

# IBM Cloud Pak for Business Automation

## Demos and Labs

Operational Intelligence

IBM Business Automation Insights

*Build Business Performance Center Dashboard*

V 21.0.3 IF010 (Release 2)

Paul Pacholski

[pacholsk@ca.ibm.com](mailto:pacholsk@ca.ibm.com)

## NOTICES

This information was developed for products and services offered in the USA.

IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering the subject matter described in this document. The furnishing of this document does not grant you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing  
IBM Corporation  
North Castle Drive, MD-NC119  
Armonk, NY 10504-1785  
United States of America

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law: INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow the disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM websites are provided for convenience only and do not in any manner serve as an endorsement of those websites. The materials at those websites are not part of the materials for this IBM product and use of those websites is at your own risk.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements, or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility, or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to the names and addresses used by an actual business enterprise is entirely coincidental.

## TRADEMARKS

IBM, the IBM logo, and ibm.com are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the web at "Copyright and trademark information" at [www.ibm.com/legal/copytrade.shtml](http://www.ibm.com/legal/copytrade.shtml).

Adobe, the Adobe logo, PostScript, and the PostScript logo are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States and/or other countries.

Cell Broadband Engine is a trademark of Sony Computer Entertainment, Inc. in the United States, other countries, or both and is used under license therefrom.

Intel, Intel logo, Intel Inside, Intel Inside logo, Intel Centrino, Intel Centrino logo, Celeron, Intel Xeon, Intel SpeedStep, Itanium, and Pentium are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

IT Infrastructure Library is a Registered Trade Mark of AXELOS Limited.

ITIL is a Registered Trade Mark of AXELOS Limited.

Java and all Java-based trademarks and logos are trademarks or registered trademarks of Oracle and/or its affiliates.

Linear Tape-Open, LTO, the LTO Logo, Ultrium, and the Ultrium logo are trademarks of HP, IBM Corp., and Quantum in the U.S. and other countries.

Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

UNIX is a registered trademark of The Open Group in the United States and other countries.

© Copyright International Business Machines Corporation 2020.

This document may not be reproduced in whole or in part without the prior written permission of IBM.

US Government Users Restricted Rights - Use, duplication, or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

## Table of Contents

<b>1 Lab Introduction .....</b>	<b>4</b>
1.1 Introduction to IBM Business Automation Insights.....	4
1.2 Lab Overview .....	4
1.3 Lab Setup Instructions .....	6
<b>2 Exercise: Create Client Onboarding Workflow Dashboard .....</b>	<b>7</b>
2.1 Introduction.....	7
2.2 Exercise Instructions.....	7
2.2.1 Create a Dashboard .....	7
2.2.2 Create an "Average Revenue from Service Fees for Approved Clients" Chart .....	8
2.2.3 Create "Approvals by Industry" Chart .....	13
2.2.4 Create a "Services Subscription by Industry with Drilldowns" Chart.....	15
2.2.5 Create a "Highest Service Fee by Industry Sector" Chart .....	19
2.2.6 Create "Approval Count of High-Risk Cases" Chart.....	21
2.2.7 Create an "Average Approval Confidence by Industry Sector and Revenue" Chart .....	23
2.2.8 Create an "Activity Duration Distribution in Case Completion" Chart .....	26
2.2.9 Create a "Completed Cases per Day" Chart.....	28
2.2.10 Create "Approvals by Industry Heatmap" Chart .....	34
2.2.11 Create a "Client Onboarding Data" Chart .....	36
2.2.12 Create a Configure Goal.....	40
2.2.13 Change Dashboard Layout.....	42
2.2.14 Explore Advanced Dashboard Features .....	45
2.3 Summary.....	46

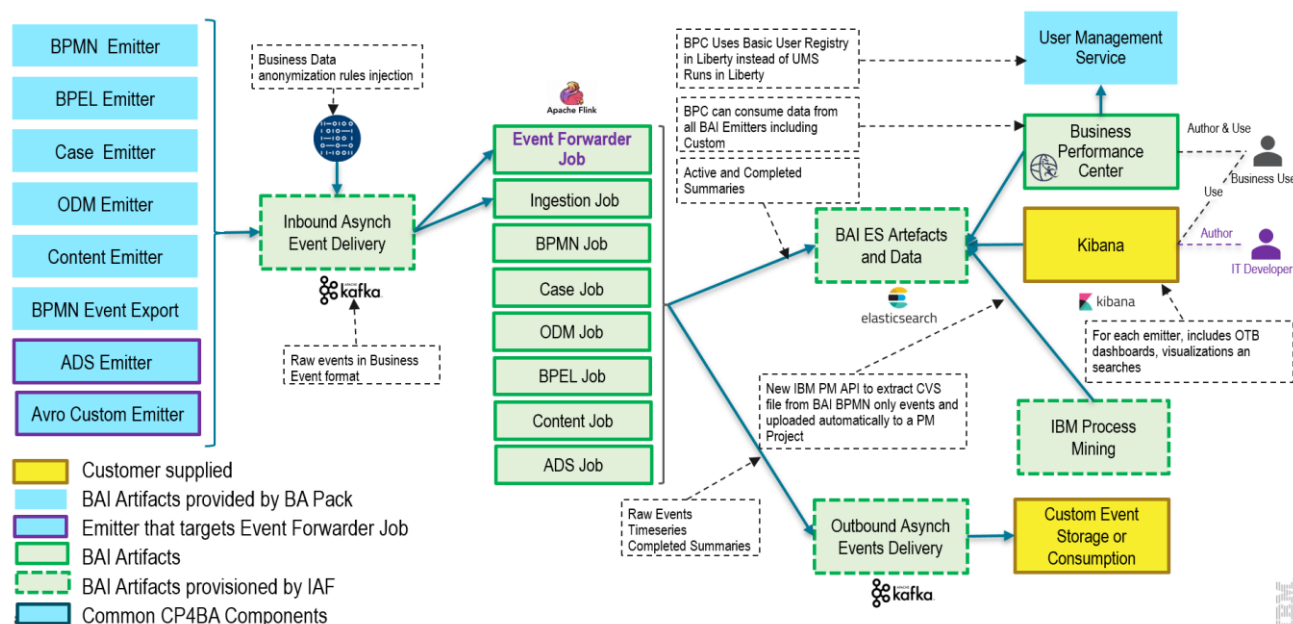
## 1 Lab Introduction

In the labs, you will learn how to build and use the Business Performance Center dashboard to provide insights into a Client Onboarding solution for a line of business users.

## 1.1 Introduction to IBM Business Automation Insights

IBM Business Automation Insights enables the capture of events generated by the operational systems implemented with the IBM Business Automation products. Captured events are aggregated into business-relevant KPIs, and presented in dashboards for lines of business to have a real-time view of their operations.

More technical information about BAI: <https://ibm.box.com/v/IBM-BAI-Tech-Intro>



### Figure 1. IBM Business Automation Insights 21.0.3 Architecture

Business Performance Center (BPC), shown in Figure 1 above, is the no-code business monitoring application native to IBM Cloud Pak for Business Automation. Using BPC business users (with no IT assistance) can:

- Design and share dashboards in minutes that capture business data in near real-time and provide awareness of essential business activities and processes.
- Prepare, track, and design visualizations of metrics, key performance indicators (KPIs), and other business performance measurements in customizable dashboards.

More information about BPC: <https://ibm.box.com/v/BusinessPerformanceCenter>

## 1.2 Lab Overview

The solution used during the labs is *Client Onboarding* Workflow automation implemented as a Case with several BPMN processes that implement Case Activities. The solution contains a single Case Type (*Client Onboarding Requests*), which includes activities that need to be performed, data, documents, and conditions driving the processing.

## Client Onboarding Request

Case Type Properties Views Case Folders Stages Rules **Activities**

All activities ⓘ 🔒 View

**Required activities**

- Initialize Request**  
File selected documents to the Case folder and handle pending  
Precondition: Case Start  
Set: <None>
- Notification**  
Notify the client and client rep that the review has been  
Precondition: Stage started: Notification  
Set: <None>
- Perform Scoreboarding**  
Scoreboard the client (Classifies them into a segment and assess  
Precondition: Stage started: Scoreboarding  
Set: <None>
- Update Backend Systems**  
Update backend systems with client information  
Precondition: Stage started: Backend Systems Up...  
Set: <None>

**Optional activities**

- Review Client Documents**  
Renew any new documents coming in from the client  
Precondition: Documents: Any document  
Property ...  
Set: <None>

All five Case Activities above are implemented by BPMN Processes (shown below) in an automatically generated Process App (Client Onboarding)

IBM Automation

Business automations /

### Client Onboarding

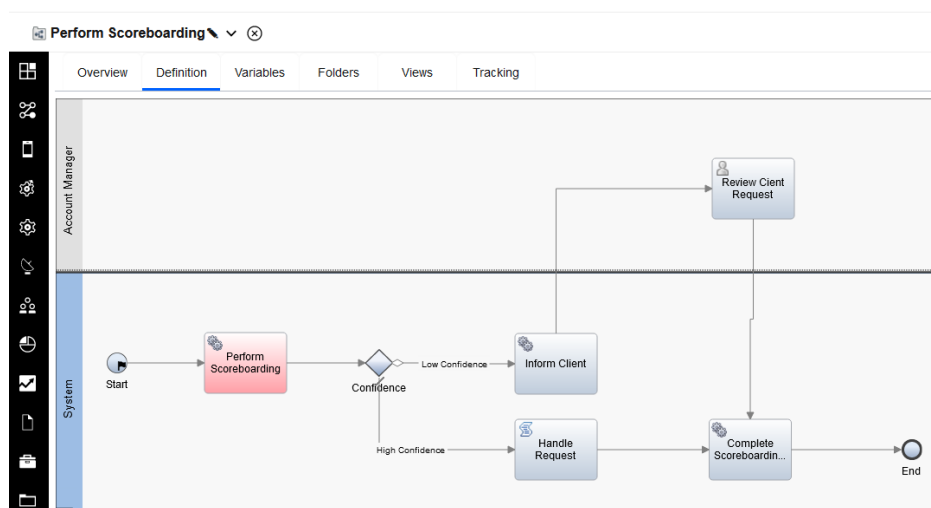
Process App Settings (Read-only)

- Client Onboarding
- Processes**
- User interface
- Exposed Automation Services

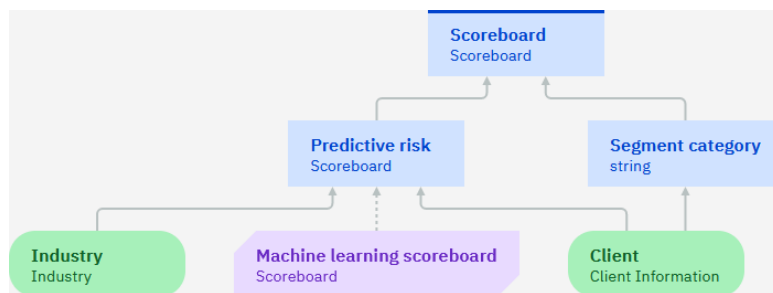
Type Processes 6

- Initialize Request
- New Client Onboarding Request
- Notification
- Perform Scoreboarding
- Review Client Documents
- Update Backend Systems

The *Perform Scoreboarding* Activity (shown in light red below) is particularly interesting. It uses Automation Services to invoke Scoreboard decisions implemented using Automation Decision Services.



The Scoreboard ADS Decision determines if a client is risky using an ML-based predictive model and classifies the client into a segment.



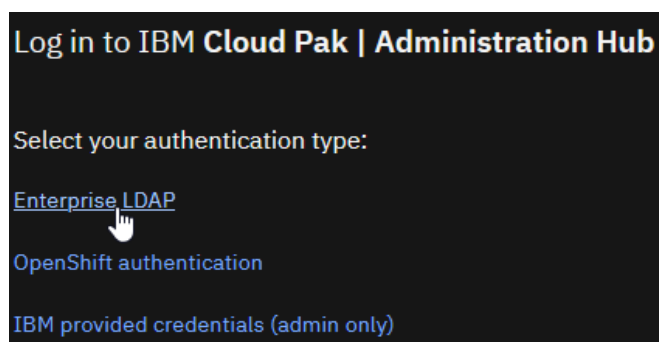
When authoring one of the Charts, you will be using data generated by the above decision.

## 1.3 Lab Setup Instructions

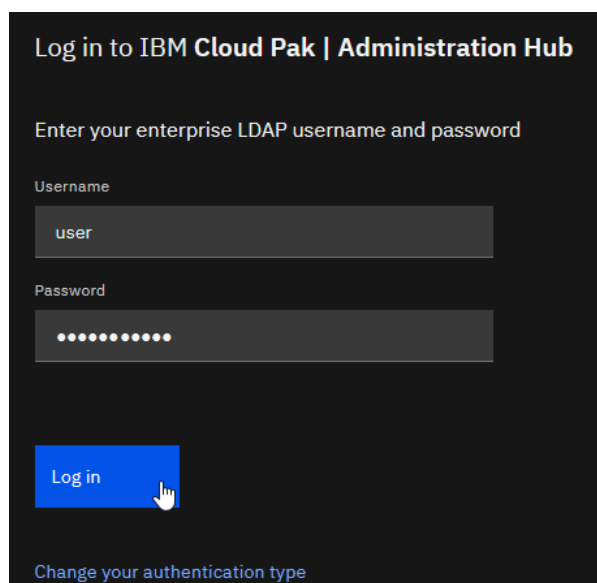
\_1. If you are performing this lab as a part of an IBM event, access the document that lists the available systems and URLs along with login instructions. For this lab, you will need to access **IBM Business Performance Center**.

\_2. Paste the Business Performance Center URL to your web browser.

\_3. Select **Enterprise LDAP** login option



\_4. Enter the supplied to you *Username* and *Password*, and then click **Log in**

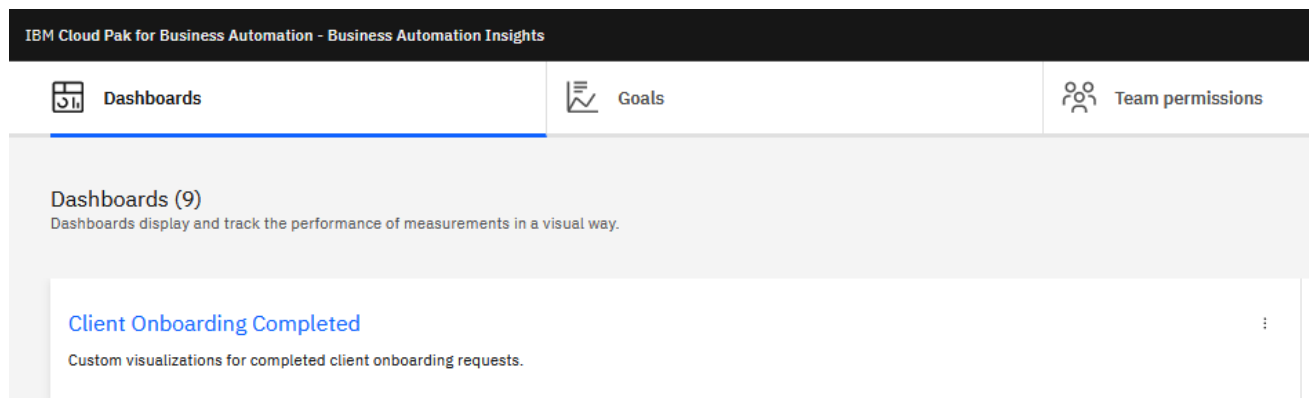


## 2 Exercise: Create Client Onboarding Workflow Dashboard

### 2.1 Introduction

In this lab exercise, you will use BPC to create a business dashboard that will enable a business user to get a real-time business insight into *Client Onboarding Workflow*.

In addition to built-in dashboards, a reference version of the dashboard you will be building in the lab exercise (called **Client Onboarding Completed**) has already been built for you.



If you like, you can refer to it when building your dashboard version.

Note that BAI events were already generated for you. But, since you are using a live shared environment with you and other users working on Client Onboarding cases, you may see new events arriving as you author your dashboard. Consequently, some of the screenshots in the lab instructions may not look as captured in the lab instructions.

### 2.2 Exercise Instructions

In this lab exercise, you will author and configure the following BPC artifacts:

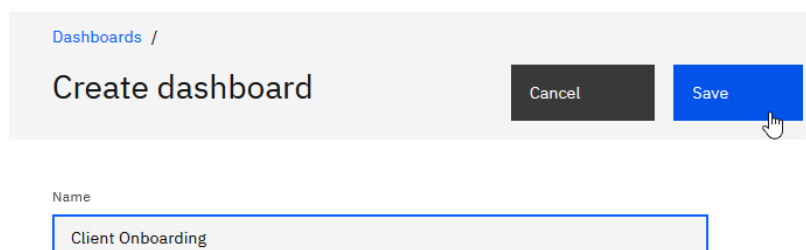
- Client Onboarding **Dashboard**
- **Charts** used in the Client Onboarding dashboard
- A Chart **Alert**
- A **Goal** to group related Charts

#### 2.2.1 Create a Dashboard

\_1. Click **Create +**



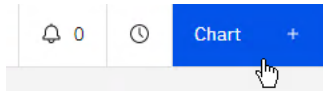
\_2. For *Name*, enter **Client Onboarding** and click **Save**



## 2.2.2 Create an "Average Revenue from Service Fees for Approved Clients" Chart

This gauge chart will show the average revenue from service fees for approved clients.

\_1. Click **chart +**



\_2. Enter the following and then click **Create**

Item	Value
Name	Average Revenue from Service Fees for Approved Clients
Select measurement	KPI

Client Onboarding ×

Create chart

Name

Average Revenue from Service Fees for Approved Clients

Description (optional)

Select measurement

Metric

90%

A performance indicator based on data items, constants, and other metrics that helps you

Period metric

A representation of metric values measured over time.

KPI

A type of metric that shows the degree to which business objectives are on track.

Period KPI

A representation of KPI values measured over time so that you can spot historical trends.

Data

A set of data items presented in a table.

Cancel Create

### 2.2.2.1 Define Monitoring Information

\_1. For *Monitoring source*, select **Workflow (Case) – Client Onboarding**

#### Monitoring context

Monitoring source

Workflow (Case) - Client Onboarding ▼

This will select events from the Client Onboarding Workflow.

\_2. In *Aggregation*, for *Function* select **Average** and *Data item* select **CO\_ServicesFee (data) – (long)**



## Aggregation

Function

Average

Data item

CO\_ServicesFee (data) - (long)

If you wonder how this Case Property got into BAI, look at these comments...

**CO** in CO\_ServicesFee is the Client Onboarding Solution prefix.

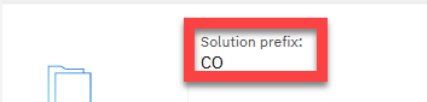
### Client Onboarding

Overview

Properties

Roles

In-baskets



**ServicesFee** in CO\_ServicesFee is the name of the Client Onboarding Case properties

### Client Onboarding

Overview

Properties

Roles

In-baskets

Documents

Business Objects

Pages

Case Types

Property Definitions ⓘ

OK All ✓

Manage Choice Lists

Services Fee

Integer



Fee being chaged for the services requested

Services Requested

String



The services requested by the client

For BAI Case Emitter to add this property to the emitted events, we need to configure the Client Onboarding Audit Configuration



IBM Business Automation Workflow Case administration

Solutions ×

Manage Audit Configuration ×

Back

Next

Save

Apply

Cancel

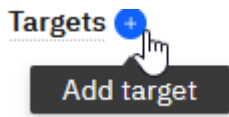
Add properties to audit

Add

Remove

Object Type	Object Name	Property Name	Property Symbolic Name
Case	Client Onboarding Request	Services Fee	CO_ServicesFee
Case	Client Onboarding Request	Services Requested	CO_ServicesRequested

\_3. Click **Targets +**



\_4. For *Value*, enter **80000**

Targets +

Label	Value	
New target	80,000	

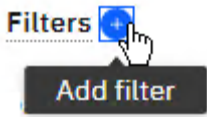
#### 2.2.2.2 Define Filter Data

When selecting Monitoring source, you specified **Workflow (Case) – Client Onboarding**. This setting allows you to work with the instances of Client Onboarding Workflow. Filters allow you to select specific data you want to display in your chart.

\_1. Select **Filters** tab



\_2. Click the **Filter +** button.



\_3. Select the following values from the dropdown list:

Item	Value
Data item	CO_ApprovalStatus (data) – (keyword)
Operator	=
Value	Approved

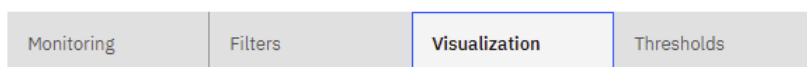
Your Filter setting should look exactly like this:

Data item	Operator	Value
CO_ApprovalStatus (data) - (keyword)	=	Approved

#### 2.2.2.3 Define Visualization

This setting allows you to customize your Chart display settings.

\_1. Select **Visualization** tab



\_2. Enter the following values:

Item	Value
Min	0
Max	100,000
Unit	\$

Your Gauge setting should look exactly like this:

#### Gauge settings

Min	Max
<input type="text" value="0"/>	<input type="text" value="100,000"/>
Unit	
<input type="text" value="\$"/>	

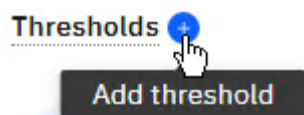
#### 2.2.2.4 Define Thresholds

This setting allows you to customize the Gage threshold setting.

\_1. Select **Thresholds** tab

Monitoring	Filters	Visualization	Thresholds
------------	---------	---------------	------------

\_2. Click the **Thresholds +** button two times.



\_3. For each group, select the following values from the dropdown list:

Threshold	Data item	Value
1	Threshold name	Below
	Value	30000
	Range name 1	Poor
	Range name 2	Good
2	Threshold name	Above
	Value	80000
	Range name	Excellent

Your Thresholds setting should look exactly like this:

#### Thresholds +

Threshold name	Value	Range name	Start	End	
Below	30,000	Poor	min	30,000	<div></div>
		Average	30,000	80,000	<div></div>
Above	80,000	Excellent	80,000	max	<div></div>

\_4. Click **Purple Color patch** and then select **Red color patch** from the palette

Start

End

min

30,000

Start

End

30,000

80,000

Start

End

80,000

max

Custom

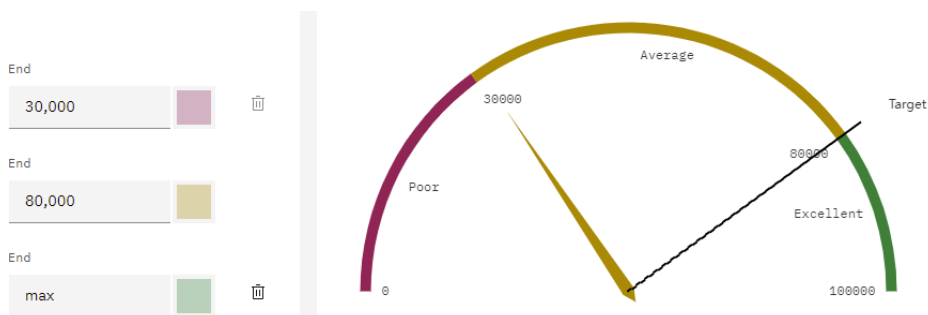
#6929c4

Red 50

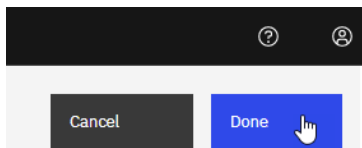
\_5. Using the above steps, customize the other two colors

Item	Value
Orange	Yellow
Excellent Color	Green

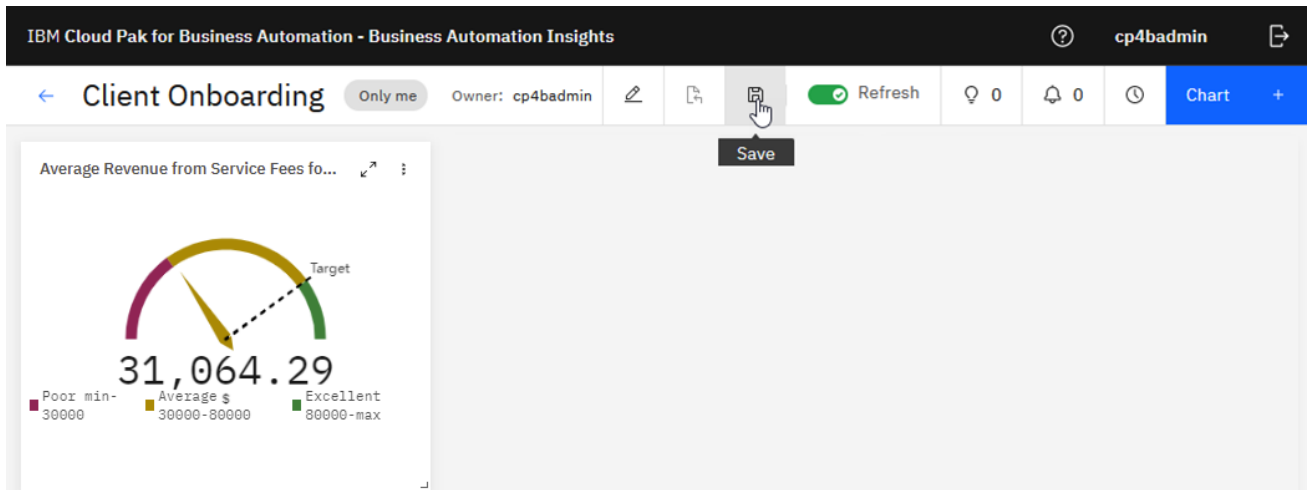
The color settings should look exactly like this:



\_6. Click **Done**



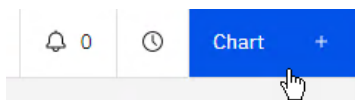
\_7. On the Dashboard, Toolbar click the **Save** icon to save your work!



### 2.2.3 Create "Approvals by Industry" Chart

This hierarchical pie chart will show the state of the industry's approvals (Approved, Rejected, Under Review).

\_1. Click **chart +**



\_2. Enter the following and then click **Create**

Item	Value
Name	Approvals by Industry
Select measurement	Metric

Client Onboarding ×

Create chart

Name

Approvals by Industry

Description (optional)

Select measurement

**Metric**

A performance indicator based on data items, constants, and other metrics that helps you monitor your business activities.

**Period metric**

A representation of metric values measured over time.

**KPI**

A type of metric that shows the degree to which business objectives are on track.

**Period KPI**

A representation of KPI values measured over time so that you can spot historical trends.

**Data**

A set of data items presented in a table.

Cancel Create

### 2.2.3.1 Define Monitoring Information

\_1. For *Monitoring source*, select Workflow (Case) – Client Onboarding

#### Monitoring context

Monitoring source

Workflow (Case) - Client Onboarding ▼

\_2. Click **Group by +** button **twice**

Group by

\_3. Enter the following keywords for the *Group by* entries:

Item	Value
1	CO_ApprovalStatus (data) – (keyword)
2	CO_Industry (data) – (keyword)

Group by

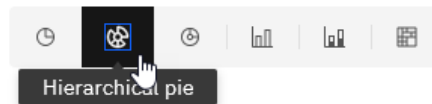
CO\_ApprovalStatus (data) - (keyword) ▼

CO\_Industry (data) - (keyword) ▼

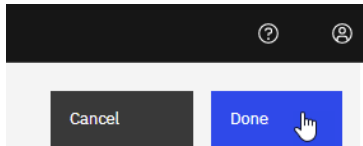
\_4. For chart, type select **Hierarchical pie**

## Metric

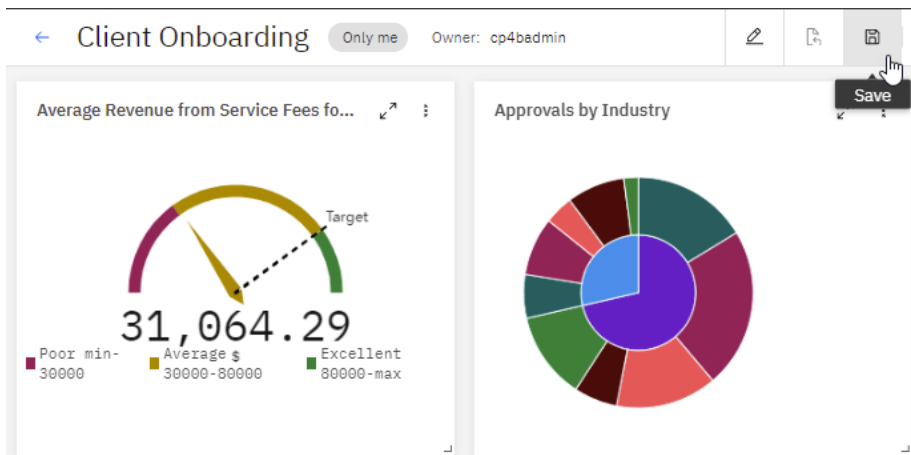
Hierarchical pie



\_5. Click **Done**



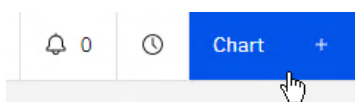
\_6. On the Dashboard, Toolbar click the **Save** icon to save your work!



### 2.2.4 Create a "Services Subscription by Industry with Drilldowns" Chart

This pie chart will show the service subscriptions by industry. Another feature of this chart is drilling down by service > industry > country.

\_1. Click **chart +**



\_2. Enter the following and then click **Create**

Item	Value
Name	Services Subscription by Industry with Drilldowns
Select measurement	Metric

Client Onboarding

Create chart

Name

Services Subscription by Industry with Drilldowns

Description (optional)

Select measurement

Metric

Period metric

KPI

Period KPI

Data

A performance indicator based on data items, constants, and other metrics that helps you monitor your business activities.

A representation of metric values measured over time.

A type of metric that shows the degree to which business objectives are on track.

A representation of KPI values measured over time so that you can spot historical trends.

A set of data items presented in a table.

Cancel

Create

#### 2.2.4.1 Define Monitoring Information

\_1. For *Monitoring source*, select **Workflow (Case) – Client Onboarding**

##### Monitoring context

Monitoring source

Workflow (Case) - Client Onboarding

\_2. Click **Group by +** button **three times**


Group by +



\_3. Enter the following keywords for the *Group by* entries:

Item	Value
1	CO_Industry (data) – (keyword)
2	CO_ServiceRequested (data) – (keyword)
3	CO_AddressCountry (data) – (keyword)

Drill down groups should look exactly like his:

**Group by** 

You can drill-down to get the details of each group on the chart.

CO_Industry (data) - (keyword)	▼
--------------------------------	---

The following groups may be accessed by drilling-down into the chart:

CO_ServicesRequested (data) - (keyword)	▼
---	---

CO_AddressCountry (data) - (keyword)	▼
--------------------------------------	---

\_4. For chart type, select **Pie**

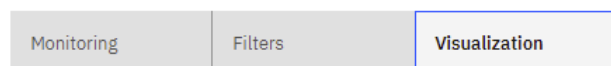
**Metric**

Pie



#### 2.2.4.2 Define Visualization Information

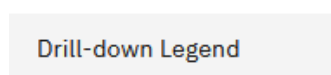
\_1. Click **Visualization** tab



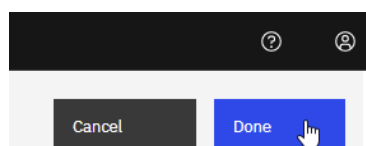
\_2. For *Pie settings > unit*, enter **Drill-down Legend**

**Pie settings**

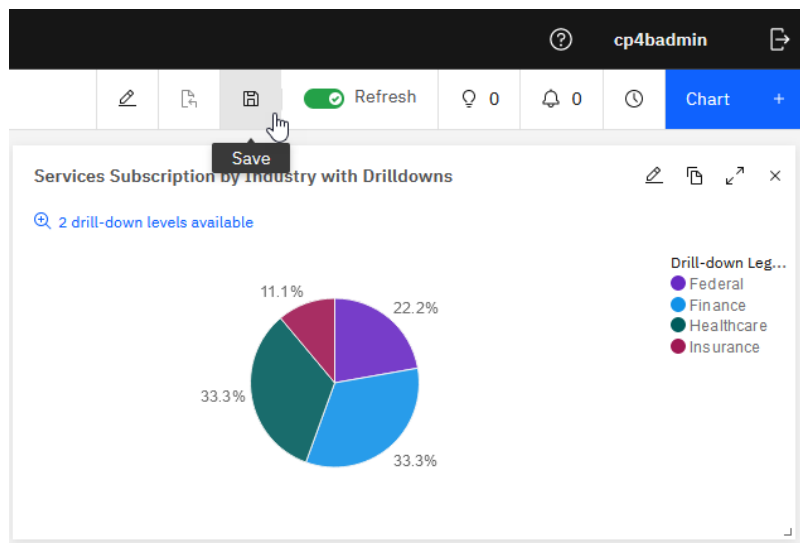
Unit



\_3. Click **Done**

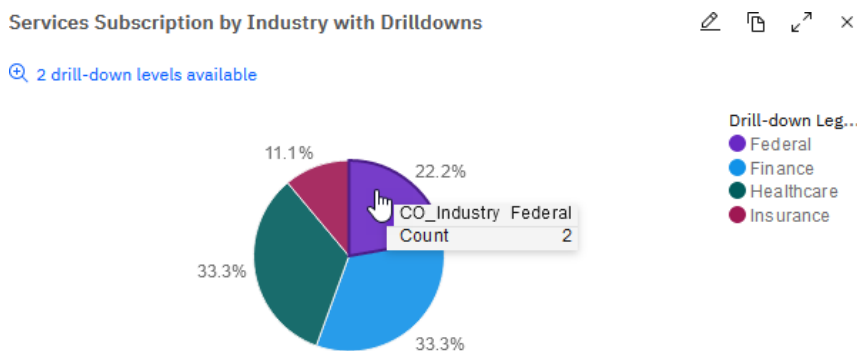


\_4. On the Dashboard, Toolbar click the **Save** icon to save your work!

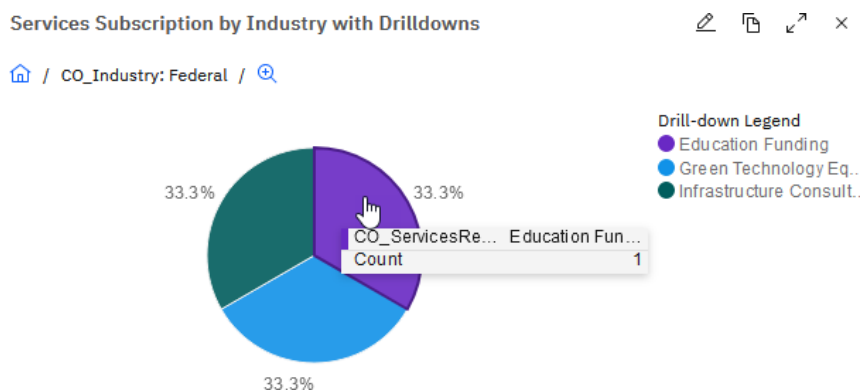


### 2.2.4.3 Explore Drill-down capability

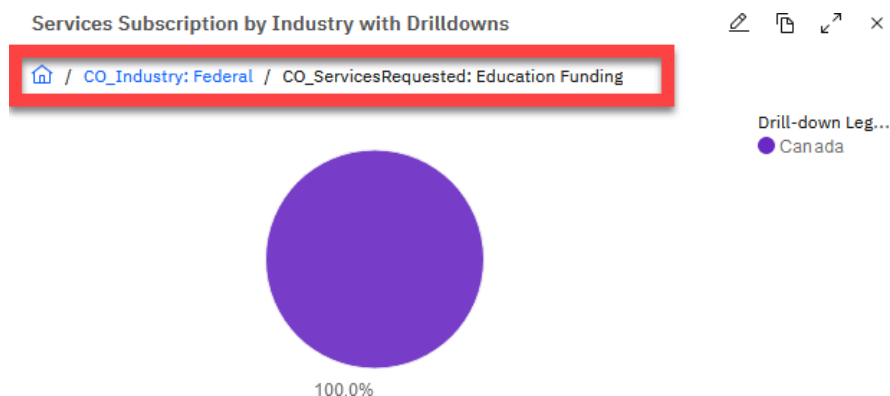
\_1. Select the first drill-down level by clicking on **Federal** Industry



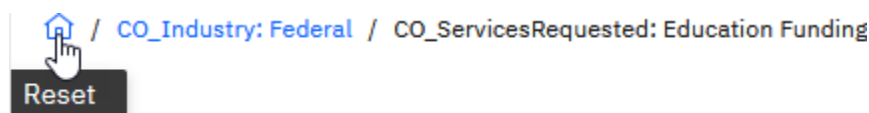
\_2. Select the second drill-down level by clicking on **Education Funding** Service



\_3. You should now see all the countries for *Federal > Education Funding* grouping.  
Note the breadcrumbs,



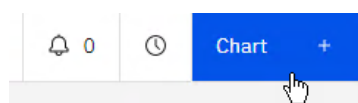
\_4. Click **Reset** to get back to the original view



## 2.2.5 Create a "Highest Service Fee by Industry Sector" Chart

This bar chart will show the highest service fee by industry sector.

\_1. Click **chart +**



\_2. In *Client Onboarding- Create chart* window, enter the following, and then click **Create**:

Item	Value
Name	Highest Service Fee by Industry Sector
Select measurement	Metric

### 2.2.5.1 Define Monitoring Information

\_1. For *Monitoring source*, select Workflow (Case) – Client Onboarding

#### Monitoring context

Monitoring source

Workflow (Case) - Client Onboarding

\_2. In *Aggregation*, for *Function* select **Max** and for *Data item* select **CO\_ServicesFee(data) – (long)**

#### Aggregation

Function

Max

Data item

CO\_ServicesFee (data) - (long)

\_3. Click **Group by +** button

**Group by** +

\_4. Enter **CO\_Industry (data) – (keyword)**

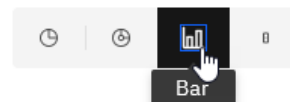
**Group by** +

CO\_Industry (data) - (keyword) ▼

\_5. For chart type, select **Bar**

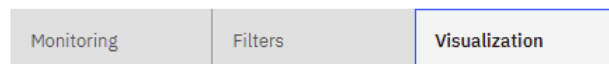
**Metric**

Bar



### 2.2.5.2 Define Visualization Information

\_1. Click **Visualization** tab



\_2. For Bar settings, enter:

Item	Value
X-axis label	Industry
Y-axis label	Maximum Service Fee [\$]

#### Bar settings

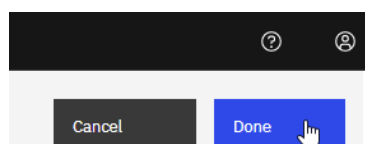
X axis label

Industry

Y axis label

Maximum Service Fee [\$]

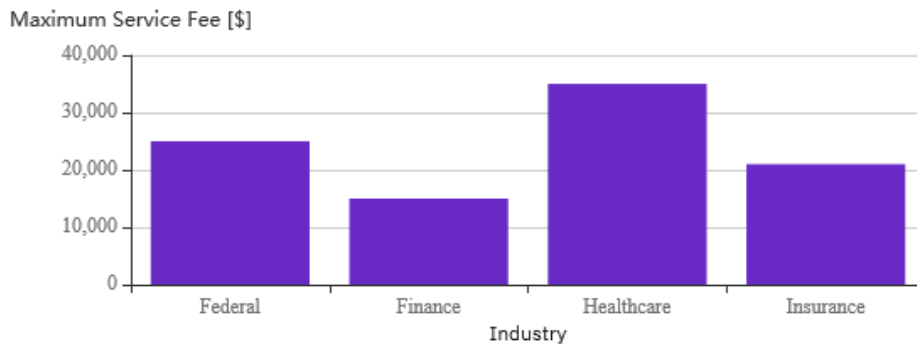
\_3. Click **Done**



\_4. On the Dashboard Toolbar, click the **Save** icon to save your work!

Your chart should look similar to this

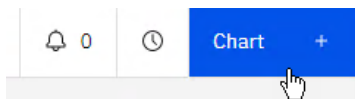
Highest Service Fee by Industry Sector



## 2.2.6 Create "Approval Count of High-Risk Cases" Chart

This bar chart will show the approval counts for high-risk cases in a given period. High-risk cases are identified by the decision service (which uses ML service to score risk level) and serve as a suggestion for approvers. This may be an essential metric, indicating that the approver overrode the ML model decision. Therefore, the ML model may not have been accurate and may need re-training.

\_1. Click **chart +**



\_2. In *Client Onboarding- Create chart* window, enter the following, and then click **Create**:

Item	Value
Name	Approval Count of High-Risk Cases
Select measurement	Period metric

### 2.2.6.1 Define Monitoring Information

\_1. For *Monitoring source*, select Workflow (Case) – Client Onboarding

#### Monitoring context

Monitoring source

Workflow (Case) - Client Onboarding

\_2. On *Interval*, change the setting to **Minutes(s)**

#### Interval

Time interval

Custom

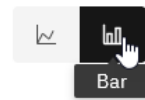
Every 1

Minute(s)

\_3. For chart type, select **Bar**

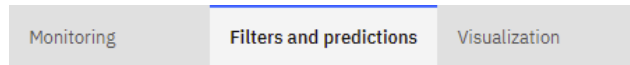
## Period metric

Bar

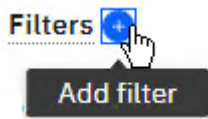


### 2.2.6.2 Define Filters and Predictions

\_1. Select the **Filters and predictions** tab



\_2. Click the **Filter +** button **twice** to add two Filters.



\_3. For each group, select the following values from the dropdown list:

Group	Data item	Operator	Value
1	CO_HighRisk (data) – (boolean)	=	true
2	CO_ApprovalStatus (data) – (keyword)	=	Approved

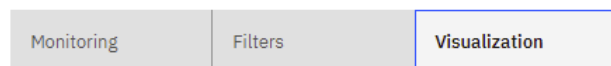
Your Filters setting should look exactly like this:

Filters +

Data item	Operator	Value
CO_HighRisk (data) - (boolean)	=	true
AND		
Data item	Operator	Value
CO_ApprovalStatus (data) - (keyword)	=	Approved

### 2.2.6.3 Define Visualization Information

\_1. Click **Visualization** tab



\_2. For Bar settings, enter:

Item	Value
X-axis label	Date
Y-axis label	Approvals

#### Trend settings

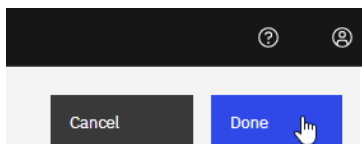
X axis label

Date

Y axis label

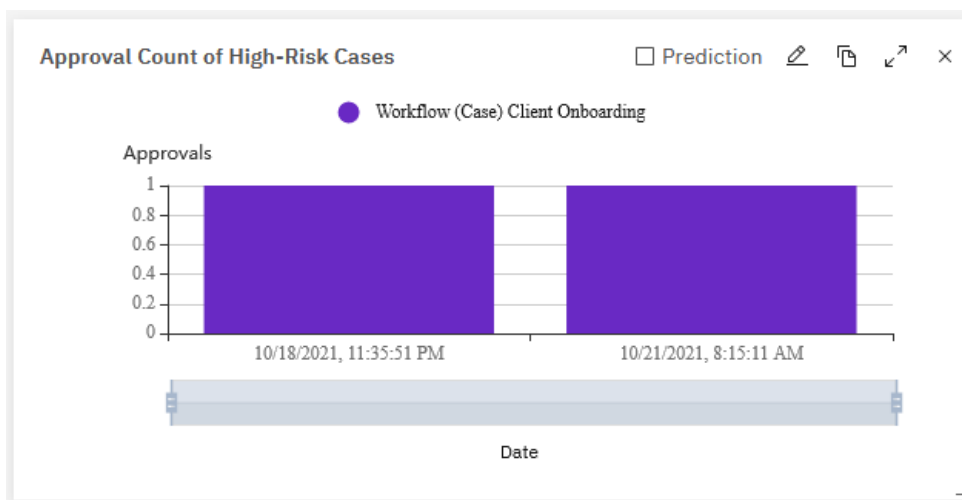
Approvals

\_3. Click **Done**



\_4. On the Dashboard Toolbar, click the **Save** icon to save your work!

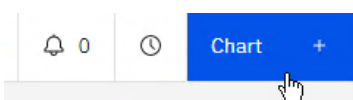
Your chart should look similar to this



## 2.2.7 Create an "Average Approval Confidence by Industry Sector and Revenue" Chart

You will be creating the Average Approval Confidence by Industry Sector and Revenue bubble chart. The bubble color will indicate the industry. The bubble size will indicate how many cases were handled by a given industry. The bubbles will be positioned in a grid with X-Axis as the average revenue and Y-Axis as the average approval confidence level.

\_1. Click **chart +**



\_2. In *Client Onboarding*- Create chart window, enter the following, and then click **Create**:

Item	Value
Name	Average Approval Confidence by Industry Sector and Revenue
Select measurement	Metric

### 2.2.7.1 Define Monitoring Information


\_1. For *Monitoring source*, select Workflow (Case) – Client Onboarding

#### Monitoring context

Monitoring source

Workflow (Case) - Client Onboarding

\_2. Click **Group by +** button

**Group by** 

\_3. Select **CO\_Industry (data) – (keyword)**

CO\_Industry (data) - (keyword)

\_4. Click the **Aggregation +** button **twice** to add two Aggregations

**Aggregation**   


Note that two Aggregations were added below Count

#### Aggregation

Function	Data item
Count	Select a data item
Sum	CO_AnnualRevenue (data) - (long)
Sum	CO_CompanyAge (data) - (long)

\_5. For the two new Aggregations, select the following values from the dropdown list:

Aggregation	Function	Data item
2	Average	CO_AnnualRvenue (data) – (long)
3	Average	CO_RiskConfidence(data) – (float)



\_6. Use the **Down Arrow** on the Count Aggregation to move it to the bottom (make it the last Aggregation).

Function	Data item		
Count	Select a data item	↑	↓

Your Aggregations setting should look exactly like this:

#### Aggregation

Function	Data item			
Average	CO_AnnualRevenue (data) - (long)	↑	↓	🗑
Average	CO_RiskConfidence (data) - (float)	↑	↓	🗑
Count	Select a data item	↑	↓	🗑

### 2.2.7.2 Define Visualization Information

\_1. Click **Visualization** tab

Monitoring	Filters	Visualization
------------	---------	---------------

\_2. For Bubble settings, enter:

Item	Value
X-axis label	Average Company Revenue
Y-axis label	Average Approval Confidence Level

#### Bubble settings

X axis label

Y axis label

\_3. Click **Done**

?

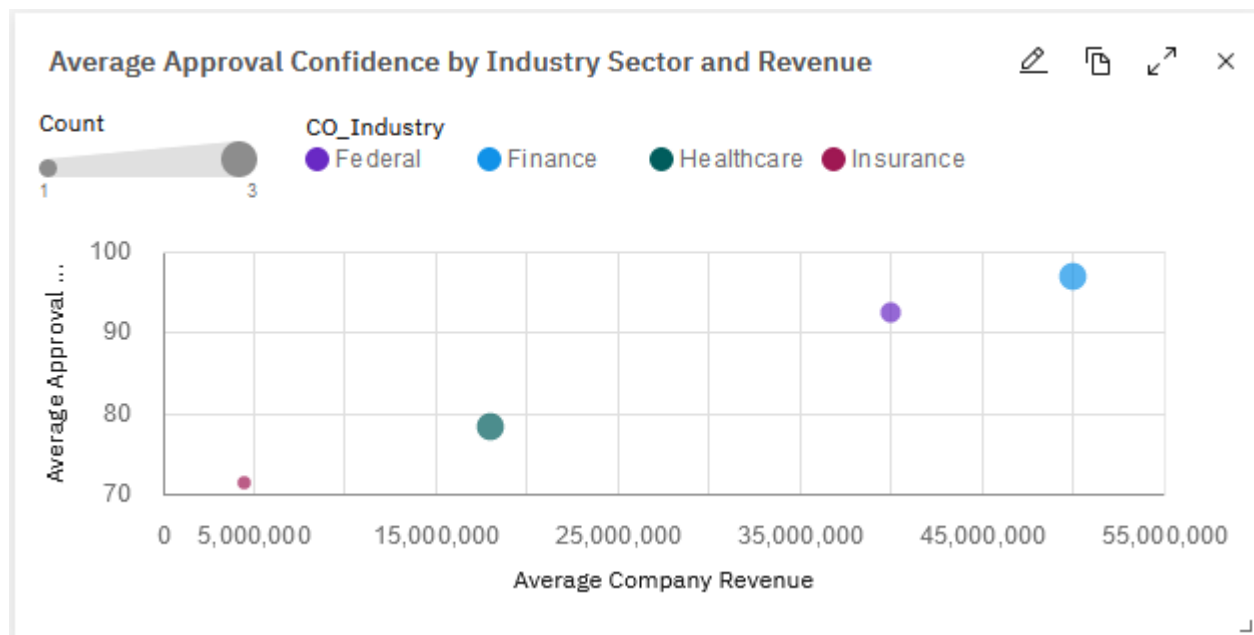
👤

Cancel

Done

\_4. On the Dashboard Toolbar, click the **Save** icon to save your work!

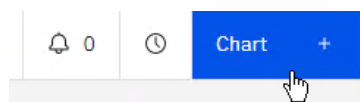
Your chart should look similar to this



## 2.2.8 Create an "Activity Duration Distribution in Case Completion" Chart

This doughnut chart will show the average time distribution among all activities required to complete a case.

\_1. Click **chart +**



\_2. In *Client Onboarding- Create chart* window, enter the following, and then click **Create**:

Item	Value
Name	Activity Duration Distribution in Case Completion
Select measurement	Metric

### 2.2.8.1 Define Monitoring Information

\_1. For *Monitoring source*, select Workflow (Case) – Client Onboarding

#### Monitoring context

Monitoring source

Workflow (Case) - Client Onboarding

\_2. Change the Aggregation values by setting *Function* to **Average** and *Data item* to **duration-seconds – (long)**

**Aggregation** +

Function	Data item
Average	duration-seconds - (long)

\_3. Click **Group by +** button

**Group by** +

\_4. Select **task-name – (keyword)**

**Group by** +

task-name - (keyword)

\_5. Set visualization type to **Donut**

**Metric**

Donut



## 2.2.8.2 Define Visualization Information

\_1. Click **Visualization** tab

Monitoring	Filters	Visualization
------------	---------	---------------

\_2. For *Donut settings*, set *Unit* to **Activity**

**Donut settings**

Unit

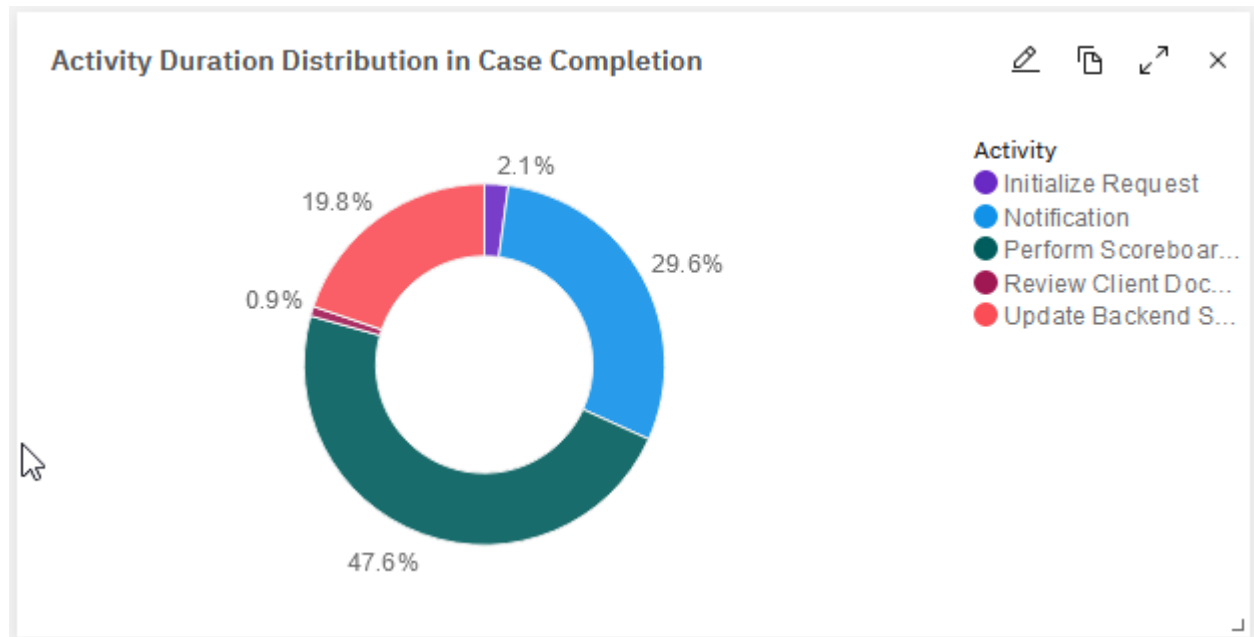
Activity

\_3. Click **Done**

Cancel Done

\_4. On the Dashboard, Toolbar click the **Save** icon to save your work!

Your chart should look similar to this



### 2.2.9 Create a "Completed Cases per Day" Chart

This bar chart will show the number of cases completed in a time period.

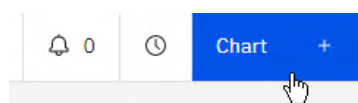
Note that the title states "per Day," but given the data set used for this lab, the scale set "per Minute".

This chart will also include two advanced features:

1. Predictions – predicts the number of cases completed in the future. This is a very valuable tool to enable capacity human resources planning.
2. Alerts – provide visual indications when the number of cases completed falls below 2 in a given period.

Note that the KPI Predictions are not based on ML. Depending on the data, KPI Prediction uses the following algorithms: ARIMA, Seasonal ARIMA, or Exponential Smoothing.

\_1. Click **chart +**



\_2. In *Client Onboarding- Create chart* window, enter the following, and then click **Create**:

Item	Value
Name	Completed Cases per Day
Select measurement	Period KPI

### 2.2.9.1 Define Monitoring Information

\_1. For *Monitoring source*, select Workflow (Case) – Client Onboarding

#### Monitoring context

Monitoring source

Workflow (Case) - Client Onboarding

\_2. On *Interval*, change the setting to **Minutes(s)**

#### Interval

Time interval

Custom

 Every 1 

Minute(s)

\_3. Click **Targets +** button



\_4. For *Label*, enter **Target** and for *Value*, enter **3**

Targets +

Label

Target

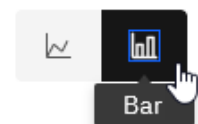
Value

3

\_5. For visualization, select **Bar**

## Period KPI

Bar



### 2.2.9.2 Define Filters

\_1. Select the **Filters and predictions** tab

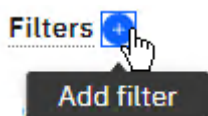
Monitoring

Filters and predictions

Visualization

Thresholds

\_2. Click the **Filter +** button **twice** to add two Filters








\_3. Select the following values for each Filter:

Filter	Data item	Operator	Value
1	type – (keyword)	=	case
2	state – (keyword)	=	Complete

Your Filter setting should look exactly like this:

#### Filters

Data item	Operator	Value
type - (keyword) 	= 	case
		
Data item	Operator	Value
state - (keyword) 	= 	Complete

\_4. Click **Prediction on** to enable Predictions

#### Prediction

 Prediction on

#### 2.2.9.3 Define Visualization Information

\_1. Click **Visualization** tab

Monitoring	Filters	<b>Visualization</b>
------------	---------	----------------------

\_2. For Trend settings, enter:

Item	Value
X-axis label	Date
Y-axis label	Completed Cases

#### Trend settings

X axis label

Date
------

Y axis label

Completed Cases
-----------------

#### 2.2.9.4 Define Thresholds

This setting allows you to customize the Gage threshold setting.

\_1. Select **Thresholds** tab

Monitoring	Filters	Visualization	Thresholds
------------	---------	---------------	------------

\_2. Click the **Thresholds +** button **twice** to add two thresholds



\_3. For each group select the following values from the dropdown list:

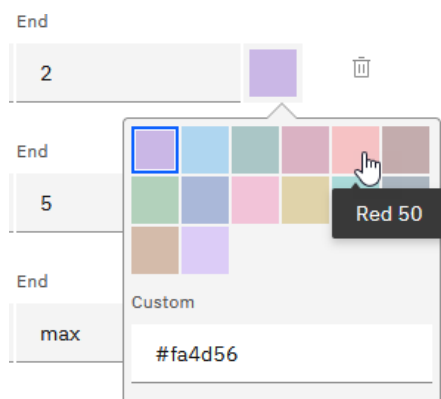
Threshold	Data item	Value
1	Threshold name	Case Completion Rate
	Value	2
	Range name 1	Low
	Range name 2	Normal
2	Threshold name	T2
	Value	5
	Range name	High

Your Thresholds setting should look exactly like this:

##### Thresholds +

Threshold name	Value	Range name	Start	End
Case Completion Rate	2	Low	min	2
		Range name	Start	End
		Normal	2	5
Threshold name	Value	Range name	Start	End
T2	5	High	5	max

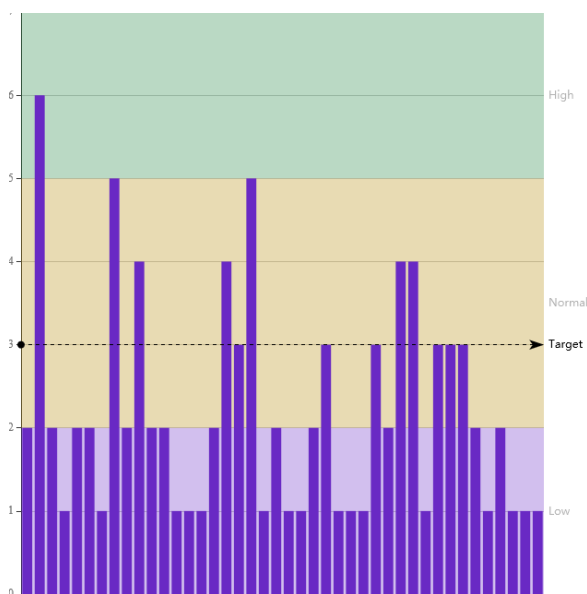
\_4. Click **Purple Color patch** and then select **Red color patch** from the palette



\_5. Using the above steps, customize the other two colors

Item	Value
Normal	Yellow
High	Green

\_6. The color settings should look exactly like this:



### 2.2.9.5 Define Alert

This setting allows you to customize the Gage threshold setting.


\_1. Click Alerts +





\_2. Make sure the threshold **Case Completion Rate** is selected


Alerts 

Case Completion Rate 


\_3. Configure the alert using input values shown below

Item	Value
Alert if the value	Drops to or below the threshold
Message	The case completion rate is low.


Alerts 

Case Completion Rate 

Alert if the value

drops to or below the threshold 

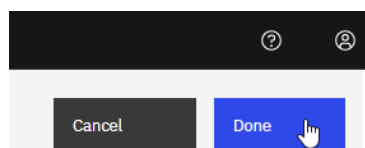
Message

Case completion rate is low. 

Priority

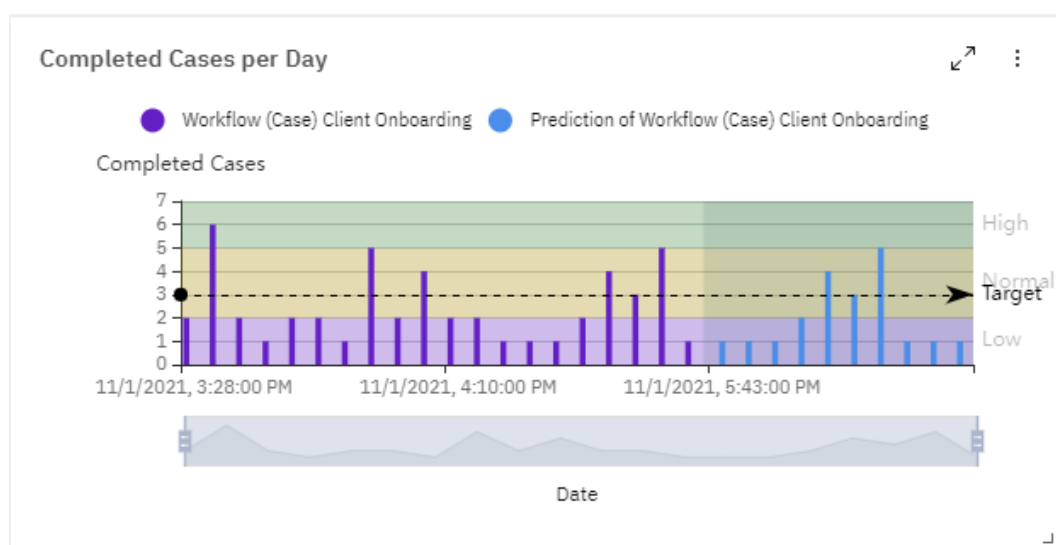
High 

\_4. Click **Done**



\_5. On the Dashboard Toolbar, click the **Save** icon to save your work!

Your chart should look similar to this



## 2.2.10 Create "Approvals by Industry Heatmap" Chart

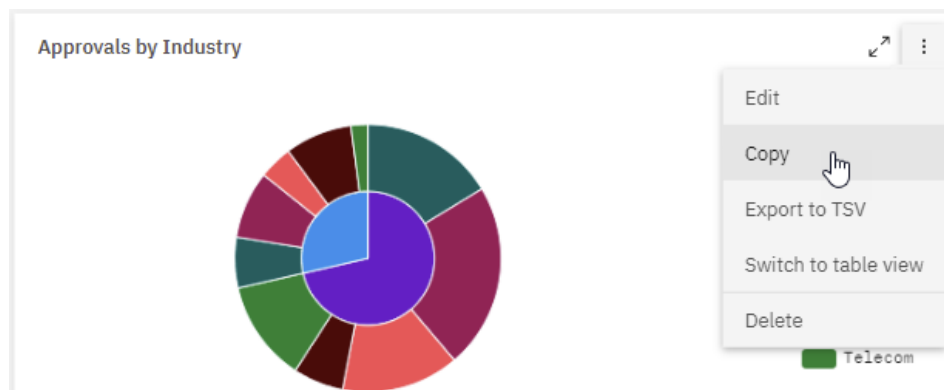
You will be creating Approvals by Industry heatmap chart.

The chart will contain two tiles for each industry: an approved and Rejected tile. The tile color intensity will indicate the count (the deeper the color, the higher the count).

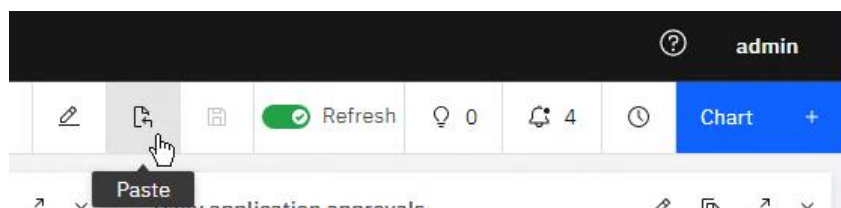
The tiles will be positioned in a grid with the X-Axis indicating the approvals (approved/rejected/approval pending), and the Y-Axis the industry.

Since this chart is almost identical to the *Approval by Industry* chart, we will use the copy-and-paste technique to create this chart from the *Approvals by Industry* chart.

\_1. On the *Approvals by Industry* chart, click the **ellipses** and select **Copy**

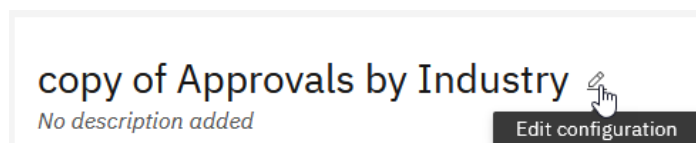


\_2. On the *BPC main toolbar*, click **Paste**



\_3. On the copy of the *Approval by Industry* chart, click **Edit**

\_4. Click **Edit configuration**




\_5. For *Name*, enter **Approvals by Industry Heatmap** and then click **Apply**

Client Onboarding Completed ×


Edit chart


Name

Approvals by Industry Heatmap 

Description (optional)

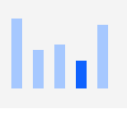
Select measurement

Metric 




A performance indicator based on data items, constants, and other metrics that help you

Period metric




A representation of metric values measured over time.

KPI




A type of metric that shows the degree to which business objectives are on track.

Period KPI




A representation of KPI values measured over time so that you can spot historical trends.

Data



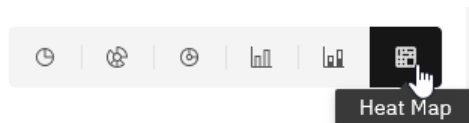
A set of data items presented in a table.

Cancel Apply 

### 2.2.10.1 Define Monitoring Information


\_1. For visualization, select **Heat Map**

Metric  
Heat Map



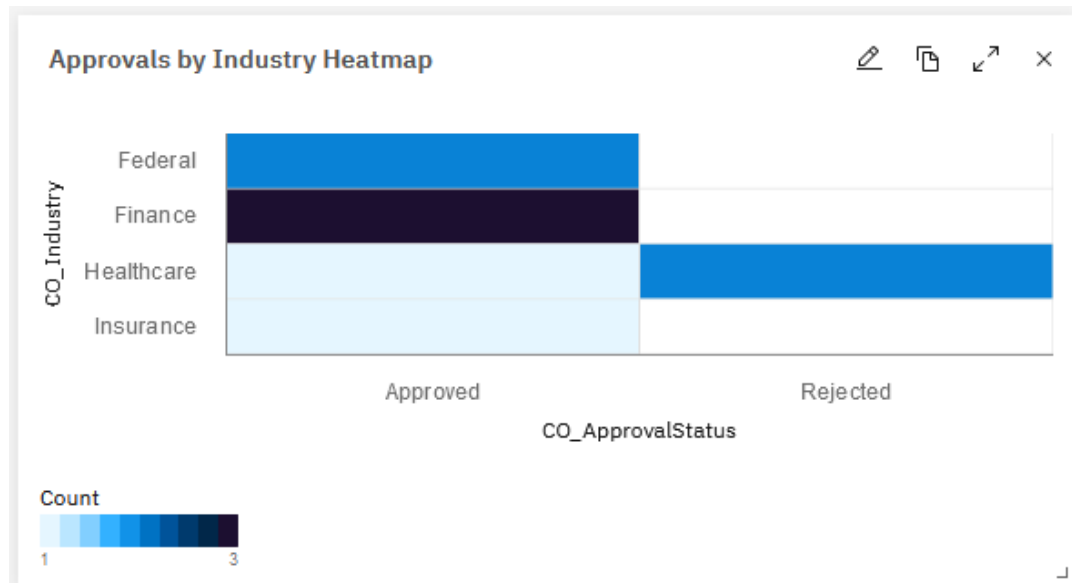
\_2. Click **Done**

? ⌵

Cancel Done 

\_3. On the Dashboard Toolbar, click the **Save** icon to save your work!

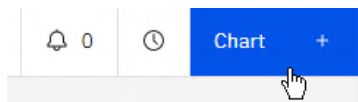
Your chart should look similar to this



### 2.2.11 Create a "Client Onboarding Data" Chart

You will be creating a Client Onboarding data chart. The data chart will contain columns representing selected Client Onboarding case properties.

\_1. Click **chart +**



\_2. In *Client Onboarding- Create chart* window, enter the following, and then click **Create**:

Item	Value
Name	Client Onboarding Data
Select measurement	Data

Client Onboarding Completed

Edit chart

Name  
Client Onboarding Data

Description (optional)

Select measurement

Metric

90%

A performance indicator based on data items, constants, and other metrics that helps you monitor your business activities.

Period metric

A representation of metric values measured over time.

KPI

A type of metric that shows the degree to which business objectives are on track.

Period KPI

A representation of KPI values measured over time so that you can spot historical trends.

Data

A set of data items presented in a table.

### 2.2.11.1 Define Monitoring Information

\_1. For *Monitoring source*, select Workflow (Case) – Client Onboarding

#### Monitoring context

Monitoring source

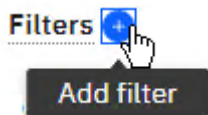
Workflow (Case) - Client Onboarding

### 2.2.11.2 Define Filters

\_1. Select **Filters** tab

MonitoringFiltersVisualization

\_2. Click the **Filter +** button **three times** to add three Filters.



\_3. For each group, select the following values from the dropdown list:

Group	Data item	Operator	Value
1	category – (keyword)	=	icm
2	type – (keyword)	=	case
3	state – (keyword)	=	Complete

Your Filters setting should look exactly like this:

Filters +

Data item	Operator	Value
category - (keyword)	=	icm
AND		
Data item	Operator	Value
type - (keyword)	=	case
AND		
Data item	Operator	Value
state - (keyword)	=	Complete

### 2.2.11.3 Define Visualization

\_1. Select **Visualization** tab

MonitoringFiltersVisualization

\_2. Click the **Data columns +** button **5 times** to add five data columns



\_3. For each group, select the following values from the dropdown list:

Data column	Data item	Label
1	CO_ServiceFee (data)	Service Fee
2	CO_Industry (data)	Industry
3	CO_AddressCountry (data)	Country
4	CO_ApprovalStatus (data)	Approved?
5	duration-seconds	Duration

Your *Data columns* setting should look exactly like this:

Data columns +		
Data item	Label	
CO_ServicesFee (data) ▼	Service Fee	↑ ↓ 🗑
CO_Industry (data) ▼	Industry	↑ ↓ 🗑
CO_AddressCountry (data) ▼	Country	↑ ↓ 🗑
CO_ApprovalStatus (data) ▼	Approved?	↑ ↓ 🗑
duration-seconds ▼	Duration	↑ ↓ 🗑

\_4. Click the **Service Fee** column to sort the data by the Service Fee column.

## Data

5 columns, 12 rows

Service Fee	Industry	Country	Approved?	Duration
-------------	----------	---------	-----------	----------

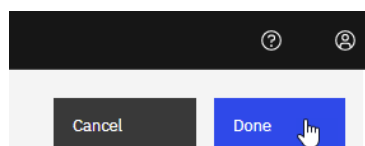
The data in the Data Chart should look similar to this

## Data

5 columns, 12 rows

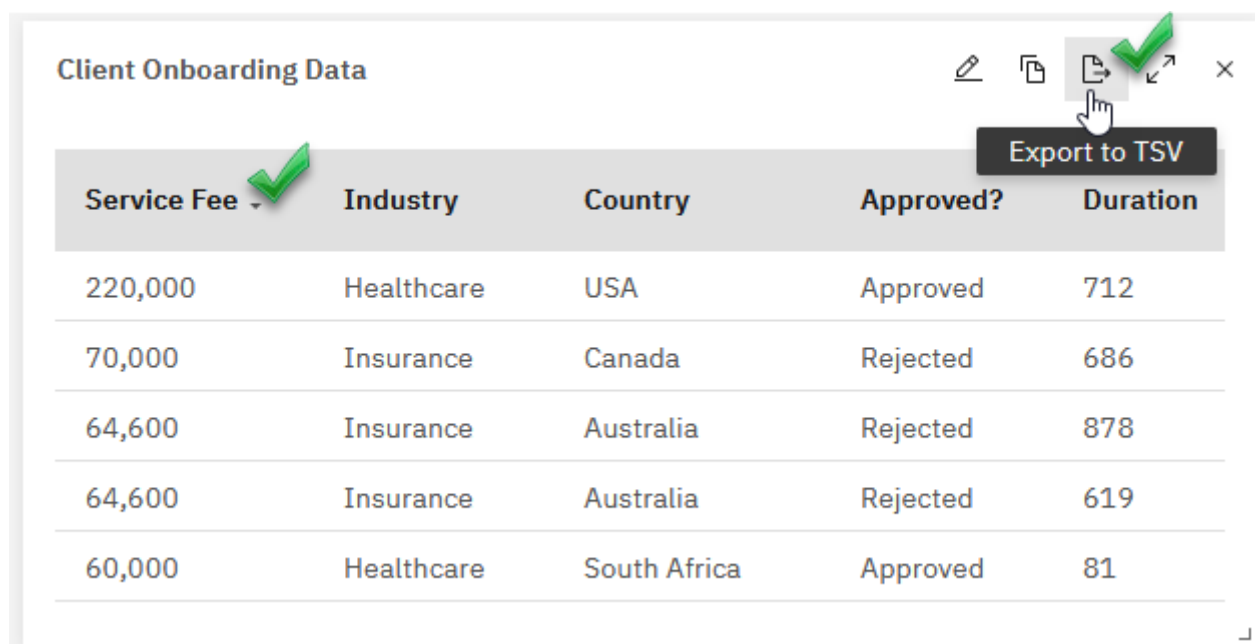
Service Fee	Industry	Country	Approved?	Duration
35,000	Healthcare	United States of America	Rejected	60
25,000	Federal	United States of America	Approved	71
21,000	Healthcare	United States of America	Approved	76
21,000	Healthcare	United States of America	Rejected	84
15,000	Finance	United States of America	Approved	51
15,000	Finance	United States of America	Approved	59
15,000	Federal	Canada	Approved	52
15,000	Finance	United States of America	Approved	59

\_5. Click **Done**



\_6. On the Dashboard, Toolbar click the **Save** icon to save your work!

The chart should look similar to this



Service Fee	Industry	Country	Approved?	Duration
220,000	Healthcare	USA	Approved	712
70,000	Insurance	Canada	Rejected	686
64,600	Insurance	Australia	Rejected	878
64,600	Insurance	Australia	Rejected	619
60,000	Healthcare	South Africa	Approved	81

Note:

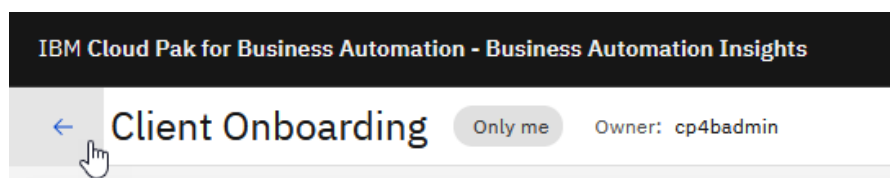
- You can sort the data in the chart. For example, in the screenshot above, the chart is sorted by Service Fee column
- You can export the data in the chart as a spreadsheet in the TSV format.

## 2.2.12 Create a Configure Goal

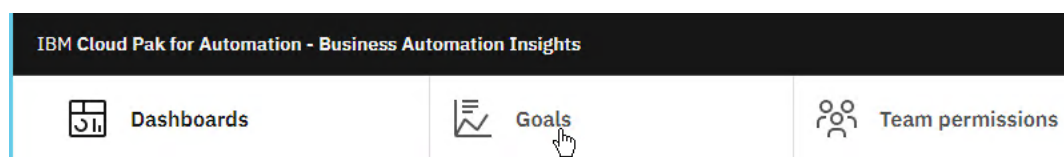
A Goal is a business statement that brings purpose and scope to your dashboards. Goals are used to aggregate charts within a dashboard and to give dashboards a business purpose. A Goal's definition includes the details of a specific objective you want to achieve, the time frame for achieving an objective, and identifiers (categories and colors) for the goal.

### 2.2.12.1 Create a Goal

\_1. Click the **Arrow** to the left of the Client Onboarding dashboard

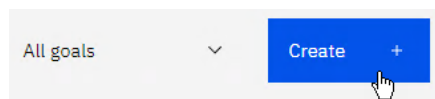


\_2. Click **Goals**





\_3. Click **Create**



\_4. For *Name*, enter Focus Corp's top Client Onboarding KPI

\_5. For *Description*, enter Focus on the three top KPIs identified by the senior management team.

\_6. For *Priority*, select **High**

\_7. Click *Goal color* to **Red**

\_8. Your Goal definition should look exactly like this:

#### Details

Name

Focus Corp's top Client Onboarding KPI ✓

Description (optional)

Focus on the three top KPI identified by senior management team. ✓

Goal color



\_9. Click **Save**



#### Goal specification

Goal classification (optional)

Enter category

Priority

☐ Low ☐ Medium ☒ High ✓

Start date

☒ Now

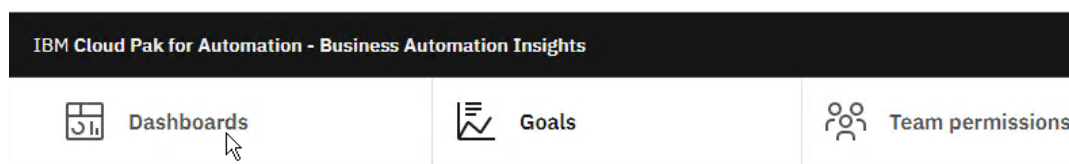
☐ Custom

10/25/2021

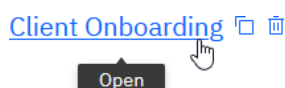


### 2.2.12.2 Set business goal for selected charts

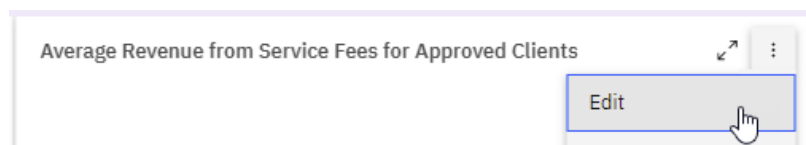
\_1. Click **Dashboards**



\_2. Click **Client Onboarding** dashboard

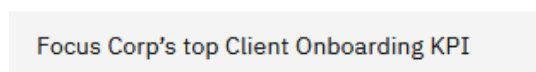


\_3. On Average Revenue from Service Fees for Approved Clients, dashboard click the **ellipses** and select **Edit**

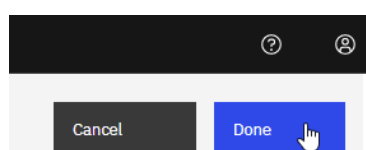


\_4. For Business goal, from the dropdown list, select **Focus Corp's top Client Onboarding KPI**

Business goal

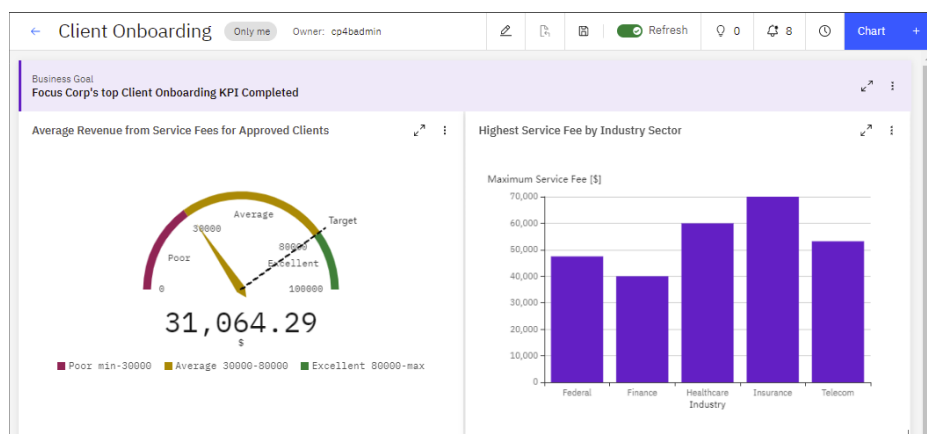


\_5. Click **Done**



\_6. Repeat the above steps to add a *Business Goal* to **Highest Service Fee by Industry Sector**

Your dashboard should now look similar to this:

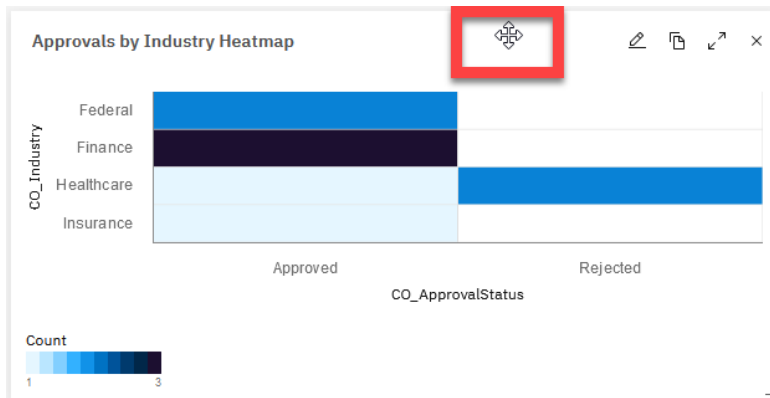


## 2.2.13 Change Dashboard Layout

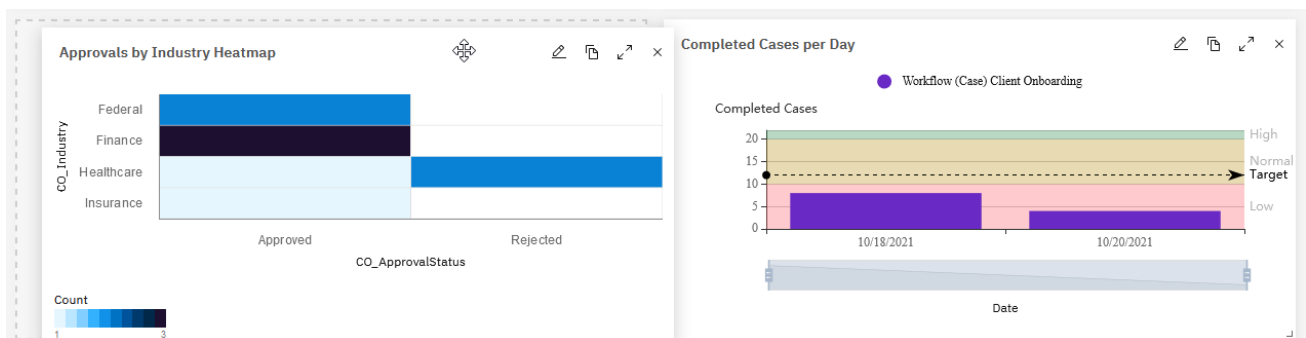
You will now customize your dashboard by moving and changing chart sizes.

### 2.2.13.1 Move Approvals by Industry Heatmap Chart

\_1. Click the **title area** on the *Approvals by Industry Heatmap* chart:

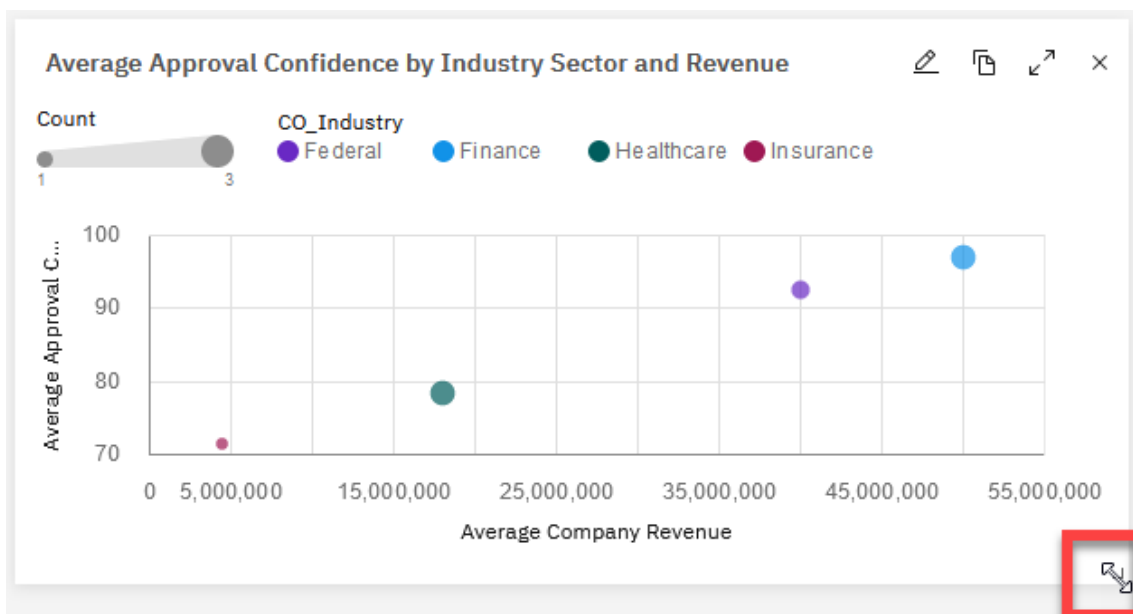


\_2. **Drag** the chart to the empty area to the left of the Completed Cases per Day chart

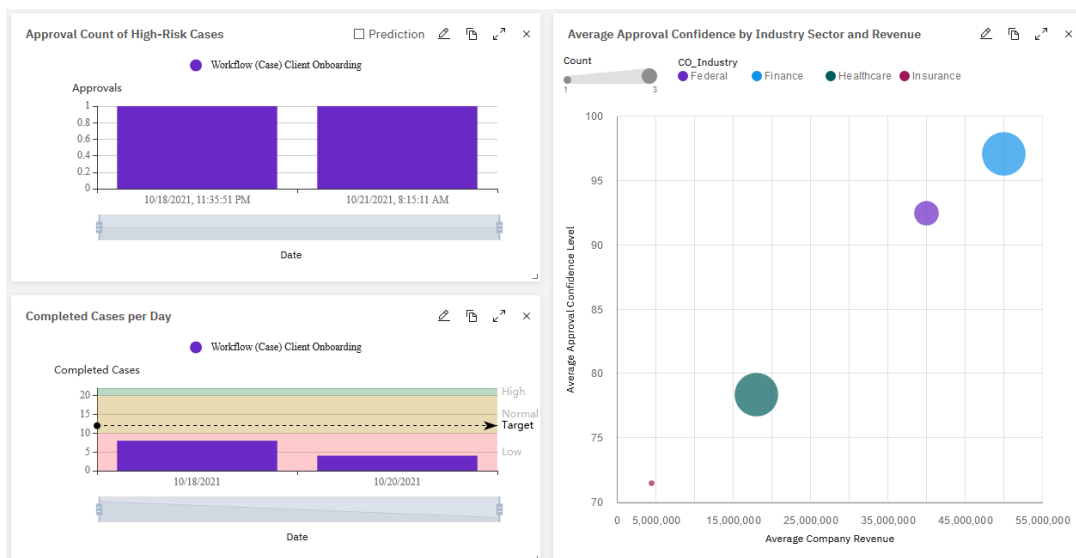


### 2.2.13.2 Expand Chart Average Approval Confidence by Industry Sector and Revenue

\_1. Grab the image expander in the bottom right corner of the **Average Approval Confidence by Industry Sector and Revenue** chart

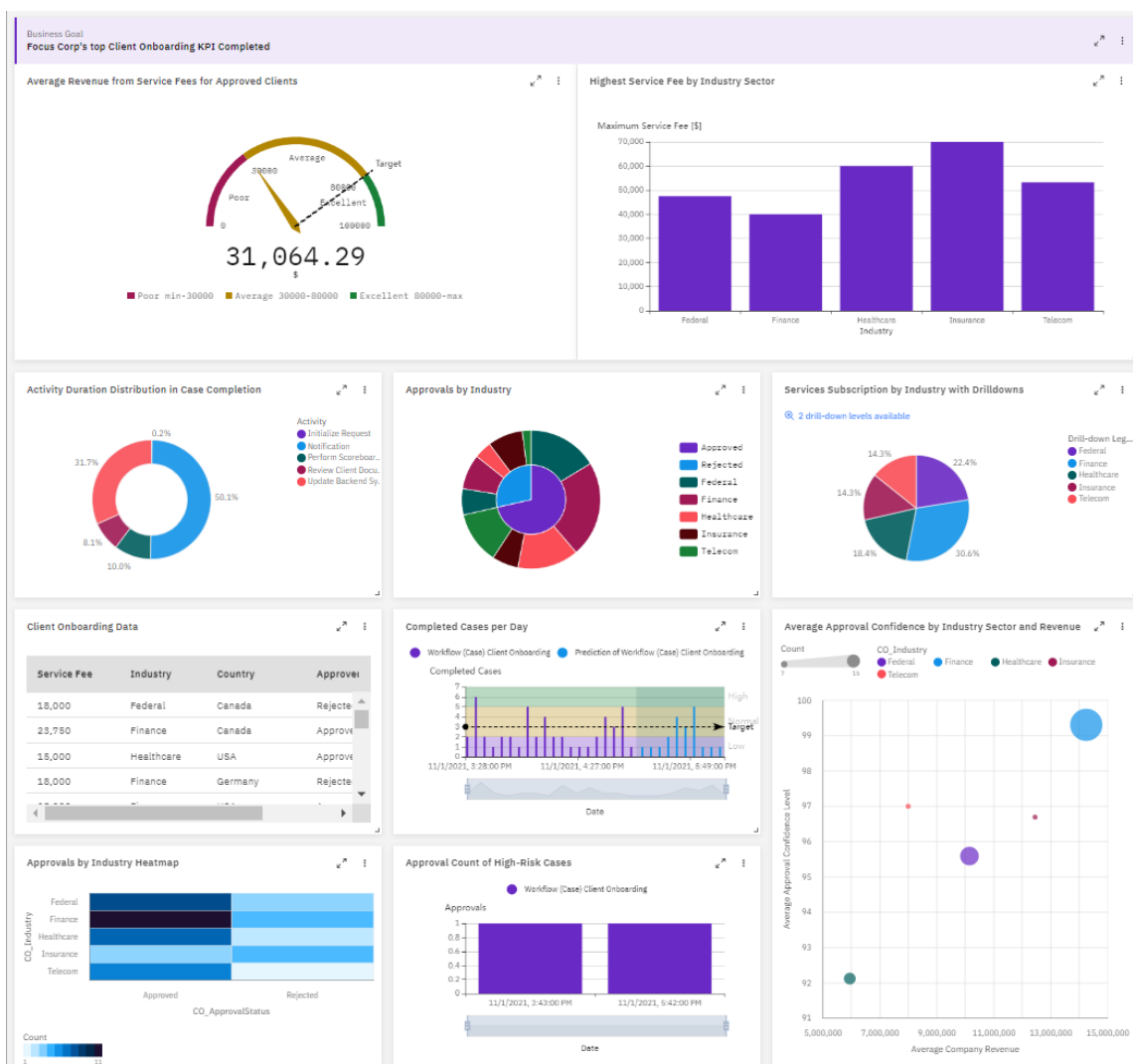


\_2. **Stretch** the chart downwards until it achieves the height of two charts



\_3. On the Dashboard Toolbar, click the **Save** icon to save your work!

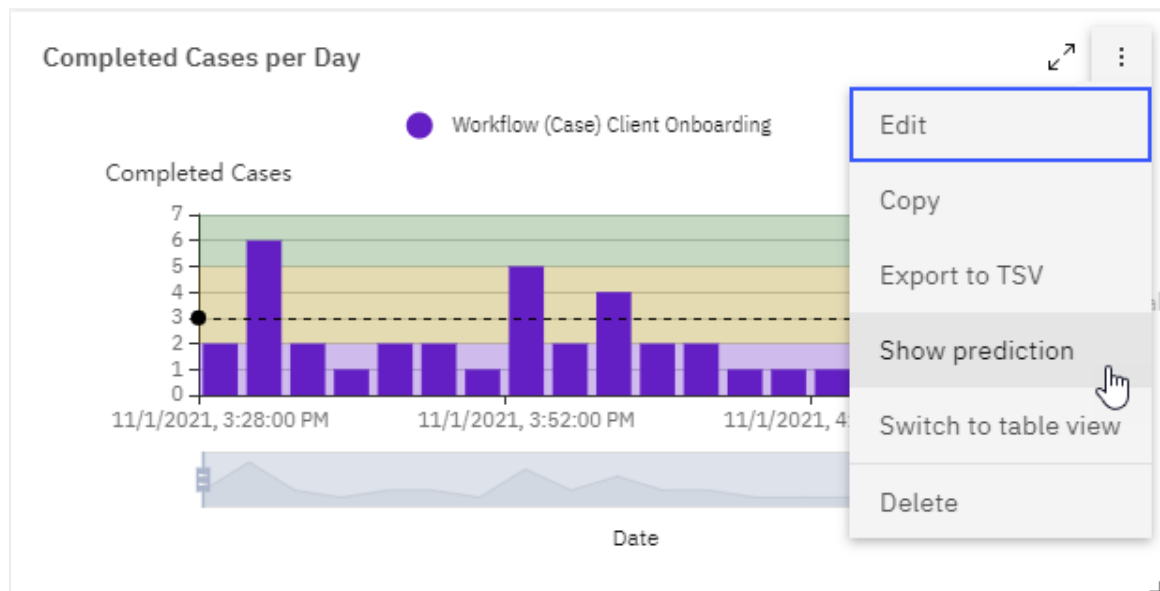
Your final version of the Client Onboarding Dashboard should now look similar to this:



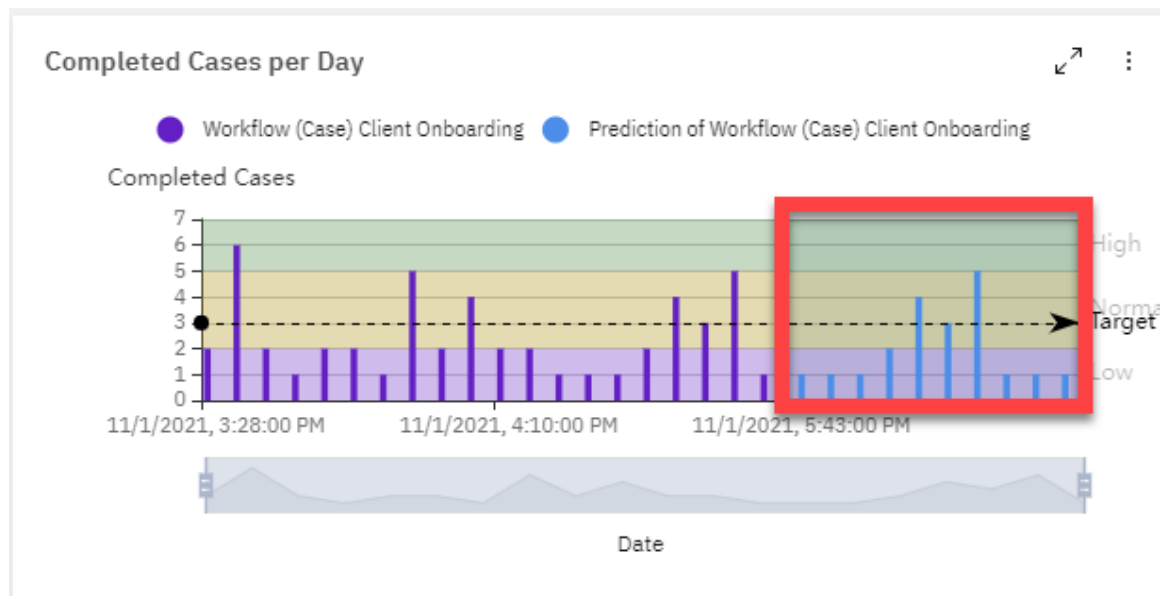
## 2.2.14 Explore Advanced Dashboard Features

### 2.2.14.1 KPI Predictions

\_1. On the *Completed Cases per Day*, Chart click the **ellipses** and then select **Show Predictions**

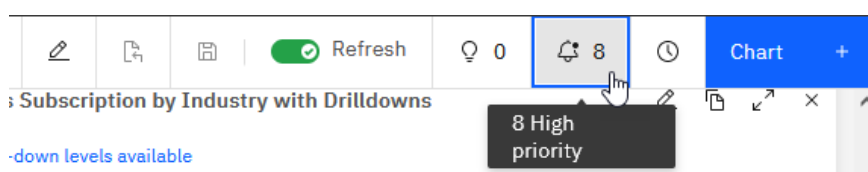


You should now see the predicted case completion rate information

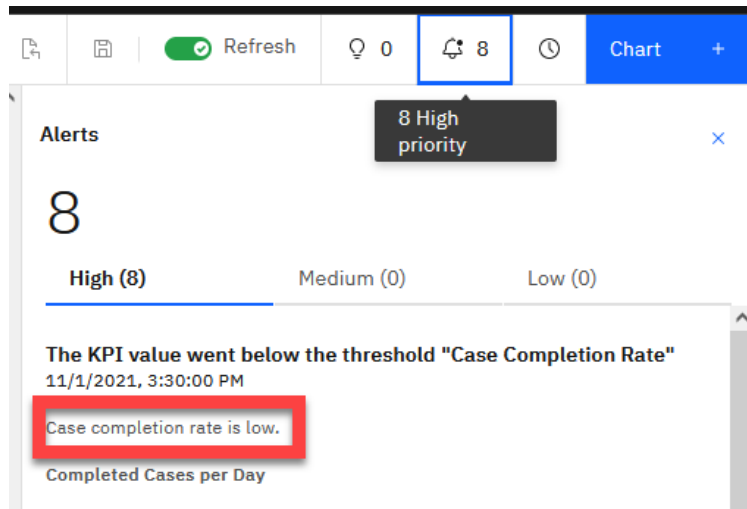


### 2.2.14.2 Dashboard Alerts

\_1. Click the **Alert** icon in the toolbar on top of the Dashboard



You should now see all the alerts generated whenever the Case Completion Rate just reached or went below the lower threshold (2) you defined in the Completed Cases per Day Chart.



Because this is a shared environment, you may see more alerts generated when other users work on the Client Onboarding case.

## 2.3 Summary

In the labs, you learned how to build and use the Business Performance Center dashboard to provide insights into a Client Onboarding solution for a line of business users. Specifically, you learned how to create and configure the following BPC artifacts: Dashboards, Charts, Chart Alerts, and Goals.