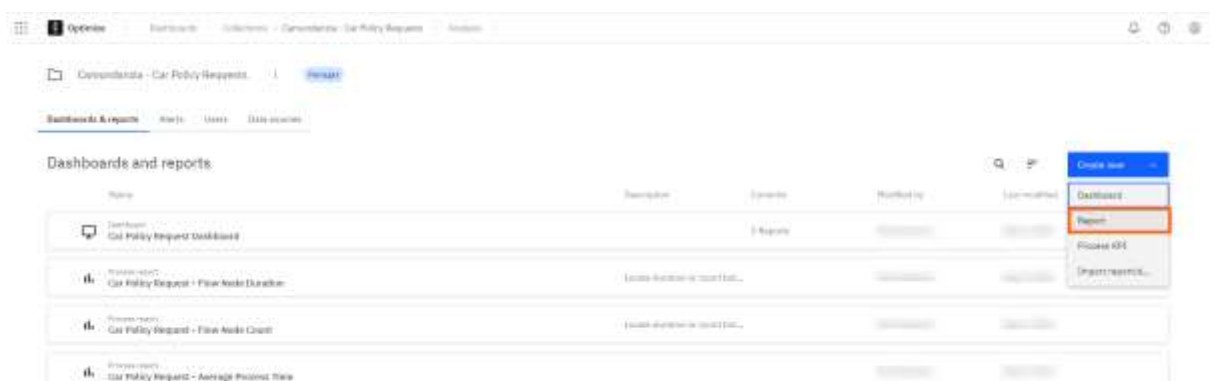# Evaluate Report: Driver Experience

Camundanzia management would like to find out more about the requesters' driving experience.

Info

Configure a new report in order to measure the **driver experience** variable.

Driver Experience Report

1. Navigate to **Optimize** > **Car Policy Requests** collection.
2. Click **Create new** > **Report**.

3. Select the **Car Policy Request** process from the dropdown list, and then set the following:

- Version: **Always display latest**
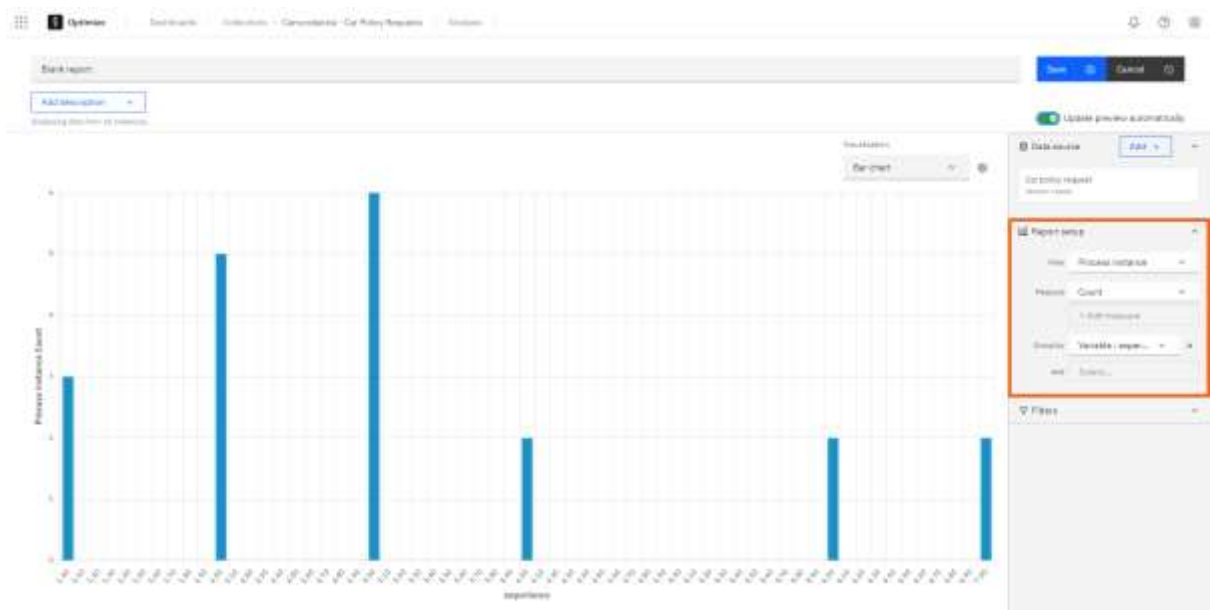- Blank template: **Blank report**
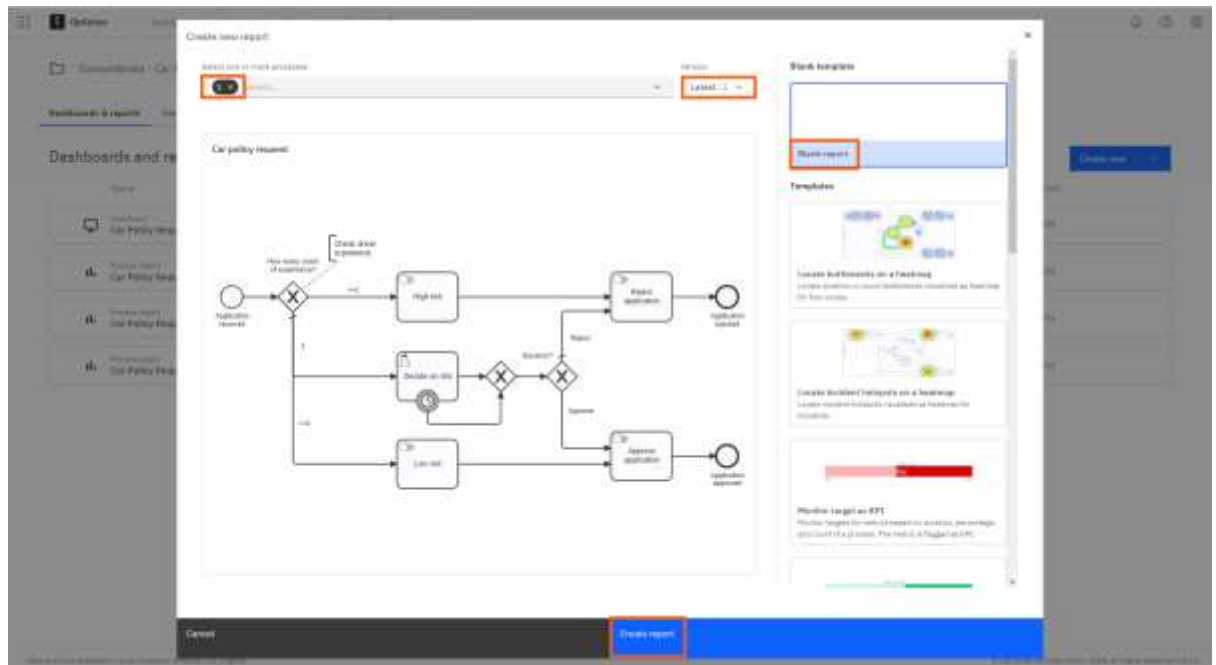
4. Click **Create Report**. You will now see a blank report.

5. Update the parameters in the property panel to the following:
- View: **Process instance**
- Measure: **Count**
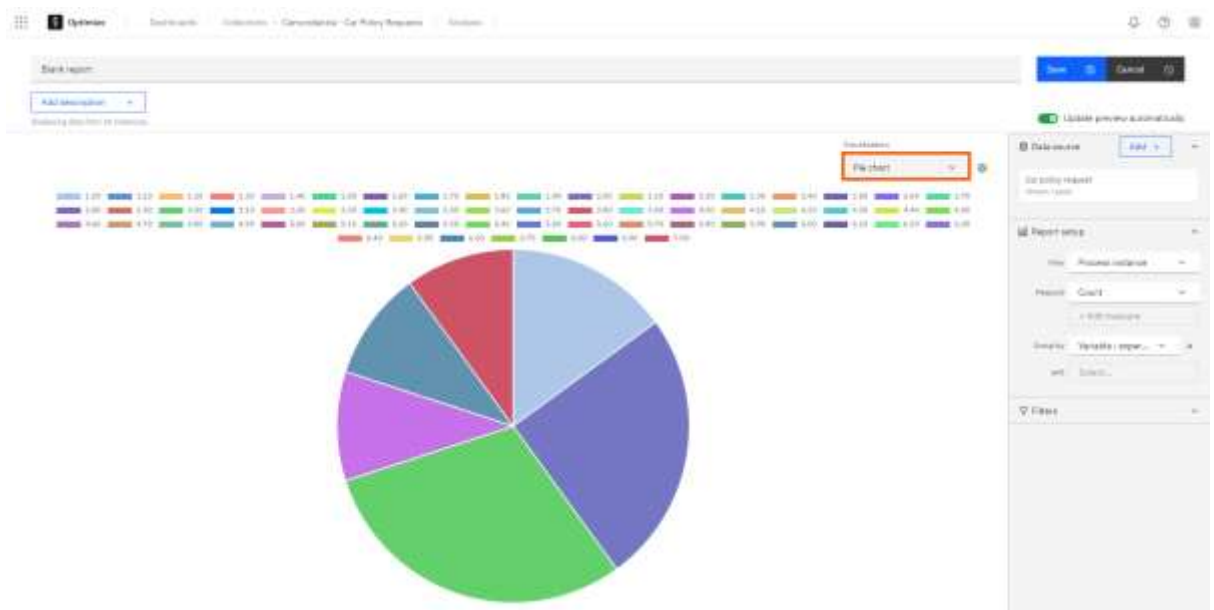- Group by: **Variable: experience**

Update Preview Automatically

Enable the **Update preview automatically** switch widget to display the results while changing the parameters.

A bar chart will automatically appear that displays the number of instances against the driver experience variable.
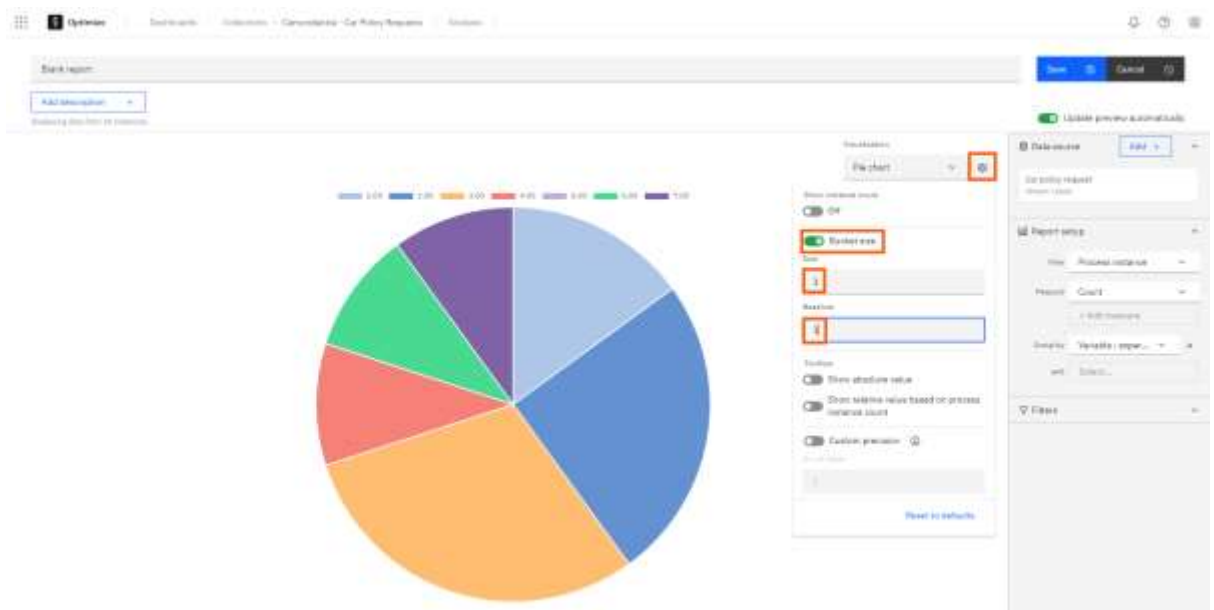
6. Change the **Visualization** to **Pie chart**.

Driver experience time is currently provided as a decimal number, so the tool created a high number of differently colored categories.

7. Simplify the pie chart. Click the **gear icon** next to **Pie chart** and set the following parameters:
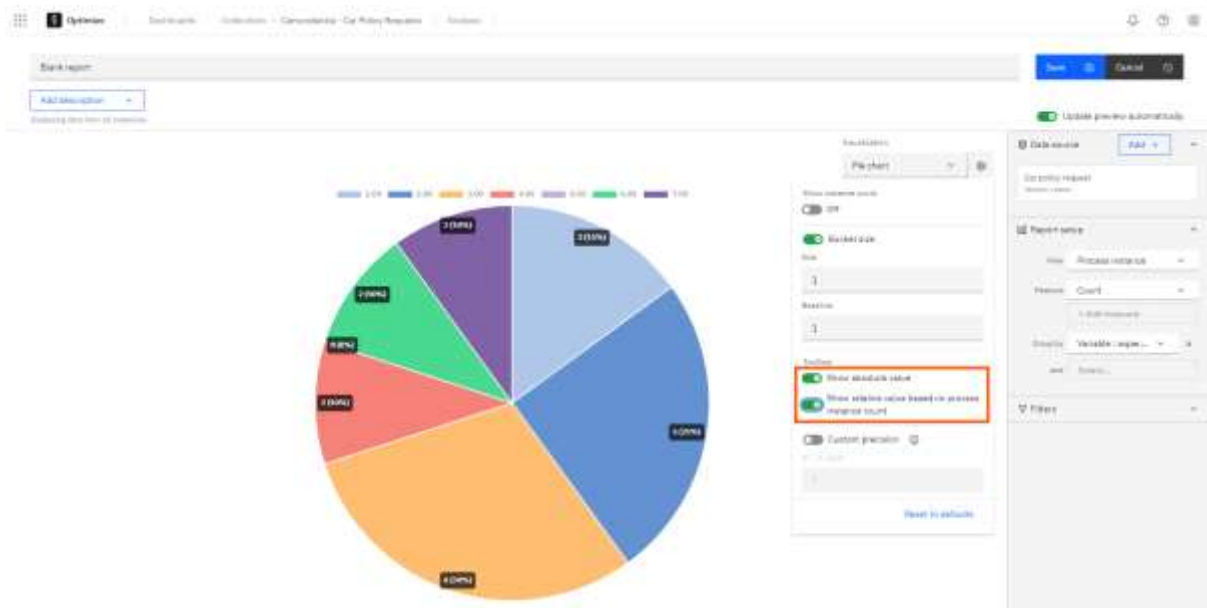
- Enable **Bucket size**
- Size: **1**
- Baseline: **1**

Feel free to play with the chart configuration settings to test the different options.

- You can optionally display the number of instances and the percentages of execution directly in the graph by enabling the **Show absolute value** and **Show relative value...** parameters:

8. Name your report (e.g. "Car Policy Request - Instances / Experience") and save it.

You have succesfully created a report to measure how many years of driving experience the applicants have.

Evaluate Report: Requests Over Time

Some Considerations

So far, you've produced four reports that offer insightful data about the *Car Policy Request* process and can be shared with stakeholders. You can use reports to enhance your processes as well. For instance, you may produce reports to track incidents and requests, or to monitor how the number of requests changes over time - this is the kind of report you will create next.

Tip

Since all of the requests are processed simultaneously in the example scenario, the outcome won't be particularly attractive, but you'll be able to see how useful these kinds of graphs can be.

Develop an Instances Per Month Report

1. Return to the **Car Policy Request** collection.
2. Click **Create new** > **Report**.
3. Select the **Car Policy Request** process from the dropdown list, and then set the following:

   o   Version: **Always display latest**
   o   Blank template: **Blank report**
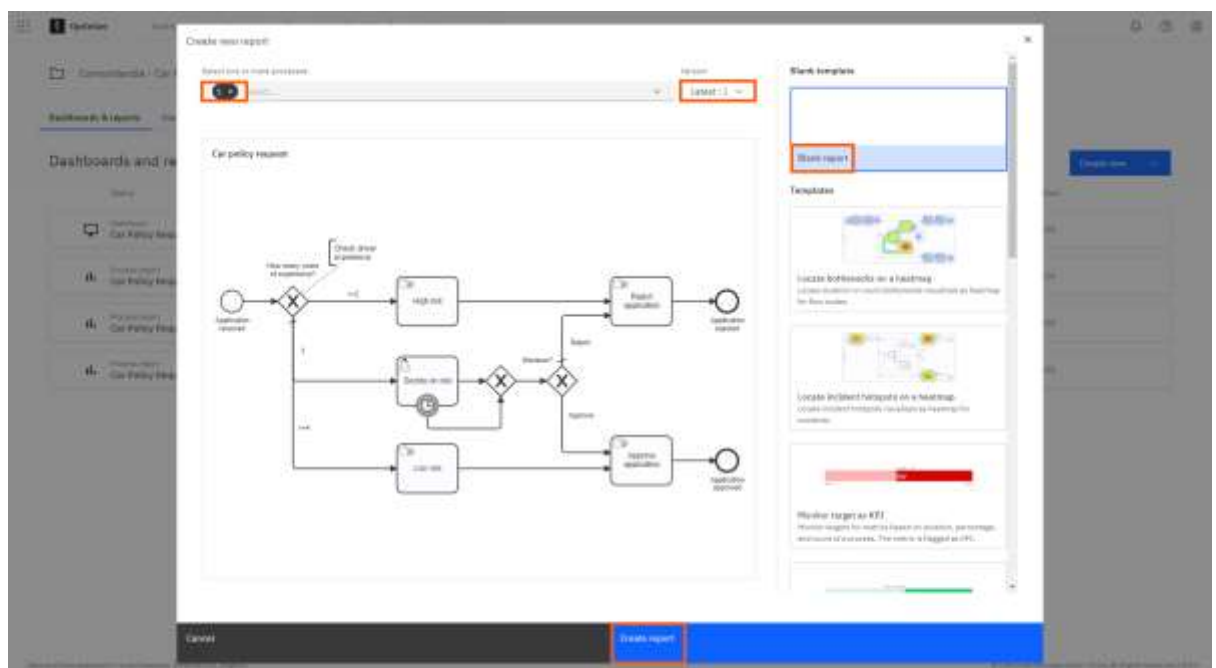
4. Click **Create report**. Update the parameters to the following values:

- View: **Process instance**
- Measure: **Count**
- Group by: **Start date** > **Month**

Update Preview Automatically

Enable **Update preview automatically** to display the results while changing the parameters.

A single bar will be displayed representing the number of process instances started in the current month.
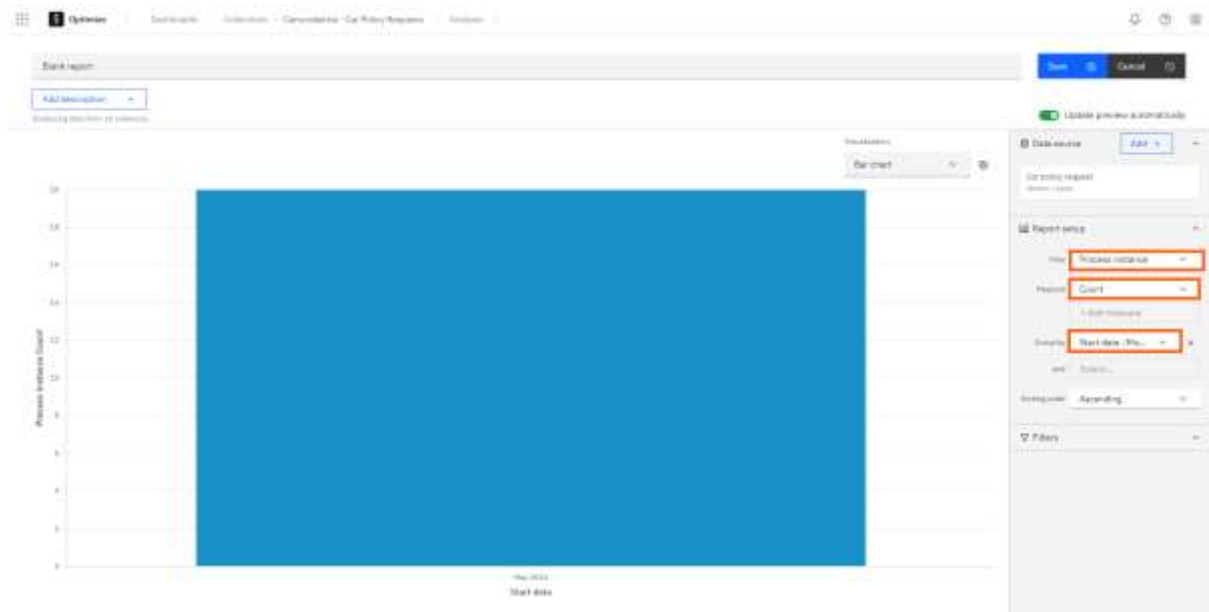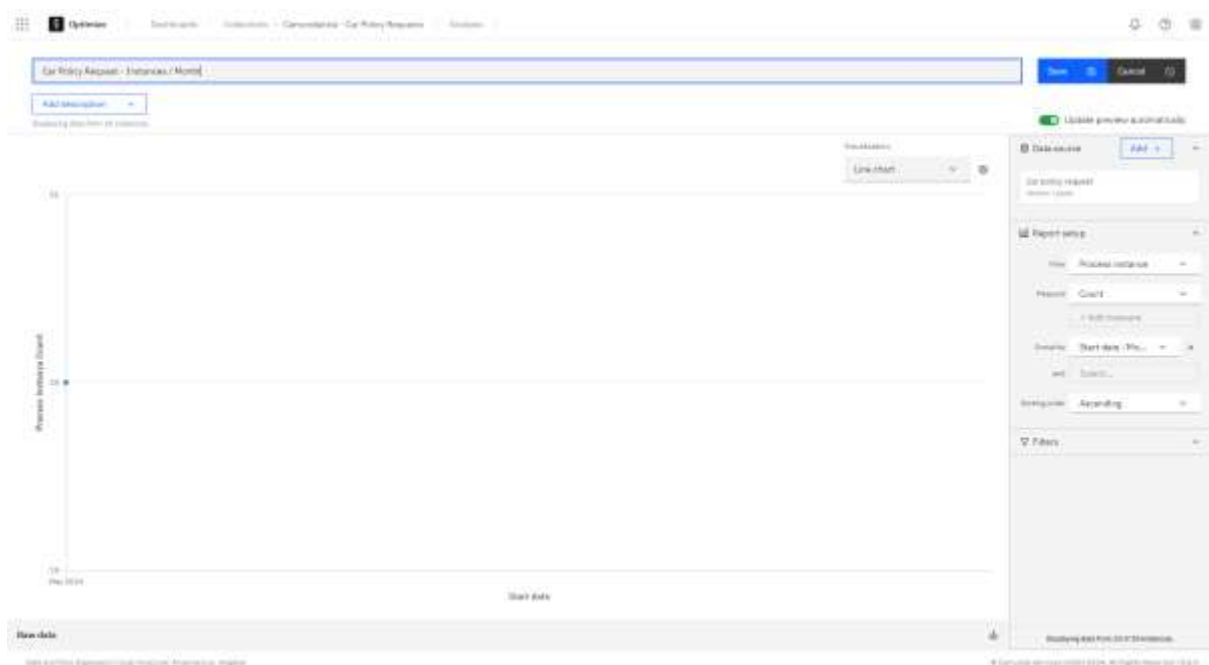
Info

In a real life scenario you would see several bars that show how the number of requests evolve over time.

Tip

Feel free to play with the chart configuration to test the different options.

5. Name your report (e.g. "Car Policy Request - Instances / Month") and save it.

Create Applications Over Time Report

You have succesfully created a report to measure how many applications are received over time.

Example Solution

Solution

If you encountered any problems during this course or were unable to complete the process configuration, the dashboard, or reports, you can compare your solution with our example solution below.

GitHub Repository

Our version of the updated process model (**Car Policy Request - Updated.bpmn**) and the final dashboard with all the reports (**car_policy_request_dashboard.json**) can be found in the GitHub Repository below:

☞ [Solution - Getting Started with Optimize Lab](#)