ABSTRACT
It is imperative to say that sales is the backbone of the organization. It is the function which tractions the revenue matrix, out of which all the parameters of the financial statements are derived. This function governs the topline from where the bottom line and the cash flow is determined. Sales not only governs the financial statements but also is a key parameter of marketing pyramid. Organizations deploy various marketing strategies with respect to their segment and target market. Positioning is done to create an effective space in the market. Thus marketing aims to inculcate a sense of value offering in the minds of the customer. We all know sales is a subset of marketing. In other words, Sales is a function which monetizes the value offering. Organizations formulate the marketing strategy best fit to them, correspondingly they derive a sales budget for each FY. The sales budget is always estimated on basis of some statistical computations with the help of historical data. To achieve the desired sales budget, a salesforce team is developed and a sales strategy is determined. Salesforce team is segregated with their individual budgets and targets are allocated with respect to hierarchies. Subsequently, expenses are recorded. Salesforce team are trained, motivated and monitored. Many a times it is found that in spite of a robust marketing mix (the 4Ps), the figures achieved are below par, benchmark or industry standards. This turns out to be a strategical dilemma. Top management hierarchies scrutinize the situation and work out many iterations. Many a times it is found out that the salesforce lacks no motivation, are properly trained and are giving equal efforts, yet the figures are substandard and will not ensure sustainability in the near future generating no breakeven. Backwardly integrated, the five stages of Sales are examined which are Suspecting, Prospecting, Approach, Negotiation, Closing and Ordering and it is found out that most of the time, the salesforce are drifting away from developing key prospects which never lead them to further stages. This is an issue which is least looked upon. Hence to analyze this The prospect matrix is derived. The prospect matrix comprises of 4 quadrants, each representing a plot set of prospects, their characteristics and their impact over the sales, turnover and expenses. Key insights are derived from each quadrant and steps are taken by the organization to optimize their individual resources, to best fit, to maximize the sales turnover.

Keywords—sales, sales budget, marketing mix, prospects, prospect matrix

INTRODUCTION
Prior to the further derivation of the prospect matrix, it’s important for us to understand the 5 stages of sales abbreviated as SPANCO
S-Suspecting the leads
P-Prospecting the leads
A-Approach them
N-Negotiation with them
C-Closing the sale
O-Ordering the requirement

The same is reflected in the figure. It follows the funnel structure wherein the leads are churned in an out of the funnel.
A brief of each stage is highlighted below

S-Suspect-Selection of the target market best fit the business model and the offering
P-Prospecting-A set of suspects with whom, the sales team interacts, consults trying to work out the best fit solution satisfying their need.
A-Approach-A stage after ensuring congruence with the prospects to approach and discuss the offering
N-Negotiation-A stage wherein the qualified approached prospects are negotiated to affirm a win win situation
C-Closing the deal-
O-Ordering and completing the sales cycle

As described in the abstract, the key problem lies in the prospecting stage where salesforce interact, engage, consult, frame and list the suspects, but are not able to understand their dynamics which limits their approach or in simple words they frame incorrect qualified leads. The prospect matrix helps them to analyze and then synthesize correct steps to approach correct leads to sync their budgets framed.

THE PROCESS
To frame the quadrant following steps are taken

- Labelling the axis
- Constructing each quadrant
- Labelling the quadrant
- Framing the matrix

To construct the matrix, we have to understand its main constructs.
Sales as we all know is a function of the market potential and corresponding resources employed. Mathematically it is represented as
Sales=f (Effective resources employed, market potential)
Hence S=f(x,y) where
S=sales
x=effective resources employed
y=market potential
if we employ a differential function
dS=df(x,y)
Thus we can say that change(differentiation) in sales(dS)(an increase or decrease in sales) is a direct differentiation of x and y parameters
Let us assume
S=4x+2y

Differentiate both wrt to x
dS/dx=4
This shows that a change in Sales with respect to change in resources employed
Similarly differentiate it wrt to y
dS/dy=2
Thus changes in both (x,y),radicals a change in Sales. With respect to the equation and a congruence with the relation, we construct a matrix with Effective resources employed on X axis and effective potential on Y axis.
Labelling the Axis
As stated earlier, the X axis is the resources employed.

Resources employed—Organizations are bestowed with resources. These resources can be inherent resource, amortized resource, monetized and human resources. Effective optimized utilization of resources ensures optimum performance in all functional hierarchies.

Sales function also has resources like human capital, in amortized form and other budget allocated them in monetized form. These resources are scaled for an effective timeline and accordingly a budget is derived to ensure effective utilization of the same.

As stated earlier in fig 2, the Y axis stands for effective potential of the market.

Effective Potential of the Market—Market is infinite, but it is not possible to access all the potential. Thus synthesizing the marketplace congruent to the effective potential keys the framing of the Y axis.

The relationship between the two vectors of Y axis and X axis evinces us a string of arrays which can be deduced as four Quadrants.

Constructing the quadrants
After analyzing both X axis vectors and Y axis vectors and with respect to the arrays constructed, four quadrants are derived.

Quadrant 1-The Diamond Quadrant—Optimum level of resources synthesized to capture the highest effective prospect potential market. This is the key quadrant which the salesforce shall target. They form a set of prospects who are influencers or market drivers. They are scarce but hold a specific place in the market. A salesforce management in sync with other functions shall focus on this quadrant and effectively optimize resources to turn them into accounts. These set of prospects are majorly consultants, influencers, key accounts, major retailers which when formed opens up a plethora of market to utilize. These prospects always try to create a win win situation techno commercially. They also play a major part in conversion of accounts and brand building. The Quadrant ensures optimum utilization of sales budget and improves the margin of stability.

Merits of Quadrant 1
1) Provides a wide market scale
2) Improves sales figure
3) Affirms the brand
4) Ensures sustainability
5) Ensures Stability
6) Improves financial health and creditworthiness

Limitations of Quadrant 1
1) Time required
2) A sense of uncertainty prevails till the time these prospects are converted to accounts
3) Incorrect deploy of resources can limit its potential

Quadrant 2-The Ambiguous Quadrant—Least optimization and synthetization of resources churning the highest potential—This quadrant are a set of prospects which are very ambiguous. They scale themselves very high, but they don’t ensure repeated businesses. These are prospects which may give a sudden up spike in the sales figure but then they fathom out. These are prospects who are curious, or compelled due to certain circumstances. The salesforce can use them to improve the topline, but shall limit their resource optimization scale as these can never be sustainable prospects. They do have high scale potential but are not useful as they won’t adhere to the value offering.

Merits of Quadrant 2
1) They can improve sales figure and liquidity for a selected period
2) They require comparatively less budget to crack

Demerits of Quadrant 2
1) Not sustainable
2) Their ambiguous nature misdirects the salesforce

Quadrant 3-The Comfort Quadrant-Minimum utilization of effective resources churning the least potential business. This quadrant is a comfort zone for salesforce. Once sales stages finish suspecting, they find a list of prospects who are easy to reach and penetrate. These prospects have a local minima potential and are small players. They ensure small regular businesses. They may either inflate the sales volume or deflate, but sales figure tends to remain the same. They are easy conversions. These prospect quadrant due to their ease of reach and requirement of least resource seems attractive but in the long run are not sustainable, due to mere fact that that may reach breakeven in early stages but then cannot run along with increased expenses.

Merits of Quadrant 3
1) Easy to approach

Demerits of Quadrant 4
1) None

RESEARCH METHODOLOGY
We have already discussed the four quadrants, its merits and limitations. To analyze this, a set of questionnaire is prepared. This questionnaire is distributed to a sample of 10 companies of the same industry and with respect to certain assumptions we compare the sales of 10 companies in a FY to the expenses incurred in that FY. Certain parameters are to be plotted and following will be compared

1) Sale revenue of 4 quadrants
2) Expenses of 4 quadrants
3) Enquiries vs conversions ratio
4) The Angle of incidence
5) Margin of safety-the differentiation of sales with the selling expenses=(S12-SB)/(E12-E1) where S= sales SB= Sale value at 1st sale, S12= sale value at 12th Month and E corresponds to Expenses
6) Breakeven timeline
7) Enquiry vs conversion ratio

HYPOTHESIS
1) The study of four quadrants puts forth insights to allocate and optimize resources to maximize sales and reach the target.
2) Also the First Quadrant has the highest margin of safety, angle of incidence and highest differentiation in sales with respect to differentiation in expenses
3) The 1st quadrant also has the highest conversion ratio (Enquiries to conversions)
ASSUMPTIONS

<table>
<thead>
<tr>
<th>Terms</th>
<th>Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Size</td>
<td>10</td>
</tr>
<tr>
<td>Type of Companies</td>
<td>B2B</td>
</tr>
<tr>
<td>Industry</td>
<td>Safety and security</td>
</tr>
<tr>
<td>Approx. Turnover of each organization</td>
<td>25 Cr</td>
</tr>
<tr>
<td>Years of operation</td>
<td>5 to 6 years</td>
</tr>
<tr>
<td>CAGR</td>
<td>15-20 percent</td>
</tr>
<tr>
<td>Geographical Distributions</td>
<td>Even(East,west,North,South)</td>
</tr>
<tr>
<td>Potential</td>
<td>Equal all over</td>
</tr>
<tr>
<td>Sales Figure</td>
<td>Only raw sales figure without any additional income and sales returns</td>
</tr>
<tr>
<td>Expense</td>
<td>Calculated as an average irrespective of accounts, expenses incurred are only confined to sales activities, irrespective of fixed costs</td>
</tr>
<tr>
<td>Figures</td>
<td>In lacs</td>
</tr>
<tr>
<td>Sales Figures</td>
<td>Plotted cumulatively</td>
</tr>
<tr>
<td>Timeline</td>
<td>In months</td>
</tr>
</tbody>
</table>

QUESTIONNAIRE

Q1) What was the overall sale turnover (except other income) this FY?
Q2) What is the overall expense in figures or percentage of sales from east, west, north and south regions?
Q3) What is the sale turnover in figure or percentage of sales from Quadrant 1, Quadrant 2, Quadrant 3, Quadrant 4 customers?
Q4) Time required to generate the first sale from 1st quadrant, 2nd Quadrant, 3rd Quadrant and fourth?
Q5) Volume of Enquiries generated from each quadrant?

COLLATED DATA

Expenses Recorded for all regions for 10 companies

<table>
<thead>
<tr>
<th>SR NO</th>
<th>Region</th>
<th>Expenses in lacs</th>
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<tbody>
<tr>
<td>1</td>
<td>East</td>
<td>22</td>
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<tr>
<td>2</td>
<td>West</td>
<td>39.06</td>
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<td>3</td>
<td>North</td>
<td>37.03</td>
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<td>4</td>
<td>South</td>
<td>31.45</td>
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<tr>
<td></td>
<td>TOTAL</td>
<td>129.54</td>
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</tbody>
</table>

Total Sales Figures Recorded for all 10 companies for each quadrants and the enquiries generated:

S(QUADRANT N)=\text{Total} \text{Sum(S1+S2+...+S10)}

(QUADRANT N)

<table>
<thead>
<tr>
<th>SR NO</th>
<th>QUADRANT</th>
<th>Total Sales figures in lacs</th>
<th>Total Enquiries Generated</th>
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<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1308.5</td>
<td>1453</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>174.2</td>
<td>176.5</td>
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<tr>
<td>3</td>
<td>3</td>
<td>497.7</td>
<td>995</td>
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<tr>
<td>4</td>
<td>4</td>
<td>110</td>
<td>140</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>2090.4</td>
<td></td>
</tr>
</tbody>
</table>

This data achieved will have to be arranged cumulatively to plot a series and analyze.

\text{Cn+r=cn+c(n+(r-1))} \text{...for Quadrant 1 n>7}

\text{Cn+r=cn+c(n+(r-1))} \text{...for Quadrant 2 n>1}

<table>
<thead>
<tr>
<th>Mon th</th>
<th>Quadrant 1 Sales</th>
<th>Quadrant 2 Sales</th>
<th>Quadrant 3 Sales</th>
<th>Quadrant 4 Sales</th>
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<tr>
<td>1</td>
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<td>0</td>
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<tr>
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<td>199.08</td>
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<td>11</td>
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<td>118.74</td>
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<td>118.74</td>
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<tr>
<td>12</td>
<td>1308.5</td>
<td>497.7</td>
<td>129.54</td>
<td>110</td>
<td>129.54</td>
</tr>
</tbody>
</table>

The average time in FY to generate the 1st sale for respective quadrants
**GRAPHICAL REPRESENTATIONS**

**QUADRANT 1**

**Fig 3**

![Graph of Quadrant 1](graph.png)

Data from Quadrant 1 (Since Equivalent y axis scale = Y/200)

1) Breakeven month = 7
2) Slope of sales line = $(y_2 - y_1)/(x_2 - x_1)$ (red) = $(1308.5 - 218)/(12 - 7) = 1.09 = M_1$
3) Slope of Expenses line = $(129.54 - 75.56)/(200)/(12 - 7) = 0.05 = M_2$
4) Tan(Angle of incidence) = absolute($((M_2 - M_1)/(1 + M_2 * M_1)) = (1.09 - 0.05)/(1 + (1.09 * 0.05)) = 0.99 = 1$
5) **Angle of incidence = 45 degrees approx.**
6) Margin of safety = change in sales with respect to change in expenses = $dS = (S_{12} - S_7)/(E_{12} - E_7) = (1308.5 - 218)/(129.54 - 75.56) = 20.2$

**QUADRANT 2**

**Fig 4**

![Graph of Quadrant 2](graph.png)

Data from Quadrant 2 (Since Equivalent y axis scale = Y/50)

1) Breakeven month = 2
2) Slope of sales line = $(y_2 - y_1)/(x_2 - x_1)$ (red) = $(174.2 - 15.836)/(50)/(12 - 1) = 0.288 = M_1$
3) Slope of Expenses line = $(129.54 - 75.56)/(50)/(12 - 1) = 0.1962 = M_2$
4) Tan(Angle of incidence) = absolute($((M_2 - M_1)/(1 + M_2 * M_1)) = (0.288 - 0.1962)/(1 + (0.288 * 0.1962)) = 0.08$
5) **Angle of incidence = 6 degrees approx.**
6) Margin of safety = change in sales with respect to change in expenses = $dS = (S_{12} - S_2)/(E_{12} - E_2) = 1.46$

**QUADRANT 3**

**Fig 5**

![Graph of Quadrant 3](graph.png)
Data from Quadrant 3 (Since Equivalent y axis scale = Y/100)

1) Breakeven month-3
2) Slope of sales line \( \frac{(y_2-y_1)}{(x_2-x_1)} \) (red)\(=((497.7-49.77)/100)/(12-2)=0.223 \)
3) Slope of Expenses line (blue)\(=((129.54-32.385)/100)/(12-2)=0.97=M2 \)
4) \( \tan(\text{Angle of incidence}) = \frac{\text{absolute}(M2-M1)}{1+(M2\times M1)} \)= (0.447-0.097)/(1+(0.447x0.097))=0.33
5) Angle of incidence=18 degrees approx.
6) Margin of safety=change in sales with respect to change in expenses
7) \( \frac{(S12-S3)}{(E12-E3)}=4.63 \)

**QUADRANT 4**

Fig 6

Data from Quadrant 4 (Since Equivalent y axis scale = Y/20)

1) Breakeven month-not achieved
2) Slope of sales line \( \frac{(y_2-y_1)}{(x_2-x_1)} \) (red)\(=\frac{(110-55)}{20}/(12-11)=2.75 \)
3) Slope of Expenses line (blue)\(=((129.54-118.74)/20)/(12-11)=0.54=M2 \)
4) \( \tan(\text{Angle of incidence}) = \frac{\text{absolute}(M2-M1)}{1+(M2\times M1)} \)= (2.75-0.54)/(1+(2.75x0.54))=0.88
5) Angle of incidence=40 degrees approx.
6) Margin of safety=change in sales with respect to change in expenses
7) \( \frac{(S12-S11)}{(E12-E11)}=5.09 \)

**COLLECTIVE DATA**

<table>
<thead>
<tr>
<th></th>
<th>Quad1</th>
<th>Quad2</th>
<th>Quad3</th>
<th>Quad4</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEM</td>
<td>7</td>
<td>2</td>
<td>3</td>
<td>NA</td>
</tr>
<tr>
<td>AOI</td>
<td>45 Degrees</td>
<td>6 degrees</td>
<td>18 degrees</td>
<td>40 degrees if achieved</td>
</tr>
<tr>
<td>MOS</td>
<td>20.2</td>
<td>1.46</td>
<td>4.63</td>
<td>5.09 if achieved</td>
</tr>
<tr>
<td>E to C</td>
<td>0.9</td>
<td>0.98</td>
<td>0.5</td>
<td>0.78</td>
</tr>
</tbody>
</table>

**COLLECTIVE GRAPHICAL REPRESENTATION**
ANALYSIS
1) Quadrant 1 takes the most time to break even, but has the highest Angle of Incidence and Margin of Safety accompanied with a robust conversion ratio.
2) Quadrant 2 takes the least time to break even, but has the lowest Angle of Incidence and Margin of Safety (Sales and expenses lines are almost parallel to each other) It has the highest conversion ratio.
3) Quadrant 3 takes a bit more time than quadrant 2 to break even, but it has a better AOI and MOS compared to quadrant 2. It has the lowest conversion ratio.
4) Quadrant 4 doesn’t break even, but if it does in future it will almost reach quadrant 1 in terms of AOI and MOS. Also it has a robust conversion ratio.

ANALYSIS AND CONCLUSIONS
1) Quadrant 1 or the diamond quadrant as the data suggests, shall be the best prospects. It takes a bit of time to penetrate these prospects, but business with them will not only be profitable but also shall be financially healthy since the expenses will follow economies of scale in the long run.
2) Quadrant 2 - Ambiguous quadrant as the data suggests, are very ambiguous prospects because they get penetrated easily, but these prospects are not healthy for long run.
3) Quadrant 3 - Comfort quadrant - Easy to approach prospects, will be easy to penetrate but will not satisfy the sales figure. It will lose its break even in the due course.
4) Quadrant 4 - Trap Quadrant - Looks similar to Quadrant 1, but it doesn’t break even. These prospects have potential but this potential is least effective due to the mere fact that it never syncs in with the offering made.

RESEARCH IMPLICATIONS
Our study about the prospect matrix leaves implications for both the salesforce and the upper management.
This research convinces that how all functional teams along with their hierarchy radical their
congruence with the prospect matrix. This will help the sales management to formulate strategies and communicate the prospect dynamics to the salesforce. Prospect Quadrant 1 shall be focused even though it takes time to breakeven. Organization shall optimize their resources to churn out the best efficacy from Quadrant 1. Quadrant 3 looks attractive prospects but are failures in long term. Quadrant 2 and 4 shall be least concentrated on.

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1) www.hubspot.com
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3) www.mckinsey.com