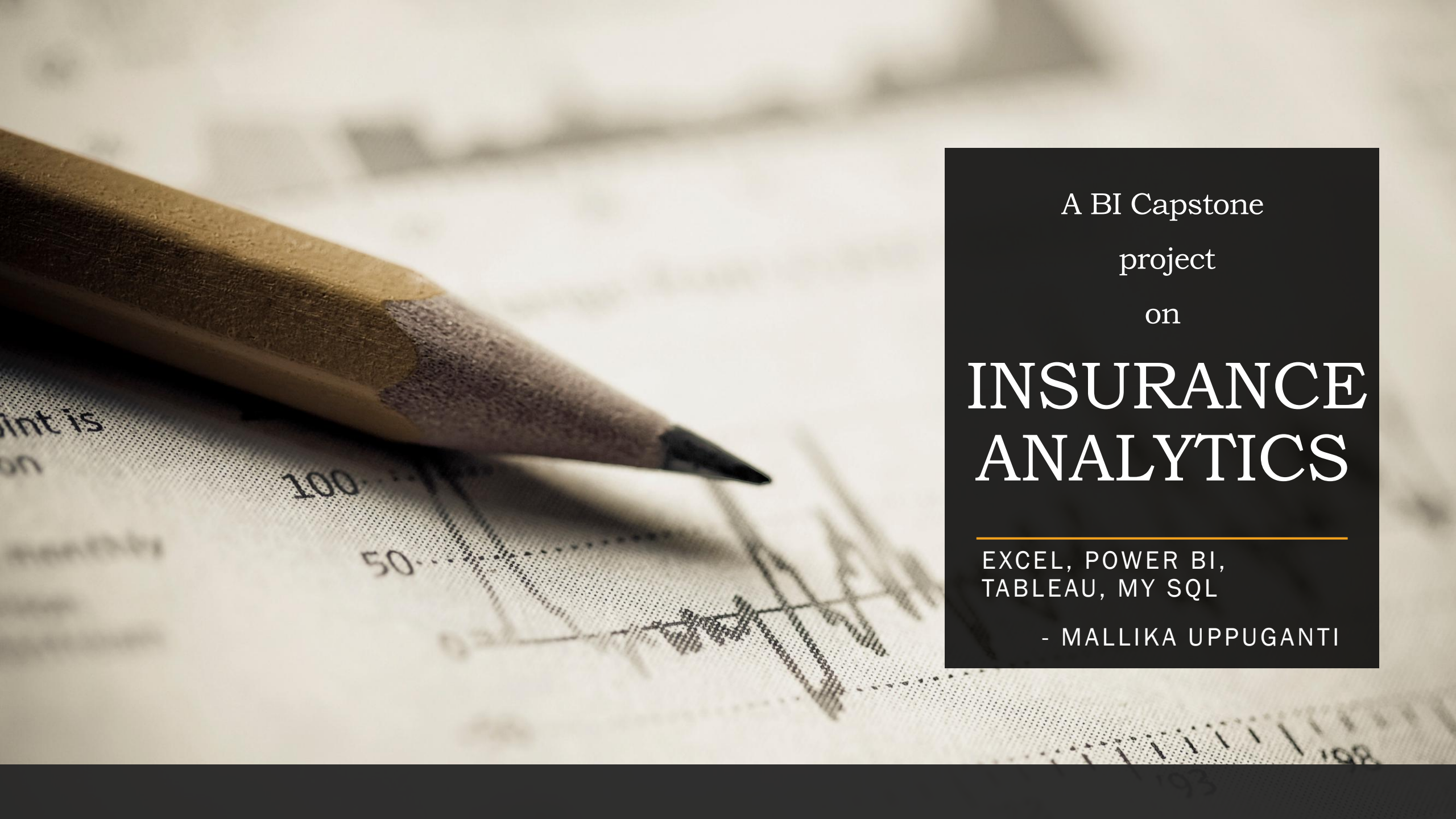


A BI Capstone

project

on

INSURANCE ANALYTICS

EXCEL, POWER BI,
TABLEAU, MY SQL

- MALLIKA UPPUGANTI

AGENDA

- What is Insurance?
- Why Analytics matter ?
- KPI List
- Excel
- Power BI
- Tableau
- MySQL
- Recommendations and Action Plan
- Conclusion

INSURANCE

What is Insurance?

Insurance is an agreement between an individual policy (or a business) and an insurance company. Under this agreement, the policy holder pays premiums to the insurer in exchange for financial compensation in the event of a covered incident.

The core components that make up most insurance policies are the premium, deductible, and policy limits.

Why Analytics matter?

With increasing market competition and evolving customer needs, leveraging data analytics is no longer optional—it’s essential. Insurance companies rely heavily on data to optimize sales, improve customer retention, and drive profitability.

Through this presentation, we’ll uncover trends, identify challenges, and discuss actionable strategies that can help us maximize efficiency and revenue.

KPI List

1.Number of Invoice by Account Executive.

2.Yearly Meeting Count.

3.1.Cross-Target, Achievement, New.

3.2.New-Target, Achievement, New.

3.3.Renewal-Target, Achievement, New.

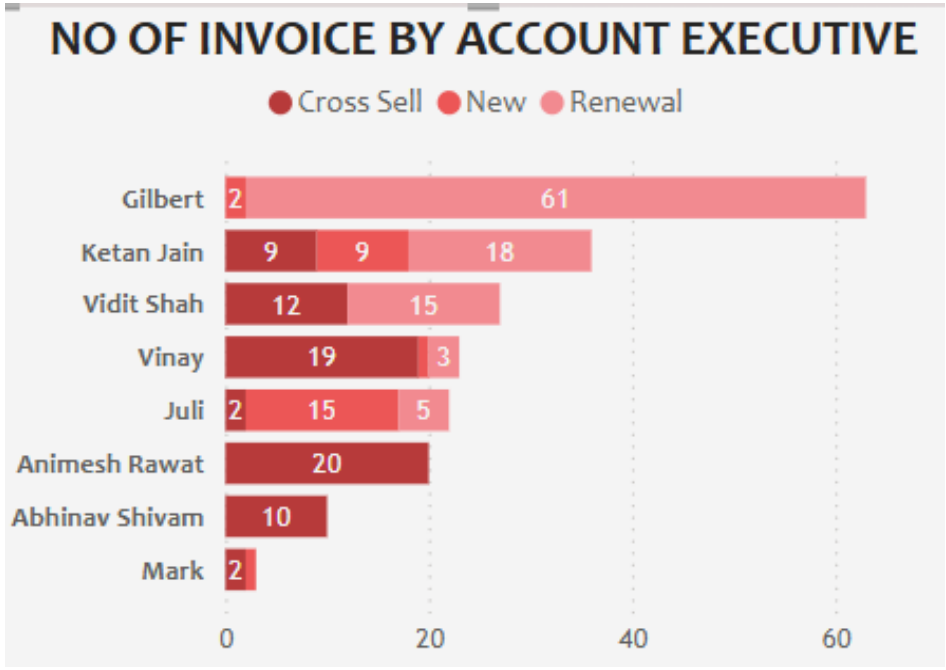
4. Stage Funnel by Revenue.

5. Number of meeting By Account Executive.

6.Top Open Opportunity.

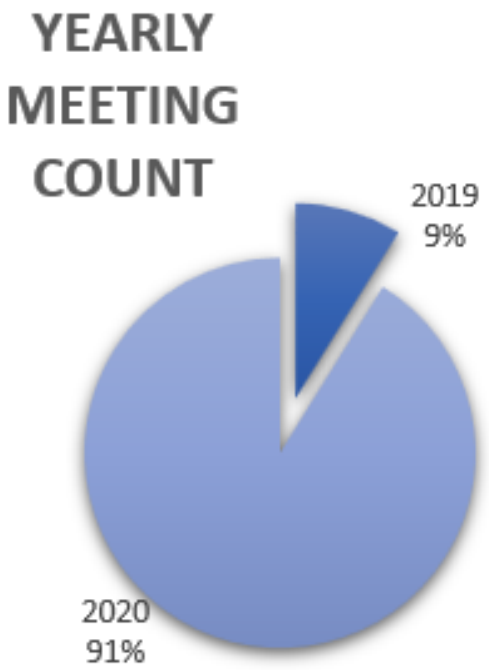
KPI 1: Number of Invoice by Account Executive

In insurance analysis, tracking the number of invoices by account executive helps measure productivity and sales performance. The number of invoices is influenced by client load, the types of insurance products, sales activity, renewals, and claims processing. To analyze, track the number of invoices per executive over a set of period. Comparing invoice numbers across executives reveals relative productivity. The key data needed includes account executive IDs, client information, invoice details, and policy information.



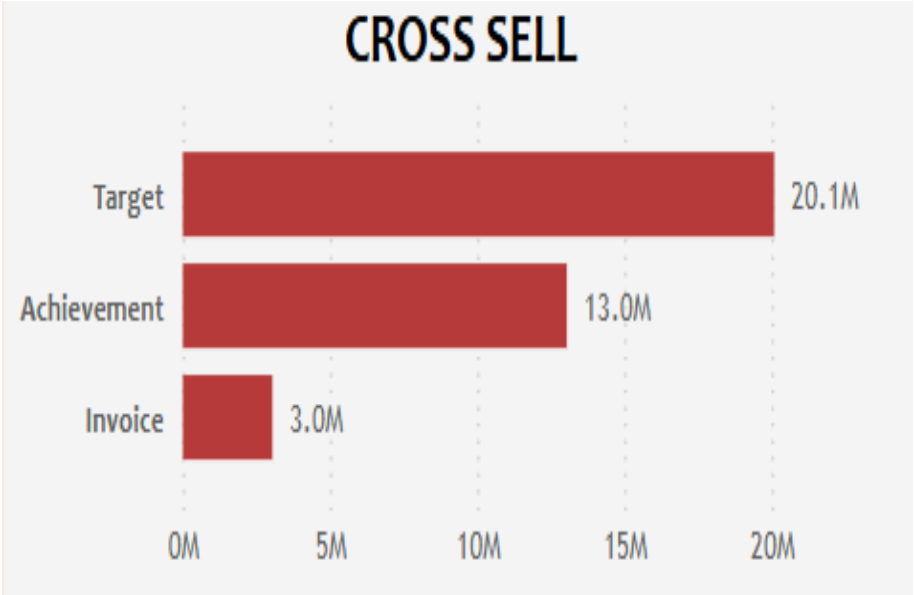
KPI 2: Yearly Meeting Count

In insurance analysis, yearly meeting counts track executive-client engagement. These meetings may involve sales, renewals, claims, or general check-ins. The count reflects the level of relationship management and business development. It is influenced by client needs, product complexity, and sales goals. Analyzing this helps evaluate account executive productivity and client satisfaction. Data required includes meeting dates and count of global attendees.



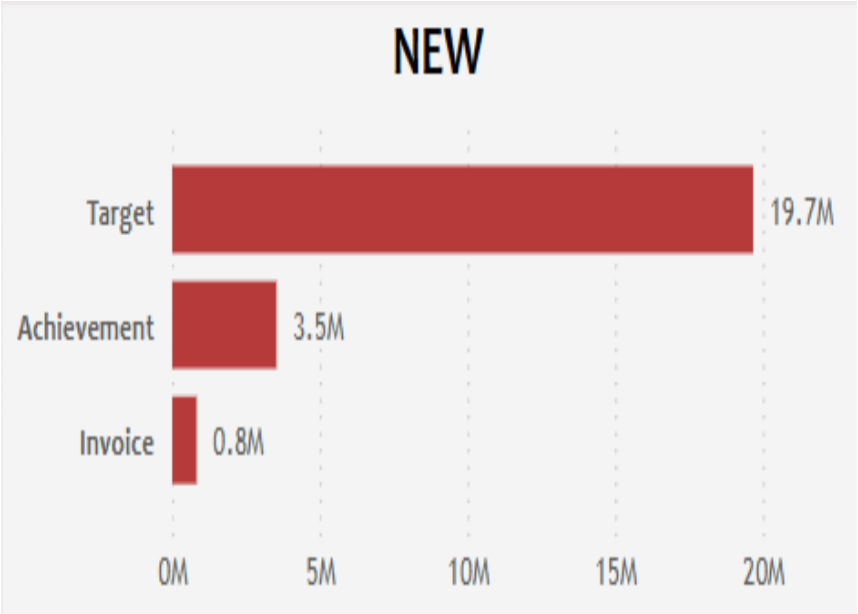
KPI 3.1 – Cross Sell Target, Achievement, New

In insurance analysis, cross-sell targets focus on encouraging account executives to sell additional products to existing clients. The goal is to increase revenue and deepen client relationships. Achieving the cross-sell target means meeting or exceeding the set sales goals for these additional products. Analyzing this data helps assess account executive performance, identify opportunities, and improve sales strategies. Key metrics include target goals, achieved sales and invoice sales of the number of cross-sell clients or policies.



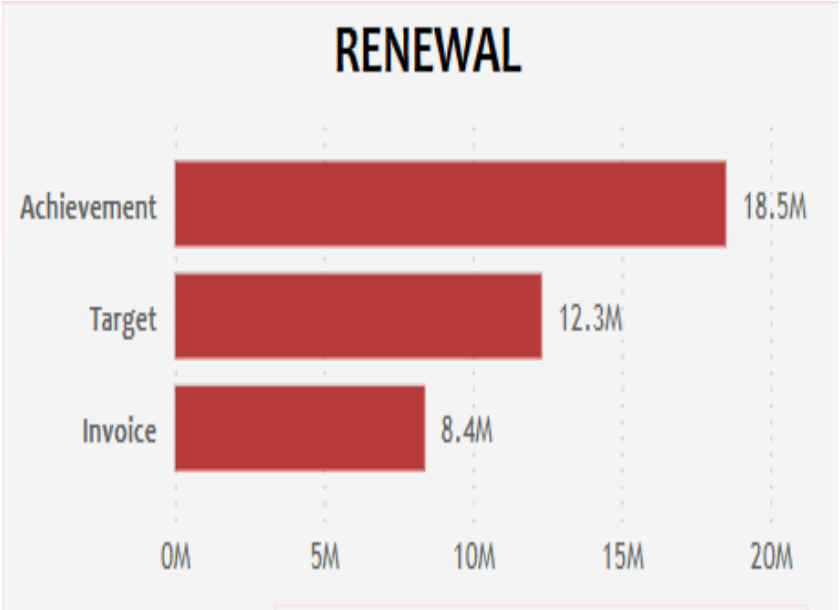
KPI 3.2 – New Target, Achievement, New

In insurance analysis, the "new-target" represents sales goals for acquiring new clients or policies. Achieving this target means meeting or exceeding the goal for new business. "New" refers to newly acquired policies or clients, not renewals or cross-sells. Tracking this metric helps evaluate account executive performance , their efforts for growth and market expansion. It provides insights into sales effectiveness and market expansion. Key data includes target goals, achieved sales, invoice sales of the number of new clients or policies.



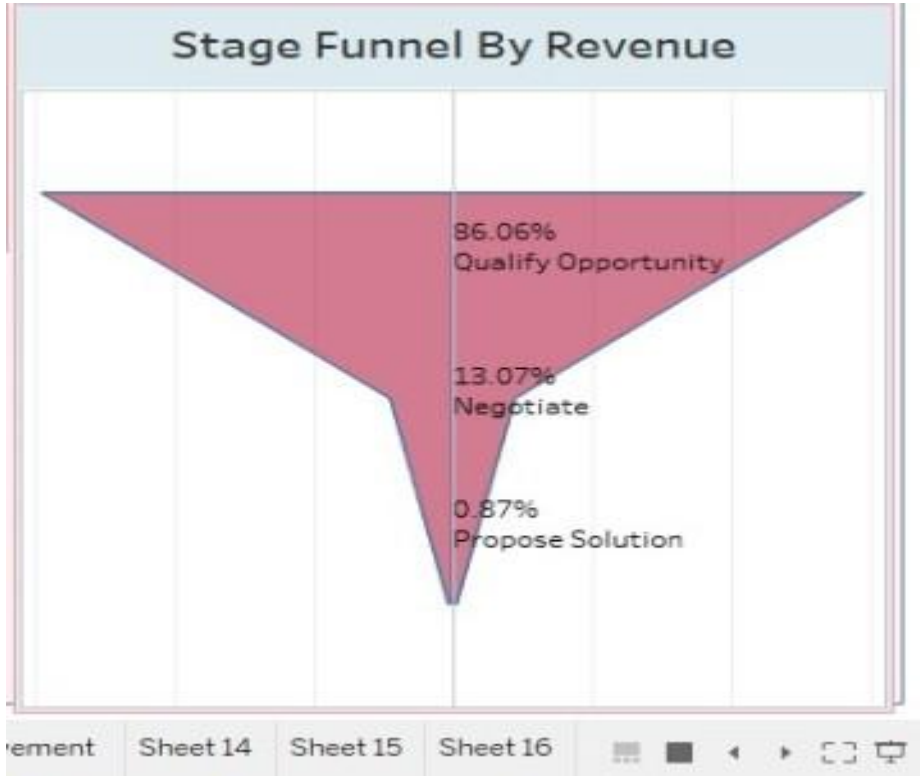
KPI 3.3 – Renewal Target, Achievement, New

In insurance analysis, the "renewal-target" refers to the goal set for renewing existing policies with clients. Achieving this target means successfully renewing a set percentage or number of policies. Tracking renewal-targets helps measure account executives' ability to maintain client retention and stable revenue streams. Analyzing this metric helps assess performance in client loyalty and retention strategies. Key data includes renewal goals, achieved renewals, and invoiced renewals of the additional policies sold.



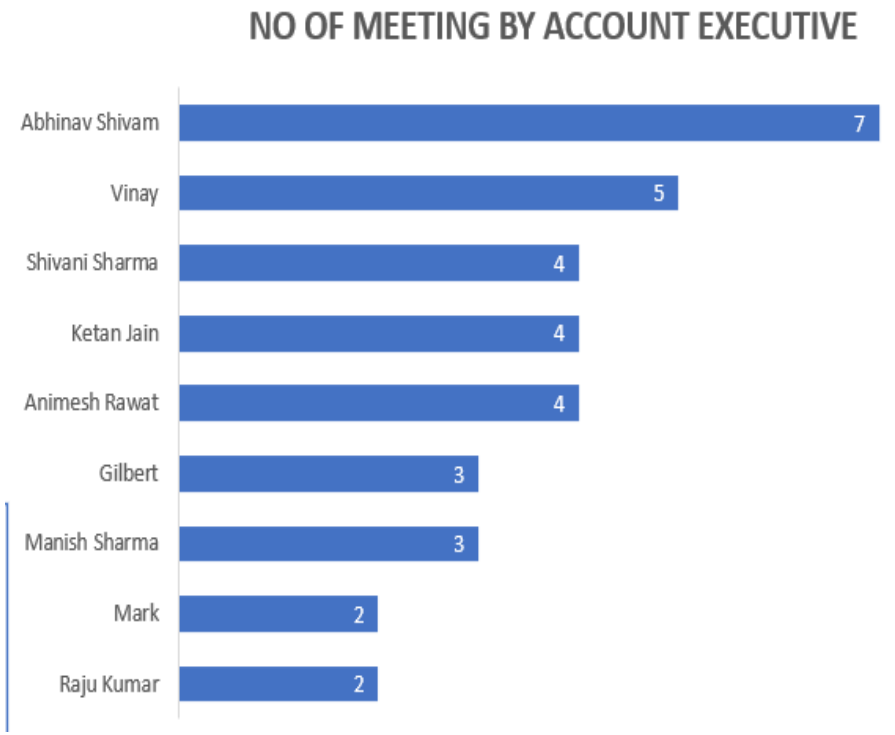
KPI 4 : Stage Funnel by Revenue

In insurance analysis, the stage funnel by revenue tracks potential sales through stages based on revenue. Stages typically include Lead Generation, Qualification, Proposal, Negotiation, and Closure. Revenue is measured at each stage to identify conversion rates and potential earnings. This funnel helps detect the bottlenecks and forecast sales more accurately. It also allows prioritizing high-value opportunities. Key metrics include revenue per stage and total revenue potential.



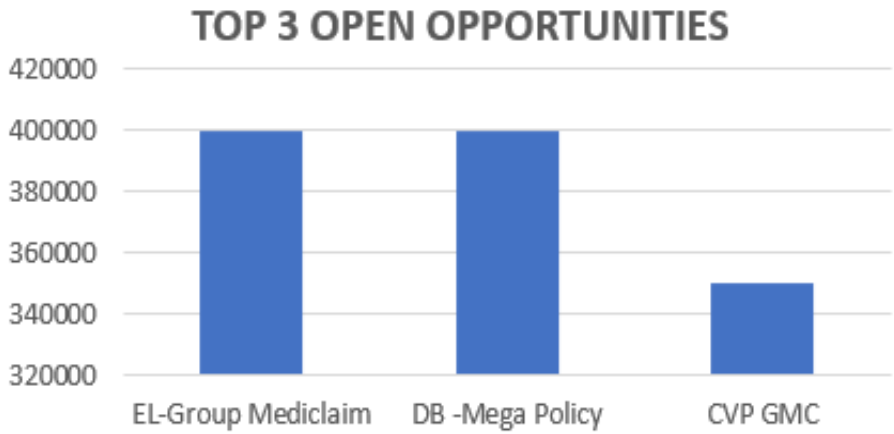
KPI 5: No of meeting By Account Executive

In insurance analysis, the number of meetings by account executives tracks client interactions such as sales, renewals, and claims discussions. It reflects account executive engagement and relationship-building efforts. A higher meeting count typically indicates stronger client relationships and more business opportunities. This metric helps evaluate productivity and identify areas for improvement. Monitoring meetings also aid in optimizing sales strategies. Key data includes Account Executives and meeting frequency.



KPI 6: Top Open Opportunity

In insurance analysis, top open opportunities are high-value, yet-to-be-closed leads or deals. These opportunities are prioritized based on factors like revenue potential and client interest. Tracking them helps account executives focus on the most promising prospects. Analyzing these opportunities identifies deals nearing closure or requiring more attention. This helps in forecasting and resource allocation. Key metrics include opportunity value, Sum of Revenue and filtering at the Stage level.

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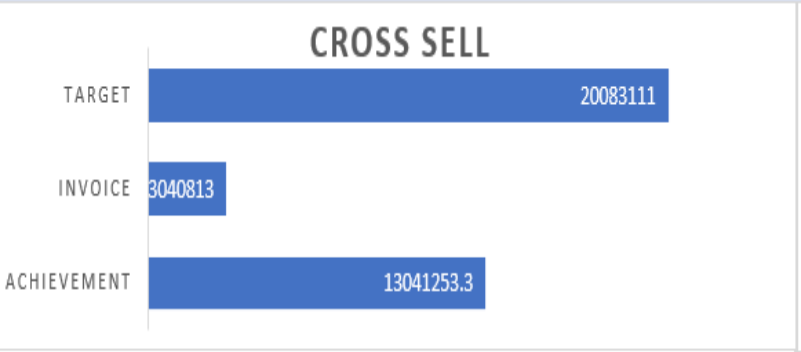
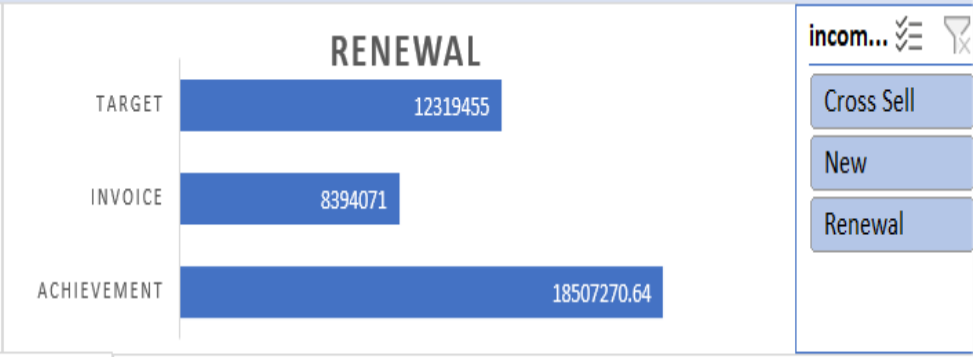
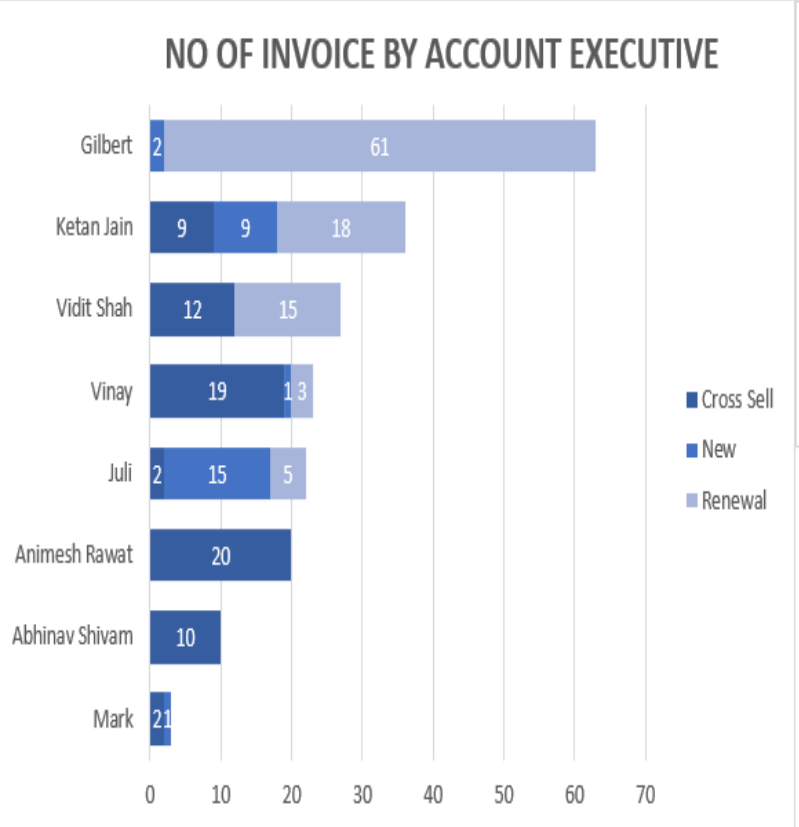
Summe : 0

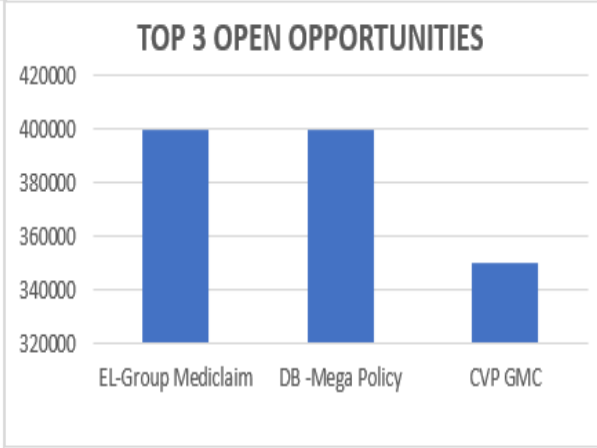
EXCEL DASHBOARD

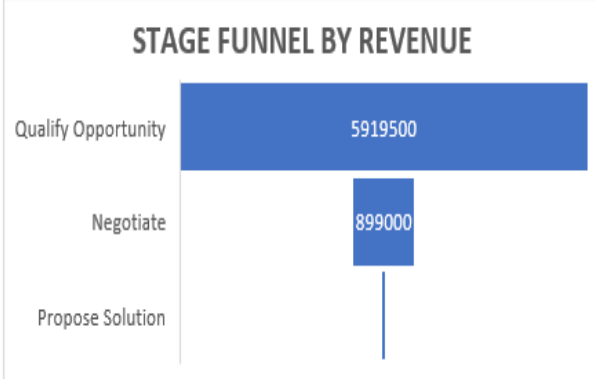
INSURANCE ANALYTICS

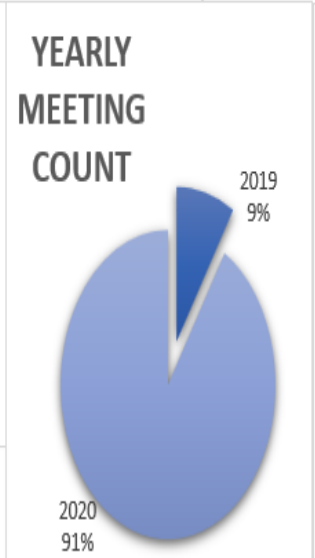


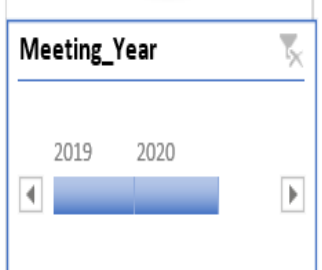












Challenges faced

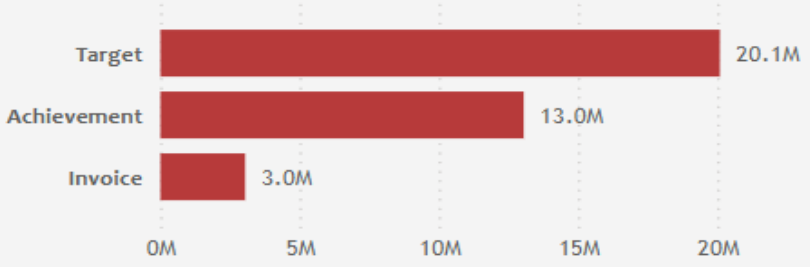
- Understanding the terminology of Insurance (Target, Achievement, Invoice)
- Data type conversion in the process of creating calculated measures
- Creation of Funnel chart with pivot


Power BI

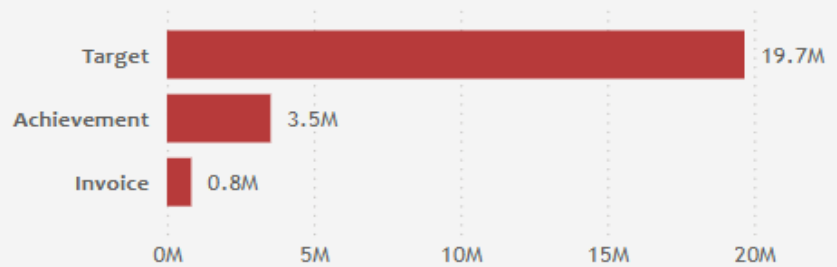
POWER BI DASHBOARD

INSURANCE ANALYTICS

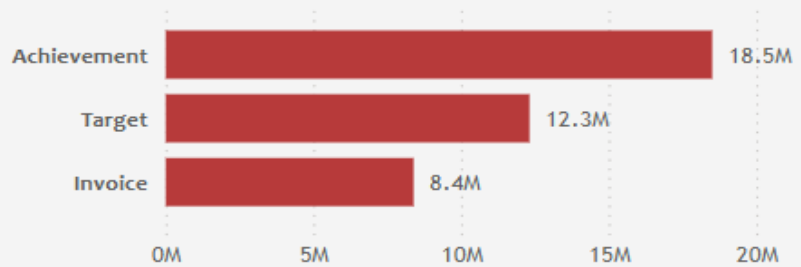
CROSS SELL



NEW



RENEWAL



Acc Executive Name

All

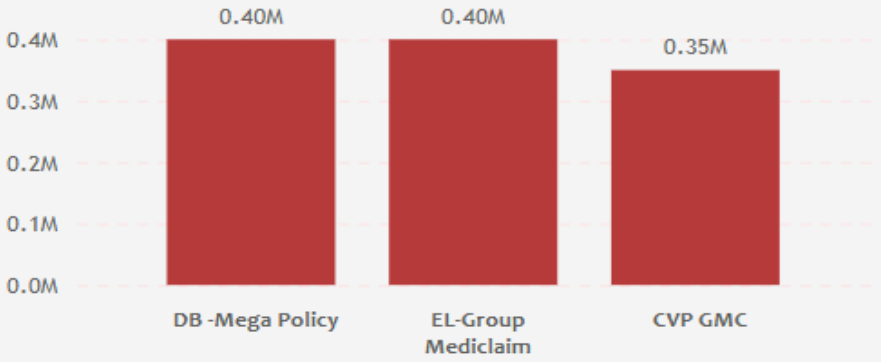
Income Class

- Cross Sell
- New
- Renewal

REVENUE

6.88M

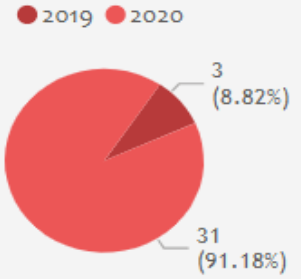
TOP 3 OPEN OPPURTUNITIES



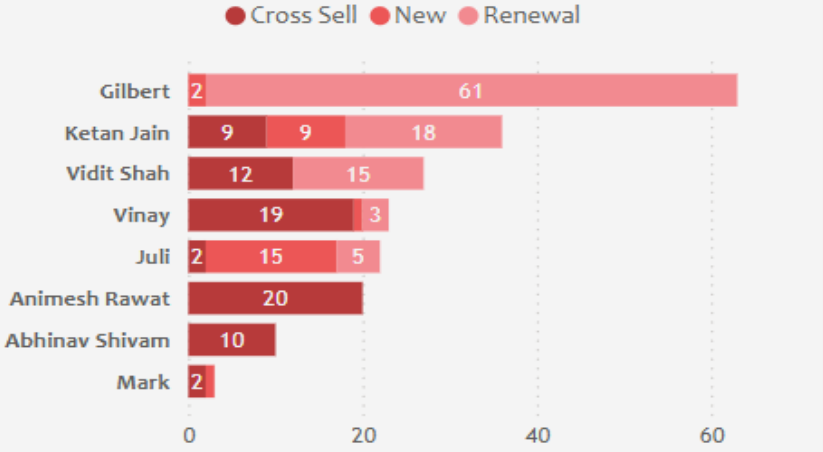
Year

- 2019
- 2020

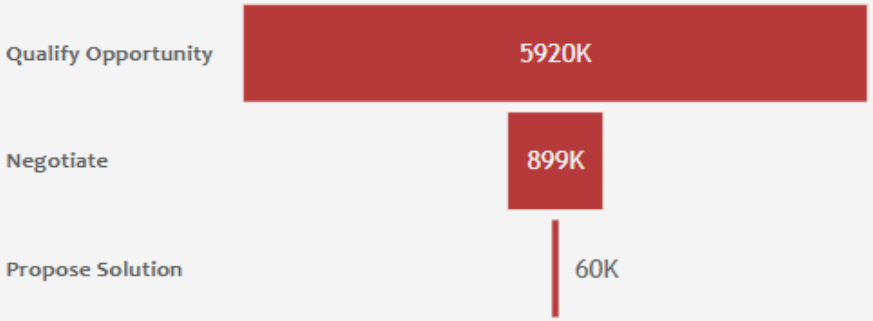
YEARLY MEETING COUNT



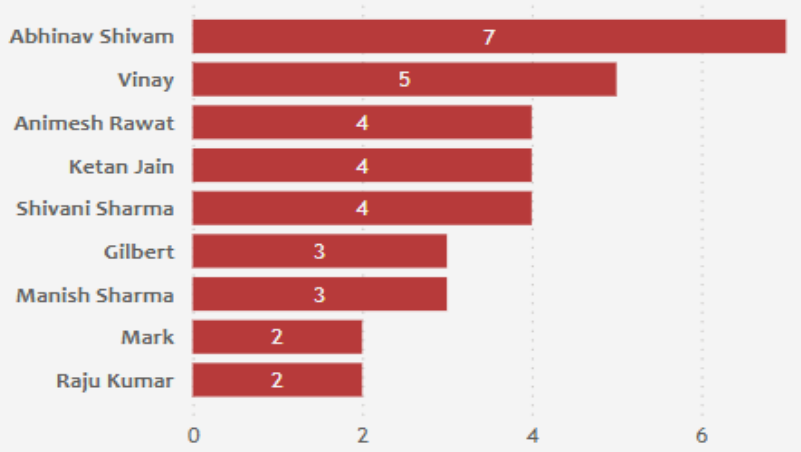
NO OF INVOICE BY ACCOUNT EXECUTIVE



STAGE FUNNEL BY REVENUE



NO OF MEETING BY ACCOUNT EXECUTIVE



Challenges faced

- Choosing method that works for the Data Import
- Retention of datatypes while importing the data
- Data cleaning of Brokerage table
- Creation of calculated tables and measures (DAX)

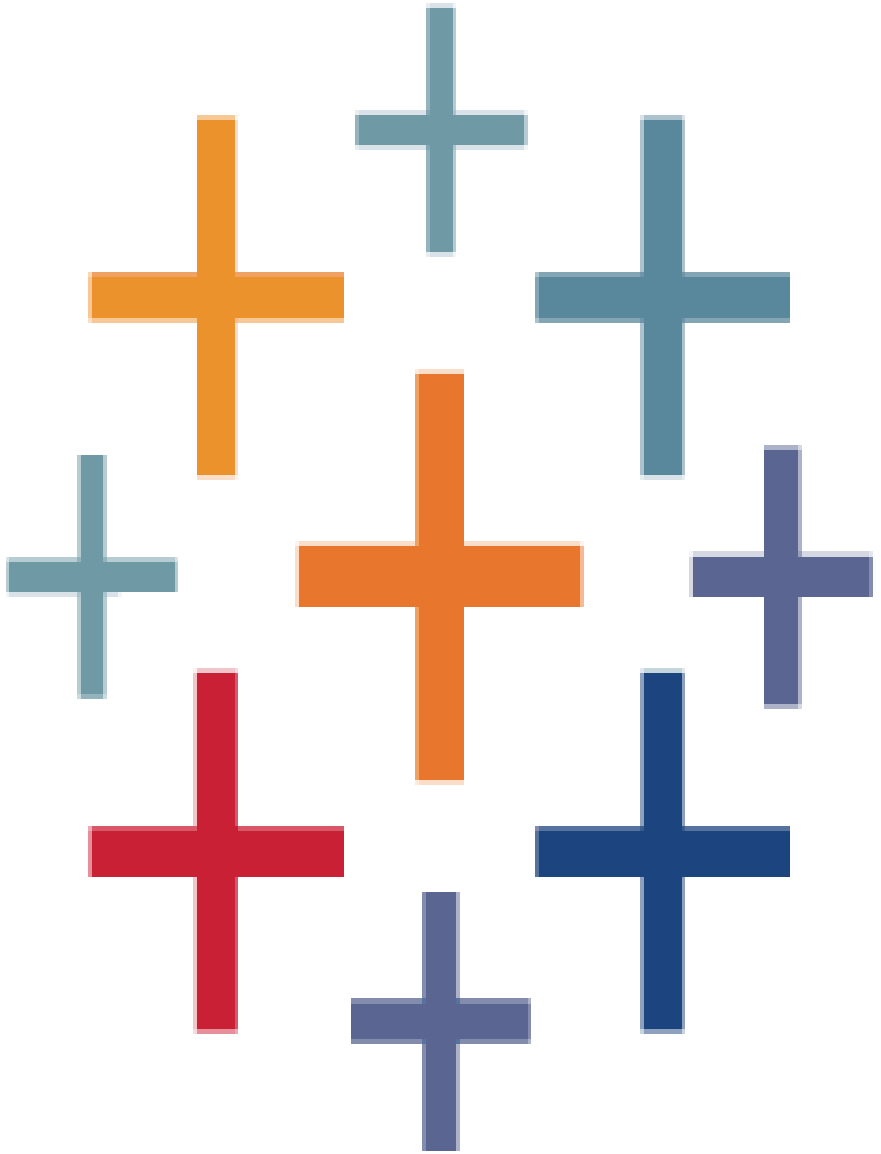
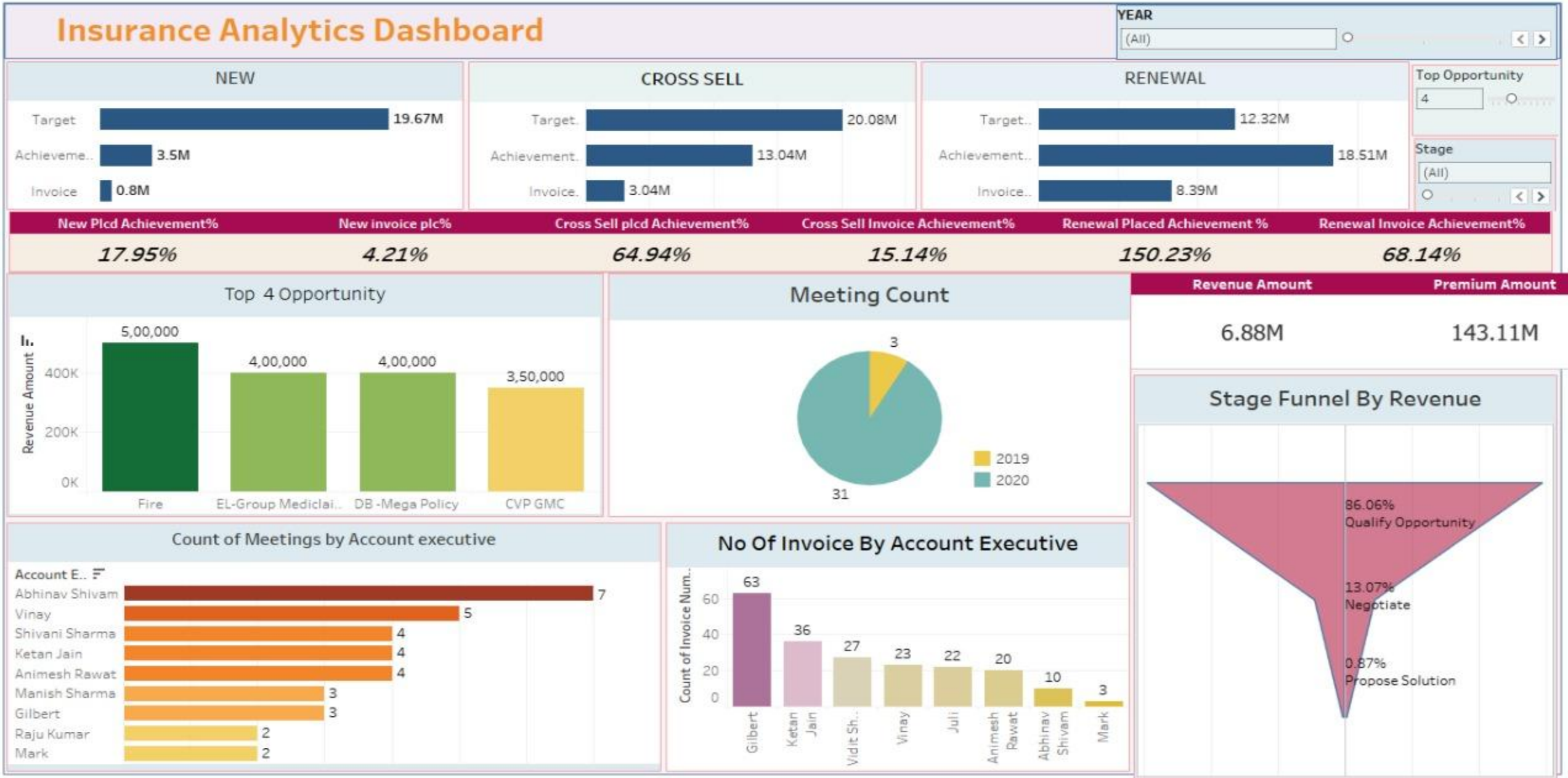


tableau
SOFTWARE

TABLEAU DASHBOARD



RENEWAL | Dashboard 1 | Dashboard 1 (2) | Count of Meetings | Opportunity | Meeting Count | Sheet 7 | Sheet 9 | Sheet 10 | Sheet 11 | Sheet 12 | New plcd achievement | Sheet 14 | Sheet 15 | Sheet 16

Challenges faced

- Inability of Tableau public to connect to database – Tableau Desktop is must
- For this data and calculated fields, faced difficulty in creation of bar charts
- Advance Funnel Chart
- Formatting the Tableau Dashboard


MySQL™

KPI 1: Number of Invoice by Account Executive

QUERY

```sql
-- 1-No of Invoice by Accnt Exec
SELECT
    `Account Executive`,
    COUNT(CASE WHEN income_class = 'New' THEN 1 END) AS `New`,
    COUNT(CASE WHEN income_class = 'Renewal' THEN 1 END) AS `Renewal`,
    COUNT(CASE WHEN income_class = 'Cross Sell' THEN 1 END) AS `Cross Sell`,
    COUNT(invoice_number) AS `number_of_invoices`
FROM invoice
GROUP BY `Account Executive`
order by `number_of_invoices` desc ;
```

OUTPUT

Account Executive	New	Renewal	Cross Sell	number_of_invoices
Gilbert	2	61	0	63
Ketan Jain	9	18	9	36
Vidit Shah	0	15	12	27
Vinay	1	3	19	23
Juli	15	5	2	22
Animesh Rawat	0	0	20	20
Abhinav Shivam	0	0	10	10
Mark	1	0	2	3

KPI 2: Yearly Meeting Count

QUERY

```
-- 2-Yearly Meeting Count
SELECT year(meeting_date) as Year,count(year(meeting_date)) as MeetingCount
from meeting
group by year(meeting_date) ;
```

OUTPUT

Year	MeetingCount
2019	3
2020	31

KPI 3.1 – Cross Sell Target, Achievement, New

QUERY

```sql
-- 3.1Cross Sell--Target,Achive,new
SELECT 'Cross Sell' AS stage,
    COALESCE(invoice.total_cross, 0) AS Invoice,
    COALESCE(unified.total_cross, 0) AS Achivement,
    COALESCE(budget.cross_sell_budget, 0) AS Target
FROM     -- Subquery for Invoice Data
    (SELECT SUM(amount) AS total_cross FROM invoice WHERE income_class = 'Cross sell') AS invoice
    CROSS JOIN -- Subquery for Unified Brokerage and Fees Data
    (SELECT SUM(amount) AS total_cross
     FROM (
        SELECT income_class, SUM(amount) AS amount FROM brokerage GROUP BY income_class
        UNION ALL
        SELECT income_class, SUM(amount) AS amount FROM fees GROUP BY income_class
     ) unified
     WHERE income_class = 'Cross sell') AS unified
    CROSS JOIN -- Subquery for Budget Data
    (SELECT SUM(`Cross sell bugdet`) AS cross_sell_budget FROM `individual budgets`) AS budget;
```

OUTPUT

stage	Invoice	Achivement	Target
Cross Sell	3040813	13041253.3	20083111

KPI 3.2 – New Target, Achievement, New

QUERY

```
35      -- 3.2New-Target,Achive,new
36  •   SELECT 'New' AS stage,
37          COALESCE(invoice.total_new, 0) AS Invoice,
38          COALESCE(unified.total_new, 0) AS Achievement,
39          COALESCE(budget.new_budget, 0) AS Target
40      FROM -- Subquery for Invoice Data
41          (SELECT SUM(amount) AS total_new FROM invoice WHERE income_class = 'New') AS invoice
42           CROSS JOIN -- Subquery for Unified Brokerage and Fees Data
43          (SELECT SUM(amount) AS total_new
44           FROM (SELECT income_class, SUM(amount) AS amount FROM brokerage GROUP BY income_class
45              UNION ALL
46              SELECT income_class, SUM(amount) AS amount FROM fees GROUP BY income_class
47           ) unified
48           WHERE income_class = 'New') AS unified
49          CROSS JOIN -- Subquery for Budget Data
50          (SELECT SUM(`New Budget`) AS new_budget
51           FROM `individual budgets`) AS budget;
```

OUTPUT

	stage	Invoice	Achievement	Target
▶	New	827822	3531629.309999999	19673793

KPI 3.3 – Renewal Target, Achievement, New

QUERY

```
53        -- 3.3Renewal-Target, Achive,new
54    SELECT 'Renewal' AS stage,
55        COALESCE(invoice.total_renewal, 0) AS Invoice,
56        COALESCE(unified.total_renewal, 0) AS Achievement ,
57        COALESCE(budget.renewal_budget, 0) AS Target
58    FROM -- Subquery for Invoice Data
59        (SELECT SUM(amount) AS total_renewal
60         FROM invoice WHERE income_class = 'Renewal') AS invoice
61        CROSS JOIN -- Subquery for Unified Brokerage and Fees Data
62        (SELECT SUM(amount) AS total_renewal
63         FROM (SELECT income_class, SUM(amount) AS amount FROM brokerage GROUP BY income_class
64            UNION ALL
65            SELECT income_class, SUM(amount) AS amount FROM fees GROUP BY income_class
66         ) unified
67         WHERE income_class = 'Renewal') AS unified
68        CROSS JOIN -- Subquery for Budget Data
69        (SELECT SUM(`Renewal Budget`) AS renewal_budget FROM `individual budgets`) AS budget;
```

OUTPUT

	stage	Invoice	Achievement	Target
▶	Renewal	8394071	18507270.640000015	12319455

KPI 4 : Stage Funnel by Revenue

QUERY

```
-- Q4. Stage Funnel by Revenue
select stage , sum(revenue_amount)
from opportunity
group by stage;
```

OUTPUT

stage	sum(revenue_amount)
Qualify Opportunity	5919500
Negotiate	899000
Propose Solution	60000

KPI 5: No of meeting By Account Executive

QUERY

```
-- Q5. No of meeting By Account Exe
select  `Account Executive`, count(meeting_date)
from meeting
group by `Account Executive` ;
```

OUTPUT

Account Executive	count(meeting_date)
Abhinav Shivam	7
Vinay	5
Animesh Rawat	4
Ketan Jain	4
Gilbert	3
Shivani Sharma	4
Manish Sharma	3
Raju Kumar	2
Mark	2

KPI 6: Top Open Opportunity

QUERY

```
-- 6-Top Open Opportunity
select opportunity_name,max(revenue_amount) as Revenue from opportunity
group by opportunity_name
order by revenue desc
limit 4;
```

OUTPUT

opportunity_name	Revenue
Fire	500000
EL-Group Mediclaim	400000
DB -Mega Policy	400000
CVP GMC	350000

Challenges faced

- Selection of the type of Join to be used to retrieve data as per requirement
- At the time of data import,

  change in datatype of a column into the date datatype requires formatting inorder to import the data properly

Recommendations & Action Plan

- **Boost Invoice Generation:** New business invoices need to increase to match target achievements.
- **Leverage Top Performers' Strategies:** Sharing best practices from high-performing executives.
- **Close High-Potential Deals:** Focus on the top 3 opportunities to accelerate growth.
- **Enhance Negotiation Success:** Strengthening the conversion from negotiation to closure.
- **Maintain High Meeting Engagement:** Continue the momentum of increased client meetings to drive future revenue.

CONCLUSION

In summary, while we are seeing strong achievement in renewals and cross-sell, there are gaps in new business invoicing and final deal closure.

By focusing on key opportunities and leveraging the strengths of top performers, we can optimize our revenue performance.

Thank You!