



ATLIQ HARDWARES

Consumer Goods Ad_Hoc Insights

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Agenda

Objective

Ad-Hoc Requests

Queries

Visualization

Insights

Suggestions

Objective

Company Overview:-

AtliQ Hardwares is a leading computer hardware manufacturer based in India with a significant market footprint in various international territories.

Current Challenge:-

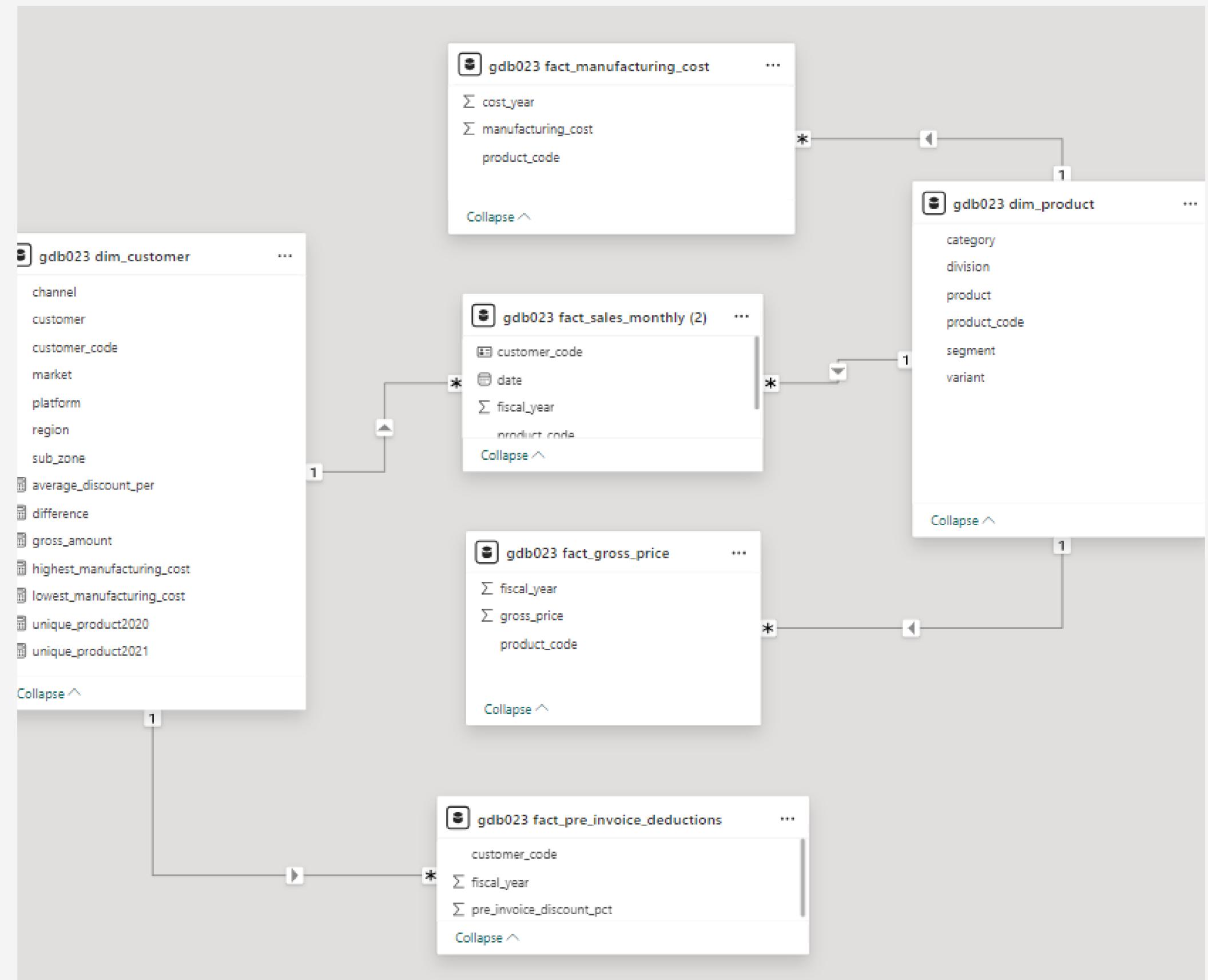
The executive team has identified a critical gap in the availability of actionable insights required to make swift, informed business decisions.

Strategic Initiative:-

To address this issue, we propose a structured approach to generate insights from ten key ad-hoc data requests. This will involve:

1. Data Extraction: Utilizing SQL queries to retrieve useful data from our databases.
2. Data Visualization: Converting the extracted data into clear, actionable visualizations.
3. Insight Generation: Presenting these visualizations to the top management to inform decision-making.

Database Schema



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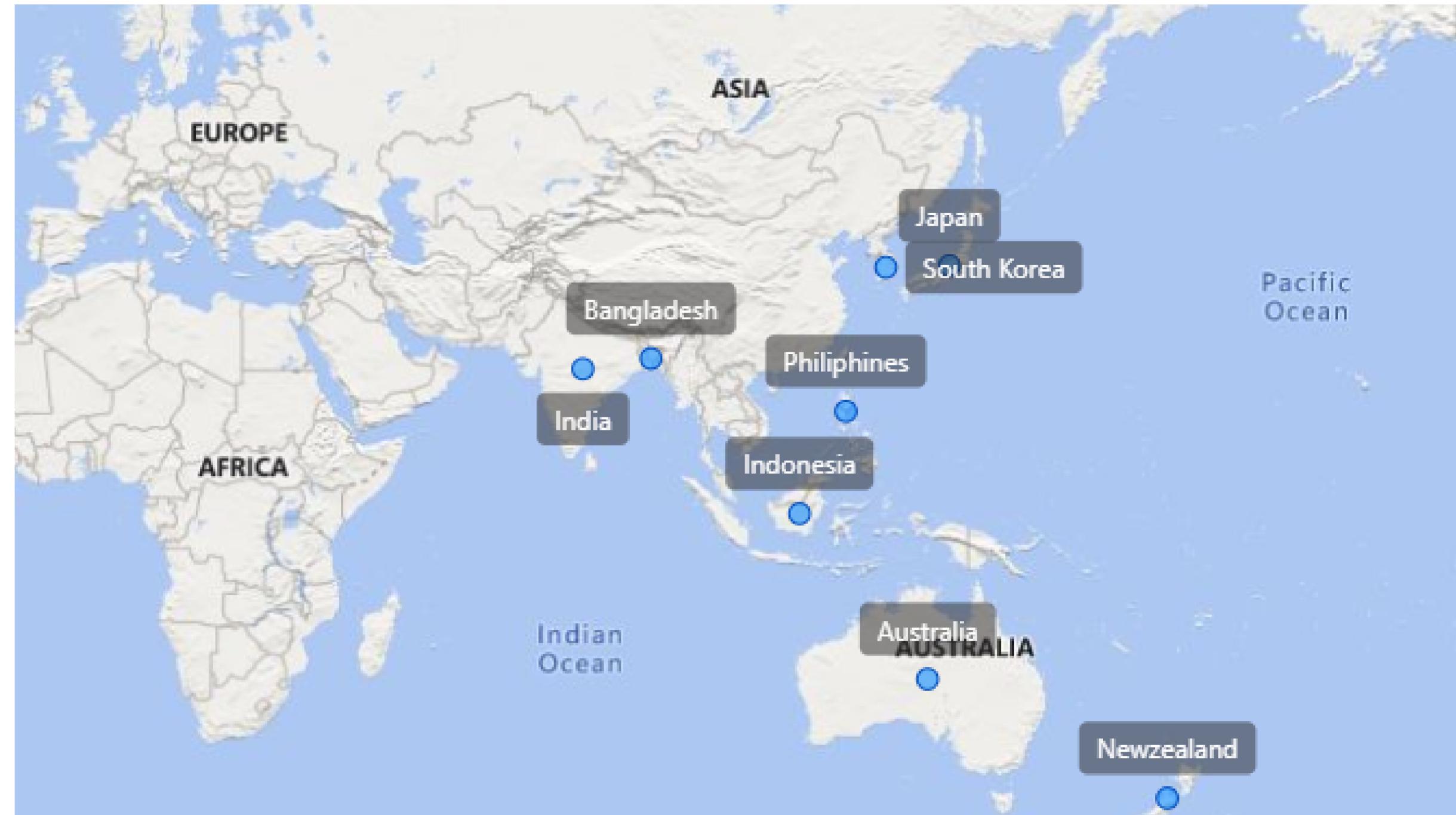
1. Provide the list of markets in which customer "Atliq Exclusive" operates its business in the APAC region.

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

market
India
Indonesia
Japan
Philippines
South Korea
Australia
Newzealand
Bangladesh

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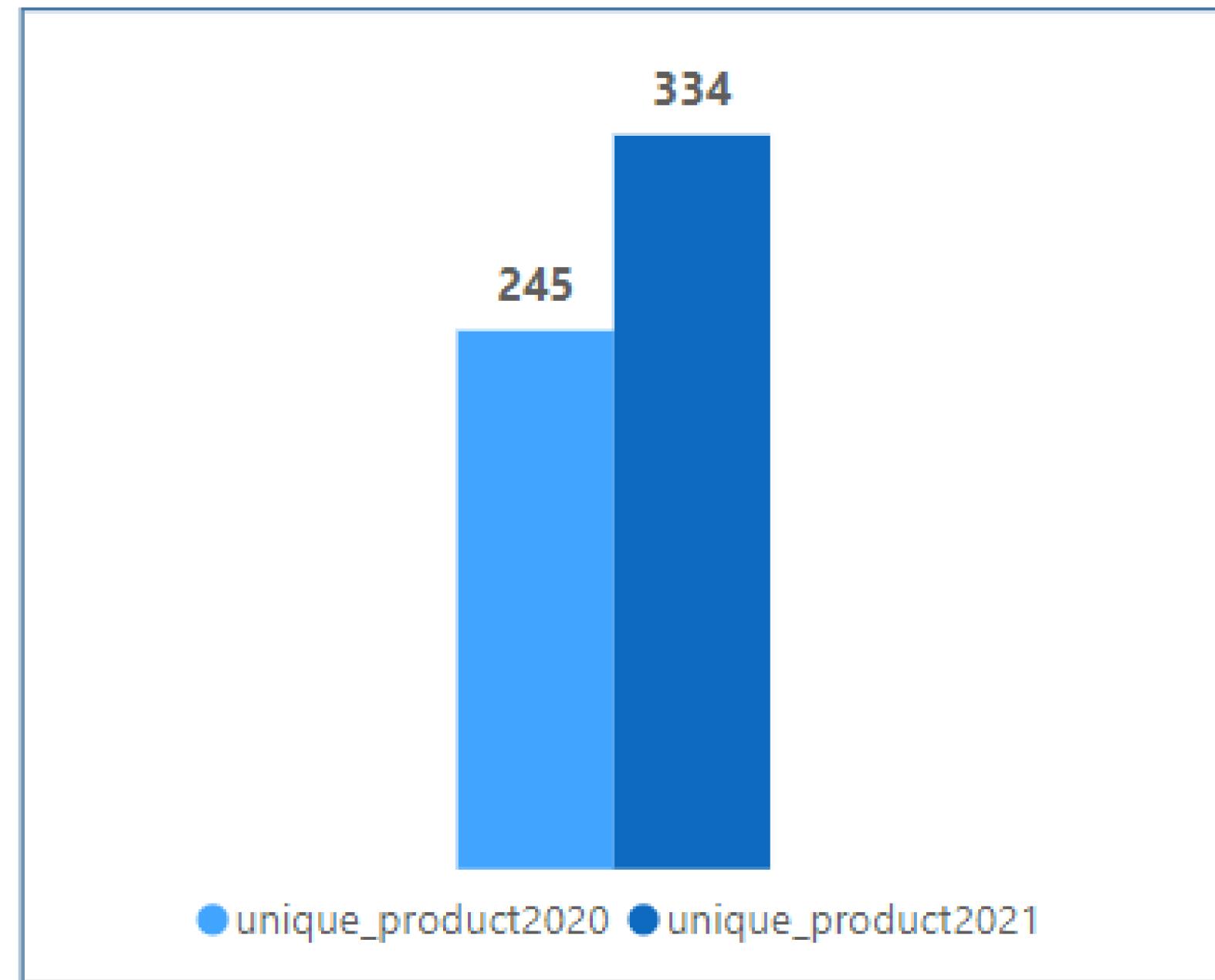
2. What is the percentage of unique product increase in 2021 vs. 2020?

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```
WITH CTE1 AS
(
    SELECT Count(DISTINCT product_code) AS unique_product_2020
    FROM fact_sales_monthly
    WHERE fiscal_year="2020" ),
CTE2 AS
(
    SELECT Count(DISTINCT product_code) AS unique_product_2021
    FROM fact_sales_monthly
    WHERE fiscal_year="2021" )

SELECT c1.unique_product_2020,c2.unique_product_2021,
Round((c2.unique_product_2021-c1.unique_product_2020)*100/c1.unique_product_2020,2)
AS percentage_chg
from CTE1 c1 join CTE2 c2 ;
```

	unique_product_2020	unique_product_2021	percentage_chg
▶	245	334	36.33



Percentage of unique product increase in 2020
VS 2021 = 36.33%

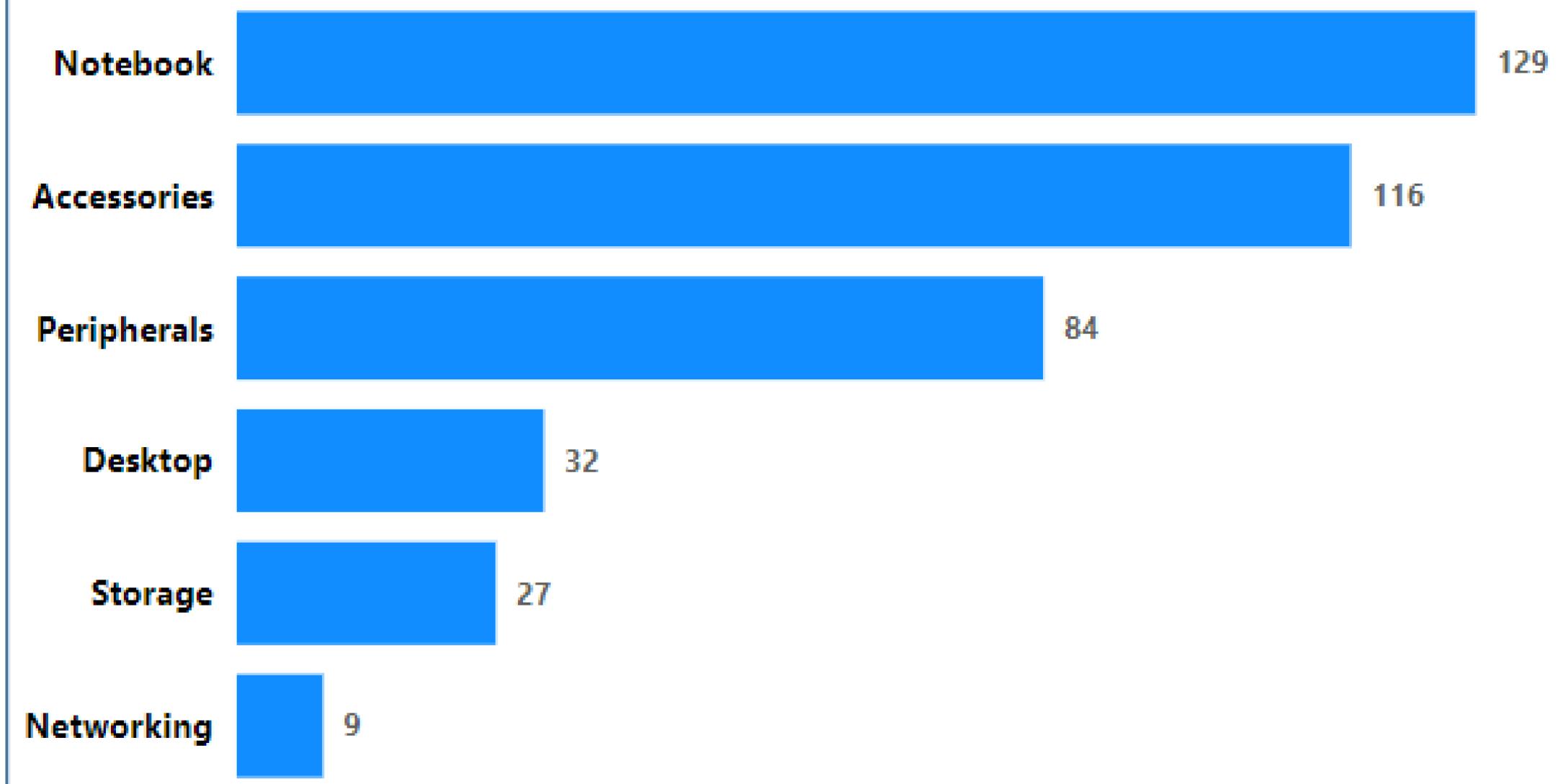
3. Provide a report with all the unique product counts for each segment and sort them in descending order of product counts.

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```
SELECT
    segment, COUNT(DISTINCT product_code) AS product_count
FROM
    dim_product
GROUP BY segment
ORDER BY product_count DESC;
```

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

Product count by Segment



Desktop, Storage and Networking segment has lowest product count.

4. Which segment had the most increase in unique products in 2021 vs 2020?

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```
WITH CTE1
AS (SELECT p.segment,
           Count(DISTINCT s.product_code) AS product_count_2020
      FROM fact_sales_monthly s
        JOIN dim_product p USING(product_code)
     WHERE s.fiscal_year = "2020"
   GROUP BY p.segment),
CTE2
AS (SELECT p.segment,
           Count(DISTINCT s.product_code) AS product_count_2021
      FROM fact_sales_monthly s
        JOIN dim_product p USING(product_code)
     WHERE s.fiscal_year = "2021"
   GROUP BY p.segment)
SELECT c1.segment,
       product_count_2020,
       product_count_2021,
       (product_count_2021 - product_count_2020) AS Difference
  FROM CTE1 c1
 JOIN CTE2 c2
    ON c1.segment = c2.segment
 ORDER BY difference DESC ;
```

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

segment	unique_product2020	unique_product2021	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
Total	245	334	89

Accessories, Notebook and Peripherals has the most increase in unique product,

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

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```
SELECT DISTINCT
    p.product_code, product, manufacturing_cost
FROM
    dim_product p
    JOIN
        fact_manufacturing_cost f ON p.product_code = f.product_code
WHERE
    manufacturing_cost = (SELECT
        MAX(manufacturing_cost)
        FROM
            fact_manufacturing_cost)
    OR manufacturing_cost = (SELECT
        MIN(manufacturing_cost)
        FROM
            fact_manufacturing_cost)
ORDER BY manufacturing_cost DESC;
```

product_code	product	manufacturing_cost
A6120110206	AQ HOME Allin1 Gen 2	240.5364
A2118150101	AQ Master wired x1 Ms	0.8920

Highest manufacturing cost

AQ HOME Allin1 Gen 2

\$240.54

A6120110206

Lowest manufacturing cost

AQ Master wired x1 Ms

\$0.89

A2118150101

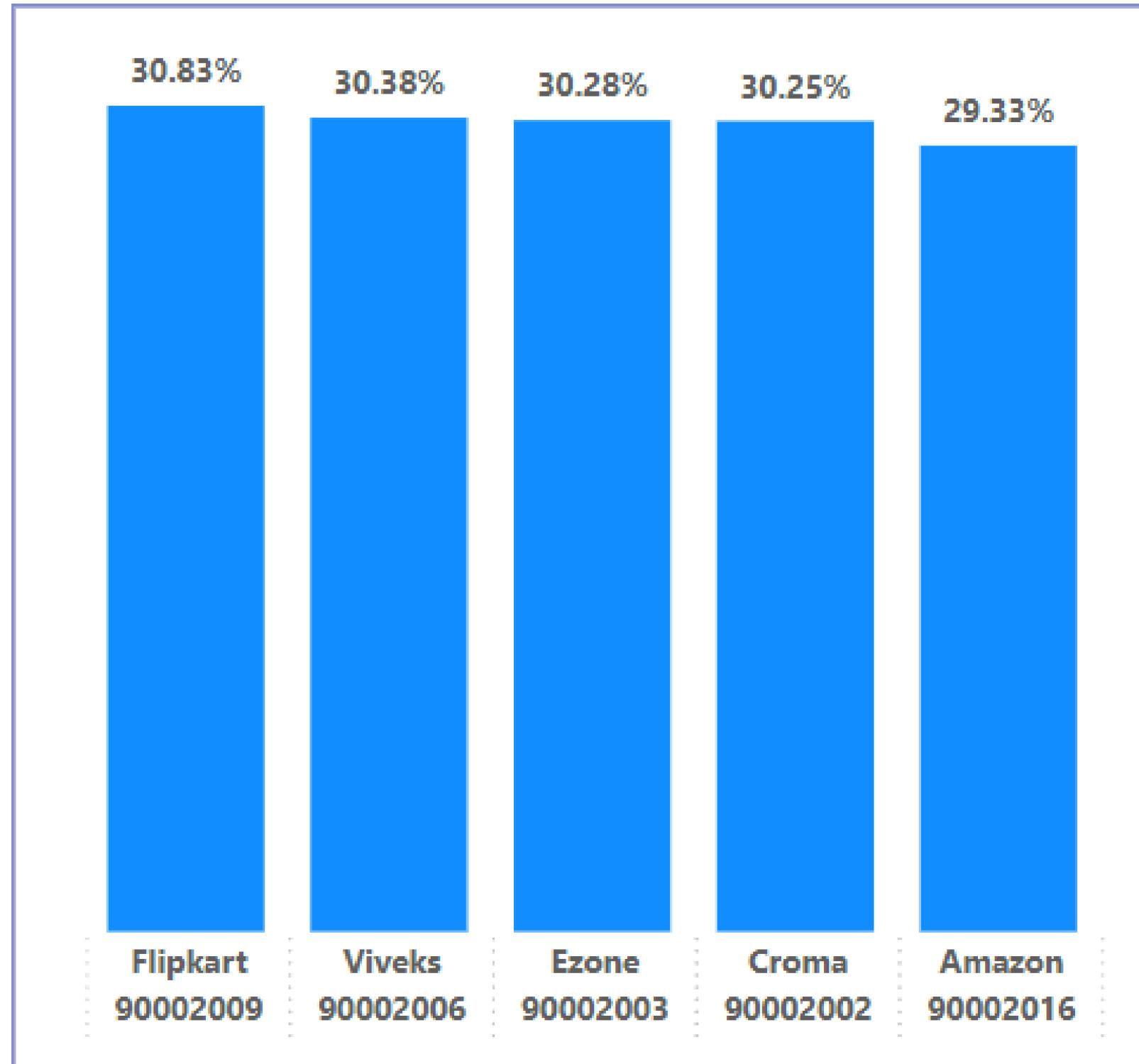
Desktop has the highest manufacturing cost while mouse has the lowest.

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.

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```
SELECT  
    c.customer_code,  
    customer,  
    ROUND(AVG(pre_invoice_discount_pct) * 100, 4) AS average_discount_percentage  
FROM  
    dim_customer c  
    JOIN  
    fact_pre_invoice_deductions f ON c.customer_code = f.customer_code  
WHERE  
    fiscal_year = '2021'  
    AND c.market = 'india'  
GROUP BY customer, customer_code  
ORDER BY average_discount_percentage DESC  
LIMIT 5;
```

customer_code	customer	average_discount_percentage
90002009	Flipkart	30.8300
90002006	Viveks	30.3800
90002003	Ezone	30.2800
90002002	Croma	30.2500
90002016	Amazon	29.3300



Flipkart has the highest pre-invoice discount while
amazon has the lowest.

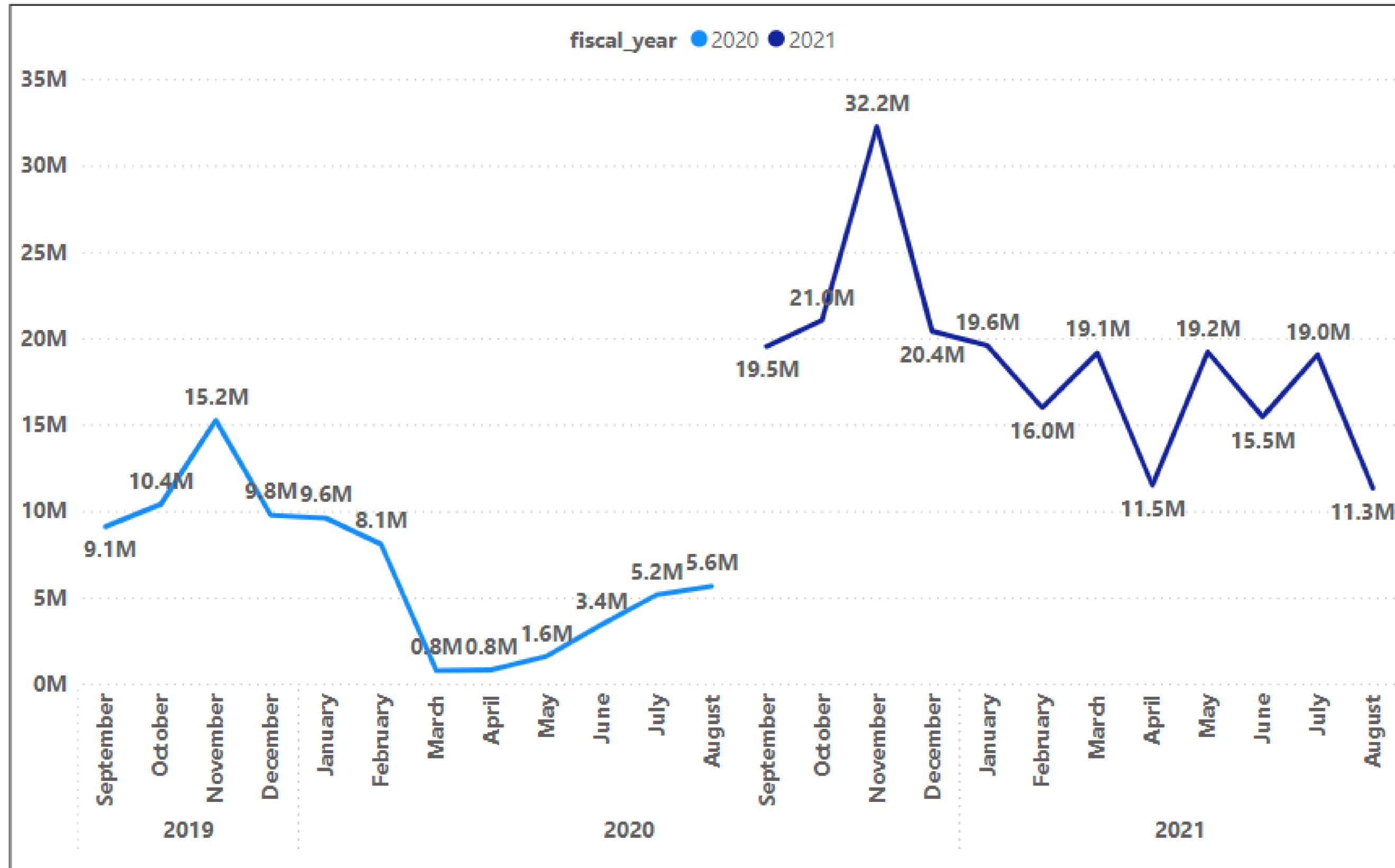
7. Get the complete report of the Gross sales amount for the customer Atliq Exclusive for each month.

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```
SELECT Concat(Monthname(f.date), ' ', Year(f.date)) AS  
      'Month'  
      ,  
      f.fiscal_year,  
      Concat(Round(Sum(g.gross_price * f.sold_quantity) / 1000000, 2), 'M') AS  
      gross_sales_amount  
  FROM fact_sales_monthly f  
  JOIN dim_customer c  
    ON f.customer_code = c.customer_code  
  JOIN fact_gross_price g  
    ON f.product_code = g.product_code  
 WHERE c.customer = 'Atliq Exclusive'  
 GROUP BY month,  
         f.fiscal_year  
 ORDER BY f.fiscal_year;
```

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

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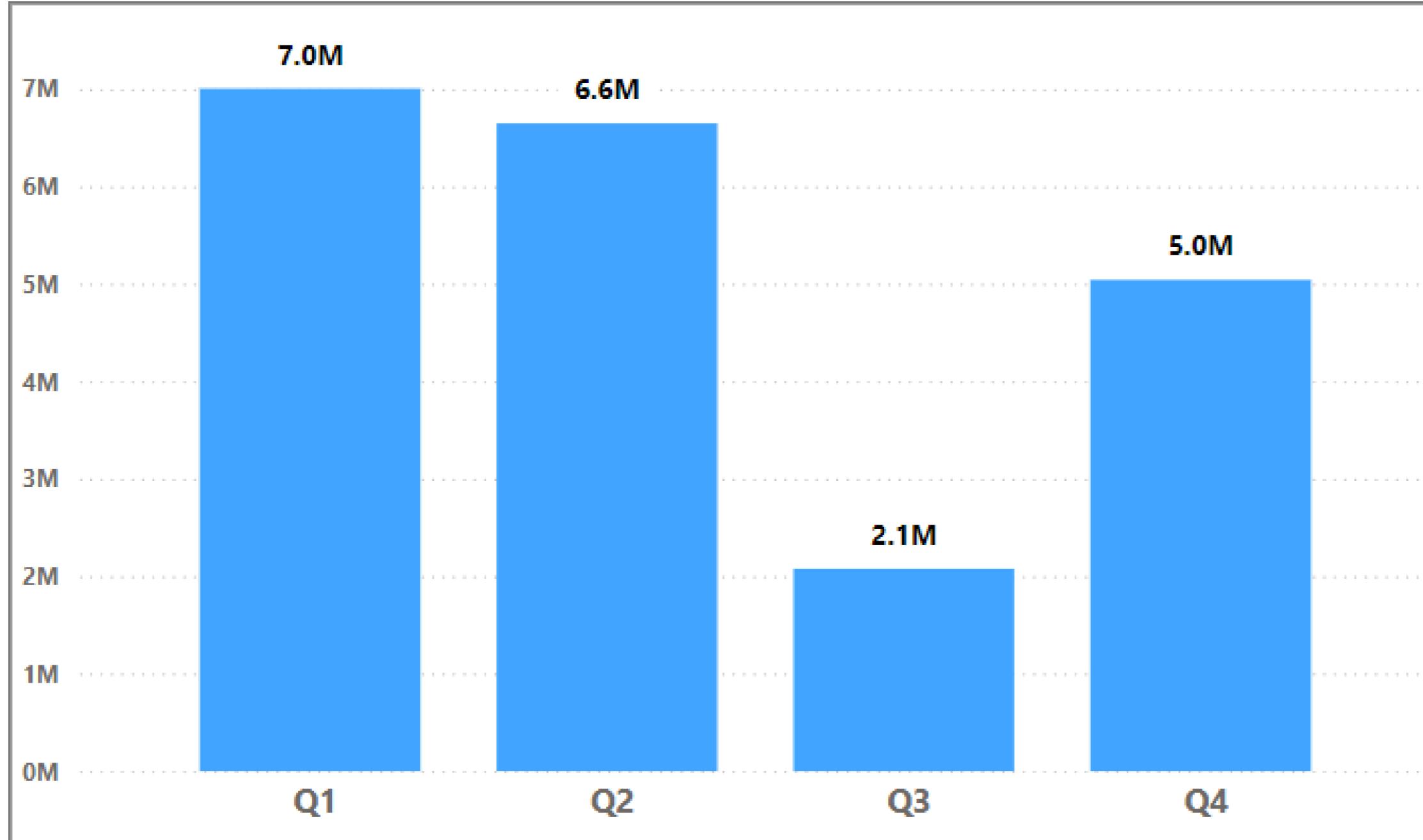
8. In which quarter of 2020, got the maximum total_sold_quantity?

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```
WITH CTE1 as
  (select month(date) as period,
  sold_quantity,
  fiscal_year
  from fact_sales_monthly)
select case
  when period in (9,10,11) then 'Q1'
  when period in (12,1,2) then 'Q2'
  when period in (3,4,5) then 'Q3'
  when period in (6,7,8) then 'Q4' end as quarter,
  ROUND(SUM(sold_quantity) / 1000000, 2) AS total_sold_quanity_in_millions
FROM CTE1
WHERE fiscal_year = 2020
GROUP BY quarter
ORDER BY total_sold_quanity_in_millions DESC;
```

quarter	total_sold_quantity_in_millions
Q1	7.01
Q2	6.65
Q4	5.04
Q3	2.08

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Quarter 1 has the maximum sold quantity.

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

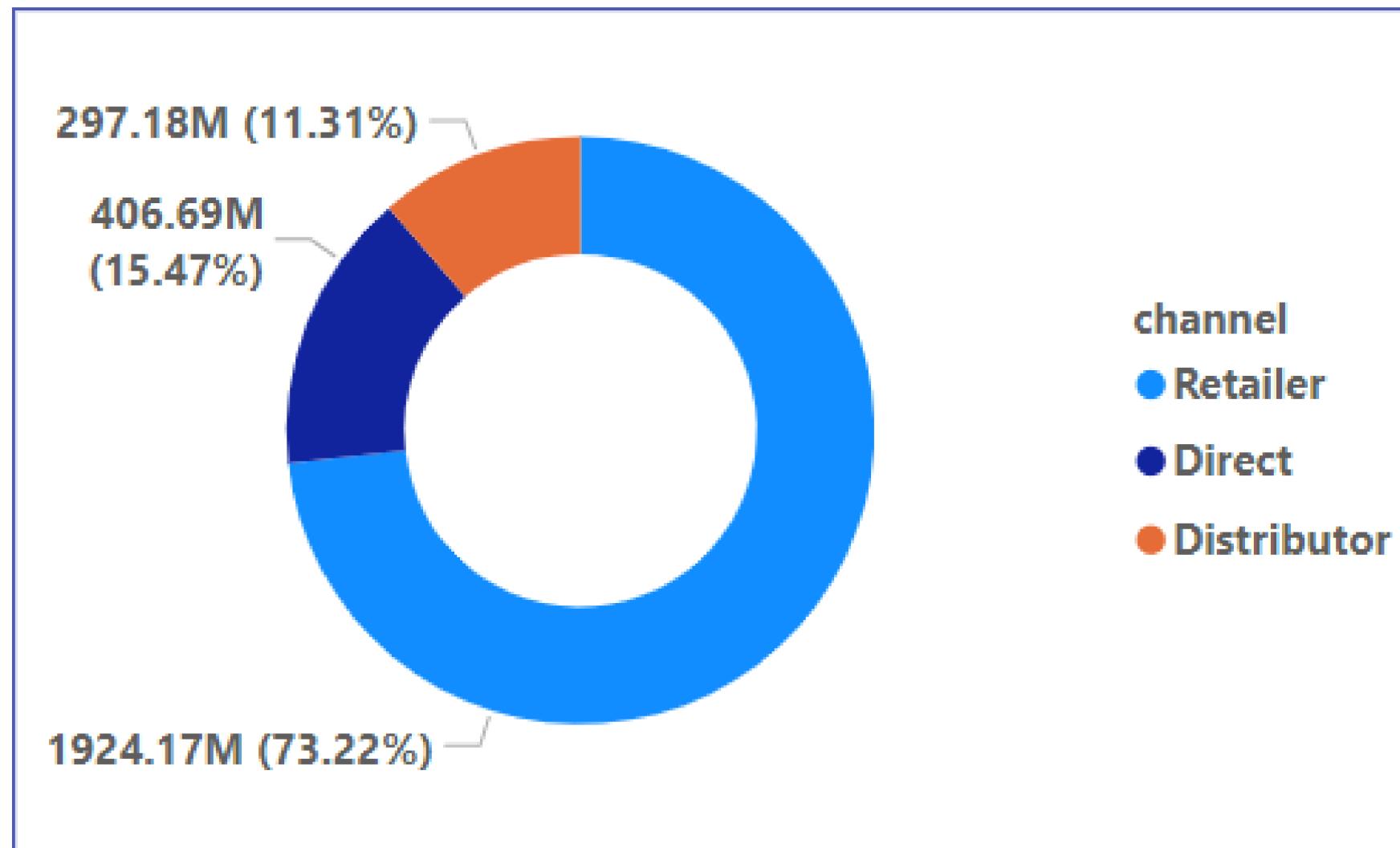
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WITH CTE

```
AS (SELECT c.channel,
           Sum(s.sold_quantity * g.gross_price) AS total_sales
      FROM fact_sales_monthly s
        JOIN fact_gross_price g USING(product_code)
        JOIN dim_customer c USING(customer_code)
     WHERE s.fiscal_year = 2021
   GROUP BY c.channel
  ORDER BY total_sales DESC)

SELECT channel,
       CONCAT(Round(total_sales / 1000000, 2), 'M') AS
       gross_sales_in_millions,
       CONCAT(Round(total_sales / ( Sum(total_sales) OVER() ) * 100, 2), '%') AS
       percentage
  FROM CTE;
```

channel	gross_sales_in_millions	percentage
Retailer	1924.17M	73.22%
Direct	406.69M	15.47%
Distributor	297.18M	11.31%



In the Fiscal year 2021, retailer bringed most sales with a contribution of 73%.

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

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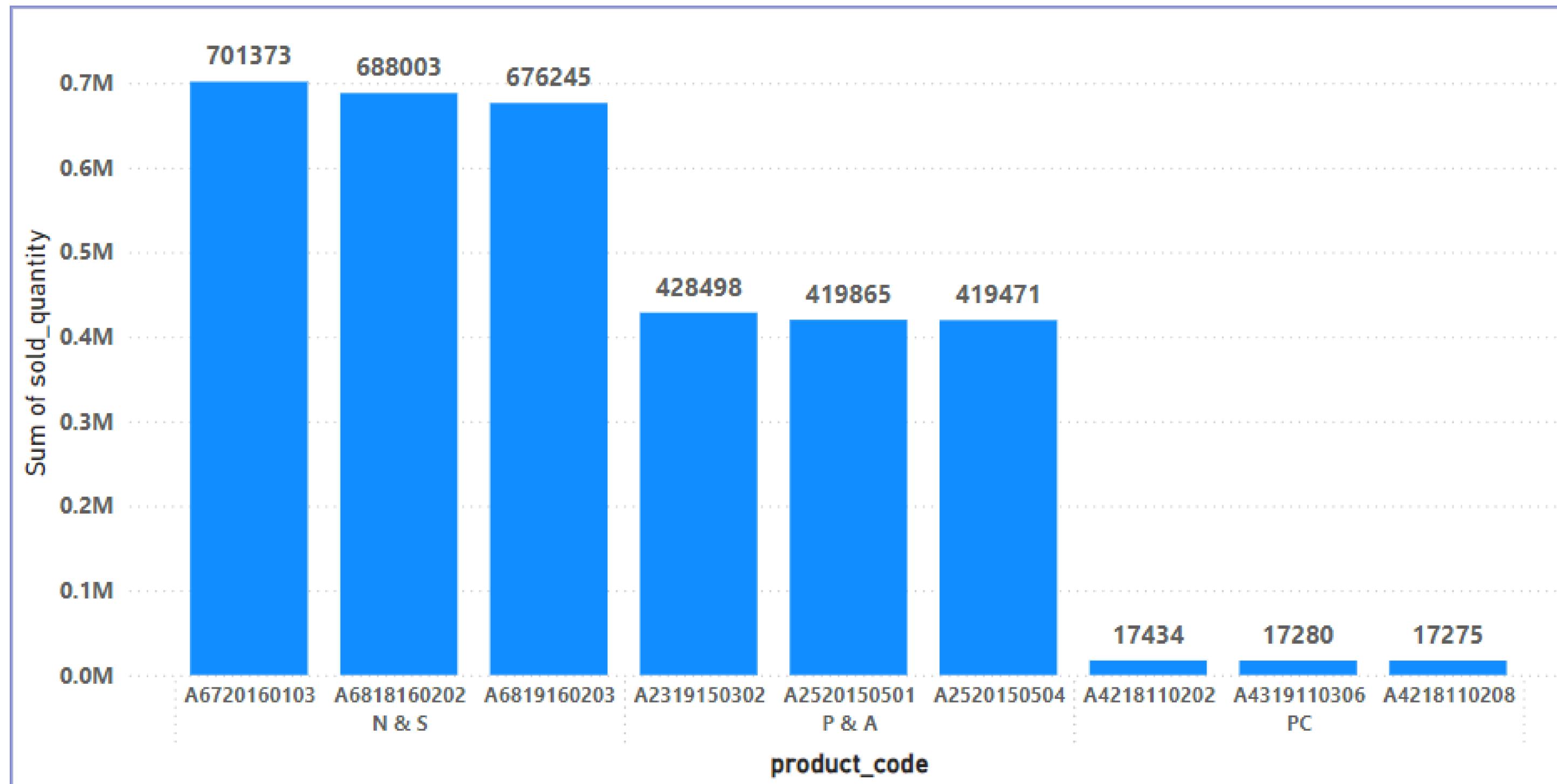
```

WITH CTE1
AS (SELECT p.division,s.product_code,p.product,
           Sum(s.sold_quantity) AS Total_sold_quantity
      FROM dim_product p
      JOIN fact_sales_monthly s using(product_code)
     WHERE s.fiscal_year = 2021
   GROUP BY s.product_code,division,p.product),
CTE2
AS (SELECT division,product_code,product,total_sold_quantity,
           RANK()
              OVER(
                  partition BY division
                  ORDER BY total_sold_quantity DESC) AS 'Rank_Order'
      FROM cte1)
SELECT CTE1.division,
       CTE1.product_code,
       CTE1.product,
       CTE1.total_sold_quantity,
       CTE2.rank_order
  FROM CTE1
 JOIN CTE2
ON CTE1.product_code = CTE2.product_code
WHERE CTE2.rank_order IN ( 1, 2, 3 )

```

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

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Insights And Suggestions

1. Sales Growth of Unique Product:-

- Insight: The unique product saw a substantial sales increase of 36.33% in FY 2021 compared to the previous year.
- Suggestions:
 - Market Expansion: Identify and target new markets where these products can perform well, based on similar demographics and buying behaviors.
 - Marketing Campaigns: Increase investment in marketing campaigns highlighting these products' unique features and benefits.

2. Top-Selling and Lowest-Selling Products:-

- Insight: The Notebook was the best-selling product, while the Networking product line had the lowest sales figures.
- Suggestions:
 - For Notebooks:
 - Bundle Offers: Create bundle offers with complementary products to increase overall sales.
 - For Networking Products:
 - Market Research: Conduct thorough market research to understand the low demand and identify potential gaps or unmet needs.

Insights And Suggestions

3. Product Manufacturing Costs:-

- Insight: Desktops had the highest manufacturing costs, while Mouse production costs were the lowest.
- Suggestions:
 - For Desktops:
 - Cost Optimization: Explore cost-saving measures in the production process, such as bulk purchasing of materials or negotiating better supplier contracts.
 - For Mouse:
 - Leverage Low Costs: Capitalize on the low production costs by increasing marketing efforts to boost sales volume.

4. Customer Contribution by Retailer:-

- Insight: Flipkart had the highest customer contribution at 30.83%, while Amazon had the lowest at 29.33%.
- Suggestions:
 - For Flipkart:
 - Strengthen Partnership: Continue strengthening the partnership with Flipkart by collaborating on exclusive deals and promotions.
 - For Amazon:
 - Improve Visibility: Increase product visibility on Amazon through enhanced listings, sponsored ads, and participation in Amazon-specific sales events.

Insights And Suggestions

5. Sales Performance Over Time:-

- Insight: The lowest sales period was in March 2020 with 2.8 million units sold, while sales peaked in November 2021 with 32.2 million units sold.
- Suggestions:
 - For Low Sales Periods:
 - Seasonal Promotions: Implement seasonal promotions and discounts to drive sales during traditionally low periods.
 - Demand Forecasting: Improve demand forecasting to better align production and marketing efforts with anticipated sales cycles.
 - For Peak Sales Periods:
 - Stock Management: Ensure optimal stock levels to meet high demand without experiencing stockouts.
 - Scalable Infrastructure: Invest in scalable infrastructure to handle peak sales volumes efficiently and maintain high customer satisfaction.



ATLIQ HARDWARES

THANK YOU!