**Sales insight project**

**Purpose:**

* To unlock sales insights that are not visible before
* Decision support for sales team
* Automate them to reduce manual time spent in data gathering

**Stakeholders**

* Sales Director
* Marketing Team
* Customer Service Team
* Data Analytics Team
* IT

**End Result**

* An automated/interactive dashboard providing quick and latest sales insights in order to support data driven decision making

**Success Criteria**

* Dashboard uncovering sales order insights with latest data available.
* Sales team able to take better decisions & prove 10% cost savings of total spend
* Sales analyst stop data gathering manually in order to save 20% of their business time and reinvest in value added activity

**Datasets**

5 tables:

* Customers: customer\_code, customer\_name, customer\_type
* Date: date, cy\_date, year, month\_name, date\_yy\_mmm
* Markets: markets\_code, markets\_name, zone
* Products: product\_code, product\_type
* Transactions: product\_code, customer\_code, market\_code, order\_date, sales\_qty, sales\_amount, currency

Findings:

* Sales amounts contain negative figures.
* Empty zone
* Inconsistent currency

**MySQL query**

**To see how many total sales transaction**

SELECT count(\*) FROM sales.transactions as Sales\_Count;

Output: 150,283

**To see number of records in customer table**

SELECT count(\*) FROM sales.customers as Customer\_Count;

Output: 38

**To see number of transaction from ‘Chennai’**

SELECT count(\*) FROM sales.transactions

WHERE market\_code IN

(SELECT markets\_code FROM sales.markets

WHERE markets\_name = 'Chennai')

Output: 1035

**Find number of transactions in USD currency**

SELECT count(\*) FROM sales.transactions

WHERE currency = 'USD'

Output: 2

**Find number of records in year 2020**

SELECT count(\*) FROM sales.transactions

WHERE YEAR(order\_date) = 2020

Output: 21550

**Or**

SELECT count(\*) FROM sales.transactions T

INNER JOIN sales.date D

ON T.order\_date = D.date

WHERE D.year = 2020

Output: 21550

**Find sum of sales in year 2020**

SELECT SUM(T.sales\_amount) FROM sales.transactions T

INNER JOIN sales.date D

ON T.order\_date = D.date

WHERE D.year = 2020

Output: 142,235,559

**Find sum of sales in year 2019**

SELECT SUM(T.sales\_amount) FROM sales.transactions T

INNER JOIN sales.date D

ON T.order\_date = D.date

WHERE D.year = 2019

Output: 336,452,114

Observation: Sales revenue declining from year 2019 to 2020

**Find sum of sales in year 2020 from Chennai**

SELECT SUM(T.sales\_amount) FROM sales.transactions T

INNER JOIN sales.date D

ON T.order\_date = D.date

WHERE D.year = 2020 AND T.market\_code = ‘Mark001’

Output: 2,463,024

**Find distinct product code from Chennai**

SELECT distinct product\_code FROM sales.transactions where market\_code=’Mark001’

**PERFORM ETL**

* Load sales dataset between POWERBI & MySQL
* Load all 5 tables
* Data modelling
* Transform data > data cleaning > exclude zone under blank, exclude sales amount <= 0, convert all currency into INR by adding new conditional column ‘norm\_sales\_amount’

Findings: Noticed there are duplicates transactions

SELECT DISTINCT currency FROM sales.transactions;

-- 'INR'

-- 'USD'

-- 'INR\r'

-- 'USD\r'

SELECT COUNT(\*) FROM sales.transactions WHERE currency = 'INR';

-- 279

SELECT COUNT(\*) FROM sales.transactions WHERE currency = 'INR\r';

-- 150000

SELECT COUNT(\*) FROM sales.transactions WHERE currency = 'USD';

-- 2

SELECT COUNT(\*) FROM sales.transactions WHERE currency = 'USD\r'

-- 2

To remove duplicates from PowerQuery

**Preparing Dashboard**

Check total revenue

SELECT sum(T.sales\_amount) FROM sales.transactions T

INNER JOIN sales.date d

ON T.order\_date = d.date

WHERE T.currency = 'INR\r' or T.currency = 'USD\r'

Output: 984,813,462

Check revenue in year 2020

SELECT sum(T.sales\_amount) FROM sales.transactions T

INNER JOIN sales.date d

ON T.order\_date = d.date

WHERE d.year = 2020 AND T.currency = 'INR\r' or T.currency = 'USD\r'

Output: 142,225,295

Check total sales quantity

SELECT sum(T.sales\_qty) FROM sales.transactions T

INNER JOIN sales.date d

ON T.order\_date = d.date

WHERE d.year = 2020 AND T.currency = 'INR\r' or T.currency = 'USD\r'

Output: 352,280

List revenue by customers, order by desc

SELECT T.customer\_code, sum(T.sales\_amount) as Total FROM sales.transactions T

INNER JOIN sales.date d

ON T.order\_date = d.date

WHERE T.currency = 'INR\r' or T.currency = 'USD\r'

GROUP BY T.customer\_code

ORDER BY Total DESC

List sales\_qty by customers, order by desc

SELECT T.customer\_code, sum(T.sales\_amount) as Total FROM sales.transactions T

INNER JOIN sales.date d

ON T.order\_date = d.date

WHERE T.currency = 'INR\r' or T.currency = 'USD\r'

GROUP BY T.customer\_code

ORDER BY Total DESC

Check total sales in Jan 2020

SELECT sum(T.sales\_amount) FROM sales.transactions T

INNER JOIN sales.date d

ON T.order\_date = d.date

WHERE d.year = 2020 AND d.month\_name = 'January' AND (T.currency = 'INR\r' or T.currency = 'USD\r')

Output: 25,656,567

Check total sales in year 2020 by market name ‘Chennai’

SELECT sum(T.sales\_amount) FROM sales.transactions T

INNER JOIN sales.date d

ON T.order\_date = d.date

WHERE d.year = 2020 AND T.market\_code = 'Mark001' AND (T.currency = 'INR\r' or T.currency = 'USD\r')

Output: 2,463,024