

# Runderneuert: SAS Visual Analytics basierend auf React.js

Richer – Faster – Easier Visual Analytics Experience



# SAS Visual Analytics React

## Technology Drivers

Performance

Modern and consistent UI

UI5

The screenshot shows a video player interface within the insidesas application. At the top, there's a navigation bar with links for 'Life', 'Career', 'Our Company', and 'Company Services'. A search bar at the top right includes fields for 'Employee Name' and 'People Search' with a magnifying glass icon, and dropdowns for 'Viewing: United States' and 'Intranet'. Below the navigation is a yellow banner with a triangle icon and the text 'Mar 9, 10:39 EST - Resource Portal for Ukraine/Russia events now available (and continually updated)'. The main content area features a video thumbnail showing five people sitting in a row, with the caption 'Focus on the impact and outcome of work' and the subtext 'We're rounding out Women's History Month with highlights from 'Building an Inclusive Culture''. To the right of the video is a 'FAVORITES' sidebar with a grid of icons and labels: VA Next, Create bug, OpenStack instance, VA tests, Staking R14; SAS, Promote, VAN Priorities, ViDiv Dailies, Staking; and Cafe Menu, Priorities, VAD (JIRA), SAS, and a speech bubble icon. A large black progress bar at the bottom right shows '00;00;00;00'.

REACT

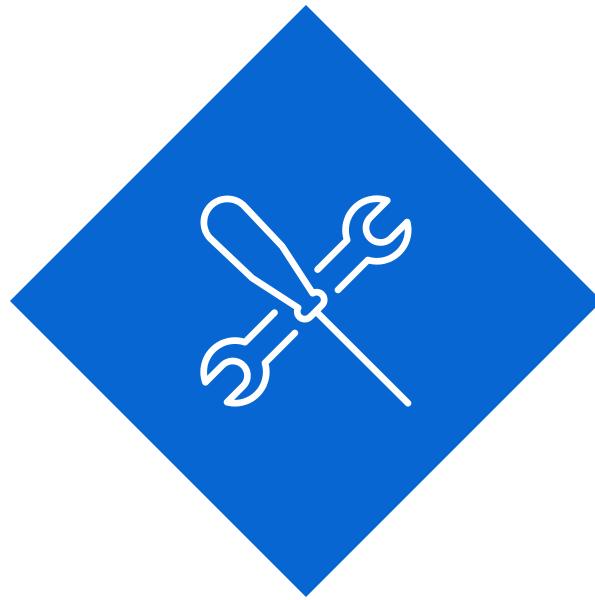
The screenshot shows a video player interface within the insidesas application, similar to the UI5 version. It has the same top navigation bar with 'Life', 'Career', 'Our Company', and 'Company Services' links, and the same search bar with 'Employee Name' and 'People Search' fields. The yellow banner at the top right also displays the message about the Resource Portal. The video thumbnail and its captions ('Focus on the impact and outcome of work' and 'We're rounding out Women's History Month with highlights from 'Building an Inclusive Culture'') are identical to the UI5 version. The 'FAVORITES' sidebar on the right also contains the same set of icons and labels: VA Next, Create bug, OpenStack instance, VA tests, Staking R14; SAS, Promote, VAN Priorities, ViDiv Dailies, Staking; and Cafe Menu, Priorities, VAD (JIRA), SAS, and a speech bubble icon. The large black progress bar at the bottom right shows '00;00;00;00'.

# SAS Visual Analytics React

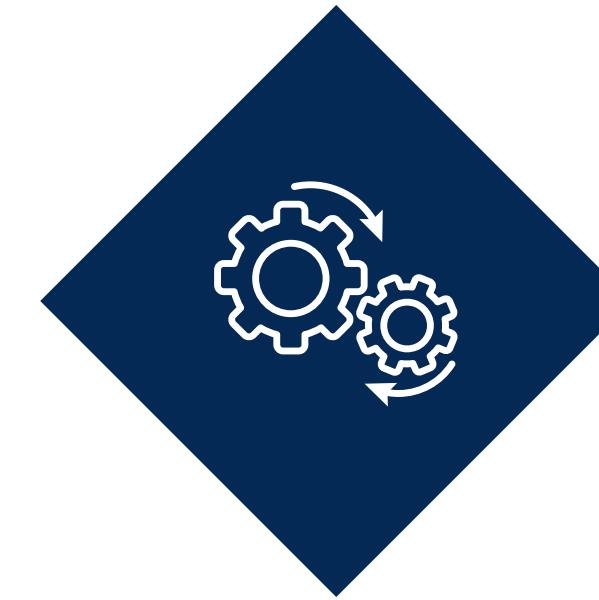
## Design Drivers



Consistency



Enhancement



Modernization

# Featured Improvements

Richer. Faster. Easier.



# SAS Visual Analytics React

- Feature Improvements & Differences

## Visual Analytics Home Page

- Discover
- Navigate
- Manage

## New Report Experience

## Working with Data

- Access to Data
- Custom category
- Multi-selecting data items
- Expression Editing Experience

# SAS Visual Analytics React

The Home Page replaces the Home Pane

The screenshot shows the SAS Visual Analytics - Explore and Visualize interface. The top navigation bar includes a menu icon, search, help, and a user profile with a notification count of 1. Below the header, the main area is titled "Explore and Visualize" with the subtitle "Explore data, apply predictive analytics, and build interactive reports with SAS Visual Analytics". A search bar and a "Sort by:" dropdown are also present. The central content area displays a grid of report thumbnails under the heading "All Reports > Samples2023". One thumbnail, "Warranty Analysis", is highlighted with a red border and has a context menu open over it. The menu options are: Open, Preview, Add to Favorites, Share..., and Copy link... . To the right of the main content area is a sidebar with various management tools: Options, Roles, Actions, Rules, Filters, and Ranks. At the bottom, there are three preview cards for report templates: "Manage templates", "Prompts and 2 charts", and "Simple K".

SAS® Visual Analytics - Explore and Visualize

Explore and Visualize

Explore data, apply predictive analytics, and build interactive reports.

New report

Search 

SAS Content > Products > SAS Visual Analytics > Samples

Sort by: Name   

Recent  
My Favorites  
My Folder  
**SAS Content**  
Shared with Me  
Recycle Bin  
Recommended  
Quarantined Files

**Marketing Pct of Sales**  
**14%**

**\$17M**

Retail Insights  
06/21/18

Warranty Analysis  
06/21/18

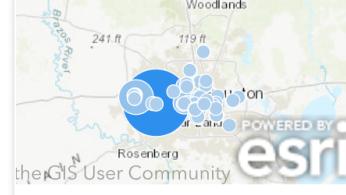
Add to favorites  
Move  
Copy  
Rename  
Delete  
Export as PDF

Share  
Copy link...

Authorization... 

What's New  
Read about the latest updates

Learn More  
Beautiful Reports



Water Consumptio...  
06/21/18



# SAS Visual Analytics React

## Accessing Data

- Access to Data
  - Recent data in the Data pane
  - Choose existing data
  - Import data from files

# SAS Visual Analytics React

## Custom Category

- Inline editing of group ranges
- Visualization of group boundaries and overlaps

# SAS Visual Analytics React

## Multi-Selecting Data Items

When using the:

- Data Pane
- Roles Pane
- Assign Data window

# SAS Visual Analytics React

## Expression Editing Experience

- Industry-standard editor
- Typeahead - hit tab to autocomplete functions, data, and expressions
- Pop-up hints
  - What the function does
  - What arguments it takes
  - An example of how to use it
- Function interfaces
  - Arguments - select from a list or type values
  - Embedded help

# SAS Visual Analytics React

## Object Updates

- Forecasting object
- Text object & Report summary
- Geographic objects
- Job Content object

# SAS Visual Analytics React

## SAS Job Support

- SAS Jobs are supported through the Job content object
  - Execution – unchanged
  - Prompts – new prompt interface
- Conversion
  - SAS Viya Migration tools – bulk migration for SAS 9 Stored Processes and previous SAS Jobs
  - SAS VA Job content object **in-place migration** - for previous SAS Jobs
- Prompts – *things to know*
  - Known gaps exist in prompting framework
  - Customers may need to make changes to Jobs with prompts
  - HTML prompts are now supported in the SAS VA Job content object



# Looking Forward

# SAS Visual Analytics

## What's Next

Continued path with SAS Visual Analytics modernization

- SAS Drive:
  - In the current release – Deployed as Open UI 5 application
  - Path Forward:
    - **EoL of SAS Drive as individual application**
    - **Enriched Content Management capabilities across SAS Viya**
- Graph Builder: Integrated Visual Analytics experience
  - In the current release – Deployed as Open UI 5 application
  - Path Forward:
    - **EoL of SAS Graph Builder as individual application**
    - **Enriched user experience with integrated Visual Analytics experience**

SAS® Visual Analytics - Explore and Visualize

Explore and Visualize

Explore data, apply predictive analytics, and build interactive reports.

New report

Search 

SAS Content > Products > SAS Visual Analytics > Samples

Sort by: Name   

Recent  
My Favorites  
My Folder  
**SAS Content**  
Shared with Me  
Recycle Bin  
Recommended  
Quarantined Files

**Marketing Pct of Sales**  
**14%**

**Retail Insights**  
06/21/18

**\$17M**

**Warranty Analysis**  
06/21/18

**Water Consumption**  
06/21/18

Add to favorites

Move  
Copy  
Rename  
Delete  
Export as PDF

Share  
Copy link...

Authorization... 

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Read about the latest updates

**Learn More**  
Beautiful Reports

  
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# SAS Visual Analytics

## What's Next

Continued path with SAS Visual Analytics modernization

- SAS Drive:
  - At June React – Deployed as Open UI 5 application
  - Path Forward:
    - **EoL of SAS Drive as individual application**
    - **Enriched Content Management capabilities across SAS Viya**
- Graph Builder: Integrated Visual Analytics experience
  - At June React – Deployed as Open UI 5 application
  - Path Forward:
    - **EoL of SAS Graph Builder as individual application**
    - **Enriched user experience with integrated Visual Analytics experience**

# Replace Graph Builder with built-in Visual Analytics graph layering

SAS® Graph Builder - Build Custom Graphs

Close

Graph Elements

- Bar Chart
- Band Plot
- Bubble Plot
- Contour Plot (geo only)
- Line Chart
- Geo Map
- Region Plot (geo only)
- Needle Plot
- Pie Chart
- Scatter Plot
- Schedule Chart
- Series Plot
- Step Plot
- Time Series Plot
- Treemap
- Vector Plot
- Waterfall Chart

Role Definitions

Shared Roles

- Category\*
- Data tip values
- + Add Role

Data Driven Lattice Roles

Data-driven lattice roles cannot be used when the template has more than one cell.

Graphs

A1

BAR CHART 1

- Category\*  Category\*
- Response\*  Measure (bar)\*
- Data Tip  Data tip values
- + Add Role

B1

BAR CHART 2

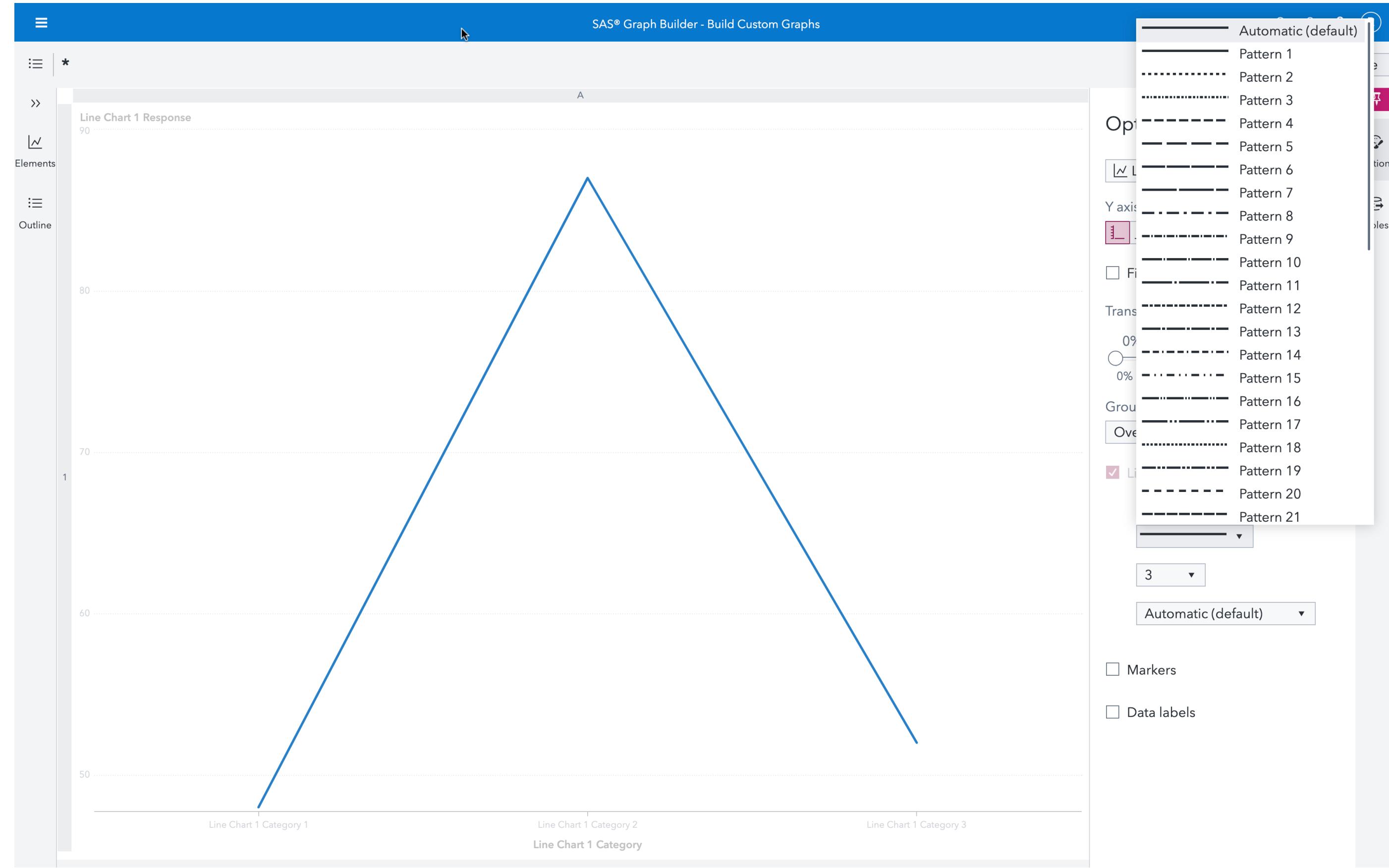
- Category\*  Category\*
- Response\*

Measure (bar)

Measure (bar 2)

■ Measure (bar) ■ Measure (bar 2)

# Replace Graph Builder with built-in Visual Analytics graph layering



# Graph Builder – Integrated Visual Analytics experience

SAS Visual Analytics - Explore and Visualize

Report 1

Editing

Data Objects Suggest Outline Review

Page 1 Page 2 Page 3 +

Graph Title

Measure

Category

Cat 1 Cat 2 Cat 3 Cat 4 Cat 5 Cat 6

100  
80  
60  
40  
20  
0

Options Customize

Bar 1

Graph frame

Bar

Direction:

Fixed baseline: 0

Spacing: 15%

Transparency: 0%

Combine excluded into "All Other"

Grouping style:

Group scale: Display actual values

Measure layout: Automatic

Abbreviate numeric values

Customize Options Roles Actions Rules Filters Ranks

# Graph Builder – Integrated Visual Analytics experience

SAS Visual Analytics - Explore and Visualize

Report 1

Editing

Page 1 Page 2 Page 3 +

Graph Title

Measure

Category

Cat 1 Cat 2 Cat 3 Cat 4 Cat 5 Cat 6

100  
80  
60  
40  
20  
0

Options Custom Graph

Custom Graph 1

> Layout

A1 + Add graph

Graph Frame

Bar

Direction:

Fixed baseline

Spacing: 15%

Transparency: 0%

Combine excluded into "All Other"

Grouping style:

Group scale: Display actual values

Custom Graph Options

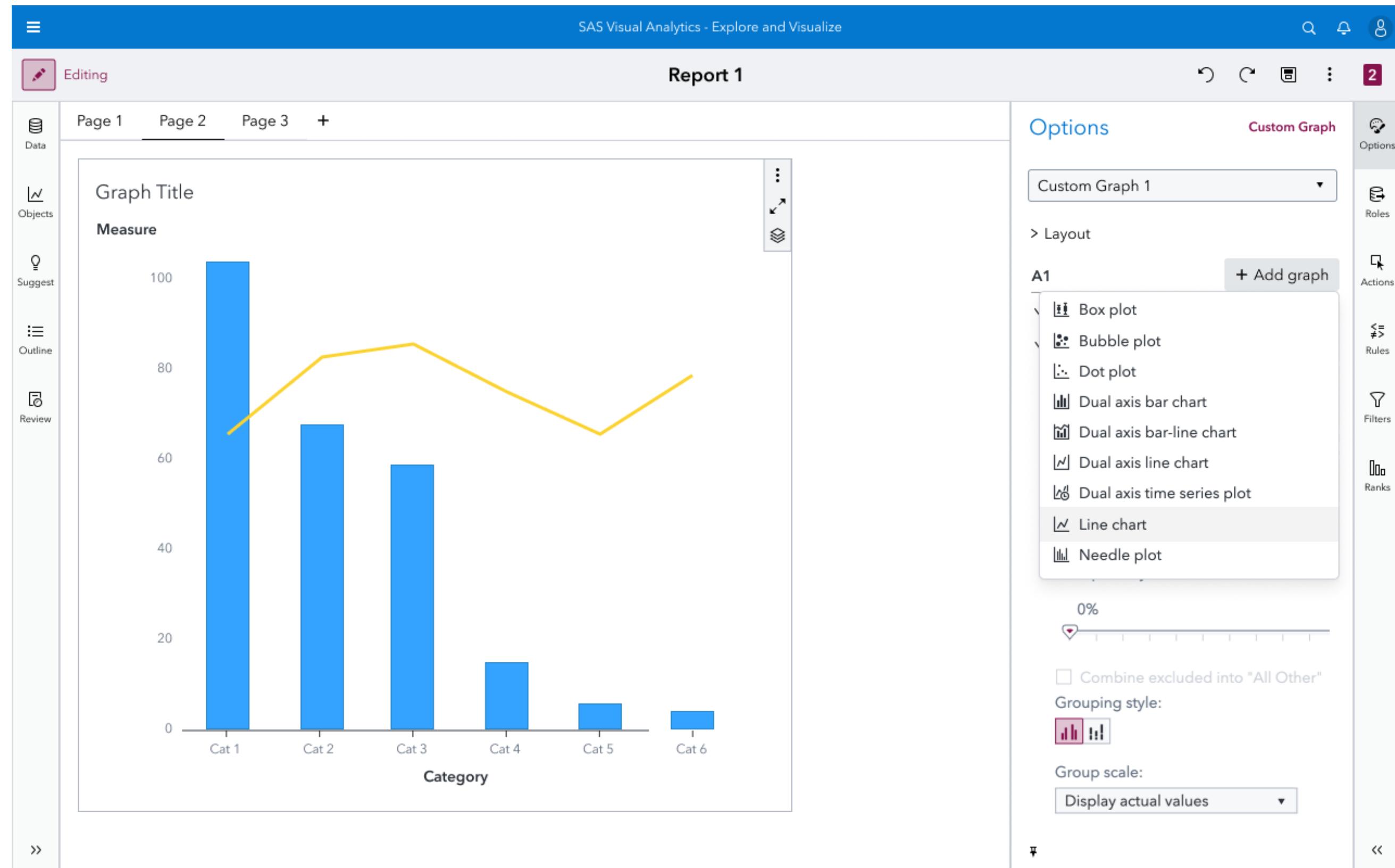
Actions

Rules

Filters

Ranks

# Graph Builder – Integrated Visual Analytics experience



# Graph Builder – Integrated Visual Analytics experience

SAS Visual Analytics - Explore and Visualize

Report 1

Editing

Page 1 Page 2 Page 3 +

Graph Title

Measure

Category

Cat 1 Cat 2 Cat 3 Cat 4 Cat 5 Cat 6

100  
80  
60  
40  
20  
0

Options Custom Graph

Custom Graph 1

> Layout

A1 + Add graph

> Graph Frame

> Line

✓ Bar

Direction:  Up

Fixed baseline

Spacing: 15%

Transparency: 0%

Combine excluded into "All Other"

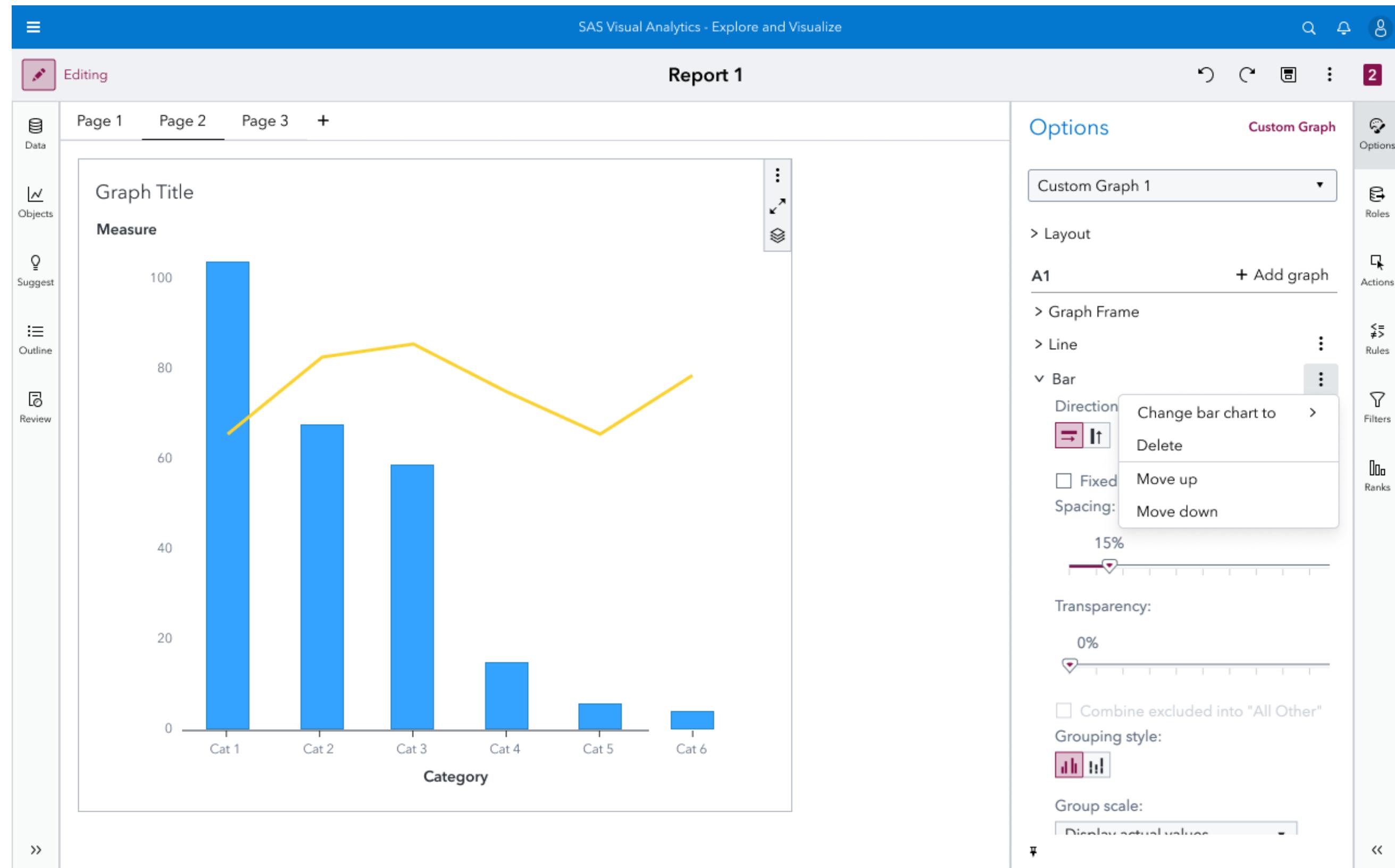
Grouping style:

Group scale: Display actual values

Data Objects Suggest Outline Review

Custom Graph Options Roles Actions Rules Filters Ranks

# Graph Builder – Integrated Visual Analytics experience



# Graph Builder – Integrated Visual Analytics experience

SAS Visual Analytics - Explore and Visualize

Report 1

Editing

Data Objects Suggest Outline Review

Page 1 Page 2 Page 3 +

Graph Title

Measure

Category	Value
Cat 1	100
Cat 2	70
Cat 3	60
Cat 4	15
Cat 5	10
Cat 6	5

Options Custom Graph

Custom Graph 1

Stretch height if necessary

**CUSTOM LATTICE STRUCTURE**

A + Add column

1

+ Add row

Specify row and column weights

X axis data roles: Different per cell

X axis range: Different per cell

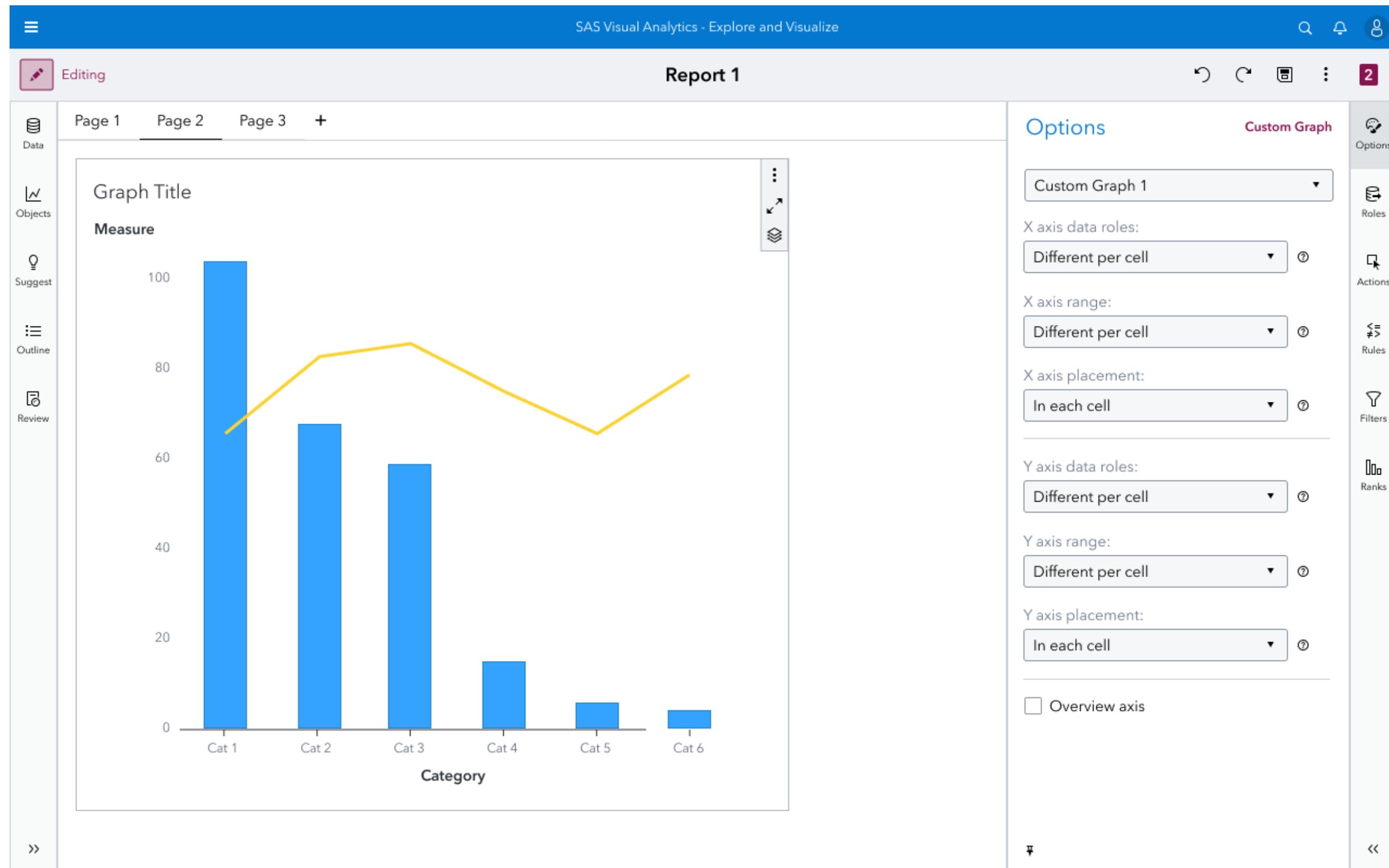
X axis placement: In each cell

Y axis data roles: Different per cell

Y axis range: Different per cell

Actions Rules Filters Ranks

# Graph Builder – Integrated Visual Analytics experience



# Graph Builder – Integrated Visual Analytics experience

SAS Visual Analytics - Explore and Visualize

Report 1

Editing

Data Roles

Custom Graph 1

Filter

SHARED

A1

LINE CHART 1

Measure\*

Group

Data tip values

BAR CHART 1

Measure\*

Group

Data tip values

UNIVERSAL

Lattice Columns

Lattice Row

Animation

Options

Roles

Actions

Rules

Filters

Ranks

Page 1 Page 2 Page 3 +

Graph Title

Measure

Category

Cat 1 Cat 2 Cat 3 Cat 4 Cat 5 Cat 6

Category	Measure (Bar)	Measure (Line)
Cat 1	100	65
Cat 2	68	82
Cat 3	58	85
Cat 4	15	75
Cat 5	5	65
Cat 6	3	78

# Graph Builder – Integrated Visual Analytics experience

SAS Visual Analytics - Explore and Visualize

Report 1

Editing

Data Roles

Show or hide roles  
Roles display >  
Edit role definitions

SHARED

A1 Category\* +Add

A1

LINE CHART 1

> Measure\* +Add  
> Group +Add  
> Data tip values +Add

BAR CHART 1

> Measure\* +Add  
> Group +Add  
> Data tip values +Add

UNIVERSAL

> Lattice Columns +Add  
> Lattice Row +Add  
> Animation +Add

Objects

Page 1 Page 2 Page 3 +

Graph Title

Measure

Category

Cat 1 Cat 2 Cat 3 Cat 4 Cat 5 Cat 6

100  
80  
60  
40  
20  
0

The screenshot displays the SAS Visual Analytics Graph Builder interface. On the left, there's a sidebar with icons for Data, Objects, Suggest, Outline, Review, and a navigation bar with tabs for Page 1, Page 2 (selected), Page 3, and a plus sign. The main workspace contains two charts: a bar chart titled 'Graph Title' with 'Measure' on the Y-axis (ranging from 0 to 100) and 'Category' on the X-axis (labeled Cat 1 through Cat 6); and a line chart overlaid on the bars. To the right of the charts is a 'Data Roles' panel with options for 'Grouped' and 'List' roles, and a context menu for 'Show or hide roles', 'Roles display', and 'Edit role definitions'. Below this are sections for 'SHARED', 'A1', 'LINE CHART 1', 'BAR CHART 1', and 'UNIVERSAL' roles, each with 'Add' buttons. The bottom right corner shows a 'Ranks' section. The overall interface is clean and modern, designed for visual data exploration.

# Graph Builder – Integrated Visual Analytics experience

SAS Visual Analytics - Explore and Visualize

Report 1

Editing

Data Roles

- Custom Graph 1
- Filter

SHARED

- A1 Category\*

A1

- LINE CHART 1
  - Measure\*
  - Group
  - Data tip values
- BAR CHART 1
  - Measure\*
  - Group
  - Data tip values
- UNIVERSAL
  - Lattice Columns
  - Lattice Row
  - Animation

Options

Roles

Actions

Rules

Filters

Ranks

Graph Title

Measure

Category

100

80

60

40

20

0

Cat 1 Cat 2 Cat 3 Cat 4 Cat 5 Cat 6

# Graph Builder – Integrated Visual Analytics experience

SAS Visual Analytics - Explore and Visualize

Editing

Page 1 Page 2 Page 3 +

Graph Title

Measure

Category

100  
80  
60  
40  
20  
0

Cat 1 Cat 2 Cat 3

Graph Builder – Integrated Visual Analytics experience

Edit Roles

SHARED +Role

Shared Category

A1

LINE CHART 1 +Role

Category Shared Category

Measure Measure

Group Group

Data tip values Data tip values

BAR CHART 1 +Role

Category Shared Category

Measure Measure

Group Group

OK Cancel

Data Roles

Custom Graph 1

Filter

SHARED

> A1 Category\* +Add

A1

LINE CHART 1

> Measure\* +Add

> Group +Add

> Data tip values +Add

BAR CHART 1

> Measure\* +Add

> Group +Add

> Data tip values +Add

UNIVERSAL

> Lattice Columns +Add

> Lattice Row +Add

> Animation +Add

Actions

Rules

Filters

Ranks

« »

The screenshot shows the SAS Visual Analytics interface. On the left, there's a navigation sidebar with tabs for Data, Objects, Suggest, Outline, and Review. The main area displays two charts: a bar chart titled 'Graph Title' with three categories (Cat 1, Cat 2, Cat 3) and a line chart showing a trend across the same categories. An 'Editing' toolbar is at the top. A central modal window is titled 'Edit Roles' and contains sections for 'SHARED' and 'A1'. Under 'SHARED', there are roles for 'Category', 'Measure', 'Group', and 'Data tip values'. Under 'A1', there are sections for 'LINE CHART 1' and 'BAR CHART 1', each with their own role assignments. On the right, a sidebar lists 'Data Roles' like 'Custom Graph 1' and 'Filter', and categories like 'SHARED', 'A1', 'LINE CHART 1', 'BAR CHART 1', 'UNIVERSAL', 'Actions', 'Rules', 'Filters', and 'Ranks'. Each category has an '+Add' button next to its description.

# Graph Builder – Integrated Visual Analytics experience

SAS Visual Analytics - Explore and Visualize

Editing

Page 1 Page 2 Page 3 +

Graph Title

Measure

Category

100  
80  
60  
40  
20  
0

Cat 1 Cat 2 Cat 3

Graph Builder – Integrated Visual Analytics experience

Edit Roles

SHARED +Role

Shared Category

Name: Shared Category 1

Classification: Category

Required

Used by:

Line Chart 1 Category

Line Chart 2 Category

A1

LINE CHART 1 +Role

Category Shared Category 1

Measure Measure

Group Group

OK Cancel

Data Roles

Custom Graph 1

Filter

SHARED

> A1 Category\*

A1

LINE CHART 1

> Measure\*

> Group

> Data tip values

BAR CHART 1

> Measure\*

> Group

> Data tip values

UNIVERSAL

> Lattice Columns

> Lattice Row

> Animation

Actions

Rules

Filters

Ranks

« »

The screenshot shows the SAS Visual Analytics interface with a focus on the Graph Builder feature. On the left, there's a navigation sidebar with tabs for Data, Objects, Suggest, Outline, and Review. The main area displays a bar chart titled 'Graph Title' with three categories: Cat 1, Cat 2, and Cat 3. The bars have heights of approximately 100, 70, and 60 respectively. A line chart is overlaid on the bars, showing a trend from about 68 at Cat 1 to 85 at Cat 2, and ending at approximately 75 at Cat 3. An 'Editing' toolbar is at the top. A central modal window is titled 'Edit Roles' and contains settings for a 'Shared Category'. It includes fields for 'Name' (Shared Category 1), 'Classification' (Category), and a checked 'Required' checkbox. Below this, under the 'A1' section, are roles for 'LINE CHART 1' and 'BAR CHART 1', each with 'Category', 'Measure', and 'Group' entries. To the right, a sidebar lists 'Data Roles' such as 'Custom Graph 1' and 'Filter', along with sections for 'SHARED', 'A1', 'BAR CHART 1', and 'UNIVERSAL' roles. The bottom right corner features the SAS logo.

# SAS Visual Analytics

## What's Next

Continued path with SAS Visual Analytics modernization – New Capabilities

- Data Viewer/Editor
- Dynamic Parameters
- MS Teams integration

# Dynamic Parameters

## 1 STATIC VALUE

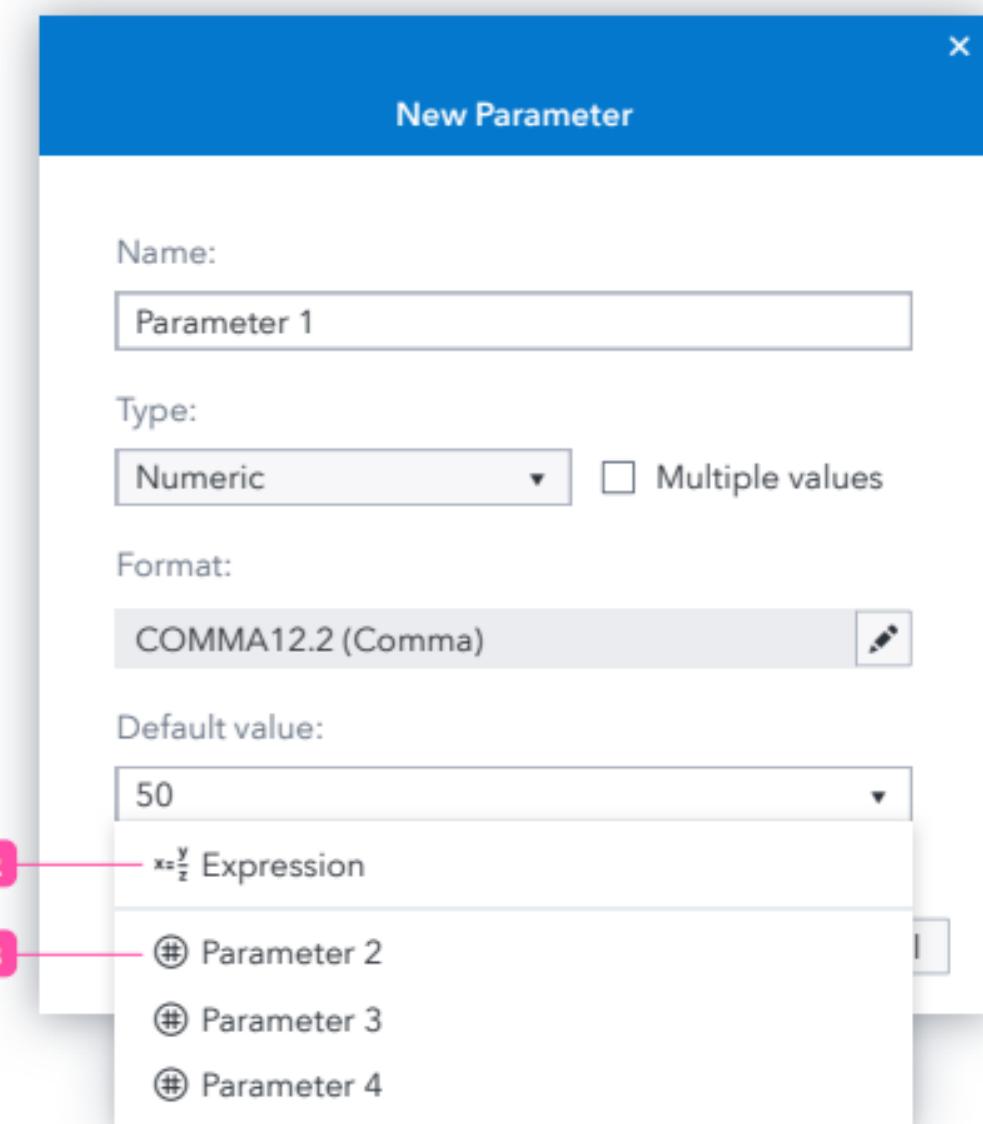
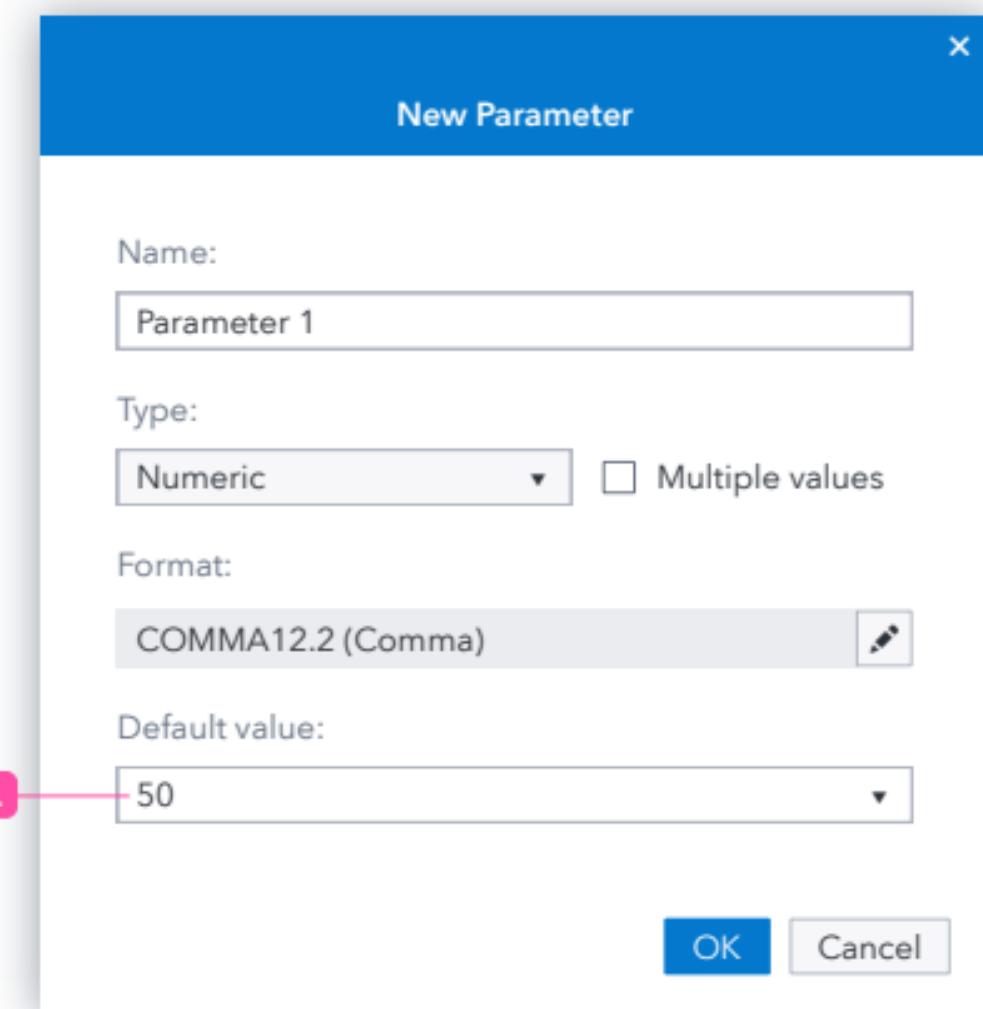
The default value field for a parameter is a combo box that may take any value valid for the type chosen for the parameter.

## 2 EXPRESSION

The user may choose to switch the parameter to an expression type for its default value which will transition to a more complex dialog.

## 2 ANOTHER PARAMETER

The default value of a parameter can also be set via another parameter. This can be useful if another calculated parameter is setting the default for a parameter that will be overwritten by user input since the calculated parameter will remain and can continue to be referenced unaffected.



# Microsoft Teams Integration

- Goal: Enable Collaboration
  - Requirements from Customers
  - Sharing, Distribution, Commenting
- Multiple projects for scoping integration
- Initially VA will support MS Teams channels as output for VA report distribution and VA alert notifications

Add Alert X

Alert name:

Condition:  $\leq$  Frequency > 0

Recipients: rdemo1 x rdemo2 x SAS Visual An... > Marketing x SAS Visual Analytics Product Ma... > 2023 Feature Planning x Teams channel(s) is a recipient. Unknown people may see the data. x

Recipients may see different data depending on permissions.

Notification frequency: Daily Interval (days): 1

Query frequency: System default Interval 1

Object must not exceed client query row limits for alerts to be evaluated.

Include link to report  
 Include object snapshot i  
 Include alert explanation

The alert [alert name] was triggered on [object name].

[Reset](#)

OK Cancel

## New Report Distribution

Distribution name:

Schedule:

### Email

ES Global Italy Administrators Concur  EEC DEM  EDM   
User A   SAS Visual Analytics Product Ma... > Marketing 

 Teams channel(s) is a recipient. Unknown people may see the data. 

Subject:

 Enter subject line

Message:

 Enter email message

Include PDF attachment

Include summary

OK Cancel

## Choose Microsoft Teams Channels

Selected Teams channels:

-  SAS Visual Analytics Product Management > Marketing 
-  SAS Visual Analytics Product Management > 2023 Feature Planning 

 Filter 

### SAS Visual Analytics Project Management

-  General 
-  BI Team Meetings 
-  Customer Meetings 
-  Features Needed in Q3 2020 
-  Mobile App Strategy 
-  Product Planning 
-  W47 - PM NOSHIPS 
-  2020 - High Priority Requirements 
-  Analyst Activity 

### SAS Visual Analytics User Experience Design

OK Cancel

# SAS Visual Analytics React

