BUSINESS INFORMATION SYSTEMS

ANALYSING A SPREADSHEET AND PRESENTING A BUSINESS REPORT

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Introduction

The report comprises of the descriptive, predictive and perceptive analysis of the Eclipse Van data for the year 2017 and 2018. The Purpose of these analyses is to create business intelligence by applying the analytics on the operational data. Where the analyzed information can be helpful for the business owners to expose patterns, relationship with other factors and the trends of the business by all of which they can take better business decisions. Firstly data will be analyzed and pooled in a way that business performance will be analyzed and can be taken into account from where we can initiate a process of using the set of data to understand the future trends visually and understand which products are to be focused, what impact the discounts are making and what will the future profitability be for the business.

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Result and Analysis

Sales Staff Analysis

In the Fig 1.1 we can see the sales performance of the staff in comparison to the model of the vehicle where the Senior Sales Person Burges (Sales03) has sold 248 vehicles till now with selling 49 units of Adventure 65 the most trending model amongst the consumer but has failed to sell any units of Safari 45 in the past two years. Rachel ng (Sales02) on the other hand improved her sales by 69% from 71 units in the year 2017 to 120 units in year 2018. Timothy Robertson (Sales01) dropped the annual sales number by 4 units from 83 units to 79 units in the year 2018. The contribution towards the operating profit by sales personnel is $1,032,352(Sales01), $1,223,162(Sales02), and $1,527,268(Sales03). Total earnings (salary + commission) by Sales01 is $144,117, for Sales02 $153,658 and $200,363 for Sales03. Rachel ng has the highest

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contribution towards the operating profit which is $7.96 on every dollar earned by her which makes the most efficient sales resource for Eclipse Van.
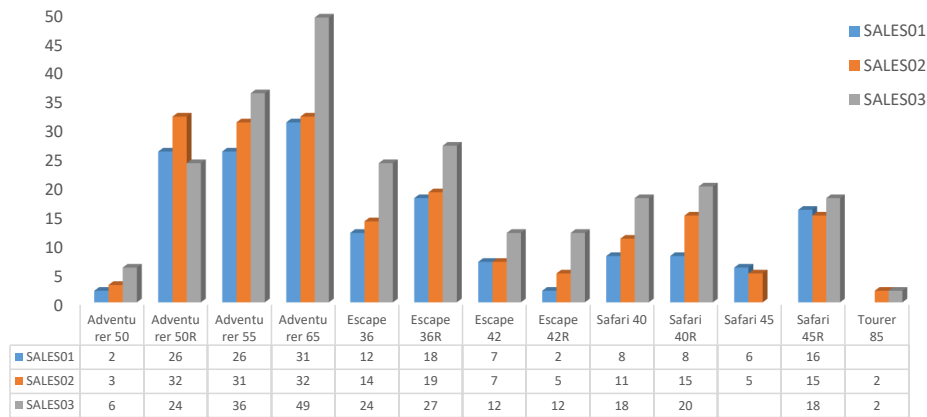

	Adventu rer 50	Adventu rer 50R	Adventu rer 55	Adventu rer 65	Escape 36	Escape 36R	Escape 42	Escape 42R	Safari 40	Safari 40R	Safari 45	Safari 45R	Tourer 85
SALES01	2	26	26	31	12	18	7	2	8	8	6	16	
SALES02	3	32	31	32	14	19	7	5	11	15	5	15	2
SALES03	6	24	36	49	24	27	12	12	18	20		18	2

Fig 1.1 Sales Staff Performance by Model

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Sales Model Analysis

The analysis shows that Adventurer 65 has been sold over 112 times in the past two years. In Fig 2.2 we can see that the most demanded category is the Caravan followed by the trailer and pop tarts. The motorhome is the least favored category by selling only 4 units in the whole 24 months. Adventurer models are the most successful series in the Eclipse Vans product line.
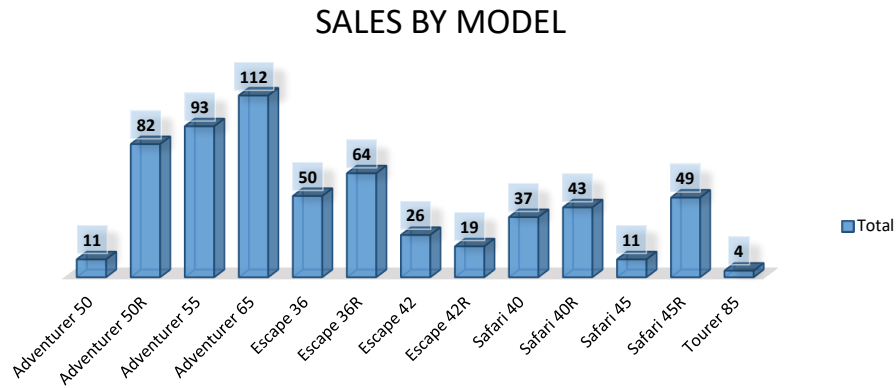
SALES BY MODEL

Fig 2.1 Sales Performance by Model
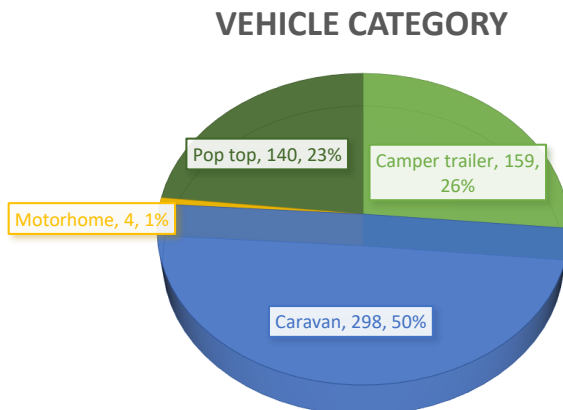
VEHICLE CATEGORY

Fig 2.2 Sales Performance by Vehicle Category

Discount Option Analysis

From a total of 342 sold units in 2018 168 units took up the offer of a special option discount. 83%

of all Safari45 sold units took up the offer of special discount and Adventure 50 showed the least

interested consumer for the special options discount standing at 29%. Total of $33,328 was the cost realized for this special options discount since its inception. 31 consumers of the highest-selling model in Caravan opted for the special package.

	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Total
Escape 36	- 104	- 520	- 416	- 104	-	- 104	-	-	- 104	-	-	- 104	- 1,456
Escape 36R	- 208	- 208	- 624	- 520	- 208	- 104	-	-	- 104	- 104	- 208	- 104	- 2,392
Escape 42	-	- 104	- 208	- 104	-	-	-	-	-	-	-	-	- 416
Escape 42R	-	- 208	-	- 104	- 104	- 104	-	-	-	-	-	-	- 520
Safari 40	- 280	- 560	- 560	- 560	-	- 560	-	-	- 280	-	- 280	-	- 3,080
Safari 40R	-	- 1,120	-	- 560	-	-	-	-	- 560	- 560	-	- 560	- 3,360
Safari 45	-	-	- 280	- 280	-	- 280	-	-	- 280	- 280	-	-	- 1,400
Safari 45R	-	-	- 840	-	- 560	- 280	- 280	- 280	- 1,120	- 280	- 280	- 560	- 4,480
Adventurer 50	- 208	-	-	- 208	-	-	-	-	-	-	-	-	- 416
Adventurer 50R	- 208	- 624	- 832	- 624	- 416	- 416	- 208	-	- 208	- 416	- 624	- 416	- 4,992
Adventurer 55	- 416	- 416	- 208	- 1,248	- 624	-	-	-	- 416	- 624	- 208	- 208	- 4,368
Adventurer 65	- 1,040	- 832	- 832	- 416	- 1,248	-	- 208	- 208	- 624	- 416	- 624	-	- 6,448
Tourer 85	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	- 2,464	- 4,592	- 4,800	- 4,728	- 3,160	- 1,848	- 696	- 488	- 3,696	- 2,680	- 2,224	- 1,952	- 33,328

Table 3.1 Special Option Cost

	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Total
Escape 36	1	5	4	1	0	1	0	0	1	0	0	1	14
Escape 36R	2	2	6	5	2	1	0	0	1	1	2	1	23
Escape 42	0	1	2	1	0	0	0	0	0	0	0	0	4
Escape 42R	0	2	0	1	1	1	0	0	0	0	0	0	5
Safari 40	1	2	2	2	0	2	0	0	1	0	1	0	11
Safari 40R	0	4	0	2	0	0	0	0	2	2	0	2	12
Safari 45	0	0	1	1	0	1	0	0	1	1	0	0	5
Safari 45R	0	0	3	0	2	1	1	1	4	1	1	2	16
Adventurer 50	1	0	0	1	0	0	0	0	0	0	0	0	2
Adventurer 50R	1	3	4	3	2	2	1	0	1	2	3	2	24
Adventurer 55	2	2	1	6	3	0	0	0	2	3	1	1	21
Adventurer 65	5	4	4	2	6	0	1	1	3	2	3	0	31
Tourer 85	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	13	25	27	25	16	9	3	2	16	12	11	9	168

Table 3.2 Special Option Sales

Revenue and Profitability Analysis

The Table 4.1 reflects that in the Year 2017, 96 batches were made for all the models which cost the company $480,000 and Table 4.2 shows that 103 batches in the year 2018 which reflects a cost

of $515,000. For the 13 car models the average is around 7.65 batch per model which reflect inefficiency in production planning and ineffective sales planning.

Model	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Batches in 2017
Escape 36	4	3	3	1	3	3	0	0	0	2	2	2	9
Escape 36R	1	3	4	4	3	0	0	1	1	10	2	1	10
Escape 42	0	4	3	2	1	0	0	0	0	3	2	2	7
Escape 42R	1	1	1	1	3	0	0	0	0	0	2	2	7
Safari 40	2	1	1	1	3	2	0	0	0	0	1	1	8
Safari 40R	1	0	2	3	0	0	0	1	2	0	3	0	6
Safari 45	0	1	1	1	0	0	0	0	0	0	2	0	4
Safari 45R	0	1	0	1	5	2	1	1	3	2	2	2	10
Adventurer 50	1	0	0	0	0	0	0	0	0	1	1	1	4
Adventurer 50R	2	2	2	4	4	0	0	0	4	4	8	4	9
Adventurer 55	0	8	3	6	5	0	1	0	6	3	5	4	9
Adventurer 65	3	6	5	6	3	6	0	1	2	7	7	2	11
Tourer 85	0	0	1	0	0	0	0	0	0	1	0	0	2
Total	8	10	11	11	9	4	2	4	6	9	12	10	96

Table 4.1 Batches per model in 2017

Model	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Batches in 2018
Escape 36	2	7	4	3	0	3	0	1	3	2	1	1	10
Escape 36R	2	2	6	7	3	2	1	0	1	3	5	2	11
Escape 42	0	1	3	3	0	0	0	0	0	0	2	0	4
Escape 42R	0	2	0	1	3	1	0	0	0	1	0	0	5
Safari 40	1	3	2	2	2	3	0	0	3	3	3	3	10
Safari 40R	0	5	0	4	5	1	0	0	4	4	5	3	8
Safari 45	0	0	1	1	0	1	0	0	1	1	1	0	6
Safari 45R	0	0	3	0	2	2	2	1	6	6	5	2	9
Adventurer 50	2	1	0	1	0	0	0	0	0	0	3	0	4
Adventurer 50R	3	3	4	3	4	2	1	0	2	7	12	7	11
Adventurer 55	2	7	3	8	4	2	1	0	4	10	6	5	11
Adventurer 65	5	6	7	7	9	2	1	2	8	8	8	1	12
Tourer 85	0	0	0	1	0	0	0	0	0	0	1	0	2
Total	7	10	9	12	8	10	5	3	9	10	12	8	103

Table 4.2 Batches per model in 2018

With the realization of batch cost, salary and commission net profit from operations for the year can be calculated in table 4.3 we can report that $1.6 Million was earned through direct sales where after realizing the cost of salaries, commission and batches in production Eclipse Vans earned a total operating profit of $0.921 Million an increase of 48% is seen in the year 2018 with profit

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being $1.3 Million. The total commission for the year 2017 is 81,650 earned by all sales, 109,155 earned in 2018 which shows a rising trend. The number of Salaries and commission were increased by only 15% which reflects cost efficiency by the organization.

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	2017	2018
Total Profit from Sales	1,633,005	2,149,777
Total Salary	150,000	159,000
Total Commision	81,650	109,155
Batches Cost	480,000	515,000
Total Profit	921,355	1,366,622

Table 4.3 Profit for the year 2017 and 2018

Predictive Analysis

In Table 5.1 we can see that the profit is trending towards positivity and predicts a massive 32% increase in the overall total profit. In Table 5.2 we can see further breakup and prediction as to how this increase of 32% will be achieved due to the increasing demand of the adventure series. Safari 40R shows the highest increase in demand of around 61% and 19 units followed by its similar model of Safari 40 with 52% increase in its demand. Whereas, the motorhome shows no change in demand for the year 2019.

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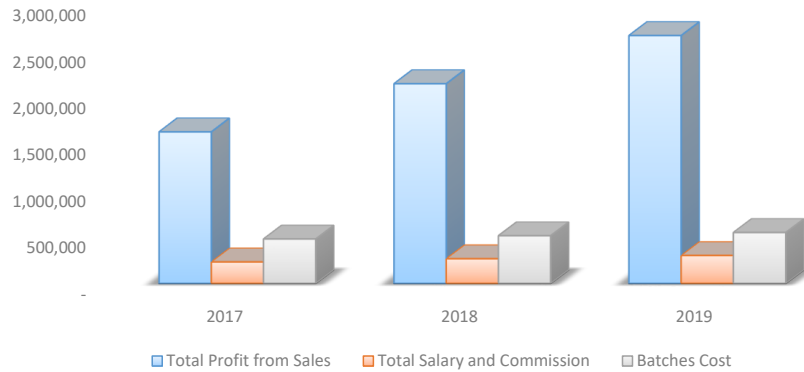
Fig 5.1 Profit for the year 2017 and 2018 with 2019(based on trend)

	2017	2018	2019
Total Profit from Sales	1,633,005	2,149,777	2,666,549
Total Salary and Commission	231,650	266,489	301,327
Batches Cost	480,000	515,000	550,000
Total Profit	921,355	1,368,288	1,815,222

Table 5.1 Profit for the year 2017 and 2018 with 2019(based on trend)

	2017	2018	2019
Escape 36	23	27	31
Escape 36R	30	34	38
Escape 42	17	9	1
Escape 42R	11	8	5
Safari 40	12	25	38
Safari 40R	12	31	50
Safari 45	5	6	7
Safari 45R	20	29	38
Adventurer 50	4	7	10
Adventurer 50R	34	48	62
Adventurer 55	41	52	63
Adventurer 65	48	64	80
Tourer 85	2	2	2

Table 5.2 Model Sales per Year 2017and 2018 with 2019(based on trend)

Summary

It can be concluded that Rachel ng is the most efficient sales staff who is contributing $7.96 on every dollar earned by her. The caravan is the highest demanded category by the consumer and Motorhome being the least favorite, in the caravan, the Adventure 65 is the most demanded vehicle with over 112 units sold in 2 years. The discount option offered by Eclipse Vans were opted 48% of the times in the whole year, which reflects on high demand by the consumer. The increasing profit for the company predicts a 32% boost in profit for the upcoming year with the highest demanded vehicle being Adventure 65 and highest growing demand of 61% for the Safari 40R.

Recommendations

Timothy Robertson performance should be reviewed and lacking skills or training should be given to increase the sales performance. The most focused product for Eclipse Van should be the Safari 40R with its highest increasing demand. Adventure 65 gives out the second-highest markup and has the most sales in comparison to all the vehicles it should be marketed more to keep up the rising demand and sales. With its high demand for the special option, pop-top special option price should be further slashed to motivate more potential customers into being consumers. To further save on batching production cost and with the help of predictive analysis Escape42 has a decreasing demand should be removed from the production line. The vehicles should be marketed 2 months prior to November which has the highest demand.

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What does it mean!

Appendices

Profit (20% Mark up)		Options Profit		Total Profit	
=VLOOKUP(G2,'reference data profit margins'!$B$3:$E$16,3,0)		=IF(K2="yes",VLOOKUP(F2,'reference data profit margins'!$A$29:$F$32,6,FALSE),0)		=SUM(L2:M2)	
=VLOOKUP(G3,'reference data profit margins'!$B$3:$E$16,3,0)		=IF(K3="yes",VLOOKUP(F3,'reference data profit margins'!$A$29:$F$32,6,FALSE),0)		=SUM(L3:M3)	

Sales Personel Analysis

Sales Person	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Total Profit	
SALES01	15,990	57,120	27,520	67,080	43,705	21,870	-	13,940	71,765	44,405	106,120	64,020		533,535
SALES02	49,985	42,920	46,775	34,970	=SUMIFS('Van sales 2017 + 2018 Calcs'!$N$2:$N$602,'Van sales 2017 + 2018 Calcs'!$D$2:$D$602,Working!$A5,'Van sales 2017 + 2018 Calcs'!$B$2:$B$602,Working!F$3)									643,445
SALES03	18,135	89,815	85,170	91,385	61,195	27,915	8,135	9,005	18,120	92,885	84,840	56,845		643,445

Sales Person	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Total Profit	
SALES01	38,742	69,065	52,693	32,601	71,733	20,750	12,752	8,240	28,232	56,842	84,515	22,652	498,817	1,032,352.00
SALES02	22,527	59,916	66,170	92,710	76,703	34,484	10,420	9,305	56,378	118,805	128,150	91,569	767,137	1,223,162.00
SALES03	54,777	86,807	71,742	128,051	61,744	46,823	15,827	9,097	115,174	121,778	135,676	36,327	883,823	1,527,268.00

Sales Personel Analysis

Sales Person	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Total Profit	
SALES01	15,990	57,120	27,520	67,080	43,705	21,870	-	13,940	71,765	44,405	106,120	64,020		533,535
SALES02	49,985	42,920	46,775	34,970	70,760	34,345	5,350	-	38,110	70,955	52,550	9,305		456,025
SALES03	18,135	89,815	85,170	91,385	61,195	27,915	8,135	9,005	18,120	92,885	84,840	56,845		643,445

Sales Person	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Total Profit	
SALES01	38,742	69,065	52,693	32,601	71,733	20,750	12,752	8,240	28,232	56,842	84,515	22,652	498,817	1,032,352.00
SALES02	22,527	59,916	66,170	92,710	76,703	34,484	10,420	9,305	56,378	118,805	128,150	91,569	767,137	1,223,162.00
SALES03	54,777	86,807	71,742	128,051	61,744	46,823	15,827	9,097	115,174	121,778	135,676	36,327	883,823	1,527,268.00

	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Total Earning by Sales Personnel	
Sales01 Earning	4,549.50	6,606.00	5,126.00	=(E4*0.05)+(45000/12)	4,843.50	3,750.00	4,447.00	7,338.25	5,970.25	9,056.00	6,951.00		71,676.75	
Sales02 Earning	6,249.25	5,896.00	6,088.75	5,498.50	7,288.00	5,467.25	4,017.50	3,750.00	5,655.50	7,297.75	6,377.50	4,215.25	67,801.25	
Sales03 Earning	5,906.75	9,490.75	9,258.50	9,569.25	8,059.75	6,395.75	5,406.75	5,450.25	5,906.00	9,644.25	9,242.00	7,842.25	92,172.25	

	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Total Earning by Sales Personnel	
Sales01 Earning	5,895.43	7,411.58	6,592.98	5,588.38	7,544.98	4,995.83	4,595.93	4,370.33	5,369.93	6,800.43	8,184.08	5,090.93	72,440.85	144,117.60
Sales02 Earning	5,084.68	6,954.13	7,266.83	8,593.83	7,793.48	5,682.53	4,479.33	4,423.58	6,777.23	9,898.58	10,365.83	8,536.78	85,856.85	153,658.10
Sales03 Earning	8,072.18	9,673.68	8,920.43	11,735.88	8,420.53	7,674.48	6,124.68	5,788.18	11,092.03	11,422.23	12,117.13	7,149.68	108,191.15	200,363.40

	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Total Sales	
SALES01	3	9	4	11	6	4	-	2	10	9	15	10	83	
SALES02	8	7	8	5	11	6	1	-	5	10	9	1	71	
SALES03	4	14	=COUNTIFS('Van sales 2017 + 2018 Calcs'!$D$2:$D$602,Working!$A27,'Van sales 2017 + 2018 Calcs'!$B$2:$B$602,Working!D$25)										105	
			COUNTIFS(criteria_range1, criteria1, [criteria_range2, criteria2], [criteria_range3, ...])											

	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Total Sales	
SALES01	5	12	8	5	12	3	2	2	4	9	13	4	79	
SALES02	4	10	12	15	10	6	2	1	10	19	18	13	120	
SALES03	8	15	13	21	10	10	2	1	18	17	21	7	143	