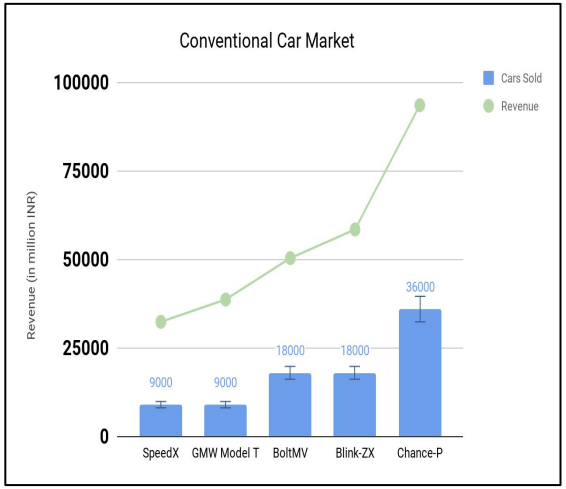
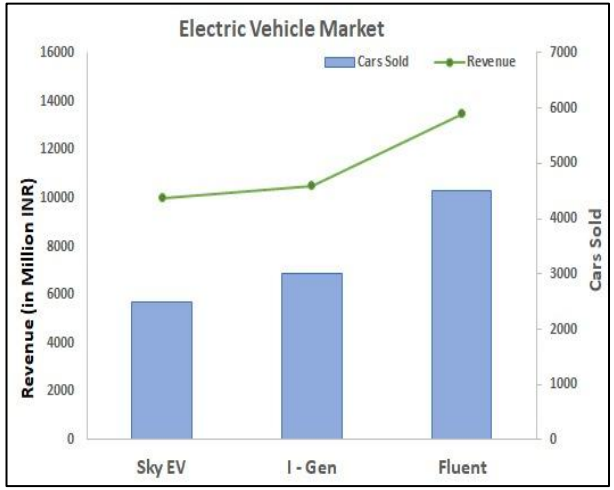
KRYPTO MOTORS

e-Vehicle Case Study by Team Apocalypse

Mujahid Bari
Akash Gupta
Abhishek Bajpai
Krishn Kanhaiya Tikmani

MARKET OVERVIEW





- Total Market size of Conventional Cars in 2020 was 273600 million INR.
- Chance-P being the low priced vehicle provider captured the larger chunk of the market.

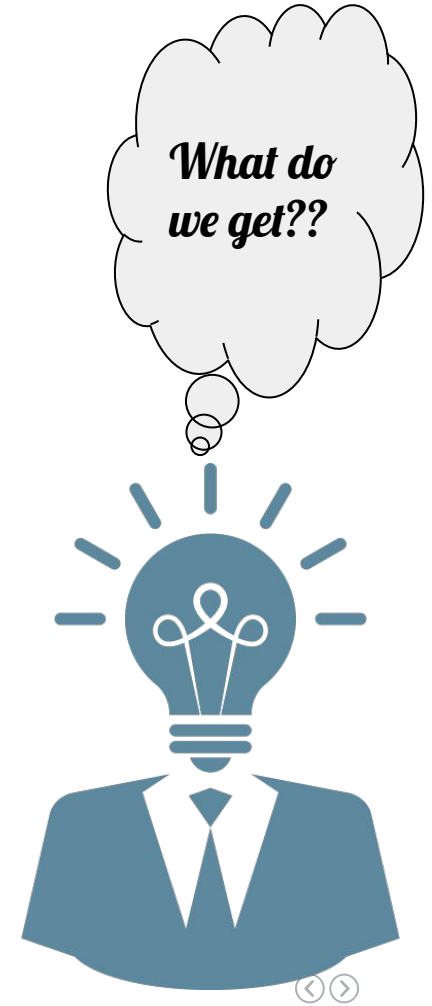
- Total Market size of Electric Car in 2020 was 34000 million INR.
- Again the most economical car provider Fluent captured major chunk of market.

- SpeedX, GMW Model T & Sky EV are the car models expensive than our product.
- Thus as per our survey we may get existing customers from there.

MARKET OPPORTUNITY

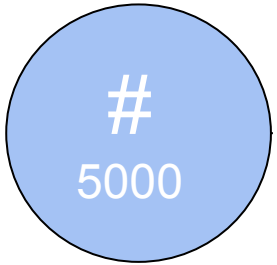
MARKET DISTRIBUTION 2021

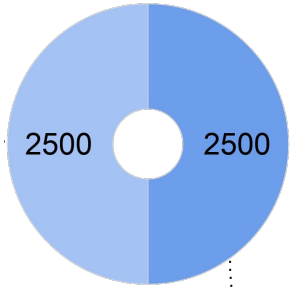
- New Customers
  - Conventional Vehicles
  - Electric Vehicles
- Existing Customers
  - Conventional Vehicles
  - Electric Vehicles

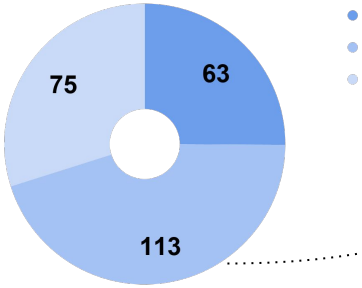


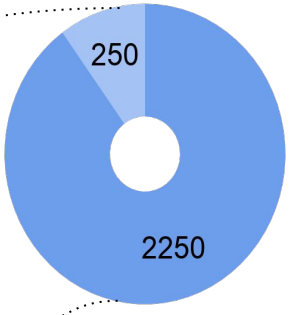
MARKET DISTRIBUTION 2021

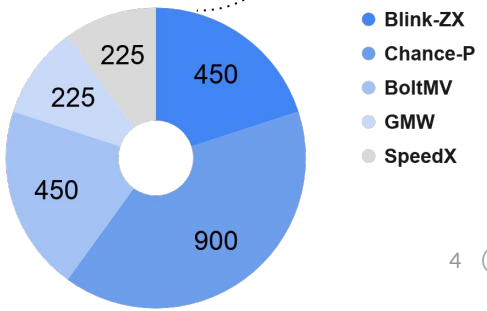
- New Customers
- Existing Customers







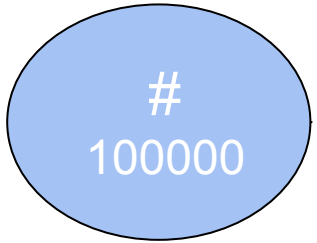


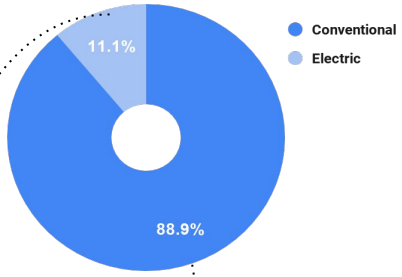


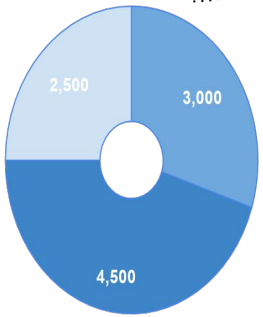
Brand	SkyEV	I - Gen	Fluent	Electra	Speed X	GMW Model T	BoltM V	Chanc e-P	Blink-ZX
New Units	63	75	113	2500	225	225	450	900	450

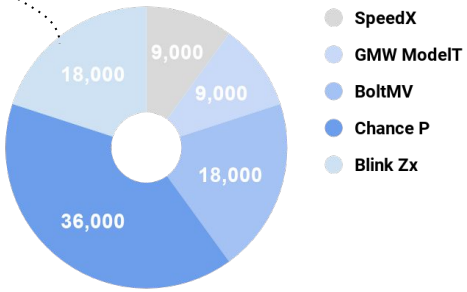
MARKET DISTRIBUTION 2021

- New Customers
- Existing Customers

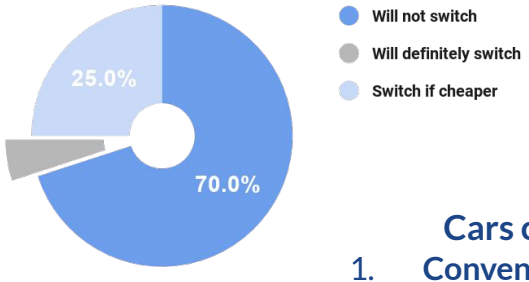








Probable customers in 2021



Cars costlier than Electra:

1. **Conventional Cars**: SpeedX, GMW Model T
2. **Electric Cars**: Sky EV

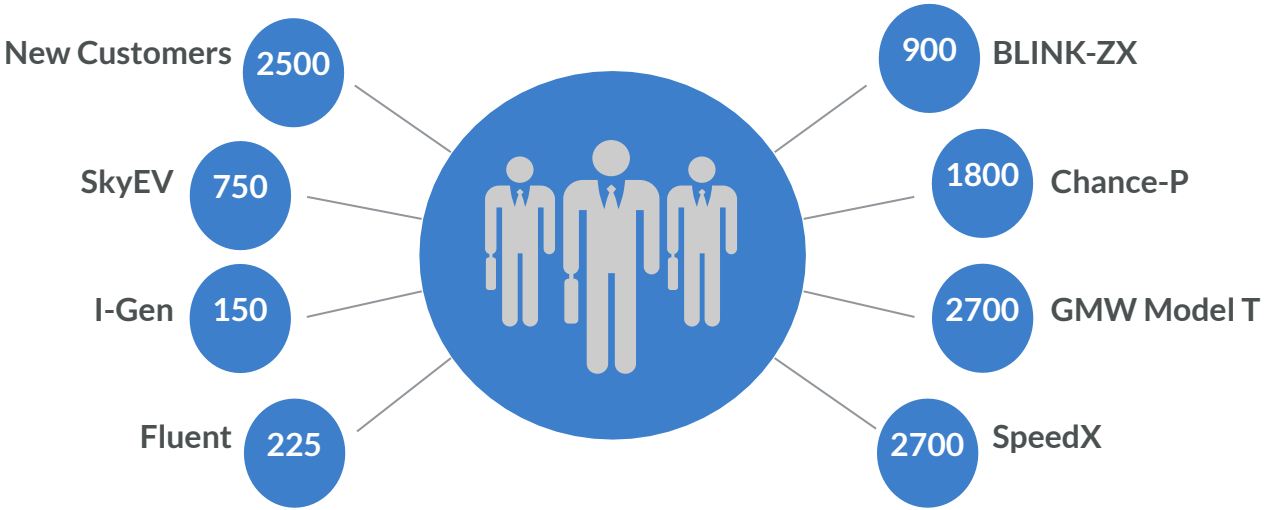
Brand	SpeedX	GMW Model T	Sky EV
Customers Switched	2700	2700	750

ELECTRA'S CUSTOMER BASE

Net Size of Market **323826** (million INR)

12625 Total Units

Electra's Market Share

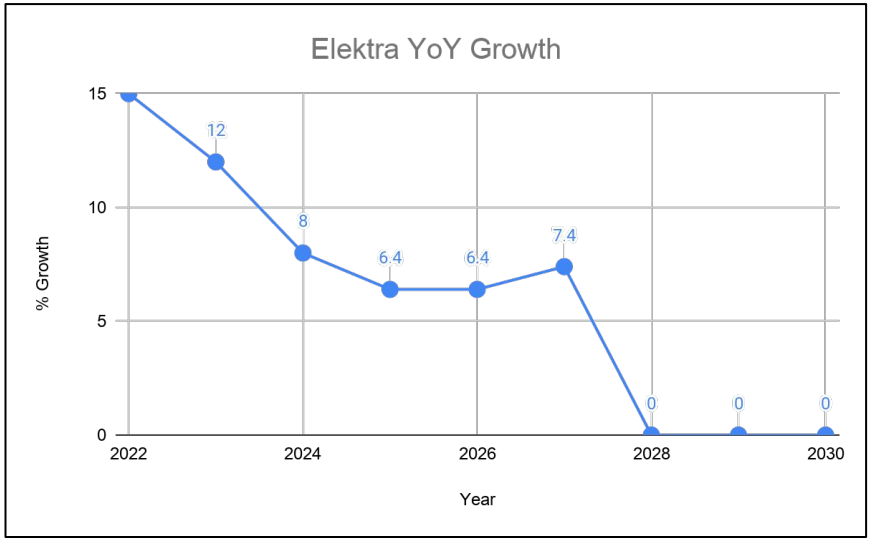


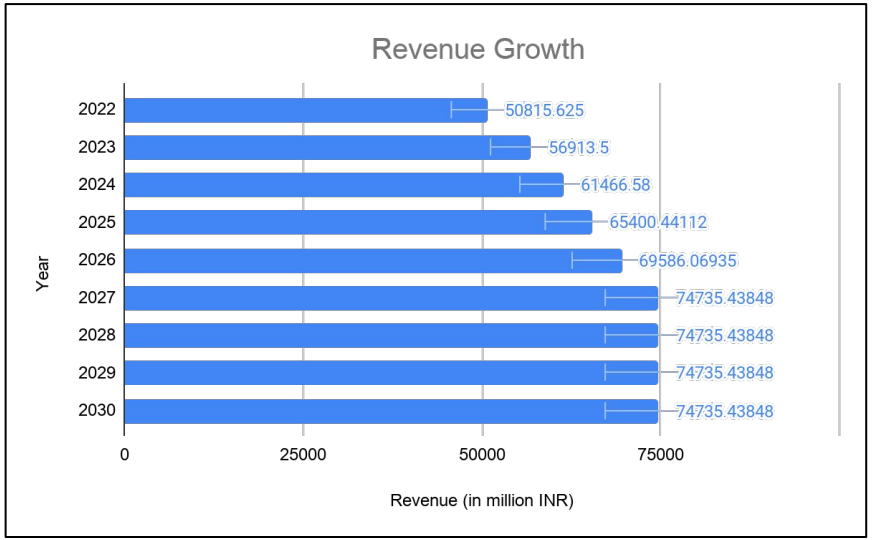
GMW Model T Lost Most Revenue

10642.5 (million INR lost)

*Note:- # in circle denote net customer attracted corresponding to the mentioned category

REVENUE FORECAST

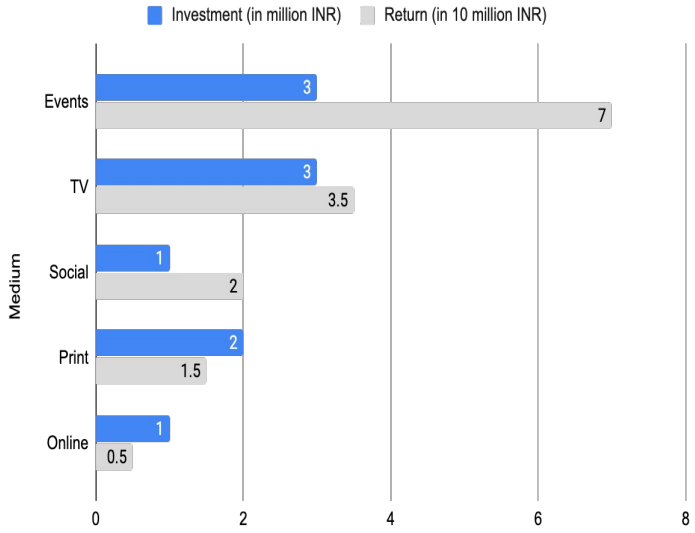


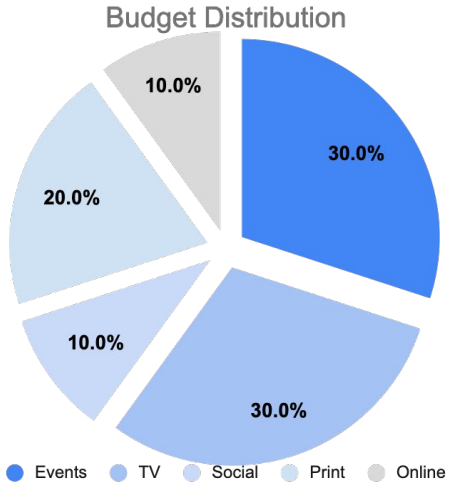


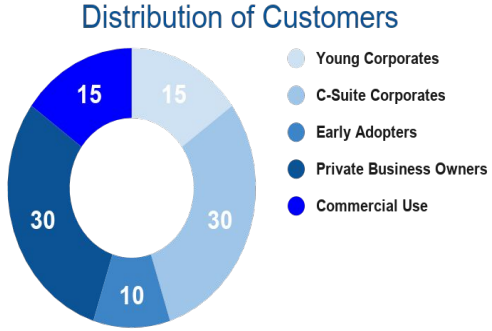
- The above curve show the growth trends of Elektra which is similar to Fluent till 2024 then there is a uprise by 1.4 times from 2025.
- Growth stopped from 2028 because of the introduction of new model.

- The final revenue by Electra at the end of the year 2030 would be 74735.4 million INR

MARKETING STRATEGY

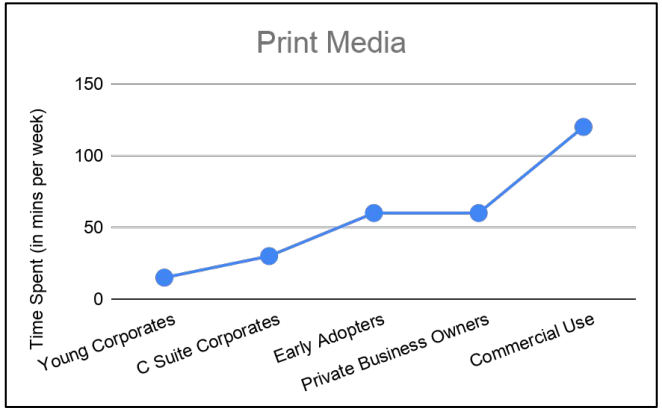


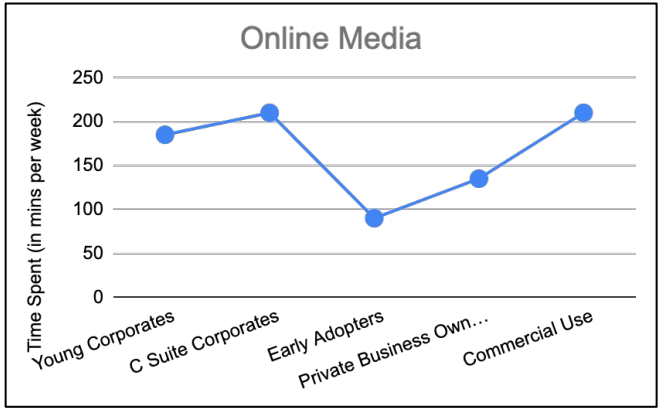


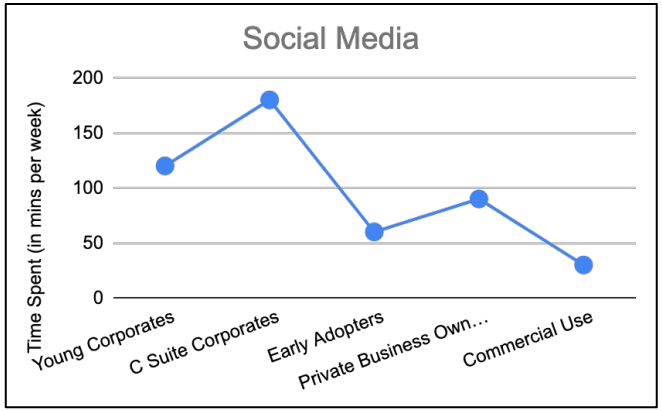


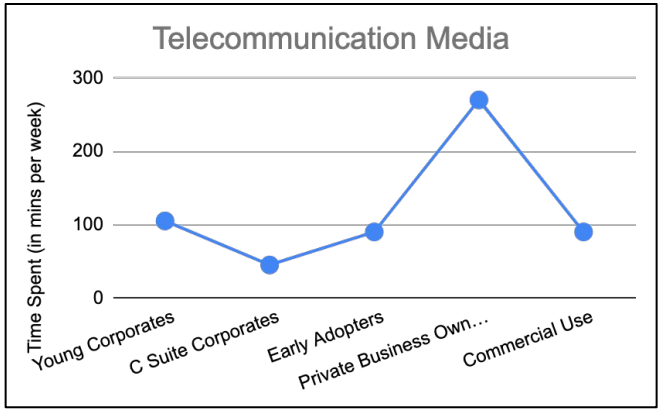
- The distribution of Budget among various medium is proposed to have optimum return.
- The maximum total return that we may have if we invest in each channel is 145 million INR.

- Our customer's entire age group is from 25 - 50 years.
- C-Suite Corporates & Private Business owners constitute more than 50% of our customer base.
- Young Corporates, Early Adopters & Commercial Use Owners are the ones who are interested in economical cars.









- It is advisable to **Print Media** to target the customer category which buys EVs **Commercial Uses like rental services** by informing about the **efficiency and durability** of Electra.
- **Corporates** are the ones who are our major customer and they are quite active on both **Social & Online Media** so both these mediums are highly advised to advertise targeting them.
- Telecommunication media like **TV & Radio ads** should aim to attract **Private Business Owners.**

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Section 2

KEY CITIES FOR LAUNCH

City	State	Population (2011 in Million)	Population Rank	Per Capita Income (INR)	Income Rank	Weighted Rank	Final Rank
Mumbai	Maharashtra	12.4	1	12,800	4	2.8	2
Delhi	Delhi	11.0	2	7,400	9	6.2	6
Bangalore	Karnataka	8.4	3	15,500	2	2.4	1
Hyderabad	Telangana	6.8	4	14,800	3	3.4	3
Ahmedabad	Gujarat	5.6	5	6,400	10	8	9
Chennai	Tamil Nadu	4.7	6	9,800	6	6	5
Kolkata	West Bengal	4.5	7	8,400	7	7	8
Surat	Gujarat	4.5	8	19,400	1	3.8	4
Pune	Maharashtra	3.1	9	10,500	5	6.6	7
Jaipur	Rajasthan	3.0	10	7,500	8	8.8	10

Based on final rank, Krypto will open **Experience Stores** in the following cities:-

1. Bangalore
2. Mumbai
3. Hyderabad
4. Surat
5. Chennai

Based on the given data, the **weights** have been assigned in the following manner:-

1. Population rank - 0.4
2. Income rank - 0.6

INCENTIVE BUDGET

Cost of Electra = INR 15 lakh

Average Incentive payout per store
= (828750 + 412500)/2 =Rs 620625

Total Incentive Budget = 5*620625 = Rs 3103125

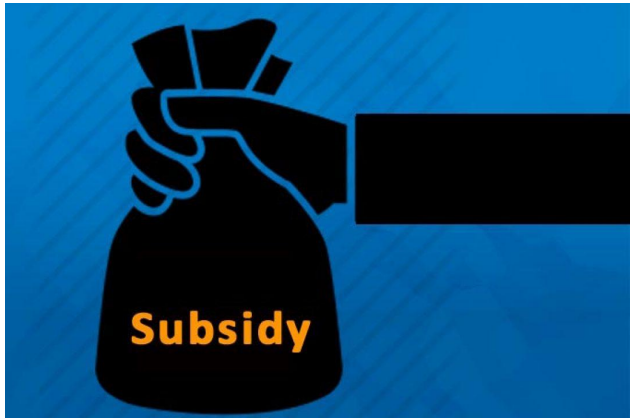
City ABC	Sales (units)	Rank	Incentive
Rep A	8	4	60000
Rep B	11	2	247500
Rep C	9	3	135000
Rep D	12	1	360000
Rep E	7	5	26250
Total	**47**		**828750**

City XYZ	Sales (units)	Rank	Incentive
Rep F	3	4	22500
Rep G	2	5	7500
Rep H	4	3	60000
Rep I	5	2	112500
Rep J	7	1	210000
Total	**21**		**412500**

IS THIS THE RIGHT STRATEGY?

Other important parameters include :-

Parameter	Weightage
Population of the city	0.25
Average Household Income	0.4
Direct Subsidies to buyers	0.15
Exemption from SGST, Road Tax and Registration fees	0.1
Availability of Charging Infrastructure	0.05
Pollution level of the City	0.05



It has been observed that the states which have already either issued or proposed **Electric Vehicle Policies**, have higher sales as compared to others.

The Electric Vehicle Policy Agenda include :-

- Encourage startups to develop business models focused on supporting economic applications for EVs
- Set up charging stations in public and private spaces including airports, railway stations,(IT) parks, and apartment complexes.

DRAWBACKS OF CURRENT COMPENSATION PLAN

Incentive calculation formula

Incentive = No. of units sold * % Commission per unit based on rank
Price of 1 car = INR 15 lakh

Rep E in City ABC and Rep J in City XYZ have sold same no. of units, let's look at their incentives based on **Current Compensation plan.**

For Rep E
Incentive = Rs. 26,250 {7 * 0.25% of 1500000 (rank=5)}
For Rep J
Incentive = Rs. 210,000 {7 * 2% of 1500000 (rank=1)}

The difference in the incentive amount is huge!
Reason - Rank based approach of commission per car sold.

Drawback - For practically the same amount of work, the Rep J in City XYZ gets **almost 8 times** incentives than that of Rep E in City ABC.

City ABC	Sales (units)	Rank	Incentive
Rep A	8	4	60000
Rep B	11	2	247500
Rep C	9	3	135000
Rep D	12	1	360000
Rep E	7	5	26250

City XYZ	Sales (units)	Rank	Incentive
Rep F	3	4	22500
Rep G	2	5	7500
Rep H	4	3	60000
Rep I	5	2	112500
Rep J	7	1	210000

MODIFIED COMPENSATION PLAN

Proposed rank based reward

Rank	Reward (₹)
1	25000
2	20000
3	15000
4	10000
5	7500

Rank based incentives should be separate from Commission earned by selling each unit.

Modified Compensation = Units sold * Commission @1% of 1500000 + Rank based reward

Based on Old plan

Based on Proposed plan

City ABC	Sales (units)	Rank	Incentive	Commission (@ 1%)	Rank based reward	Total Compensation
Rep A	8	4	60000	120000	10000	130000
Rep B	11	2	247500	165000	20000	185000
Rep C	9	3	135000	135000	15000	150000
Rep D	12	1	360000	180000	25000	205000
Rep E	7	5	26250	105000	7500	112500
Total			**828750**			**782500**

Some features of the Modified compensation plan:-

1. Flat **1%** commission on each unit sold.
2. Fixed rank based reward to promote competition.
3. Less disparity in compensation for same work.
4. Total budget is almost same as the previous plan.
5. More equitable Commission and reward system.

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Section 3

BEST CAR FOR MIDDLE INCOME GROUP

CALCULATION OF ON-ROAD PRICE

City - Mumbai

ORP = ESP + Insurance + Road Tax - Subsidy
DP = Rs 4 lakh

Model	Road Tax*	Subsidy (% of ESP)
Hatchback	5.5% of ESP or 40000	4
Sedan	7% of ESP or 55000	3
SUV	10% of ESP or 80000	3

*whichever is higher

Particulars	Hatchback	Sedan	SUV
Capacity	4	5	7
ED(in cc)	1200	1600	2300
ESP	550000	670000	1200000
Road Tax	40000	55000	120000
Insurance	22000	53000	70000
Subsidy	22000	20100	36000
ORP	590000	757900	1354000
ORP-DP	190000	357900	954000

Key:-
ED - Engine displacement
ORP - On-road price
ESP - Ex-Showroom price
DP - Down-payment

BEST CAR FOR MIDDLE INCOME GROUP

Calculation of Interest

Principal (P) = On-road price - Down-payment
Rate of interest (R)= 10%p.a.
Time (T) = 1-3 years
Simple Interest (SI) = P*R*T/100
Amount = P + SI

Time = {1,2,3} (Different Loan period)

Recommendation

Model - Sedan
On-road price - Rs. 757900
Down-payment - Rs. 400000
Principal of Loan - Rs. 357900
Interest (@10% for 1 yr) - Rs. 35790
Amount payable to bank - Rs. 393690
EMI (Amount/12) - Rs 32807.5
Total Cost of Car - Rs 793690 (within budget of Rs 800000)

Particulars	Hatchback	Sedan	SUV
Principal	190000	357900	954000
Interest(3)	57000	107370	286200
Total Cost(3)	647000	865270	1640200
Interest(2)	38000	71580	190800
Total Cost(2)	628000	829480	1544800
Interest(1)	19000	35790	95400
Total Cost(1)	609000	793690	1449400

Total Cost of Car = Down-payment + Amount

Interest(i) - Interest charged on the principal if the loan period is 'i' years.
Total Cost(i) - Total cost calculated on the basis of Interest(i).

EXPENDITURE INCURRED IN FIRST 4 YEARS

City - Mumbai

Electricity Cost (per kWh) - Rs 14
Mileage - 7 km/kWh
Electricity Cost (per km) - Electricity Cost(per kWh) / Mileage
Maintenance Cost - Rs. 5100
Total distance travelled (annually) - 11560 km

Year	EMI	Operating Cost	Total
1	393690	28220	421910
2	0	28220	28220
3	0	28220	28220
4	0	28220	28220
Total			506570

Particulars	Amount
Maintenance Cost	5100
Electricity Cost (per km)	2
Total distance	11560
Total Operating Cost	28220

Total operating Cost = Maintenance Cost + Electricity cost(per km)*Total distance

After paying the down-payment, annual expenditure will comprise of:-

1. EMI payments (only in 1st year)
2. Operating cost

On calculating, the Total Cost for 4 years comes out to be Rs. 506570

QUALITY CHECKS FOR APPENDIX 2

Some of the Data collected in Appendix 2 is redundant and no need to be input by the representative time and again.

✓	✗
Postal Code	• Country • City • State • Region
Product ID	• Product Name • Seating Capacity • Engine Displacement(in cc) • MRP(in lacs) • Finance Amount (in lacs)
Date of Birth	• Age
	• Financed • Exchanged

ERRORS IN APPENDIX 2

Row ID	Order ID	Order Date	S
1	DL-1383	08-11-2019	
2	DL-1822	08-11-2019	
11	BLR-1038	09-06-2018	
12	DL-1383	09-06-2018	
13	DL-1381	15-04-2019	

Two order IDs can't be same

ntry	City	State
ia	Pune	Maharashtra
ia	Bangalore	Tamil Nadu
ia	Mumbai	Maharashtra

State of Bangalore is Tamil Nadu

c)	MRP(in lacs)	Discount(in %)	Financed
500	15	0	No
800	8	120	No
800	8	0	No
800	-8	0	No
800	8	0	Yes

MRP cannot be negative

nount(in lacs)	Exchanged	Exchange Discount(in lacs)	Profit(in
3.8	No	0	
0	Yes	0	
0	No	0	

Exchanged - Yes
Exchanged Discount - Zero

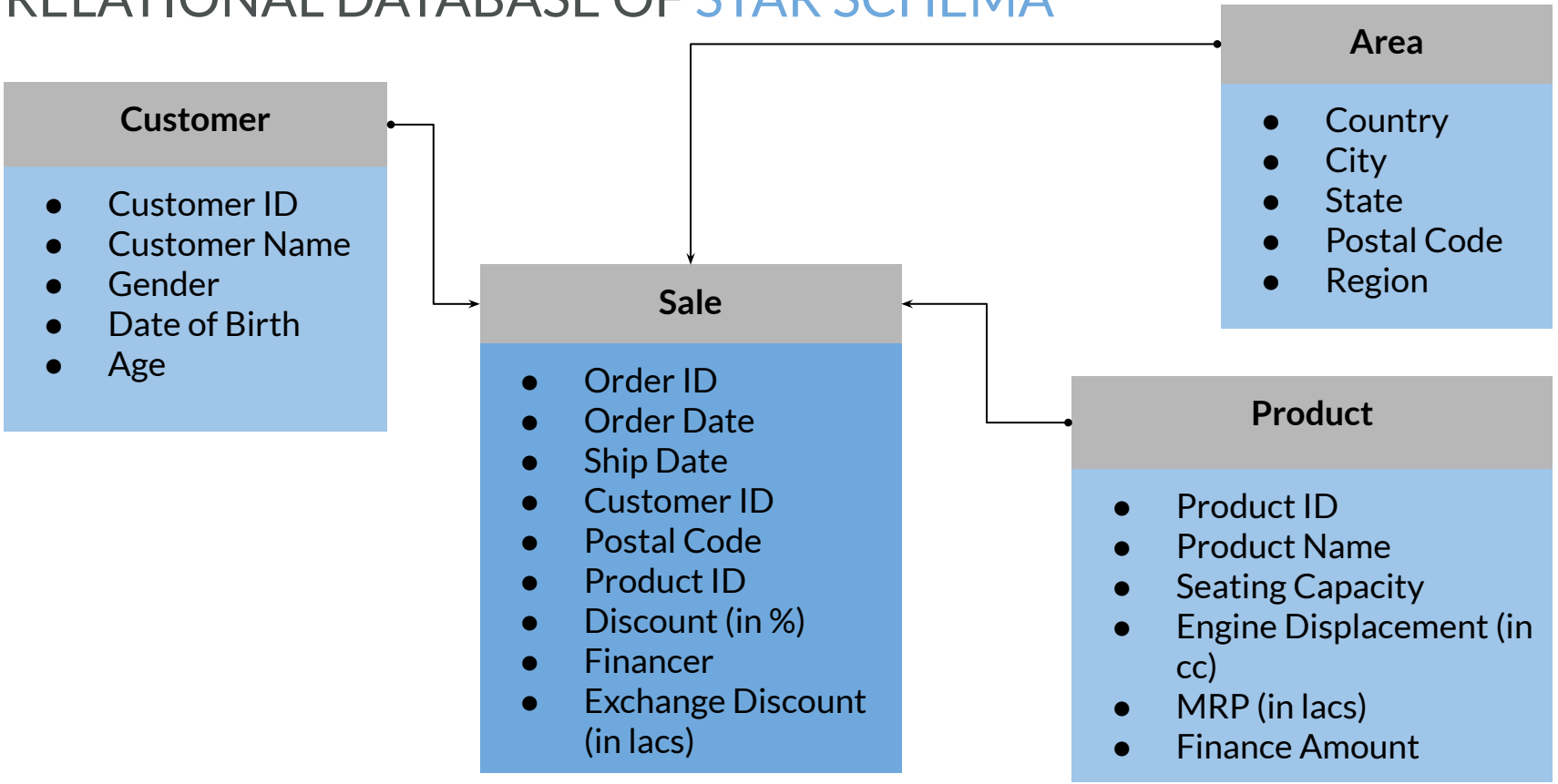
in	Finance d	Financer	Fina lacs
0	Yes	Mahindro	
10	Yes	Reliant Capital	
0	No	-	
0	No	Bijuj	
0	Yes	Reliant Capital	

Financer - No
Financer - Bijuj??

e	Gender	Date of Birth	Product Name	Se
	Male	12-09-1993	Sedan	
		07-03-1992	Sedan	
	Male	09-06-1993	Hatchback	
	Male	02-09-1991	Hatchback	
	Male	05-12-1999		
al	Male	25-01-1990	Hatchback	

Missing Value

RELATIONAL DATABASE OF STAR SCHEMA



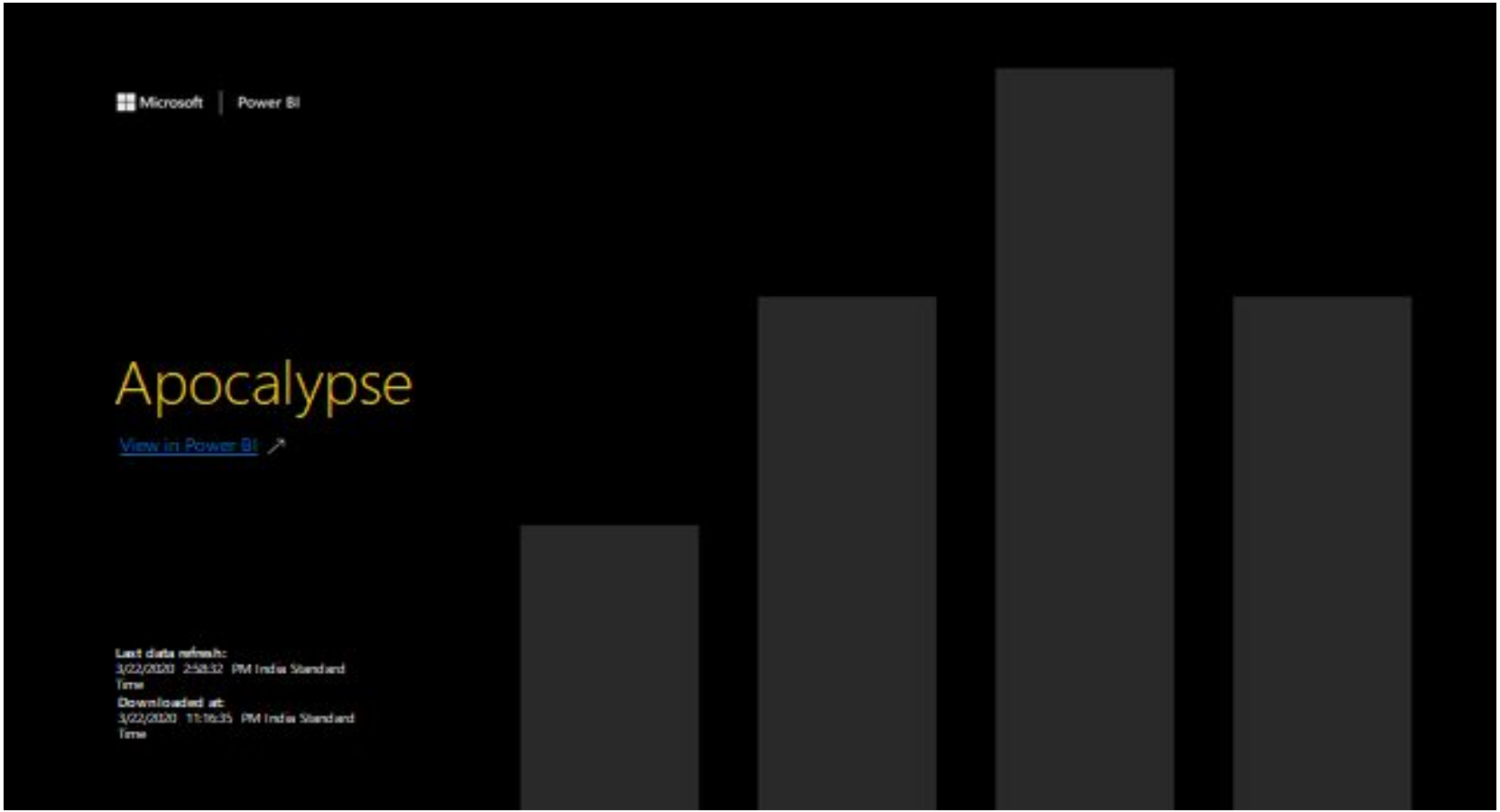
COST PRICE OF VARIOUS PRODUCTS

Calculation of Cost price of various models

Data taken from Appendix 2

Cost price = MRP - Profit
Discount = 0

Model	MRP (in lacs)	Profit (in lacs)	Cost Price (in lacs)
Hatchback	8	5	3
Sedan	9.5	5.5	4
SUV	15	8	7


Microsoft | Power BI
Apocalypse
View in Power BI
Last data refresh:
3/22/2020 2:58:32 PM India Standard Time
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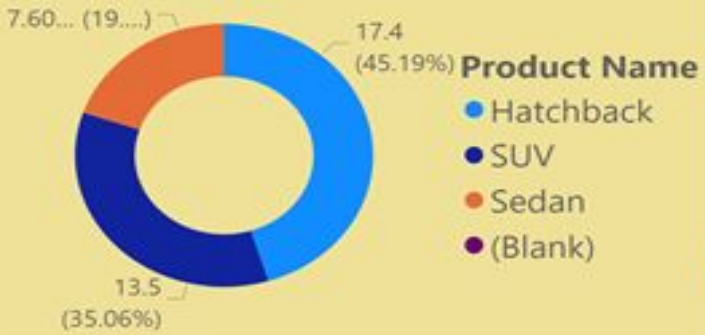
3/22/2020 11:16:35 PM India Standard Time

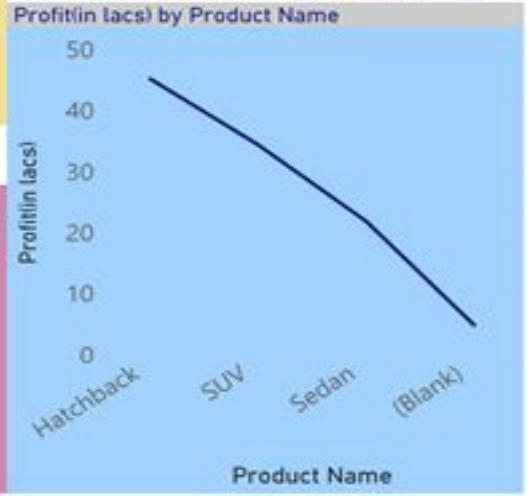
APOCALYPSE

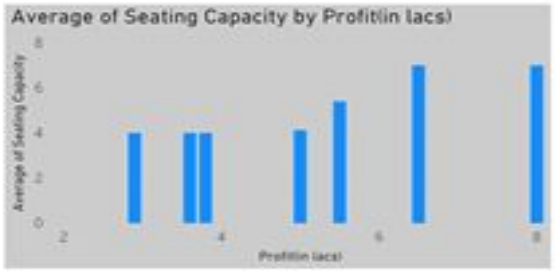
185.00
MRP(in lacs)

Finance Amount(in lacs) by Product Name



Product Name
(Blank)
Hatchback
Sedan
SUV





City
Pune
Mumbai
Delhi
Bangalore

Thank you!