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# AtliQ HARDWARE

## Ad-HOC INSIGHTS

DOMAIN : CONSUMER GOODS

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# INTRODUCTION

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- Atliq Hardware is one of the leading computer hardware producers in India and well expanded in other countries too. Atliq Hardware has 74 customers, in 27 countries worldwide.
- Along with Asia Pacific (APAC) region, they also operate in Europe (EU), North America (NA) and Latin America (LATAM).
- Atliq Hardware has 3 main division of products – Peripherals and Accessories (P & A), Network and Storage (N & S), and Personal Computer (PC).

# AGENDA

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Provide insights to the management by solving Ad-hoc requests

# DATA UNDERSTANDING

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- The dataset of fiscal year 2020 and 2021 is available.
- Atliq Hardwares fiscal year starts from 1<sup>st</sup> September and ends on 31<sup>st</sup> August.
- Atliq Hardware database (atliq\_hardware\_db) has 6 main tables.
  - dim\_customer : contains customer-related data
  - dim\_product : contains product-related data
  - fact\_gross\_price : contains gross price information for each product
  - fact\_manufacturing\_cost : contains the cost incurred in the production of each product
  - fact\_pre\_invoice\_deductions : contains pre-invoice deductions information for each product
  - fact\_sales\_monthly : contains monthly sales data for each product

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# AD - HOC REQUESTS

**Q1.** Provide the list of markets in which customer "Atliq Exclusive" operates its business in the APAC region.

```
1 • SELECT DISTINCT(market)
2   FROM dim_customer
3   WHERE customer = 'Atliq Exclusive' AND region= 'APAC'
4
```

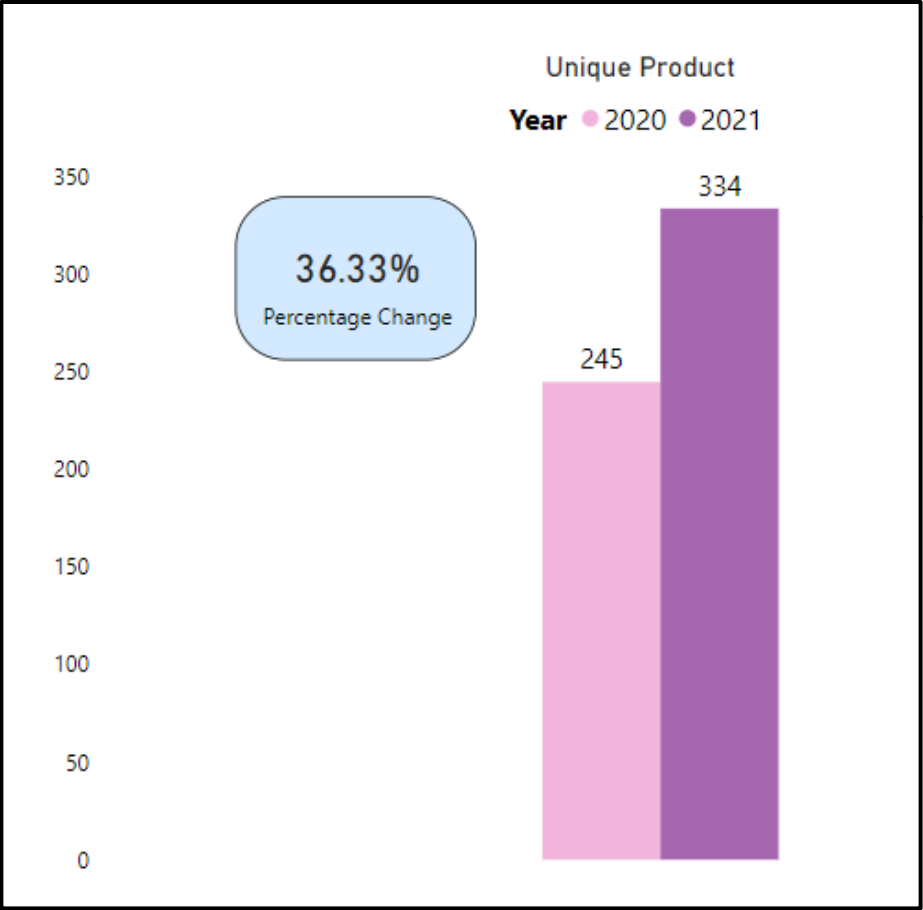
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market
India
Indonesia
Japan
Philippines
South Korea
Australia
Newzealand
Bangladesh



- AltiQ Exclusive is running business in 8 different countries in APAC region

Q2. What is the percentage of unique product increase in 2021 vs. 2020?



```
1 WITH cte AS (  
2     SELECT  
3         count(DISTINCT CASE WHEN cost_year = '2020' THEN product_code END) AS unique_products_2020,  
4         count(DISTINCT CASE WHEN cost_year = '2021' THEN product_code END) AS unique_products_2021  
5     FROM fact_manufacturing_cost  
6 )  
7  
8     SELECT  
9         unique_products_2020,  
10        unique_products_2021,  
11        ROUND(((unique_products_2021 - unique_products_2020) / unique_products_2020),3) * 100 AS percent  
12     FROM cte;  
13
```

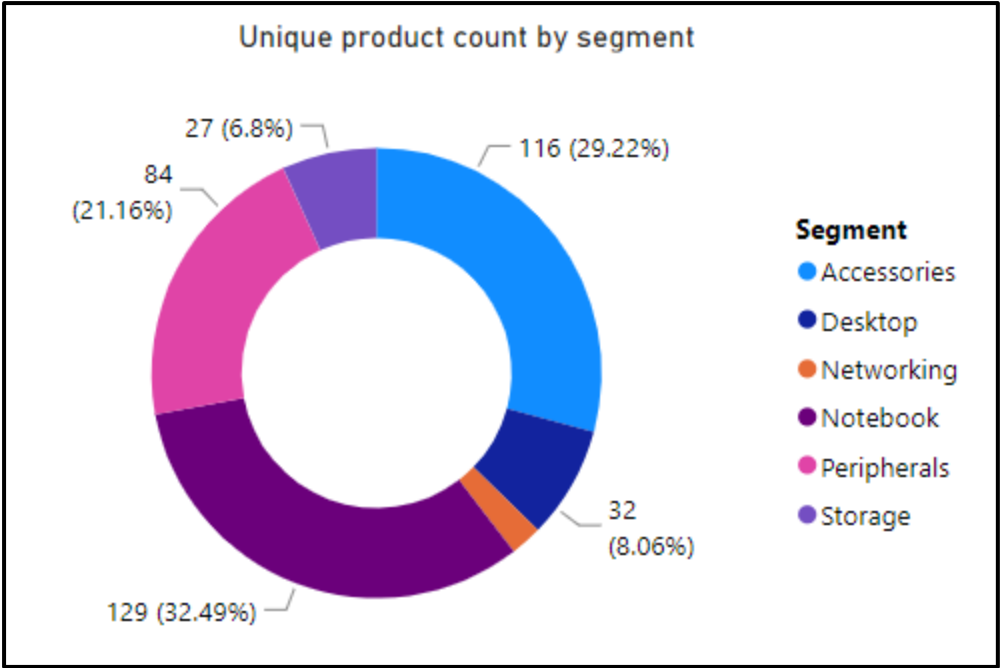
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	unique_products_2020	unique_products_2021	percentage_chg
▶	245	334	36.300

- Our product count increased by 36% from 245 in FY 2020 to 334 in FY 2021.
- An increase in the number of unique products sold can be seen as a positive indicator for the business, indicating a rise in product variety and potential revenue streams.



**Q3.** Provide a report with all the unique product counts for each segment and sort them in descending order of product counts.



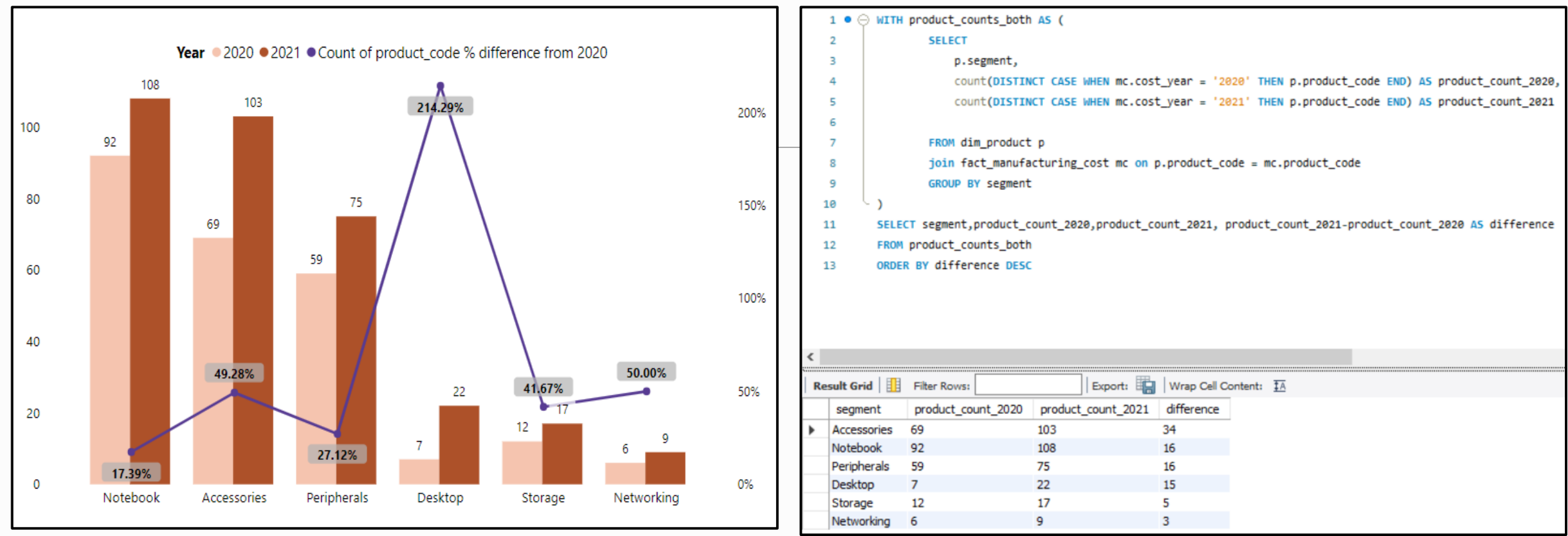
```
1 • SELECT segment,COUNT(DISTINCT product_code) AS product_count
2 FROM dim_product
3 GROUP BY segment
4 ORDER BY product_count DESC;
5
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

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

- Notebooks, accessories, and peripherals make up 83% of the total manufactured products.
- Networking, storage, and desktop are the product segments with the lowest unique products.

Q4. Follow-up: Which segment had the most increase in unique products in 2021 vs 2020?



- Accessories segment experienced the highest increase in unique product (34).
- There was a slight increase in unique product count for Desktop, Storage, and Networking segments from 2020 to 2021, yet they remain the segments with the lowest count
- Increase % wise, Desktop had highest % growth.

**Q5.** Get the products that have the highest and lowest manufacturing costs.

product	Max of manufacturing_cost	product	Min of manufacturing_cost
AQ HOME Allin1 Gen 2	240.54	AQ Master wired x1 Ms	0.89
AQ Home Allin1	234.18	AQ Pen Drive DRC	0.90
AQ BZ Allin1	219.16	AQ Pen Drive 2 IN 1	1.37
AQ Smash 2	207.28	AQ Master wireless x1 Ms	1.58
AQ Smash 1	190.50	AQ Master wired x1	1.92

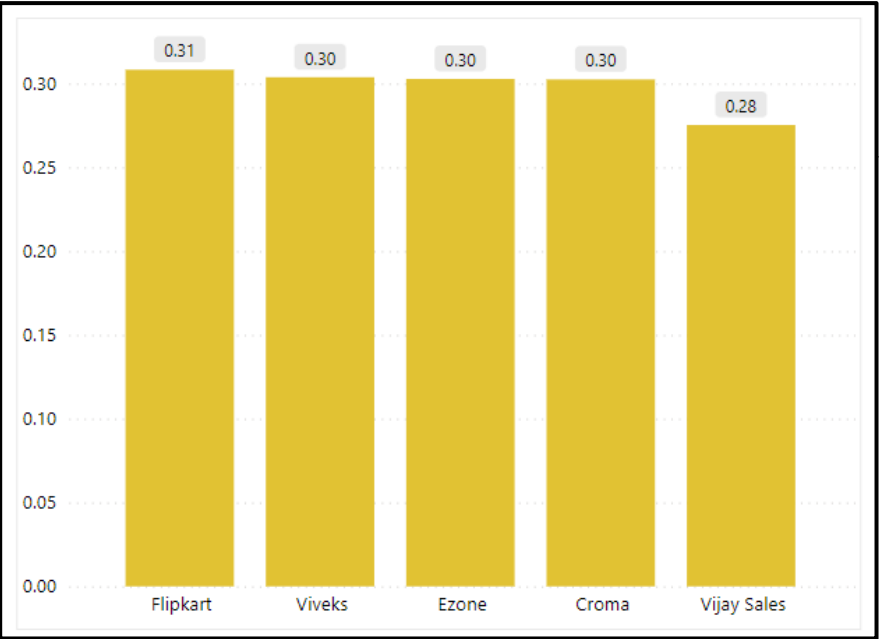
```
1 • SELECT mc.product_code,p.product, mc.manufacturing_cost
2 FROM fact_manufacturing_cost mc
3 JOIN dim_product p on mc.product_code = p.product_code
4 WHERE manufacturing_cost IN (
5     SELECT MAX(manufacturing_cost) FROM fact_manufacturing_cost
6     UNION
7     SELECT MIN(manufacturing_cost) FROM fact_manufacturing_cost
8 )
9 ORDER BY manufacturing_cost DESC
```

<

Result Grid | Filter Rows: | Export: | Wrap Cell Content: [IA](#)

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

**Q6.** 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.

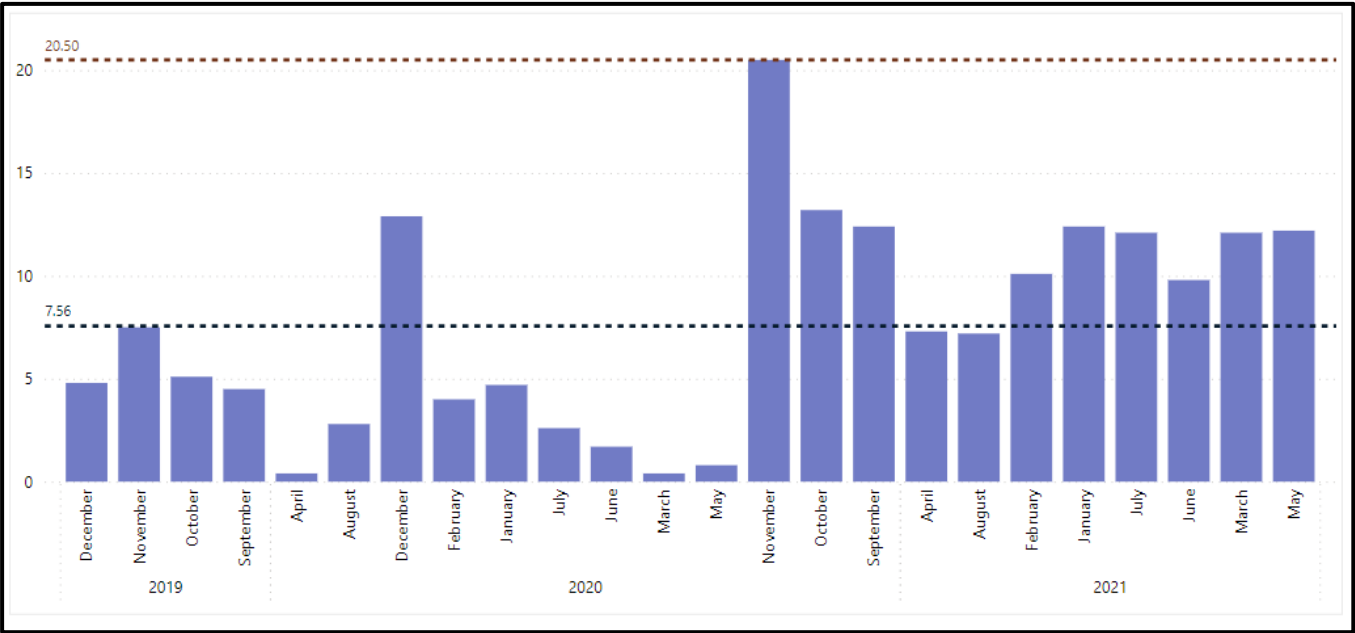


```
1 • SELECT c.customer,c.customer_code, ROUND(AVG(pid.pre_invoice_discount_pct),3) AS average_discount_percentage
2 FROM fact_pre_invoice_deductions pid
3 JOIN dim_customer c on pid.customer_code = c.customer_code
4 WHERE pid.fiscal_year = '2021' AND c.market = 'India'
5 GROUP BY c.customer, c.customer_code
6 ORDER BY average_discount_percentage DESC
7 LIMIT 5
8
```

customer	customer_code	average_discount_percentage
Flipkart	90002009	0.308
Viveks	90002006	0.304
Croma	90002002	0.303
Ezone	90002003	0.303
Amazon	90002016	0.293

- Top 5 customers receives the almost same average 30% of pre-invoice discount percent

Q7. Get the complete report of the Gross sales amount for the customer “Atliq Exclusive” for each month .

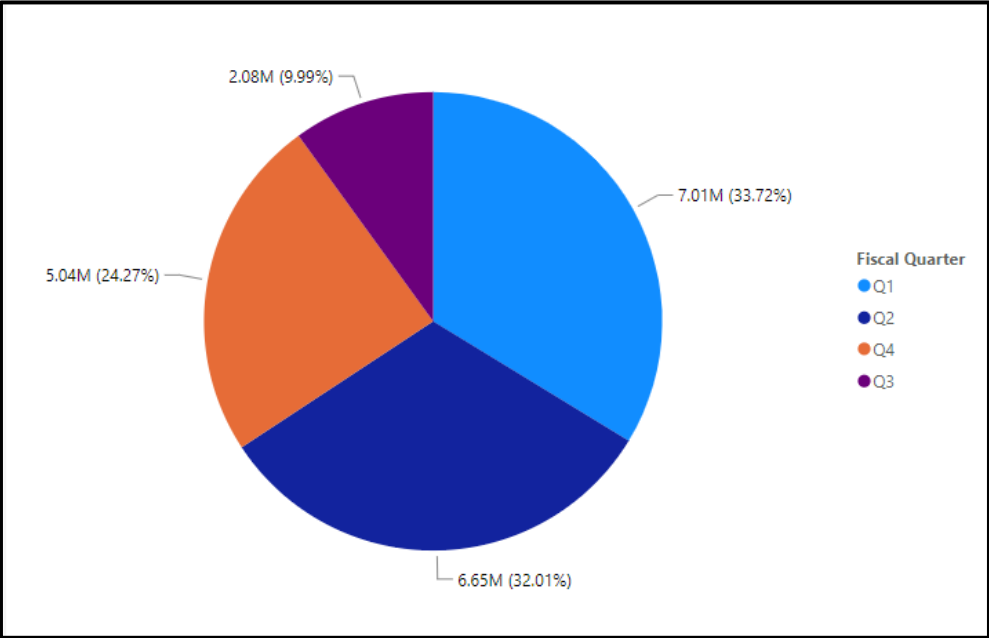


```
1 SELECT MONTHNAME(sm.date) AS month,year(sm.date) as year, ROUND(SUM((sm.sold_quantity*fgp.gross_price))/1000000,1) as Gross_sales_Amount
2 FROM dim_customer c
3 JOIN fact_sales_monthly sm on sm.customer_code = c.customer_code
4 JOIN fact_gross_price fgp on fgp.product_code = sm.product_code AND sm.fiscal_year = fgp.fiscal_year
5 WHERE c.customer = "Atliq Exclusive"
6 GROUP BY month,year
7 ORDER BY year
```

month	year	Gross_sales_Amount
November	2020	20.5
October	2020	13.2
December	2020	12.9
September	2020	12.4
January	2021	12.4
May	2021	12.2
March	2021	12.1
July	2021	12.1
February	2021	10.1
June	2021	9.8
November	2019	7.5
April	2021	7.3
August	2021	7.2
October	2019	5.1
December	2019	4.8

- 2020 November shows highest gross sales and from 2020 November , on average USD 7.56 million gross sales were done throughout.
- We can see that gross sales have been good post November 2020.

Q8. In which quarter of 2020, got the maximum total\_sold\_quantity?



```
1 SELECT
2 CASE
3     WHEN MONTH(date) IN (9,10, 11) THEN 'Q1'
4     WHEN MONTH(date) IN (12, 1, 2) THEN 'Q2'
5     WHEN MONTH(date) IN (3,4,5) THEN 'Q3'
6     WHEN MONTH(date) IN (6,7, 8) THEN 'Q4'
7 END AS Quarter,
8 concat(ROUND(SUM(sold_quantity)/1000000,2),' ','M') as total_sold_quantity
9
10
11 FROM fact_sales_monthly
12 WHERE fiscal_year = '2020'
13 GROUP BY Quarter
14 ORDER BY 2 DESC
```

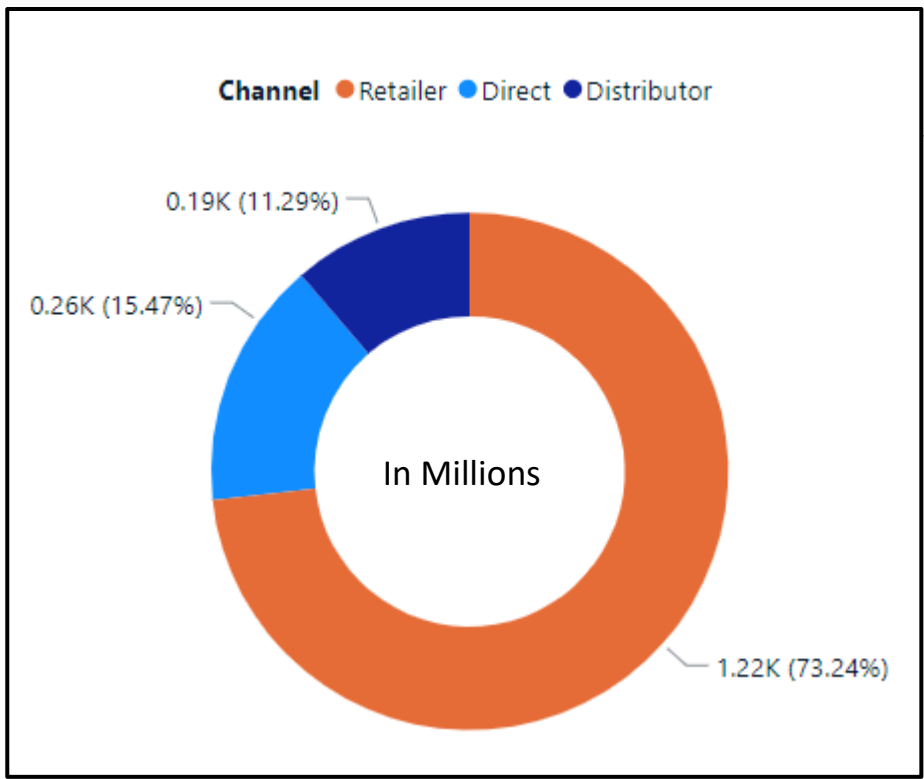
Result Grid

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

In FY 2020

- AltIQ Exclusive is outperformed in Q1 & Q2 compared to other quarters. Christmas & New year holidays could be the reasons sales increase in Q1 & Q2.
- Q1 and Q2 contribute to a combined 65% of total sold quantity

Q9. Which channel helped to bring more gross sales in the fiscal year 2021 and the percentage of contribution?



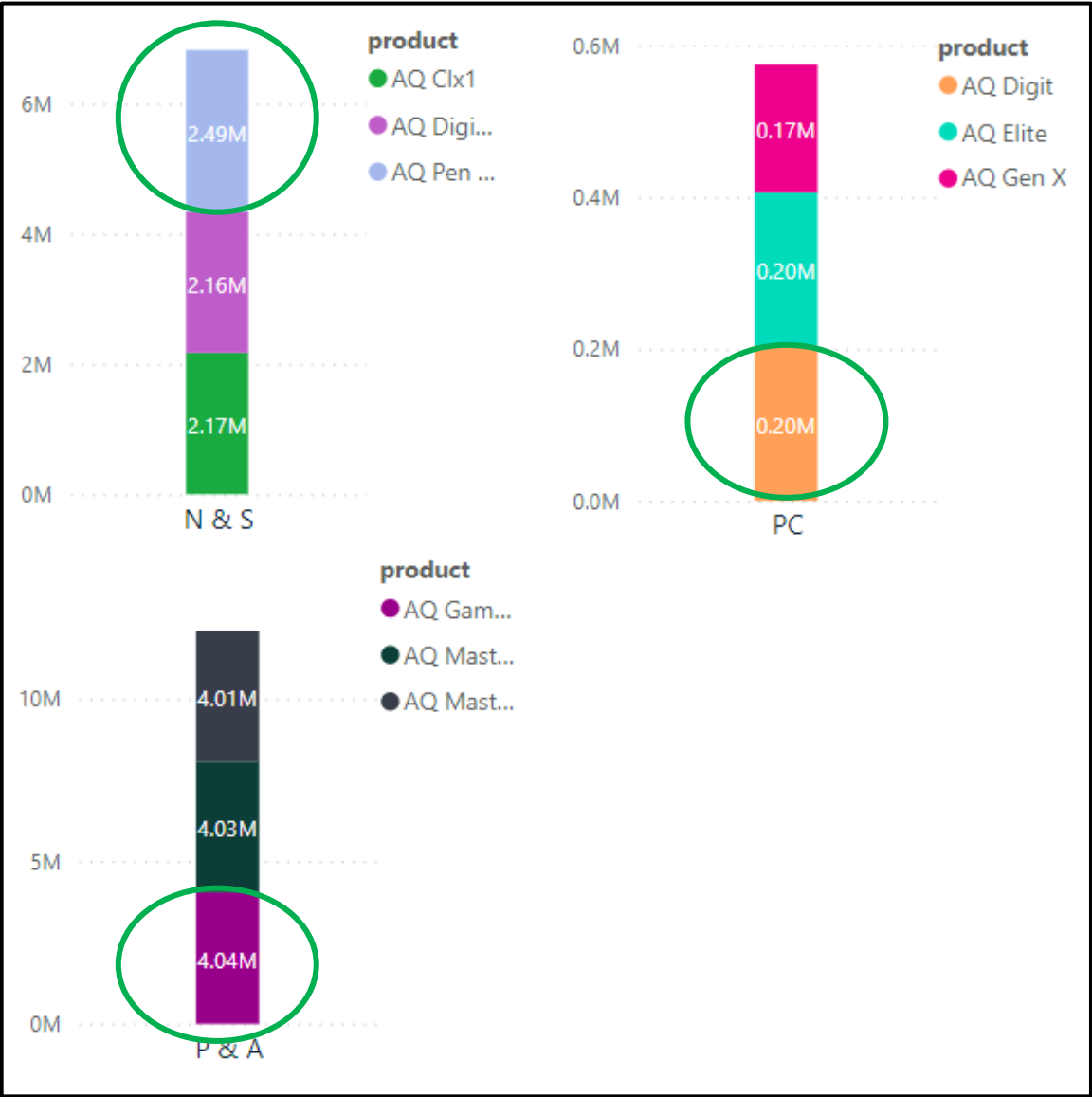
```
1 WITH
2   cte1 AS(
3     SELECT c.channel, ROUND(SUM((sm.sold_quantity*gp.gross_price))/1000000,1) as gross_sales_ml
4     FROM dim_customer c
5     JOIN fact_sales_monthly sm ON c.customer_code = sm.customer_code
6     JOIN fact_gross_price gp ON gp.product_code=sm.product_code AND gp.fiscal_year=sm.fiscal_year
7     WHERE sm.fiscal_year = '2021'
8     GROUP BY c.channel
9   ),
10
11   cte2 AS(
12     SELECT SUM(gross_sales_ml) as total_gross_sales_mln
13     FROM cte1
14   )
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

channel	gross_sales_ml	Percentage
Direct	257.5	15.500
Retailer	1219.1	73.200
Distributor	188.0	11.300

- Retailer has been identified as the primary driver of sales, accounting for a significant proportion of 73.22%
- Distributor has been found to contribute the least, with a percentage of only 11.31%.

Q10. Get the Top 3 products in each division that have a high total\_sold\_quantity in the fiscal\_year 2021?



```
1 WITH cte AS(  
2     SELECT p.division, p.product, SUM(sm.sold_quantity) as Total_Qty_Sold,  
3     dense_rank() OVER(PARTITION BY division ORDER BY SUM(sm.sold_quantity) DESC) as Rank_order  
4     FROM fact_sales_monthly sm INNER JOIN dim_product p  
5     ON sm.product_code = p.product_code  
6     WHERE fiscal_year = 2021  
7     GROUP BY p.division, p.product  
8 )  
9 SELECT *  
10 FROM cte  
11 WHERE Rank_order <= 3
```

division	product	Total_Qty_Sold	Rank_order
N & S	AQ Pen Drive DRC	2034569	1
N & S	AQ Digit SSD	1240149	2
N & S	AQ Clx1	1238683	3
P & A	AQ Gamers Ms	2477098	1
P & A	AQ Maxima Ms	2461991	2
P & A	AQ Master wireless x1 Ms	2448784	3
PC	AQ Digit	135092	1
PC	AQ Gen Y	135031	2
PC	AQ Elite	134431	3



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THANK YOU

