

Marketing Campaign Optimization

Leonard Philips Sabbathani pasaribu



Business Case (Optimize Marketing sales)



Large Hospital



Medium Hospital



Small Hospital

Marketing
Tactics:

Sales
Phone
Email
Flyers

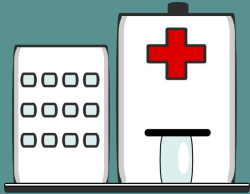


Revenue!

Find which marketing strategy works for each Client Type



Large Hospital



Medium Hospital



Small Hospital

Sales

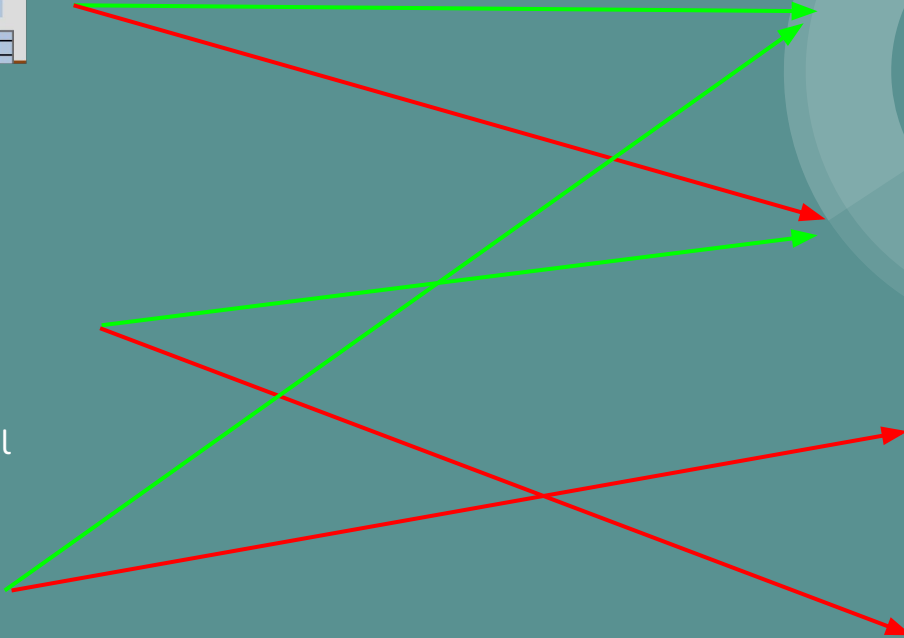
Phone

Email

Flyers

Positive impact

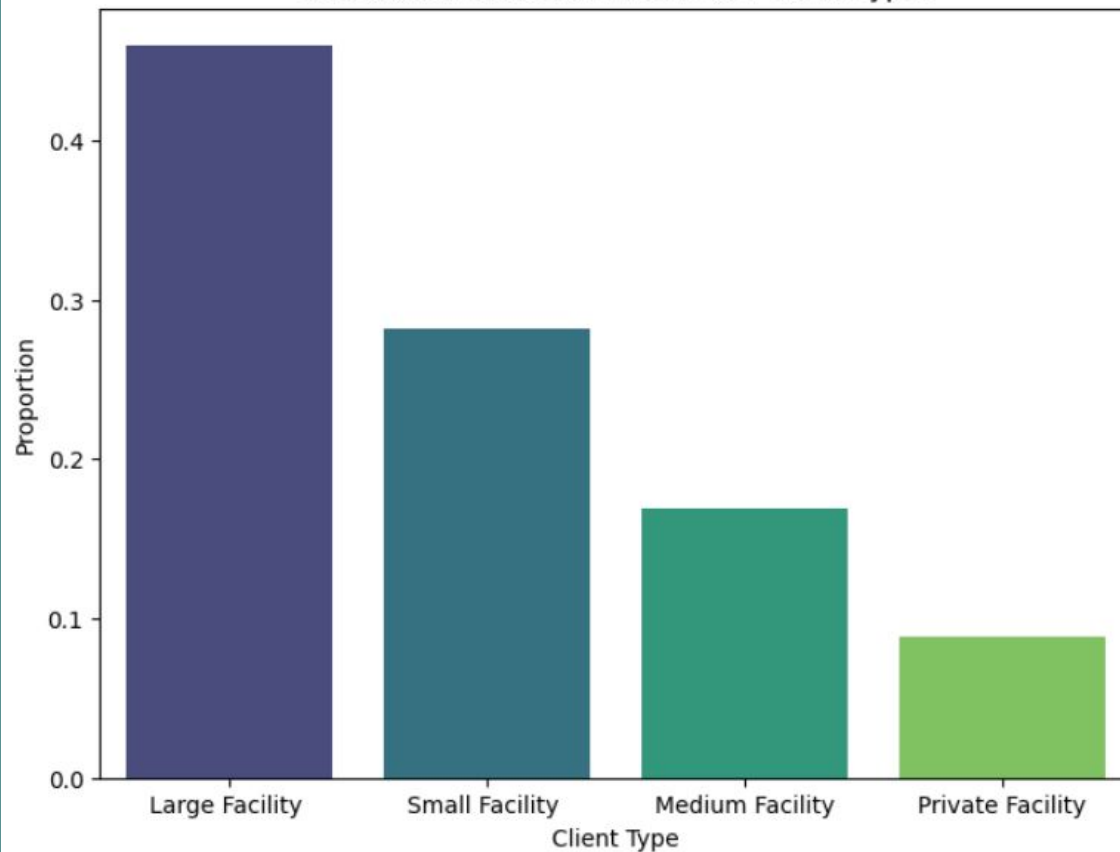
Negative impact



Exploratory Data Analysis



Distribution of Customers in each Client Types



**Customer
Distribution**

Client Type	Large Facility	Medium Facility	Private Facility	Small Facility	All
Number of Competition					
High	0.166667	0.166667	0.166667	0.166667	0.166667
Low	0.833333	0.833333	0.833333	0.833333	0.833333

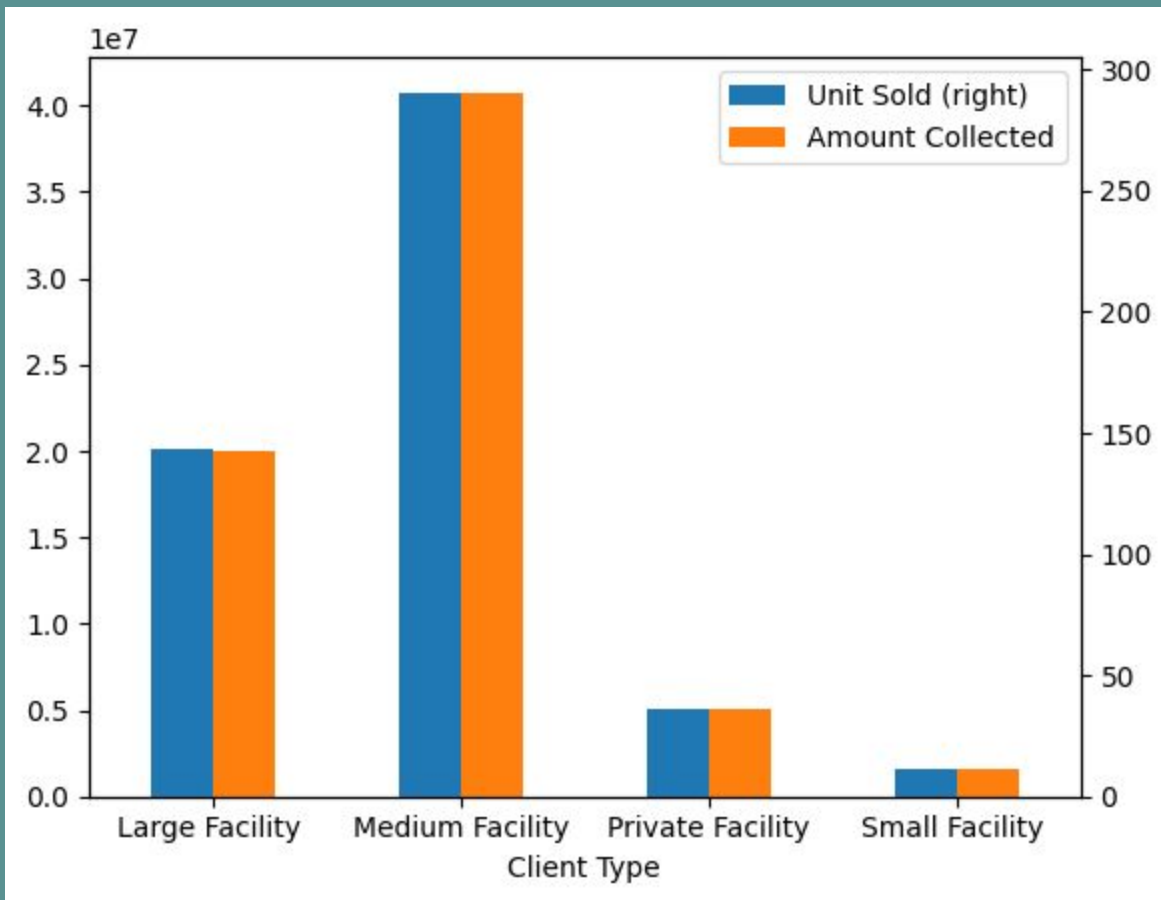
Distribution of Facilities based on Number of Competition

Most facilities have low number of competition

Number of Competition	Amount Collected	Unit Sold
0	High	2.974789e+07
1	Low	1.445570e+07

Difference between Amount Collected and unit Sold on different Number of Competition

But the facilities with high number of competition sells the most unit and generates more revenue, almost by 200%



Right measurement is
the total unit sold

Left measurement is
the amount collected
(4.0 means 40 Million)

What variable correlates with the amount collected?

Small facility

	Acc Type	Variables	Impact
0	Small Facility	Sales Contact 2	0.22
1	Small Facility	Sales Contact 3	0.07
2	Small Facility	Campaign (Email)	0.06
3	Small Facility	Campaign (Flyer)	0.04
4	Small Facility	Sales Contact 4	0.02
5	Small Facility	Sales Contact 5	0.00
6	Small Facility	Sales Contact 1	-0.02
7	Small Facility	Campaign (Phone)	nan

Medium Facility

16	Medium Facility	Sales Contact 2	0.51
17	Medium Facility	Campaign (Flyer)	0.45
18	Medium Facility	Sales Contact 1	0.27
19	Medium Facility	Campaign (Email)	0.26
20	Medium Facility	Sales Contact 3	0.22
21	Medium Facility	Sales Contact 4	0.15
22	Medium Facility	Sales Contact 5	0.10
23	Medium Facility	Campaign (Phone)	0.02

Large Facility

24	Large Facility	Sales Contact 2	0.42
25	Large Facility	Campaign (Flyer)	0.32
26	Large Facility	Sales Contact 1	0.29
27	Large Facility	Sales Contact 4	0.28
28	Large Facility	Sales Contact 3	0.19
29	Large Facility	Campaign (Email)	0.09
30	Large Facility	Campaign (Phone)	0.01
31	Large Facility	Sales Contact 5	-0.01

**But since Correlation !=
Causation...**

**We used Regression Analysis to
see which variable has the most
Return on Investment**



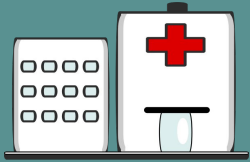
	Variable	Return on Investment	Account Type
4	Sales_Contact_2	0.800000	Small Facility
5	Campaign_Phone	-0.000000	Small Facility
0	Campaign_Flyer	4.100000	Medium Facility
1	Sales_Contact_2	3.600000	Medium Facility
2	Sales_Contact_1	3.100000	Medium Facility
3	Sales_Contact_3	2.100000	Medium Facility
6	Sales_Contact_1	11.700000	Large Facility
7	Sales_Contact_4	10.600000	Large Facility
8	Sales_Contact_2	4.000000	Large Facility
9	Campaign_Flyer	2.700000	Large Facility
10	Sales_Contact_3	2.000000	Large Facility
11	Campaign_Phone	-3.500000	Large Facility

**Result for each
facility category (6.6
means 6 dollars ROI)**

Recommendations:



Large Hospital



Medium Hospital



Small Hospital



From the analysis, we can see that sales has the most overall impact. Putting more investment in this area will have the most impact on the campaign. However, we cannot ignore the fact that flyers and phone messages also contributes. This could mean that the synergy between sales and flyers/phone messages could also be explored for further analysis.