

Interactive Dashboards & User Experience

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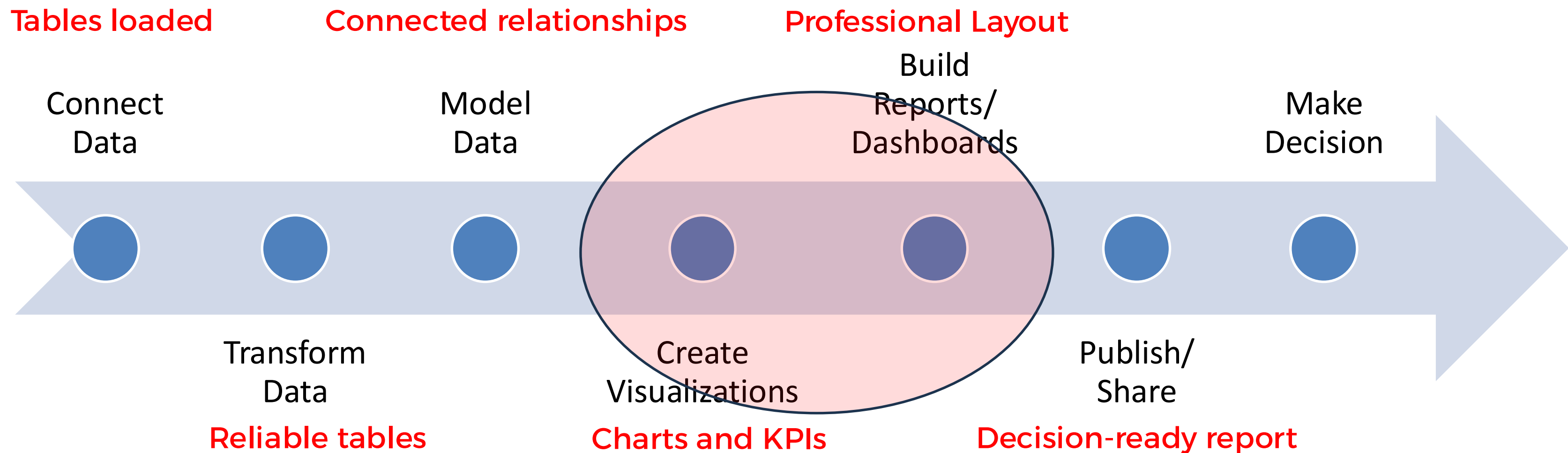
Course: From Data to Decisions using Power BI

Lecture 06



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Power BI Workflow (The Analytics Journey)



Each stage adds value — skip one and the chain breaks

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What we will cover

1. Interactivity overview
2. User Experience Best Practices

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1. Interactivity Overview



Interactivity turns a report from a static display into an analytical experience.

A successful interactive dashboard is not just visually appealing—it is intuitive, responsive, accessible, and designed to help users make informed business decisions quickly and confidently.

Why Interactivity Matters?

Interactive dashboards help users answer their own business questions.

Static Report	Interactive Report
Shows fixed information	Allows users to explore data
One view for everyone	Personalized analysis
Limited investigation	Supports drill-down and filtering
More dependency on report creator	More self-service for users

Business Scenario

Management wants a dashboard where users can:

- Select a year or month
- Filter by region
- Analyze product categories
- Drill into customer details
- Navigate between summary and detail pages

The dashboard should allow users to explore performance without rebuilding the report.

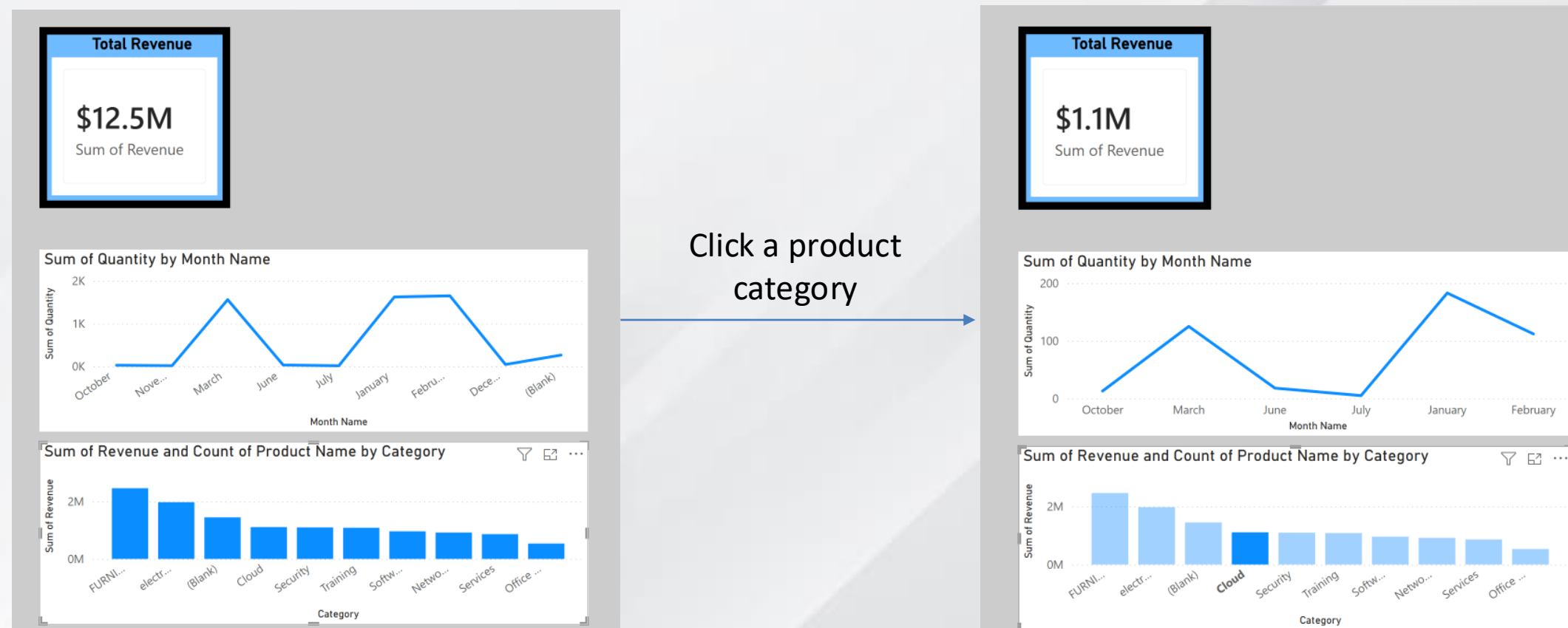
Visual Interactions

Power BI visuals can interact with each other

Visual interactions make reports exploratory and interactive.

Example:

- Click a product category in Revenue by product category
- Other visuals update automatically
- Total Revenue and Monthly trends visuals show this product category results only



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Edit Interactions

- Use Edit Interactions to control how visuals affect each other.

- Options:

- Filter
- Highlight
- None

- Example:

- A Region chart filters KPI cards but does not affect a trend chart.

The screenshot shows the Power BI ribbon with the 'Format' tab selected. The 'Interactions' section is highlighted with a red box and labeled '1.'. The 'Edit interactions' button is highlighted with a red box and labeled '3.'. The 'Format' tab is highlighted with a red box and labeled '2.'. Below the ribbon, a table displays data for Product Category, Region, Sales, and Profit.

Product Category	Region	Sales	Profit
Technology	West	2,18,867.52	10,095.17
Office Supplies	East	2,11,784.41	51,107.56
Furniture	East	1,96,331.77	-462.97
Furniture	West	1,96,011.15	53,545.79
Technology	East	1,84,055.31	34,646.81

Report Interactivity Overview

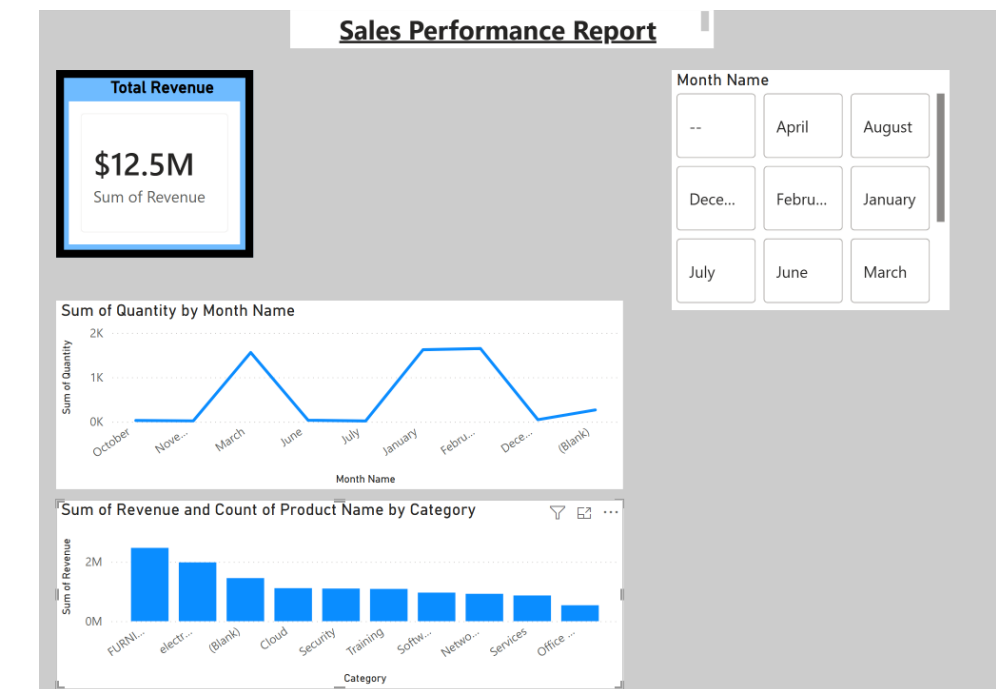
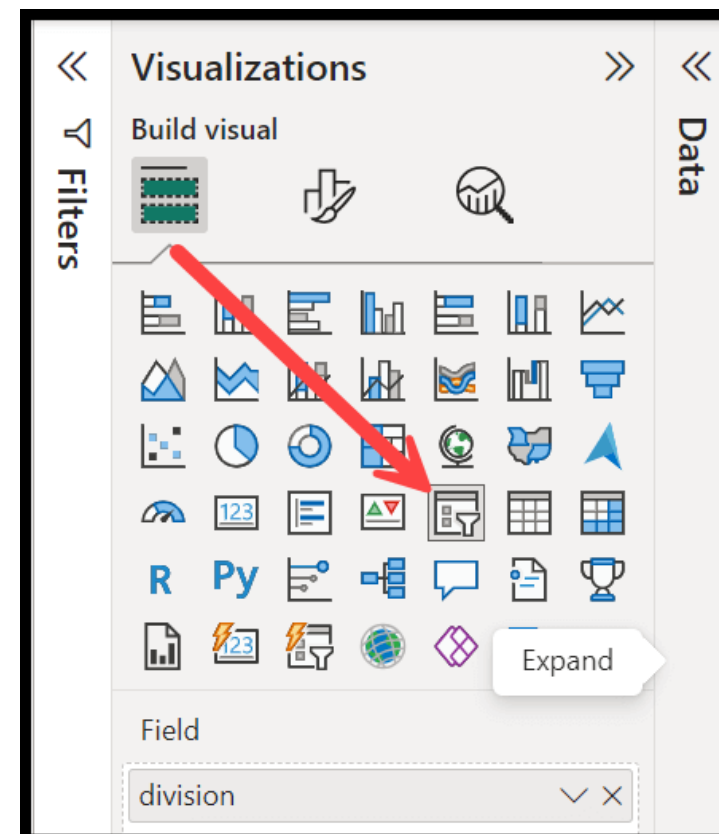
Power BI offers several interactivity features.

Excel Formulas	Purpose
Slicers	User-controlled filtering
Drill-down	Move from summary to detail
Drill-through	Report-level business logic
Bookmarks	Save report views
Buttons	Support navigation and actions

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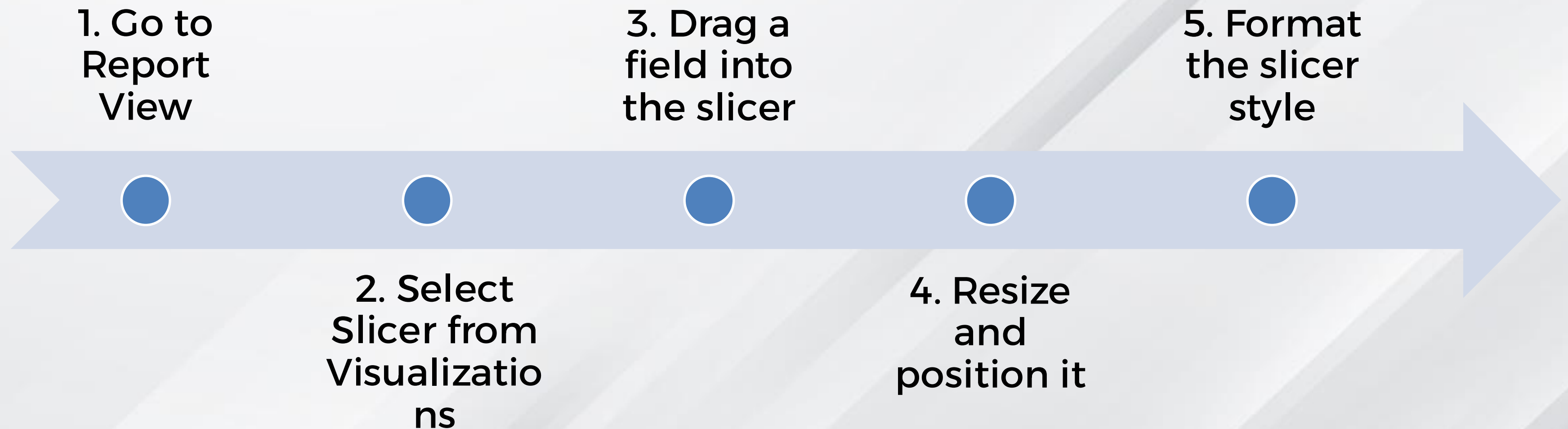
Slicer Visual

- A slicer is an interactive filter placed directly on the report page.
- Slicers give report users control over what they want to analyze.
- Common slicers:
 - Year
 - Month
 - Region
 - Product Category
 - Customer Segment



Creating a Slicer

Steps:



Example: Create a Region slicer

Slicer Types

Choose the slicer type based on the field and user need.

Slicer Type	Best Use
List	Few values
Dropdown	Long lists
Between	Numeric or date ranges
Relative Date	Recent periods
Tile	Visual selection buttons

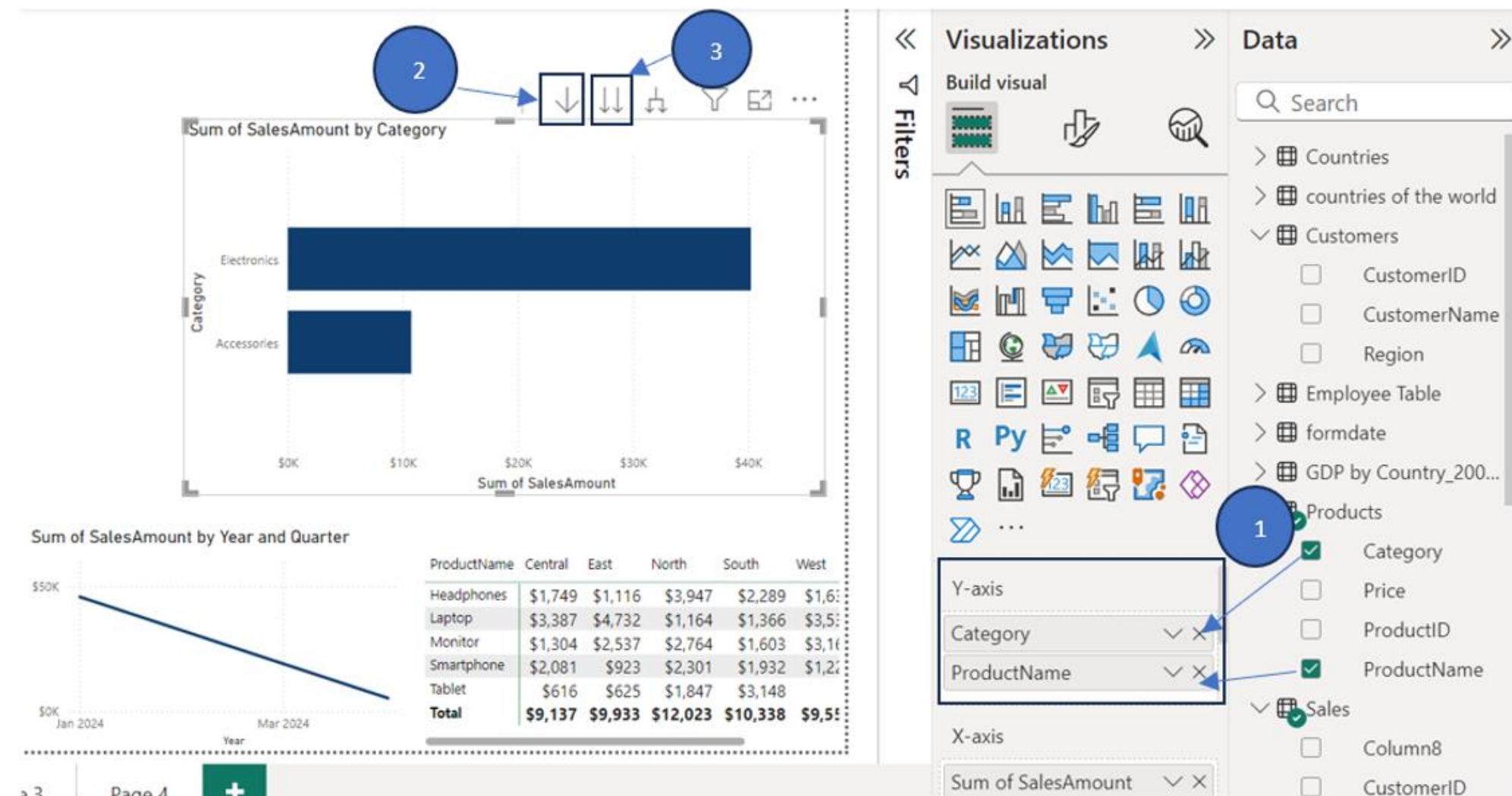
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Drill-Down

- Drill-down allows users to move from a summary level to a more detailed level.
- Drill-down supports deeper analysis without creating multiple charts.

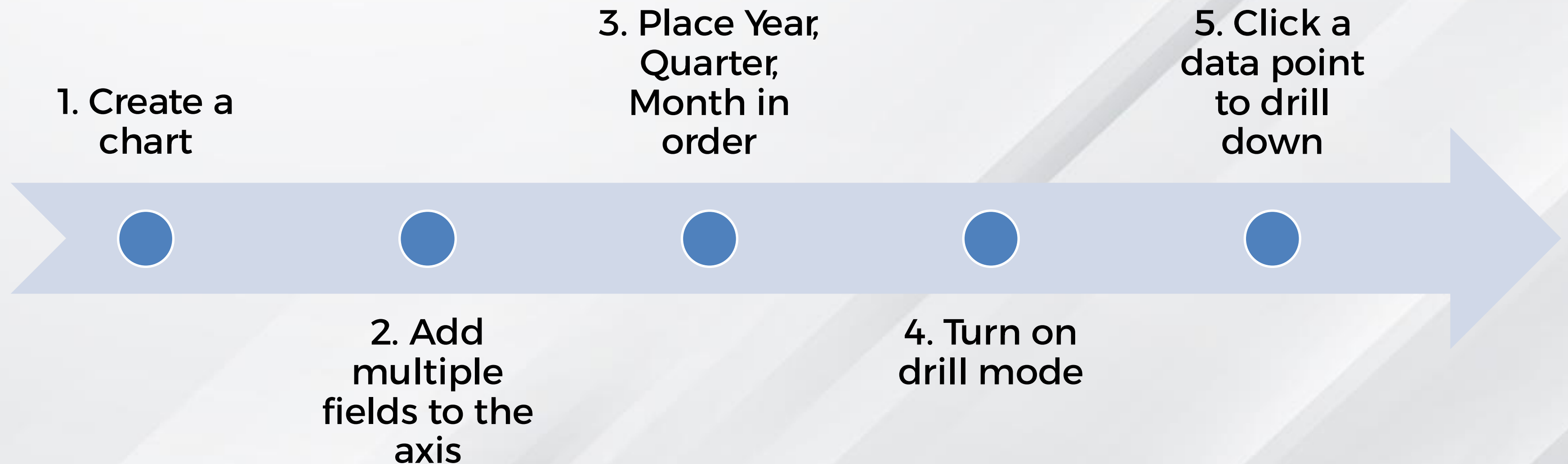
- Example hierarchy:

- Year
- Quarter
- Month
- Day



Creating a Drill-Down Hierarchy

Steps:



Example: Revenue by Year → Quarter → Month.

Drill-Up and Next Level

Drill Option	Purpose
Drill down	Go deeper into one selected item
Go to next level	Move all data to the next level
Expand all down	Show next level while keeping context
Drill up	Return to previous level

Drill-Through

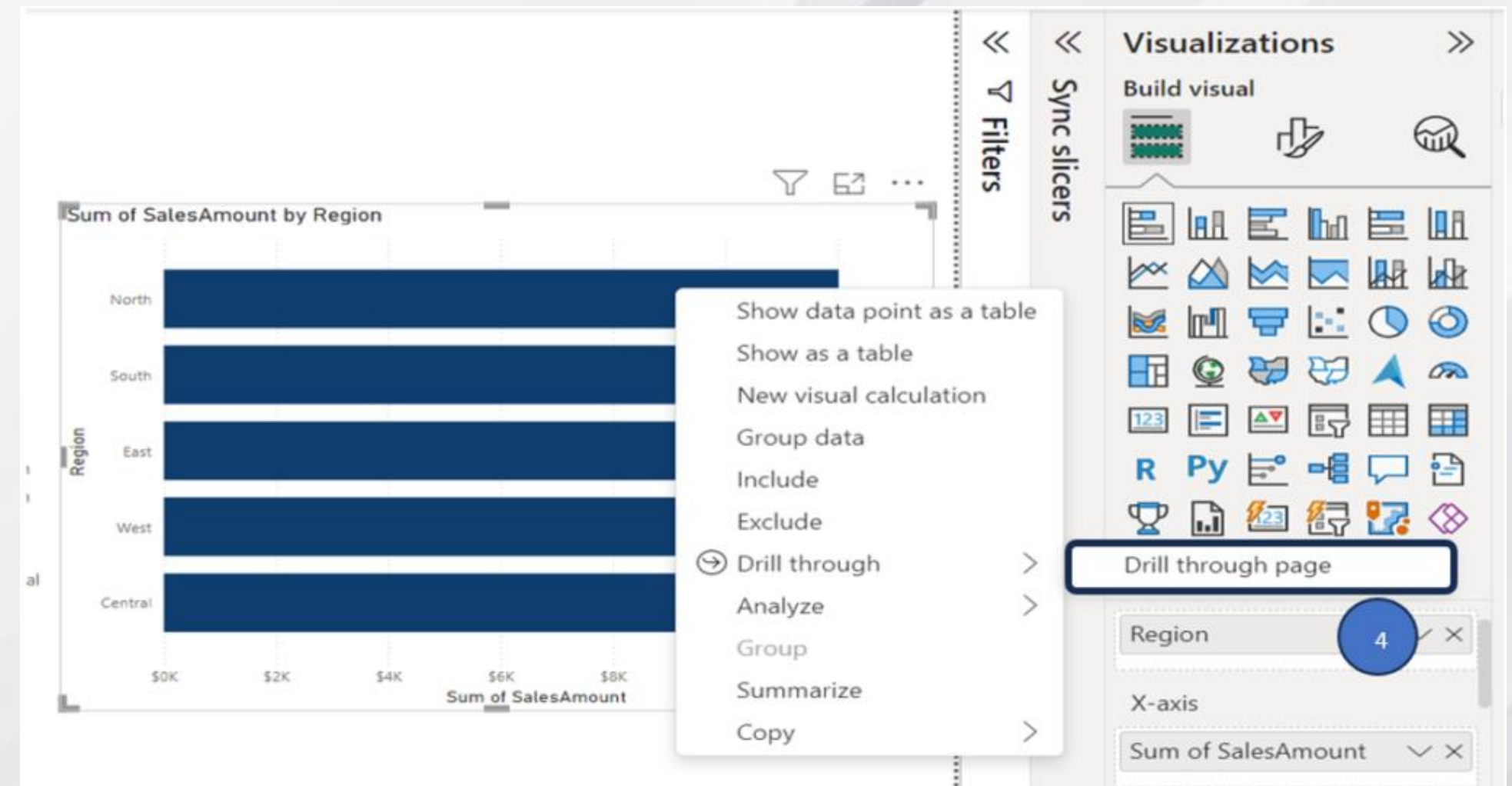
Drill-through allows users to right-click a data point and open a detailed page.

- Drill-through connects summary dashboards with detailed investigation.

- Example:

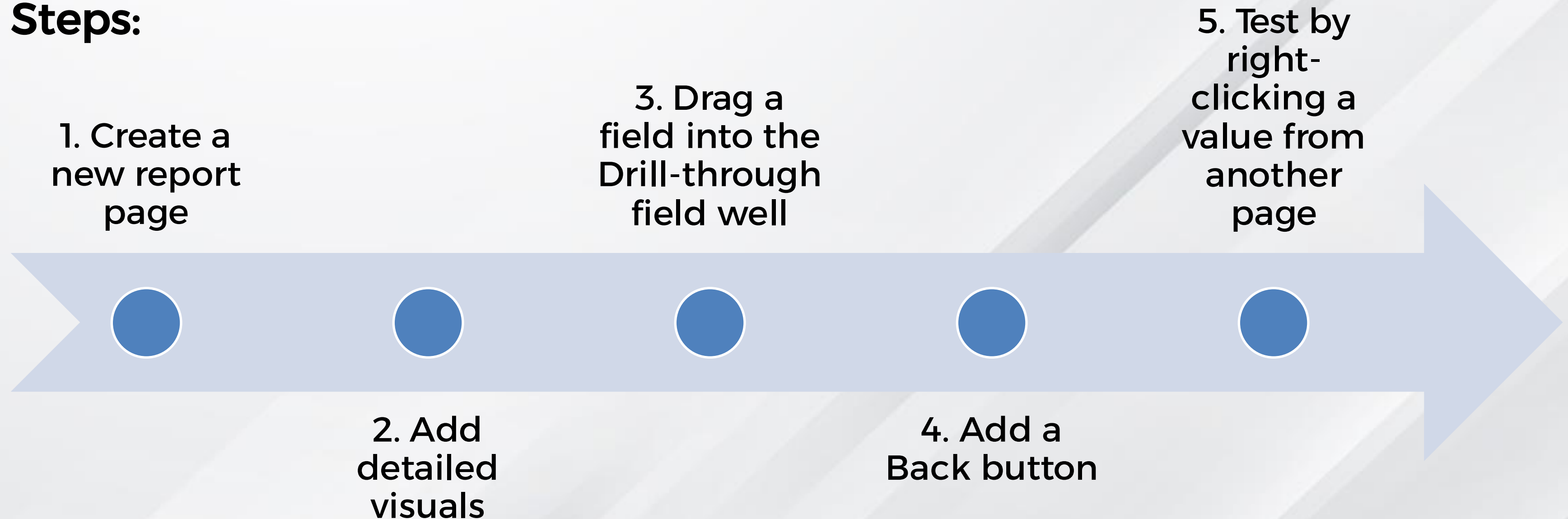
Right-click a customer and open a

Customer Detail page.



Creating a Drill-Through Page

Steps:



Example field:

Customer Name.

Drill-Through Use Cases

Use Case	Drill-Through Page
Customer analysis	Customer detail page
Product analysis	Product detail page
Region analysis	Regional performance page
Salesperson analysis	Salesperson performance page

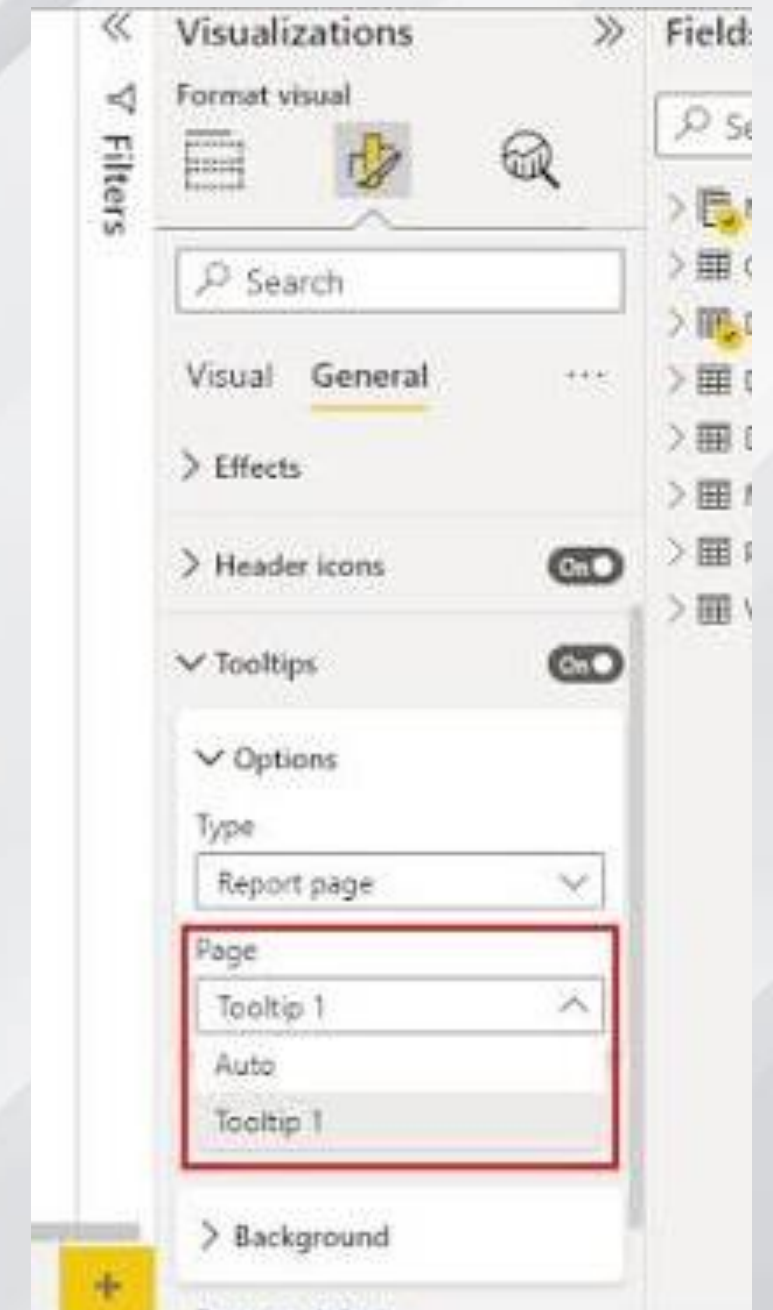
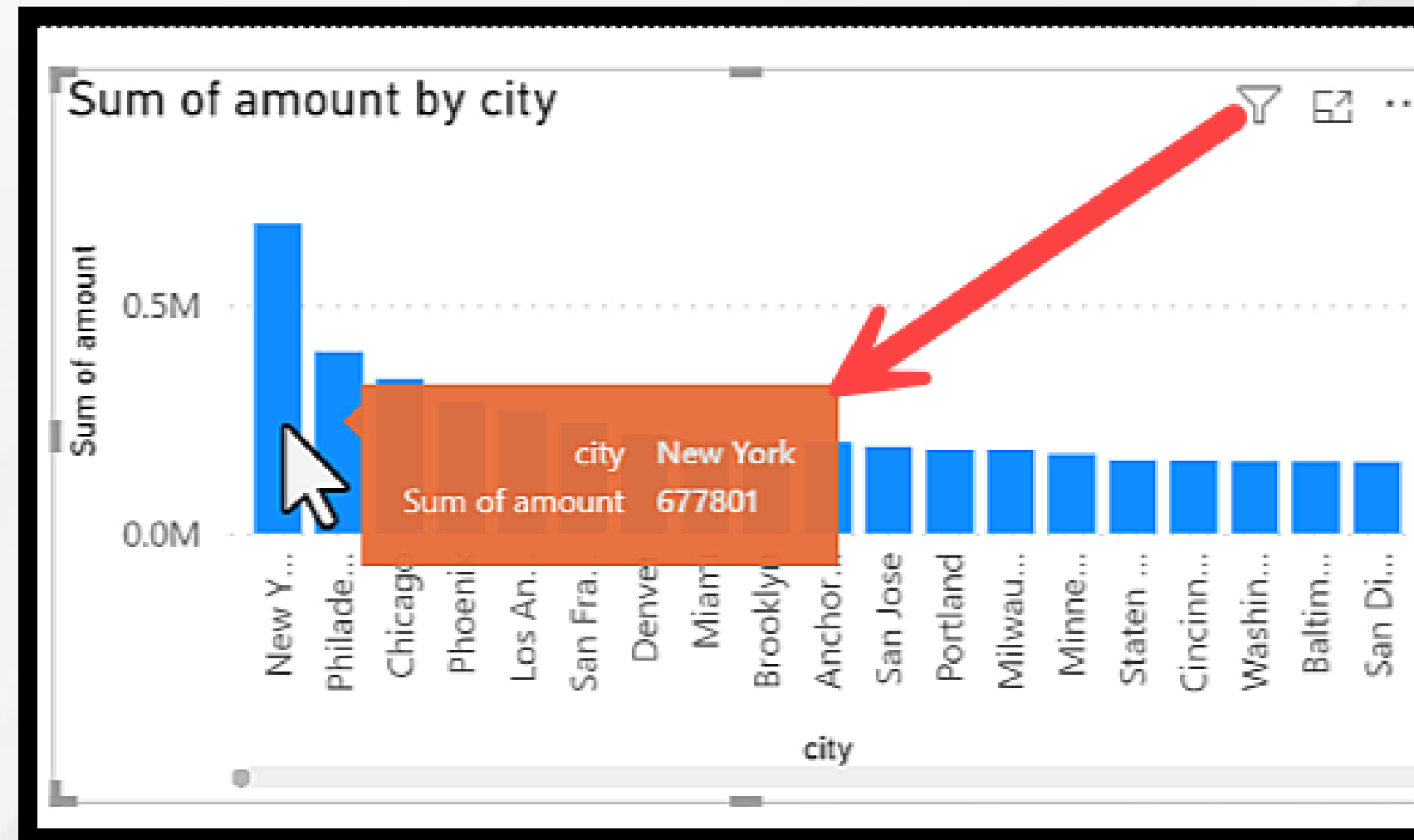
Tooltips

Tooltips show extra information when users hover over a visual.

- Tooltips provide extra detail without overcrowding the page.

- Examples:

- Revenue
- Profit
- Profit Margin
- Quantity
- Customer Count



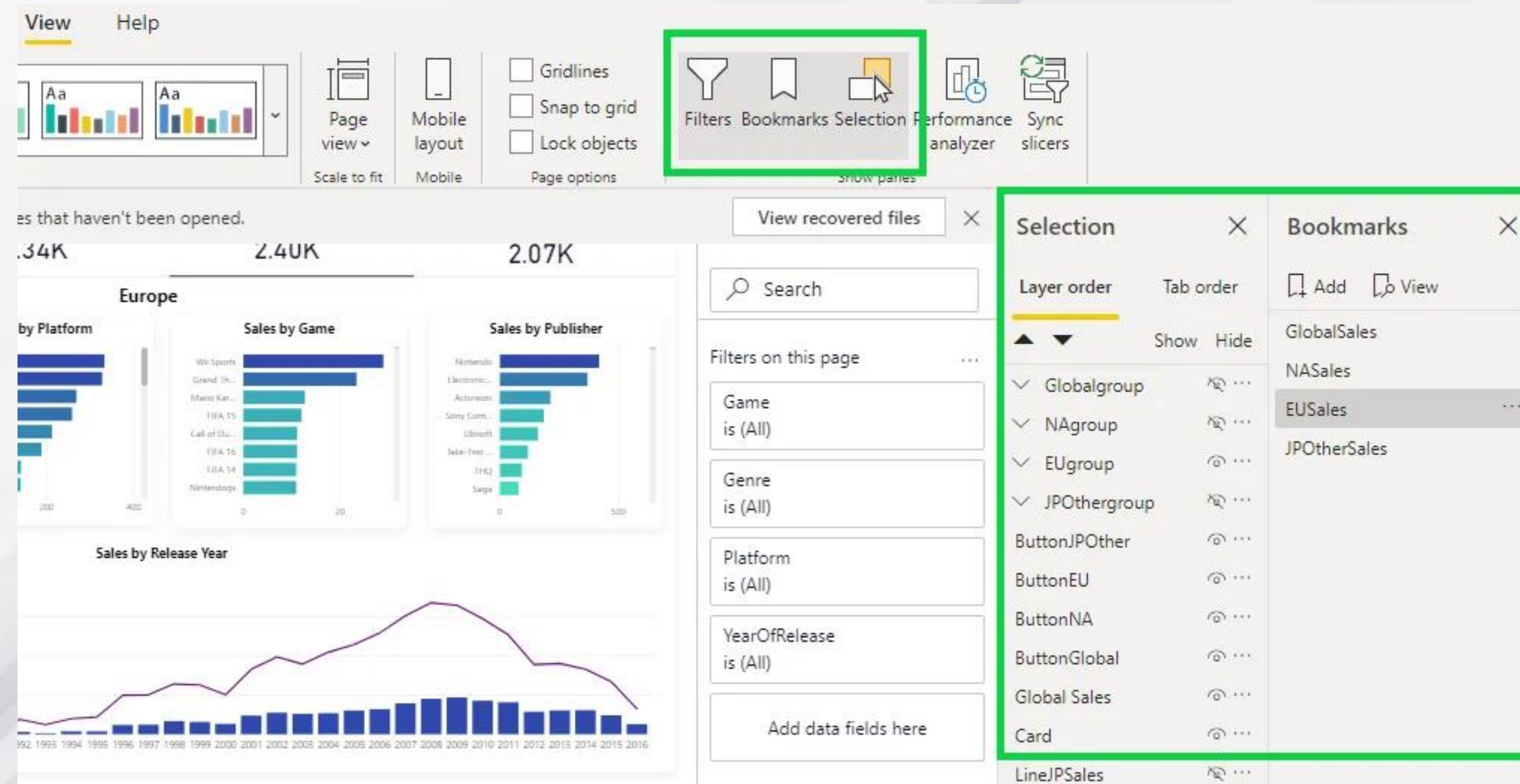
Bookmarks

Bookmarks save a specific report view.

- Bookmarks help create guided report experiences.

- They can capture:

- Filters
- Slicer selections
- Visual visibility
- Page position



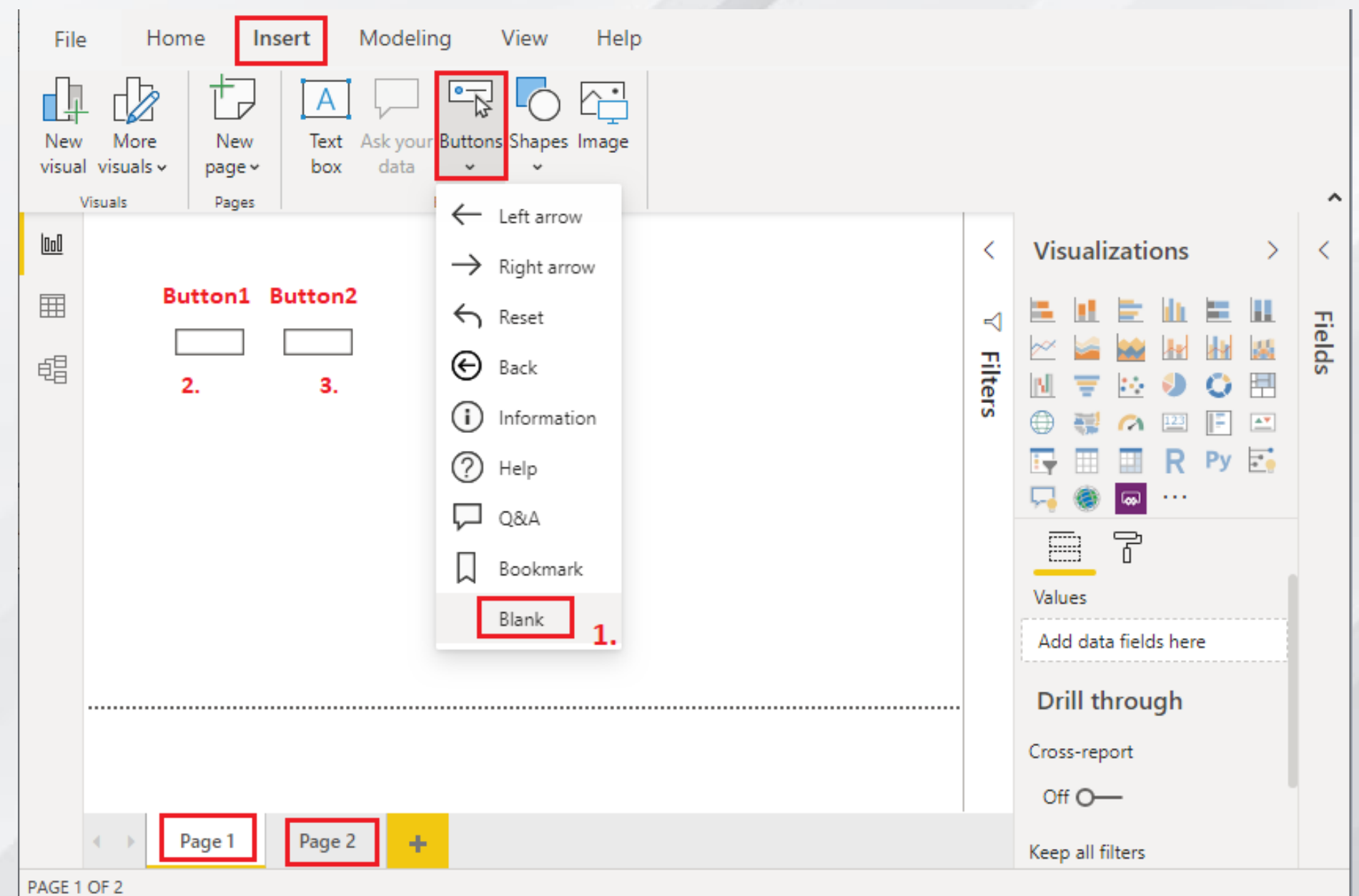
Bookmark Use Cases

Use Case	Example
Navigation	Switch between views
Storytelling	Show step-by-step insights
Show / hide panels	Open a filter menu
Scenario views	Best case vs worst case
Reset view	Return report to default state

Buttons

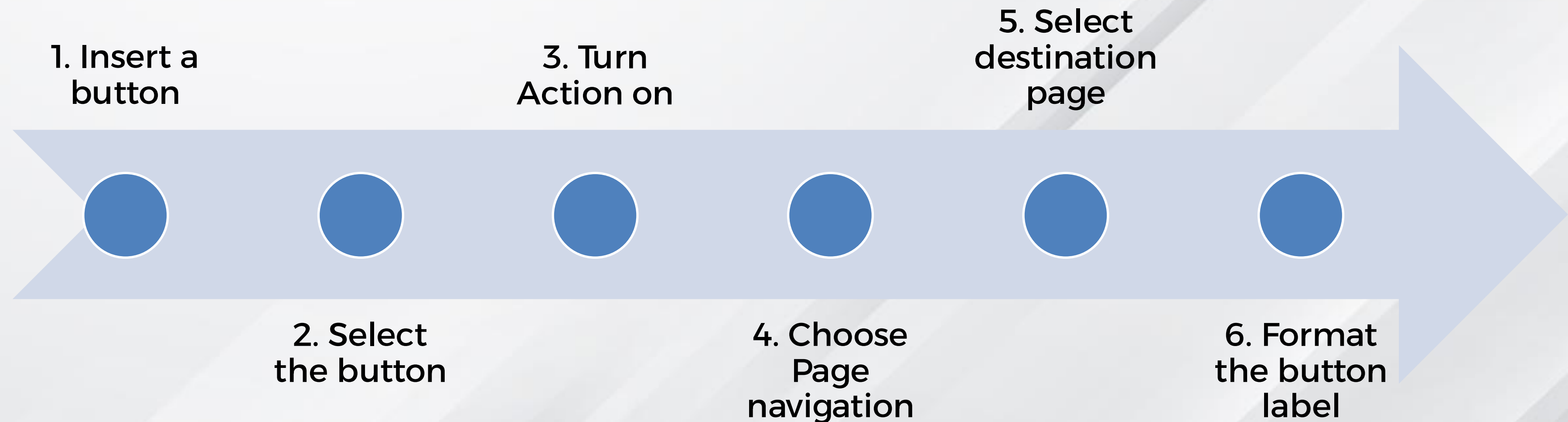
Buttons allow users to perform actions in a report.

- Buttons make dashboards easier to navigate.
- Common actions:
 - Page navigation
 - Bookmark navigation
 - Back
 - Drill-through back
 - Reset filters



Creating Page Navigation

Steps:



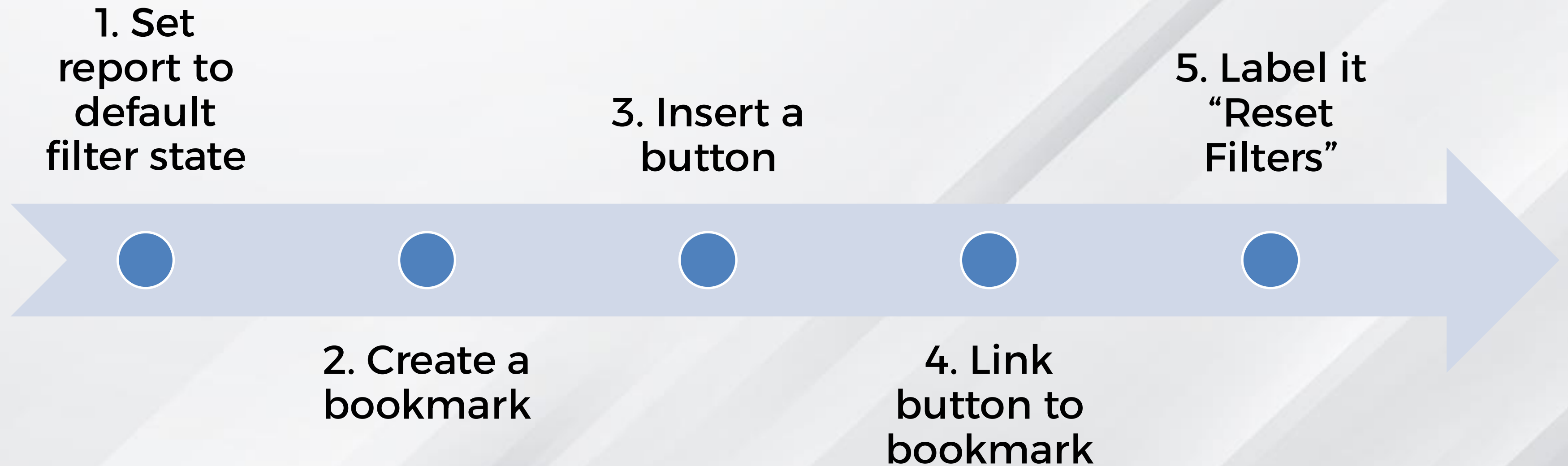
Example field:

Button: “Go to Page xx”

Creating a Reset Filter Button

Reset buttons improve user experience and reduce confusion.

Steps:



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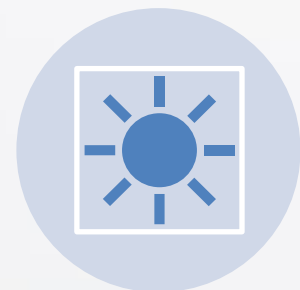
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2. User Experience Best Practices



Dashboard User Experience

Design for the user, not for the tool.



Clear



Easy to Navigate



Interactive



Consistent



Focused on decisions

A good dashboard guides users toward insight, not confusion.

Dashboard Layout Principles

A good dashboard layout usually includes:

1. Title and reporting period
2. KPI cards
3. Main trend visual
4. Category comparisons
5. Detail table
6. Slicers or navigation controls

Placing Slicers Effectively

Good slicer placement:

- Top of page
- Left-side panel
- Consistent location across pages
- Grouped by user need

Avoid:

- Too many slicers
- Random placement
- Long unformatted lists

GOOD SLICER PLACEMENT

Clean • Consistent • User Friendly

- Top of Page**
Place key slicers in a single row at the top for quick filtering.
- Left-side Panel**
Use a left panel for advanced or additional filters to save space.
- Consistent Location Across Pages**
Keep slicers in the same place on all pages for a consistent experience.
- Grouped by User Need**
Group related slicers together (Time, Geography, Product, Category).

Dashboard Example:

- Top Slicers:** Date (Jan 1 - May 31, 2024), Region (All), Category (All), Product (All), Clear Filters.
- Left Panel Slicers:** Time (Year: 2024, Quarter: All), Geography (Region: All, Country: All), Product (Category: All, Product: All).
- Key Metrics:** Total Sales (\$6.45M, +18.6% vs PY), Total Profit (\$1.12M, +20.3% vs PY), Profit Margin (17.4%, +1.8% vs PY), Total Orders (24.7K, +15.2% vs PY).
- Visuals:** Sales Trend (Line chart), Sales by Category (Horizontal bar chart), Top 10 Products by Sales (Table).

WHY IT WORKS

- ✓ Slicers are easy to find and use
- ✓ Layout is clean and balanced
- ✓ Related slicers are grouped logically
- ✓ Provides a consistent experience across all pages

AVOID

Too Many Slicers

Too many slicers overwhelm users and take up valuable space.

Random Placement

Random placement makes the report look messy and hard to use.

Long Unformatted Lists

Long, unformatted lists are difficult to scan and not user friendly.

Building Pop-up Information Panels

Instead of displaying everything on the page, show additional information only when needed.

Tools Used:

- Selection Pane
- Bookmarks
- Buttons

Benefits

- Cleaner dashboards
- Better user guidance
- Less clutter
- More professional design

Typical pop-ups include:

- KPI definitions
- Business rules
- Help instructions
- Detailed explanations
- Dashboard legends

Using the Selection Pane

The Selection Pane enables professional dashboard interactions and cleaner report management.

Location: **View → Selection Pane**

The Selection Pane helps manage report objects by allowing developers to:

- Show or hide visuals
- Rename report objects
- Organize layers
- Support bookmarks

Common Uses

- Pop-up information windows
- Filter panels
- Navigation menus
- Instruction overlays

Designing for Mobile Devices

Power BI provides a dedicated Mobile Layout view to optimize reports for smaller screens.

Design dashboards for the device your audience is most likely to use.

Best Practices

- Stack visuals vertically
- Prioritize KPIs
- Use fewer visuals per page
- Increase button size
- Avoid large tables

Business Example:

An executive views daily sales KPIs on a smartphone while traveling.



Accessibility and Inclusive Dashboard Design

Accessible dashboards improve usability and support organizational inclusivity.

Good dashboard design ensures every user can understand and interact with the report.

Power BI dashboards should be accessible to all users.

Best Practices

- Use high-contrast colors
- Avoid relying on color alone
- Provide meaningful titles
- Use readable font sizes
- Include alternative text for visuals

Dashboard Performance Best Practices

Good user experience depends on both design and performance.

Best Practices

- Limit the number of visuals per page
- Reduce unnecessary slicers
- Avoid complex visuals when possible
- Use summarized data where appropriate
- Remove unused fields from the model

Benefits

- Faster report loading
- Better responsiveness
- Improved user satisfaction

A fast dashboard provides a better user experience.

Common UX Mistakes

Mistake	Impact
Too many visuals	Users lose focus
Too many slicers	Report becomes confusing
Poor titles	Users do not understand visuals
Inconsistent layout	Hard to navigate
No reset button	Users get stuck in filters

Executive Dashboard Design Checklist

Checklist Item	✓
Clear report title and purpose	☐
KPI cards displayed prominently	☐
Slicers placed consistently	☐
Navigation is intuitive	☐
Visuals use appropriate chart types	☐
Filters and drill-through tested	☐
Report loads quickly	☐
Mobile layout reviewed	☐
Accessibility considered	☐
Dashboard answers business questions	☐

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Demo on Power BI



Exercise: Improve Report Interactivity

Using your Sales Dashboard from previous lectures:

1. Improve the layout by organizing KPI cards, charts, tables, and slicers using dashboard design best practices.
2. Add interactivity by creating slicers for Year, Region, Category, and Customer Segment, and include at least one drill-down hierarchy.



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Exercise

Exercise: Improve Report Interactivity

3. Create navigation by adding a drill-through page, a Back button, and one navigation or Reset Filters button.
4. Enhance user experience by implementing advanced features, as a bookmark, tooltip, or Selection Pane.
5. Test your dashboard to ensure all filters, navigation, and interactive features work correctly.



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Exercise

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06**Key Points**

Interactive dashboards empower users to explore data and answer business questions independently.

Slicers, filters, drill-down, and drill-through enable flexible and dynamic data exploration.

Bookmarks, buttons, tooltips, and navigation improve the user experience and report usability.

Well-designed dashboards use consistent layouts, intuitive navigation, and clear visual hierarchy.

Effective interactivity transforms Power BI reports into powerful decision-support tools.

Lecture 07:

- Advanced Business Analysis Techniques



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Next Lecture



Thank You