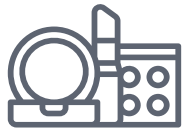


Data warehouse and BI infrastructure design and implementation

Cosmetics brand

Built a scalable enterprise data warehouse on Azure platform to accommodate data from multiple data sources and developed Power BI reporting suite to analyze the sales performance

Cosmetics brand needs to setup an enterprise data warehouse and design the BI infrastructure

Picture this…

You're looking to set up an efficient, scalable cloud-based data warehouse and develop automated Power BI dashboards. Currently, it is becoming increasingly difficult to manage (collate, cleanse and aggregate) the data from various sources and to create/update the weekly and monthly Excel reports.

You turn to Accordion.

We partner with your team to build a scalable enterprise data warehouse on Azure platform to accommodate data from multiple data sources and develop a Power BI reporting suite to analyze the sales performance, including:

- Building an Enterprise Data Warehouse (on Microsoft Azure platform) connecting different data sources through data pipelines (in Azure Data Factory) and transforming the raw data as per business requirements
- Ingesting data from Oracle Essbase (data extracted through file exports), NetSuite (data extracted through Saved Search), OneDrive to create data models after cleansing and harmonizing the data
- Creating tabular data models within Azure SQL database to create ready-to-serve data marts for analytical and reporting purposes
- Developing automated Power BI dashboards on top of the tabular data models to analyze the sales performance across different channels

Your value is enhanced.

- Your have an advanced Enterprise Datawarehouse enabled the availability of clean, validated and ready-to-use data across the company on real time basis
- Your have automated Power BI dashboards providing visibility into the key performance metrics with consistent and accurate performance KPIs
- The automated dashboards have saved you ~100 person-hours per month by eliminating the need to prepare manual Excel reports and PowerPoint presentations

DATA WAREHOUSE AND BI INFRASTRUCTURE DESIGN AND IMPLEMENTATION

KEY RESULT

- ~100 person-hours per month saved

VALUE LEVERS PULLED

- Enterprise Data Warehouse setup
- Tabular data models in Azure SQL database
- Automated Power BI reporting suite

DATA WAREHOUSE AND BI INFRASTRUCTURE DESIGN AND IMPLEMENTATION

Setting up cloud-based data warehouse and building reporting suite for cosmetics brand

Situation

- With sales across multiple countries and numerous products, it was becoming increasingly difficult for the client to manage (collate, cleanse and aggregate) the data from various sources and to create/update the weekly and monthly Excel reports
- Partnered with the client to set up more efficient, scalable cloud-based environment and developed automated Power BI dashboards

Accordion Value Add

- Built an Enterprise Data Warehouse (on Microsoft Azure platform) connecting different data sources through data pipelines (in Azure Data Factory) and transformed the raw data as per business requirements
- Ingested data from Oracle Essbase (data extracted through file exports), NetSuite (data extracted through Saved Search), OneDrive to create data models after cleansing and harmonizing the data
- Created tabular data models within Azure SQL database to create ready-to-serve data marts for analytical and reporting purposes
- Developed automated Power BI dashboards on top of the tabular data models to analyze the sales performance across different channels

Impact

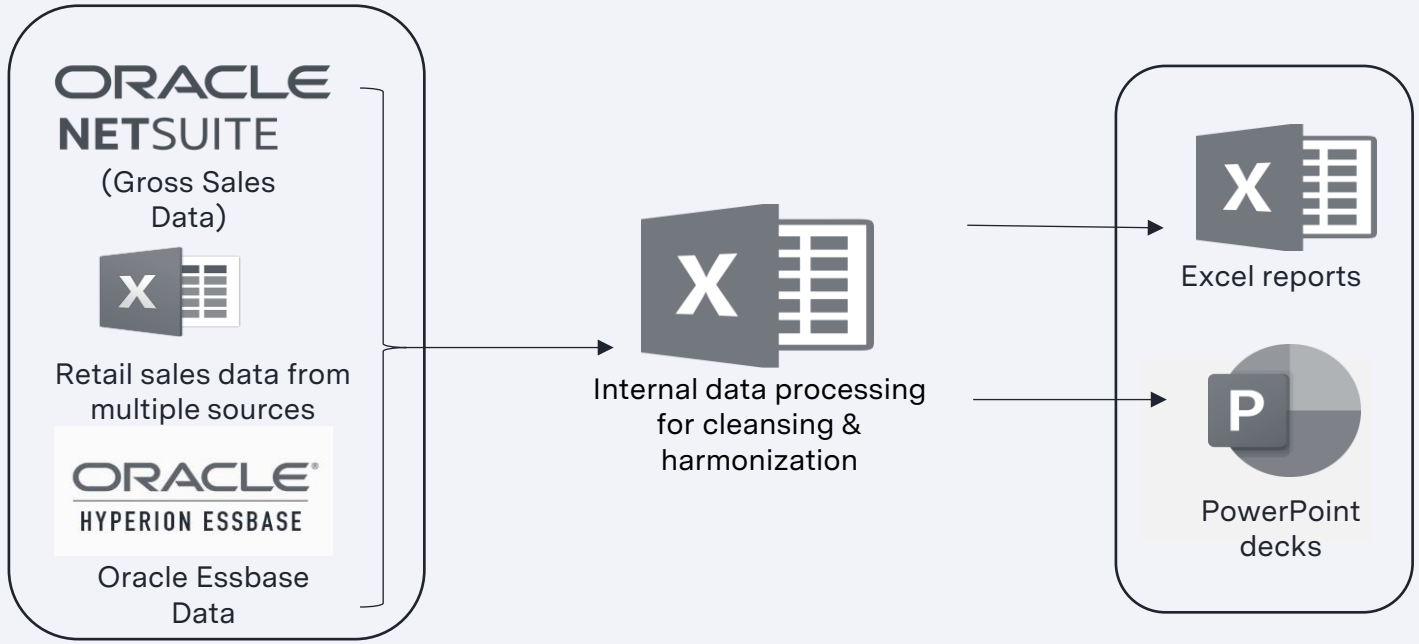
- Advanced Enterprise Datawarehouse enabled the availability of clean, validated and ready-to-use data across the company on near real time basis
- Automated Power BI dashboards provided visibility for the Senior Leadership team into the key performance metrics with consistent and accurate performance KPIs
- Based on assessment, the automated dashboards saved ~100 person-hours per month by eliminating the need to prepare manual Excel reports and PowerPoint presentations

Prior BI architecture

Data Structures

Data Sources

Data Processing and Reporting Layer



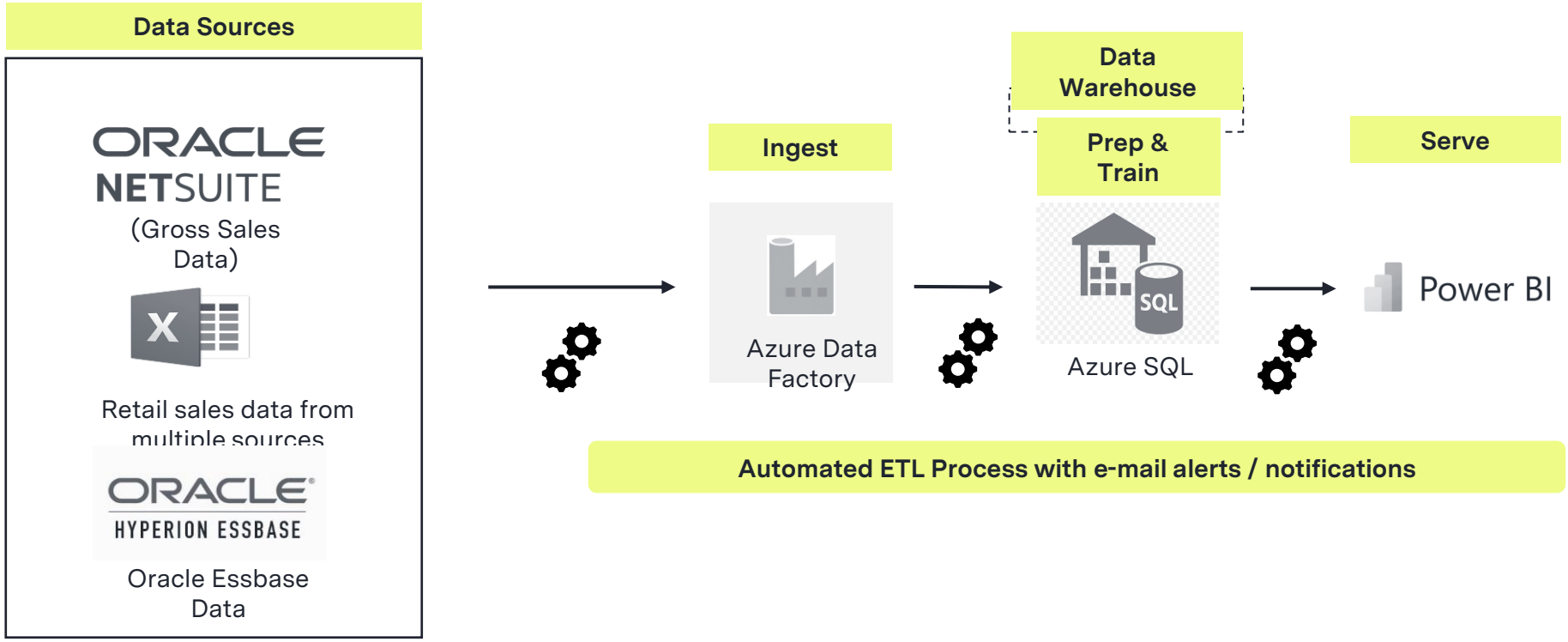
Observations on prior architecture:-

- Extracting data from different sources and processing them through Excel is time consuming and inefficient
- Data sources across various channels, retail partners are different with varying architecture and inconsistent dimensions
- Non-scalable architecture: Cumbersome to add a new data source for any reporting purpose

Data, Reporting and Analytics

- **Lack of central repository** for storing historical data as some reports are directly generated from source systems
- **Ad-hoc reporting** based on needs from various teams
- **Prone to errors** as the data is manually processed and updated in the Excel reports/ PowerPoint decks
- **Lack** of availability of **real-time data**

New reporting flow after BI infrastructure implementation

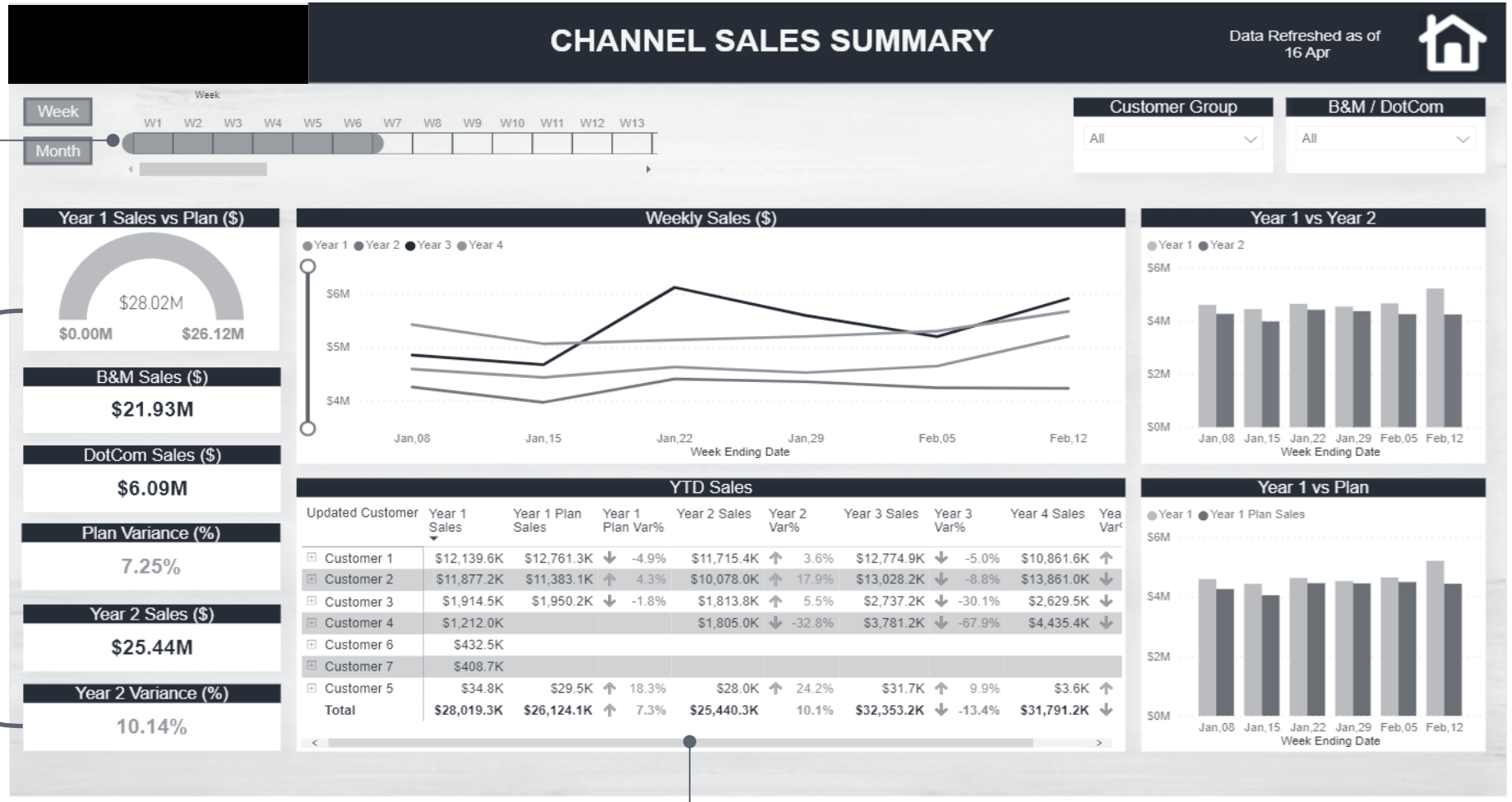


- Built an **Enterprise Datawarehouse** connecting NetSuite, Oracle Essbase and other flat file data sources through data pipelines and transformed raw data as per business requirements
- **Developed an automated ETL process** to load the data into **data warehouse** daily and configured e-mail alerts/notifications to monitor the overall ETL process
- Created **Tabular data models on Azure SQL database** and **developed ready-to-serve data marts for analytical and reporting purposes**.
- **Developed Sales dashboards by channel, product, retail, etc.,** above the data models to monitor and track business performance

Illustrative dashboard – Channel sales

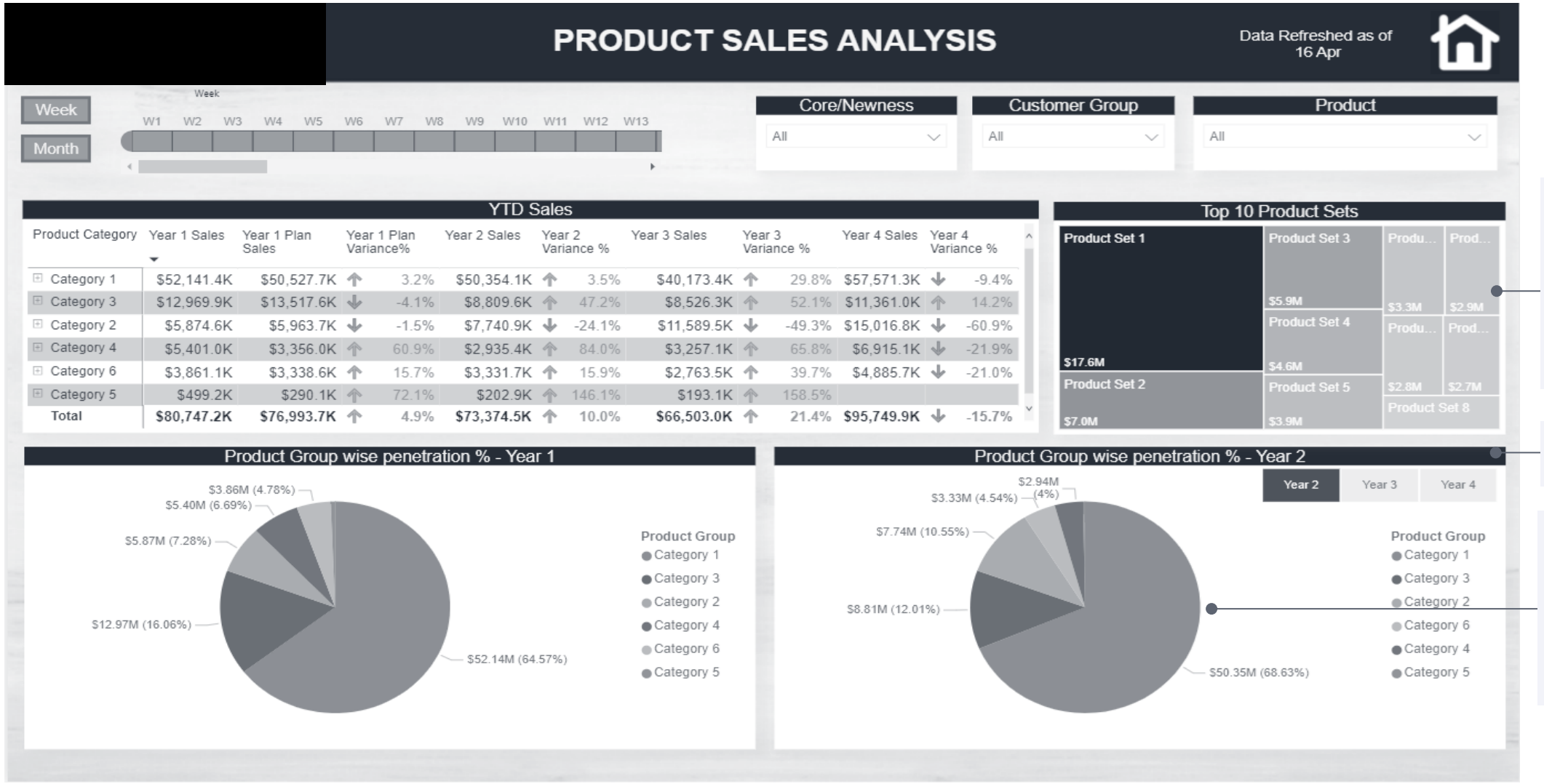
Week/Month slicer to select required Weeks or Months

KPI cards to compare Sales vs. Plan and vs. various years



Matrix table to compare Customer wise sales across various years. The matrix table enables to provide hierarchical view with multiple layers of data

Illustrative dashboard – Product sales

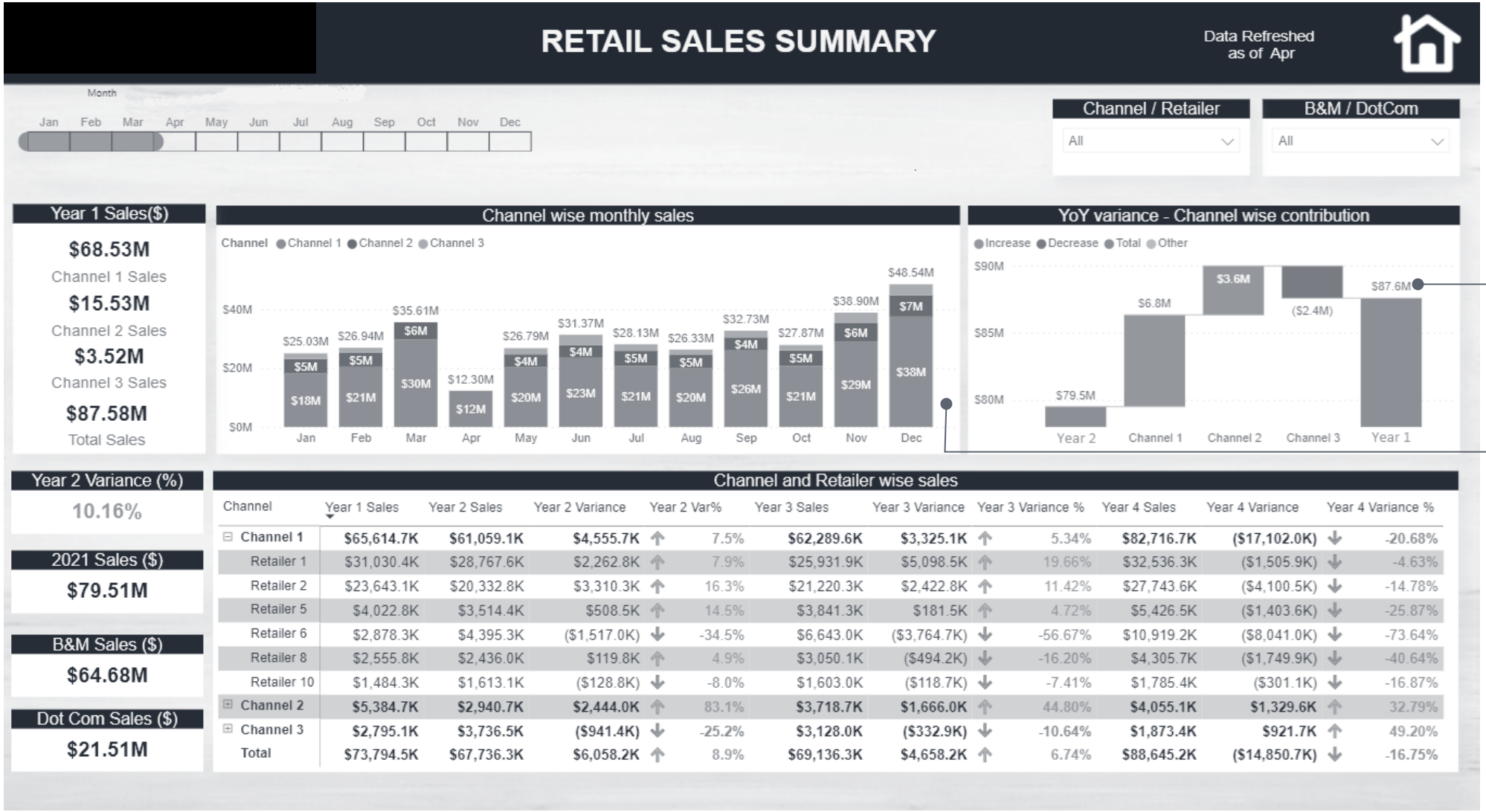


'Tree chart' to view the Top products by sales. The size of the box corresponds to the sales of the product

'Buttons' to select the 'Year'

Pie chart to view product category wise revenue contribution based on the 'Year' selected

Illustrative dashboard – Retail sales

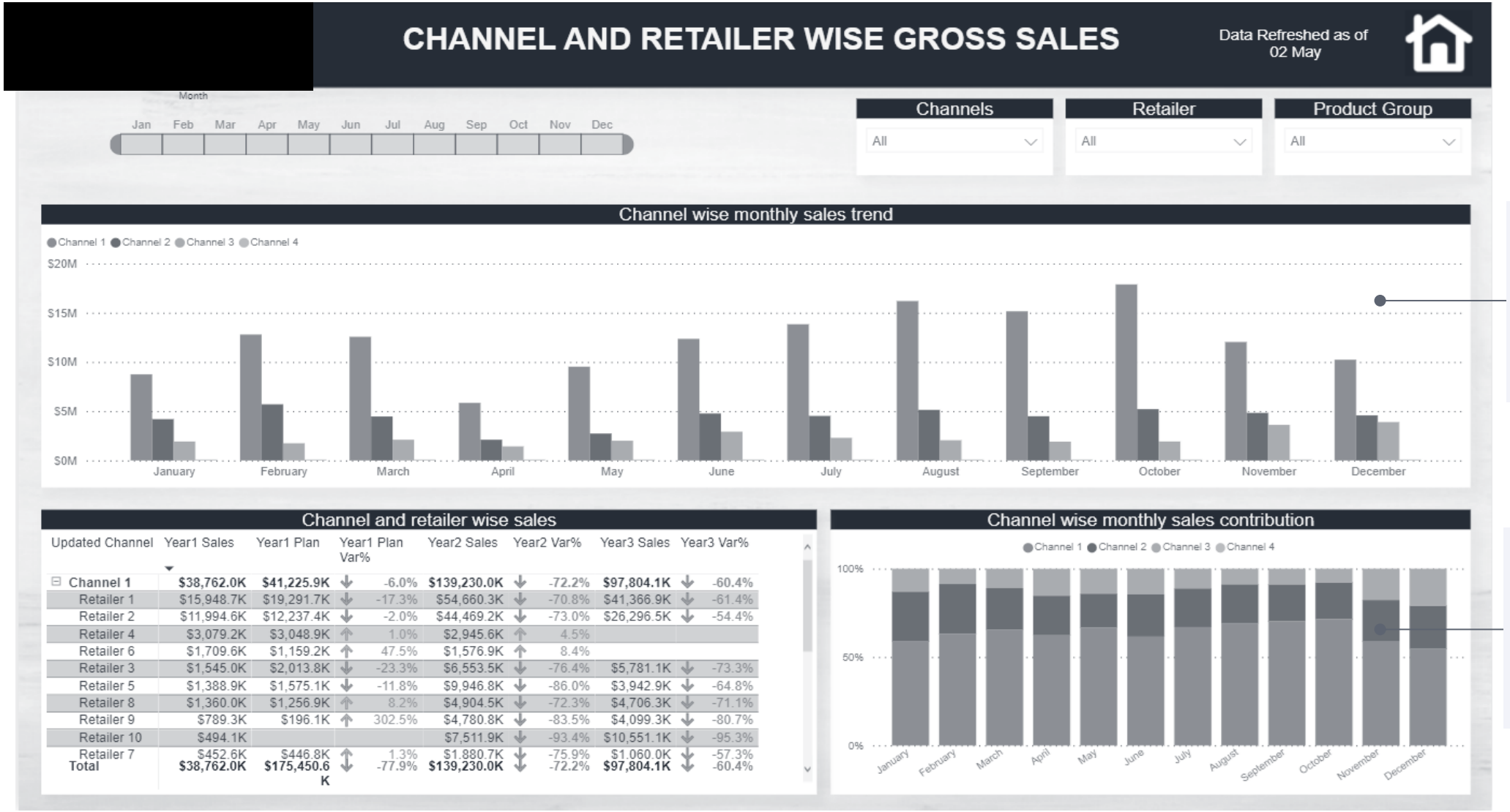


Channel	Year 1 Sales	Year 2 Sales	Year 2 Variance	Year 2 Var%	Year 3 Sales	Year 3 Variance	Year 3 Variance %	Year 4 Sales	Year 4 Variance	Year 4 Variance %
Channel 1	$65,614.7K	$61,059.1K	$4,555.7K	7.5%	$62,289.6K	$3,325.1K	5.34%	$82,716.7K	($17,102.0K)	-20.68%
Retailer 1	$31,030.4K	$28,767.6K	$2,262.8K	7.9%	$25,931.9K	$5,098.5K	19.66%	$32,536.3K	($1,505.9K)	-4.63%
Retailer 2	$23,643.1K	$20,332.8K	$3,310.3K	16.3%	$21,220.3K	$2,422.8K	11.42%	$27,743.6K	($4,100.5K)	-14.78%
Retailer 5	$4,022.8K	$3,514.4K	$508.5K	14.5%	$3,841.3K	$181.5K	4.72%	$5,426.5K	($1,403.6K)	-25.87%
Retailer 6	$2,878.3K	$4,395.3K	($1,517.0K)	-34.5%	$6,643.0K	($3,764.7K)	-56.67%	$10,919.2K	($8,041.0K)	-73.64%
Retailer 8	$2,555.8K	$2,436.0K	$119.8K	4.9%	$3,050.1K	($494.2K)	-16.20%	$4,305.7K	($1,749.9K)	-40.64%
Retailer 10	$1,484.3K	$1,613.1K	($128.8K)	-8.0%	$1,603.0K	($118.7K)	-7.41%	$1,785.4K	($301.1K)	-16.87%
Channel 2	$5,384.7K	$2,940.7K	$2,444.0K	83.1%	$3,718.7K	$1,666.0K	44.80%	$4,055.1K	$1,329.6K	32.79%
Channel 3	$2,795.1K	$3,736.5K	($941.4K)	-25.2%	$3,128.0K	($332.9K)	-10.64%	$1,873.4K	$921.7K	49.20%
Total	$73,794.5K	$67,736.3K	$6,058.2K	8.9%	$69,136.3K	$4,658.2K	6.74%	$88,645.2K	($14,850.7K)	-16.75%

'Water fall chart' to analyze the drivers of YoY variance

'Stacked column chart' to view channel wise monthly sales contribution trend

Illustrative dashboard – Channel & retail sales



'Cluster column chart' to compare Channel wise monthly sales trend

'100% Stacked column chart' to view channel wise monthly sales contribution trend