

# Ad Hoc Insights

## Consumer Goods Analytics

A comprehensive analysis of Atliq Hardware's market performance, product portfolio, and strategic insights for data-driven decision making.

Created by Sourav Paul





# Project Overview

01

## What: Company Context

Atliq Hardware is a major computer hardware manufacturer in India with strong international presence.

02

## Why: The Challenge

Management lacks sufficient insights for prompt and data-informed decisions. Expanding analytics team to address this gap.

03

## How: The Solution

SQL challenge by Data Analytics Director Tony Sharma to evaluate candidates through 10 ad hoc business requests.



# Company Profile

## About Atliq Hardware

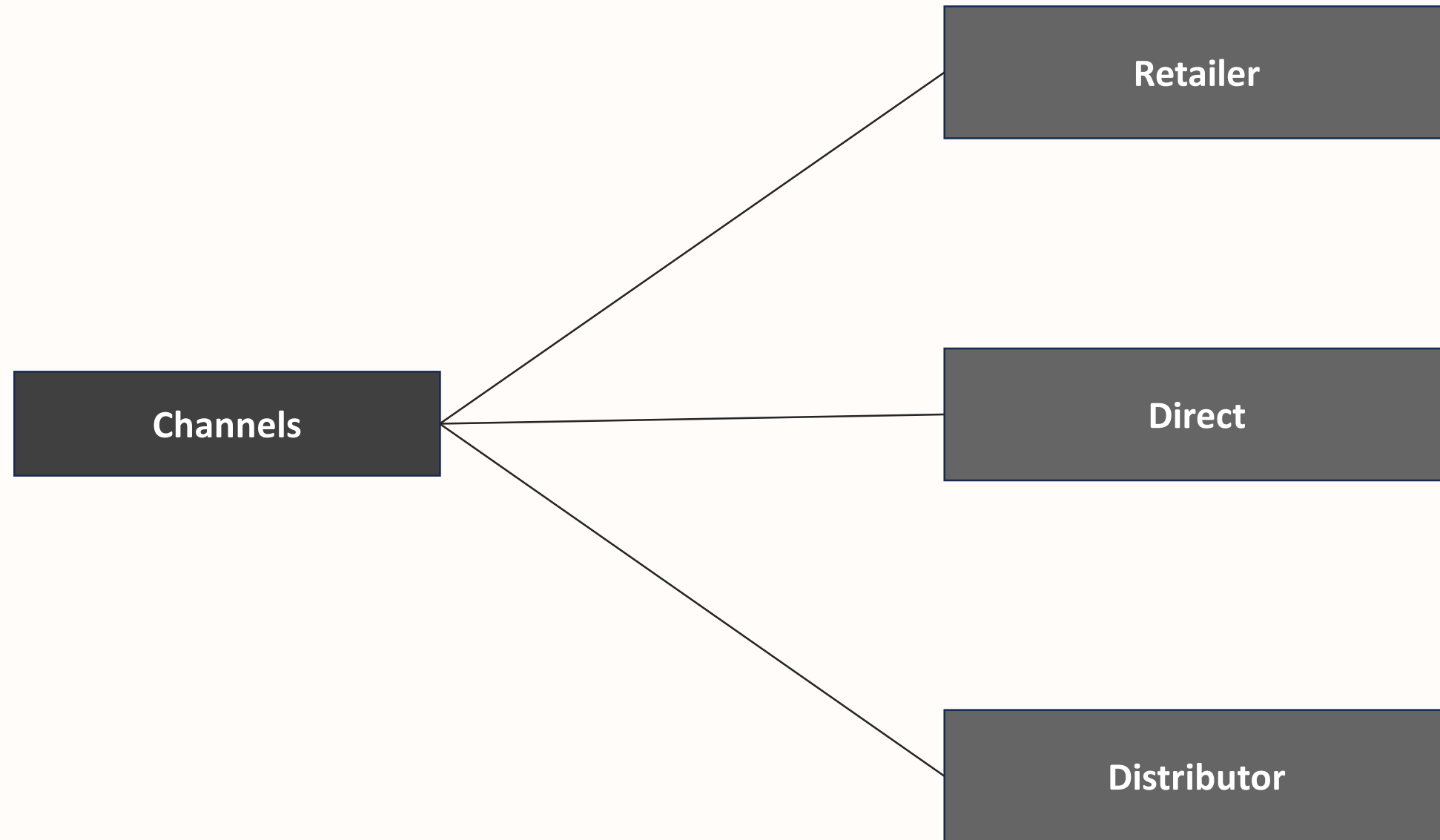
Leading manufacturer of computer hardware and accessories with operations across multiple regions.

## Fiscal Year Structure

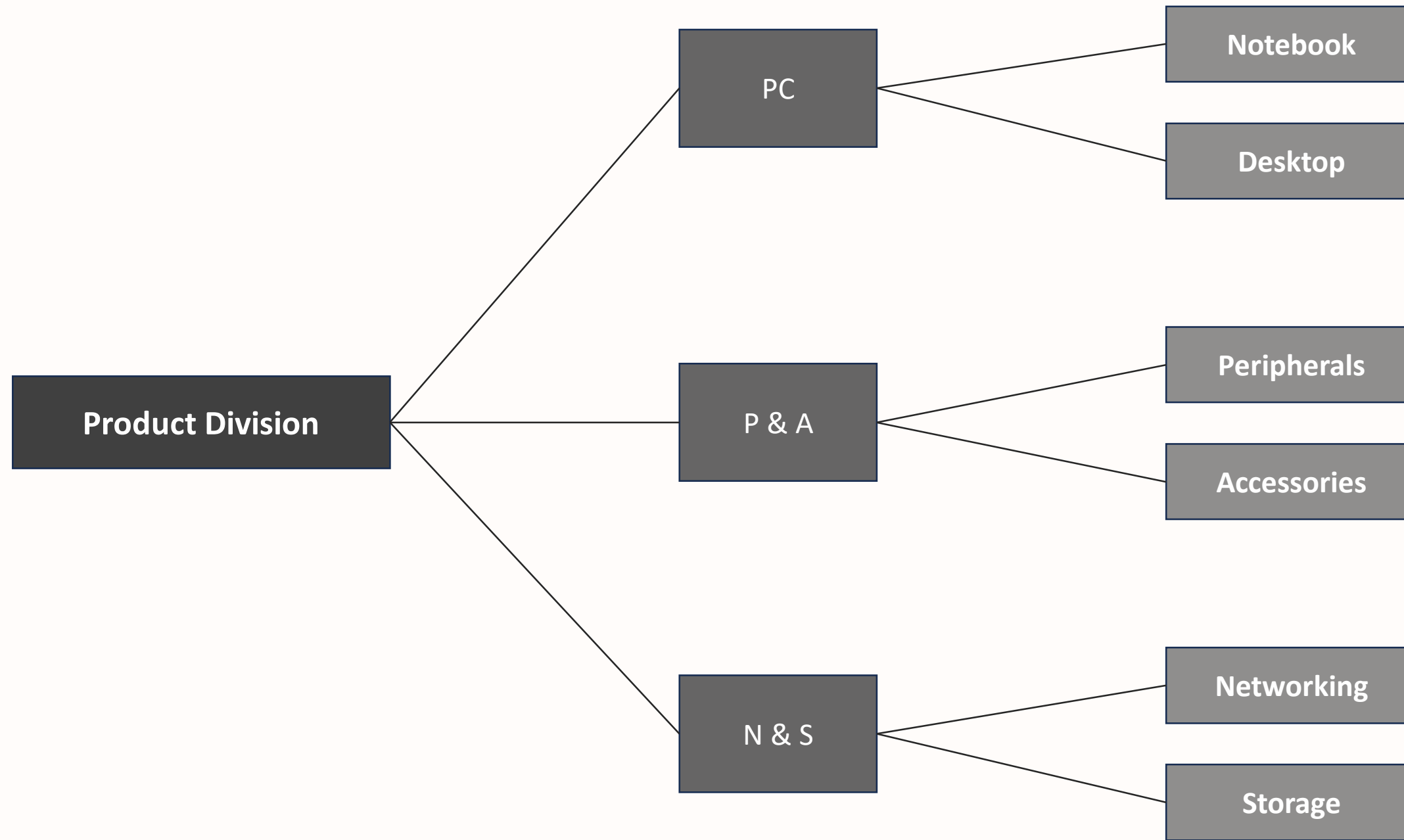
- FY 2018: September 2017 - August 2018
- FY 2019: September 2018 - August 2019
- FY 2020: September 2019 - August 2020
- FY 2021: September 2020 - August 2021
- FY 2022: September 2021 - August 2022



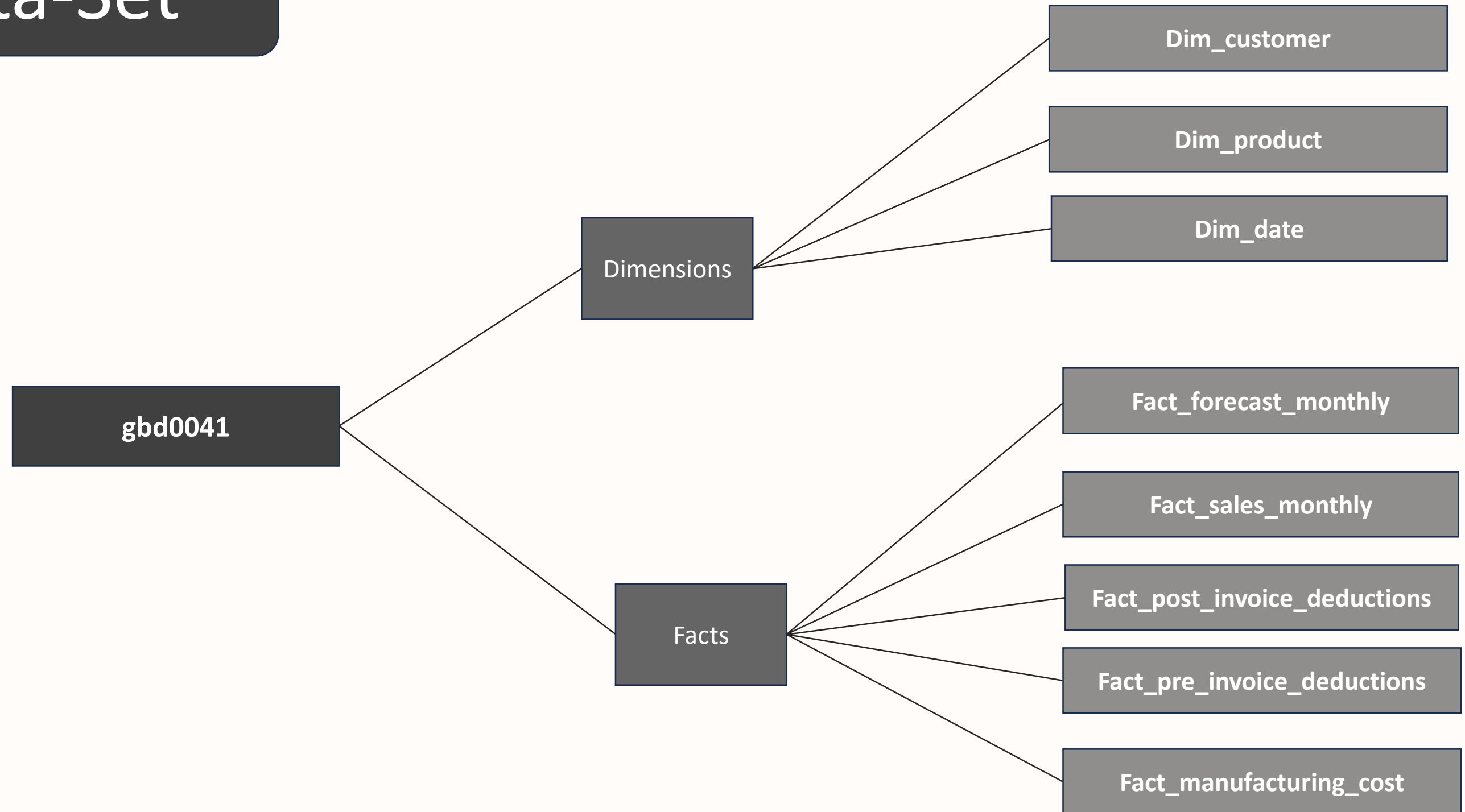
# Business Model



# Product Categories



# Data-Set





# Market Presence



LATAM Region



North America



EUROPE



APAC

1. Provide the list of markets in which customer "Atliq Exclusive" operates its business in the APAC region.

Query

```
SELECT DISTINCT
    market
FROM
    dim_customer
WHERE
    customer = 'Atliq Exclusive'
    AND region = 'APAC'
ORDER BY market;
```

Result

	market
▶	Australia
	Bangladesh
	India
	Indonesia
	Japan
	Newzealand
	Philiphines
	South Korea





2. What is the percentage of unique product increase in 2021 vs. 2020? The final output contains these fields,

- unique\_products\_2020
- unique\_products\_2021
- percentage\_chg

	unique_products_2021	unique_products_2020	pct_chg
▶	334	245	36.33

**Key Insight:** Demand and production both increased significantly, reflecting strong market expansion and product diversification strategy.



3. Provide a report with all the unique product counts for each segment and sort them in descending order of product counts. The final output contains 2 fields,

- segment
- product\_count

	segment	product_count
▶	Notebook	129
	Accessories	116
	Peripherals	84
	Desktop	32
	Storage	27
	Networking	9

### Market Focus

Notebooks, accessories, and peripherals show significant manufacturing growth, constituting **83%** of total manufactured products.

Desktop, storage, and networking segments lag behind in production volume.



4. Follow-up: Which segment had the most increase in unique products in 2021 vs 2020? The final output contains these fields,

- segment
- product\_count\_2020
- product\_count\_2021
- difference

	segment	Unique_products_2020	Unique_products_2021	difference
▶	Accessories	69	103	34
	Desktop	7	22	15
	Networking	6	9	3
	Notebook	92	108	16
	Peripherals	59	75	16
	Storage	12	17	5

**Key Insight:** The product portfolio expanded notably from 2020 to 2021. Accessories led the growth with 34 new products, showing strong diversification. Notebook and Peripherals each added 16 products, indicating consistent innovation. Desktop grew by 15 products, while Storage and Networking saw modest increases, highlighting focus on core product lines.





# Segment Growth: 2020 vs 2021



## Accessories

+34 products

69 → 103



## Notebook

+16 products

92 → 108



## Peripherals

+16 products

59 → 75



## Desktop

+15 products

7 → 22

**Strategic Insight:** Accessories had the largest increase in production. Storage and networking are experiencing slower growth than other segments.



5. Get the products that have the highest and lowest manufacturing costs. The final output should contain these fields,

- product\_code
- product
- manufacturing\_cost

	product_code	product	manufacturing_cost
▶	A6121110208	AQ HOME Allin1 Gen 2	263.4207
	A2118150101	AQ Master wired x1 Ms	0.8654

**Key Insight:** There’s a major cost disparity between products: **AQ HOME Allin1 Gen 2** has a high manufacturing cost of ₹263.42, while **AQ Master wired x1 Ms** costs only ₹0.86, indicating different production scales or complexity.





6. Generate a report which contains the top 5 customers who received an average high pre\_invoice\_discount\_pct for the fiscal year 2021 and in the Indian market. The final output contains these fields,

- customer\_code
- customer
- average\_discount\_percentage

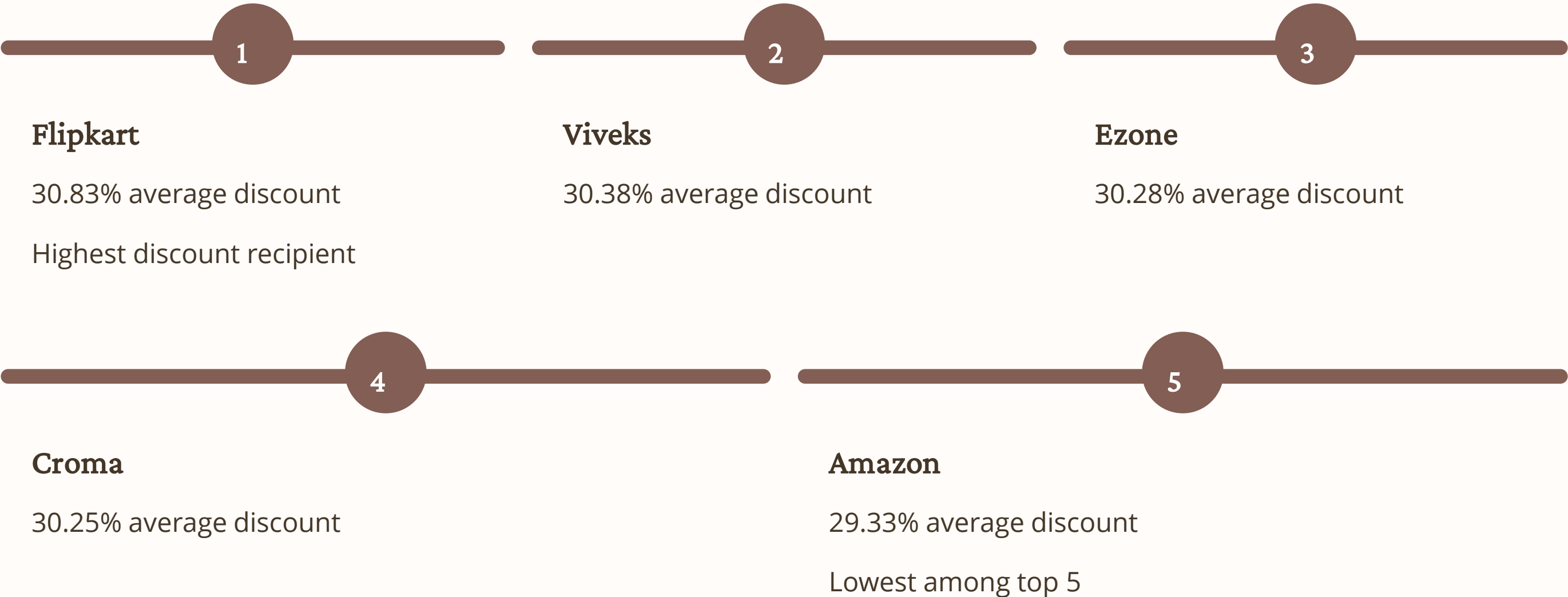
	customer_code	customer	avg_pre_inv_dis_pct
▶	90002009	Flipkart	0.3083
	90002006	Viveks	0.3038
	90002003	Ezone	0.3028
	90002002	Croma	0.3025
	90002016	Amazon	0.2933

**Key Insight:** Top 5 customers by pre-invoice discount % show minimal variation, indicating consistent pricing strategy. Flipkart leads with 0.3083, slightly above Viveks (0.3038) and Ezone (0.3028). The narrow gap (~0.015) suggests stable discount policy across major retail partners.



# Customer Discount Analysis

Top 5 Indian Market Customers by Pre-Invoice Discount (FY 2021)



7. Get the complete report of the Gross sales amount for the customer “Atliq Exclusive” for each month . This analysis helps to get an idea of low and high -performing months and take strategic decisions. The final report contains these columns:

- Month
- Year
- Gross sales Amount

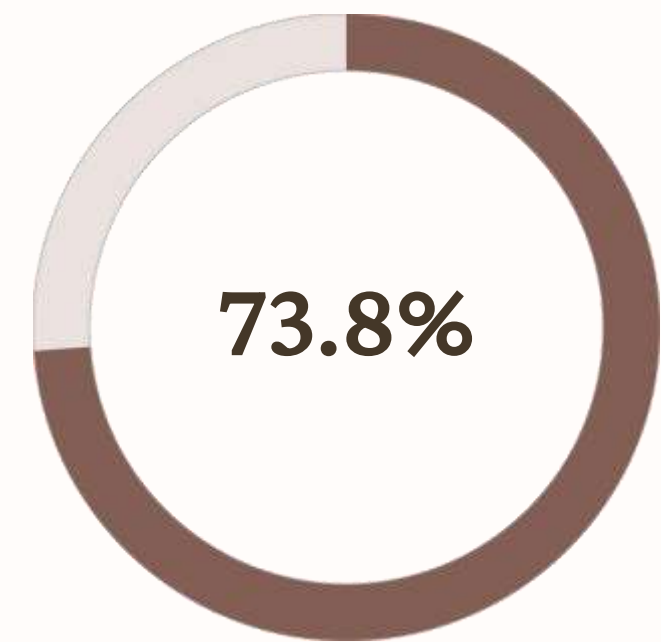
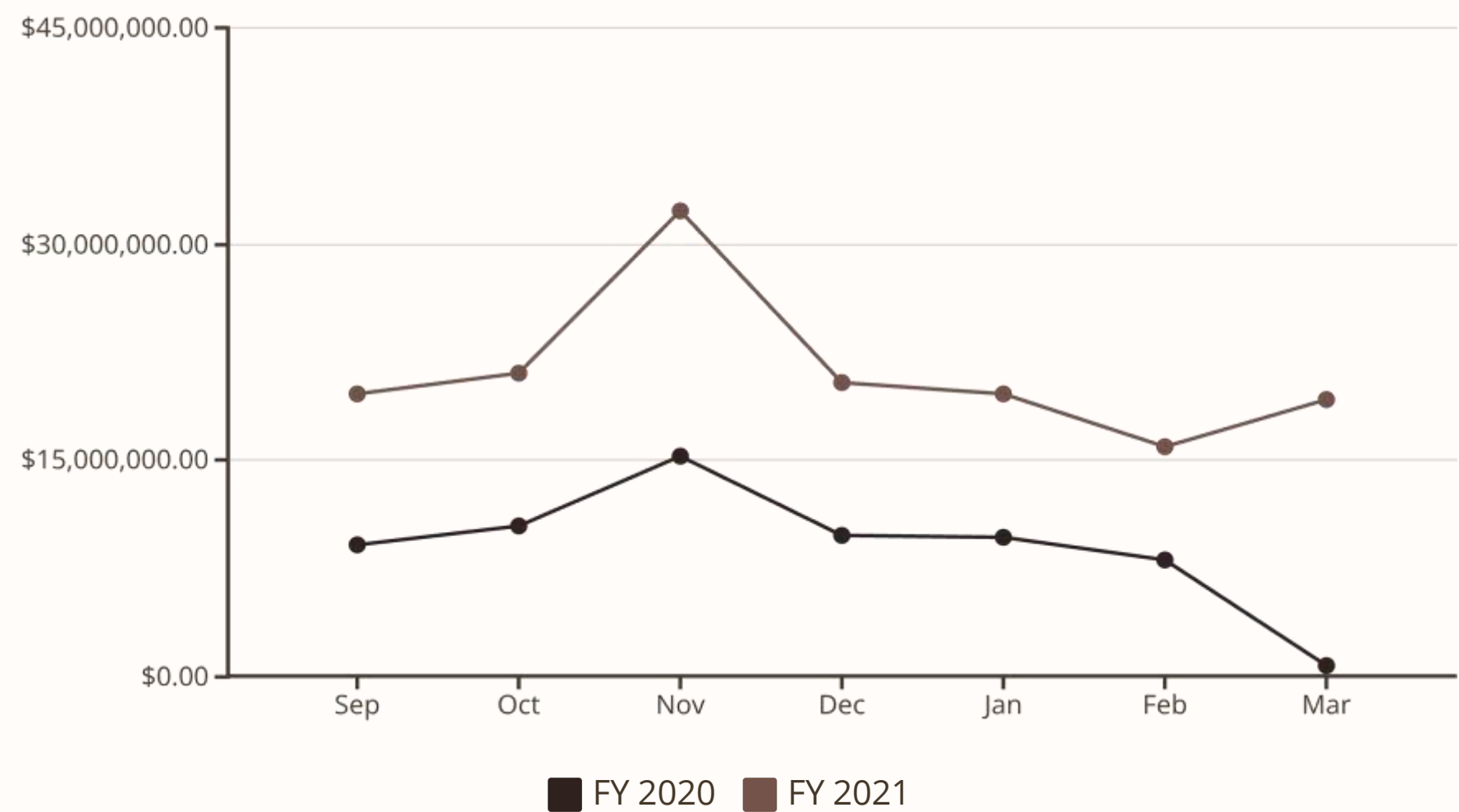
	month	year	total_GP_mln
	July	2020	2.551 M
	August	2020	2.787 M
	September	2020	12.354 M
	October	2020	13.219 M
	November	2020	20.465 M
	December	2020	12.945 M
	January	2021	12.399 M
	February	2021	10.130 M
	March	2021	12.144 M
	April	2021	7.312 M
	May	2021	12.150 M

Sample Output

**Key Insight:** Sales showed steady growth from FY18–FY20 with moderate seasonality peaks during Oct–Dec. A sharp surge began in mid-2020, peaking massively in Nov 2021 (95.7 M), likely driven by festive demand or product expansion. Post-2020, monthly sales sustained 10x higher volumes than pre-pandemic levels.



# Gross Sales Performance Analysis



FY 2021 Share

Of total gross sales

## Key Findings

- Lowest: March 2020
- Highest: November 2020
- Impact: COVID-19 & chip shortage

8. In which quarter of 2020, got the maximum total\_sold\_quantity? The final output contains these fields sorted by total\_sold\_quantity,

- Quarter
- total\_sold\_quantity

Quarter	total_sold_quantity
Q1	7005619
Q2	6649642
Q4	5042541
Q3	2075087

**Key Insight:** In 2020, sales mirrored the pandemic's economic impact. A strong first half was decimated by a 69% crash in Q3, coinciding with global lockdowns. The subsequent Q4 rebound shows market adaptation and resilience, though it couldn't fully recover the losses from the mid-year slump.





9. Which channel helped to bring more gross sales in the fiscal year 2021 and the percentage of contribution? The final output contains these fields,

- channel
- gross\_sales\_mln
- percentage

Quater	total_sold_quantity
Q1	7005619
Q2	6649642
Q4	5042541
Q3	2075087

**Key Insight:** In 2020, sales mirrored the pandemic's economic impact. A strong first half was decimated by a 69% crash in Q3, coinciding with global lockdowns. The subsequent Q4 rebound shows market adaptation and resilience, though it couldn't fully recover the losses from the mid-year slump.



- 10. Get the Top 3 products in each division that have a high total\_sold\_quantity in the fiscal\_year 2021? The final output contains these fields,
- division
- product\_code
- product
- total\_sold\_quantity
- rank\_order

	division	product_code	product	total_sold_quantity	rank_order
▶	N & S	A6720160103	AQ Pen Drive 2 IN 1	701373	1
	N & S	A6818160202	AQ Pen Drive DRC	688003	2
	N & S	A6819160203	AQ Pen Drive DRC	676245	3
	P & A	A2319150302	AQ Gamers Ms	428498	1
	P & A	A2520150501	AQ Maxima Ms	419865	2
	P & A	A2520150504	AQ Maxima Ms	419471	3
	PC	A4218110202	AQ Digit	17434	1
	PC	A4319110306	AQ Velocity	17280	2
	PC	A4218110208	AQ Digit	17275	3

### Key Insight:

- ❖ Based on the data, the **N & S division is the clear sales leader**, primarily driven by high-volume accessories like pen drives. Its top product outsold the top PC division product by more than 40 times.
- ❖ This massive volume gap suggests a business focus on mass-market peripherals (N & S, P & A) over lower-volume items in the PC division, which may be higher-priced or a less strategic category.



# Channel Performance & Top Products Analysis

## Retailer Channel

\$1,924.17M gross sales

**73.22%** contribution

## Direct Channel

\$406.69M gross sales

**15.48%** contribution

## Distributor Channel

\$297.18M gross sales

**11.31%** contribution

## Top Products by Division (FY 2021)

1

### N & S Division

AQ Pen Drive 2 IN 1: 701,373 units sold

2

### P & A Division

AQ Gamers Ms [Standard 2]: 428,498 units sold

3

### PC Division

AQ Digit [Standard Blue]: 17,434 units sold





# Conclusion

- Strong market expansion and product diversification observed from 2018–2021.
- Production and demand rose sharply, with notebooks, accessories, and peripherals contributing 83% of total output.
- Product portfolio widened notably, with accessories leading new launches (34 products).
- Despite a pandemic-driven slump in 2020, sales rebounded strongly, reaching 10x pre-2020 levels by late 2021.
- Consistent pricing strategy maintained across key customers, reflecting disciplined discount policies. N&S division led sales, driven by high-volume accessories like pen drives, outselling PC division by 40x.
- Overall focus: scalable, high-demand products and resilient recovery through innovation and diversification.



# THANK YOU

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Thank you for your time and attention. The insights shared confirm **strong market expansion** and a **resilient recovery** through innovation. We are committed to leveraging this data to drive future growth and strategic decision-making at Atliq Hardware.



+91-7003252199



souravpaulofficial101@gmail.com