**✅ 1️⃣ Recommended Pages**

Here’s a solid multi-page structure for an **AdventureWorks Sales** report:

**📄 Page 1: Sales Overview**

* Total Sales, Total Orders, Total Customers (Cards)
* Sales Trend over Time (Line Chart)
* Sales by Region (Map or Column Chart)
* Top 5 Products by Sales (Bar Chart)

**📄 Page 2: Sales by Product**

* Sales by Category & Subcategory (TreeMap or Stacked Bar)
* Product Profitability: Sales vs. Cost (Scatter Plot)
* Top 10 Products (Table)
* Product-wise Sales Trend (Line Chart with slicer)

**📄 Page 3: Sales by Territory & Resellers**

* Sales by Region & Country (Map)
* Sales by Sales Territory (Column Chart)
* Top Resellers by Sales (Bar Chart)
* Reseller Locations (Map with Reseller Data)

**📄 Page 4: Customer Analysis**

* Total Customers by Region (Map)
* Repeat vs New Customers (Donut)
* Sales by Customer (Table)
* Average Sales per Customer (Card)

**📄 Page 5: Date & Orders Insights**

* Orders Trend by Month/Quarter (Line Chart)
* Orders by Channel (Donut)
* Average Order Value (Card)
* Order Fulfillment Time if you have Ship/Due Dates (Bar Chart)

**✅ 2️⃣ Data Model in Power BI**

**Relationships to build:**

* Sales\_data ←→ Product\_data (ProductKey)
* Sales\_data ←→ Customer\_data (CustomerKey)
* Sales\_data ←→ Reseller\_data (ResellerKey)
* Sales\_data ←→ Sales Territory\_data (SalesTerritoryKey)
* Sales\_data ←→ Date\_data (OrderDateKey)
* Sales Order\_data may link by SalesOrderLineKey if needed.

**✅ 3️⃣ Steps to build**

1️⃣ **Load the Excel file** → Load all sheets as tables into Power BI.  
2️⃣ **Model the data** → Set up the relationships above in the **Model View**.  
3️⃣ **Create measures** → E.g., Total Sales, Total Cost, Profit, Average Order Value.  
4️⃣ **Design pages** → Use appropriate visuals for each page.  
5️⃣ **Add filters/slicers** → Date slicers, Product Category, Region, Reseller.  
6️⃣ **Format the report** → Use consistent colors, titles, and tooltips.

**✅ 4️⃣ Next:**

Do you want me to:  
🔹 Suggest **DAX measures**?  
🔹 Give you **step-by-step import instructions**?  
🔹 Help you **design visuals** page by page?  
🔹 Or prepare a **Power BI PBIX template** outline you can follow?

👉 Tell me which part you’d like help with first!

**You said:**

Help you design visuals page by page?

**ChatGPT said:**

Excellent! Let’s do this step-by-step — I’ll break it down **page by page** with **visual ideas**, **which fields to use**, and **design tips** so you can build it confidently in Power BI.

**✅ 📄 Page 1: Sales Overview**

**🎯 Goal: Show big picture — total sales, orders, trends, top products.**

**Visuals to Add:**

1️⃣ **KPI Cards**

* *Visual*: 3 Card visuals
* *Fields*:
  + Total Sales → SUM(Sales\_data[Sales Amount])
  + Total Orders → COUNTROWS(Sales\_data) or distinct count of Sales Orders
  + Total Customers → DISTINCTCOUNT(Sales\_data[CustomerKey])

2️⃣ **Sales Trend over Time**

* *Visual*: Line Chart
* *Axis*: Date\_data[Date]
* *Values*: SUM(Sales\_data[Sales Amount])
* *Tip*: Add a slicer for Fiscal Year/Quarter.

3️⃣ **Sales by Region**

* *Visual*: Filled Map or Column Chart
* *Location*: Sales Territory\_data[Country] or [Region]
* *Values*: SUM(Sales\_data[Sales Amount])

4️⃣ **Top 5 Products by Sales**

* *Visual*: Clustered Bar Chart
* *Axis*: Product\_data[Product]
* *Values*: SUM(Sales\_data[Sales Amount])
* *Filter*: Top N filter → Top 5 by Sales.

**✅ 📄 Page 2: Sales by Product**

**🎯 Goal: Deep dive into product sales & profit.**

1️⃣ **Sales by Category & Subcategory**

* *Visual*: Treemap or Stacked Bar Chart
* *Group*: Product\_data[Category] + Product\_data[Subcategory]
* *Values*: SUM(Sales\_data[Sales Amount])

2️⃣ **Product Profitability**

* *Visual*: Scatter Chart
* *X Axis*: SUM(Sales\_data[Total Product Cost])
* *Y Axis*: SUM(Sales\_data[Sales Amount])
* *Details*: Product\_data[Product]

3️⃣ **Top 10 Products**

* *Visual*: Table visual
* *Columns*: Product, Sales Amount, Quantity, Profit (Sales - Cost)
* *Tip*: Add conditional formatting → Data bars.

4️⃣ **Product Sales Trend**

* *Visual*: Line Chart
* *Axis*: Date\_data[Date]
* *Values*: SUM(Sales\_data[Sales Amount])
* *Legend*: Product\_data[Category] or pick top products.

**✅ 📄 Page 3: Sales by Territory & Resellers**

**🎯 Goal: Understand sales spread by region and reseller.**

1️⃣ **Sales by Region & Country**

* *Visual*: Map or Stacked Column Chart
* *Axis*: Sales Territory\_data[Region] or Country
* *Values*: SUM(Sales\_data[Sales Amount])

2️⃣ **Sales by Sales Territory**

* *Visual*: Clustered Bar Chart
* *Axis*: Sales Territory\_data[SalesTerritoryKey]
* *Values*: SUM(Sales\_data[Sales Amount])

3️⃣ **Top Resellers by Sales**

* *Visual*: Bar Chart
* *Axis*: Reseller\_data[Reseller]
* *Values*: SUM(Sales\_data[Sales Amount])
* *Filter*: Top 10.

4️⃣ **Reseller Locations**

* *Visual*: Map
* *Location*: Reseller\_data[City] or [Country-Region]
* *Size*: SUM(Sales\_data[Sales Amount])

**✅ 📄 Page 4: Customer Analysis**

**🎯 Goal: Analyze customers and segments.**

1️⃣ **Customers by Region**

* *Visual*: Filled Map
* *Location*: Customer\_data[Country-Region] or [City]
* *Size*: DISTINCTCOUNT(Customer\_data[Customer ID])

2️⃣ **Repeat vs New Customers** *(If you have join keys)*

* *Visual*: Donut Chart
* *Field*: Create a flag measure for Repeat vs New → e.g., using Order count per customer.
* *Values*: Customer count.

3️⃣ **Sales by Customer**

* *Visual*: Table
* *Columns*: Customer Name, Region, Total Sales, Orders.

4️⃣ **Average Sales per Customer**

* *Visual*: Card
* *Measure*: Total Sales / DISTINCTCOUNT(Customer ID)

**✅ 📄 Page 5: Date & Orders Insights**

**🎯 Goal: Show time-based order and shipping trends.**

1️⃣ **Orders Trend by Month**

* *Visual*: Line Chart
* *Axis*: Date\_data[Month]
* *Values*: COUNTROWS(Sales\_data) or distinct Sales Orders.

2️⃣ **Orders by Channel**

* *Visual*: Donut Chart
* *Legend*: Sales Order\_data[Channel]
* *Values*: COUNTROWS(Sales Order\_data)

3️⃣ **Average Order Value**

* *Visual*: Card
* *Measure*: Total Sales / Total Orders

4️⃣ **Order Fulfillment Time** *(If ShipDate & DueDate)*

* *Visual*: Bar Chart
* *Axis*: Date/Month
* *Values*: Create measure for average days between ShipDateKey and DueDateKey.

**✅ Design Tips**

* Add slicers for Date, Region, Product Category.
* Use consistent colors & titles.
* Add bookmarks if you want interactive drill-throughs.

If you want, I can **write DAX for key measures** (Total Sales, Profit, AOV, Repeat Customer Flag).  
👉 Shall I prepare that next?

**You said:**

yes

**ChatGPT said:**

Great! Let’s prepare the **essential DAX measures** you’ll need for your **Power BI report** based on your AdventureWorks data. I’ll break them down by purpose so you can just copy-paste them into your **Power BI model**.

**✅ 📌 Basic DAX Measures**

**1️⃣ Total Sales**

DAX

CopyEdit

Total Sales = SUM('Sales\_data'[Sales Amount])

**2️⃣ Total Orders**

If each row in Sales\_data is a line item, count distinct Sales Order from Sales Order\_data:

DAX

CopyEdit

Total Orders = DISTINCTCOUNT('Sales Order\_data'[Sales Order])

Or if you only have line keys in Sales\_data:

DAX

CopyEdit

Total Orders = DISTINCTCOUNT('Sales\_data'[SalesOrderLineKey])

**3️⃣ Total Customers**

DAX

CopyEdit

Total Customers = DISTINCTCOUNT('Sales\_data'[CustomerKey])

**4️⃣ Total Product Cost**

DAX

CopyEdit

Total Product Cost = SUM('Sales\_data'[Total Product Cost])

**5️⃣ Total Profit**

DAX

CopyEdit

Total Profit = [Total Sales] - [Total Product Cost]

**6️⃣ Average Order Value (AOV)**

DAX

CopyEdit

Average Order Value = DIVIDE([Total Sales], [Total Orders])

**7️⃣ Order Count**

If you want the number of line items:

DAX

CopyEdit

Order Count = COUNTROWS('Sales\_data')

**✅ 📌 Date-Based DAX**

**8️⃣ YTD Sales**

DAX

CopyEdit

Sales YTD = TOTALYTD([Total Sales], 'Date\_data'[Date])

**9️⃣ Orders YTD**

DAX

CopyEdit

Orders YTD = TOTALYTD([Total Orders], 'Date\_data'[Date])

**✅ 📌 Repeat vs. New Customer Flag**

Power BI doesn’t have this automatically, so here’s an approach:

**First**, calculate the *First Purchase Date* for each customer:

DAX

CopyEdit

First Purchase Date =

CALCULATE(

MIN('Sales\_data'[OrderDateKey]),

ALLEXCEPT('Sales\_data', 'Sales\_data'[CustomerKey])

)

**Second**, create a flag that checks if the order date equals the first purchase date:

DAX

CopyEdit

Is New Customer =

IF(

'Sales\_data'[OrderDateKey] = [First Purchase Date],

"New Customer",

"Repeat Customer"

)

Use this as a slicer or legend in visuals (e.g., Donut chart).

**✅ 📌 Order Fulfillment Days**

To analyze shipping performance:

DAX

CopyEdit

Order Fulfillment Days =

AVERAGEX(

'Sales\_data',

DATEDIFF('Sales\_data'[OrderDateKey], 'Sales\_data'[ShipDateKey], DAY)

)

**✅ How to Use**

1️⃣ Create a new **Measure** for each in **Data View**.  
2️⃣ Use the measures in visuals (Cards, Charts, Tables).  
3️⃣ Combine them with slicers for dynamic filtering.