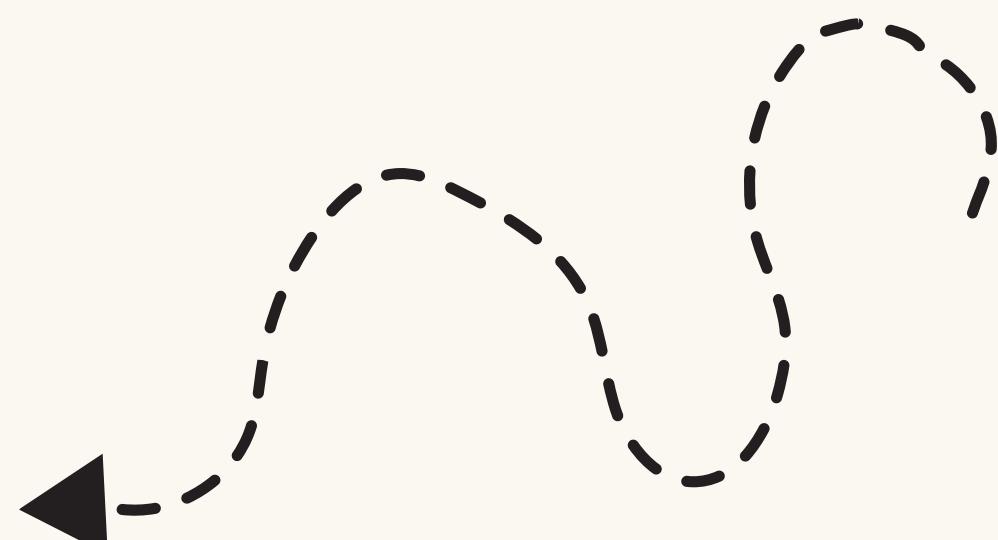


By Prudhvi Sai Guntupalli



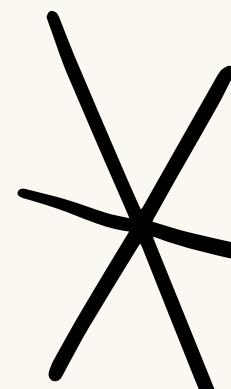
AD-HOC ANALYSIS CONSUMER GOODS

SQL-Driven Insights for Atliq Hardware



Agenda

1. Problem Statement & Objectives
2. AtliQ Hardware Overview
3. Key Data & Tables Overview
4. Ad-Hoc Analysis (SQL-Driven Questions)
5. Thank You



Problem Statement

Atliq Hardware

(fictitious corporation) is one of the major computer hardware manufacturers in India, with a strong presence in other nations.

To Address The Insights Gap:

The management did note that they do not have sufficient insights to make prompt, wise, and data-informed judgments.

Team

Expansion:

Plan to expand the data analytics team by adding junior data analysts.

Candidate Assessment:

Data analytics director Conduct a specialized SQL challenge to evaluate both the technical and soft skills of potential hires.

AtliQ Hardware's Overview

1 WHO WE ARE

- A major consumer electronics manufacturer based in India with a global footprint.
- Specializes in electronic goods sold to end consumers via various customer channels.

2 CUSTOMER TYPES

3 SALES PLATFORMS

1. Retailers

Croma..

2. Direct

AtliQ Exclusive..

3. Distributor

Neptune..

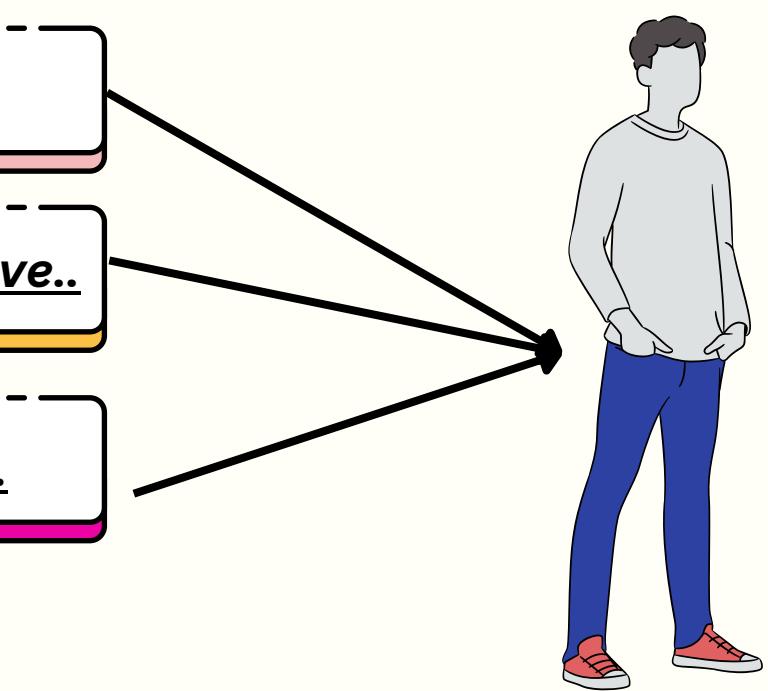
1. Brick & Motor

Walmart..

2. E-Commerce

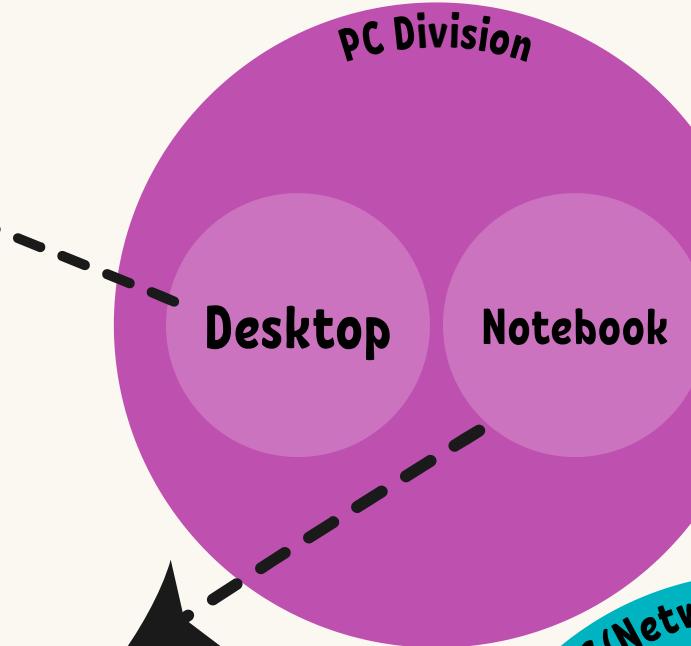
Amazon..

Consumer

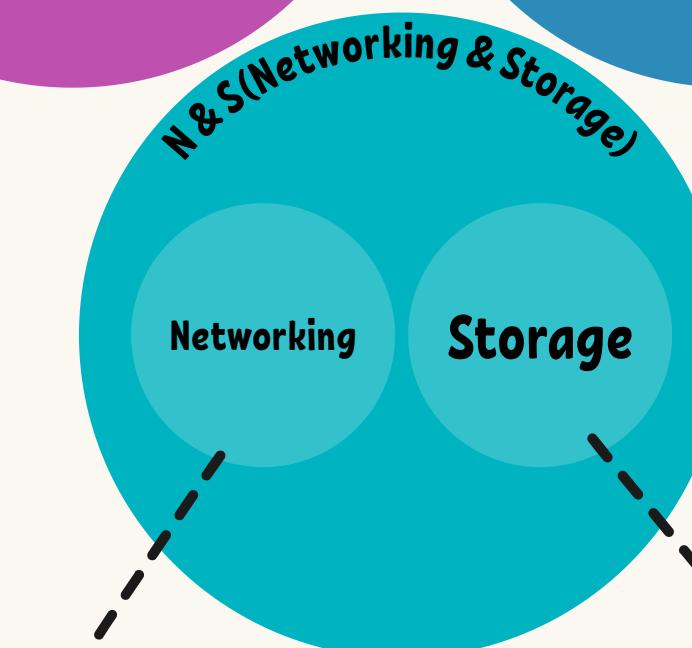


AtliQ Product Line

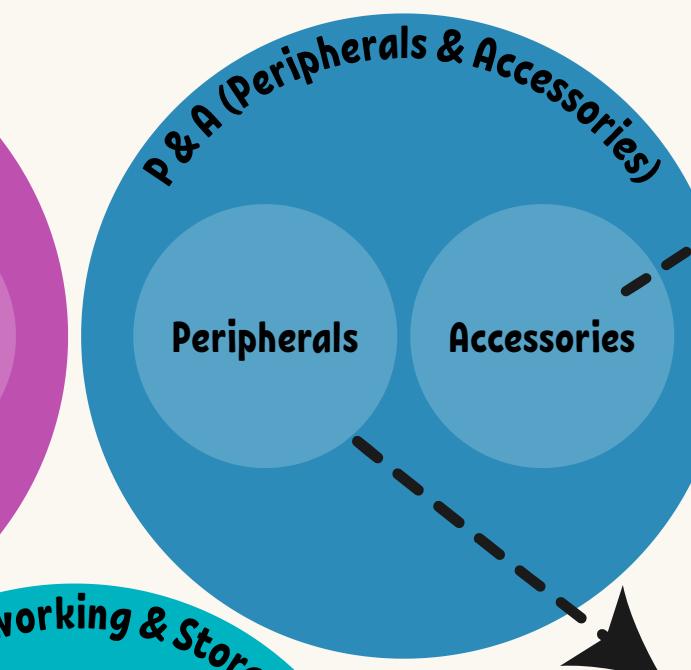
- BUSINESS LAPTOP
- PERSONAL LAPTOP



- GAMING LAPTOP
- BUSINESS LAPTOP
- PERSONAL LAPTOP



- WI-FI EXTENDER



- BATTERIES
- KEYBOARD
- MOUSE

- GRAPHIC CARD
- INTERNAL HDD
- MOTHERBOARD
- PROCESSORS

- EXTERNAL SSD
- USB FLASH DRIVES

SNAPSHOT OF KEY TABLES

Tables contain data for fiscal years 2020 and 2021.

Total manufacturing costs per fiscal year

fact_manufacturing_cost

Gross (pre-discount) prices per fiscal year

fact_gross_price

Monthly sales data (date, quantity, fiscal year)

fact_sales_monthly

Customer codes, names, channels, markets, regions

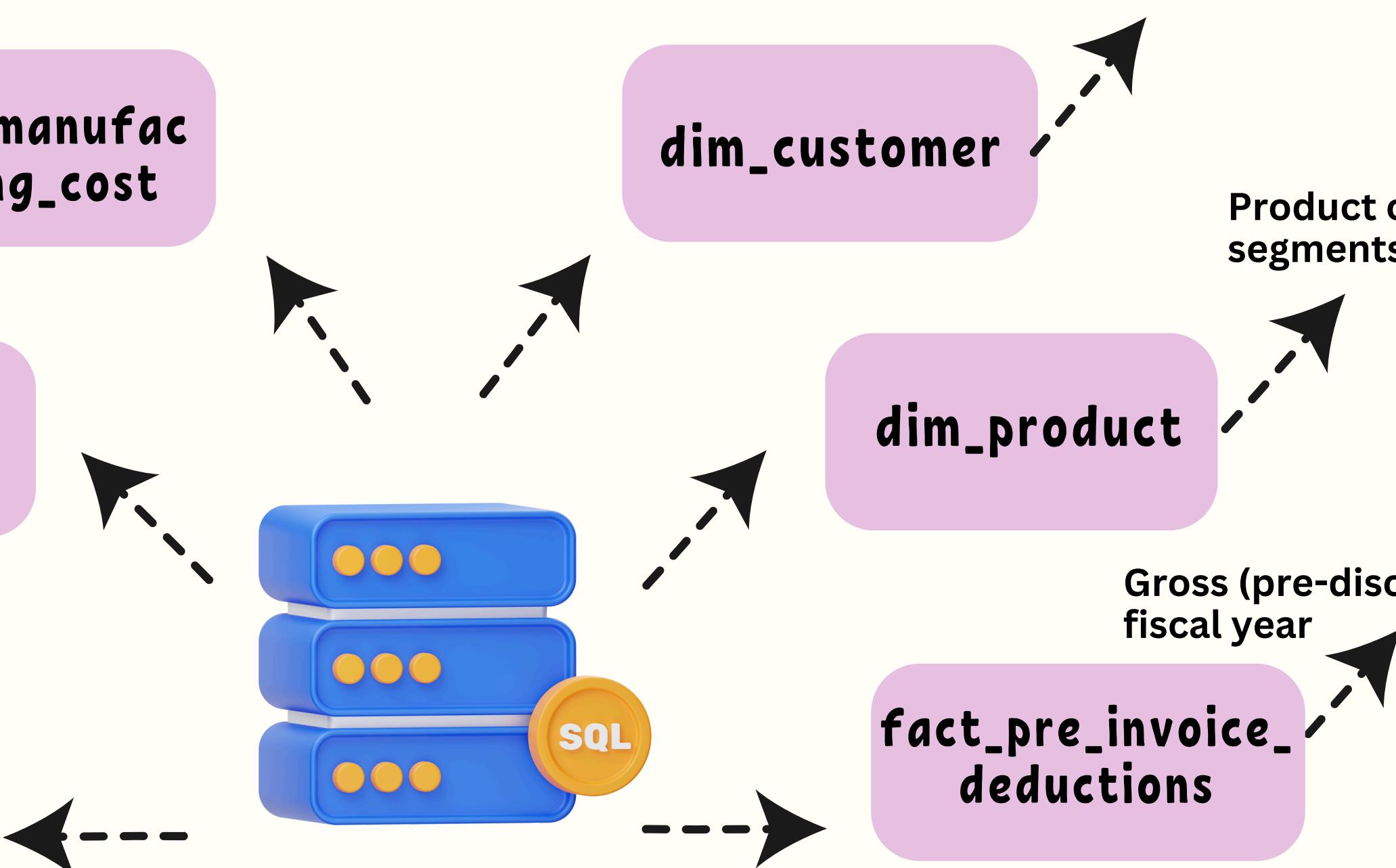
dim_customer

Product codes, divisions, segments, variants

dim_product

Gross (pre-discount) prices per fiscal year

fact_pre_invoice_deductions



TOOLS USED



AD-HOC ANALYSIS



Power BI

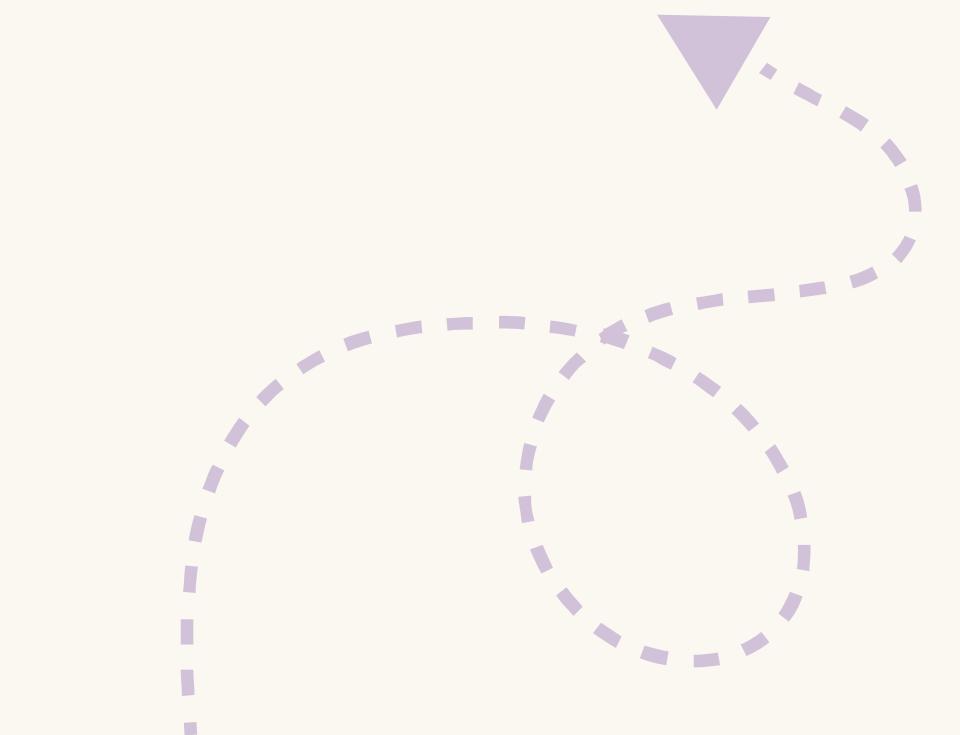


DATA VISUALIZATION



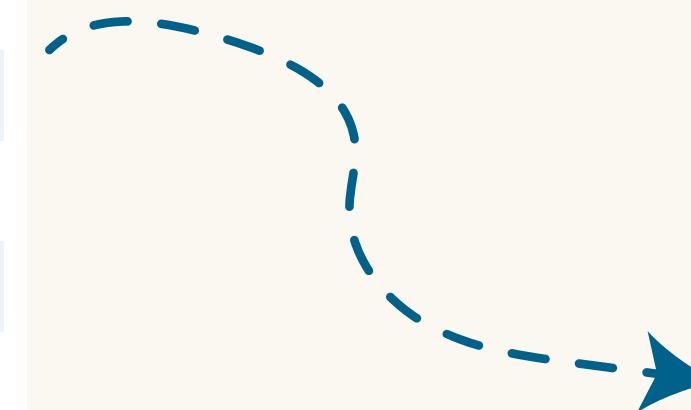
PRESENTATION DESIGN

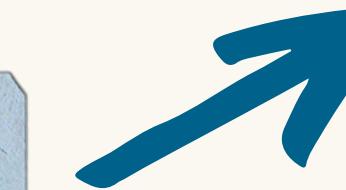
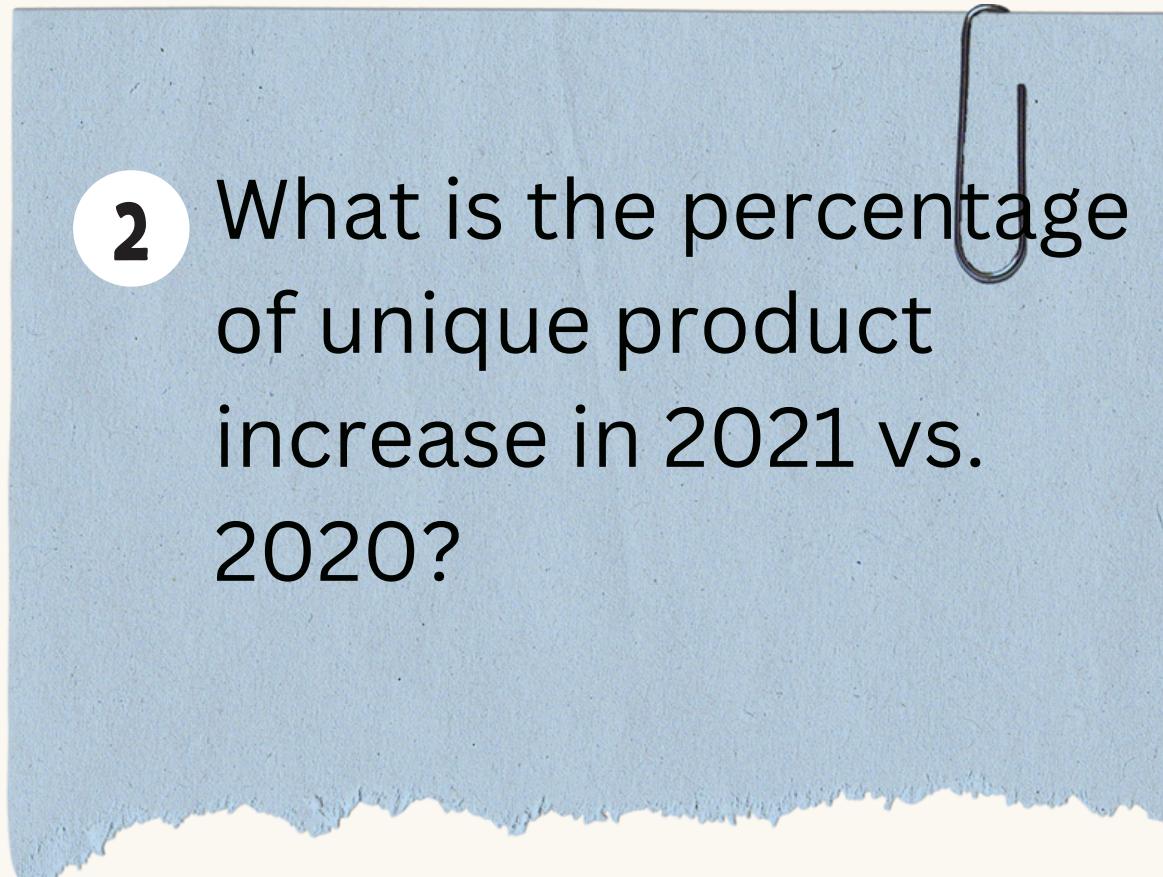
DOCUMENTATION



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

market
India
Indonesia
Japan
Philippines
South Korea
Australia
Newzealand
Bangladesh



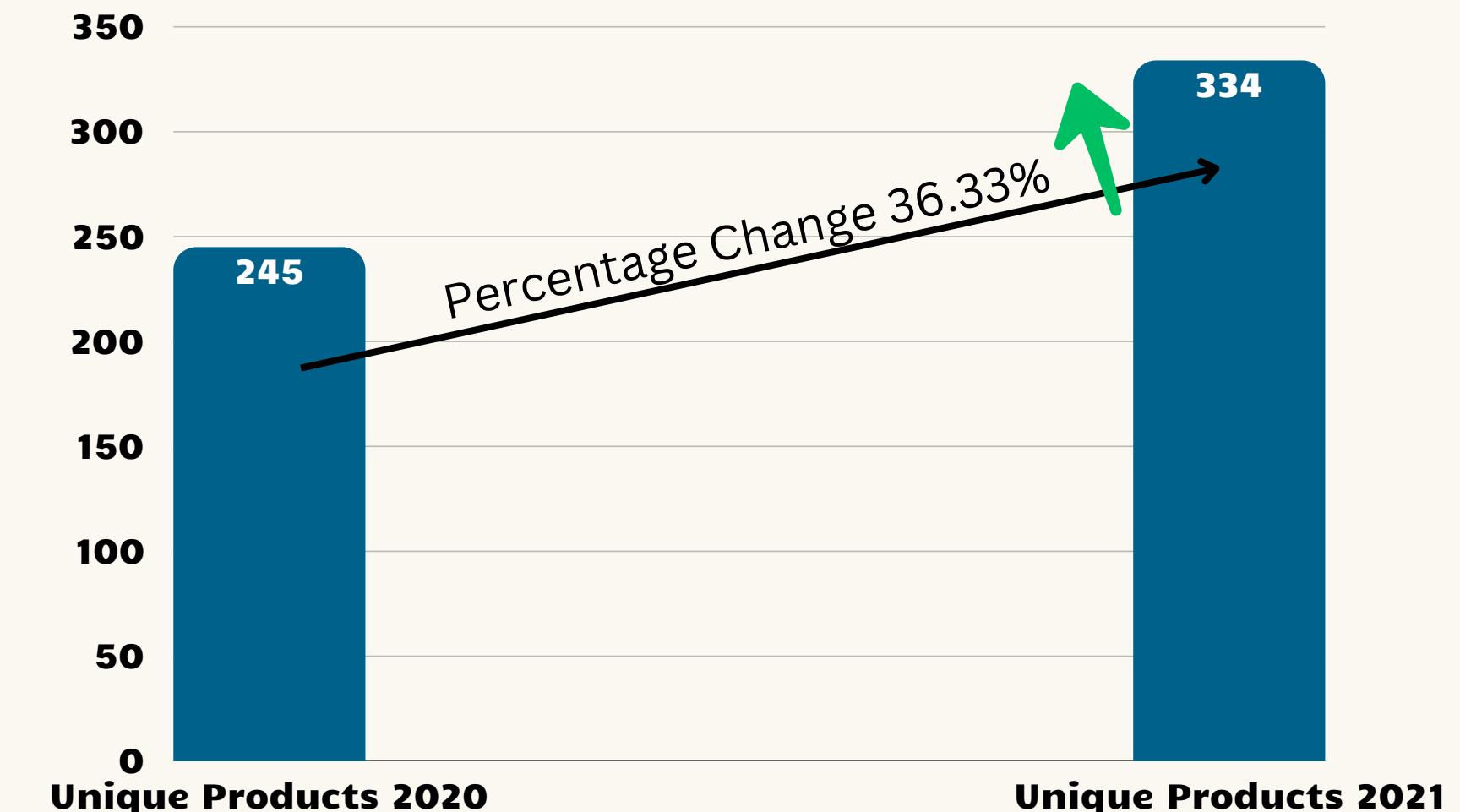


2 What is the percentage of unique product increase in 2021 vs. 2020?

insights

- A 36.33% INCREASE IN UNIQUE PRODUCTS FROM 2020 TO 2021 SHOWS STRONG PRODUCT DIVERSIFICATION, WITH NEW ITEMS AND VARIANTS CONTRIBUTING TO GROWTH. CONTINUE MONITORING SUCCESSFUL NEW PRODUCTS TO GUIDE INVESTMENTS IN PROMISING CATEGORIES.

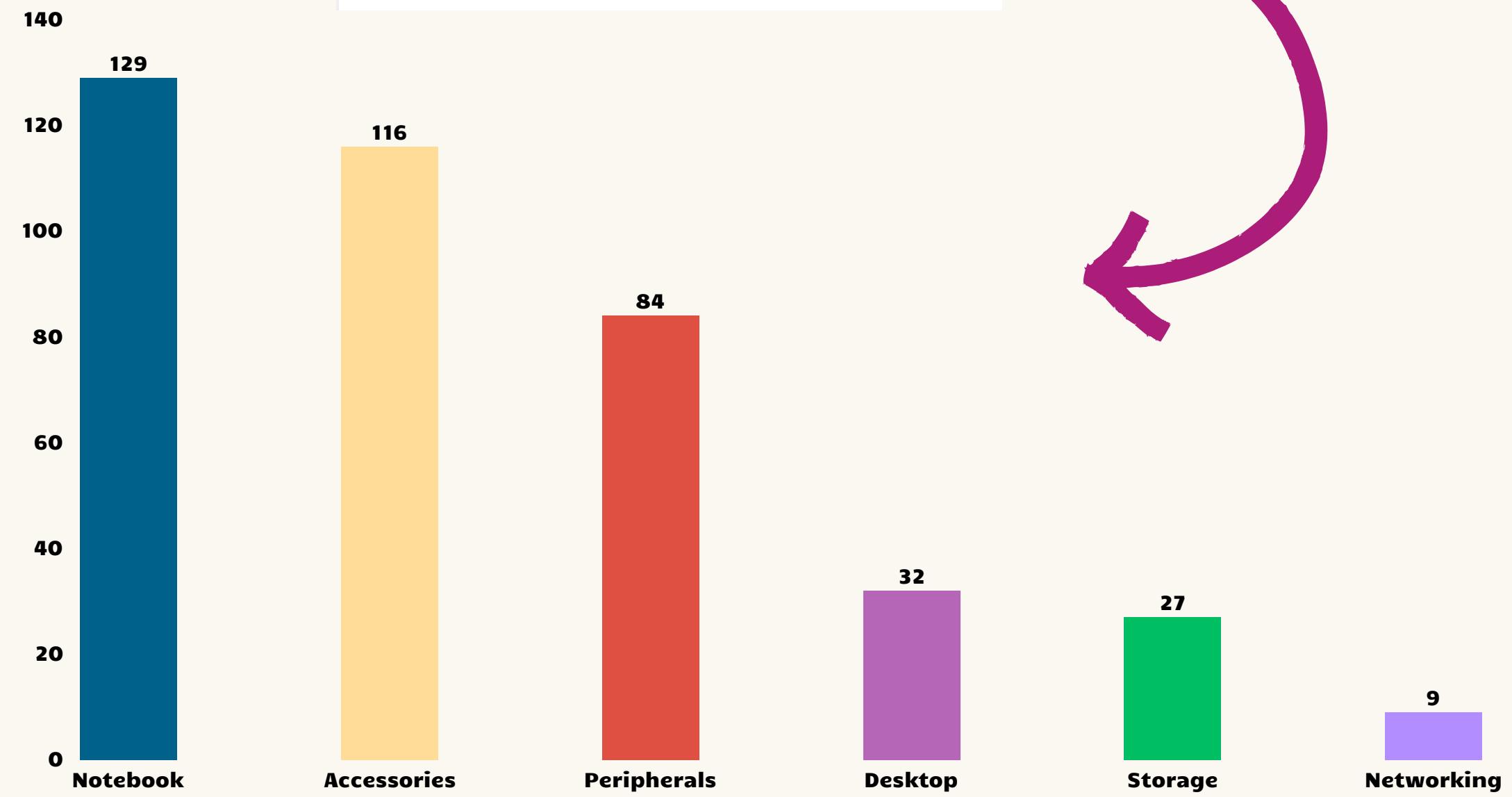
	unique_products_2020	unique_products_2021	percentage_chg
▶	245	334	36.33



3 Provide a report with all the unique product counts for each segment and sort them in descending order of product counts.



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



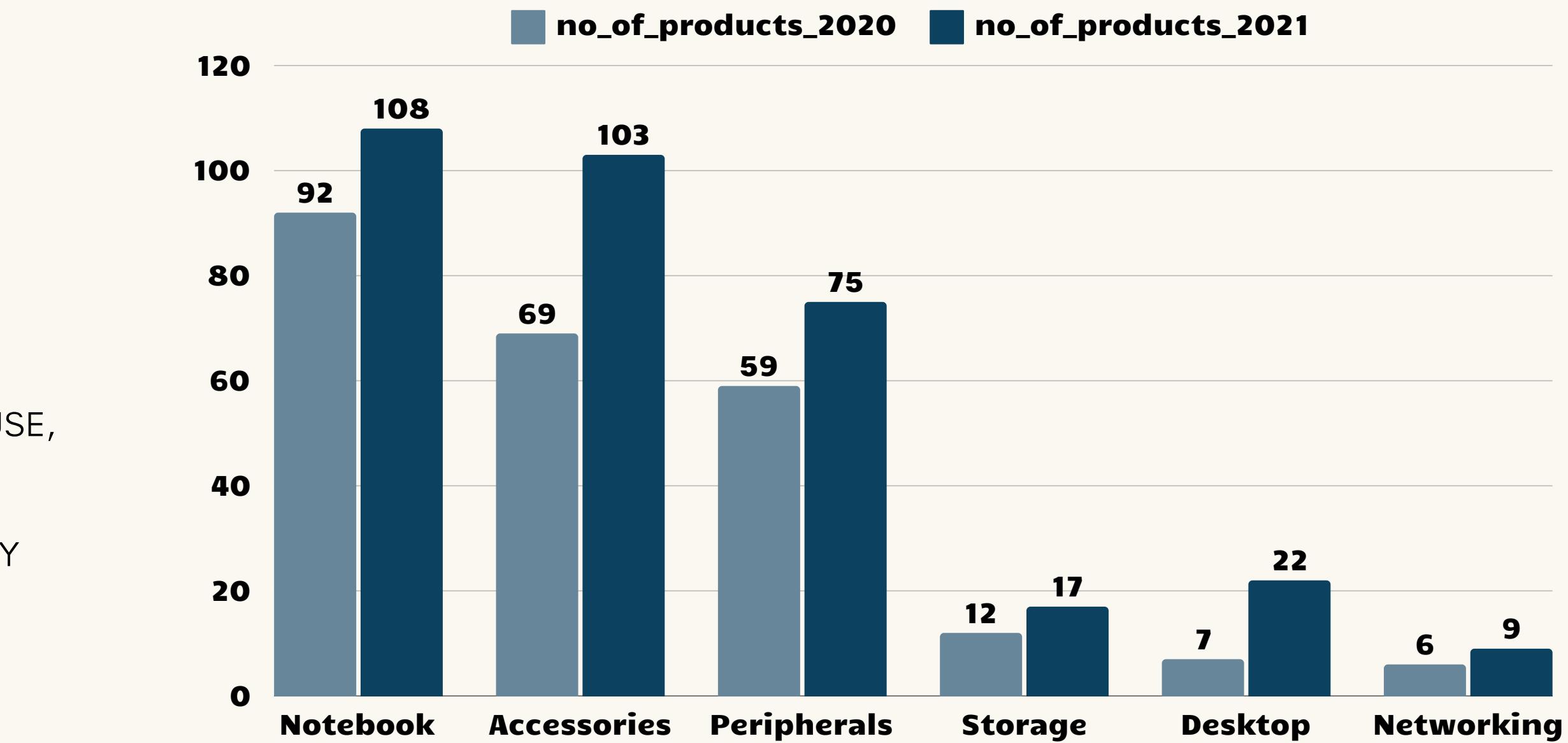
4

Follow-up: Which segment had the most increase in unique products in 2021 vs 2020?

insights

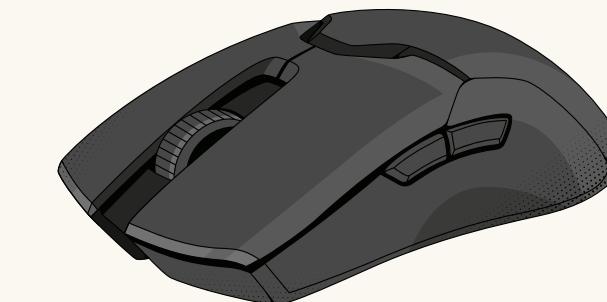
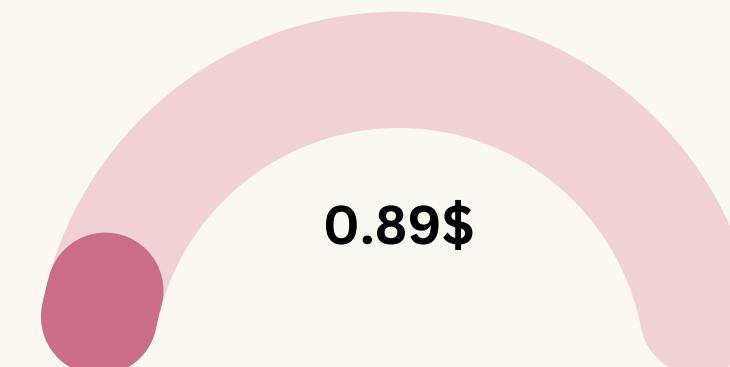
- ACCESSORIES HAD THE LARGEST JUMP IN PRODUCT COUNT, SUGGESTING RISING CONSUMER INTEREST IN ADD-ONS LIKE MOUSE, KEYBOARDS, AND HEADSETS
- SO STRENGTHENING MARKETING AND SUPPLY CHAIN IS KEY TO CAPTURING THIS GROWTH.

segment	no_of_products_2020	no_of_products_2021	difference
Notebook	92	108	16
Accessories	69	103	34
Peripherals	59	75	16
Storage	12	17	5
Desktop	7	22	15
Networking	6	9	3



- 5 Get the products that have the highest and lowest manufacturing costs.

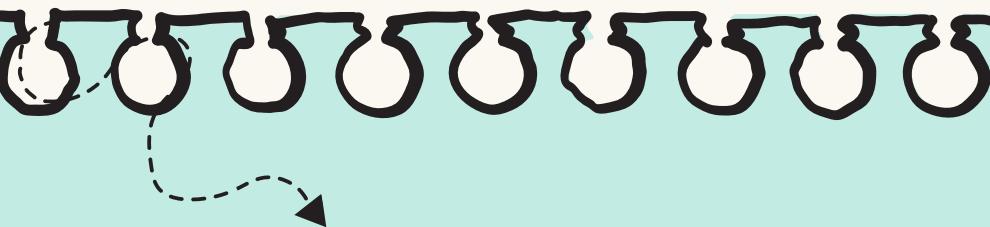
	product_code	product	manufacturing_cost
▶	A2118150101	AQ Master wired x1 Ms	0.89
	A6120110206	AQ HOME Allin1 Gen 2	240.54



AQ Master Wired X1 Ms
Wired Mouse

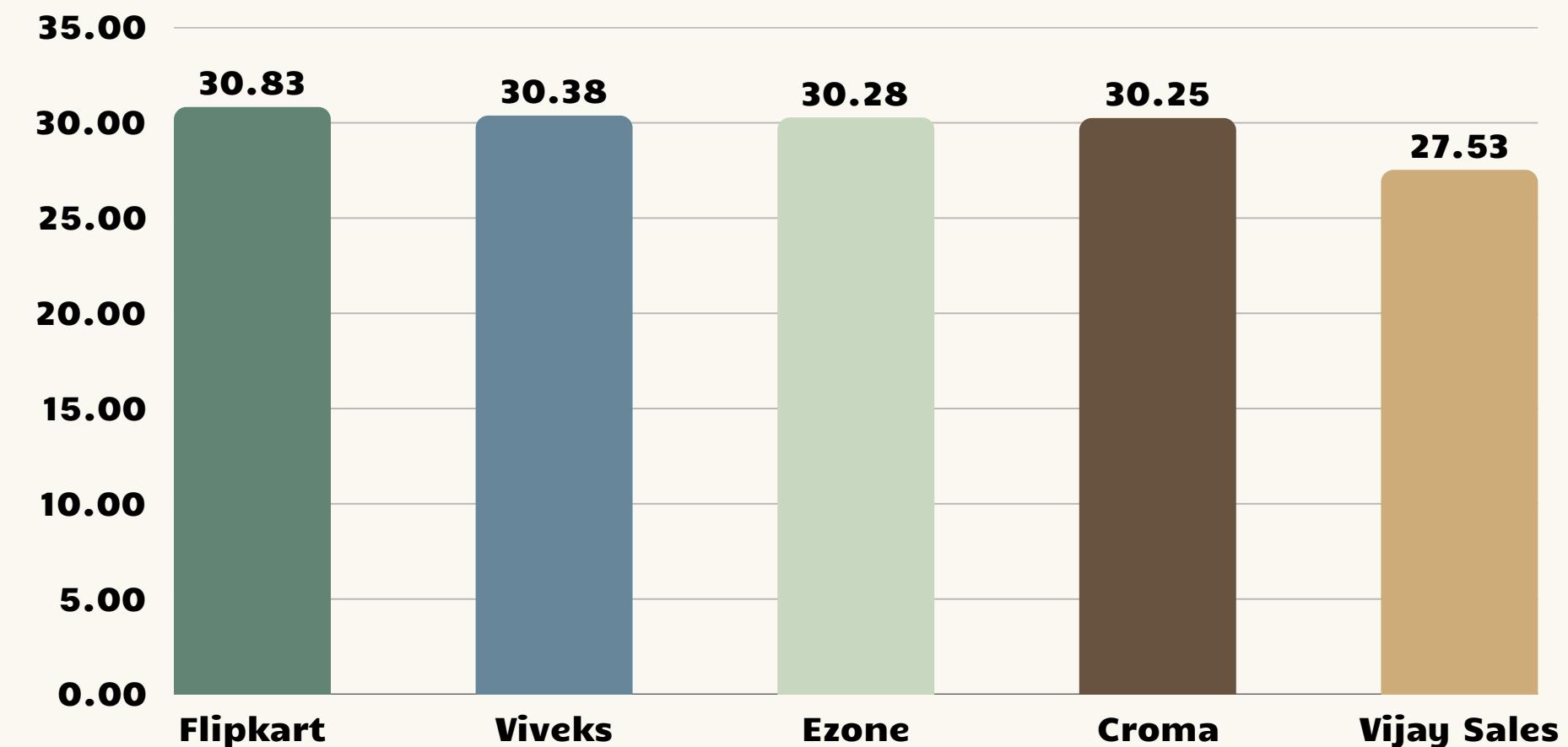


AQ Home Allin1 Gen2
Personal Desktop



- 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.

customer_code	customer	average_discount_percentage
90002009	Flipkart	30.83
90002006	Viveks	30.38
90002003	Ezone	30.28
90002002	Croma	30.25
90002004	Vijay Sales	27.53



insights

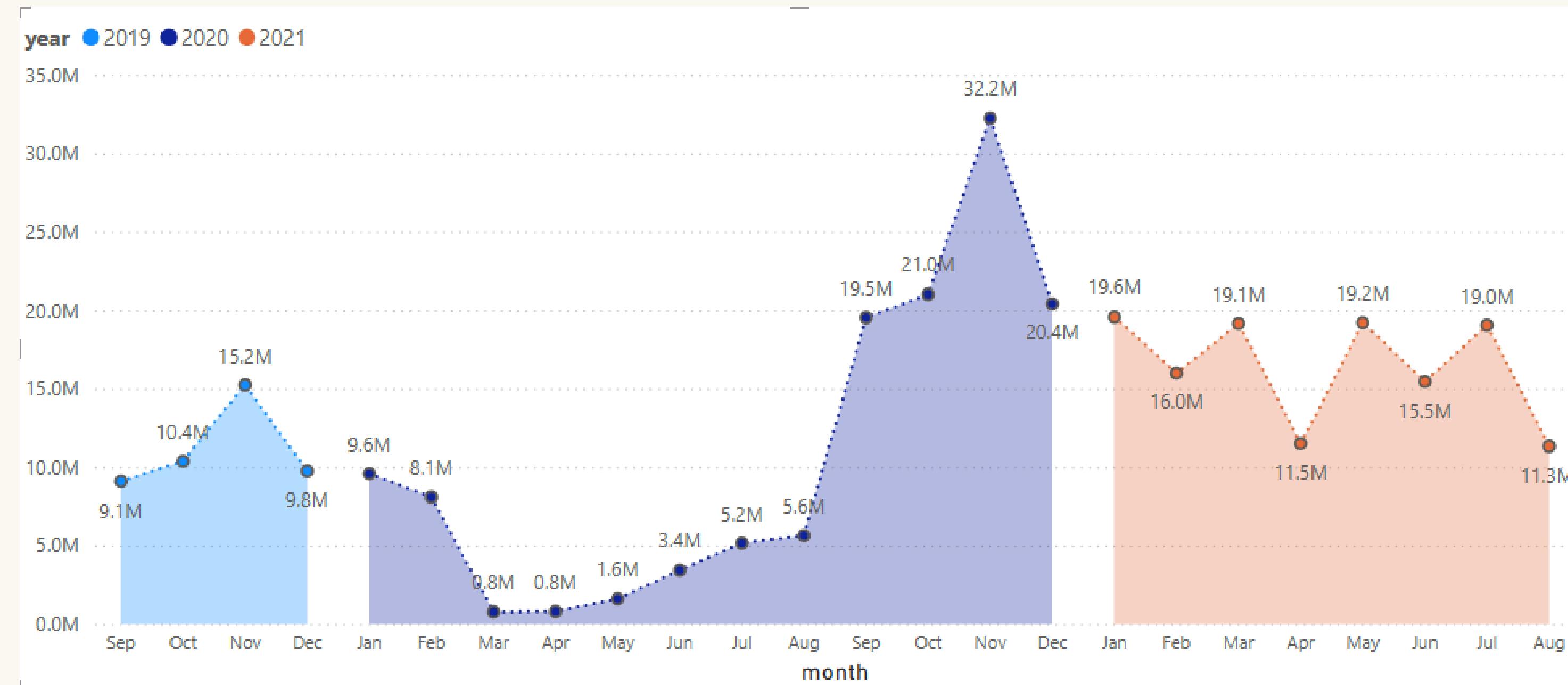
- KEY CUSTOMERS LIKE FLIPKART, VIVEKS, EZONE, CROMA, AND VIJAY SALES RECEIVE AROUND 27-31% IN DISCOUNTS.
- THESE DISCOUNTS REFLECT THEIR LARGE-VOLUME PURCHASES OR STRATEGIC PARTNERSHIPS.
- ASSESS THE ROI ON THESE RELATIONSHIPS TO ENSURE LONG-TERM PROFITABILITY AND BRAND REACH.

7 Get the complete report of the Gross sales amount for the customer “Atliq Exclusive” for each month .

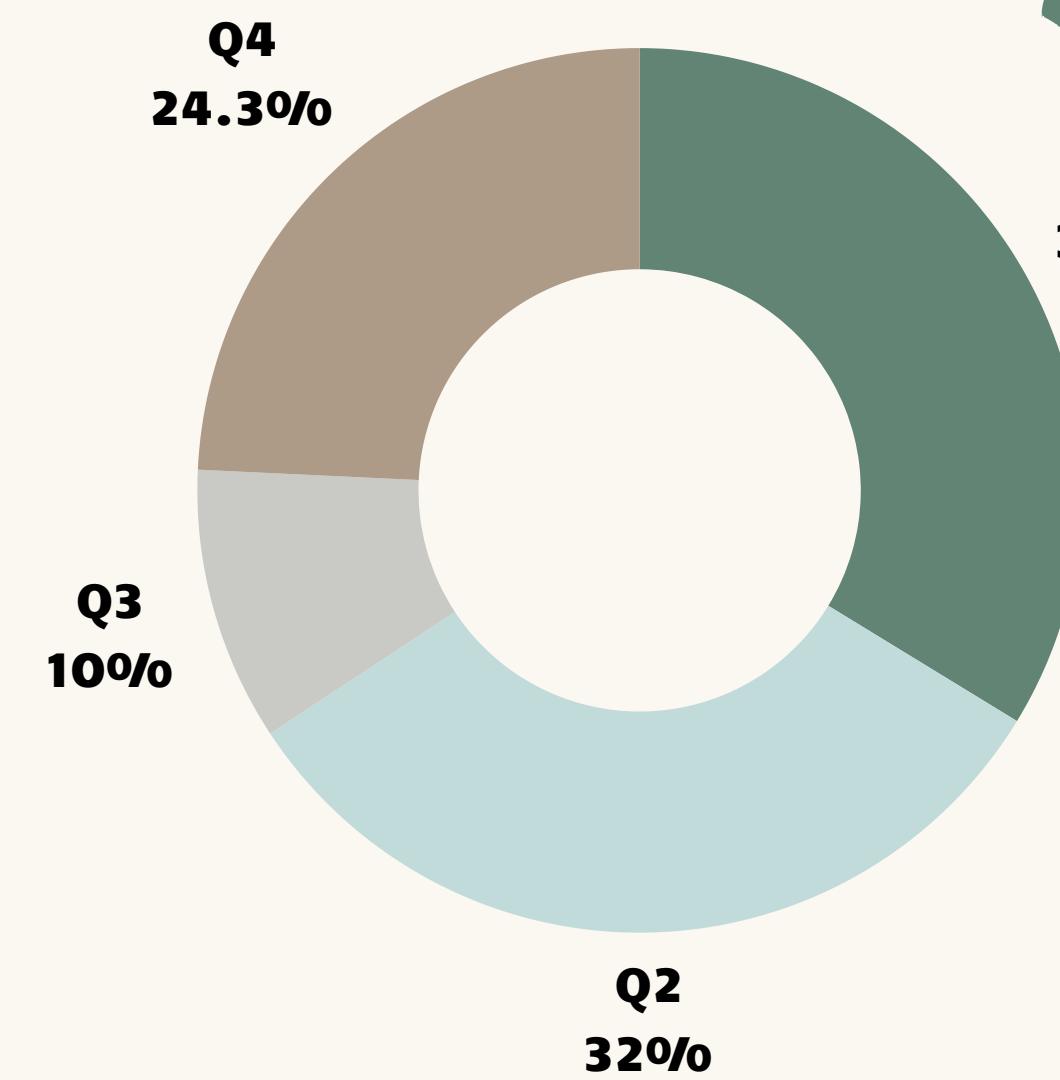
insights

- SOME MONTHS SIGNIFICANTLY OUTPERFORM OTHERS, WHICH HINTS AT SEASONALITY, PROMOTIONAL CAMPAIGNS, FESTIVE SEASONS OR PRODUCT LAUNCHES
- USE THESE INSIGHTS TO ADJUST INVENTORY, MARKETING PUSHES, AND PROMOTIONAL TIMING FOR OPTIMAL RESULTS.

	month	year	gross_sales_amount
▶	September	2019	9.09M
	October	2019	10.38M
	November	2019	15.23M
	December	2019	9.76M
	January	2020	9.58M
	February	2020	8.08M
	March	2020	0.77M
	April	2020	0.80M
	May	2020	1.59M
	June	2020	3.43M
	July	2020	5.15M
	August	2020	5.64M
	September	2020	19.53M
	October	2020	21.02M
	November	2020	32.25M
	December	2020	20.41M
	January	2021	19.57M
	February	2021	15.99M
	March	2021	19.15M
	April	2021	11.48M
	May	2021	19.20M
	June	2021	15.46M
	July	2021	19.04M
	August	2021	11.32M



8 In which quarter of 2020, got the maximum total_sold_quantity?



quarter	total_sold_quantity
Q1	7.01M
Q2	6.65M
Q3	2.08M
Q4	5.04M

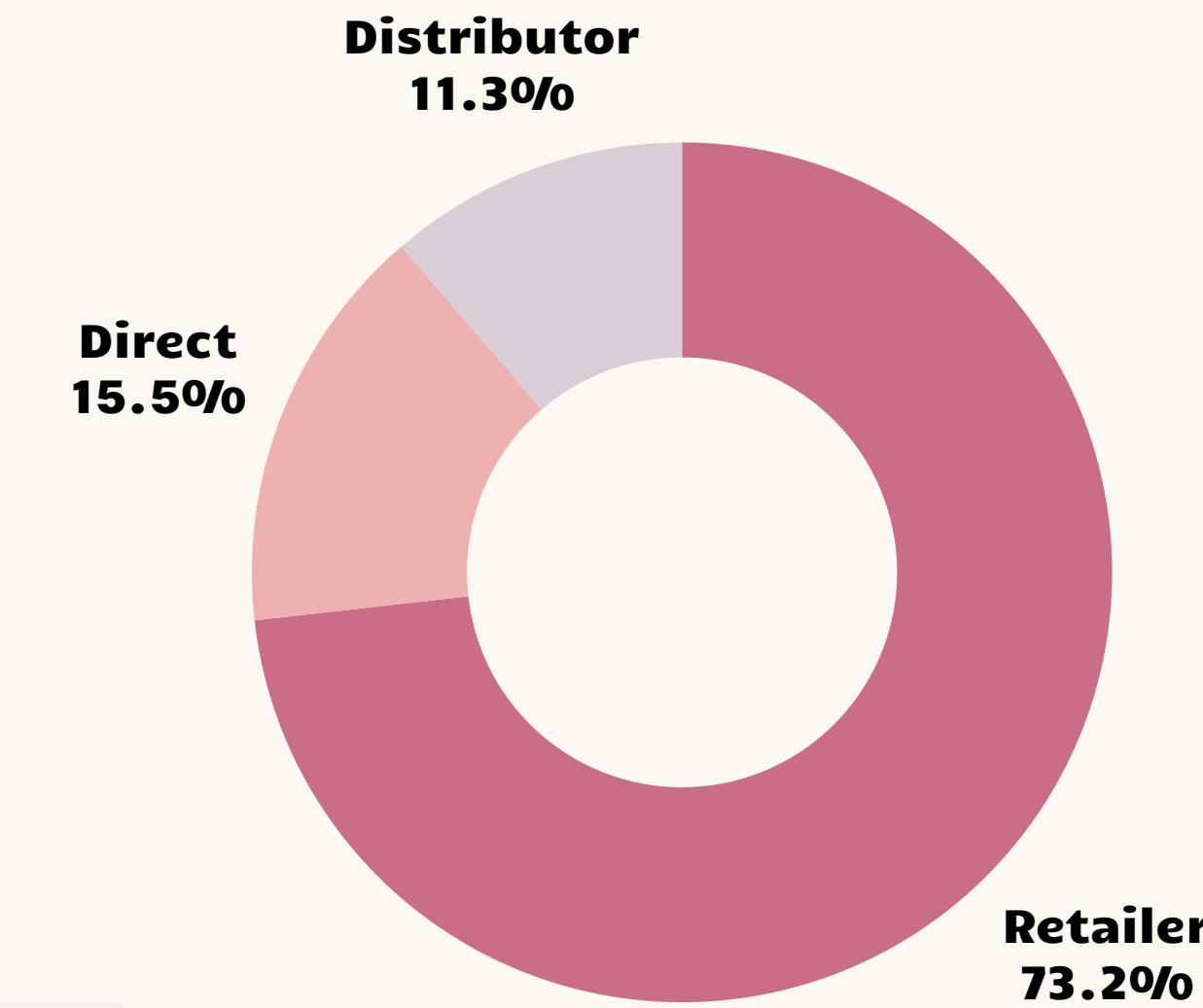
quarter	month	total_sold_quantity
Q1	September	1.76M
Q1	October	2.19M
Q1	November	3.05M
Q2	December	3.18M
Q2	January	1.76M
Q2	February	1.70M
Q3	March	0.24M
Q3	April	0.82M
Q3	May	1.02M
Q4	June	1.56M
Q4	July	1.69M
Q4	August	1.79M

insights

- **Q1 2020** TOPS THE LIST AT ROUGHLY 33.7% OF TOTAL QUANTITY
- POSSIBLY DUE TO SUCCESSFUL **PRODUCT ROLLOUTS** OR **HOLIDAY PROMOTIONS**
- SUGGESTING FURTHER INVESTIGATION TO REPLICATE OR SCALE THOSE TACTICS IN OTHER QUARTERS

9 Which channel helped to bring more gross sales in the fiscal year 2021 and the percentage of contribution?

channel	gross_sales_mln	percentage
Retailer	1924.17	73.22
Direct	406.69	15.48
Distributor	297.18	11.31

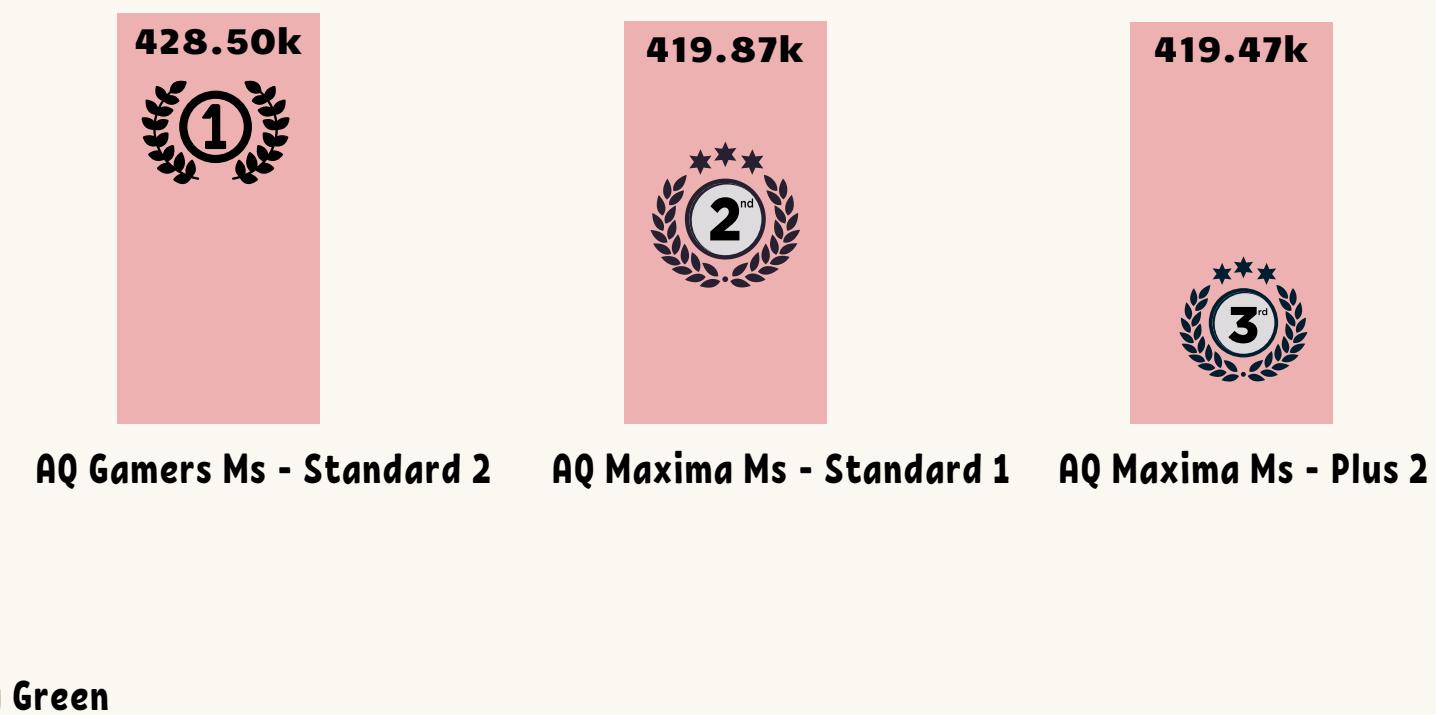
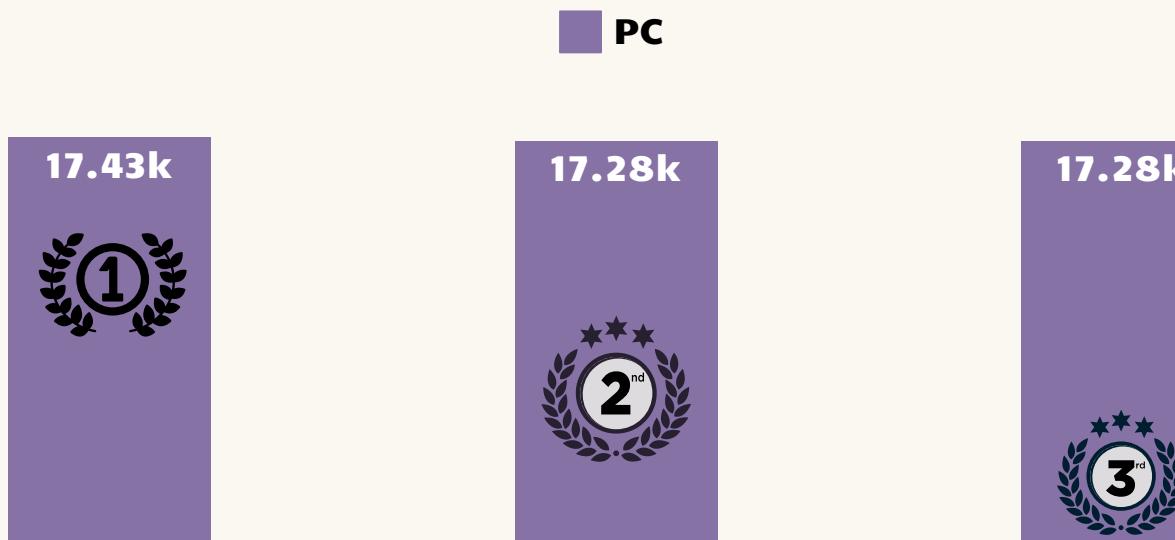


insights

- RETAIL DOMINATES WITH 73.2% OF GROSS SALES.
- WHILE DIRECT AND DISTRIBUTOR CHANNELS REPRESENT 15.5% AND 11.3%, RESPECTIVELY.
- HOWEVER, DIRECT COULD OFFER BETTER MARGINS IF EXPANDED CAREFULLY

division	product	total_sold_quantity	rnk
N & S	AQ Pen Drive 2 IN 1 - Premium	701373	1
N & S	AQ Pen Drive DRC - Plus	688003	2
N & S	AQ Pen Drive DRC - Premium	676245	3
P & A	AQ Gamers Ms - Standard 2	428498	1
P & A	AQ Maxima Ms - Standard 1	419865	2
P & A	AQ Maxima Ms - Plus 2	419471	3
PC	AQ Digit - Standard Blue	17434	1
PC	AQ Velocity - Plus Red	17280	2
PC	AQ Digit - Premium Misty Green	17275	3

10 Get the Top 3 products in each division that have a high total_sold_quantity in the fiscal_year 2021?



THANK YOU!

