AD HOC INSIGHTS

Consumer Goods

PROJECT OBJECTIVE

- The objective of this project is to analyze for AtliQ Hardwares, a leading computer hardware manufacturer, by answering 10 ad-hoc business queries using SQL and transforming those answers into actionable business insights.
- Use SQL queries to extract meaningful data from large datasets
- Translate raw data into clear, concise insights for executive decision-making
- Present findings through a professional, visual presentation tailored to top-level management
- Demonstrate both analytical thinking and business storytelling through dashboards, slides, or recorded walkthroughs
- Ultimately, this project showcases the ability to bridge the gap between data and decision-making, reflecting the core value a data analyst brings to a business.

COMPANY DETAILS

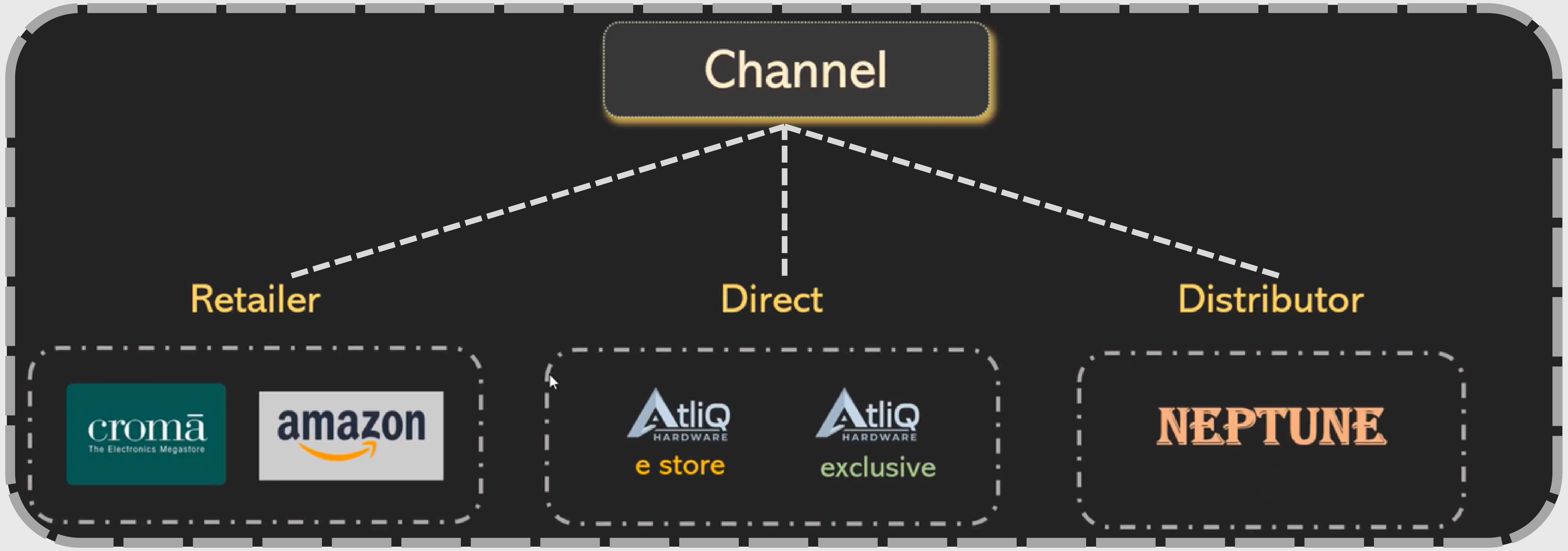
- Atliq Hardware is a computer hardware and accessory manufacturing company

Fiscal Year

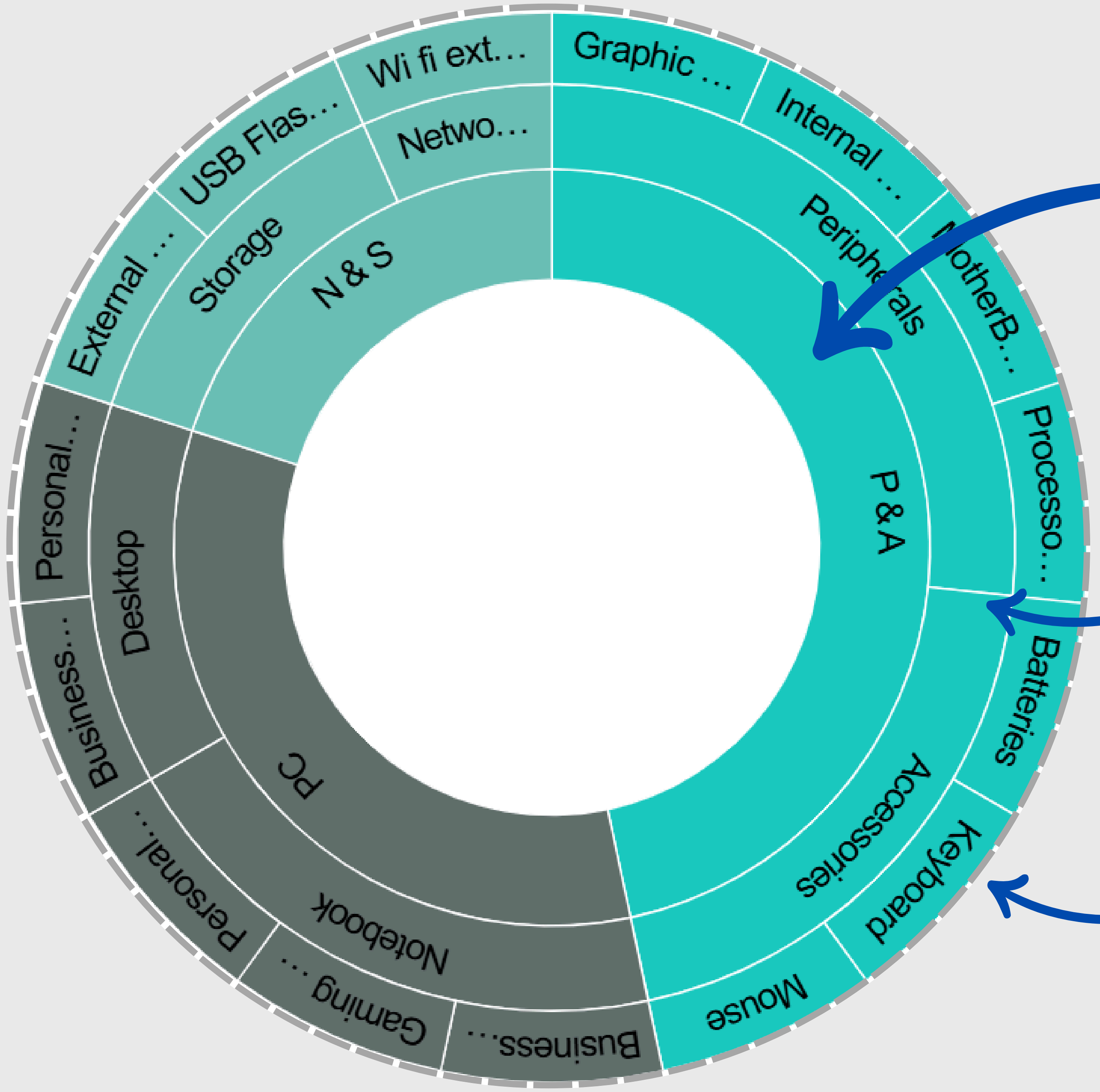
September - August

For Example: FY21

01 September 2021 - 31 August 2022



PRODUCT CATEGORY BREAKDOWN



Inner Circle:
Division

Middle Circle:
Segment

Outer Circle:
Category

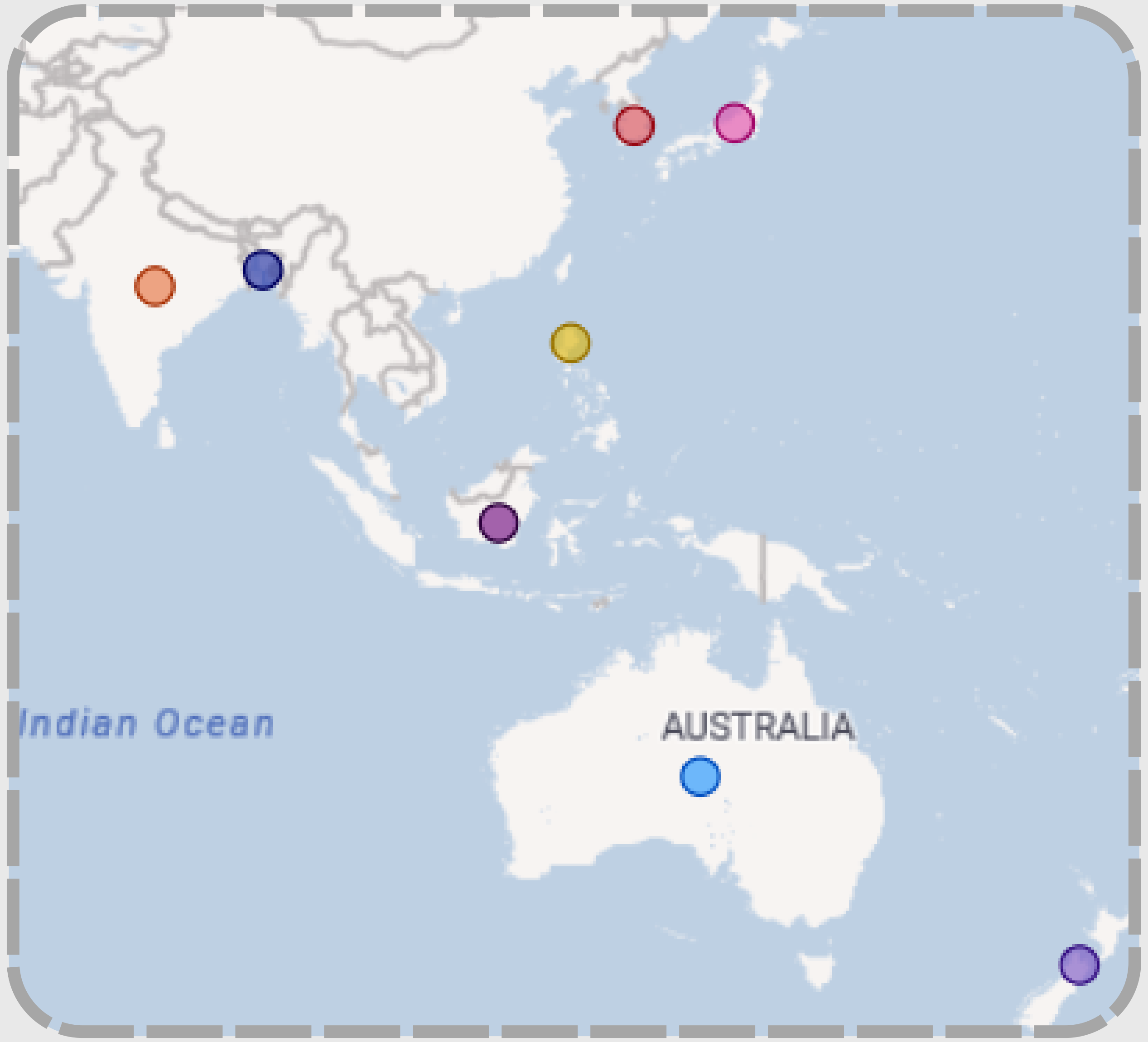
Tools used

MySQL
Power BI (For visualization)
Canva

REQUEST 1:

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

market
India
Indonesia
Japan
Philiphines
South Korea
Australia
Newzealand
Bangladesh



Insights:

- Atliq Exclusive **operates in 8 APAC markets**:
- *India*, *Indonesia*, *Bangladesh*, *Australia*, *New Zealand*, *Japan*, *South Korea*, *and Philippines*
- These include a **mix of emerging economies** (e.g., India, Bangladesh) **and developed market**s (e.g., Japan, Australia).

REQUEST 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_product_2020	unique_product_2021	percentage_chg
245	334	36.33

334

LY: 245 (+36.33%)

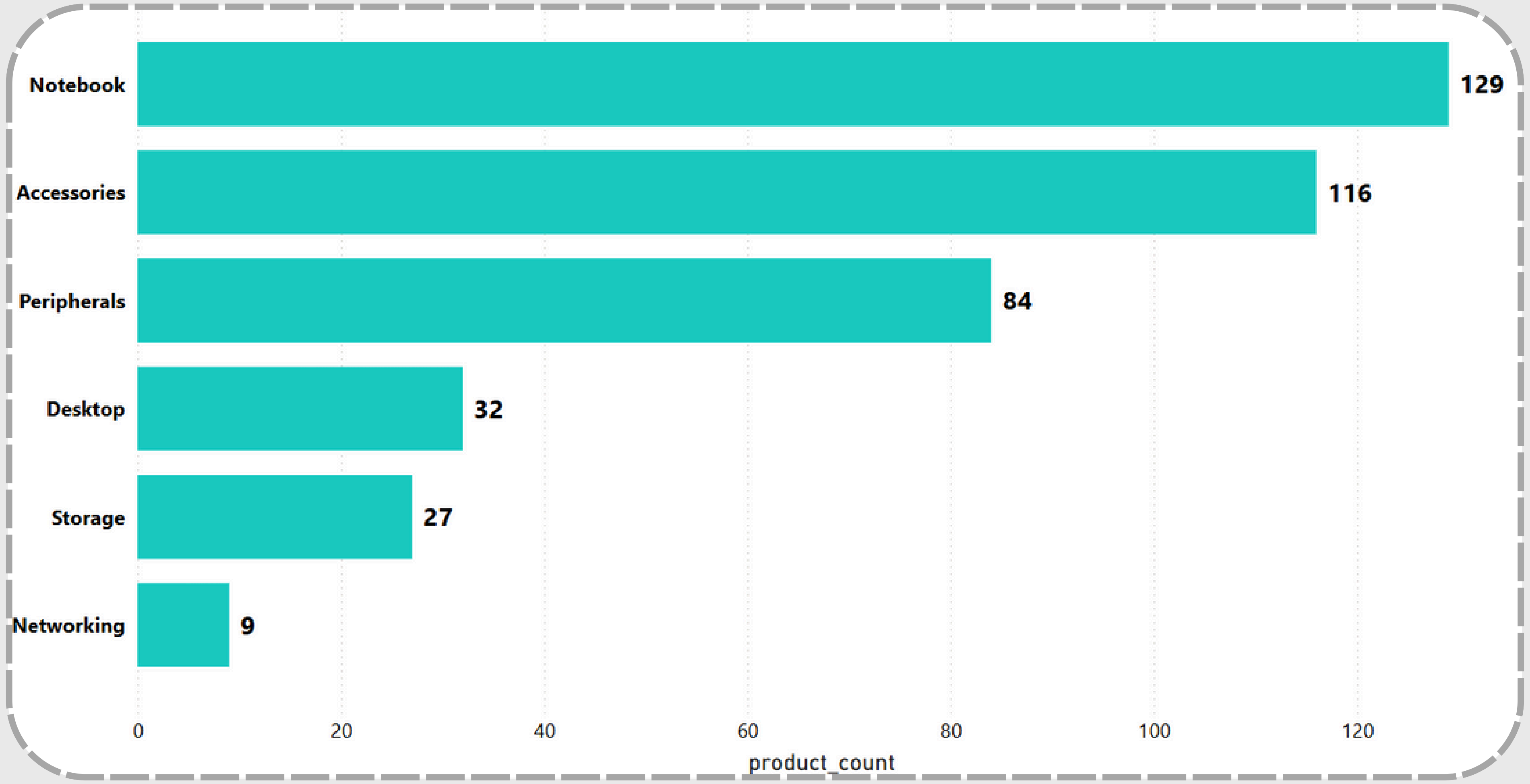
Insights:

- Unique products **grew by 36%** (*245 > 334* from *2020 to 2021*)
- Indicates success of prior product launches
- Opportunity to expand market share by offering more product variety

REQUEST 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



Insights:

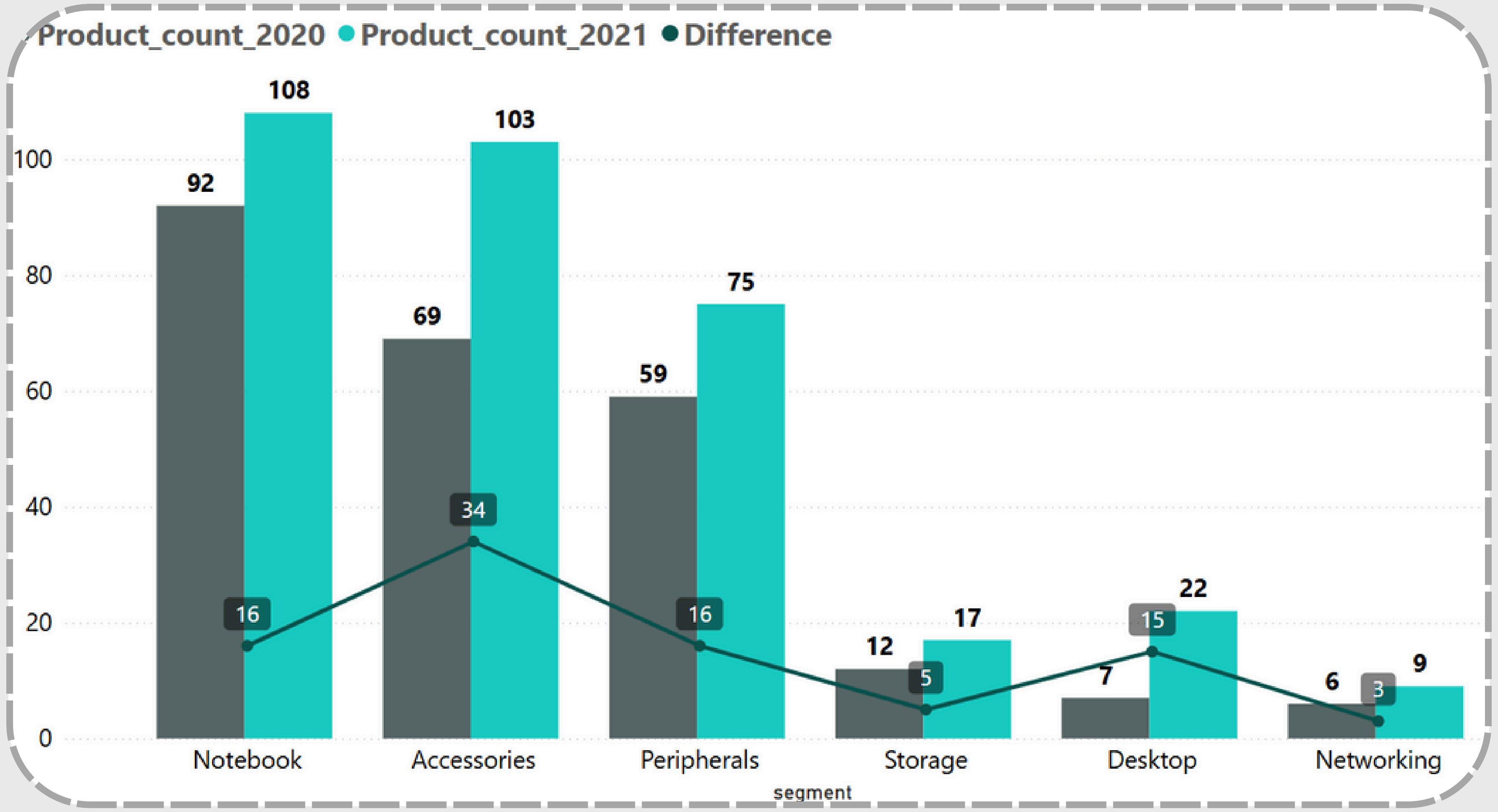
- **Notebook Leads Product Range; Opportunity in Smaller Categories**
- Notebook *(129)* and Accessories *(116)* **lead** in product count; **Networking has only 9**
- Reflects strong demand and strategic focus on high-performing categories
- Continue investing in top segments while exploring growth in underrepresented areas

REQUEST 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	product_count_2020	product_count_2021	difference
Accessories	69	103	34
Notebook	92	108	16
Peripherals	59	75	16
Desktop	7	22	15
Storage	12	17	5
Networking	6	9	3



Insights:

- **Highest Product Growth in Accessories; Opportunity in Low-Growth Segments**
- Accessories *(+34)* led new product growth from 2020–2021; Notebooks & Peripherals followed *(+16)*
- Suggests strong customer demand and strategic focus in top segments
- Continue investing in high-growth areas **while exploring lower-growth categories** *(e.g., Storage, Networking)* **for diversification**

DEEP DIVE INTO Q4:
WHICH SEGMENTS GENERATED THE HIGHEST AVERAGE GROSS MARGIN, AND ARE THERE ANY SEGMENTS WITH HIGH PRODUCT VARIETY BUT LOW PROFITABILITY?

-segment, -product_count, -COGS, -Total gross margin, -Avg GM per Product, -Gross Margin %

Segment	Product_Count	COGS_mln	Total_Gross_Margin_mln	AVG_Gross_Margin_Per_Product	Gross_Margin_%
Notebook	129	89.61	986.34	2,152.74	91.70
Accessories	116	18.54	520.37	1,166.12	96.60
Peripherals	84	27.25	672.06	1,887.32	96.10
Desktop	32	21.77	306.38	6,089.18	93.40
Storage	19	4.15	120.49	1,595.33	96.70
Networking	9	3.67	104.58	2,711.54	96.60

Insights:

- **More Products ≠ More Profit – Focus on High-Margin Segments**
- **Desktop has highest avg. GM/product** *(6.1K)* with **only 32 products**
- Notebook has 129 products but lower margin efficiency (2.15K/product, 91.7%)
- Accessories and Peripherals are balanced but not top in avg. margin
- Optimize Notebook catalog
- Scale Desktop/Networking strategies to improve margins in other segments
- Leverage Accessories & Peripherals for steady mid-tier profitability

REQUEST 5:
GET THE PRODUCTS THAT HAVE THE HIGHEST AND LOWEST MANUFACTURING COSTS. THE FINAL OUTPUT SHOULD CONTAIN THESE FIELDS,

-PRODUCT_CODE, -PRODUCT MANUFACTURING_COST

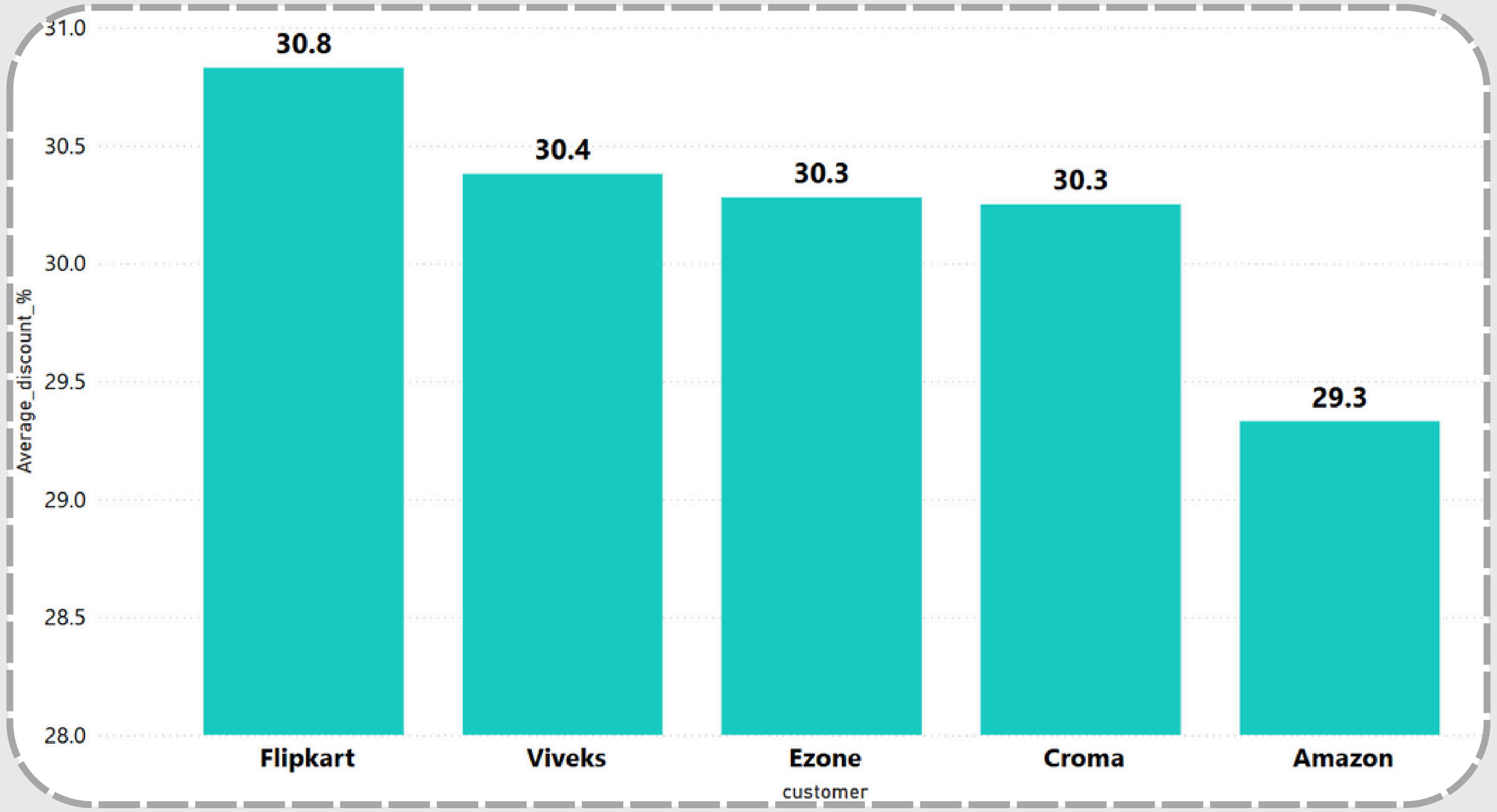
product_code	product	manufacturing_cost
A6121110208	AQ HOME Allin1 Gen 2	263.4207
A2118150101	AQ Master wired x1 Ms	0.8654

Insights:

- **High Cost Gap Suggests Different Market Strategies**
- AQ Home Align 1 Gen 2 has the highest manufacturing cost (263.42); HQ Master Wired X1 MS the lowest (0.865)
- Suggests premium vs mass-market positioning – profitability depends on margin and volume
- Review gross profit and cost structure for high-cost items; scale volume for low-cost items to improve efficiency

REQUEST 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	average_discount_pct
90002009	Flipkart	30.83
90002006	Viveks	30.38
90002003	Ezone	30.28
90002002	Croma	30.25
90002016	Amazon	29.33



Insights:

- **Top Customers Receive Similar Discounts – But Are They Equally Valuable?**
- **Flipkart** *(30.83%)* **leads average discount**; Amazon lowest at **29.33%** – difference within **1.5%**
- Consistent rates suggest a volume-based or strategic pricing model
- Recommend analyzing customer profitability to optimize discount strategy

DEEP DIVE INTO Q6:
WHAT IS THE GROSS SALES CONTRIBUTION OF THE TOP 5 CUSTOMERS WHO RECEIVED THE HIGHEST AVERAGE DISCOUNTS, AND ARE THESE DISCOUNTS JUSTIFIED BY THEIR REVENUE IMPACT?

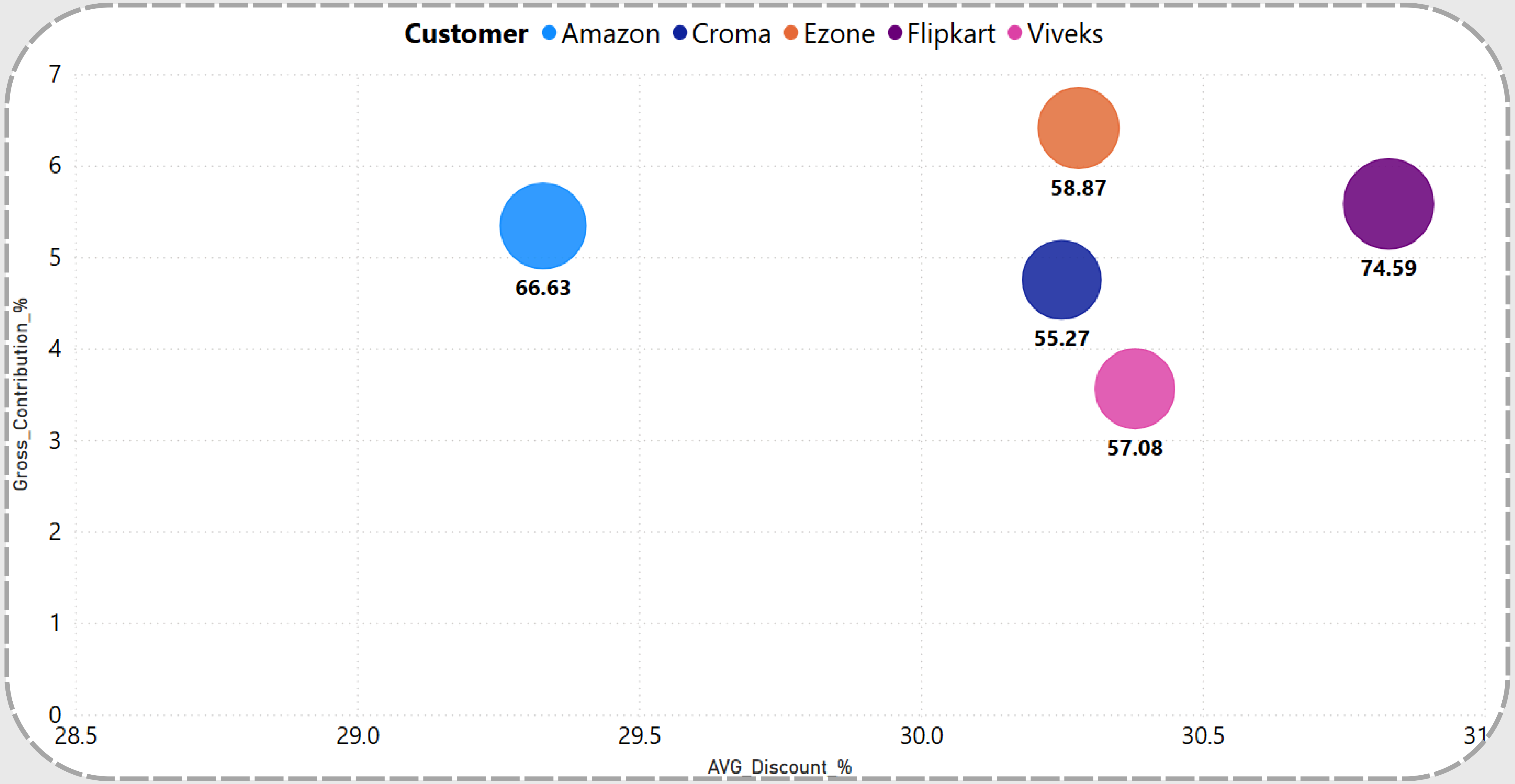
-Customer, -Average Discount %, -Gross Sales, -Net Price, -Gross Sales Contribution %

customer	Average_Discount_%	Gross_Sales_mln	Net_Price_mln	Gross_Sales_Contribution_%
Amazon	29.33	94.28	66.63	5.34
Croma	30.25	79.24	55.27	4.75
Ezone	30.28	84.44	58.87	6.41
Flipkart	30.83	107.84	74.59	5.58
Viveks	30.38	81.98	57.08	3.56

Insights:

- **Discount vs. Contribution: Are Big Discounts Paying Off?**
- Top 5 discounted customers contribute **3.56–6.41% of total gross sales**
- Ezone delivers highest return for its discount (6.41%)
- Viveks underperforms with just 3.56% contribution
- Adjust discounts for low-return accounts
- Maintain or optimize for strong contributors like Flipkart & Amazon
- Use ROI-based discounting to align strategy with revenue impact

DEEP DIVE INTO Q6:



Insights:

- Ezone (6.4%) and Amazon (5.3%) show strong contribution with justified discounts.
- Flipkart (5.6%) has the highest discount (30.83%) but only moderate returns.
- Croma (4.75%) and Viveks (3.56%) contribute less despite similar discounts.
- Reassess discount strategies for underperforming customers to improve profitability.

REQUEST 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:

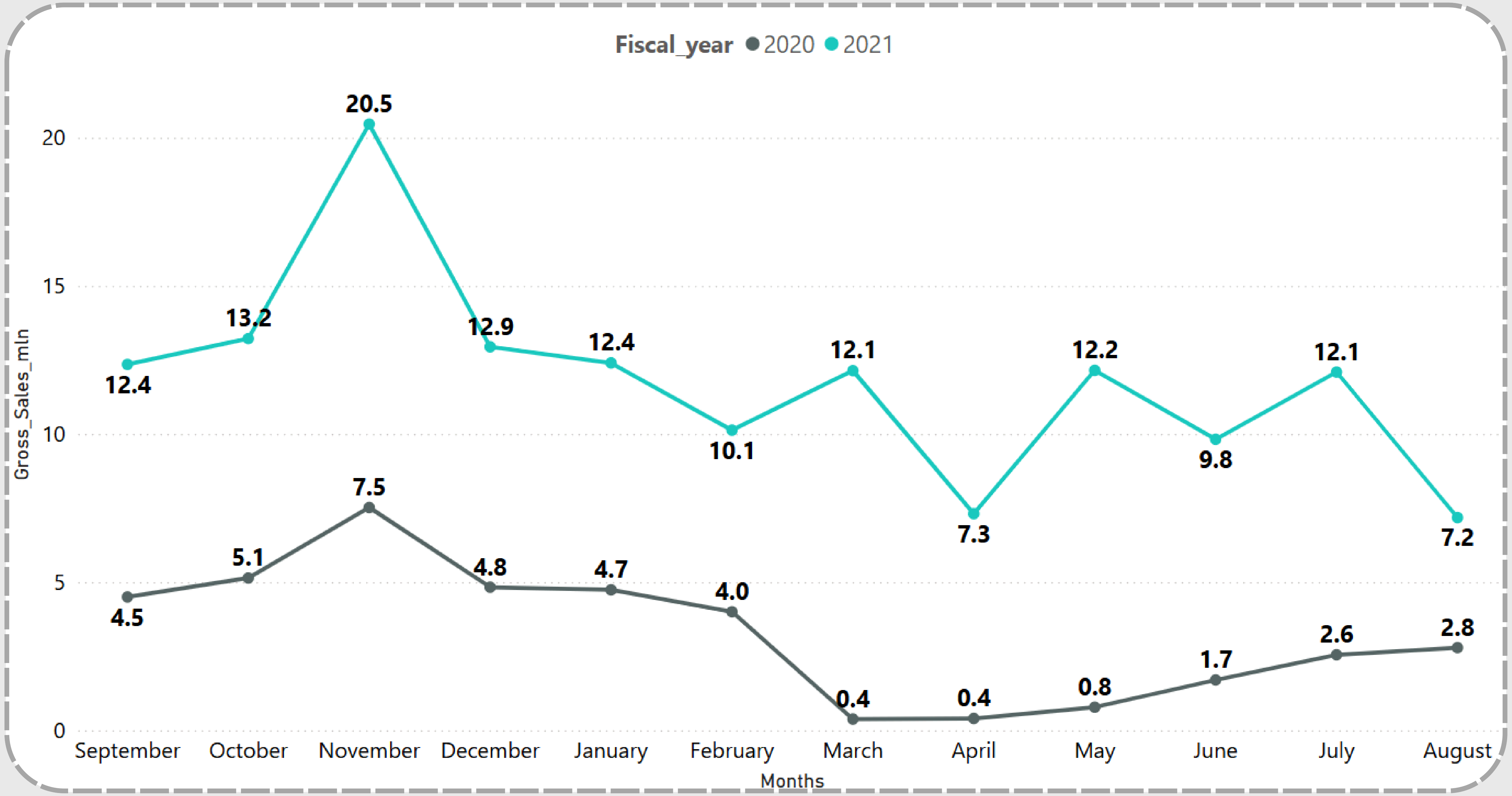
-Month, -Year, -Gross sales Amount

fiscal_year	months	gross_sales_mln
2020	September	4.50
2020	October	5.14
2020	November	7.52
2020	December	4.83
2020	January	4.74
2020	February	4.00
2020	March	0.38
2020	April	0.40
2020	May	0.78
2020	June	1.70
2020	July	2.55
2020	August	2.79

fiscal_year	months	gross_sales_mln
2021	September	12.35
2021	October	13.22
2021	November	20.46
2021	December	12.94
2021	January	12.40
2021	February	10.13
2021	March	12.14
2021	April	7.31
2021	May	12.15
2021	June	9.82
2021	July	12.09
2021	August	7.18

Insights:

- **Monthly Sales Trend: Strong Recovery & Seasonal Highs**
- FY21 sales surged, peaking in **Nov (20.46M) vs. Nov 2020 (7.52M)**
- **Strong months**: *Oct, Nov, Dec, May, July*
- Lowest 2021: **April (7.31M), August (7.18M)** – still higher than 2020 lows
- Double down on Nov–Dec with focused promotions
- Explore strategies to uplift April–June (seasonal dip zone)
- Consider new product launches or targeted campaigns in August and April



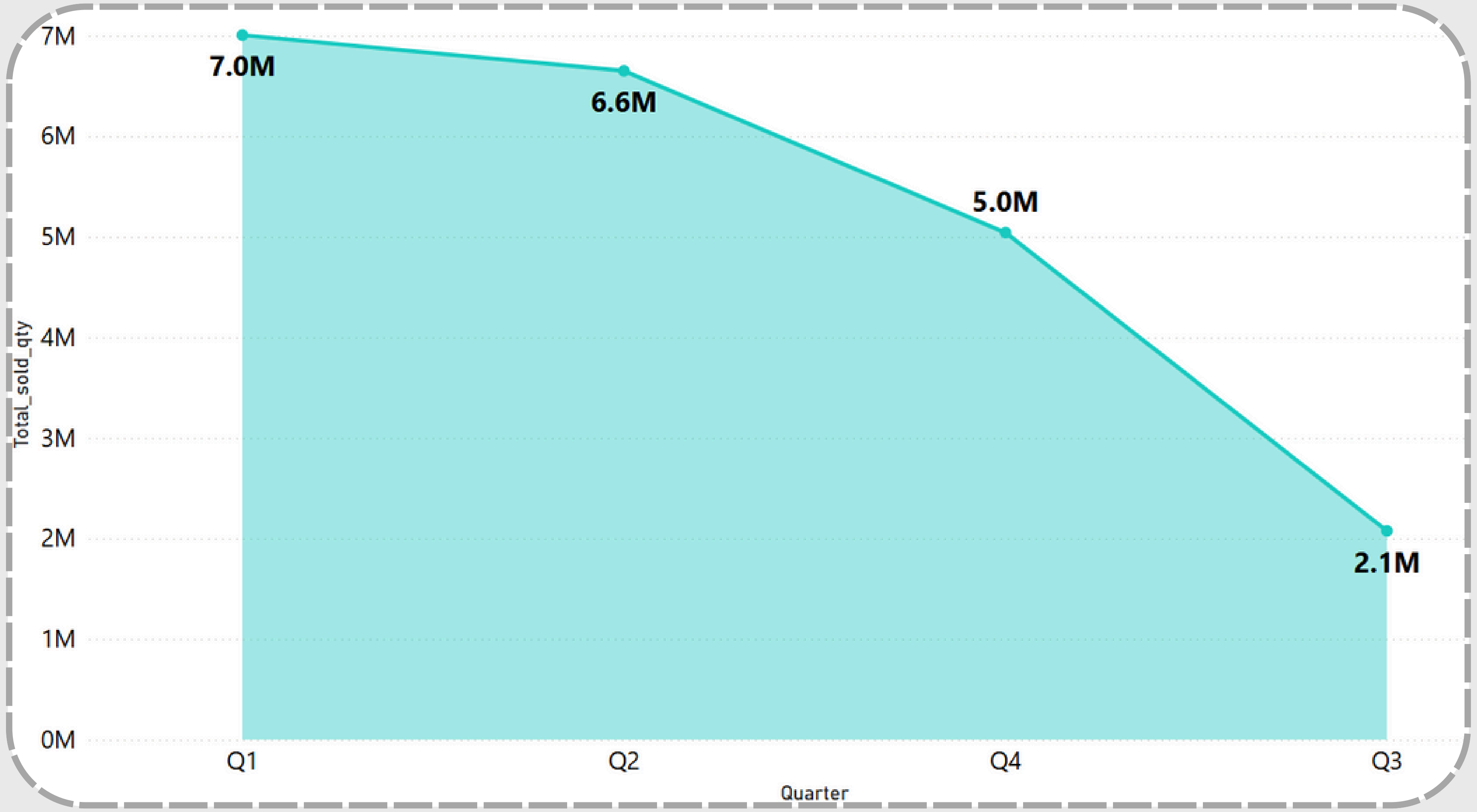
Insights:

- **Monthly Sales Trend: Strong Recovery & Seasonal Highs**
- FY21 sales surged, peaking in Nov (₹20.46M) vs. Nov 2020 (₹7.52M)
- Strong months: Oct, Nov, Dec, May, July
- Lowest 2021: April (₹7.31M), August (₹7.18M) – still higher than 2020 lows
- Double down on Nov–Dec with focused promotions
- Explore strategies to uplift April–June (seasonal dip zone)
- Consider new product launches or targeted campaigns in August and April

REQUEST 8:
IN WHICH QUARTER OF 2020, GOT THE MAXIMUM TOTAL_SOLD_QUANTITY? THE FINAL OUTPUT CONTAINS THESE FIELDS SORTED BY THE

-total_sold_quantity, -Quarter total_sold_quantity

quarter	total_sold_qty
Q1	7005619
Q2	6649642
Q4	5042541
Q3	2075087



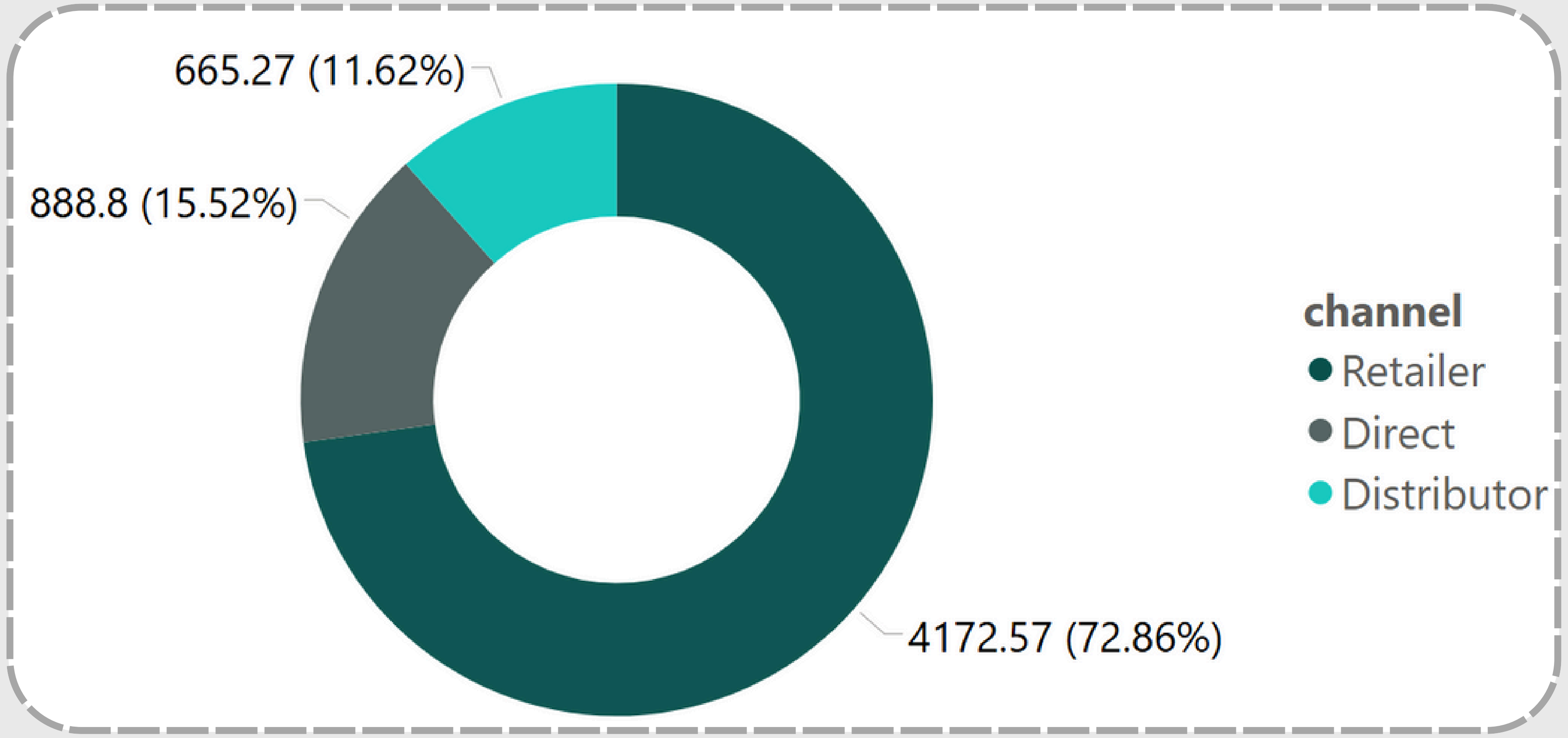
Insights:

- **Q3 Drop Driven by COVID; Strong Seasonal Sales in Q1 & Q2**
- Q1 (7M) and Q2 (6.6M) outperformed; Q3 fell to 2M; partial recovery to 5M in Q4
- **Strong Q1–Q2 sales** likely tied to **seasonal demand** *(e.g., festivals)*
- **Q3 drop** aligns with **COVID lockdowns**; Q4 rebound shows resilience
- Action: Boost Q1–Q2 with targeted promos; improve Q3 via off-season & e-com strategy; maintain contingency plans for future disruptions

REQUEST 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

channel	gross_sales_mln	pct
Retailer	4172.57	72.86
Direct	888.80	15.52
Distributor	665.27	11.62



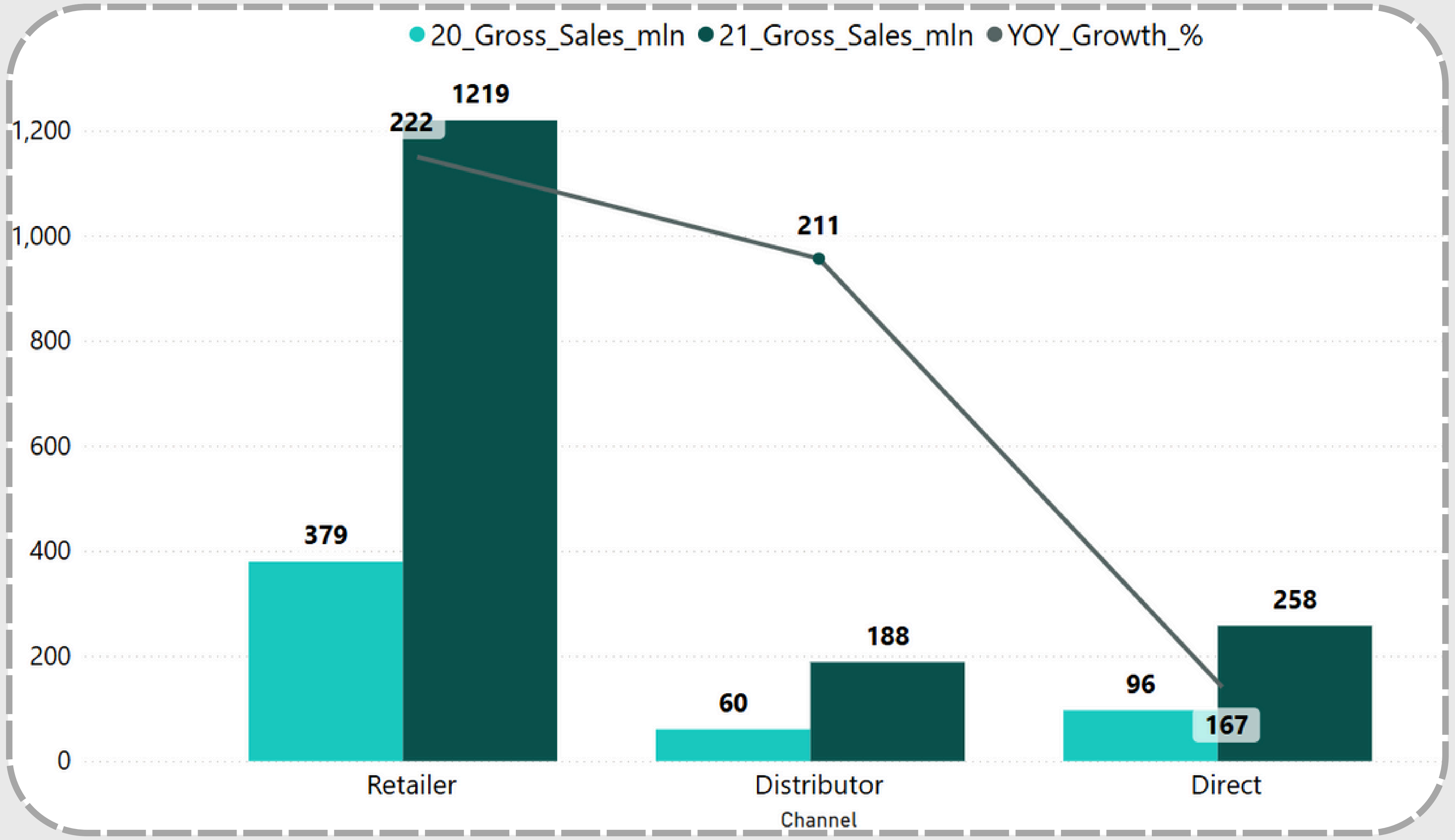
Insights:

- **Retail Dominates Sales – Opportunity to Grow Direct & Distributor Channels**
- Retailers drove 72.86% of FY21 gross sales; Direct: 15.52%, Distributors: 11.62%
- Indicates strong customer trust and reach via retail partners
- Expand Direct & Distributor sales to reduce overreliance on Retail
- Offer value-adds *(e.g., faster delivery, bundles)* in Direct channel instead of price cuts
- Support Distributors with region-specific incentives where Retail is weak

DEEP DIVE INTO Q9:
HOW DID EACH SALES CHANNEL'S GROSS SALES CHANGE FROM 2020 TO 2021, AND WHICH CHANNELS ARE SHOWING THE STRONGEST GROWTH?

-Channel, -Gross Sales 2020, -Gross Sales 2021, -YoY Growth %

channel	20_gross_sales_mln	21_gross_sales_mln	yoy_growth_pct
Retailer	379.07	1219.08	221.60
Distributor	60.44	188.03	211.10
Direct	96.43	257.53	167.06



Insights:

- **Channel Growth: Retailers Lead, Distributors Emerging**
- Retailer sales grew by **222% YoY**, now dominating with 1219 M in 2021
- **Distributor channel surged 211%**, showing rising strategic value
- **Direct channel up 167%** – opportunity to boost with better digital engagement
- Double down on retailer performance
- Expand distributor reach
- Invest in scaling direct channel via digital tools and offers

REQUEST 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

Insights:

- **Top Products by Division (FY21) – Key Drivers by Category**

N & S Division

- Top 3: All Pen Drives (each >670K units)
- High demand for portable, low-cost storage
- Expand product line, offer bundles

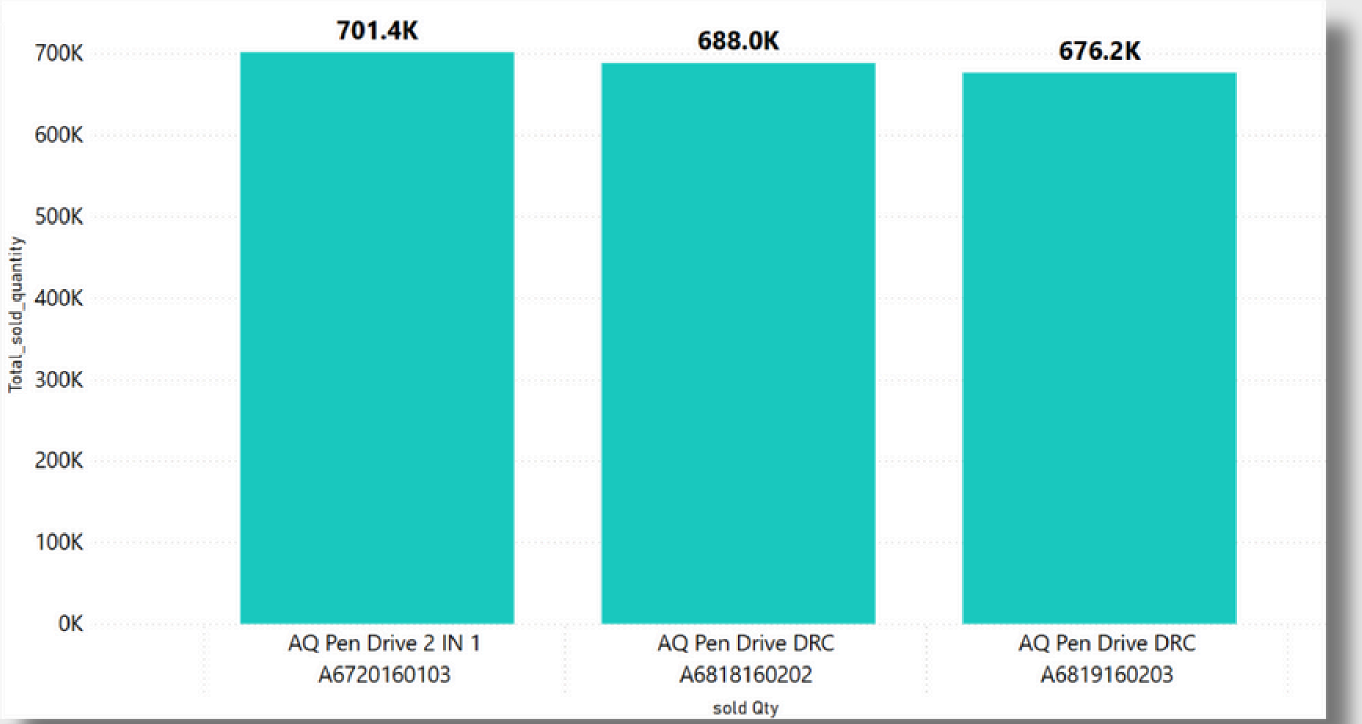
P & A Division

- Top: Gaming & Maxima Mice (~420K units)
- Strong demand for accessories in gaming/work setups
- Leverage gaming trend; develop cross-sell strategies

PC Division

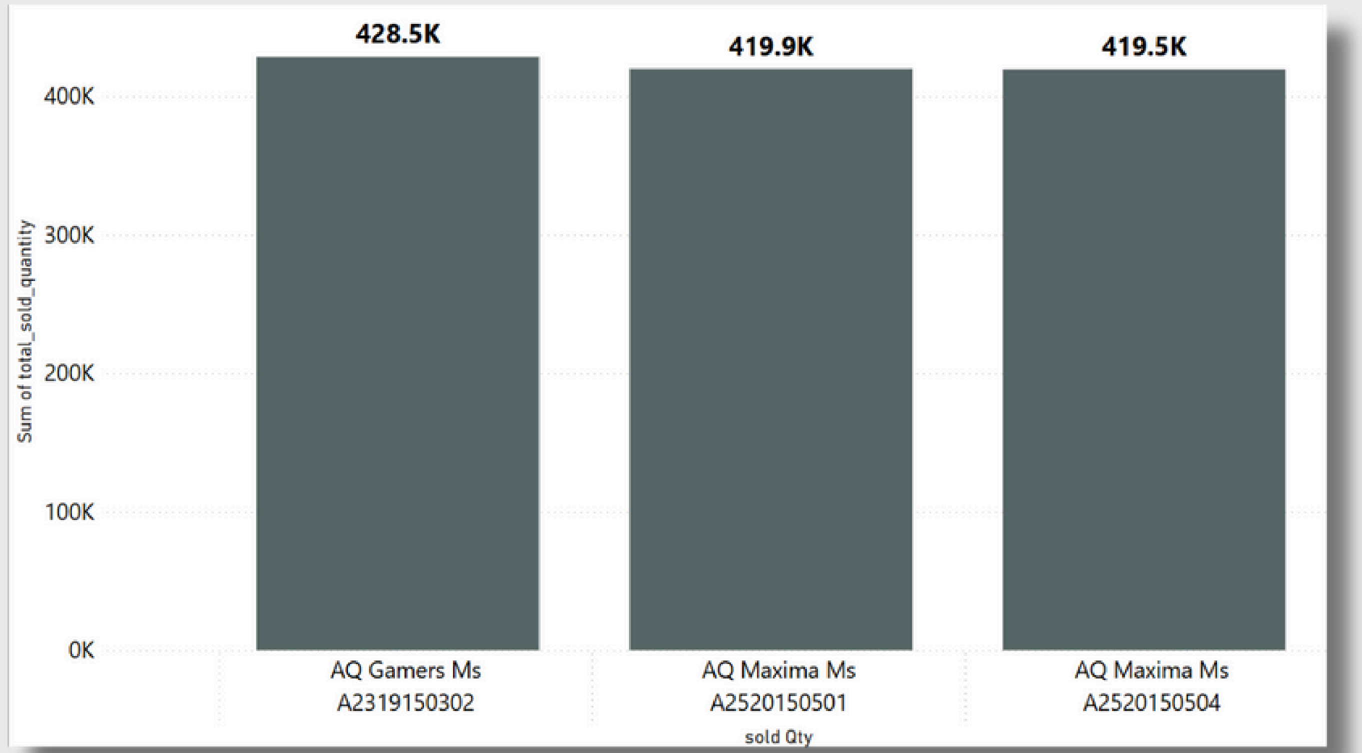
- Top: AQ Digit & Velocity (~17K units each)
- Likely premium/niche, low unit volume
- Optimize pricing or focus on high-margin sales

division	product_code	product	total_sold_quantity	drnk
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



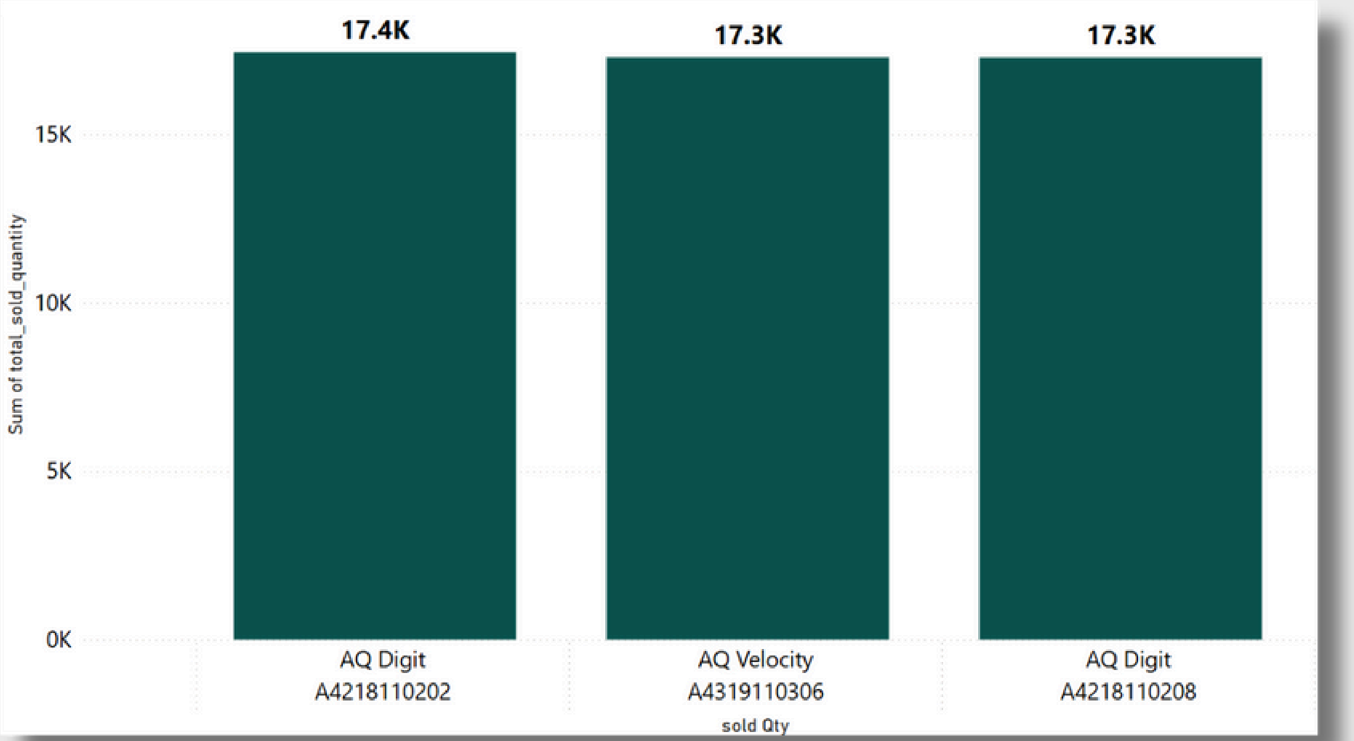
701.4K
688.0K
676.2K
700K
600K
500K
400K
300K
200K
100K
0K
Total_sold_quantity
AQ Pen Drive 2 IN 1
A6720160103
AQ Pen Drive DRC
A6818160202
AQ Pen Drive DRC
A6819160203
sold Qty

N & S



428.5K
419.9K
419.5K
400K
300K
200K
100K
0K
Sum of total_sold_quantity
AQ Gamers Ms
A2319150302
AQ Maxima Ms
A2520150501
AQ Maxima Ms
A2520150504
sold Qty

P & A



17.4K
17.3K
17.3K
15K
10K
5K
0K
Sum of total_sold_quantity
AQ Digit
A4218110202
AQ Velocity
A4319110306
AQ Digit
A4218110208
sold Qty

PC

THANK YOU