Consumer goods
Ad Hoc Insights

REQUEST 1

PROVIDE THE LIST OF MARKETS IN WHICH CUSTOMER "ATLIQ EXCLUSIVE" OPERATES ITS BUSINESS IN THE APAC REGION.

```sql
select distinct(market) from dim_customer
where  customer='Atliq Exclusive' and region='APAC'
```

Output

market
India
Indonesia
Japan
Philipines
South Korea
Australia
Newzealand
Bangladesh

INSIGHTS

- India is highest revenue market in APAC regions.
- In APAC region it operates its business in India, Indonesia, Japan, Philippines, South Korea, Australia, New Zealand,Bangladesh.
- The customer 'Atliq Exclusive' operates in three regions-APAC,EU,NA.

REQUEST 2

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 ?

```sql
1  with unique_products_2020 as
2  (select count(distinct product_code) as unique_products_2020
3  from fact_gross_price
4  where fiscal_year='2020'),
5  unique_products_2021 as
6  (select count(distinct product_code) as unique_products_2021
7  from fact_gross_price
8  where fiscal_year='2021')
9  select unique_products_2020,unique_products_2021,
10 round(((unique_products_2020/unique_products_2021)*100),2) as percentage_chg
11  from unique_products_2020
12  inner join unique_products_2021
```

Output to visual

unique_products_2020	unique_products_2021	percentage_chg
245	334	36.33

● Sum of unique_products_2020 ● Sum of unique_products_2021

245

334
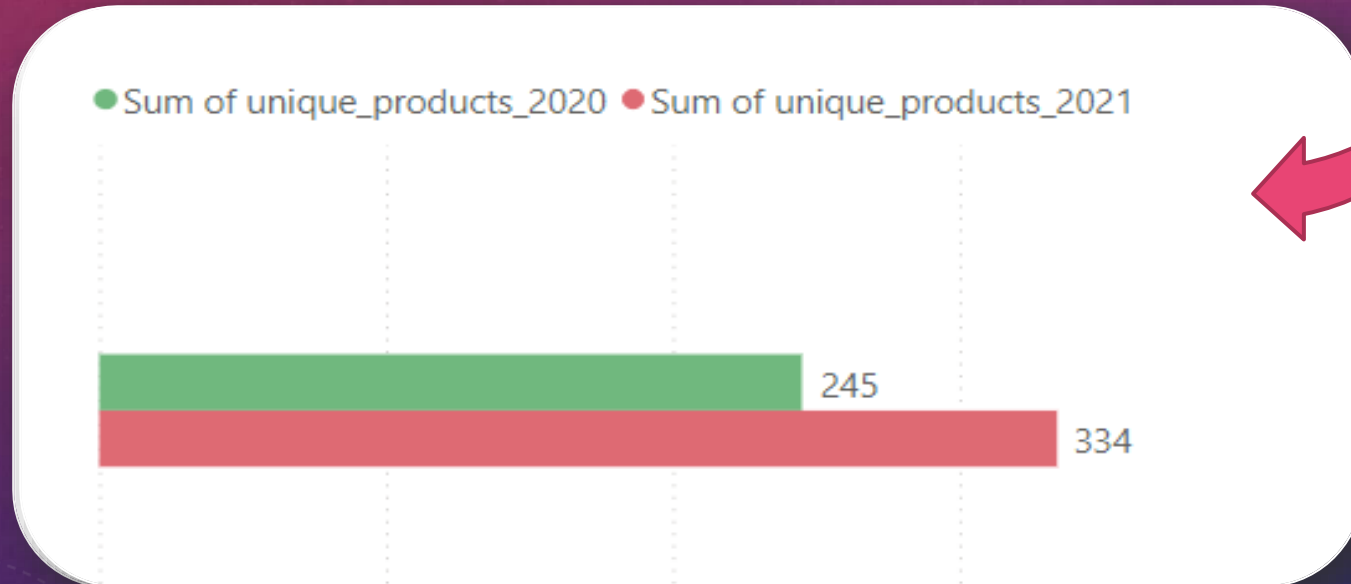
INSIGHTS

- The product increase from 2020 to 2021 is 36.33%.
- 89 unique products were added in 2021.

REQUEST 3

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.

```sql
1  select count(distinct product_code) as product_count,segment
2    from dim_product
3    group by segment
4    order by count(distinct product_code) desc
```
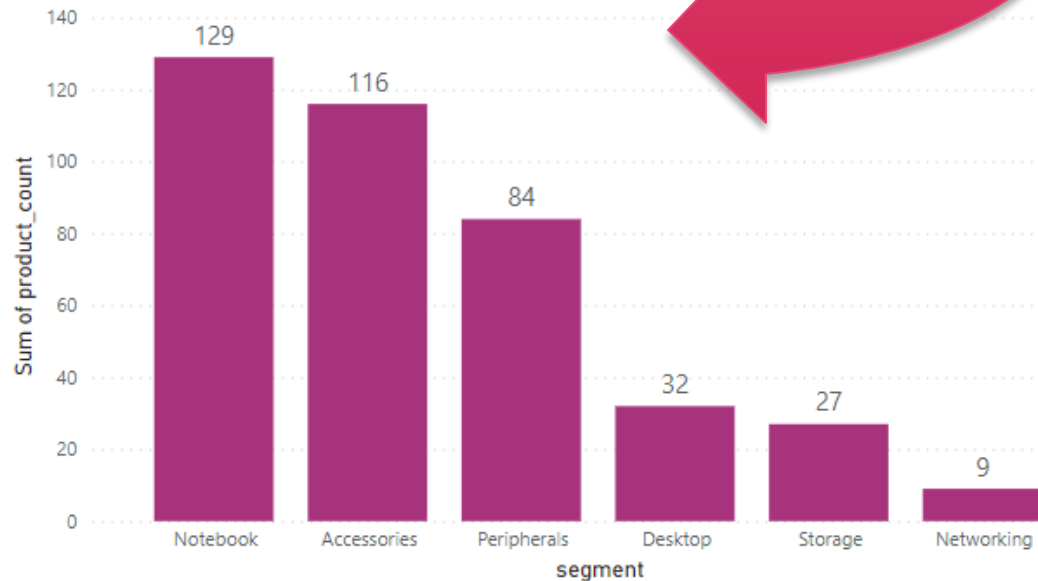
Output to visual

INSIGHTS

- Network segment(129) has the highest number of unique products followed by Accessories(116) and Peripherals(84).

REQUEST 4

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.

```sql
with cte1 as (
select segment,count(distinct x.product_code) product_count_2020
from dim_product x
inner join fact_sales_monthly y
on x.product_code=y.product_code
where fiscal_year='2020'
group by segment),
cte2 as (
select segment,count(distinct x.product_code) product_count_2021
from dim_product x
inner join fact_sales_monthly y
on x.product_code=y.product_code
where fiscal_year='2021'
group by segment),
cte3 as (
select cte1.segment,product_count_2020,product_count_2021,
product_count_2021-product_count_2020 as difference
from cte1 join cte2
on cte1.segment=cte2.segment)
select * from cte3
order by difference desc
```
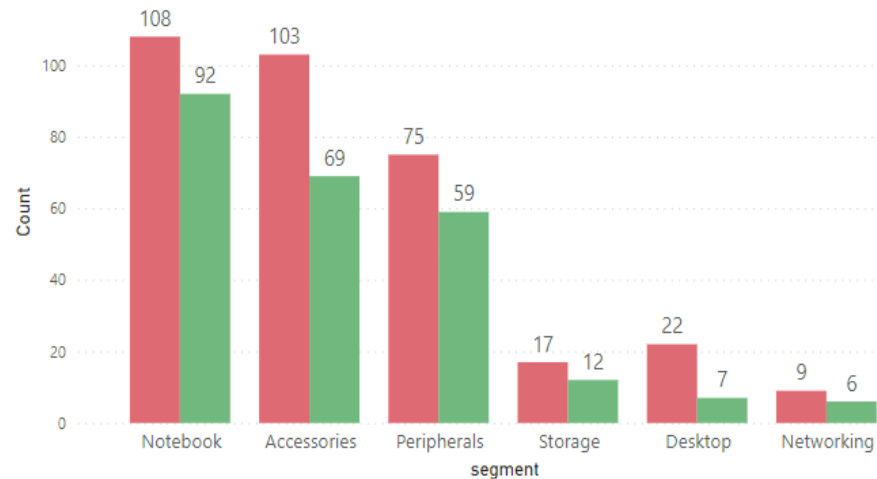
Output to visual

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

Product_count by year

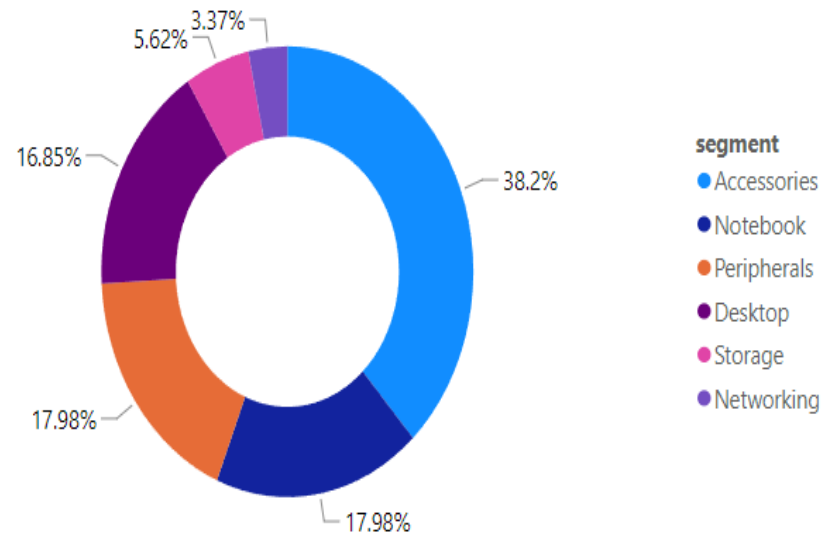● Sum of product_count_2021 ● Sum of product_count_2020

INSIGHTS

- 34 new Accessories were added in 2021 i.e there is an increment of 49% of accessories count in 2021 from 2020.
- Only 3 unique networking segment has been increased in 2021.
- There is an increase of 314.28% of product count in desktop segment, highest increment percentage of all.

Difference by segment

- 3.37%
- 5.62%
- 16.85%
- 17.98%
- 17.98%
- 38.2%

segment
- Accessories
- Notebook
- Peripherals
- Desktop
- Storage
- Networking

- INSIGHTS

- 34 new Accessories were added in 2021 i.e there is an increment of 49% of accessories count in 2021 from 2020.

- Only 3 unique networking segment has been increased in 2021.

- There is an increase of 314.28% of product count in networking segment.

REQUEST 5

5. GET THE PRODUCTS THAT HAVE THE HIGHEST AND LOWEST MANUFACTURING COSTS. THE FINAL OUTPUT SHOULD CONTAIN THESE FIELDS, PRODUCT_CODE PRODUCT MANUFACTURING_COST.

```
1   with cte as (
2       select y.product_code as product_code,product,
3       rank() over (order by manufacturing_cost desc) highestt,
4       rank() over (order by manufacturing_cost asc) lowestt,
5       manufacturing_cost
6       from fact_manufacturing_cost x
7       join dim_product y
8       on x.product_code=y.product_code)
9
10      select product_code,product,manufacturing_cost
11      from cte where
12      highestt=1 or lowestt=1
```

Output to visual

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

Max Manufacturing Cost and Min Manufacturing Cost

0.892 (0.37%)

240.5364 (99.63%)

- Max Manufacturing ...
- Min Manufacturing ...
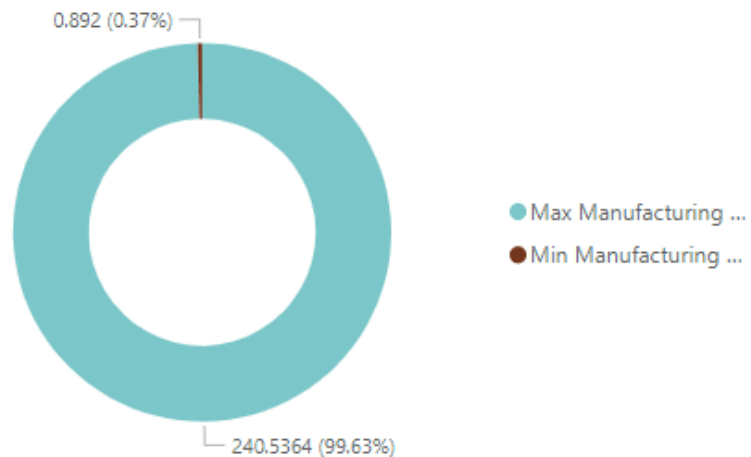
INSIGHTS

- AQ HOME Allin1 Gen2 has the highest manufacturing cost whereas AQ Master wired x1 Ms has the lowest manufacturing cost.

REQUEST 6
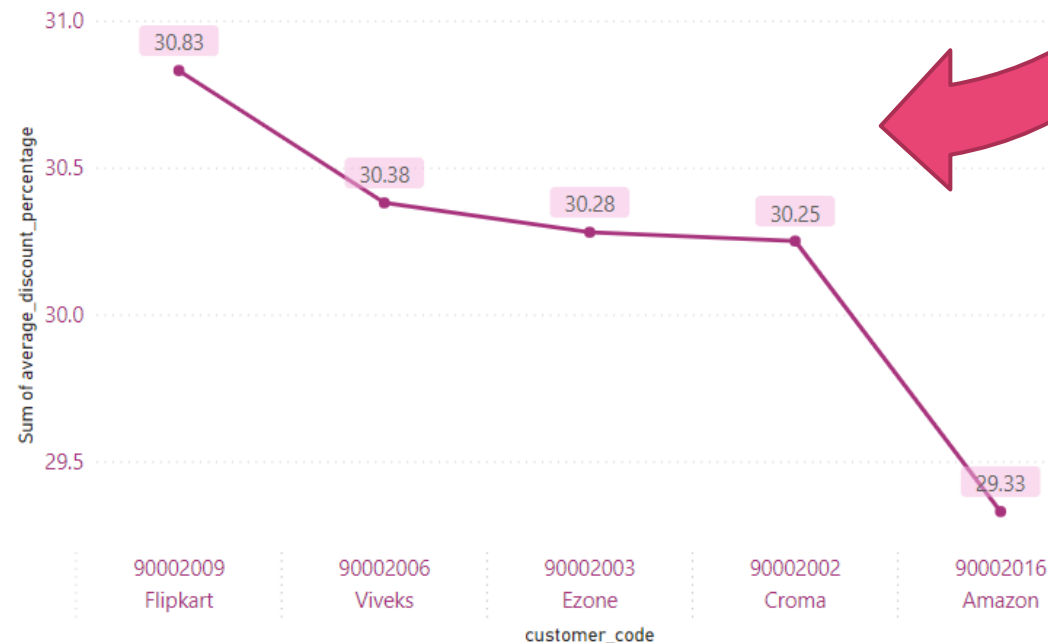
6. GENERATE A REPORT WHICH CONTAINS THE TOP 5 CUSTOMERS WHO RECEIVED AN AVERAGE HIGH PRE_INVOICE_DISCOUNT_PCT FOR THE FISCAL YEAR 2021 AND IN THE INDIAN MARKET. THE FINAL OUTPUT CONTAINS THESE FIELDS, CUSTOMER_CODE CUSTOMER AVERAGE_DISCOUNT_PERCENTAGE.

```sql
with cte as (
select x.customer_code,customer, round(pre_invoice_discount_pct*100,2) average_discount_percentage
from fact_pre_invoice_deductions x
join dim_customer y
on x.customer_code=y.customer_code
where pre_invoice_discount_pct>
 (select avg(pre_invoice_discount_pct) from fact_pre_invoice_deductions)
and market='India'
and fiscal_year='2021')
select * from cte
order by average_discount_percentage desc
limit 5
```

Output to visual

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

INSIGHTS

- Flipkart received highest pre invoice discount (30.83%)in the fiscal year from Indian market .
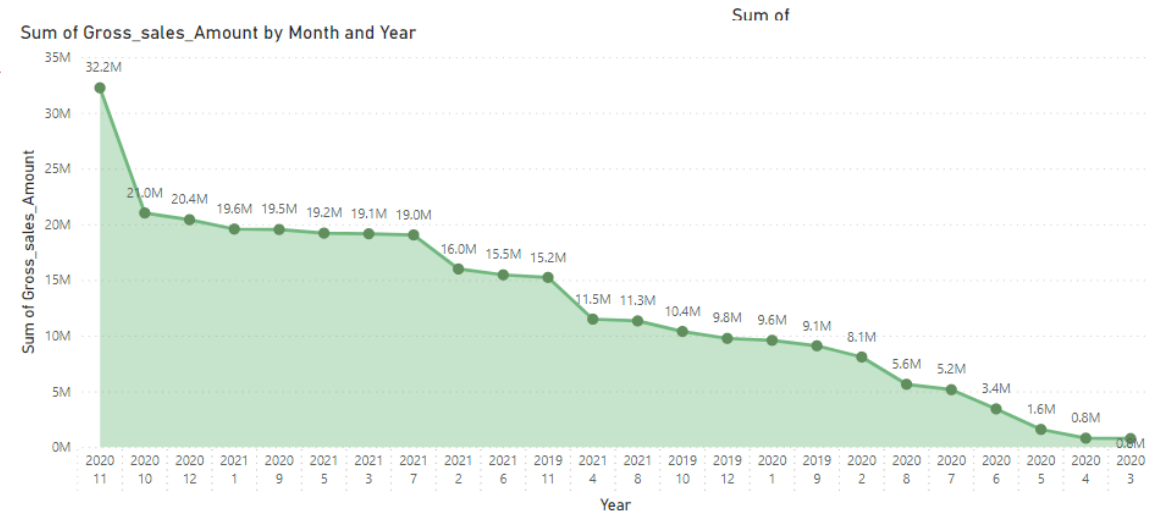- In contrast to which Amazon received the lowest with 29.33%.

Sum of average_discount_percentage by customer and customer_code

REQUEST 7

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 .

```sql
select round(sum(gross_price*sold_quantity),2) Gross_sales_Amount,
month(date) Month,year(date) Year
from dim_customer c
join fact_sales_monthly m
on c.customer_code=m.customer_code
join fact_gross_price g
on g.product_code=m.product_code
where customer='Atliq Exclusive'
group by month(date),year(date)
order by year(date)
```

Output to visual

REQUEST 8

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

```
1  •    select sum(sold_quantity) total_sold_quantity,
2  ⊖    case when month(date) in (9,10,11) then 'quarter1'
3       when month(date) in (12,1,2) then 'quarter2'
4       when month(date) in (3,4,5) then 'quarter3'
5       when month(date) in (6,7,8) then 'quarter4' end Quarter
6       from fact_sales_monthly
7       where fiscal_year=2020
8       group by Quarter
9       order by total_sold_quantity desc
10      limit 1
```

Output to visual

total_sold_quantity	Quarter
7005619	quarter1
6649642	quarter2
5042541	quarter4
2075087	quarter3
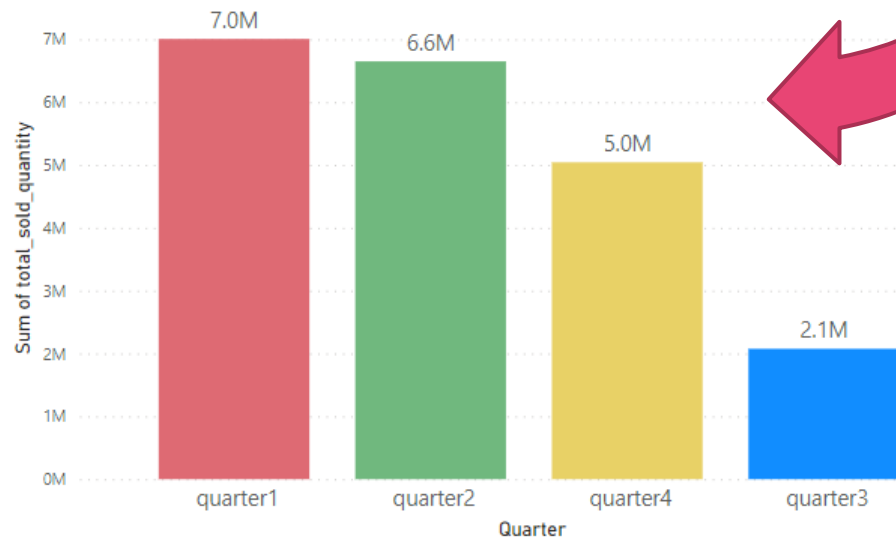
INSIGHTS

- Quarter 1 of fiscal year 2020 has the highest sold quantity with over 7.005 million products sold.
- Quarter 3 did not perform very well, only 2.1M products were sold in quarter 3.

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 ?

```sql
1  ⊖  WITH gross_sales AS (
2        SELECT
3        d_c.channel,
4        ROUND((SUM(f_sm.sold_quantity * f_gp.gross_price)/1000000),2) AS gross_sales_mln
5        FROM fact_sales_monthly f_sm
6        JOIN fact_gross_price f_gp ON f_sm.product_code = f_gp.product_code
7        JOIN dim_customer d_c ON f_sm.customer_code = d_c.customer_code
8        WHERE f_sm.fiscal_year = 2021
9        GROUP BY d_c.channel
10       ORDER BY SUM(f_sm.sold_quantity * f_gp.gross_price)/1000000 DESC
11     )
12
13     SELECT
14     channel,
15     gross_sales_mln,
16     CONCAT(ROUND(gross_sales_mln * 100.0 / sum(gross_sales_mln) OVER(),2),'%')  AS percentage
17     FROM gross_sales
```

OUTPUT TO VISUAL

channel	gross_sales_mln	percentage
Retailer	1924.17	73.22%
Direct	406.69	15.48%
Distributor	297.18	11.31%

Sum of percentage by Gross_sales_mln and channel

Gross_sales_mln
- 1924.17 M
- 406.69 M
- 297.18 M

11.31%

15.48%

73.21%
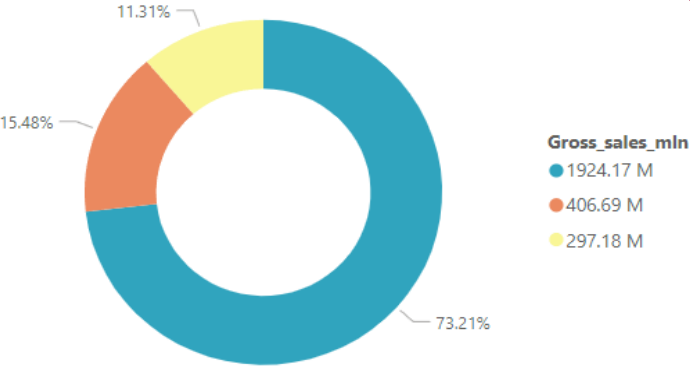
REQUEST 10

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, rank_order, product, total_sold_quantity.

```sql
1  with cte as (
2      select division,m.product_code,product,
3      sum(sold_quantity) as total_sold_quantity,
4      rank() over (partition by division order by sum(sold_quantity) desc) as rank_order
5      from dim_product p
6      join fact_sales_monthly m
7      on p.product_code=m.product_code
8      where fiscal_year=2021
9      group by product,product_code,division
10     )
11     select * from cte
12     where rank_order<4
13
14
```

Output to visual