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That's How I Like It: Personalize Reports in SAS® Visual Analytics Apps for iOS, Android, and Microsoft Windows 10

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ABSTRACT

The report you are viewing on your phone is both beautiful and informative. You can drill, **filter, and sort the data, but there's a burning question you need to answer. If only you** could make a few modifications to the report, you could gain the insight you are searching for. Viewer customizations, a collection of capabilities recently introduced in SAS® Visual Analytics, puts the power in the hands of report viewers to gain their own insights. You can personalize your report-viewing experience and answer the questions that used to lie just out of reach. Customize filters, groups, and ranks for your data to get a different view and gain new insights. Change data items and visualizations to dig a bit deeper. While viewing your report, you can make decisions more quickly by customizing the report according to your needs—no need to bother the report designer with change requests. You can easily change the data being analyzed from *revenue* to *profit*, if you like, or filter out regions of the world that are not relevant to your data questions. You can do all of this in the SAS® Visual Analytics Apps, using your preferred platform: iOS, Android, or Windows 10.

INTRODUCTION

SAS Visual Analytics reports can be interacted with from any of your devices. Simply download the free mobile app from the Apple Store, Google Play, or Microsoft Windows Store, and you can view reports anywhere. And now, our mobile apps allow you to customize your experience.

When the report designer creates a report, they can determine how much personalization they want to allow report viewers to perform on the report. Viewer customizations supports three capability levels:

- **Simple Edits.** This is the lowest level. Report viewers can see the data assigned to a graph, and view the filters, ranks, and display rules as they could prior to this feature.
- **Comprehensive Edits.** Viewers can make modifications to some of the features. For example, viewers can turn off a display rule.
- **Data Edits.** This is the highest level of viewer customizations. Report viewers can create filters, ranks, and display rules; viewers can replace a data item in a chart and even add a new data item to a visualization.

For the purposes of this paper, we are assuming that the report designer has set the viewer customizations capability level to Data Edits—the highest customization level. Our illustrations assume that the report viewer is using an iOS device.

In support of the promise of SAS to deliver analytics to everyone, everywhere, the viewer **customizations feature makes each user's experience personalized through self**-service empowerment delivered through a well-governed system.

Personalize: With our new viewer customizations feature, you can now personalize your reports—to meet your needs.

Self-service: Report designers are no longer overwhelmed with requests to customize reports for individuals.

Governed: Report designers manage the level of viewer customizations supported for each report.

This paper gives you an overview of the viewer customizations feature. The paper includes screen shots and illustrative examples showing how you can interact with your data on your phone, tablet, and laptop to gain deeper insight to support smart business decisions.

ADD A FILTER

Suppose a graph in your daily report shows the sales figures for several regions, but you care only about the data for your region. With the SAS Visual Analytics viewer customization feature you can create your own filters, and you don't have to ask the report designer to make any changes. Here's how to do it:

First, select the graph that you're interested in filtering. Next, tap the Details button () to open a window containing details about the graph. See Figure 1 for an illustration of the iOS application with the Details window displayed.

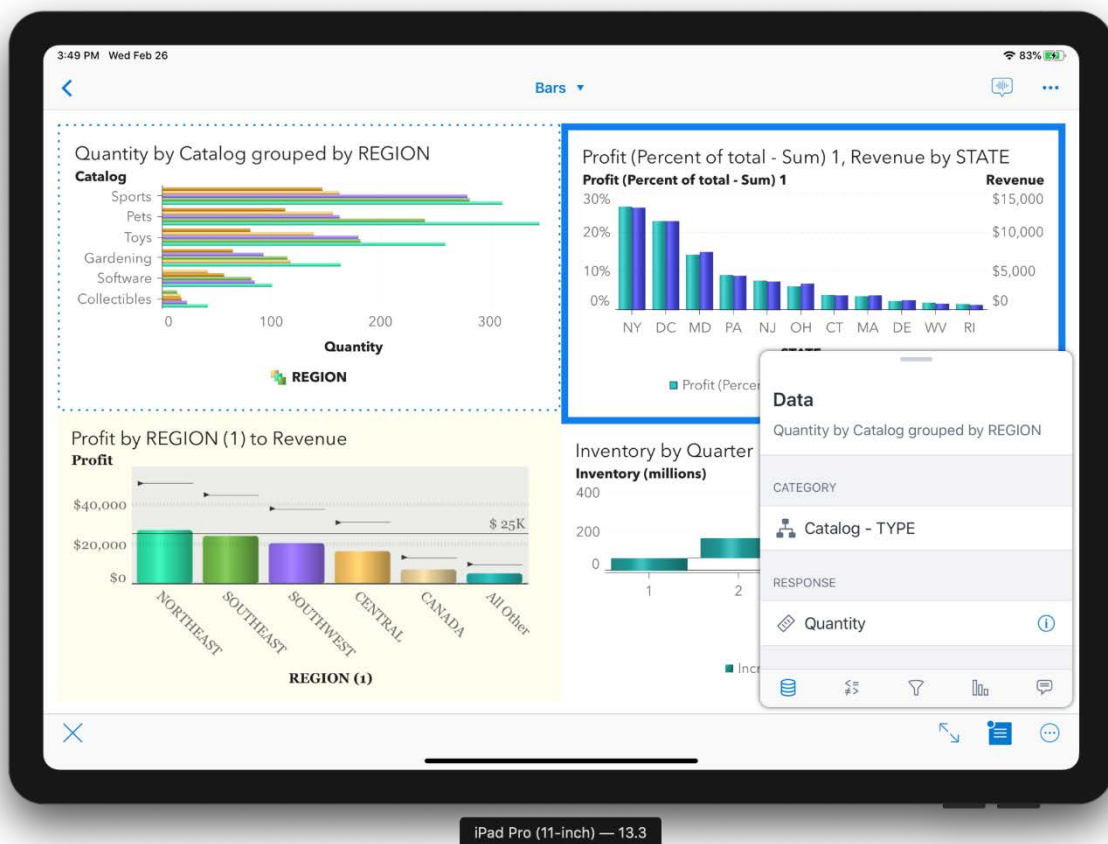


Figure 1. The Details Button and the Details Window Displaying the Data Pane

When the left-most button is tapped on the Details window, the Data pane is displayed, as shown in Figure 1. You can see all the data associated with the graph in this pane. When you tap one of the other buttons at the bottom of the Details window, you can see the display rules, filters, ranks, and comments, respectively, that are associated with the selected graph.

See Figure 2 for an example of the Filters pane. Notice that the Filter button (🔍) is blue at the bottom of the Details window. In Figure 2, no filters have been applied yet.

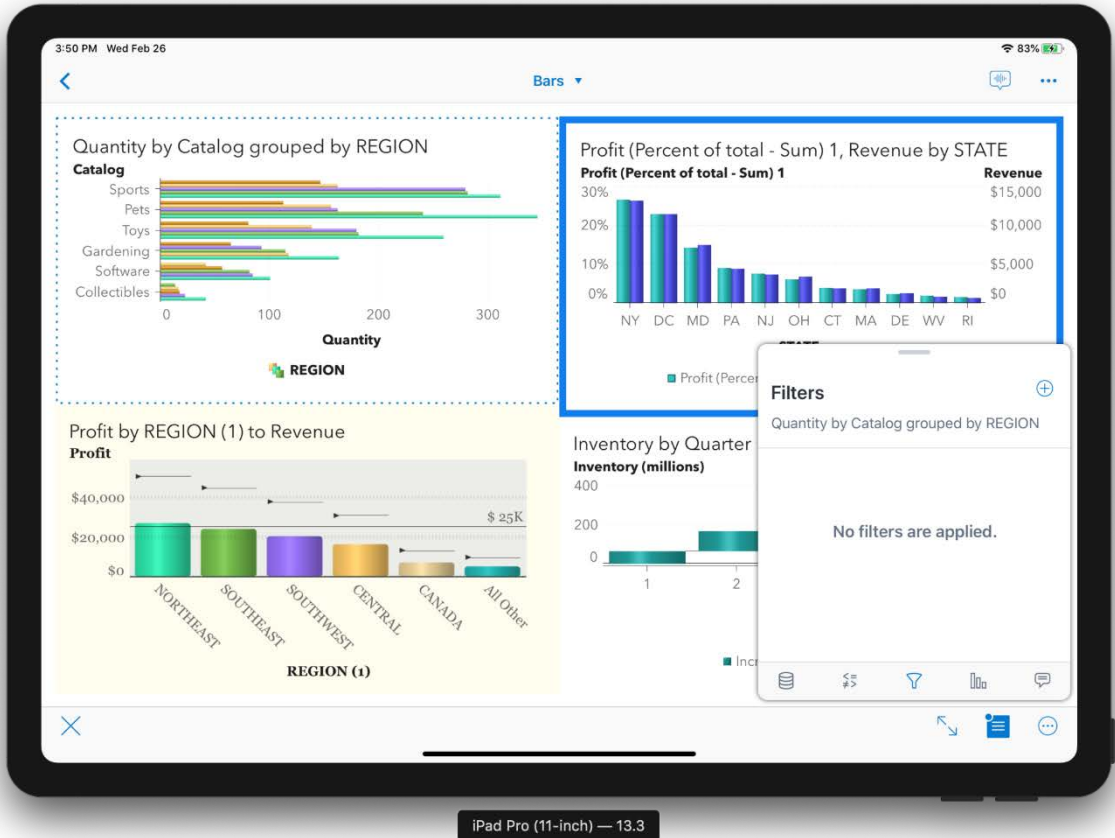
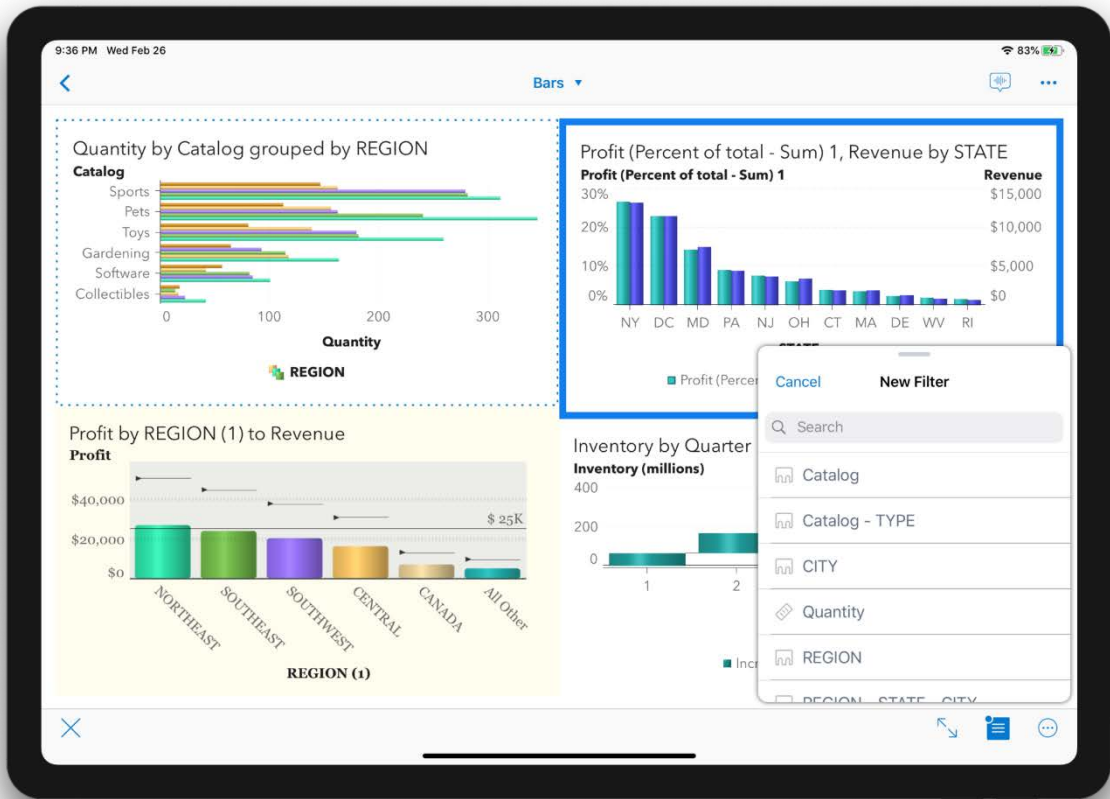


Figure 2. The Filter Button and the Filters Pane

You want to remove some of the data from the chart, so you tap the Add button—the blue plus symbol in the upper right of the pane—to create a new filter.

Next, see Figure 3. Select the data item that you want to create a filter for (“Region” in this example). Tap the values that you want to include in the filter, and then tap Done. Your filter will now be applied to the graph. It’s that simple!



iPad Pro (11-inch) — 13.3

Figure 3. Data Items and Data Values in the Filters Pane

Figure 4 shows the filter applied to the graph, and the Filters pane listing the new filter.

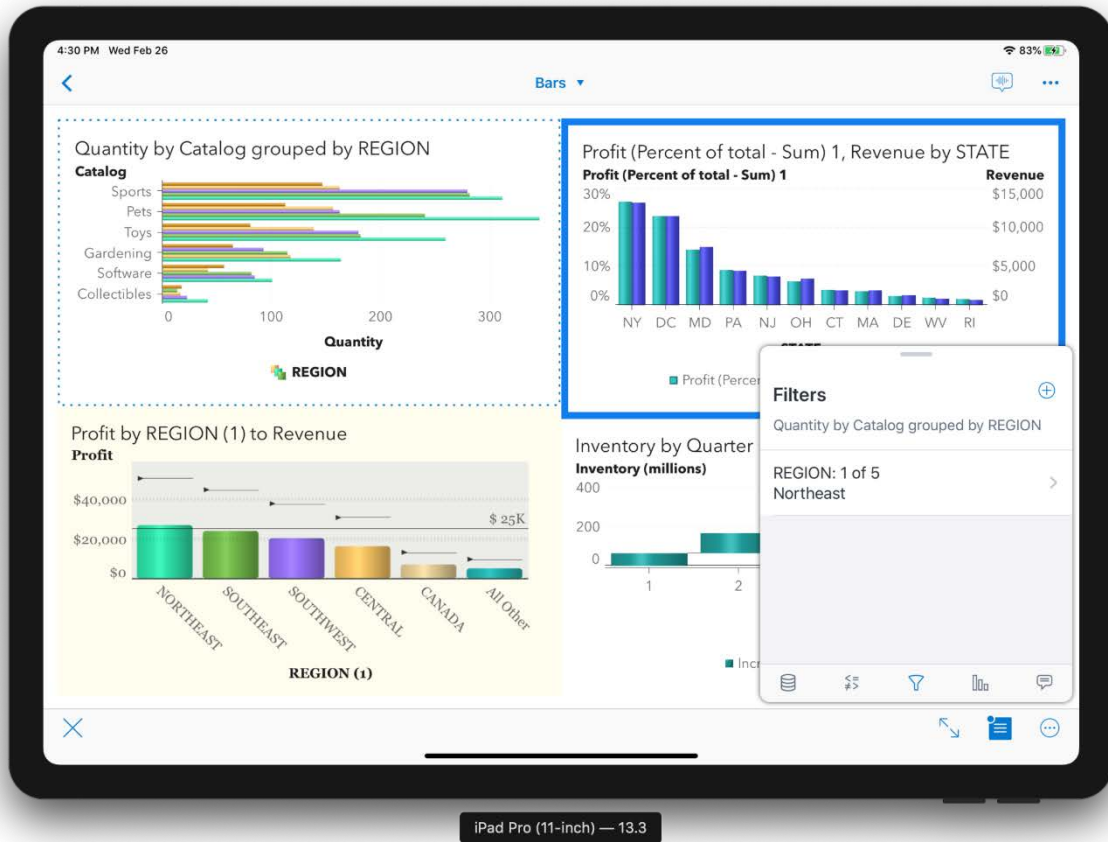


Figure 4. The New Filter Applied to the Graph

CHANGE A VARIABLE

In the next example, the report shows your costs per state, but you need to understand your costs per city. You can change the data item from "State" to "City," to get a better sense of the numbers.

With the graph selected, tap the Details button, and then tap the Data button (🗄️).

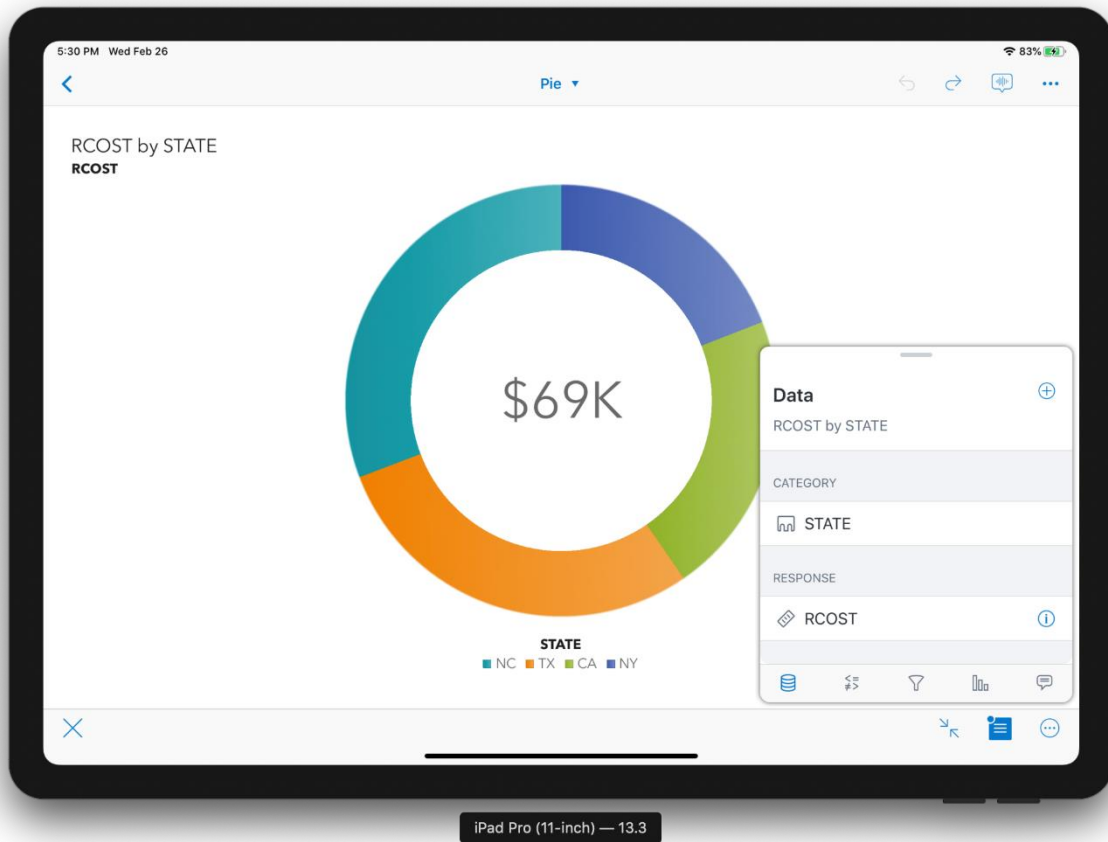


Figure 5. The “State” Data Item Associated with the Graph

You see the data associated with the graph in Figure 5. To replace “State” with “City,” simply tap State. Then tap City on the next screen as shown in Figure 6.

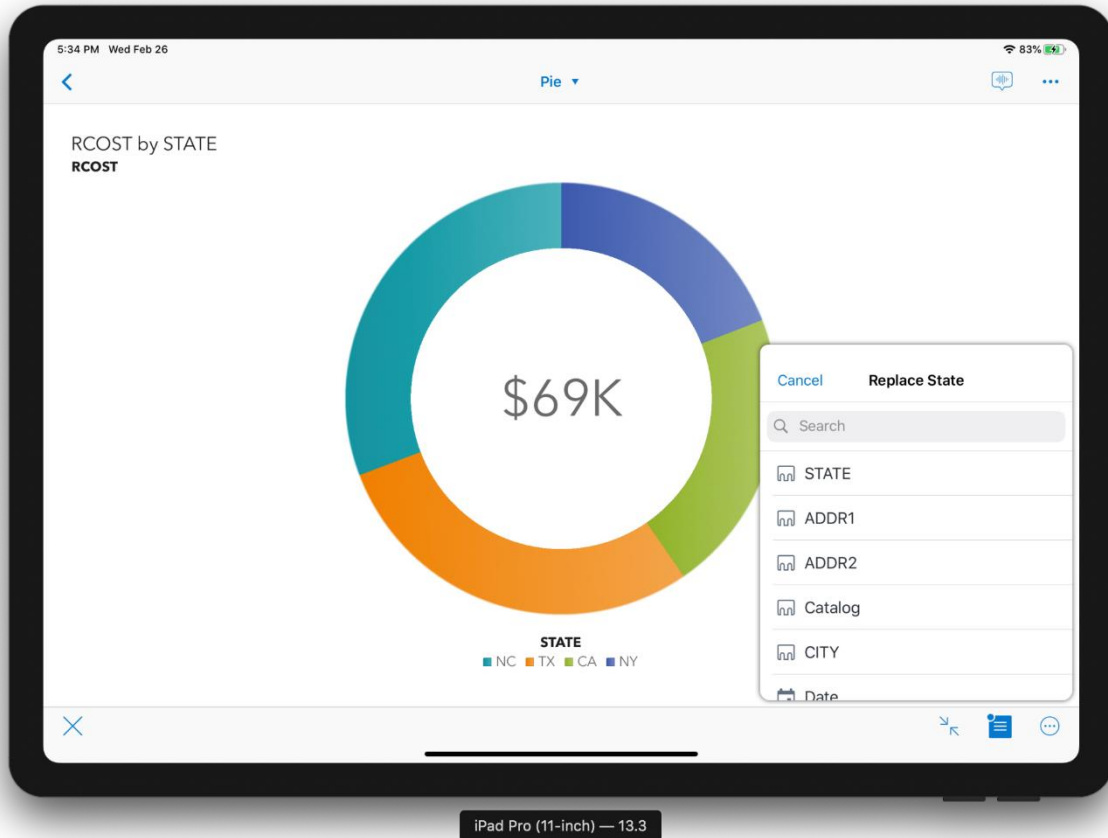


Figure 6. Tap “City” to Replace “State” in the Filter

Figure 7 shows how easy it is to replace a variable. The graph is updated immediately with the new data item.

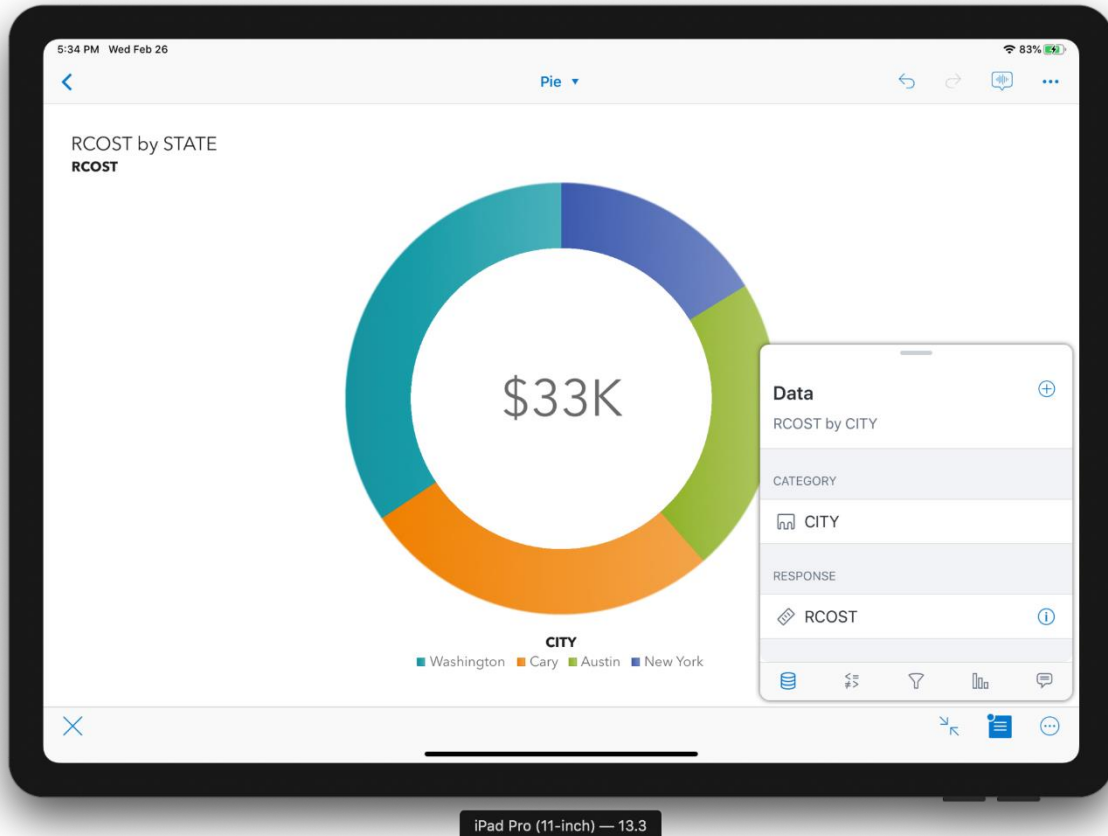


Figure 7. The Chart with the "City" Data Item

CHANGE THE VISUALIZATION

Sometimes the report designer chooses a specific chart type that you don't like or don't completely understand. With the Change Chart Type feature, you can easily swap out a chart type without bothering the report designer. For example, the report you are viewing has a pie chart showing the cost of good per state, but you want to see each state as a bar instead of a pie wedge. You can change the visualization from a pie chart to a bar chart, to **get a better view of your data. Here's how:**

Be sure the chart is selected. Tap the Object More Options button (☰), and then tap Change Pie Chart to as shown in Figure 8.

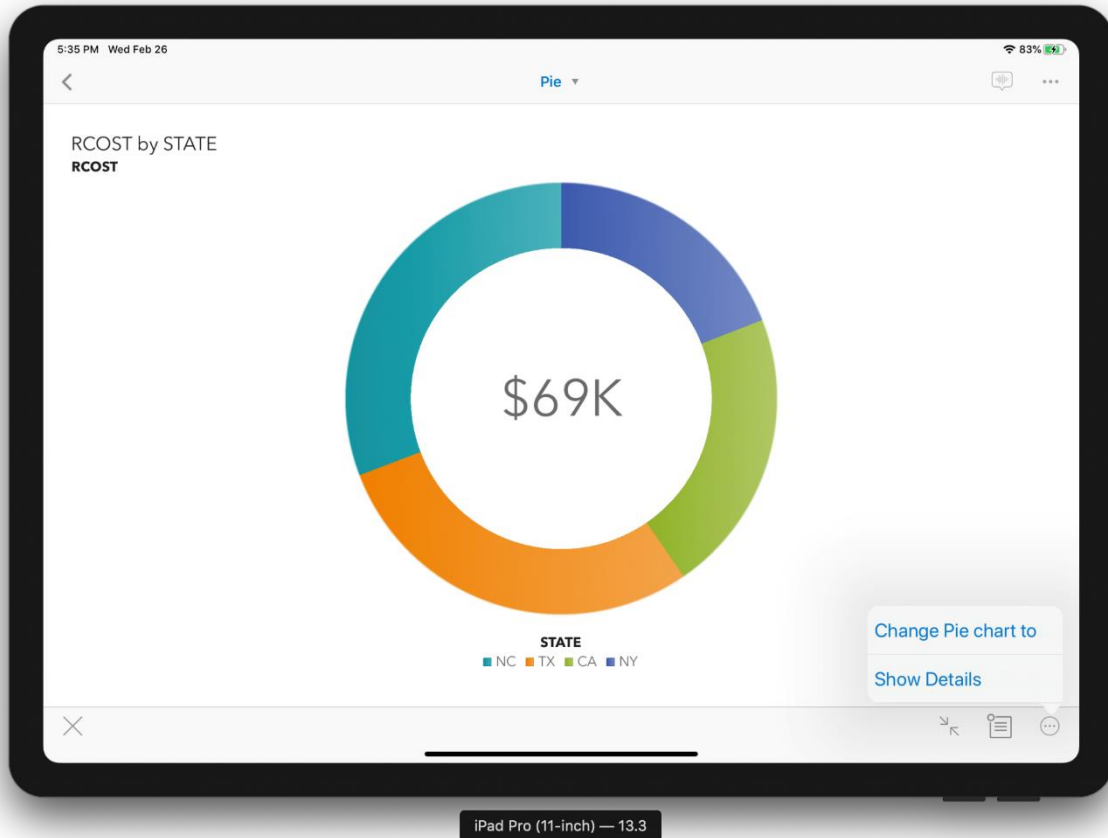


Figure 8. Tap “Change Pie chart to”

Tap the chart type that you prefer as shown in Figure 9.

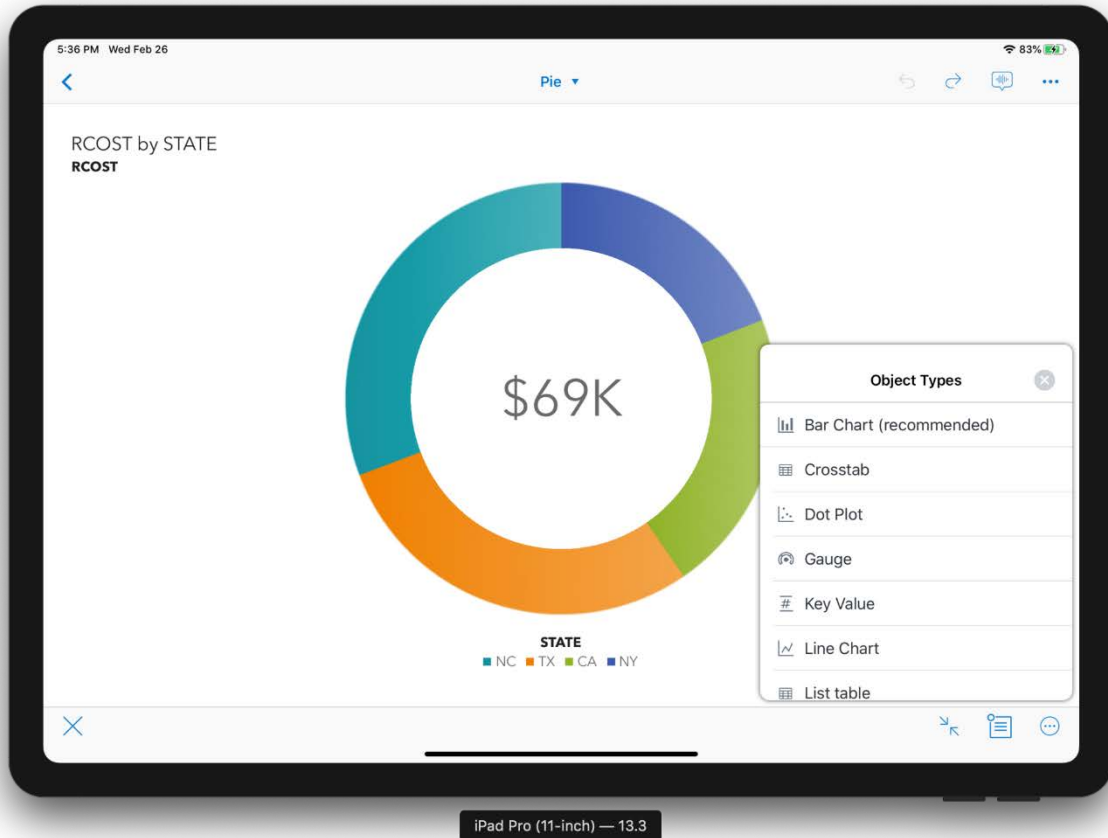


Figure 9. Select the New Chart Type “Bar Chart”

As you can see in Figure 10, it is incredibly easy to view your reports the way you want by changing the chart type in the report to the chart that you prefer to view.

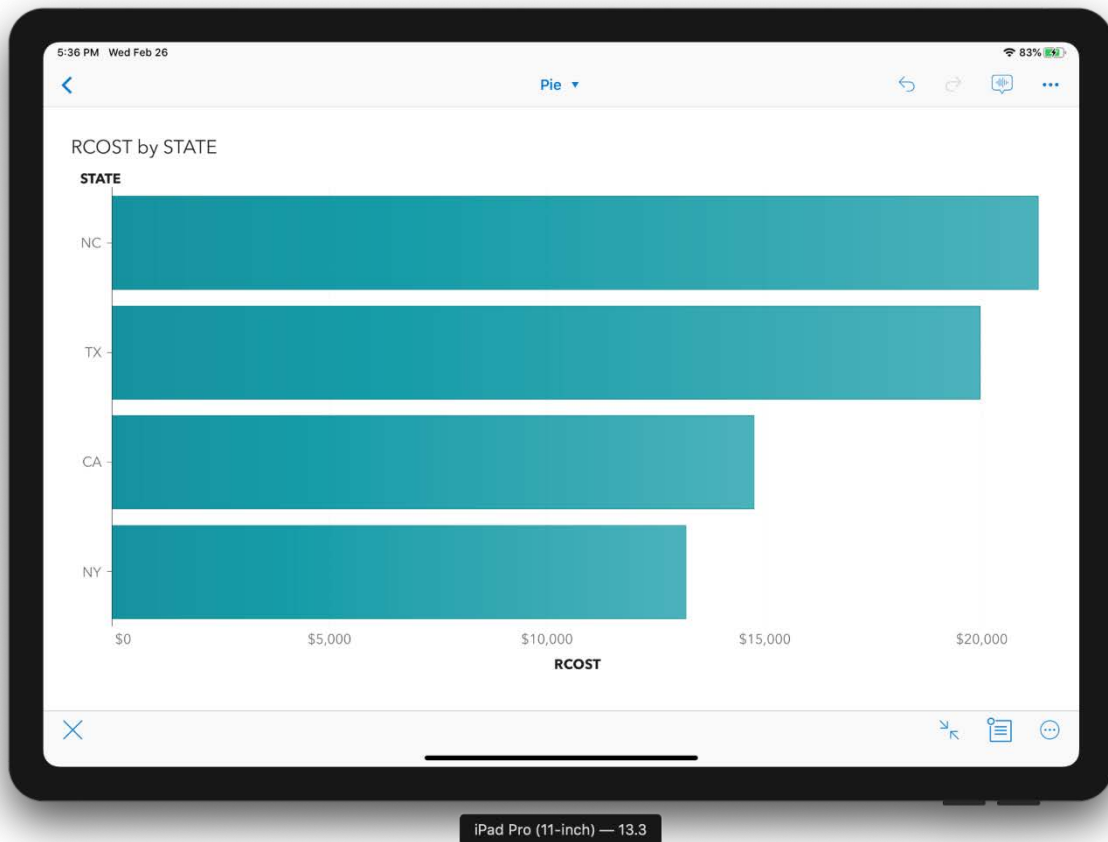


Figure 10. The Bar Chart

CREATE A CUSTOM GROUP

While viewing a bar chart of your factory costs, as shown in Figure 11, you notice there are separate bars for each of the four states where your company has factories. You are responsible for the factories in CA and NC, so you want to see their cost data combined into one bar.

You can create a group for those two states, so the bar chart will reflect the data in the way **that's most useful to you. Here's how:**

Select the chart and tap the Object More Options button. Then tap New Value Group as shown in Figure 11.

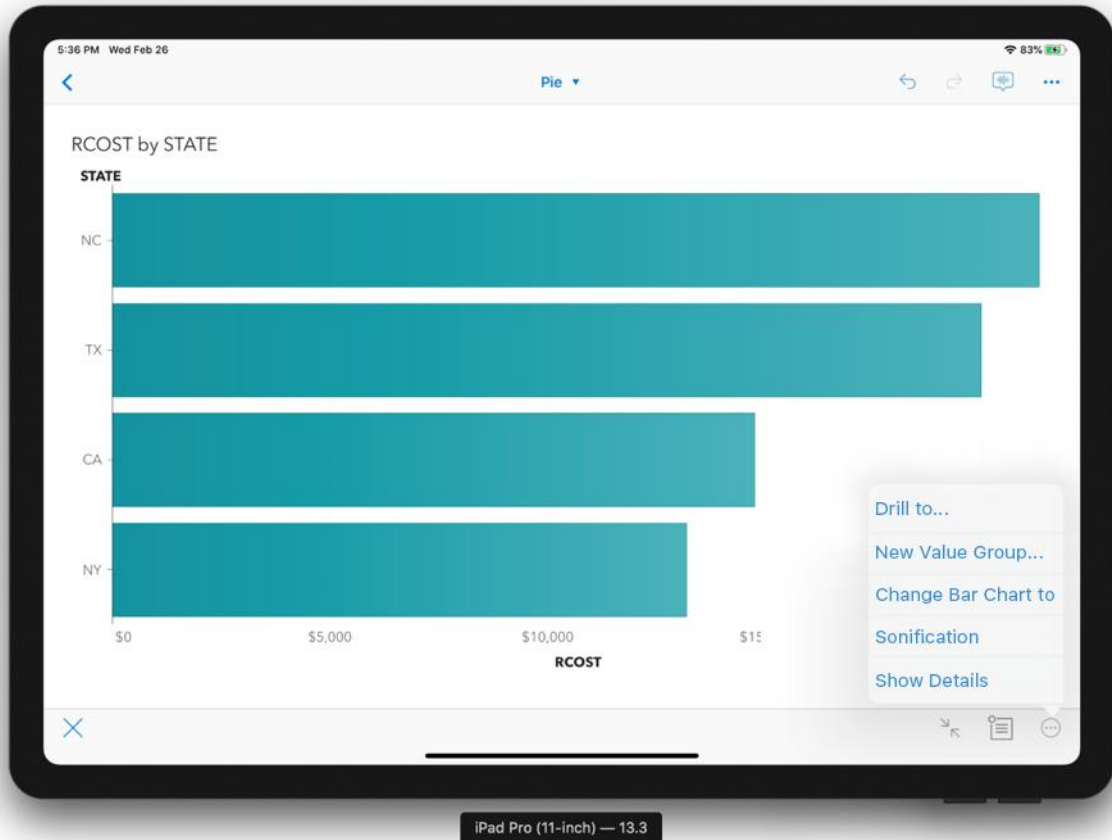


Figure 11. The New Value Group Option

You can choose to enter a name for the new group and select its members as shown in Figure 12.

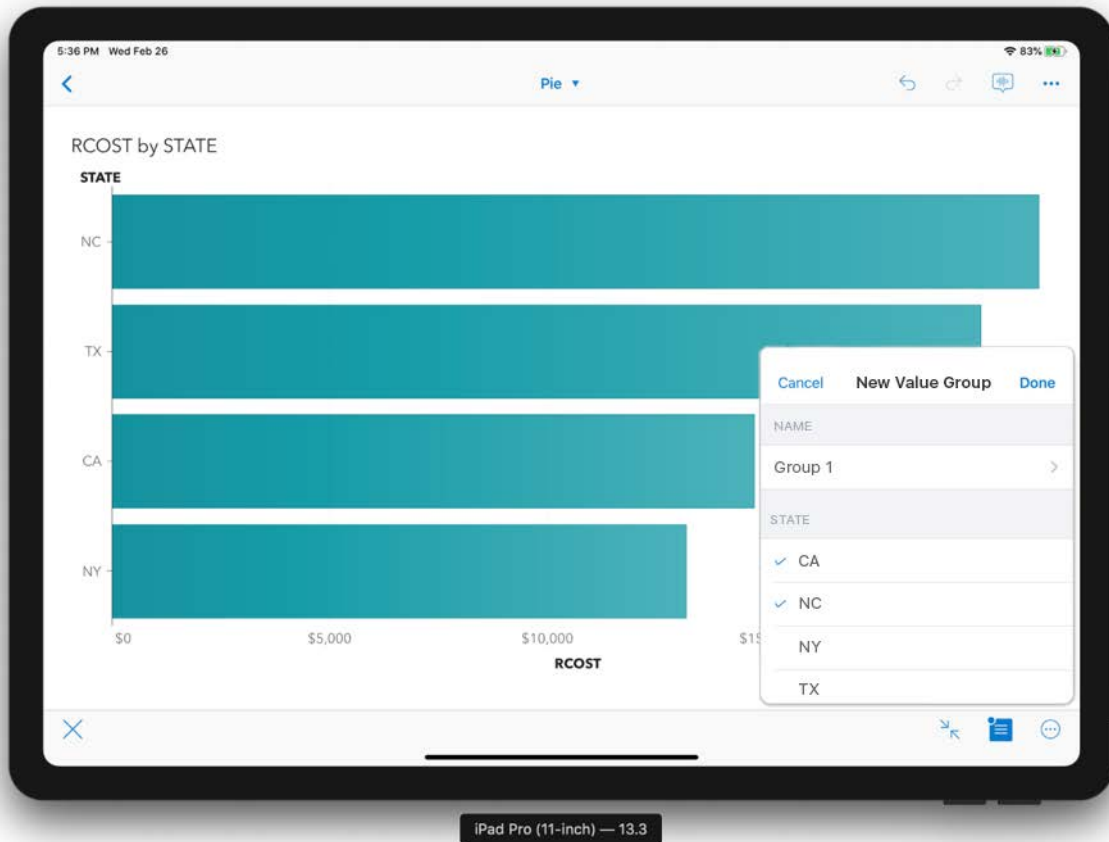


Figure 12. The Group Name and the Group Members

It's only a few taps on your mobile app to combine a few bars into a single group, allowing you to compare the group against the rest of the values. See Figure 13 for the custom group in the chart.

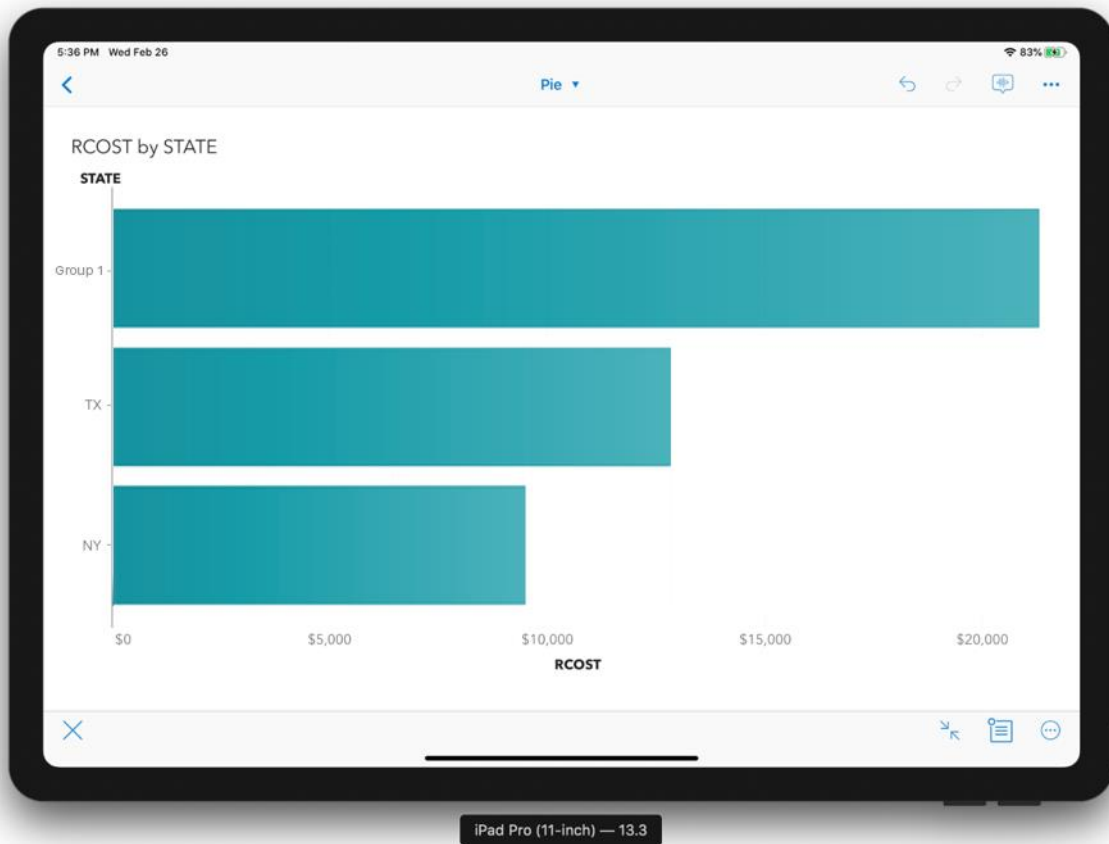


Figure 13. The New Group in the Bar Chart

ADD A RANK

What if you want your data organized by the top 10 customers or top 5 percent of sales? You can rank your data with our new personalization features. Consider the example of a chart of production errors across all your factories. You want to know how many errors the largest 10 facilities make since these seriously impact your bottom line. You can rank the data based on facility and only show the data for your top 10 factories.

As always, tap the object to select it, and then tap the Details button. Tap the Ranks button (📊) to open the Ranks pane and tap the Add button (+) to add a rank. See Figure 14.

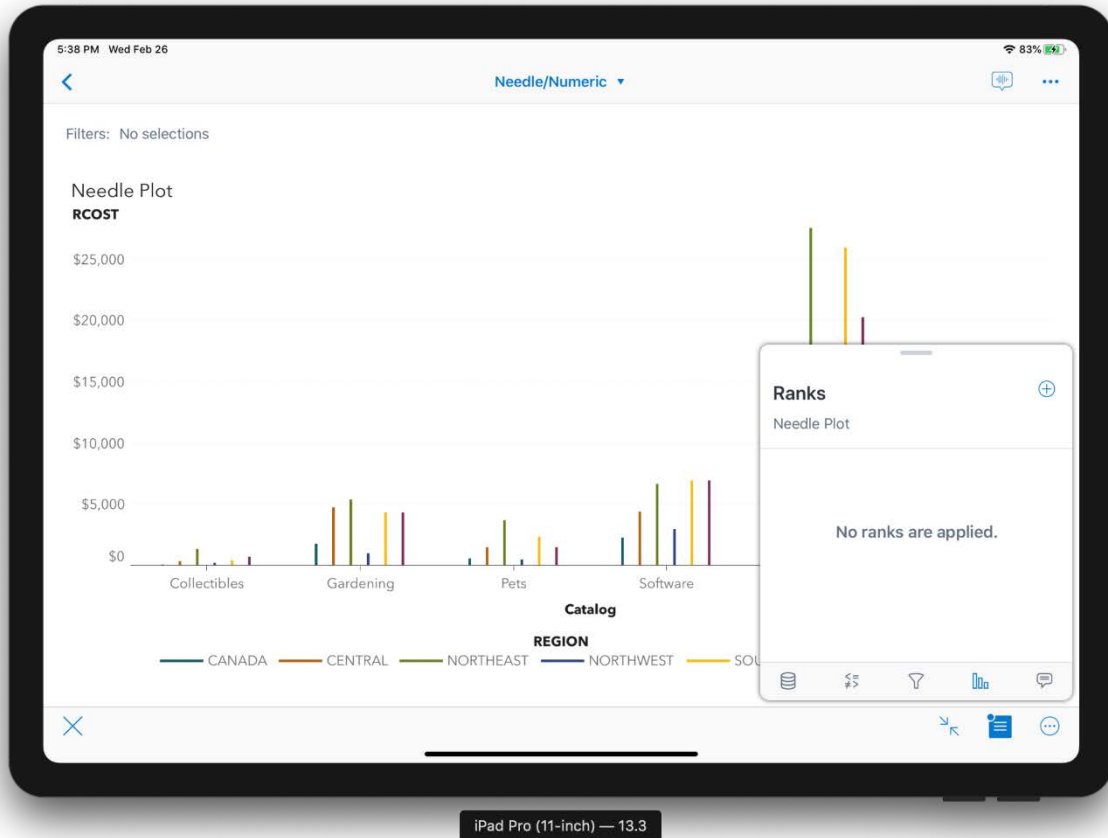


Figure 14. The Ranks Button and the Add Button in the Ranks Pane

Select the data item you want to rank, whether to use a percentage or a count, how many to rank, and which data item to rank it by as shown in Figure 15.

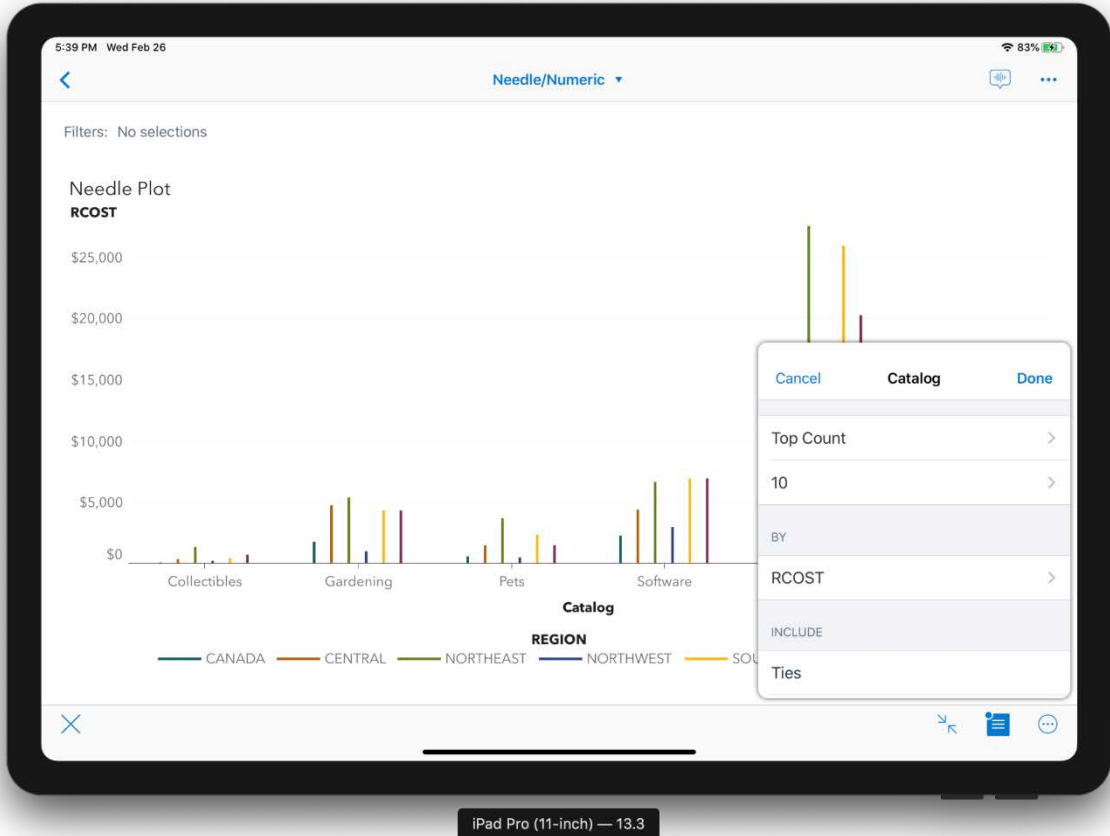


Figure 15. Add a Rank

Figure 16 shows the chart with the new rank applied.

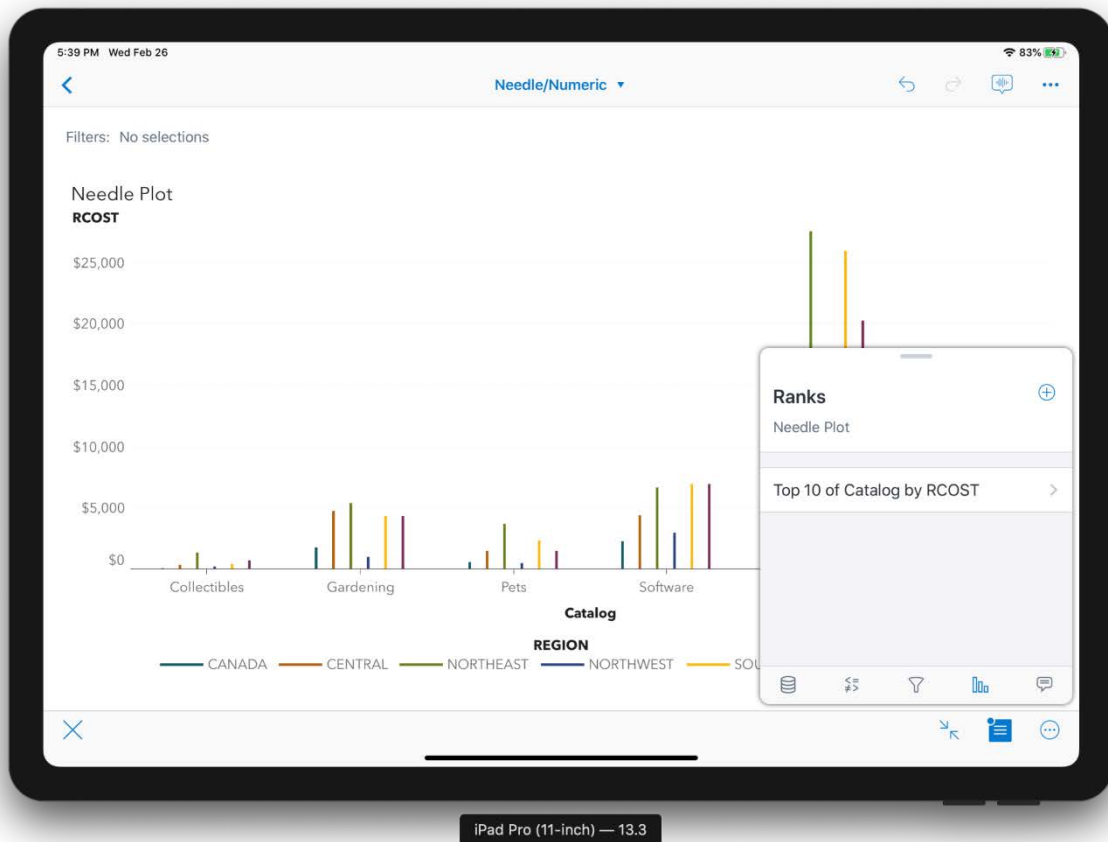


Figure 16. The Chart with the Rank

CHANGE A NUMERICAL FILTER

How often have you wished you could reduce the range of data being displayed in your visualization? **With the Filters pane, you can do just that. For example, let's** assume you previously filtered a bar chart to show the sales data between \$10,000 and \$20,000, but now you want to look at the sales data between \$10,000 and \$25,000. You can do this by **simply changing the "Sales" filter.**

Select the chart and tap the Details button. In the Details window, tap the Filters button. See Figure 17.

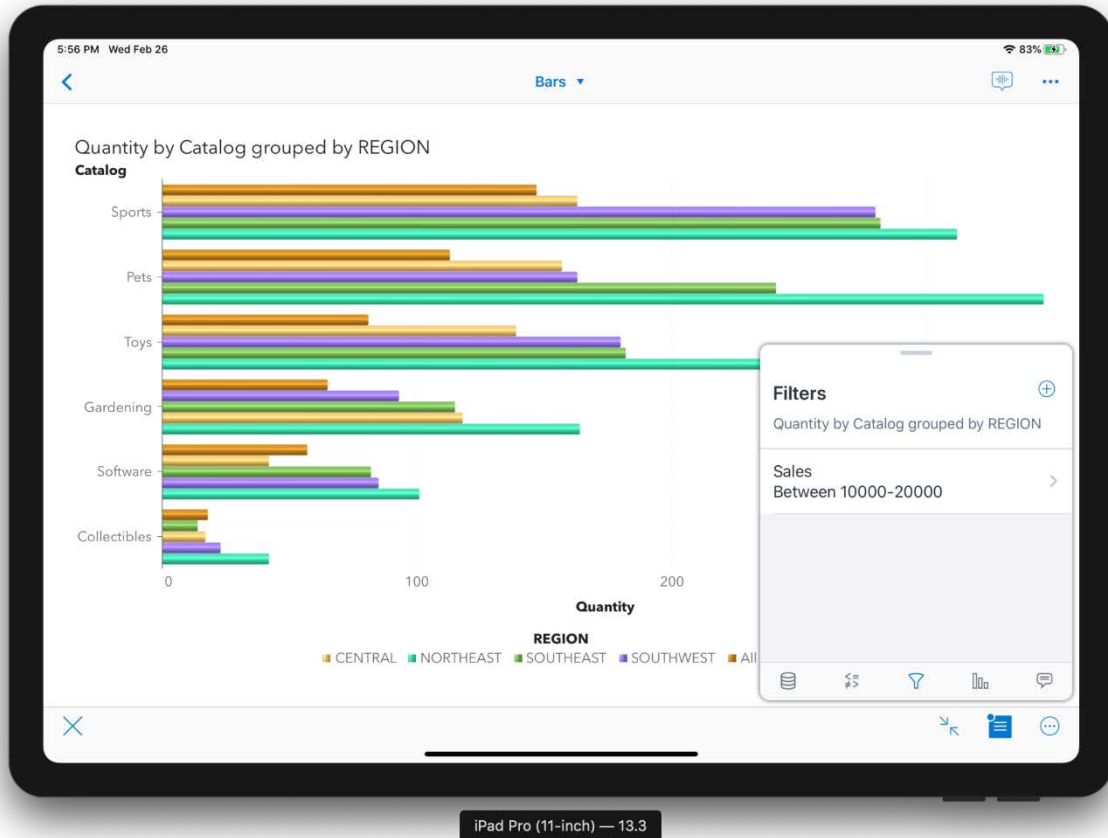
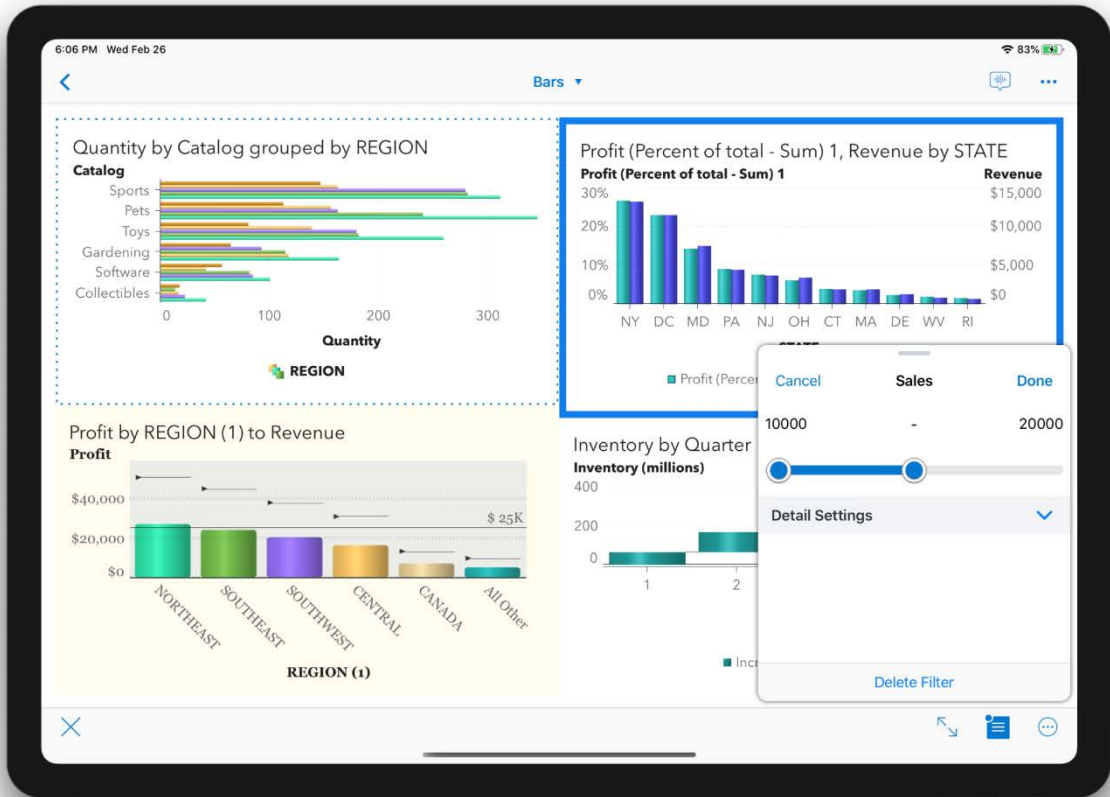


Figure 17. The Filters Pane

In the Filters pane, tap the Sales filter to open it. Figures 18 and 19 show the range slider associated with the Sales filter.

You can move the end points of the slider, or even go into the Detail Settings section to change the operator.



iPad Pro (11-inch) — 13.3

Figure 18. Use the Slider to Change the Range of “Sales”

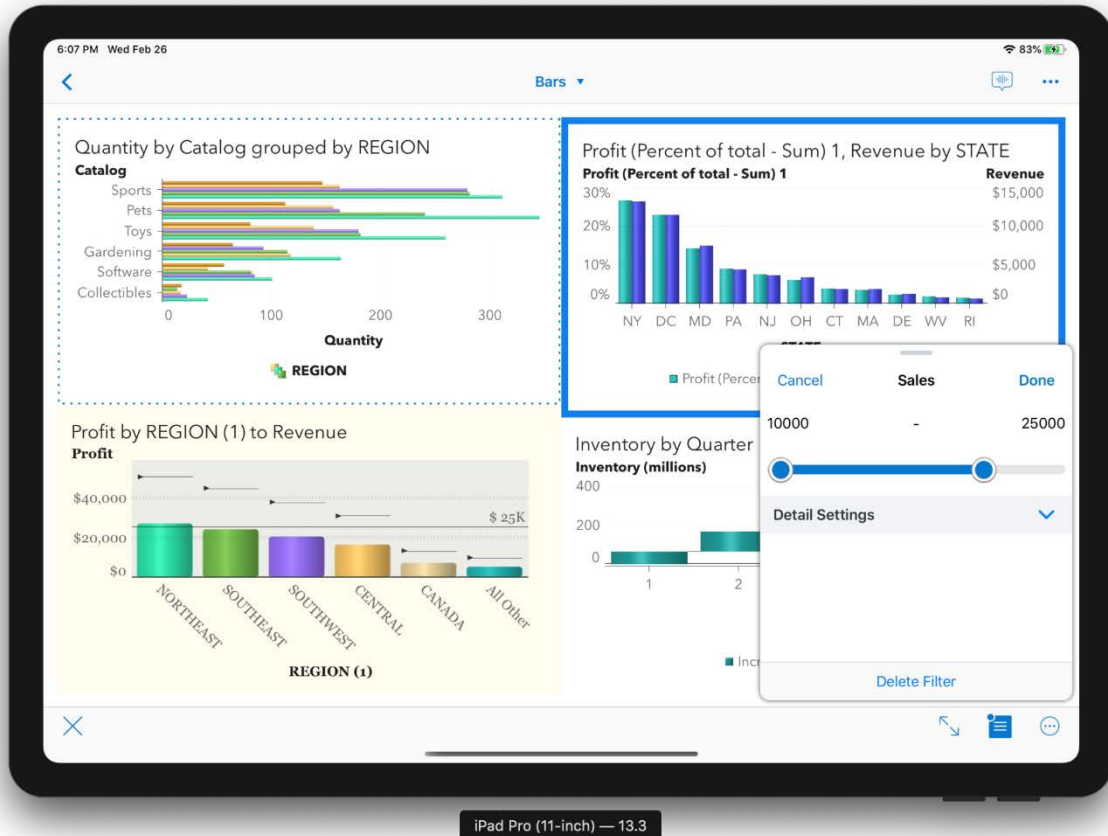


Figure 19. The Slider Shows a New Range for “Sales”

SAVE A COPY

You’re probably wondering what happens to all the changes you are making to the report. Your changes are kept as part of your report view state. As long as the report designer **doesn’t make any changes to the** original report, all of your changes will be there the next time you view the report. In addition to your modifications automatically persisting, you can choose to save a copy of the report at any time. If you save a copy, and the report designer makes **changes to the report**, you won’t lose any of your changes. This is an exciting opportunity for report viewers to keep previous versions of a report.

CONCLUSION

As a report viewer, the viewer customizations feature lets you explore your data the way that makes the most sense for you.

As a report designer, this feature lets you deliver analytics to everyone, everywhere by empowering each person in your organization with self-service customization capabilities.

Enabling the viewer customizations feature in your reports will deliver insights to drive decisions in your organization with more impact than ever before.

CONTACT INFORMATION

Your comments and questions are valued and encouraged. Contact the author at:

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