

Insights for Atliq Hardware

Executive Summary

Atliq Hardware is a leading provider of hardware solutions for businesses. This report provides a comprehensive overview of the company's performance, including key metrics, trends, and insights.



Quarterly Sales

Atliq Hardware's sales have shown a steady increase over the past four quarters, driven by strong demand for its hardware solutions. The company's focus on innovation and customer service has been a key factor in its success.

Market Share

Atliq Hardware's market share has increased significantly over the past year, reflecting its growing presence in the hardware market.



Global Reach

Atliq Hardware's global reach has expanded significantly, with the company now serving customers in over 50 countries. This expansion has been a key driver of its growth and success.

Customer Satisfaction



Global Network

Key Metrics

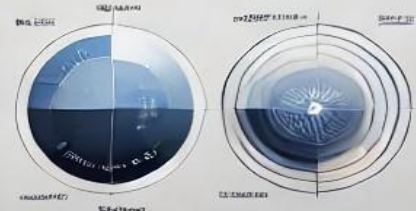
Atliq Hardware's key metrics include sales, market share, and customer satisfaction. These metrics are used to evaluate the company's performance and identify areas for improvement.

Atliq Hardware's sales have increased by 15% over the past year, while its market share has grown by 10%. Customer satisfaction has also improved, with a score of 85%.

Atliq Hardware's focus on innovation and customer service has been a key factor in its success. The company's commitment to quality and reliability has earned it a strong reputation in the hardware market.



Expressive Driver Decisions



Atliq Hardware's key metrics include sales, market share, and customer satisfaction. These metrics are used to evaluate the company's performance and identify areas for improvement.



Communications



Atliq Hardware's communications strategy focuses on providing clear and concise information to its customers. The company uses a variety of channels, including email, social media, and its website, to reach its audience.



Power BI

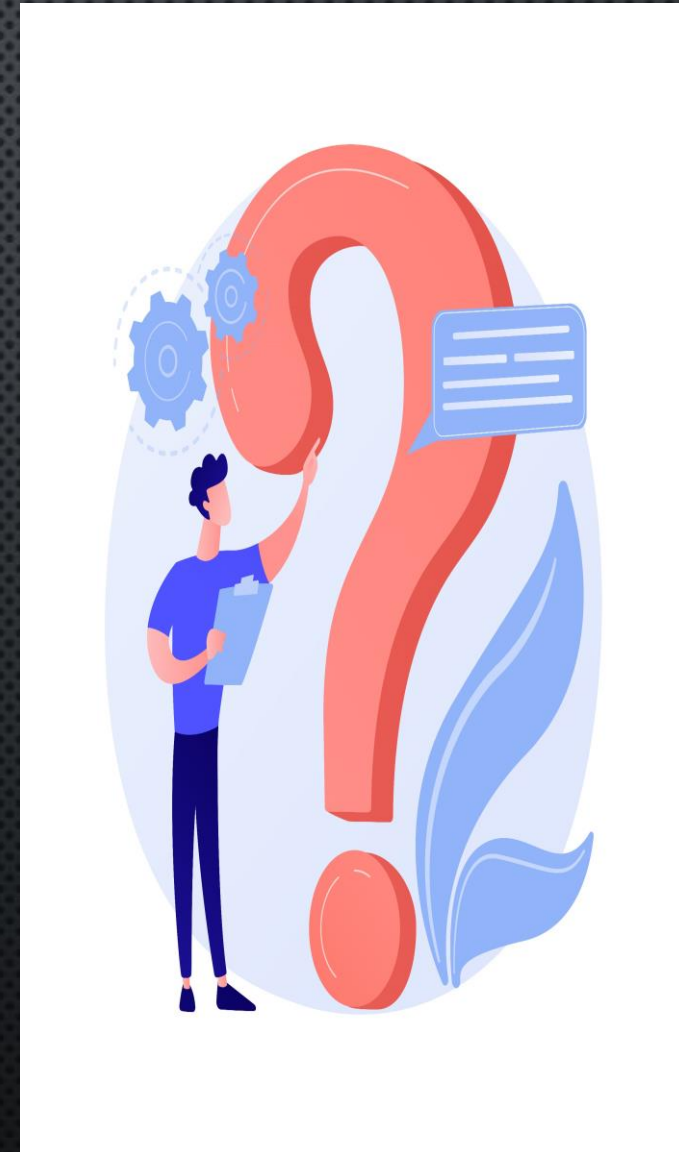


SQL INSIGHTS OF ATLIQ HARDWARE

PROBLEM STATEMENT

Atliq Hardwares (imaginary company) is one of the leading computer hardware producers in India and well expanded in other countries too. Despite data being available the management is unable to uncover insights to make quick and smart decisions. They want to expand their data analytics team by adding several junior data analysts.

Tony Sharma, the Data Analytics Director, wants to hire a professional skilled in both technical and soft skills. So, Tony crafted a challenging SQL-based evaluation designed to test not just technical expertise but also the ability to derive actionable insights from complex datasets. This involves analyzing a simulated database, writing SQL queries to address ad-hoc business questions, and generating meaningful insights. It is also expected to create impactful visualizations to present these insights to support strategic decision-making. Tony's ideal hire would possess a strong blend of technical acumen (SQL expertise, data visualization, and analytics) and interpersonal prowess (clear communication and compelling presentation skills)



AD HOC REQUEST 1:

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

QUERY

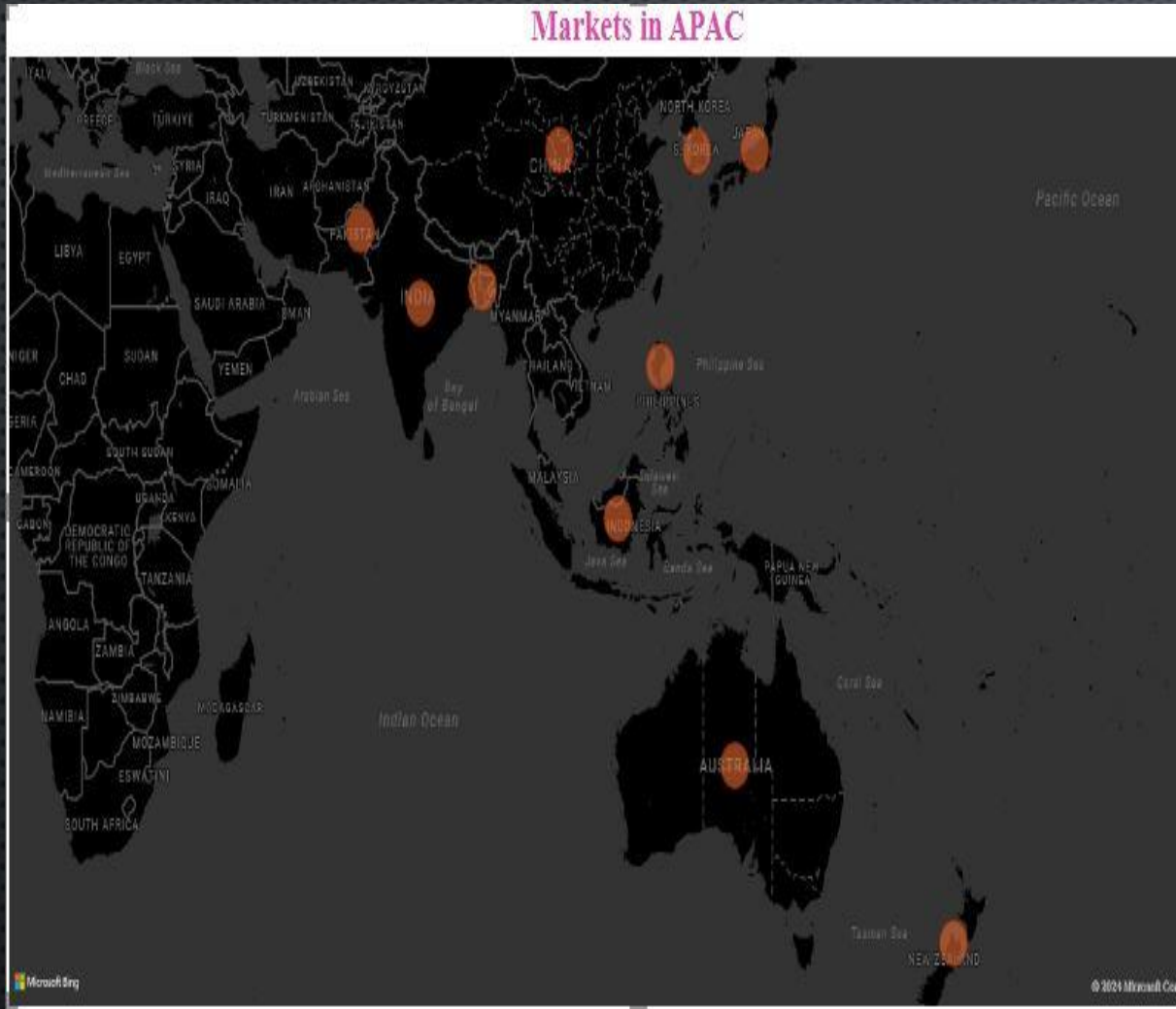
```
SELECT distinct(market) from dim_customer  
where customer= "Atliq Exclusive" and region="APAC"  
ORDER BY market asc;
```

OUTPUT

market
Australia
Bangladesh
India
Indonesia
Japan
Newzealand
Philiphines
South Korea

VISUAL 1:

INSIGHT



Atliq Hardware's strategic focus on the Asia Pacific region positions them to capitalize on a diverse and dynamic market landscape. By targeting both emerging economies like the Philippines and Indonesia, as well as mature markets like Japan and India, Atliq gains exposure to a vast consumer base with varying levels of purchasing power and technological sophistication.

By successfully navigating this complex and competitive market, Atliq Hardware demonstrates its strong market understanding, adaptability and commitment to delivering value to its customers

AD HOC 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

QUERY

```
1 • with cte1 as(  
2   SELECT product_code,fiscal_year,  
3   count(distinct(product_code)) as unique_products_2020 from fact_gross_price  
4   where fiscal_year=2020),  
5   cte2 as(  
6   SELECT count(distinct(product_code)) as unique_products_2021 from fact_gross_price  
7   where fiscal_year= 2021)  
8   select cte1.unique_products_2020,cte2.unique_products_2021,  
9   ((cte2.unique_products_2021-cte1.unique_products_2020)*100/cte1.unique_products_2020)as pct_change  
10  from cte1,cte2;
```

OUTPUT

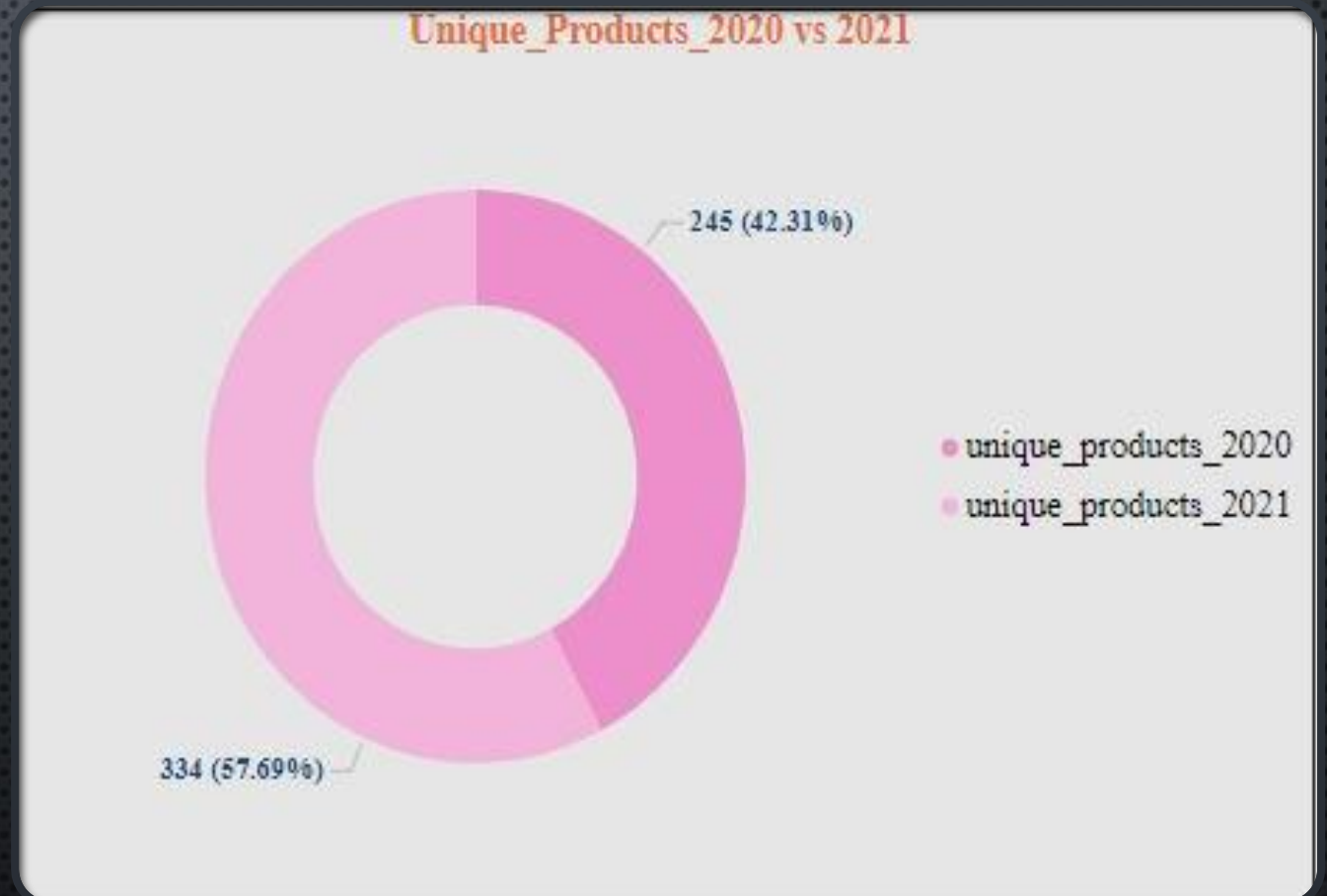
unique_products_2020	unique_products_2021	pct_change
245	334	36.3265

VISUAL 2:

INSIGHT

The 36.33% increase in unique products from 2020 to 2021 suggests that the company is actively responding to increased consumer demand and emerging market trends.

This proactive approach to product development demonstrates the company's agility and its ability to capitalize on new opportunities.



AD HOC 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

QUERY

```
1 • select segment, count(distinct(product_code)) as product_count
2   from dim_product
3  group by segment
4  order by product_count desc;
```

OUTPUT

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

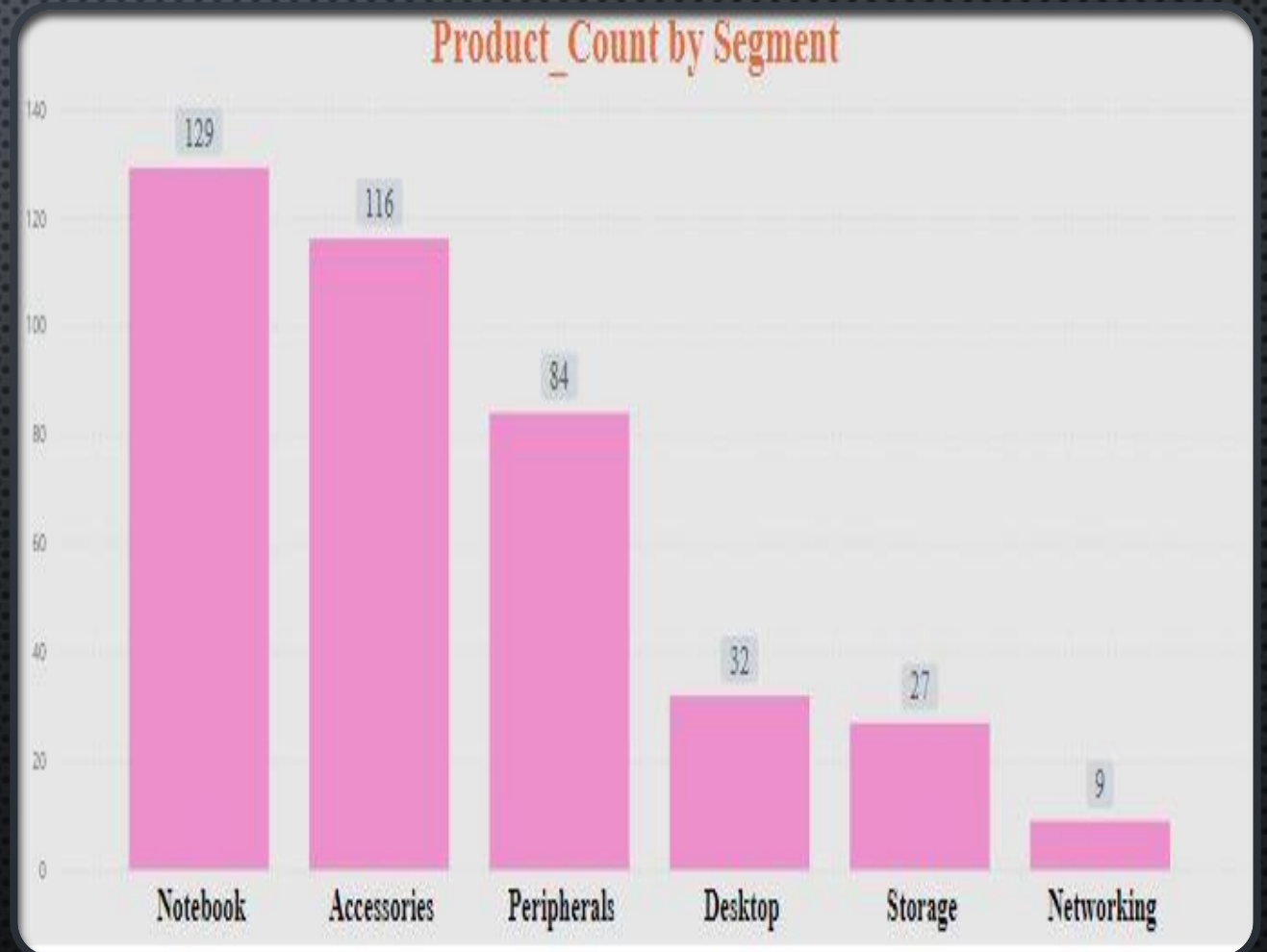
VISUAL 3:

INSIGHT

Notebooks, Accessories, and Peripherals, comprising 32%, 29.2%, and 21% of the product range, respectively, dominate the product mix. This could be attributed to either high market demand or deliberate strategic emphasis.

Conversely, the lower product counts in Storage and Networking might suggest a more specialized approach to cater to specific customer requirements.

To make decisions better, it is crucial to analyze the profit margins and revenue generated by each product segment.



AD HOC 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.

QUERY

```
with x as(
select
p.segment,count(distinct(p.product_code)) as product_count_2020
from dim_product p
join fact_gross_price g
on p.product_code=g.product_code
where g.fiscal_year=2020
group by p.segment),
y as (
select
p.segment,count(distinct(p.product_code)) as product_count_2021
from dim_product p
join fact_gross_price g
on p.product_code=g.product_code
where g.fiscal_year=2021
group by p.segment)
select x.segment,
x.product_count_2020,y.product_count_2021,
|(y.product_count_2021-x.product_count_2020) as difference
from x
join y
on x.segment=y.segment
group by segment;
```

OUTPUT

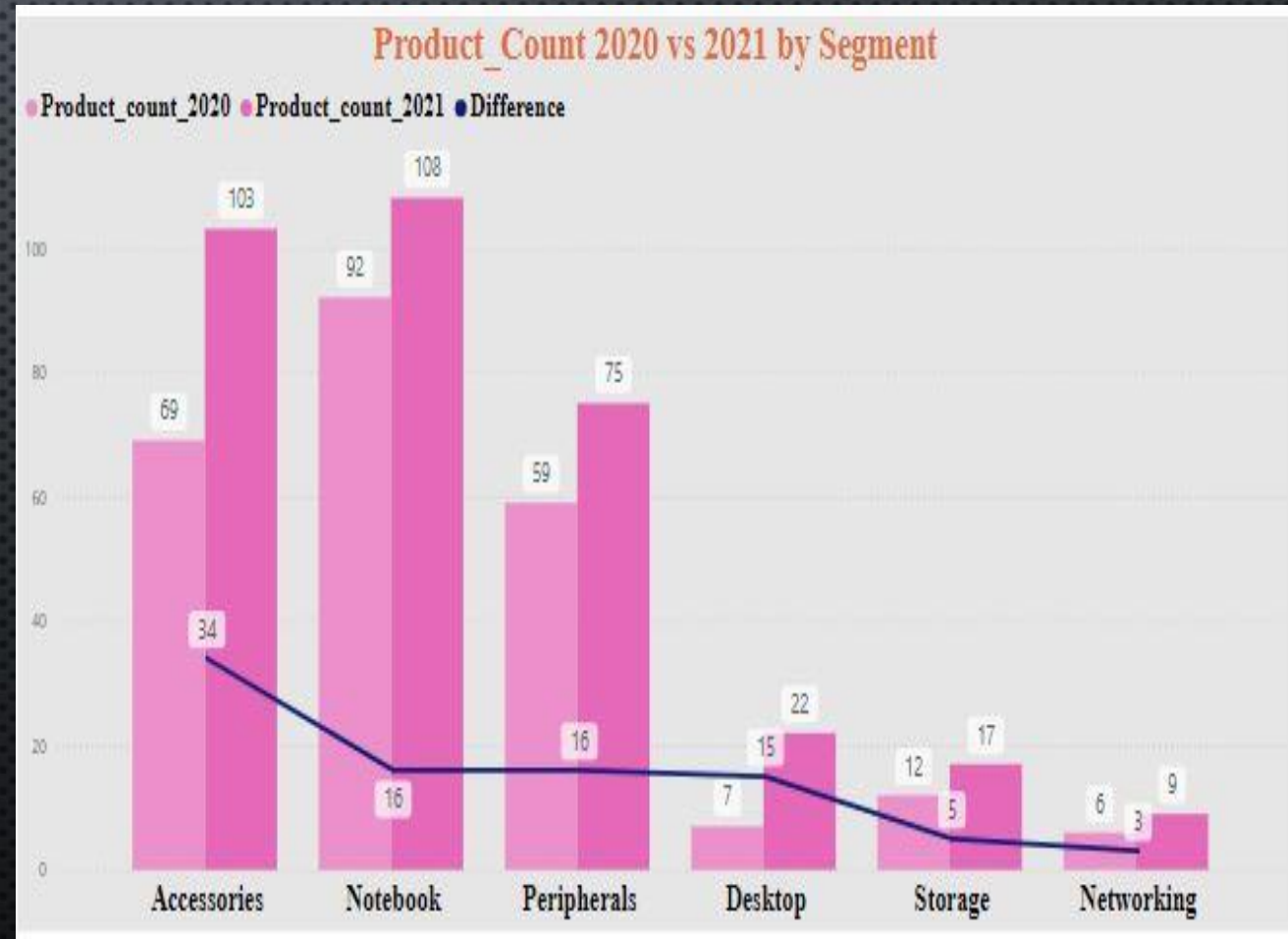
segment	product_count_2020	product_count_2021	difference
Accessories	69	103	34
Desktop	7	22	15
Networking	6	9	3
Notebook	92	108	16
Peripherals	59	75	16
Storage	12	17	5

VISUAL 4:

INSIGHT

The Accessories segment experienced a significant rise, from 69 to 108 products. Notebooks and Peripherals also saw moderate increases. In contrast, Storage and Networking segments remained relatively stable, suggesting steady demand.

The increase in certain segments, coupled with the stability of others, might be attributed to market saturation, technological advancements, or the company's strategic focus on specific products.



AD HOC 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.

QUERY

```
1 with ctel as(  
2   select  
3     p.product_code,p.product,m.manufacturing_cost as manufacturing_cost  
4     from fact_manufacturing_cost m  
5     join dim_product p  
6     on m.product_code=p.product_code  
7     group by product)  
8   select product,product_code,manufacturing_cost from ctel  
9   where manufacturing_cost=(select max(manufacturing_cost) from ctel)  
10  or manufacturing_cost=(select min(manufacturing_cost) from ctel)  
11  order by manufacturing_cost desc;  
12
```

OUTPUT

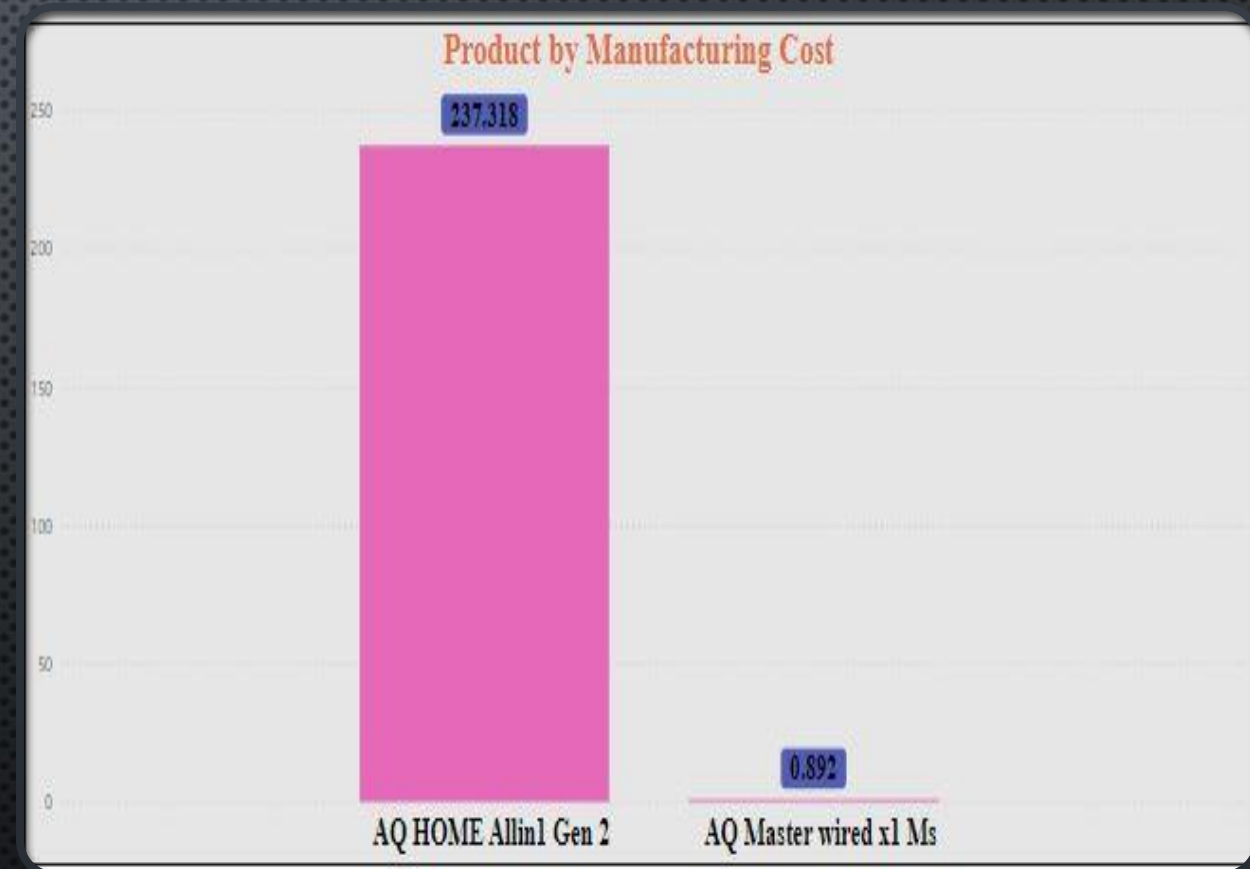
product	product_code	manufacturing_cost
AQ HOME Allin1 Gen 2	A6119110201	237.3180
AQ Master wired x1 Ms	A2118150101	0.8920

VISUAL 5:

INSIGHT

The "AQ Home Allin1 Gen 2" incurs significantly higher manufacturing costs than the "AQ Master wired x1 Ms." This difference can be explained by variations in production processes and material costs.

Additionally, these two products can be catering to distinct market niche, with the "AQ Home Allin1 Gen 2" potentially targeting a premium market.



AD HOC 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.

QUERY

```
1 select
2   c.customer,c.customer_code,round((pi.pre_invoice_discount_pct)*100,2)as avg_discount_pct
3   from fact_pre_invoice_deductions pi
4   join dim_customer c
5   on pi.customer_code= c.customer_code
6   where pi.fiscal_year=2021 and c.market="India"
7   group by customer
8   order by avg_discount_pct desc
9   limit 5;
```

OUTPUT

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

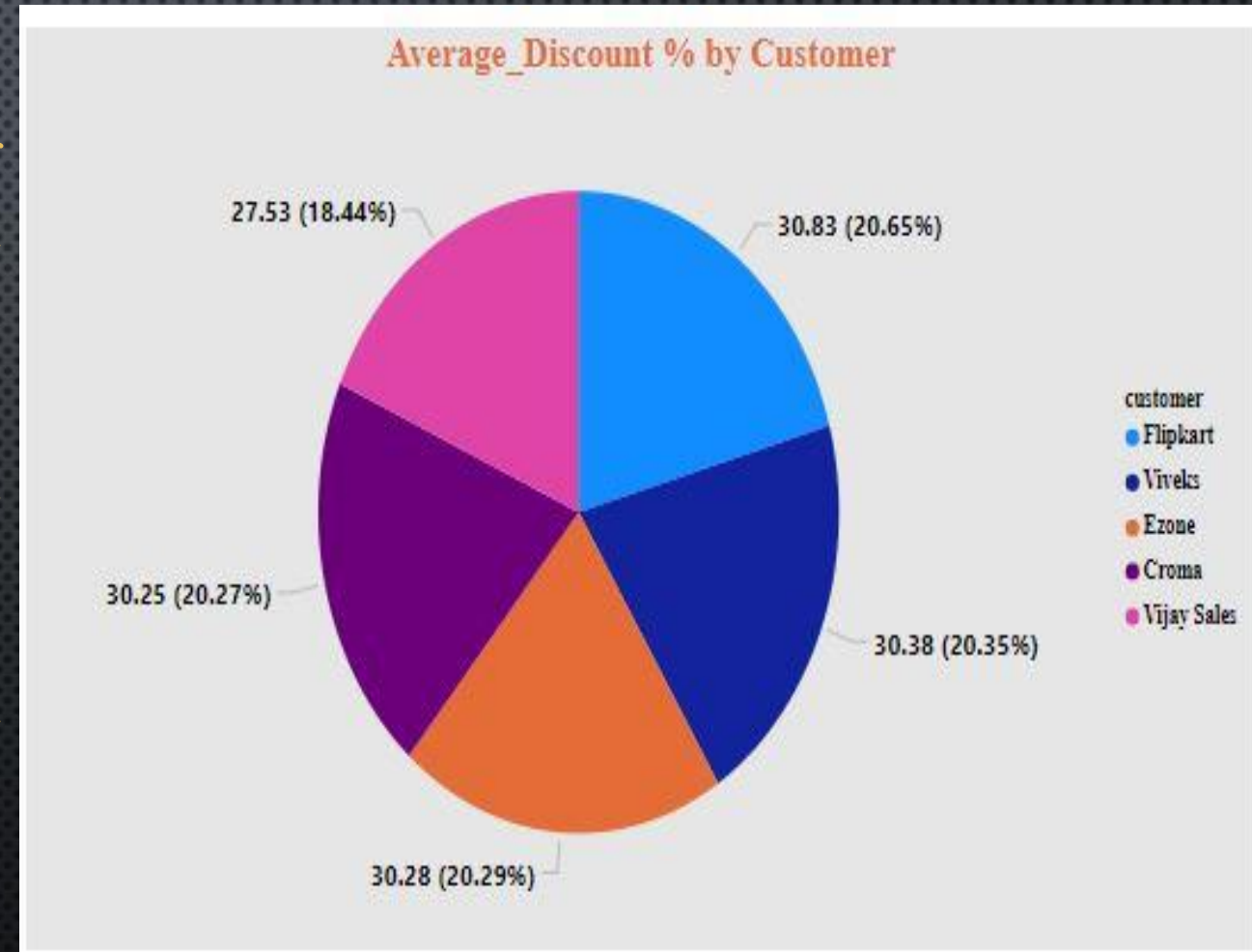
VISUAL 6:

INSIGHT

Flipkart gets the highest average discount of 30.83% while Vijay Sales trailing below at 27.53%.

The higher average discount rates offered to Flipkart and Viveks indicates a larger consumer base for Atliq, necessitating higher discounts.

All other customers have almost similar discount rates. Similar discounts across different customers suggest a competitive pricing environment.



AD HOC 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.

QUERY

```
1 • select
2 monthname(s.date) as month,s.fiscal_year as year, sum((gp.gross_price*s.sold_quantity)) as gross_sales_amount
3 from fact_sales_monthly s
4 join dim_customer c
5 on s.customer_code=c.customer_code
6 join fact_gross_price gp
7 on s.product_code=gp.product_code and s.fiscal_year=gp.fiscal_year
8 where c.customer="Atliq Exclusive"
9 group by month,year
10 order by year;
```

OUTPUT

month	year	gross_sales_amount
October	2021	13218636.1966
September	2020	4496259.6724
October	2020	5135902.3467
November	2020	7522892.5608
December	2020	4830404.7285
January	2020	4740600.1605
February	2020	3996227.7661
March	2020	378770.9700
April	2020	395035.3535
May	2020	783813.4238
June	2020	1695216.6008
July	2020	2551159.1584
August	2020	2786648.2601
September	2021	12353509.7938

October	2021	13218636.1966
November	2021	20464999.0997
December	2021	12944659.6509
January	2021	12399392.9788
February	2021	10129735.5675
March	2021	12144061.2501
April	2021	7311999.9547
May	2021	12150225.0139
June	2021	9824521.0110
July	2021	12092346.3245
August	2021	7178707.5902

VISUAL 7:

INSIGHT

The gross sales both in 2020 and 21 started high in November and gradually declined through the year, with a significant drop in February and March.

There seems to be a seasonal pattern, with sales generally higher in the second half of the year. This can be attributed to factors like festival/holiday shopping, end-of-year purchases.

This can help the company optimize inventory and supply chain management to better respond to fluctuating demand.



AD HOC 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

QUERY

```
2 select
3   quarter(date_add(s.date,interval 4 month)) as quarter,sum(sold_quantity) as total_sold_quantity
4   from fact_sales_monthly s
5   where fiscal_year=2020
6   group by quarter
7   order by total_sold_quantity desc;
```

OUTPUT

quarter	total_sold_quantity
1	7005619
2	6649642
4	5042541
3	2075087

VISUAL 8:

INSIGHT

Q1 (Atiq's financial year starts in September) saw the highest sales with 7.01 million units sold, while Q3 was the weakest quarter.

This indicates a strong seasonal influence on sales.

To effectively manage inventory and supply chain, the company should adapt to these changing demand patterns.



AD HOC 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

QUERY

```
1 with cte1 as(  
2   select  
3     c.channel, round(sum(gp.gross_price*s.sold_quantity)/1000000,2) as gross_sales_mln  
4   from dim_customer c  
5   join fact_sales_monthly s  
6   on s.customer_code=c.customer_code  
7   join fact_gross_price gp  
8   on s.fiscal_year=gp.fiscal_year and s.product_code=gp.product_code  
9   where s.fiscal_year=2021  
10  group by c.channel  
11  order by gross_sales_mln desc)  
12  select channel,gross_sales_mln, round(gross_sales_mln*100/sum(gross_sales_mln) over(),2) as percentage from cte1;
```

OUTPUT

channel	gross_sales_mln	percentage
Retailer	1219.08	73.23
Direct	257.53	15.47
Distributor	188.03	11.30

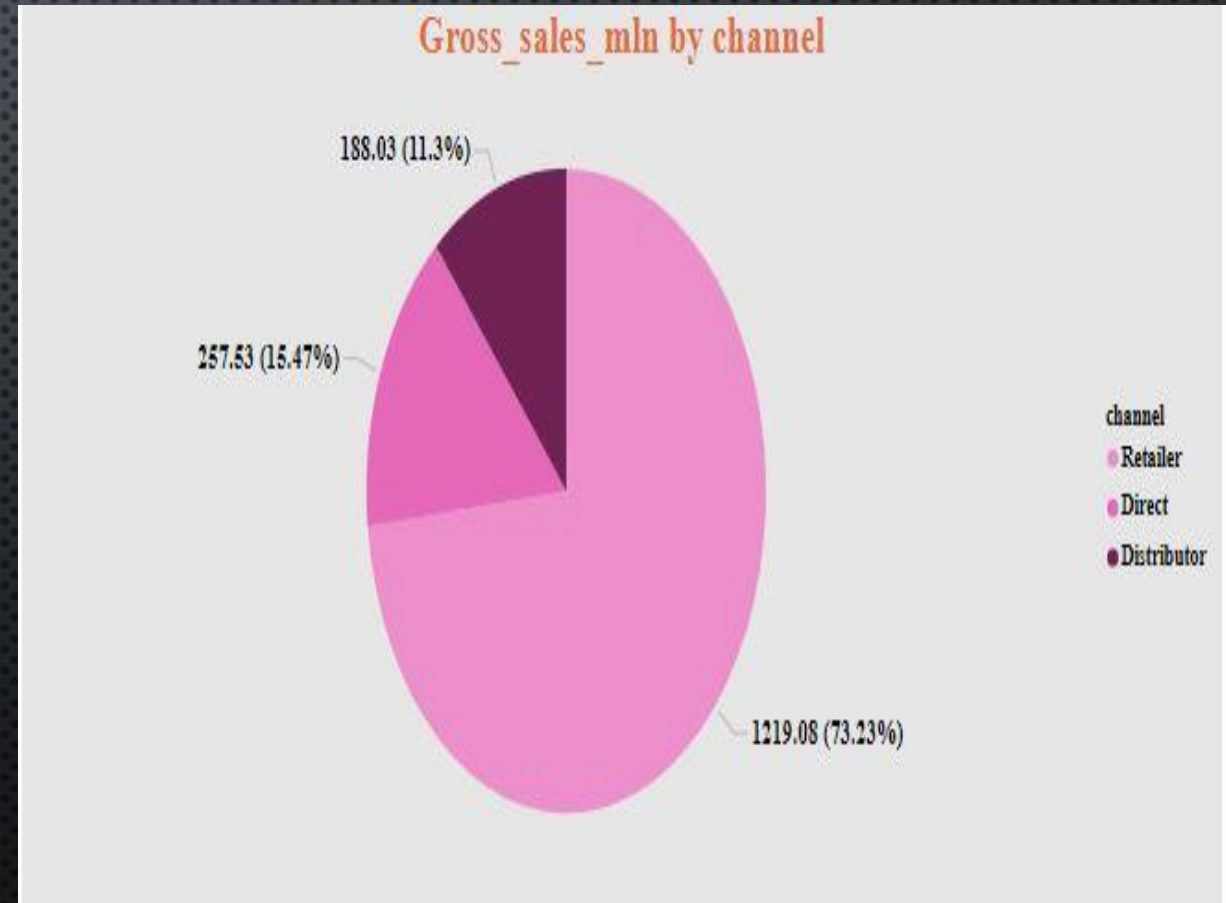
VISUAL 9:

INSIGHT

The significant dominance of the distributor channel (73.23%) highlights the need for a balanced distribution strategy.

While distributors are crucial for market reach, the company should explore ways to increase direct sales to improve profit margins and customer relationships.

This could involve strengthening e-commerce, building a direct sales force, or partnering with strategic retailers.



AD HOC 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.

QUERY

```
1 with cte1 as(  
2   select  
3     p.division,p.product_code,p.product,sum(s.sold_quantity) as total_sales_quantity,  
4     dense_rank() over(partition by p.division order by sum(s.sold_quantity) desc) as rank_order  
5   from dim_product p  
6   join fact_sales_monthly s  
7   on p.product_code=s.product_code  
8   where s.fiscal_year=2021  
9   group by p.product,p.product_code,p.division)  
10  select division,product_code,product,total_sales_quantity,rank_order from cte1  
11  where rank_order<=3;
```

OUTPUT

division	product_code	product	total_sales_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

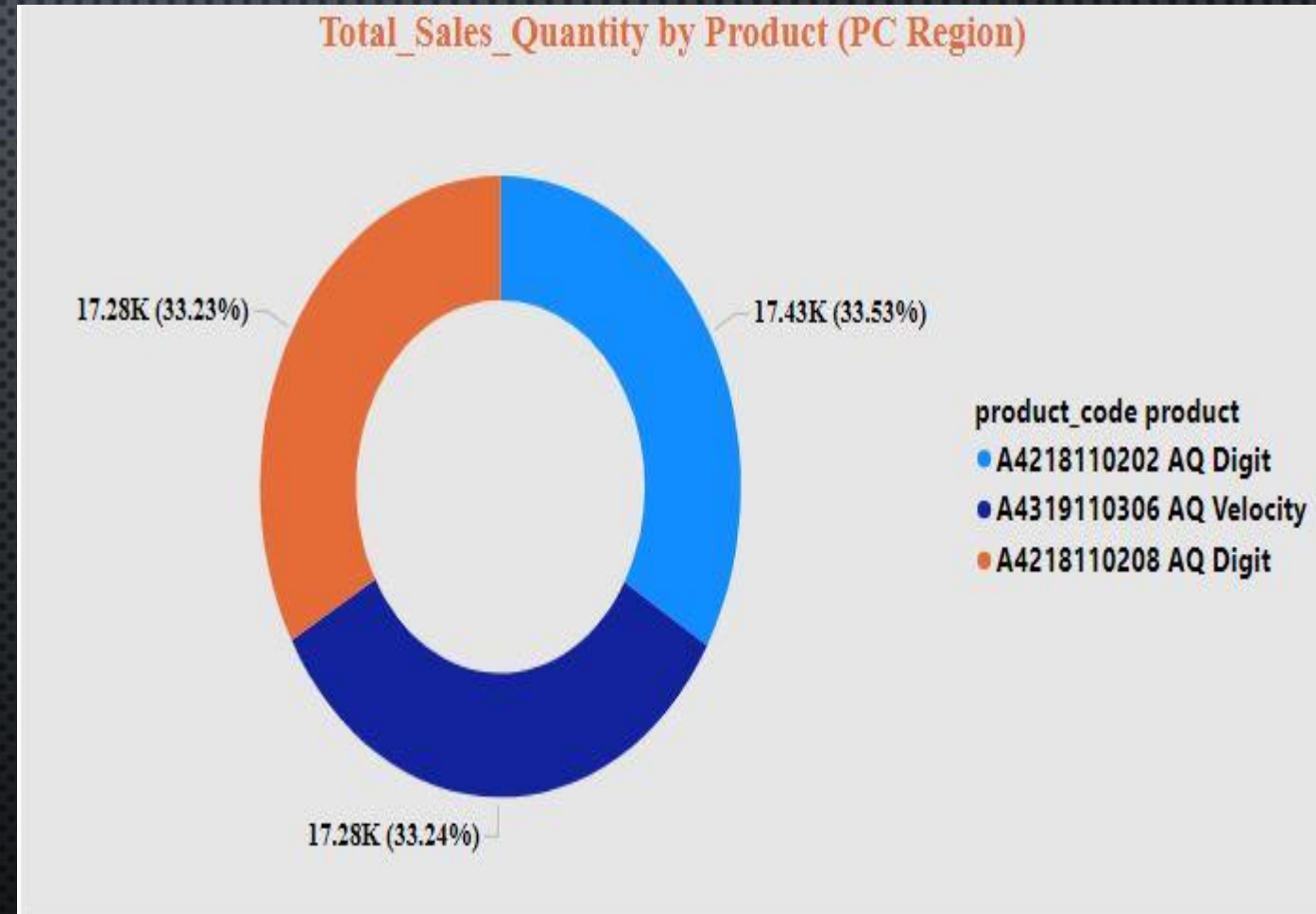
VISUAL 10:

INSIGHT

The chart represents sales data for the PC Region. The sales quantity is almost evenly distributed among the three products.

The near-equal distribution suggests that all three products are relatively popular in the PC Region.

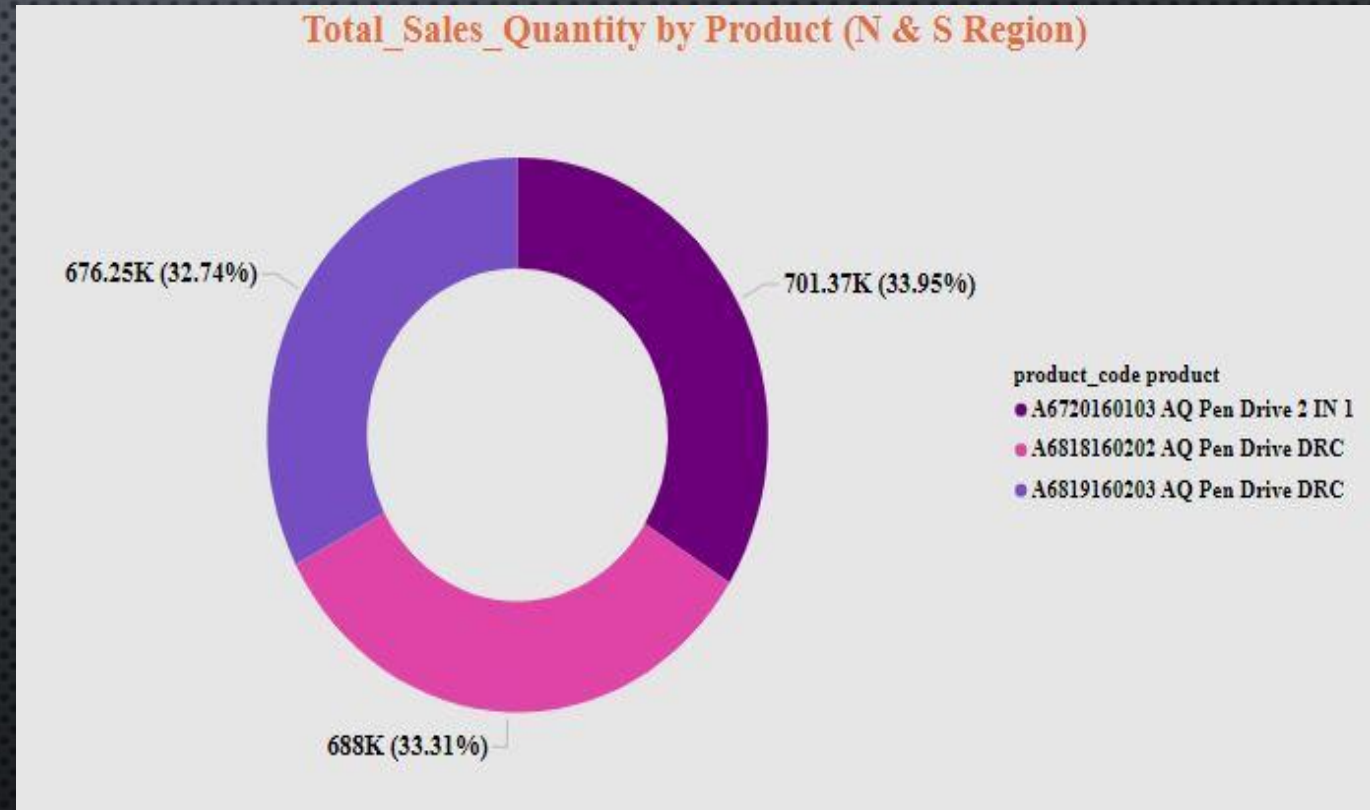
The company might consider focusing on promoting product A4319110306 (AQ Velocity) slightly more to capitalize on its slightly higher demand.



INSIGHT

The top 3 products are pen-drives of different variants. This indicates strong consumer base for pen drives.

The company must focus on effectively managing the inventory to meet the demand expectations.



INSIGHT

The sales quantity is almost evenly distributed among the three mouse models. Each model accounts for approximately one-third of the total sales quantity.

Product Similarity: The near-equal distribution suggests that all three mouse models are relatively similar in terms of features, pricing, and customer appeal in the P & A region.

