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Major Research Project Report
on
LEVERAGING POWER BI FOR STRATEGIC INSIGHTS
ACROSS BUSINESS DOMAINS

(Submitted for the partial fulfillment of-the requirements for the award of the degree of Executive Master of Business Administration.)

Submitted By:

Name: Prafful Sharma

Roll No. 23/UEMBA/06

Under the guidance of:

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UNIVERSITY SCHOOL OF MANAGEMENT & ENTREPRENEURSHIP
Delhi Technological University

East Delhi Campus, Vivek Vihar,

Phase 2, Delhi-110095

July 2025

CERTIFICATE

This is to certify that the project report titled “*Leveraging Power BI for Strategic Insights Across Business Domains*” is a record of the project work carried out by Prafful Sharma under the guidance of Dr. Kusum Lata.

This project is for the fulfillment of Executive Masters of Business Administration from University School of Management and Entrepreneurship, Delhi Technological University

Signature of Mentor

DECLARATION

I hereby declare that the project work entitled “*Leveraging Power BI for Strategic Insights Across Business Domains*” submitted to the USME, DTU, is a record of an original work done by me under the guidance of Dr. Kusum Lata, Assistant Professor, DTU and this project work is submitted in the partial fulfillment of the requirements for the award of the degree of Executive Master of Business Administration. The results embodied in this thesis have not been submitted to any other University or Institute for the award of any degree or diploma.

Prafful Sharma

23/UEMBA/06

ACKNOWLEDGEMENT

It is our pleasure to be indebted to various people, who directly or indirectly contributed in the development of this work and who influenced our thinking, behavior, and acts during the course of study.

I express my sincere gratitude to the authorities who gave me an opportunity to take this project.

I am highly intended and extremely thankful to Dr. Kusum Lata for her support, cooperation, guidance and suggestions that helped me in completing this project.

Prafful Sharma

23/UEMBA/06

ABSTRACT

In an increasingly globalized and data-driven business environment, multinational consumer electronics companies must leverage advanced analytical tools to optimize performance across diverse operational domains. This major research project explores the use of Microsoft Power BI to evaluate key business functions—such as sales, supply chain, product performance, regional market trends, and customer support—within a consumer goods electronics company operating across multiple countries.

The study involves the comprehensive integration and transformation of large-scale operational data into interactive, domain-specific dashboards. Power BI's powerful data modeling capabilities, including DAX (Data Analysis Expressions), dynamic filtering, and real-time visualizations, are utilized to derive actionable insights. These dashboards enable stakeholders to monitor performance indicators such as revenue growth, product category performance, regional sales distribution, inventory efficiency, and customer satisfaction metrics.

The objective of the research is to assess the effectiveness of Power BI in enhancing business intelligence and supporting strategic decision-making in a complex, multinational environment. The findings highlight how Power BI facilitates timely and data-informed decisions by presenting critical business metrics through visually intuitive dashboards. This study affirms the role of Power BI as a transformative tool for improving transparency, operational efficiency, and competitive advantage in the global consumer electronics sector.

Keywords: Consumer Electronics, Business Intelligence, Power BI, Global Operations, Sales Analytics, Supply Chain Performance, Product Performance, DAX, Dashboard Reporting, Strategic Decision-Making, OLAP, OLTP.

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LIST OF ABBREVIATIONS

Abbreviation	Full Form
GM%	Gross Margin Percentage
NP%	Net Profit Percentage
NS	Net Sales
PC	Personal Computer
OOS	Out of Stock
EI	Excess Inventory
FY	Fiscal Year
KPI	Key Performance Indicator
SE	South East
NA	North America
NE	North East
LATAM	Latin America
AI	Artificial Intelligence
BI	Business Intelligence
SQL	Structured Query Language
DAX	Data Analysis Expressions
PBI	Power BI
OLAP	Online Analytical Processing
PM	Project Management
ETL	Extract, Transform, Load

INTRODUCTION

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Atliq Hardware is **one of the fastest-growing companies in the** global consumer electronics market, known for its innovation, affordability, and expansive distribution network. Specializing in the manufacturing and distribution of essential electronic hardware such as PC mice, keyboards, printers, webcams, and related accessories, Atliq Hardware has rapidly expanded its footprint across multiple countries.

The company follows an integrated business model that spans from **in-house manufacturing** to **global distribution**. All products are developed in Atliq's state-of-the-art manufacturing facilities and then transported to **regional warehouses** and **distribution centers**. From there, they are shipped through various customer-facing sales channels, each tailored to suit different markets and consumer preferences.

Atliq Hardware sells its products through multiple **sales and distribution channels**, including:

- **Brick-and-Mortar Retailers:** Physical stores such as **Croma**, **Best Buy**, and **Staples**, where customers can purchase Atliq products directly.
- **E-commerce Platforms:** Online marketplaces like **Amazon** and **Flipkart**, allowing for wide digital reach and convenience.
- **Distributors:** In select countries, Atliq partners with local **distributors** who handle bulk purchases and redistribution to retailers or wholesalers.
- **Direct-to-Consumer (D2C) Channels:**
 - **Atliq E-Store:** The official online platform for purchasing Atliq products directly.
 - **Atliq Exclusive:** Brand-exclusive outlets offering premium experiences and direct customer engagement.



This **multi-channel approach** ensures that Atliq Hardware can serve a diverse set of customers efficiently, while also maintaining flexibility to adapt to changing consumer behaviors and regional market dynamics. The company's ability to optimize its supply chain and leverage both traditional and digital retail ecosystems **has played a pivotal role in** its rapid growth **and** competitive positioning in **the** electronics market.



With operations spread across several countries, Atliq Hardware is committed to using **data-driven strategies** for monitoring its domain-specific performance — from **sales trends and supply chain efficiency** to **channel-wise profitability** and **regional demand forecasting**. This research project utilizes **Microsoft Power BI** to analyze these domains and visually present insights that support strategic decision-making.



PROBLEM STATEMENT

Atliq Hardware, a rapidly expanding consumer electronics company with operations across multiple countries, currently relies heavily on Microsoft Excel for its data storage, reporting, and analytical needs. While Excel has served as a foundational tool for basic data management, it has become increasingly inadequate for handling the scale, complexity, and speed required in the company's growing business environment.

The use of static and disconnected Excel files has made data consolidation across departments time-consuming, error-prone, and difficult to maintain. More critically, the current analytical process lacks interactivity, real-time capabilities, and the ability to generate deep business insights. This limitation has directly impacted strategic decision-making, leading to delayed responses, inefficiencies, and missed opportunities.

A recent and significant example of this analytical gap occurred in the Latin American market, where the lack of timely and comprehensive data visibility led to operational misjudgements, ultimately resulting in a major financial loss for the company. This event highlighted the urgent need for a more robust, scalable, and intelligent analytics infrastructure.

Recognizing these challenges, senior executives at Atliq Hardware have approved the initiation of a company-wide data analytics project. A dedicated team has been formed with the objective of modernizing the analytics framework by leveraging advanced business intelligence tools. The goal is to improve data accessibility, enable real-time reporting, support proactive decision-making, and mitigate risks associated with poor data visibility.

PROJECT PLANNING AND SCOPING

The initiation of Atliq Hardware's data analytics transformation began with an internal communication from the **Product Owner** to the **Director of Data Analytics**, signalling the need for a strategic overhaul in how business performance is measured and reported. The Product Owner, representing key business stakeholders, outlined the initial requirements for **five critical dashboards** to be developed using Microsoft Power BI. The email also emphasized the CEO's personal interest in the success of the project, indicating its high strategic importance to the organization's future.

Attached to the email was an Excel document containing high-level descriptions of the expected features, KPIs, and business domains to be covered by the dashboards. These included areas such as sales performance, inventory trends, regional analysis, distributor channel performance, and customer insights. This marked the informal but essential beginning of the **requirements gathering phase**.

Recognizing the significance and complexity of the project, the Data Analytics Director promptly assembled a specialized team comprising a **Senior Data Analyst** and a **Junior Data Analyst**. The team was tasked with converting the loosely defined requirements into a structured analytics solution that would be scalable, insightful, and interactive.

Before the official **project kick-off meeting** with the Product Owner, the analytics team conducted internal discussions to align on expectations, understand the business context, and define preliminary roles and responsibilities. As a best practice, they prepared a **Project Charter**, a foundational document that outlined the project objectives, scope, key stakeholders, timeline estimates, assumptions, constraints, and success criteria.

The charter served as a communication tool to ensure that both business stakeholders and technical contributors shared a common understanding of the project goals. It also helped define the **scope boundaries**—clarifying what would be included in the initial phase (the five dashboards) and what could be deferred to future enhancements.

The **project charter and the upcoming meetings** with the Product Owner laid the groundwork for a structured, agile approach to building Atliq Hardware's first enterprise-level Power BI reporting system—an initiative expected to significantly improve data visibility, operational efficiency, and business decision-making at a global scale.

	A	B	C	D
1	Features	Description	Comments	
2	Finance View	Show Profit and loss statement to understand financial performance across Markets, Products, Customers etc.	Regular or customized?	
3	Sales View	Show Top / Bottom Customers along with Key Metrics. A matrix would be preferable to understand their performance	X, Y Axis?	
4	Marketing View	Same as Sales view but for Products		
5	Supply Chain	Reliability, Forecast Accuracy in a view to understand SC Performance	Rel. data not available	
6	Executive View	Integrated view of key insights for executives. (More details TBD)	More Info?	
7				
8				
9				
10				
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12				
13				
14				

Figure 1: 5 critical dashboard requirements

3 skills that we need to learn out of the project kick-off meeting,

Being proactive

Expectation management

Project management skills



Figure 2: Project Charter

POWER BI BASICS

4

Data warehouse

A data warehouse is a system that aggregates data from multiple sources into a single, central and consistent data store. Data warehouses help prepare data for data analytics, business intelligence (BI), data mining, machine learning (ML) and artificial intelligence (AI) initiatives.

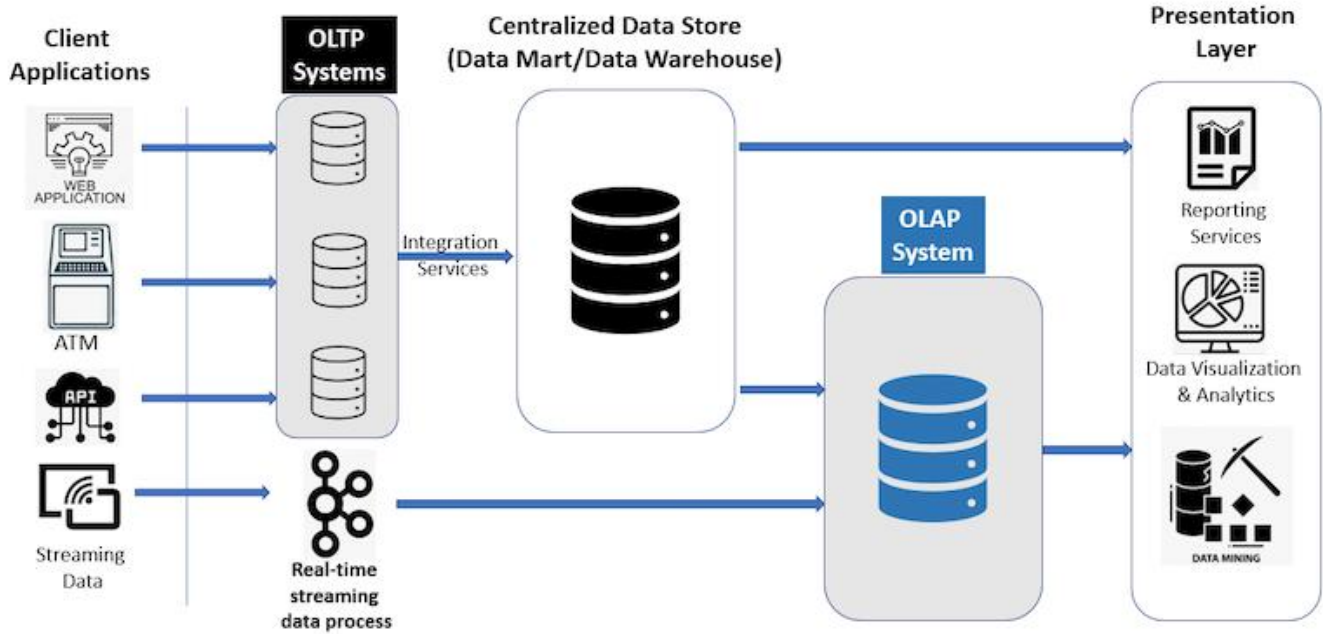


Figure 3: Data warehouse

OLAP vs OLTP

Online Analytical Processing (OLAP) is a system used to quickly analyze large volumes of data, often stored in a data warehouse or data mart. It helps businesses understand patterns, trends, and insights from their data. OLAP is mainly used for tasks like financial reporting, budgeting, sales forecasting, and business planning. It is especially useful for data mining and business intelligence, allowing decision-makers and analysts to perform complex calculations and gain valuable insights from multi-dimensional data.

Online Transactional Processing (OLTP), on the other hand, is designed for handling day-to-day transactions in real time, usually over the internet. It is the system behind common activities like ATM withdrawals, online purchases, hotel bookings, password changes, and text messages. OLTP systems are built to support many users at the same time, processing large numbers of small transactions quickly and efficiently.



Note: In some cases, data architecture designs consider OLAP engine is part of Data Warehouse, in some cases one of Data Warehouse layer serves the need of OLAP engine.

Figure 4: OLAP vs OLTP

6

Data Catalog

A data catalog is a detailed inventory of all data assets in an organization, designed to help data professionals quickly find the most appropriate data for any analytical or business purpose.

DB Server	TableName	Description
GDB041	FactForecastMonthly	Contains historical forecast, current forecast at monthly
GDB041	FactSalesMonthly	Contains sales up to date at Monthly level
GDB013	Regional Forecast	Forecast at different levels of granularity as per region
GDB014	Regional Sales	Sales at different levels of granularity as per region
GDB056	ManufacturingCost	Currency in USD, data at fiscal year level
GDB056	PostInvoiceDeductions	Currency in USD, data at monthly level
GDB017	Regional Cost & Deductions	Local Currency
GDB056	PreInvoiceDeductions	Currency in USD, data at fiscal year level
GDB019	RegionalMarkUpCost	Local Currency
GDB020	RegionalOperatingExpenses	Local Currency
GDB041	DimCustomer, DimProduct, DimMarket	
GDB022	Regional Freight	Local Currency
GDB056	FreightCost	Freight' and 'other costs' is % of Net Sales
GDB024	DailySales	Contains sales at daily level
GDB056	GrossPrice	Currency in USD, data at fiscal year level

Figure 5: Data catalog for Atliq hardware tables

1

What is a Dimension Table?

In a data warehouse, a Dimension table is a structure that categorizes facts and measures in order to enable users to answer business questions. Dimensions are descriptive and define the characteristics of a business object. They provide context to facts — as they hold the fields which are descriptive, qualitative and textual.

Let's take a simple example of an e-commerce business. In this case, some dimensions could be Customers, Products, and Time.

- The Customer dimension may have attributes like CustomerID, Name, Email, and Address.
- The Product dimension may have ProductID, Name, Category, and Price.
- The Time dimension may have Date, Month, Quarter, and Year.

What is a Fact Table?

Contrary to the descriptive nature of Dimension tables, a Fact table is a primary table in a dimensional model. A Fact table contains the quantifiable data for analysis — the numerical measures (often additive) of the business processes. The Fact table also has foreign keys which refer to candidate keys in the Dimension tables.

1

Dimension and Fact tables are critical elements of a data warehouse, serving as the structure for data analysis and decision-making. While Dimension tables provide the descriptive context, Fact tables store the measurable transactions. Together, they empower businesses to answer complex questions, track changes over time, and make data-driven decisions.

Understanding these concepts is the first step to effectively using data warehousing to leverage your business data. As more businesses rely on data analysis for decision making, a strong foundation in these principles can provide a significant edge in the business world.

2

Star Schema

Star schema is a mature modeling approach widely adopted by relational data warehouses. It requires modelers to classify their model tables as either dimension or fact.

15

- Dimension tables enable *filtering* and *grouping*.
- Fact tables enable *summarization*.

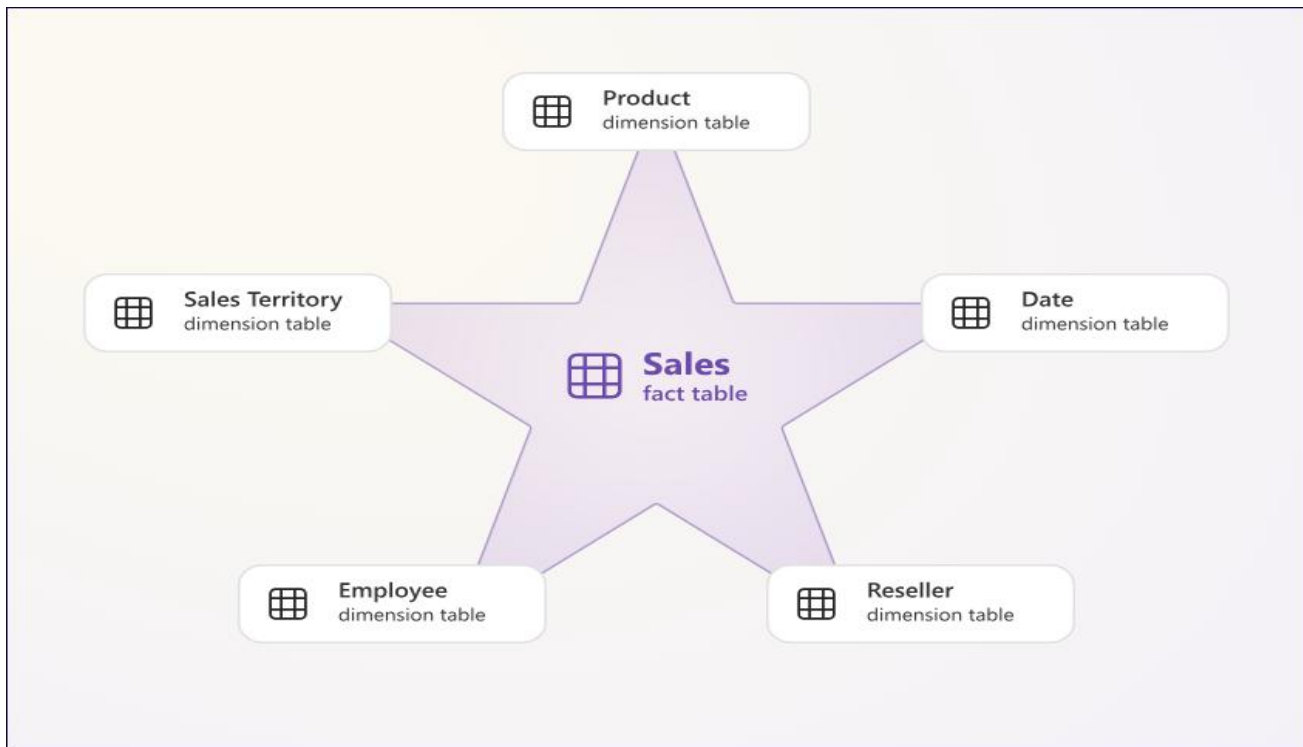


Figure 6: Star Schema

Data transformation in Power Query

Table	Transformation Applied
Sales	- Removed null rows- Renamed columns- Changed data types (e.g., date, decimal)- Split SalesDateTime into Date and Time
Product	- Filtered active products only- Trimmed whitespace from product names- Merged category/subcategory columns
Customer	- Removed duplicates- Standardized city and country names (Proper Case)- Extracted customer type
DateTable	- Created using M function for a continuous calendar- Marked as Date Table in Power BI

5

DAX

Data Analysis Expressions (DAX) is a library of functions and operators that can be combined to build formulas and expressions in Power BI, Analysis Services, and Power Pivot in Excel data models.

Some major DAX function used in this project are Sum, SumX Distinct, Calculate, HasOneValue, Related, Switch, Divide, Filter etc.

Relationships between the tables

Establishing relationships is fundamental to integrating and analyzing data from multiple tables within Power BI. These relationships enable users to build accurate data models, perform cross-table analysis, and generate meaningful insights through reports and dashboards.

Power BI supports **four types of table relationships**:

3

1. **One-to-One (1:1)**

Each record in one table is uniquely related to a single record in another table, and vice versa. This relationship type is used when both tables share a unique key column.

3

2. **One-to-Many (1:*)**

A single record in the primary table corresponds to multiple records in the related table. This is the most common relationship type, often used between dimension tables (e.g., Product) and fact tables (e.g., Sales).

3

3. **Many-to-One (*:1)**

Multiple records in one table relate back to a single record in another table. Functionally similar to One-to-Many, this is often viewed from the perspective of the fact table referencing a dimension.

4. **Many-to-Many (:)**

Records in both tables can relate to multiple records in the other. This type is useful in complex scenarios where no unique key exists in either table. Power BI handles such relationships through composite modeling features.

Homepage Overview



Figure 7: Homepage

The home page of the Business Analysis Power BI Report is designed as a user-friendly navigation panel that links to different dashboards across various business domains. Instead of scrolling through multiple pages, users can simply click on icons representing the area they want to explore. These icons act as bookmarks and make it easy to move around the report.

The homepage includes seven key sections:

1. **Info** – This section contains a user manual or guide that helps new users understand the report and how to use it effectively.
2. **Finance View** – Provides access to detailed profit and loss data. Users can analyze financial performance based on different filters like customers, products, and countries. It also allows for comparing time periods.
3. **Sales View** – Focuses on customer performance using KPIs such as Net Sales and Gross Margin. It includes a profitability and growth matrix to help identify strong and weak performers.

4. **Marketing View** – Highlights product performance across marketing metrics. Similar to the sales view, it includes a profitability and growth matrix for better decision-making.
5. **Supply Chain View** – Offers data on forecast accuracy, net error, and risk analysis. Users can break down the information by product, segment, or category.
6. **Executive View** – Designed for top-level management, this dashboard combines high-level insights from all departments to support quick strategic decisions.
7. **Support** – A quick link to contact the support team for any technical or usage-related issues with the dashboard.

Other details:

- All financial values are shown in millions (USD).
- The sales data is up to date till **December 2021**.
- At the bottom right corner, the report mentions it is created by **Prafful Sharma**.

This homepage layout improves overall user experience by making navigation simple, efficient, and structured around business functions.

FINANCE VIEW

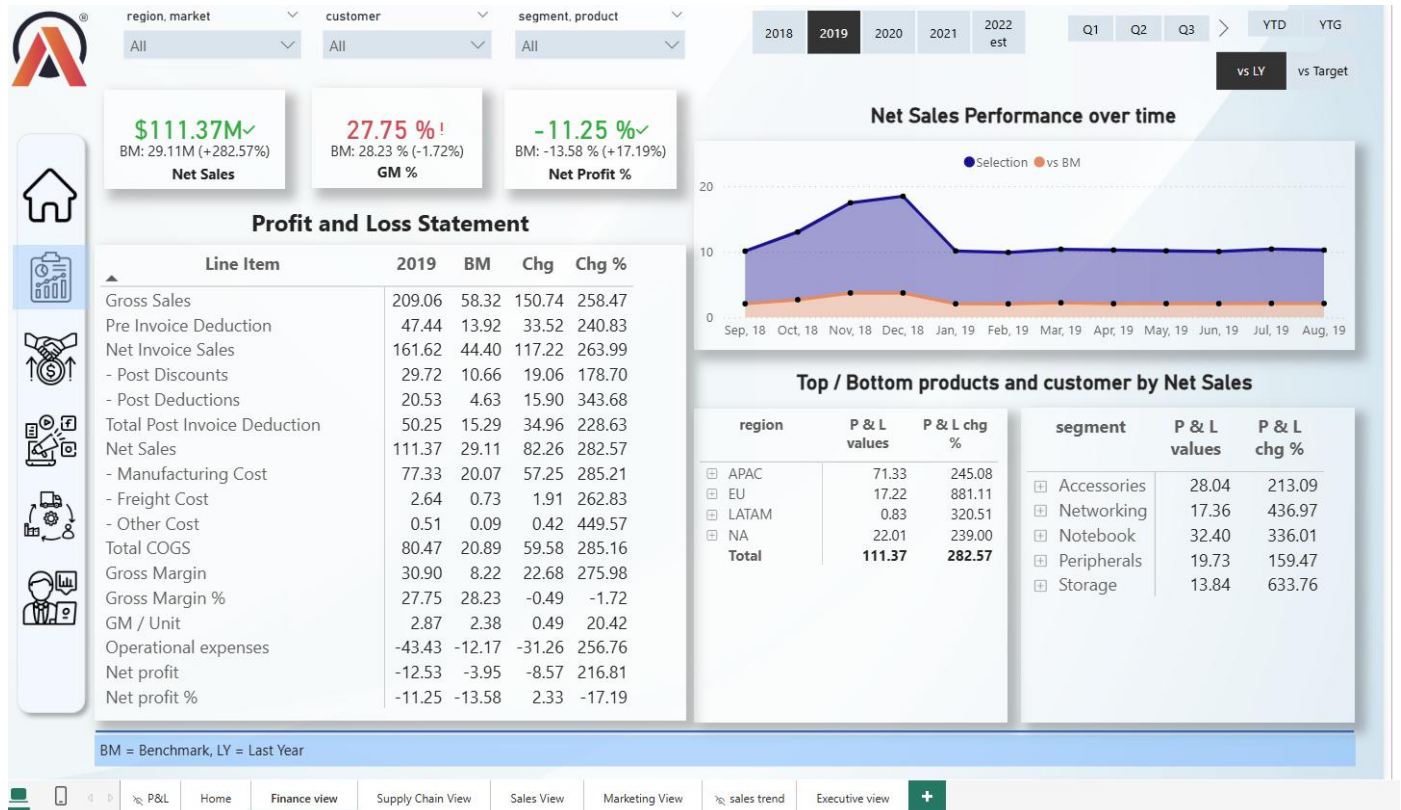


Figure 8: Finance View

The **Finance View** section of the **Power BI dashboard** offers a detailed snapshot of the company's financial performance, focusing on the most essential metrics like Net Sales, Gross Margin %, and Net Profit %. At the top, users can apply filters to analyze specific data by region, customer, segment, product, or market.

Key Metrics

At a glance, three KPI cards are displayed showing:

- **Net Sales** – indicating a significant increase compared to the benchmark, with a growth of over 280%.
- **Gross Margin %** – though slightly below the benchmark, it shows that product profitability is generally stable.
- **Net Profit %** – although still negative, it has improved from the benchmark, suggesting reduced losses.

These KPIs help in quickly assessing the financial health of the business.

Profit & Loss Breakdown

A detailed **P&L statement** is included, comparing values from the selected year (2019) against the benchmark. It covers:

- Gross and Net Sales
- Total Deductions and Operating Costs
- Operating Income and Profit/Loss

The table also calculates the percentage change, making it easier to see where performance has improved or declined.



Figure 9: Finance Terms

Sales Trend Over Time

A line and area chart tracks **Net Sales** across a 12-month period. It visually compares actual performance against the benchmark, highlighting fluctuations and growth trends month by month.

Top & Bottom Performers

Two tables provide insight into:

- **Regional Performance** – EU stands out with the highest sales growth, while LATAM is underperforming.
- **Product Categories** – Storage and Networking are the top performers in terms of profitability and sales increase.

This view gives finance teams and decision-makers a clear picture of what's working, what's not, and where they need to dig deeper. It brings together key numbers and visuals to support better

SUPPLY CHAIN VIEW

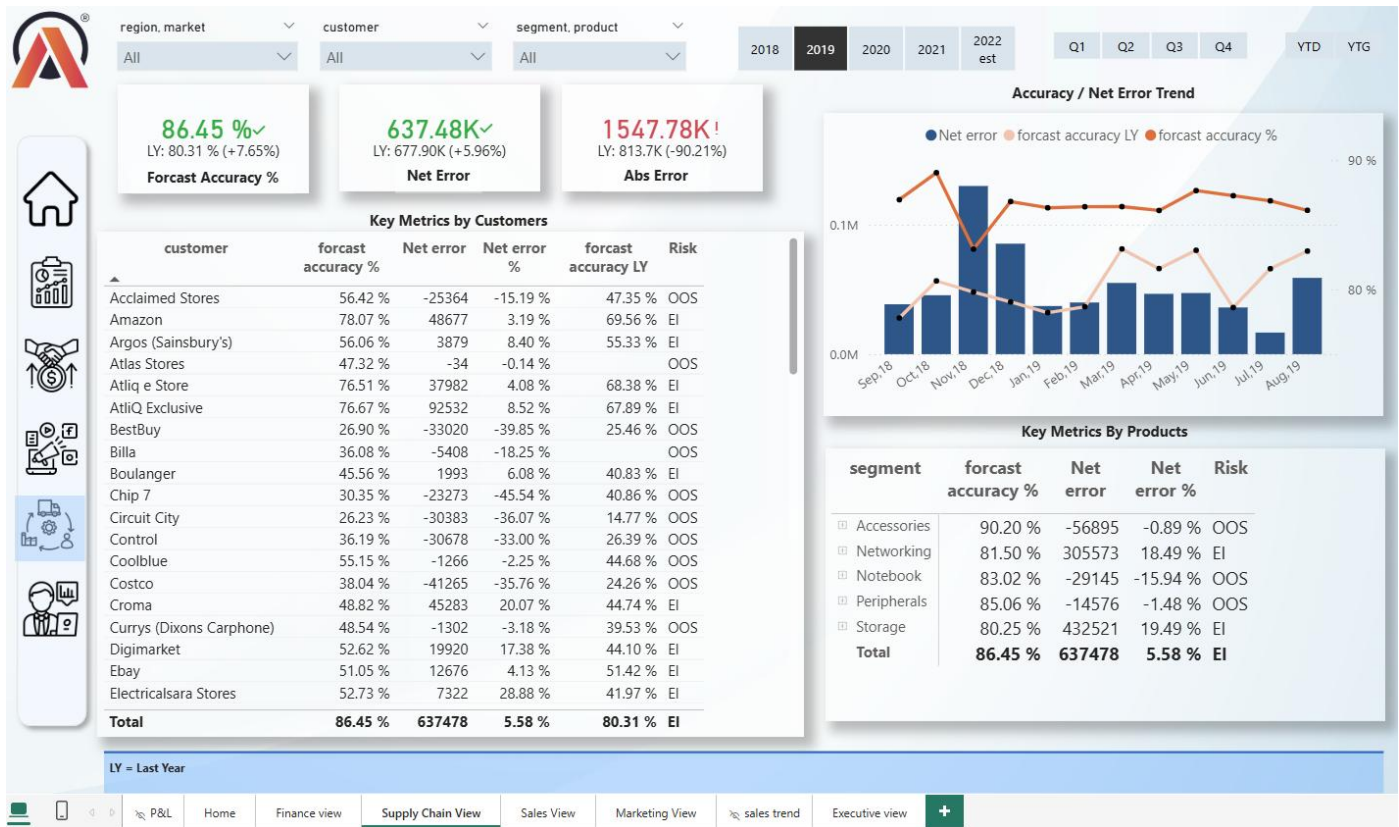


Figure 10: Supply Chain View

The **Supply Chain View** provides a focused look into forecast accuracy and demand planning efficiency across customers and product segments. It helps identify where forecast errors are happening and which areas carry risk to inventory planning or service levels.

Key Performance Indicators

Three summary cards at the top give quick insight into:

- **Forecast Accuracy %** – Overall accuracy stands at **86.45%**, an improvement from last year's 80.31%.
- **Net Error** – Shows the difference between forecasted and actual sales. The current error is **637.48K**, slightly lower than last year.
- **Absolute Error** – Currently at **1547.78K**, indicating some variability, though improved compared to last year.

Customer-Level Metrics

A detailed table lists:

- **Forecast accuracy** per customer
- **Net error** and **Net error %**
- **Risk classification** – either **OOS** (Out of Stock) or **EI** (Excess Inventory)

This allows planners to pinpoint which customers had large deviations in forecast and what kind of supply risk they pose. For example, BestBuy and Chip 7 show very poor accuracy with out-of-stock risk, while Atliq eStore and Amazon are performing better with minimal error.

Trend Chart

The line and bar chart on the right tracks **forecast accuracy and net error** over time (monthly). This helps visualize seasonal impacts or periods with high forecasting deviation.

Segment-Level Metrics

Another table breaks down performance by **product segment**:

- **Accessories and Peripherals** are top performers with accuracy above 85%.
- **Networking and Storage** show higher error percentages and are flagged for Excess Inventory risks.

This view is essential for the supply chain and planning teams, as it highlights which areas require adjustment in forecasting models or operational responses to reduce stockouts and overstock.

SALES VIEW

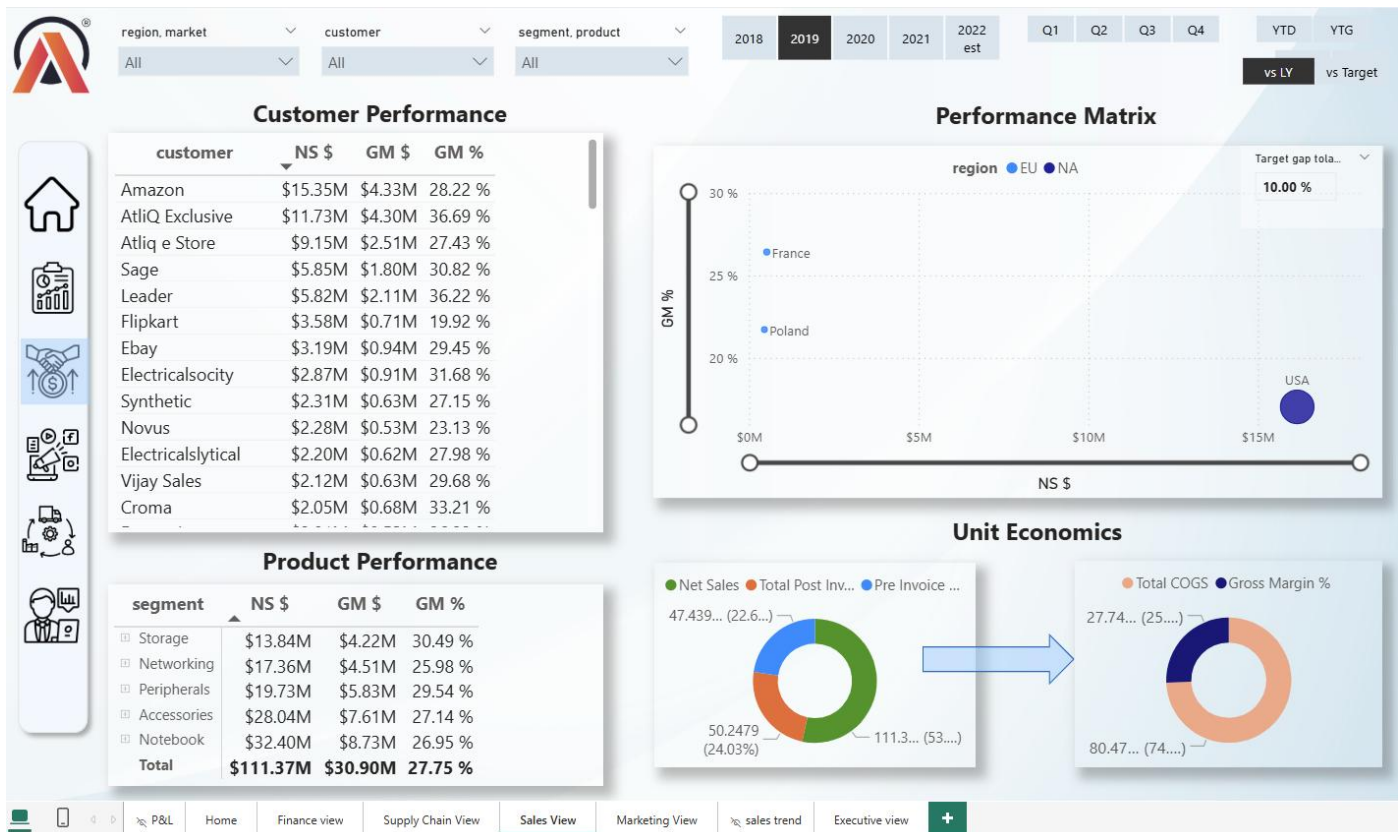


Figure 11: Sales View

The **Sales View** provides a comprehensive snapshot of customer and product performance, regional trends, and unit economics. This view is designed to help business teams assess profitability, sales distribution, and margin performance across various dimensions.

Customer Performance Table

The **Customer Performance** section lists the top customers based on:

- **Net Sales (NS \$)**
- **Gross Margin (GM \$)**
- **Gross Margin % (GM %)**

This data helps identify which customers bring in the highest revenue and margins. For instance, **Amazon** leads in net sales, while **Croma** and **Electrical society** have higher gross margins, indicating more profitable relationships despite lower volume.

Product Performance Table

This section breaks down performance by **product segments** such as Storage, Networking, Peripherals, Accessories, and Notebook. Each is evaluated on:

- Net Sales
- Gross Margin
- Gross Margin %

Notebook is the highest-selling product, but **Storage** has the highest gross margin percentage at 30.49%, highlighting its profitability. This analysis helps guide marketing, production, and pricing strategies.

Performance Matrix (Bubble Chart)

This scatter plot visualizes the performance of regions based on:

- Net Sales (X-axis)
- Gross Margin % (Y-axis)
- Bubble size representing market weight

For example, **USA** stands out with the largest bubble, highest net sales, and competitive gross margin. **France** and **Poland**, on the other hand, show lower margins and sales, suggesting potential areas for growth or strategic focus.

Unit Economics (Donut Charts)

This section breaks down cost and margin components into visual donuts:

- The **left donut chart** shows the contribution of Net Sales, Pre-Invoice, and Post-Invoice Deductions.
- The **right donut chart** represents **Total Cost of Goods Sold (COGS)** vs **Gross Margin**.

Together, these charts give a quick view of how much value is retained after deductions and production costs. It's a key decision-making tool for understanding profitability drivers at a unit level.

Overall, the Sales View helps senior leaders and product teams quickly identify top-performing customers and products, regional strengths and gaps, and how effectively the business is turning revenue into profit.

MARKETING VIEW

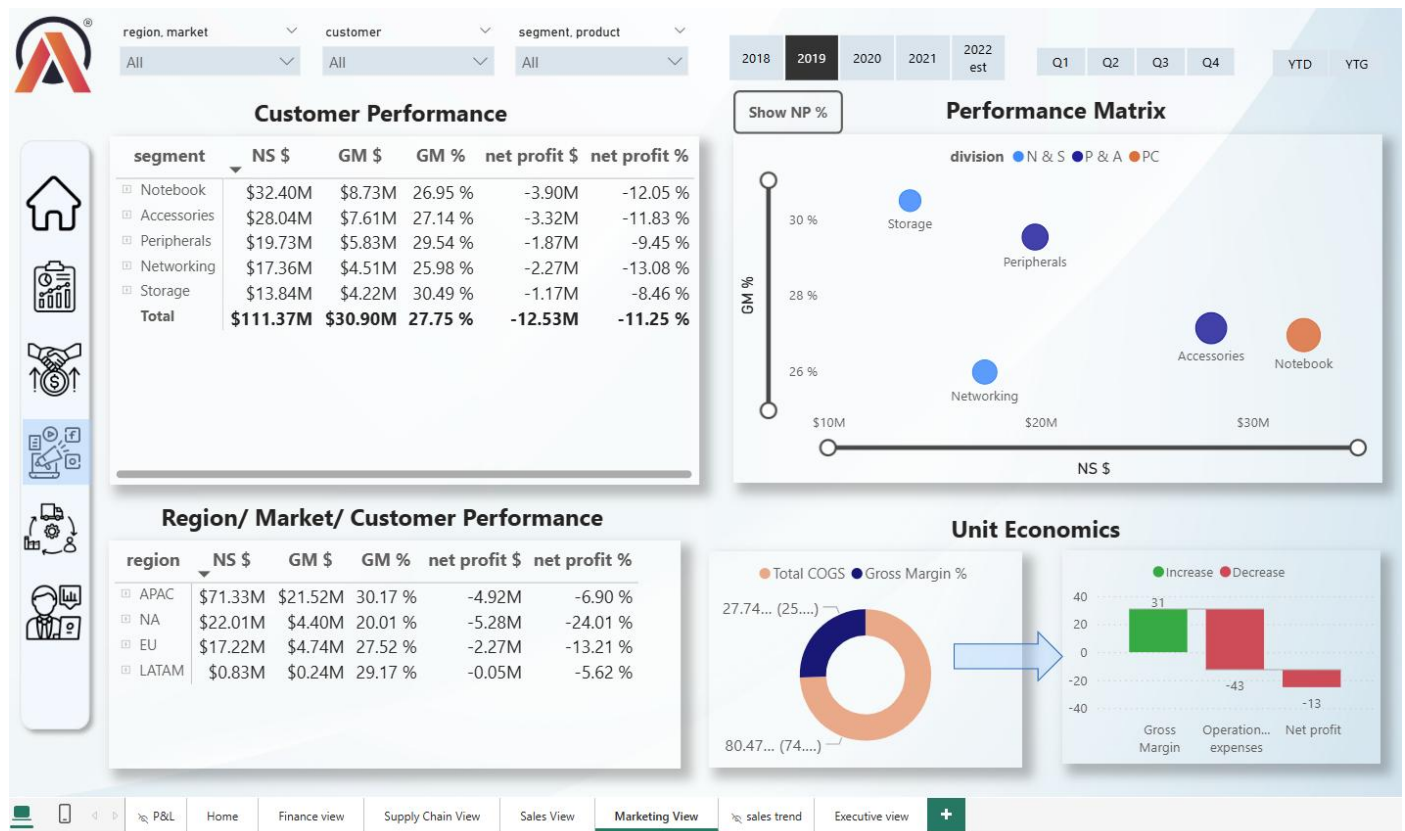


Figure 12: Marketing View

The Marketing View dashboard gives a detailed look into how different product categories and regions are performing from a sales and profitability perspective.

Product Segment Analysis

The table on the top-left lists five major product segments and their financial performance. While **Notebook** has the highest sales (around \$32 million), it also has the biggest net loss, over \$3.9 million. On the other hand, **Storage** shows a much healthier profit margin of over 30%, even though its overall sales are lower.

Overall, the business seems to be running at a net loss of around \$12.5 million, with an average net profit margin in the negative. This suggests that some high-selling products may not be priced well enough to cover costs or that operational costs are too high.

Bubble Chart – Sales vs. Margin

The chart on the right side uses bubbles to compare net sales and gross margins for each product category. Products like **Storage** and **Peripherals** are doing well in terms of margins, while **Notebook** and **Accessories**, although generating more sales, are pulling down profits.

This visual helps quickly spot which segments are worth focusing on and which ones may need a review.

Regional Performance

The lower-left section highlights how each region is contributing. **APAC** stands out with the highest sales and a decent margin, but still ends up with a net loss. **North America** is struggling the most, with both low margins and a large net loss. Interestingly, **LATAM**, despite being smaller in volume, is close to breakeven.

This part of the dashboard can help decide which regions need more attention or a change in strategy.

Unit-Level Breakdown

The two smaller charts show how much money is being made after covering the cost of goods sold, and where the rest of the money is going. One chart shows the gross margin percentage (~28%), and the other breaks down how gross profit is reduced by operating expenses, leading to a final net loss.

It clearly shows that even if products are profitable at the unit level, overall company profitability is being hit by high running costs.

EXECUTIVE VIEW

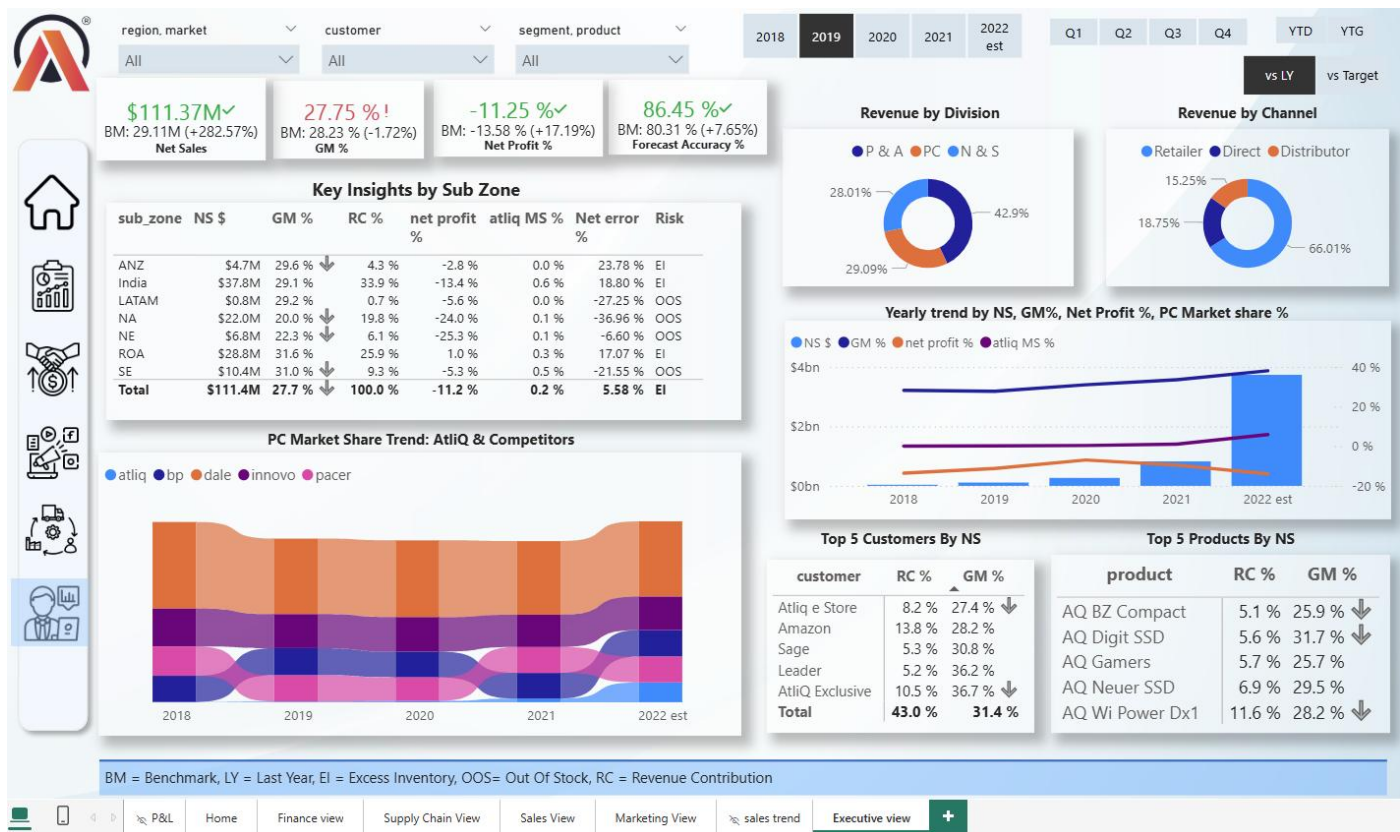


Figure 13: Executive View

The Executive View dashboard gives a high-level overview of company performance, helping leadership make fast, informed decisions. It pulls together multiple key metrics and trends across sales, profitability, market share, and forecast accuracy—all in one place.

Top Metrics Overview

At the top, four key indicators summarize business health:

- **Net Sales:** \$111.37M, significantly up from the benchmark.
- **Gross Margin %:** 27.75%, which has slightly dipped.
- **Net Profit %:** Currently at -11.25%, though it's an improvement from last year's -13.58%.
- **Forecast Accuracy:** At 86.45%, suggesting strong alignment between forecast and actual results.

These figures offer a quick sense of how the business is tracking against its goals.

Performance by Sub-Zone

The table in the center breaks down sales and profitability by sub-region. **India** leads in revenue (\$37.8M), but its net profit is still negative (-1.3%). **NA** and **NE** regions are showing heavier losses, with **NA** contributing 19.8% to revenue but showing a -24% net profit. The **SE** and **LATAM** zones are also underperforming in terms of profitability. The “Risk” column flags issues like **Excess Inventory (EI)** and **Out Of Stock (OOS)** conditions that need to be addressed.

Revenue by Division & Channel

Two donut charts highlight how sales are split:

- By division: **42.9%** of sales are coming from the **N & S** (Notebook & Storage) segment.
- By channel: Most sales (**66.01%**) are through **Distributors**, with **Direct** and **Retailers** contributing less.

This kind of split is crucial for planning resource allocation and understanding which parts of the business are performing best.

PC Market Share & Yearly Trends

The stacked area chart titled **PC Market Share Trend** compares AtilQ’s performance against competitors over five years. AtilQ has slowly gained market share, especially in the last two years, while others like Innovo and Pacer are shrinking.

The line and bar chart below it shows how **Net Sales**, **Gross Margin**, and **Net Profit** have changed over time. Sales have grown sharply in 2022, but margins and profits haven’t improved at the same pace. It’s a classic case of top-line growth not fully translating to bottom-line gains.

Top Customers and Products

At the bottom, two tables show who’s driving the business:

- **Top 5 Customers** include **Amazon**, **Sage**, and **Leader**. Interestingly, **Leader** offers the highest gross margin (36.2%) among them.
- **Top 5 Products** show a fairly balanced performance, with GM% hovering between 25–32%. However, all products show a downward trend in margins, pointing to either cost pressures or pricing issues.

Key Findings

The findings from the Executive Dashboard are summarized below:

1. Financial Performance:

- Net Sales have increased significantly to \$111.37M.
- Gross Margin has slightly decreased to 27.75%.
- Net Profit remains negative at -11.25%, though improved from the previous fiscal year (-13.58%).

2. Regional Analysis:

- **India** leads in revenue contribution (34%) but has only marginally negative profitability.
- **North America (NA)** and **North East (NE)** regions have higher revenue contributions but suffer from severe losses.
- Risk flags such as **Excess Inventory** and **Out of Stock** were predominantly found in SE and LATAM zones.

3. Channel and Division Insights:

- **Distributors** account for 66% of all revenue, followed by Retailers and Direct sales.
- The **Notebook & Storage (N & S)** division dominates with 42.9% share.

4. Market Share:

- AtiIQ's market share is improving year-over-year, especially over the last two fiscal periods.
- Competitors like Innovo and Pacer have declined in market position.

5. Top Customers and Products:

- Amazon and Sage are leading revenue generators.
- Products are experiencing margin compression across the board, suggesting pricing pressure or rising costs.

CONCLUSION

The dashboard analysis provides a comprehensive picture of AtilIQ Inc.'s strategic and operational standing. While the company shows strong top-line growth, persistent negative profitability and declining margins across key products and customers signal deeper operational inefficiencies.

Regional disparities in performance and recurring inventory risks highlight the need for more localized supply chain optimization. Similarly, the heavy dependence on distributors may pose a risk to long-term customer engagement and pricing flexibility.

Improvements in forecast accuracy (86.45%) reflect a maturing demand planning process, but unless profitability improves, the current growth trajectory may not be sustainable. Strategic decisions around pricing, inventory management, and channel diversification are essential for converting sales growth into sustainable profit.

This study validates the role of executive dashboards in surfacing insights that go beyond traditional static reports, enabling leadership to make informed, proactive decisions.

References:

- [1]. Khan, A., Smith, J., & Brown, L. (2021). Data visualization techniques in Power BI. *Journal of Data Analysis*, 15(3), 45-67
- [2] Manpreet Singh, Bhawick Ghutla, Reuben Lilo Jnr, Aesaan F S Mohammed and Mahmood A Rashid, "Walmart's Sales Data Analysis - A Big Data Analytics Perspective" [Online]. Available: https://www.researchgate.net/publication/328246040_Walmart's_Sales_Data_Analysis_-_A_Big_Data_Analytics_Perspective
- [3] Sonia Singla, "Getting Started with Data Analysis using Power BI" [Online]. Available:
- [4] <https://www.analyticsvidhya.com/blog/2021/11/getting-started-with-data-analysis-using-power-bi/Effective Business Intelligence Solutions>, "BUSINESS INTELLIGENCE TRENDS IN 2022" [Online]. Available: <https://ebisgroup.com/business-intelligence-trends-in-2022/>
- [5] Maggie Sparkman, David Iseminger, Michele Hart, Kent Sharkey, "Sales and Marketing sample for Power BI: Take a tour" [Online]. Available: <https://docs.microsoft.com/en-us/power-bi/create-reports/sample-sales-and-marketing>
- [6] Orina Mark, "Data Analytics and Visualization: A Comprehensive Guide" [Online]. Available: <https://hevodata.com/learn/data-analytics-and-visualization/>
- [7] Atliq Hardware sales insights data analysis and visualization [HaamzaHM/ATLIQ-HARDWARE-SALES-INSIGHTS-DATA-ANALYSIS-AND-VISUALIZATION: ATLIQ Hardware data analysis and visualization project.](#)
- [8] Analysis and Visualization of Financial Data with Power BI [\(PDF\) ANALYSIS AND VISUALIZATION OF FINANCIAL DATA WITH POWER BI](#)