

consumer goods

SQL project challenge

presented by **WAFA DAKHEEL**

A photograph of three men in business suits sitting at a desk with multiple computer monitors. One man is standing and pointing at a screen, while the other two are seated and looking at the screen. The image is overlaid with a semi-transparent teal filter.

Agenda

- 01** Background/context
- 02** Getting familiar Motron's Business - their Market and product lines
- 03** Gitting familiar with input data
- 04** Ad-hor requests along with the queried result, visualization and insight

BACKGROUND/ CONTEXT

our company

Motron (imaginary company) - one of the leading computer hardware producers in USA

Background

the management noticed that they do not get enough insights to make quick and smart data-informed decisions

Problem

There are 10 ad-hoc requests for which the company needs insights

Approach

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



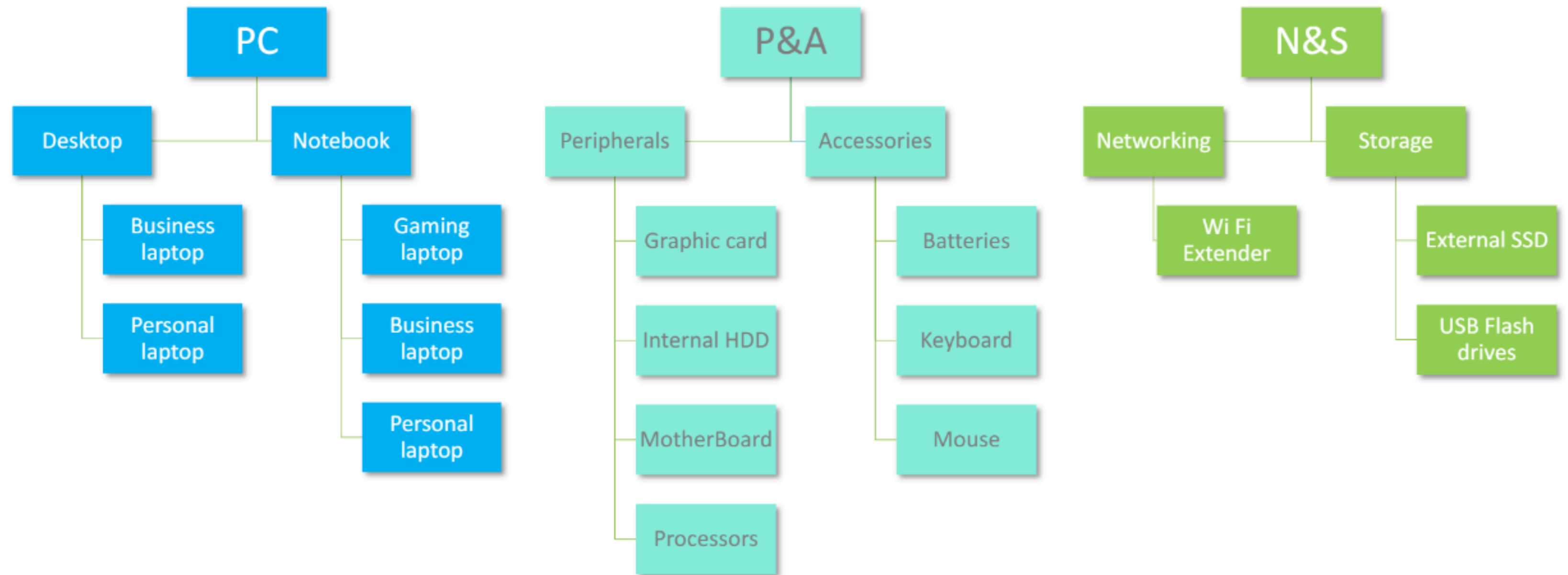
Getting familiar with Motrn's Business - Their Markets and Product lines



— Motron's Business Markets

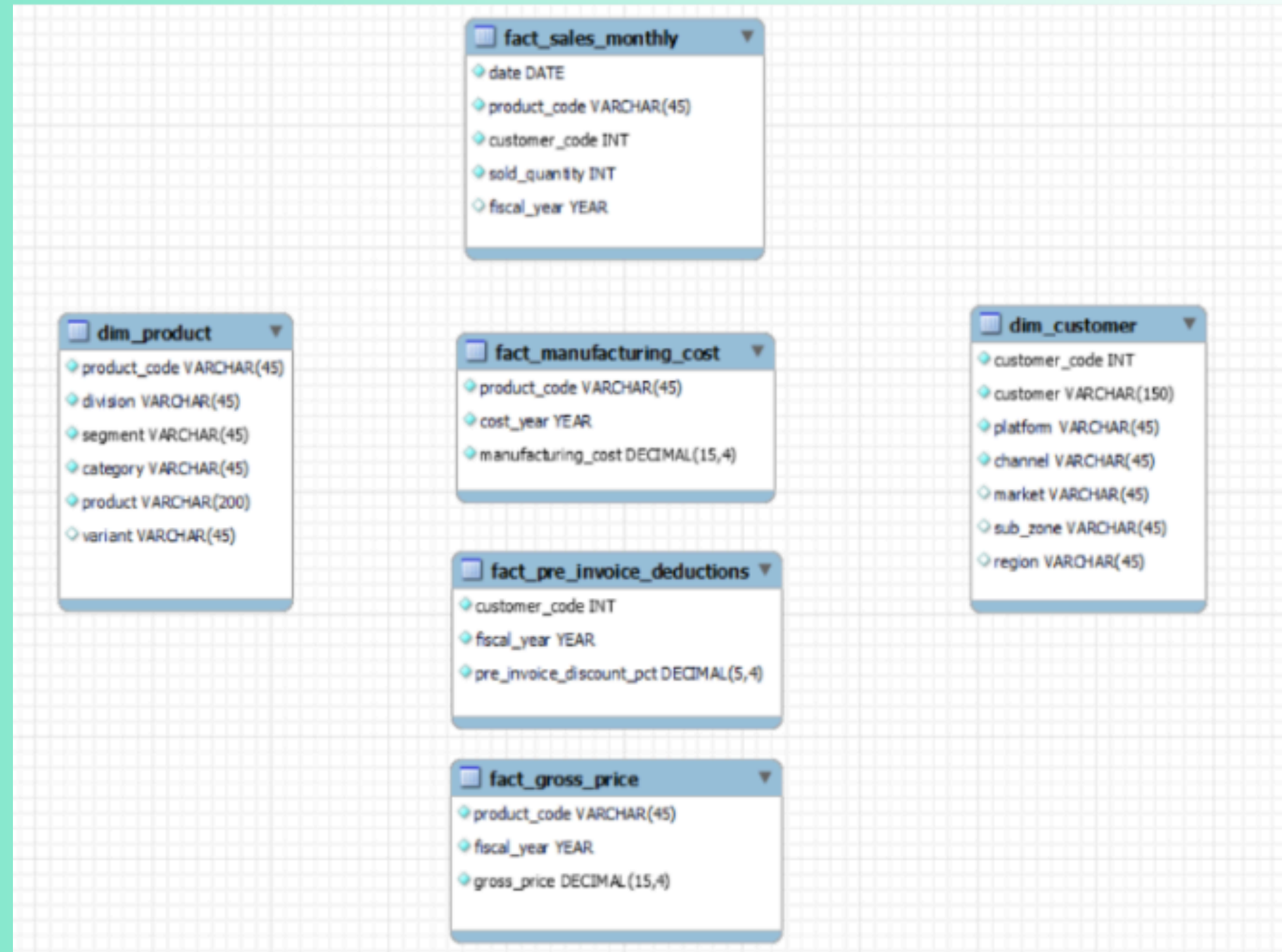
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Motron's Product lines



presented by WAFA DAKHEEL

Getting familiar with the input data



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

**Ad-hoc
requeste,
queried results.
Insights and
visualization**

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the input data

	market
▶	Australia
	Bangladesh
	India
	Indonesia
	Japan
	Newzealand
	Philiphines
	South Korea

REQUEST 1:

- Provide the list of markets in which customer “Motorn Exclusive “ operates its business in the APAC region.

Insights

- In the APAC region, our Exclusive store has established its presence in 8 major markets.



REQUEST 2:

- What is the percentage of unique product increase in 2021 vs. 2020? The final output contains these fields:

2020 - 2021

output data

	unique_product_2020	unique_product_2021	percentage_chg
▶	245	334	36.33

Insights

- it's a good sign that we are continuously innovating and introducing new products to the market. In FY 2020, we had a total of 245 products, but in FY 2021, our count increased by 36% to 334 products.

output data



presented by WAFA DAKHEEL

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;
-

output data

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

REQUEST 4:

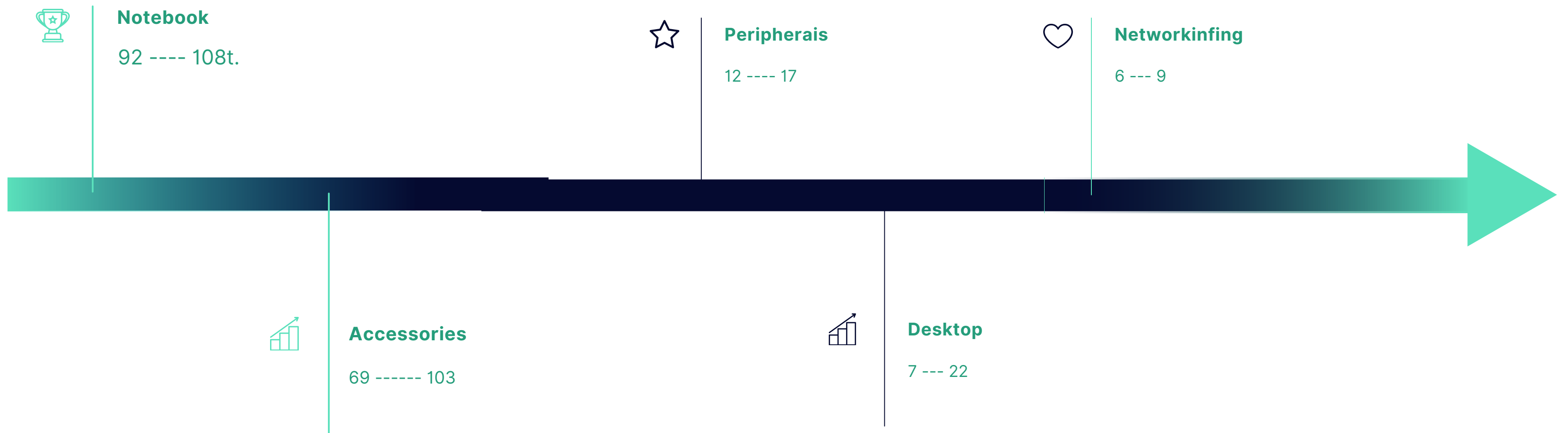
- Follow-up : Which segment had the most increase in unique products in 2021 vs 2020? The final output contains these fields:

output data

	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

Insights

- In 2021, we were mainly focusing on diversifying our accessories segment. We introduced 34 new products to the market in accessories.



comparison of product count 2020 vs 2021 for each of the segments

REQUEST 5:

- Get the products that have the highest and lowest manufacturing costs. The final output should contain these fields:

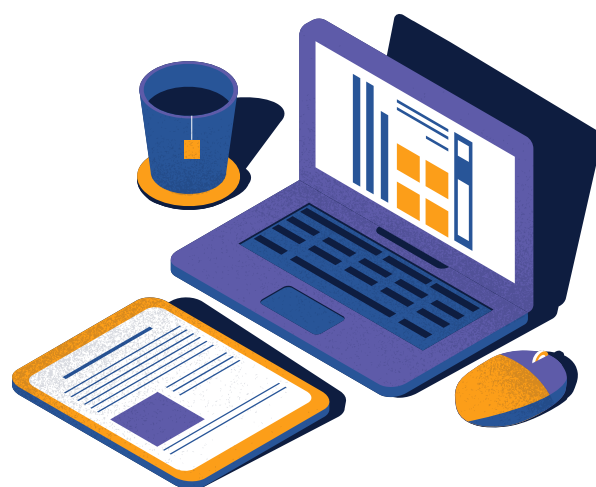
output data

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



Insights

Which of our products has the highest manufacturing cost ?

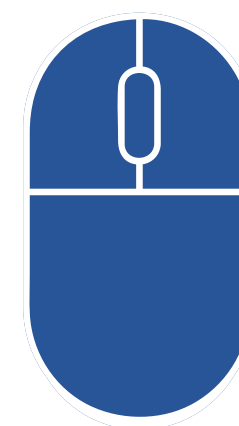


240.54\$

MT HOME Allin 1 Gen 2 (Plus 3)

Personal Desktop

Which of our products has the lowest manufacturing cost ?



0.89\$

AQ Master wied x1 Ms (Standard 1)

Mouse

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 India market. The final output contains these fields:
-

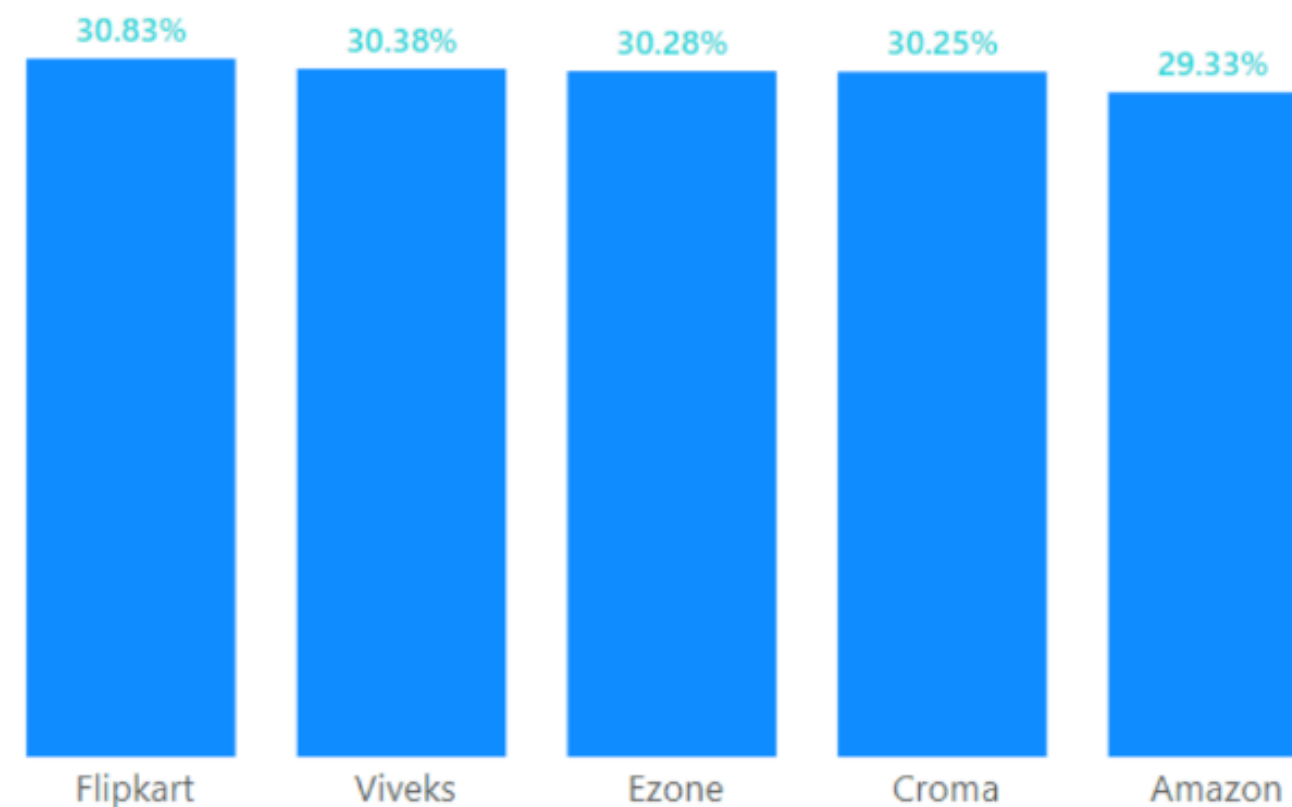
output data

	customer_code	customer	average_discount_percentage
►	90002009	Flipkart	0.3083
	90002006	Viveks	0.3038
	90002003	Ezone	0.3028
	90002002	Croma	0.3025
	90002016	Amazon	0.2933



Insights

In 2021, we offered nearly equal **pre-invoice discount percentages to each of our top customers**, given that **Flipkart** is the most discounted customer in the India market, which equals 30.83%.



who are the top 5 customers for whom we offered the most pre-invoice discount percentage in 2021 and in the Indian market ?

REQUEST 7:

- Get the complete report of the Gross sales amount for the customer “Motron Exclusive “ for each month.This analysis helps to get an idea of low and high-performing months and take strategic decision. The final report contains these columns;

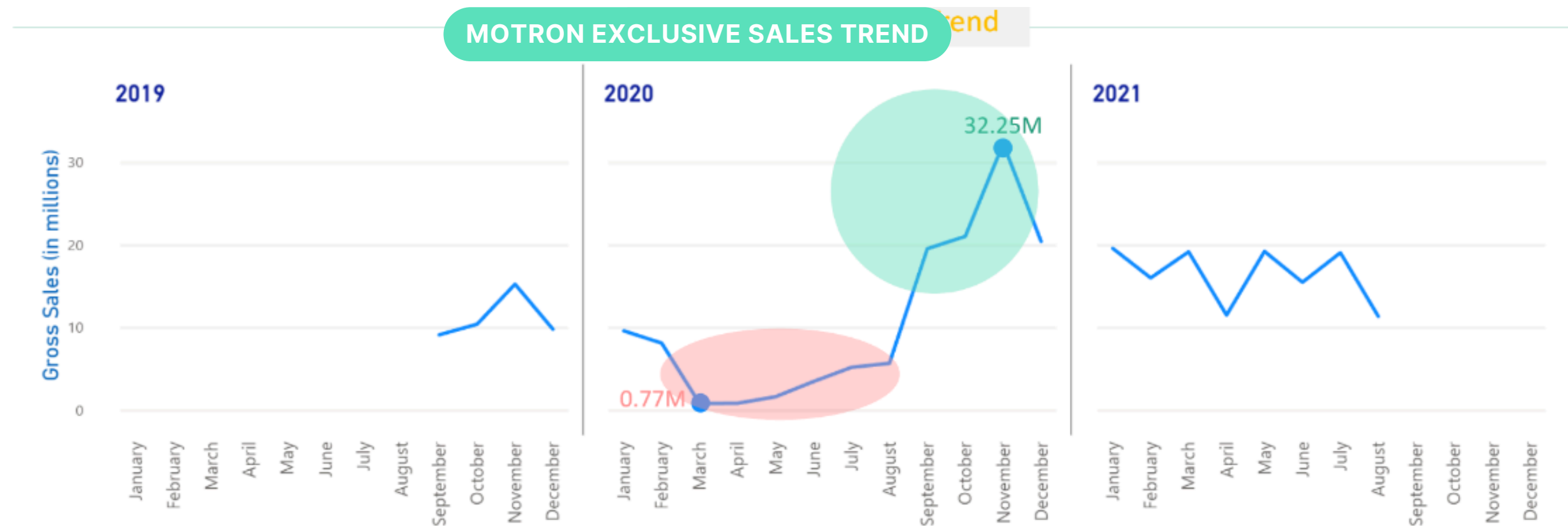
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output data

	months	year	gross_sales
▶	September	2019	9.09M
	October	2019	10.38M
	November	2019	15.23M
	December	2019	9.76M
	January	2020	9.58M
	February	2020	8.08M
	March	2020	0.77M
	April	2020	0.80M
	May	2020	1.59M
	June	2020	3.43M
	July	2020	5.15M
	August	2020	5.64M
	September	2020	19.53M
	October	2020	21.02M
	November	2020	32.25M
	December	2020	20.41M
	January	2021	19.57M
	February	2021	15.99M
	March	2021	19.15M
	April	2021	11.48M
	May	2021	19.20M
	June	2021	15.46M
	July	2021	19.04M
	August	2021	11.32M

Insights

For Motron Exclusive, November 2020 marked the highest sales, and March 2020 marked the lowest gross sales. it's very evident that the **lower sales between March and August are because of COVID-19**. However it's a very good sign that the sales increased quickly after August and reached **the highest level since the last two years in November**.



Get in touch with us.



@wafastudy



wafadakheel@gmail.com



wafa dakheel