Agenda

- Background

- Understanding AtliQ product line , market and strategies

- Familiarization of database

- Ad-hoc request and insights

Background

Atliq Hardware : One of the leading computer hardware producers in India.

The management noticed that they do not get enough insights to make quick and smart data informed decisions.
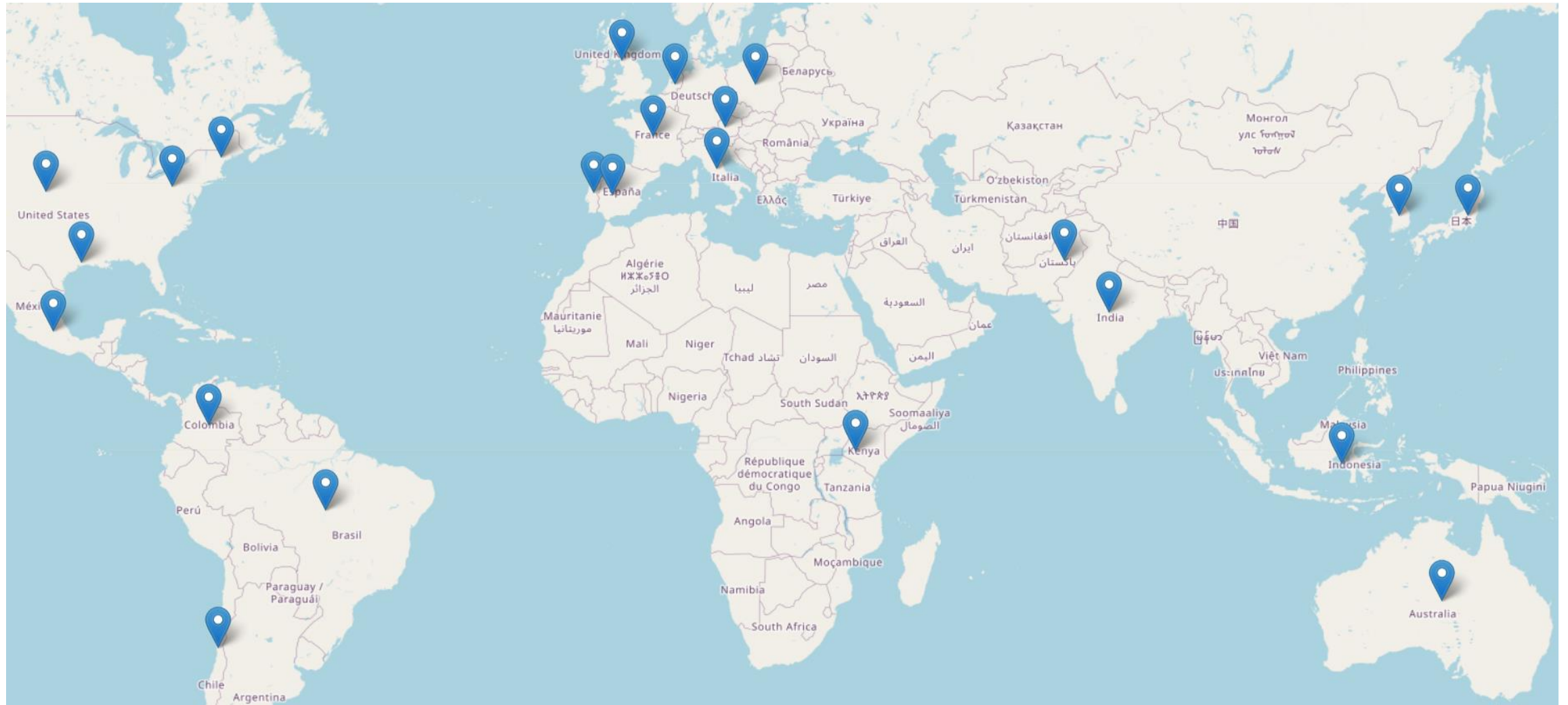
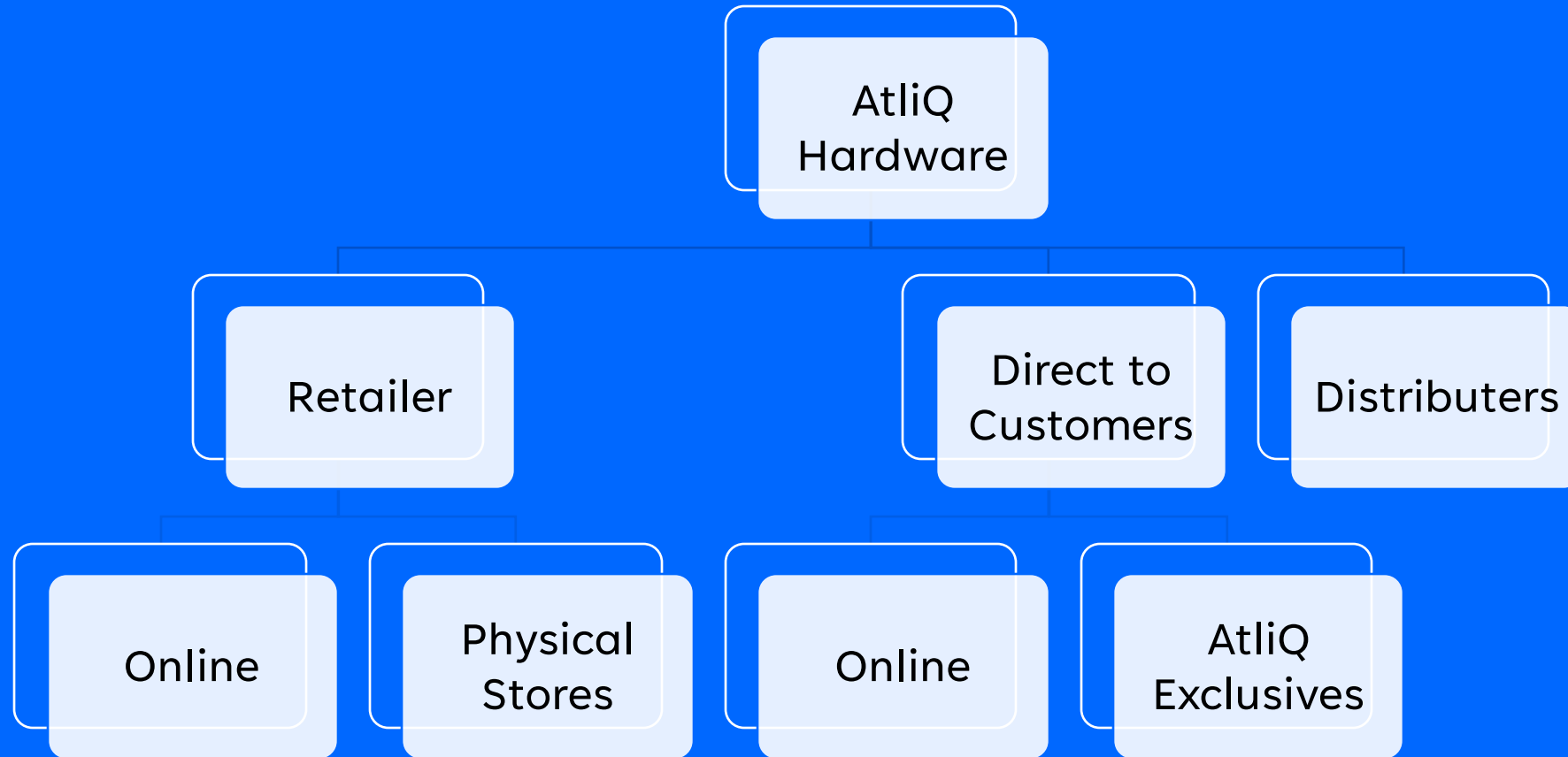There are 10 ad-hoc requests for which the company needs insights.

Run a SQL query to answer these requests. Convert it into visualizations and present the insights to the top level management.

AtliQ Markets

AtliQ Channels

```
                    AtliQ
                   Hardware
                       |
        +--------------+--------------+
        |              |              |
     Retailer    Direct to      Distributers
        |        Customers
        |              |
   +----+----+    +----+----+
   |         |    |         |
 Online  Physical Online  AtliQ
         Stores          Exclusives
```

AtliQ Product Line

PC

Desktop
- Business Laptop
- Personal Laptop

Notebook
- Gaming Laptop
- Business Laptop
- Personal Laptop

P&A

Peripherals
- Graphic Card
- Personal Laptop
- Mother Board
- Processors

Accessories
- Batteries
- Keyboar
- Mouse

N&S

Networing
- Wi Fi Extender

Storage
- External SSD
- USB Flash Drives
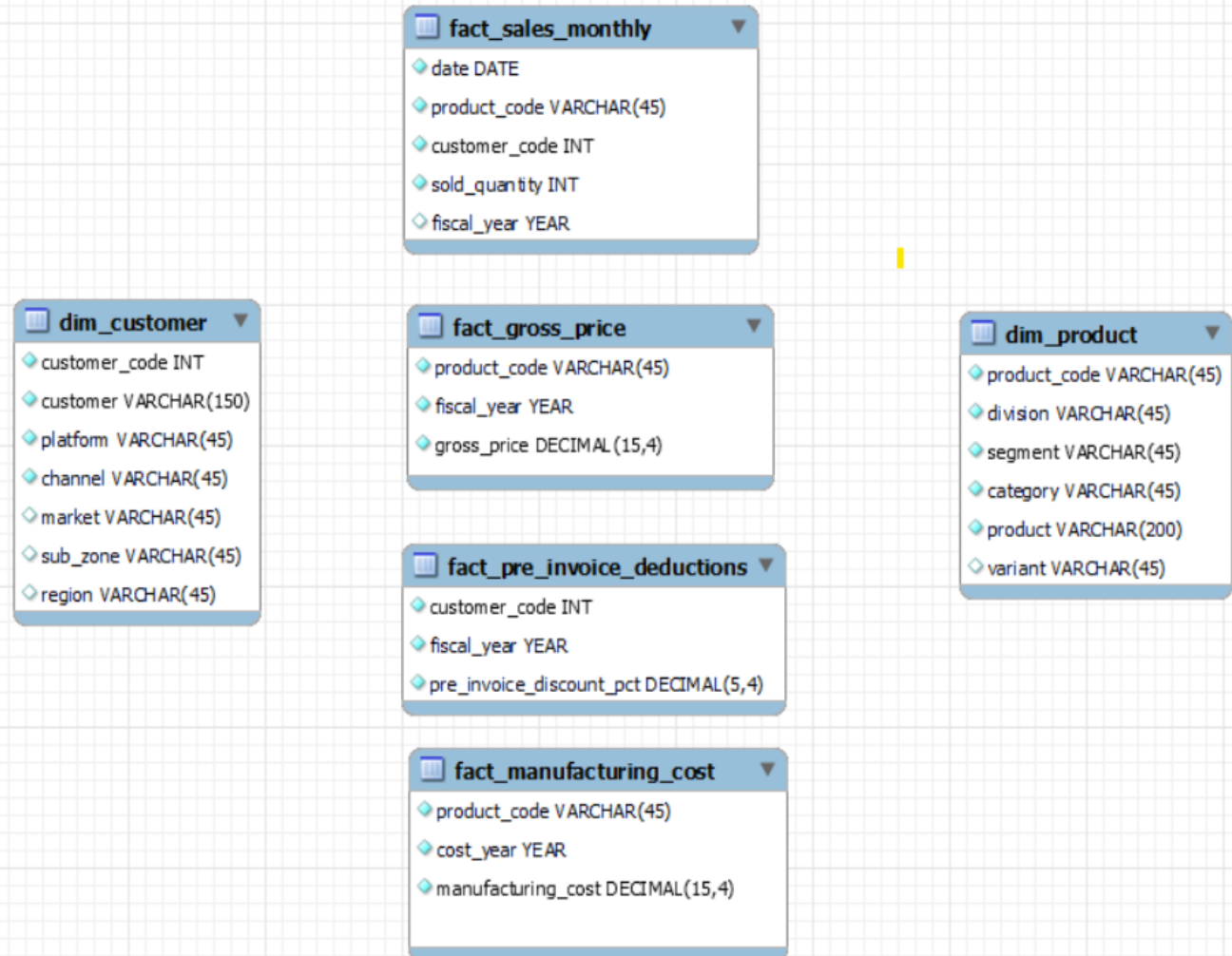
Familiarization of input dataset

Input data consists of sales data for FY 2020 and FY 2021, along with different other dimension tables like customer and product

fact_sales_monthly ▼
- ◇ date DATE
- ◇ product_code VARCHAR(45)
- ◇ customer_code INT
- ◇ sold_quantity INT
- ◇ fiscal_year YEAR

dim_customer ▼
- ◇ customer_code INT
- ◇ customer VARCHAR(150)
- ◇ platform VARCHAR(45)
- ◇ channel VARCHAR(45)
- ◇ market VARCHAR(45)
- ◇ sub_zone VARCHAR(45)
- ◇ region VARCHAR(45)

fact_gross_price ▼
- ◇ product_code VARCHAR(45)
- ◇ fiscal_year YEAR
- ◇ gross_price DECIMAL(15,4)

fact_pre_invoice_deductions ▼
- ◇ customer_code INT
- ◇ fiscal_year YEAR
- ◇ pre_invoice_discount_pct DECIMAL(5,4)

fact_manufacturing_cost ▼
- ◇ product_code VARCHAR(45)
- ◇ cost_year YEAR
- ◇ manufacturing_cost DECIMAL(15,4)

dim_product ▼
- ◇ product_code VARCHAR(45)
- ◇ division VARCHAR(45)
- ◇ segment VARCHAR(45)
- ◇ category VARCHAR(45)
- ◇ product VARCHAR(200)
- ◇ variant VARCHAR(45)

AD-HOC REQUESTS

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

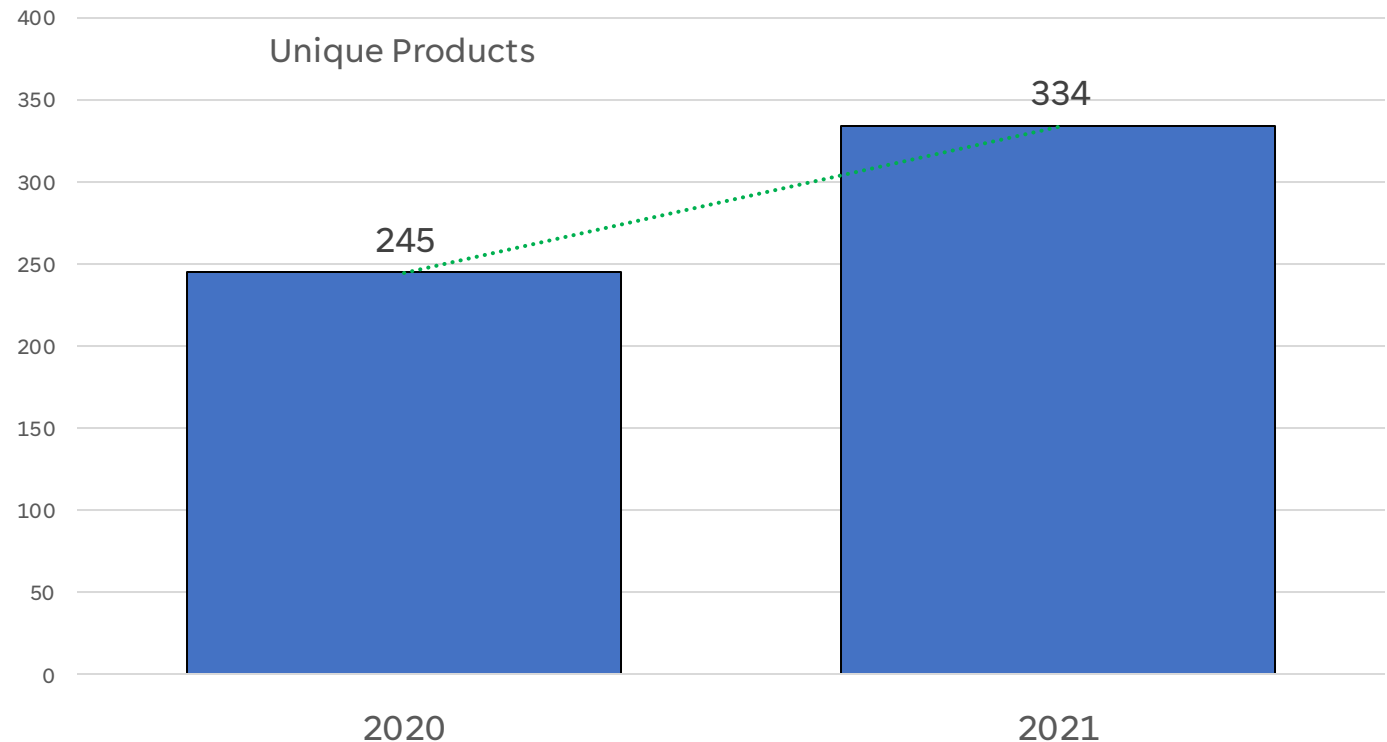| market |
| --- |
| India |
| Indonesia |
| Japan |
| Philiphines |
| South Korea |
| Australia |
| Newzealand |
| Bangladesh |

Insights 1 : AtliQ Exclusive has successfully penetrated markets within key economic powerhouses in the APAC region. We are currently exploring potential expansion opportunities in China and the Middle East.

Task 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 and percentage change

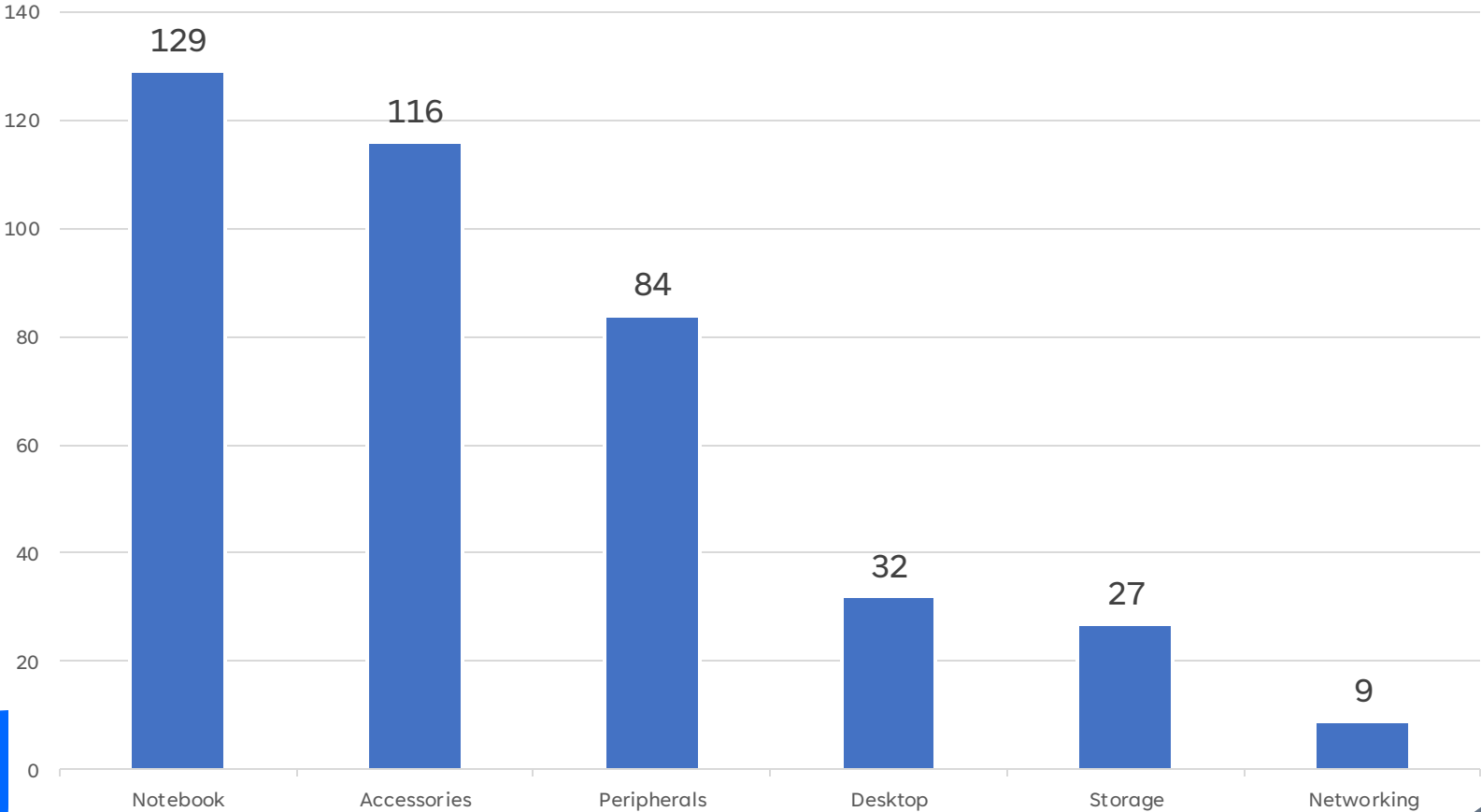| unique_products_2020	unique_products_2021	percentage_change
245	334	36.3265

Unique Products

Ad hoc Insights

Insights 2 : We have observed a notable 36% increase in the number of unique products in 2020 as compared to 2021. This expansion enhances the diversity of our product portfolio in the market, reflecting our commitment to staying abreast of emerging trends.

Task 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 segment and product_count

Product Count by Segment

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

Ad hoc Insights

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Task 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 and difference

| segment	products_2020	products_2021	difference
Notebook	92	108	16
Accessories	69	103	34
Peripherals	59	75	16
Desktop	7	22	15
Storage	12	17	5
Networking	6	9	3

Chart Title

Ad hoc Insights

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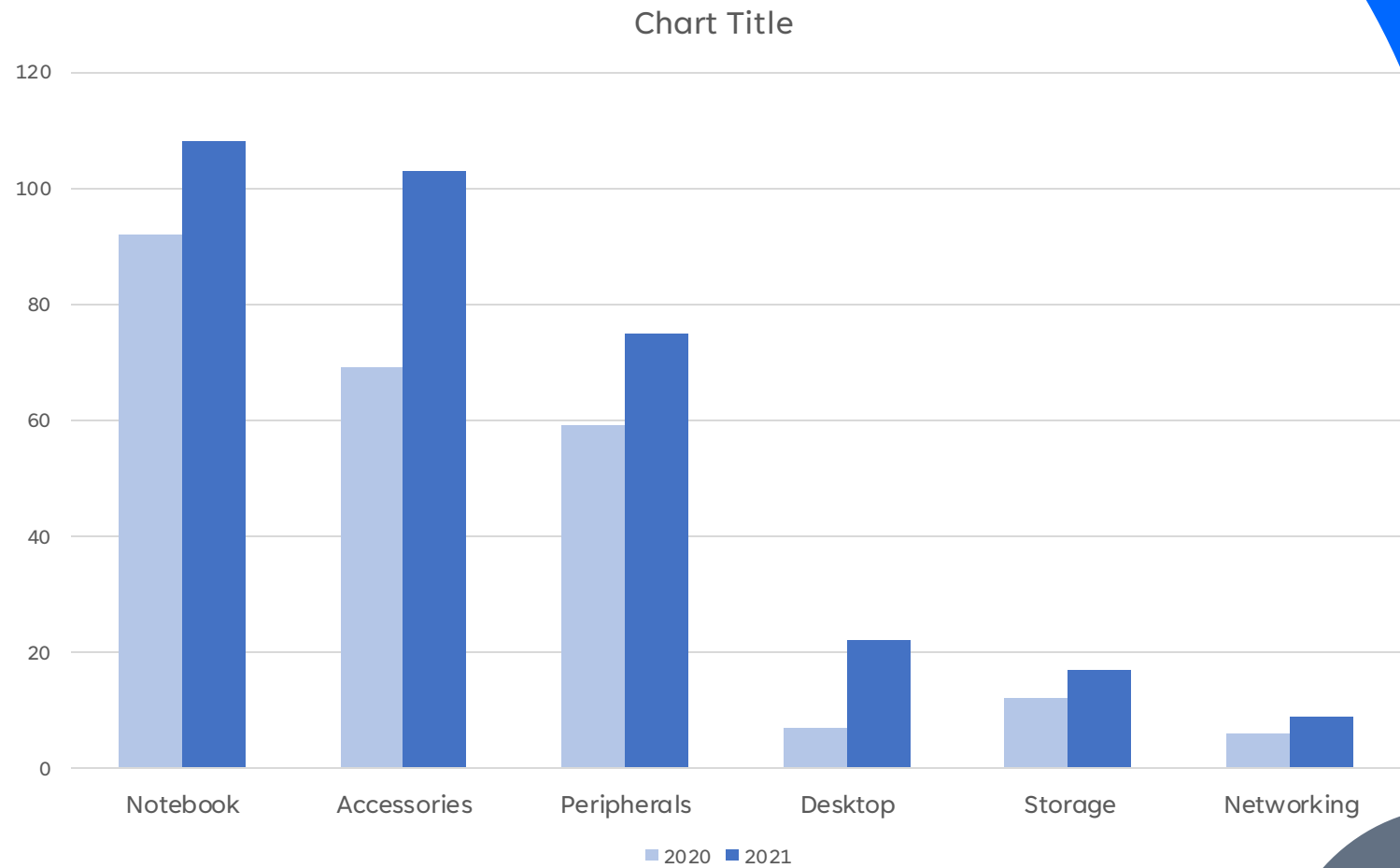
Insights 3&4 : In 2021, our major product segments—Accessories, Desktops, and Notebooks—saw significant growth, adding 15-30 new products to our portfolio of approximately 100 items. Among these, Desktop and Storage categories expanded by 30 products, while Networking introduced 9 new items. Notably, the Networking and Storage segments experienced a more modest increase, with 3-5 new products each in 2021.
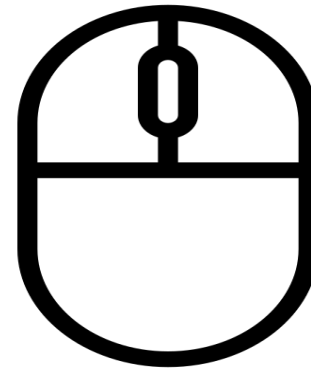
Task 5: Get the products that have the highest and lowest manufacturing costs. The final output should contain these fields, product_code ,product and manufacturing_cost

product_code	product	manufacturing_cost
A6120110206	AQ HOME Allin1 Gen 2	240.5364
A2118150101	AQ Master wired x1 Ms	0.8920
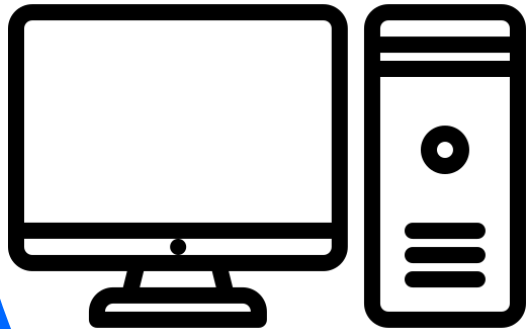
AQ Home Allin 1 Gen 2
Manufacturing Cost:
$ 240.56

AQ Master wired x1 Ms
Manufacturing Cost:
$ 0.8920

Task 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
and average_discount_percentage

customer	customer_code	pre_invoice_discount_pct
Flipkart	90002009	30.83
Viveks	90002006	30.38
Ezone	90002003	30.28
Croma	90002002	30.25
Amazon	90002016	29.33

Insights 6: We have implemented a pre-invoice discount averaging 30% for our retail customers, including online platforms such as Amazon, Flipkart, and Ezone, as well as major brick-and-mortar stores like Viveks and Croma. This strategic approach not only fosters customer loyalty but also contributes to an enhanced cash flow for our business.

Task 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 and Gross sales Amount


Gross Sales
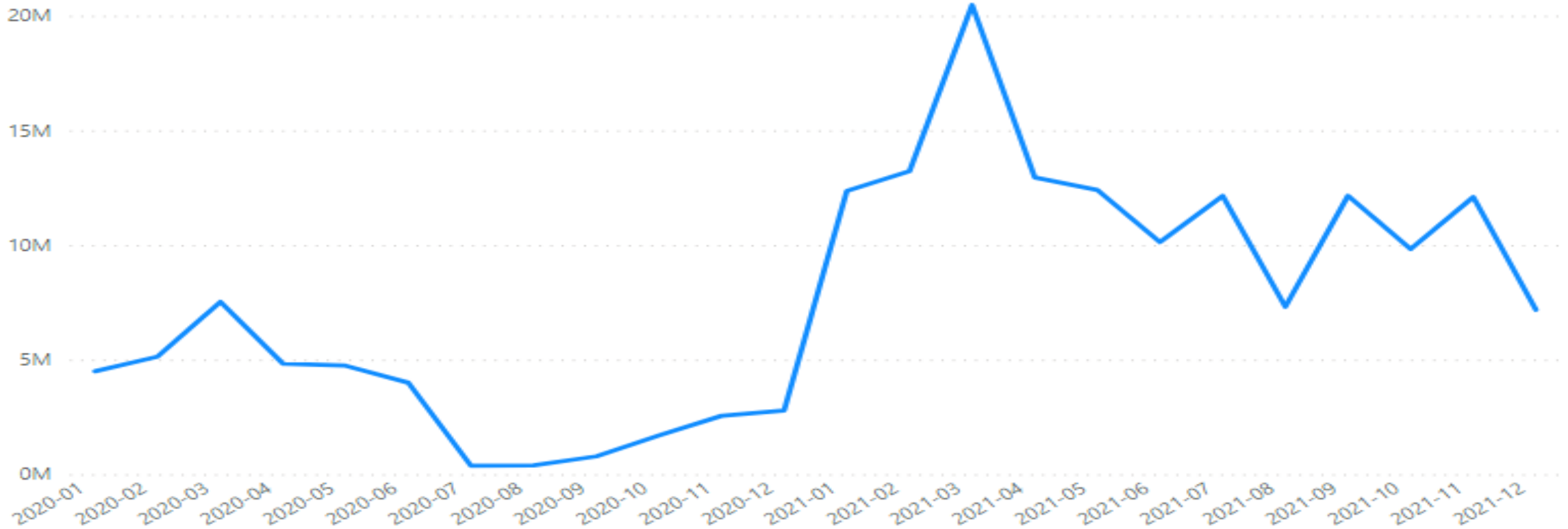
Insights 7: In the first three months, gross sales rose to 7.5 million, the highest in 2020. Subsequent quarters saw a decline, but in the last quarter of 2020 and into 2021, there was a resurgence, peaking at 20 million in the third month of 2021. Throughout the rest of 2021, gross sales stabilized around 10 million.

Task 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 and total_sold_quantity

| quarter	total_sold_quantity
Q1	14.48 M
Q2	13.81 M
Q3	10.98 M
Q4	10.89 M

Sold Qty by Quarter
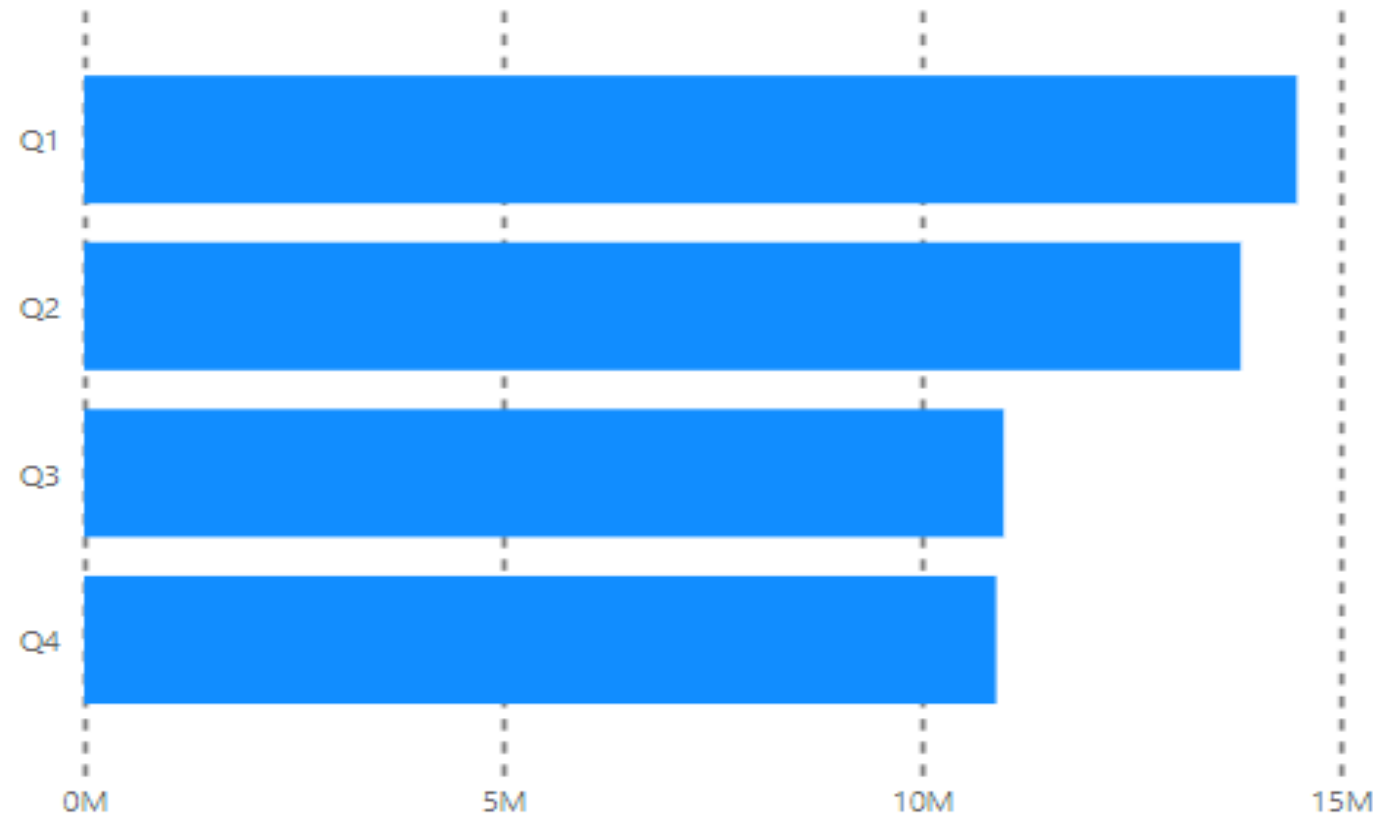
Insights 8: The peak in total sales quantity occurred in Q1 of 2021, reaching a maximum of 14.84 million units. However, in the subsequent quarters, there was a decline, reaching its lowest point of 10.89 million units in Q4.

Task 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 and percentage

channel	gross_sales	percentage
Direct	257532002.6536	15.47073932
Retailer	1219081639.9472	73.23398284
Distributor	188025630.9348	11.29527784

Gross Sales percentage contribution by Channel
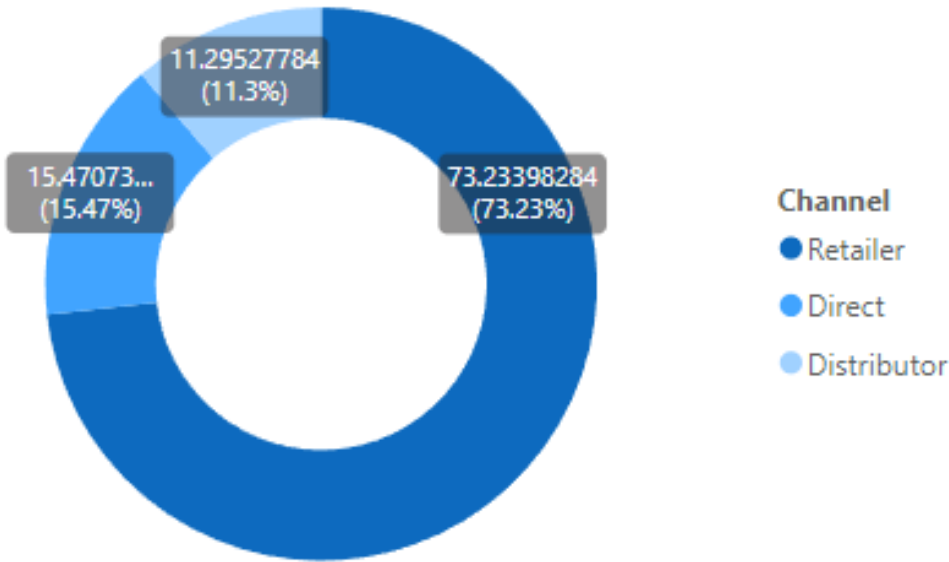
Insights 9: The majority of total gross sales, constituting 73%, are generated through retail channels, with the remaining portion evenly distributed between direct sales and sales through distributors.

Task 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_code	product	division	total_qty	DenseRank
A6720160103	AQ Pen Drive 2 IN 1	N & S	1159222	1
A6818160201	AQ Pen Drive DRC	N & S	1128104	2
A6419160301	AQ Clx1	N & S	729696	3
A2319150302	AQ Gamers Ms	P & A	683634	1
A2219150204	AQ Master wireless x1 Ms	P & A	682321	2
A2319150306	AQ Gamers Ms	P & A	681531	3
A4218110202	AQ Digit	PC	26012	1
A4319110306	AQ Velocity	PC	25978	2
A4118110107	AQ Aspiron	PC	25963	3

Top 3 products in each division

N&S

- 1.AQ Pen Drive 2 IN 1
- 2.AQ Pen Drive DRC
- 3.AQ Clx1

P&A

- 1.AQ Gamers Ms
- 2.AQ Master wireless x1 Ms
- 3.AQ Gamers Ms

PC

- 1.AQ Digit
- 2.AQ Velocity
- 3.AQ Aspiron

Thank you

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