

How to Create a Clustered Stacked Bar Chart in Google Sheets

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In the realm of data visualization, few graphical tools offer the comprehensive comparative power of the clustered stacked bar chart. This sophisticated visualization technique ingeniously merges the strengths of both standard clustered and stacked bar charts, making it an indispensable asset for analysts dealing with multi-layered datasets. Essentially, it facilitates two distinct levels of comparison simultaneously: it shows the composition of individual groups (stacking) while allowing these groups to be compared against parallel categories (clustering). This dual functionality is critical when analyzing complex metrics, such as comparing product sales across different years and retail locations.

The ability to create such detailed visualizations is readily available within powerful spreadsheet platforms like Google Sheets. While the initial setup might seem intricate, Sheets offers intuitive controls that allow users to transform raw data into this powerful chart format with relative ease. The key lies in correctly structuring the source dataset and understanding the specific customization options available within the Chart editor panel. This comprehensive guide provides a step-by-step methodology for generating a professional and insightful clustered stacked bar chart, ensuring that even users new to advanced chart features can master this technique.

Google Sheets: Create a Clustered Stacked Bar Chart

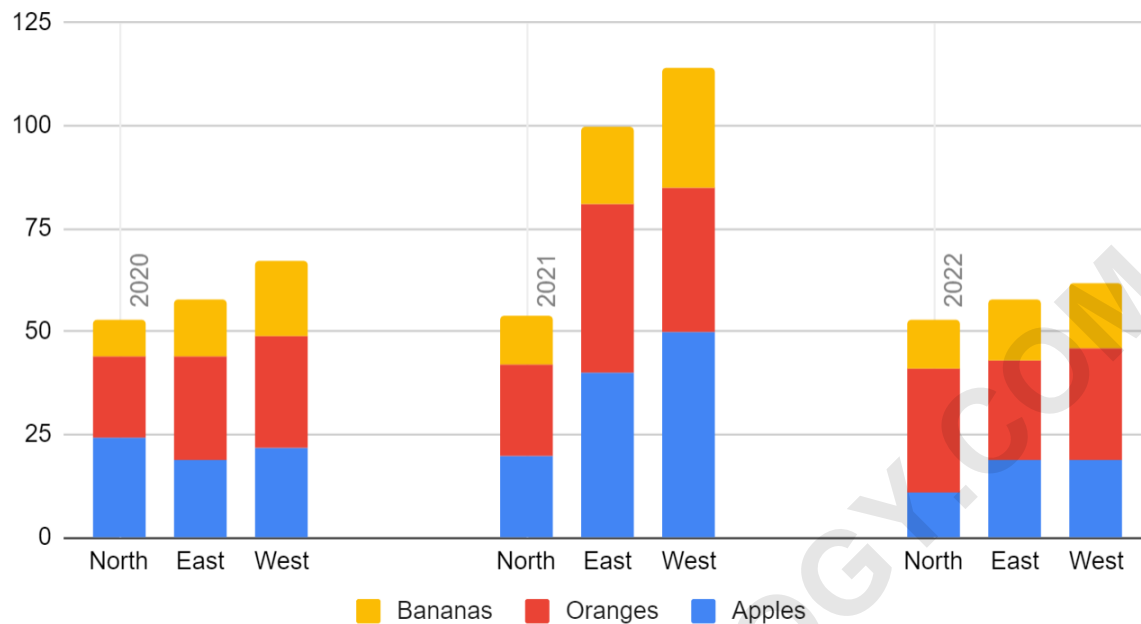
The Foundational Structure: Defining the Clustered Stacked Bar Chart

A **clustered stacked bar chart** is defined by its hybrid nature, combining two essential data visualization techniques. The **stacking** component is used to show how sub-parts contribute to a whole, typically within a single category, represented by one bar. The **clustering** component groups these stacked bars side-by-side, allowing for efficient comparison across different major categories, such as distinct time periods or geographical locations. This combination is exceptionally potent for analyzing metrics that are categorized hierarchically.

The primary utility of this chart type emerges when visualizing complex data points that involve multiple layers of grouping. For instance, if you are tracking the sales of various product types (stacking) across different stores (sub-clustering) over several years (main clustering), the chart clearly dissects these variables. It provides immediate insight into not only which years performed best overall, but also which products contributed most to those annual totals at specific locations.

To set the context for our practical exercise, we aim to replicate the sophisticated visualization shown below. This final chart displays sales volume clustered by year, with the sales data for specific fruit categories stacked according to the store location. Achieving this level of detail requires careful data handling and precise chart configuration within Google Sheets.

Sales by Store and Year



Step 1: Preparing and Entering the Source Data

The foundation of any accurate visualization is a correctly structured dataset. For a clustered stacked bar chart in Google Sheets, the organization of data must align with how the chart engine interprets the series, clusters, and labels. In our example, we are tracking sales data segmented by **Year** (the primary cluster), **Store** (the secondary identifier), and specific **Fruit Product** (the stacked series). The sales volumes themselves form the quantitative core of the data.

It is essential to arrange the data in a columnar format where the stacking variables (Fruit Sales: Column C, D, E) are adjacent to the clustering variables (Year and Store: Columns A and B). Note that the data must be organized such that repeated cluster identifiers (e.g., Year 2021) are present for each store location, ensuring the chart recognizes the grouping hierarchy correctly. This structure allows the chart editor to easily delineate the various data series that will be stacked within each cluster.

Please enter the following data into your Google Sheet, starting at cell A1. Ensure that the header row is included, as this will automatically inform the chart editor about the labels for the data series.

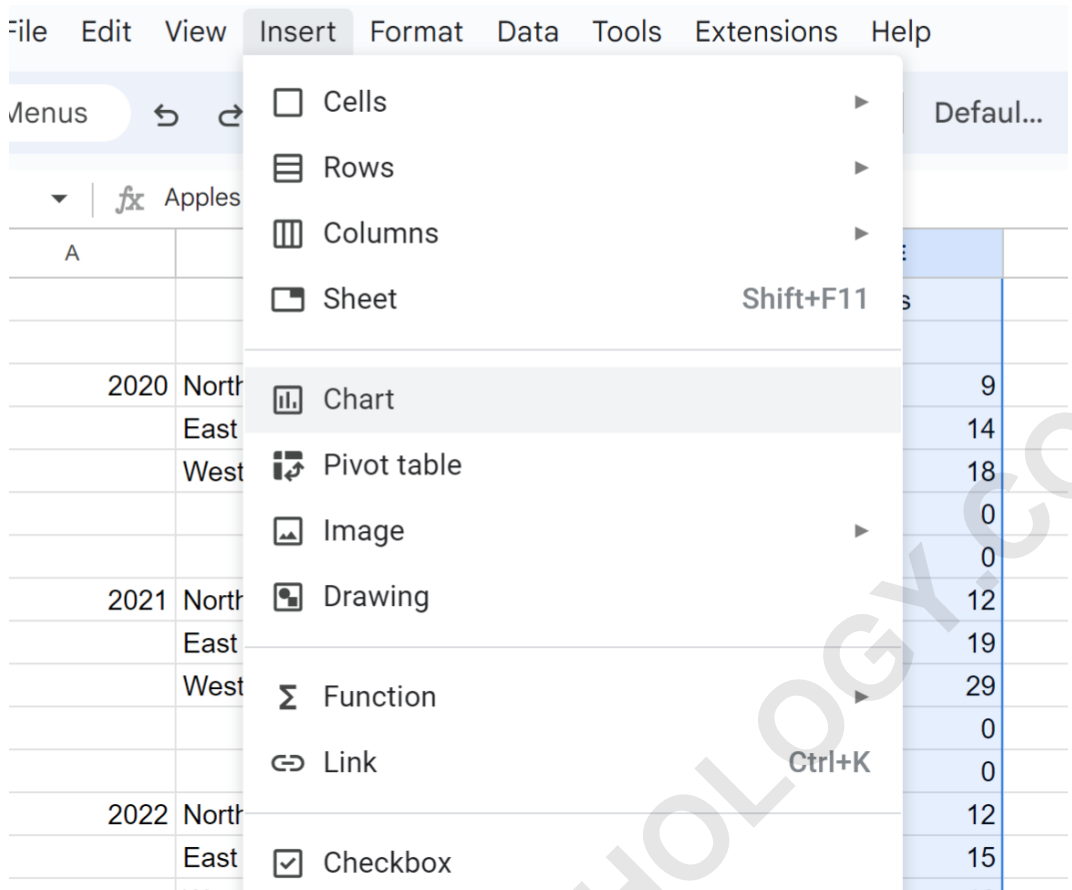
	A	B	C	D	E
1			Apples	Oranges	Bananas
2					
3	2020	North	24	20	9
4		East	19	25	14
5		West	22	27	18
6			0	0	0
7			0	0	0
8	2021	North	20	22	12
9		East	40	41	19
10		West	50	35	29
11			0	0	0
12			0	0	0
13	2022	North	11	30	12
14		East	19	24	15
15		West	19	27	16
16					
17					
18					

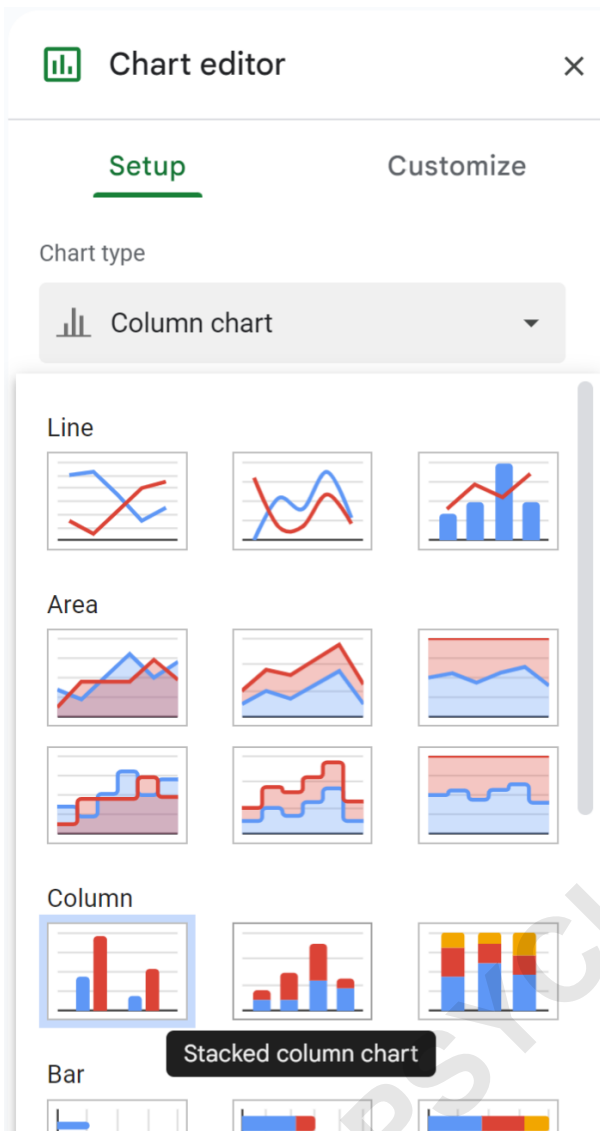
Step 2: Initiating Chart Creation and Selecting the Stacked Type

Once the data is accurately entered, the next step is to initiate the chart creation process within Google Sheets. Crucially, when selecting the data range for the chart, we must initially focus only on the series we intend to stack--the numerical values themselves. We will incorporate the grouping labels (the primary and secondary identifiers) in a later customization step.

To begin, highlight the cell range containing the quantitative sales data, which in our example corresponds to **C1:E16**. This range includes the headers for the fruit categories (Apples, Bananas, Oranges). With this data selected, navigate to the top ribbon menu, click the **Insert** tab, and then select the **Chart** option. This action automatically opens the **Chart editor** panel on the right side of your screen.

In the **Setup** tab of the Chart editor, under the **Chart type** section, you must select a visualization that supports stacking. Choose the **Stacked column chart** option. Although this chart type might initially look like a standard stacked column chart, Google Sheets automatically interprets the repetitive nature of the non-selected data (Columns A and B) as implicit clustering, leading to the preliminary visualization shown below. This initial step establishes the stacked series correctly.



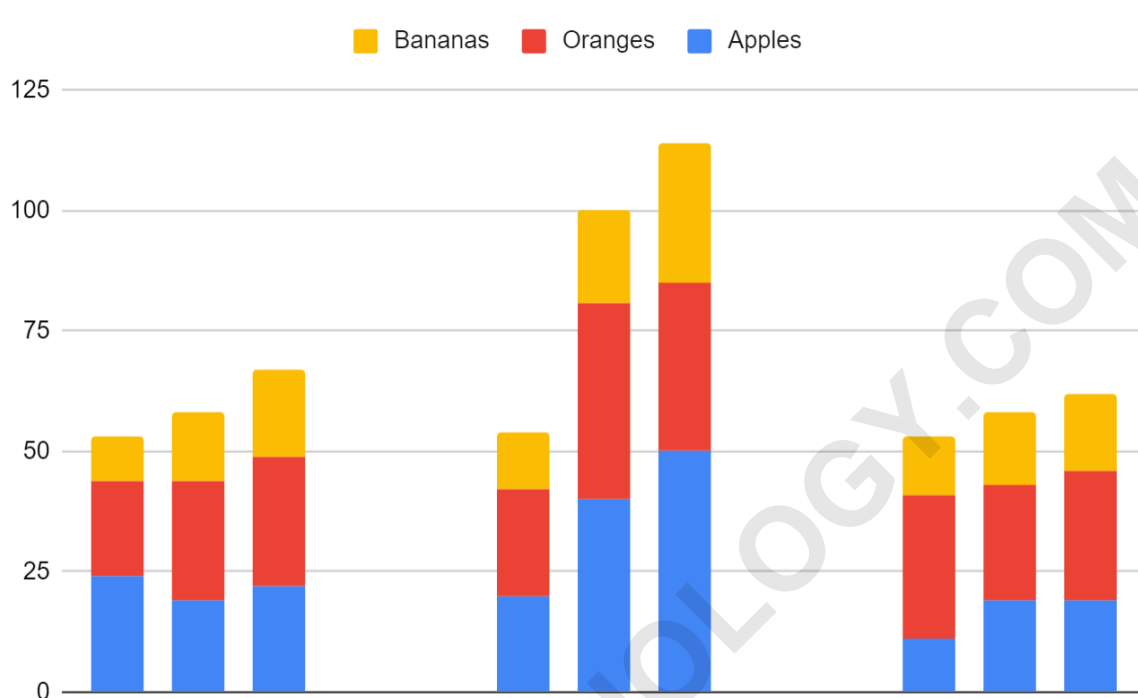


Step 3: Reviewing the Preliminary Clustered Visualization

Upon selecting the **Stacked column chart** type, Google Sheets generates a preliminary clustered stacked bar chart based on the numerical series (C1:E16). At this stage, the chart displays the stacked sales data correctly, but the horizontal axis, or x-axis, lacks meaningful context. Currently, it likely uses sequential row numbers or default identifiers, failing to communicate that the data is grouped by both Store and Year.

The visualization below represents this intermediary state. While the stacking of Apples, Bananas, and Oranges is correct, the underlying structure of the data--the clustering mechanism--is not yet explicitly labeled. The chart editor interprets the rows as separate data points, but we must manually instruct it to use the descriptive fields in columns A and B to create clear, hierarchical labels.

The subsequent steps will focus entirely on utilizing the **Chart editor**'s customization options to integrate these external labels, transforming the generic column identifiers into insightful, two-tiered labels that fully define the nature of the clusters.

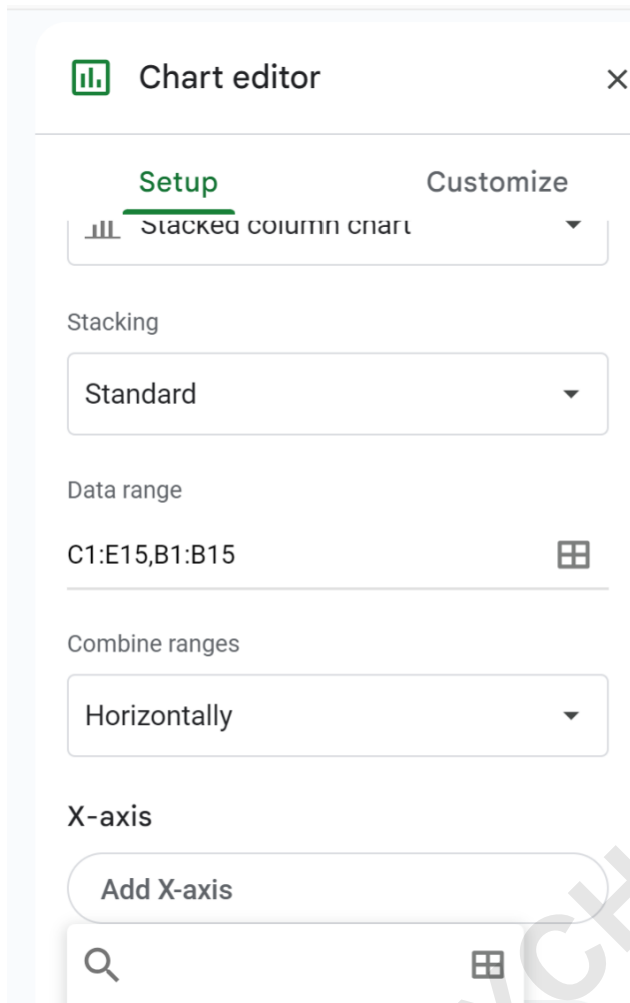


Step 4: Customizing the X-Axis with Primary Labels (Clustering)

The most crucial step in creating an effective clustered stacked bar chart involves defining the labels for the x-axis, which will explicitly create the clustered grouping. We utilize the additional columns in our original dataset (Columns A and B) to establish a hierarchy of labels that correspond to the clustered bars.

To begin this customization, ensure you are in the **Setup** tab of the **Chart editor**. Locate the section dedicated to the X-axis and click the **Add X-axis** button. This feature allows you to specify the data range that will populate the horizontal labels. A small grid icon will appear next to the newly added X-axis field; click this icon to input your data range.

For the primary clustering label, which represents the Store location, input the data range **B1:B15**. It is important to include the header ("Store") as part of this range. After typing the range, click **OK** to confirm the selection. Google Sheets will immediately update the chart to display the store names beneath the corresponding bars. This step defines the primary clustering mechanism of the visualization.



Select a data range

B1:B15

Cancel

OK

Step 5: Adding Secondary Labels for Hierarchical Grouping


To fully realize the clustered structure, we must introduce the secondary label set (Year) which defines the larger groupings above the Store locations. This creates a clear hierarchy on the x-

axis, visually organizing the data bars into distinct temporal categories, which is central to effective data visualization.

In the **Chart editor**, locate the X-axis entry you just created (B1:B15). Click the three vertical dots (More options menu) associated with this X-axis definition. From the drop-down menu that appears, select **Add labels**. This action indicates to Google Sheets that you wish to introduce a secondary grouping layer above the existing primary labels.

When prompted for the label range, input **A1:A15**. This range corresponds to the Year column in our original dataset. Click **OK** to apply this setting. The chart will immediately update to display the Years (2021, 2022, 2023) as overarching categories, with the corresponding Store labels nested below them. This two-tiered labeling system completes the clustered structure of the chart, making the comparison across years and within stores highly intuitive.


The resulting visualization, now featuring the completed hierarchical labels, should resemble the image provided below, confirming that both the stacking (product sales) and the clustering (Year/Store) components are correctly configured.

 **Chart editor** ✕


Setup Customize

Chart type

Stacking

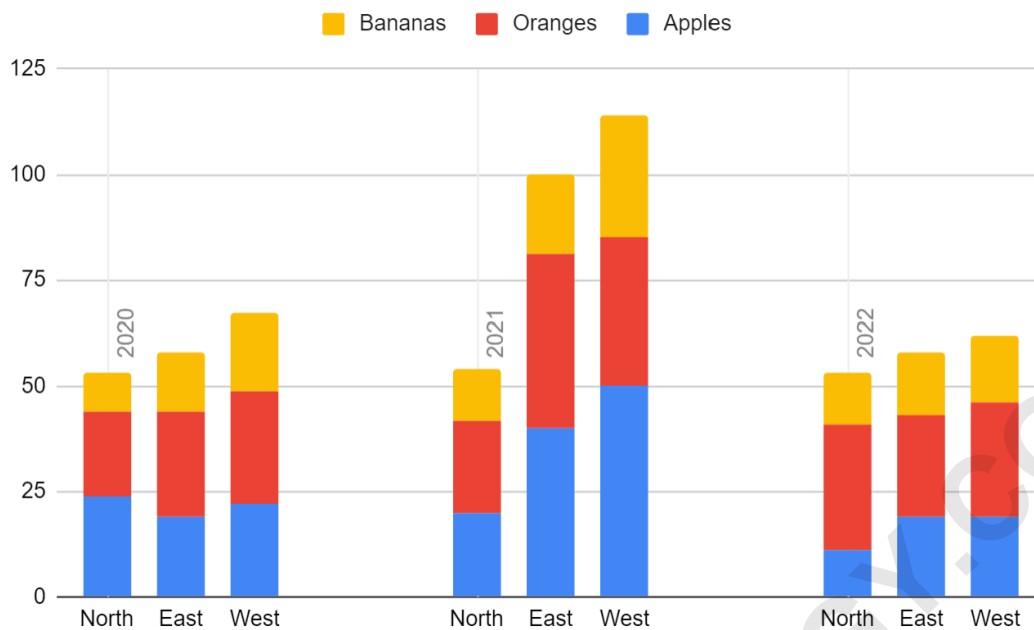
Data range
C1:E15,B1:B15,B1:B15,B1:B15 

Combine ranges

X-axis
 

Aggregate

Series



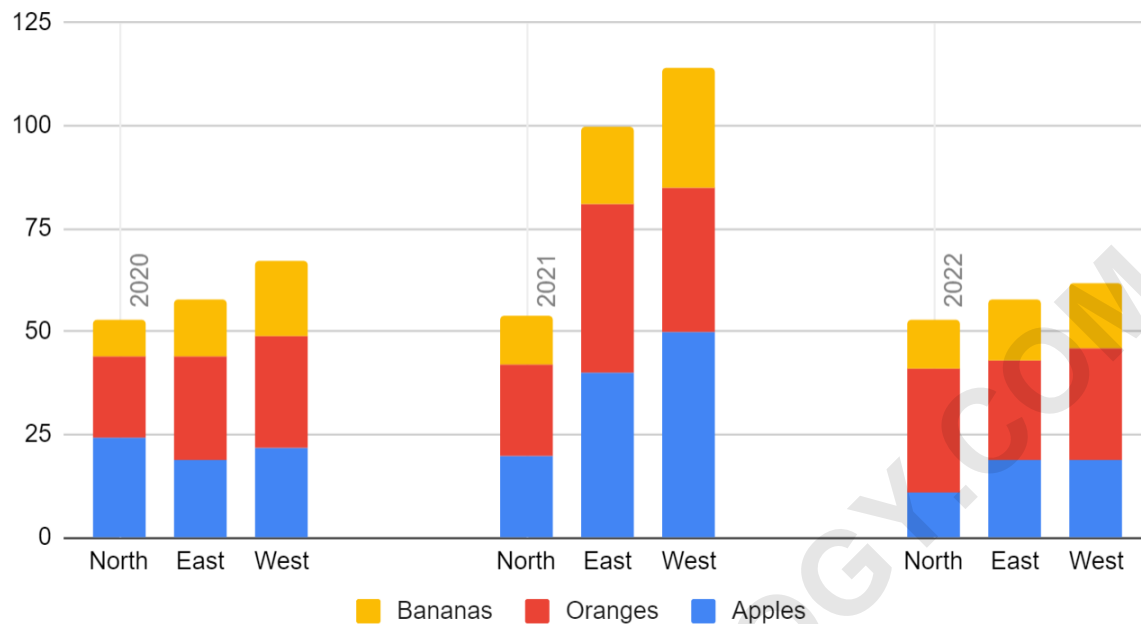
Step 6: Final Refinements and Aesthetic Customization

With the structure of the clustered stacked bar chart finalized, the remaining tasks involve aesthetic refinements to maximize readability and professional appearance. These adjustments, performed within the **Customize** tab of the **Chart editor**, ensure the visualization is polished and ready for presentation or reporting.

Key aesthetic improvements typically include adding a descriptive chart title, which immediately informs the audience of the chart's focus (e.g., "Annual Fruit Sales Clustered by Year and Store"). Furthermore, adjusting the placement of the legend can greatly enhance the use of space. Moving the legend from the default right side to the bottom or top center often provides more horizontal space for the actual data bars, especially when dealing with many series.

To apply these changes, navigate to the **Customize** tab. Use the **Chart & axis titles** section to add your title. Then, use the **Legend** section to change the position (e.g., to "Bottom"). After these adjustments, your finished visualization should match the polished example shown earlier in this tutorial, where sales at each store are clearly clustered by year, and product categories are distinctly stacked.

Sales by Store and Year



Conclusion and Further Data Visualization Techniques

Mastering the creation of the **clustered stacked bar chart** in [Google Sheets](#) is a significant step toward advanced [data visualization](#) competency. This chart type is highly effective for illustrating multi-dimensional comparisons and complex data hierarchies that simpler charts cannot convey. The iterative process of selecting data, choosing the stacked chart type, and manually adding the hierarchical X-axis labels is crucial for success.

By following these precise steps, analysts can leverage the full power of spreadsheet software to generate sophisticated, publication-ready graphics. This technique is particularly valuable in business intelligence and academic reporting where clarity in communicating complex relationships within a [dataset](#) is paramount.

For those interested in expanding their graphical toolkit, Google Sheets supports numerous other powerful visualization types suitable for different analytical needs. Consider exploring tutorials on these topics to continue building your expertise:

Creating dynamic line charts for time-series analysis.

Generating scatter plots to identify correlations.

Building geographical heatmaps for regional insights.