



BUSINESS REPORT

KPIs for Rapid Growth of the
Company

Company Name - Maven Fuzzy Factory

By
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TABLE OF CONTENTS

PROBLEM STATEMENT _____	3
Objective _____	3
VOLUME GROWTH TRENDED BY QUARTERS _____	4
PERFORMANCE IMPROVEMENT _____	5
Observations from Performance Trend _____	5
GROWTH OF SPECIFIC CHANNELS _____	6
Observations from channel view over the years _____	6
CONVERSION RATE TREND QUARTERLY BY CHANNELS _____	7
Observations of Conversion_rate trend by Channels _____	7
MONTHLY TREND FOR REVENUE AND MARGIN BY PRODUCTS _____	8
Observations from the Monthly trend of Revenue & margin by products _____	9
IMPACT OF INTRODUCING NEW PRODUCT _____	10
Observations: _____	11
PERFORMANCE OF ALL PRODUCT AFTER 4 TH PRODUCT WAS MADE AVAILABLE AS PRIMARY PRODUCT _____	12
Observations: _____	12
RECOMMENDATIONS & OPPORTUNITITES _____	13
Cross Sell Products _____	13
Product Launch _____	13
Landing Page _____	13
Marketing _____	13

PROBLEM STATEMENT

Cindy (CEO) of the company Maven Fuzzy Factory is close to securing company's next round of funding, and she needs your help to tell a compelling story to investors. In this report we are going to pull the relevant data and help our CEO to craft a story about a data driven company that has been producing rapid growth.

"The main purpose of the report is to craft a data driven story of company's revenue & growth over the recent year which make a remarkable impression on the investors"

Objective

The main objective of the project is to dig insight the data captured from website-sessions, orders to craft a story of the trend of improvement, impact of the marketing strategies, optimization of the conversion rate, and revenue generation trends.

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VOLUME GROWTH TRENDED BY QUATERS

First, I'd like to show our volume growth. The 'overall session' and 'order volume', trended by quarter for the life of the business?

The output table contains the no. of sessions and orders per quarter over a year from the starting of operation until today.

	yr	quater	sessions	orders
►	2012	1	1879	60
	2012	2	11433	347
	2012	3	16892	684
	2012	4	32266	1495
	2013	1	19833	1273
	2013	2	24745	1718
	2013	3	27663	1840
	2013	4	40540	2616
	2014	1	46779	3069
	2014	2	53129	3848
	2014	3	57141	4035
	2014	4	76373	5908
	2015	1	64198	5420

Table 1: Quarterly Volumes of Sessions and orders

Over the years there is a consistent increase in traffic which is clearly evident from the increase in sessions and those sessions proved to have good impact on the no. of orders placed as the no. of orders have also increased over the years.

There is also a quarterly trend. Q4 seems to witness the most no. of sessions and orders every year which clearly indicates a seasonality. This may be due to 'Christmas eve' and holidays over the last few weeks of the year.

2014 proved to be the most successful year with maximum no. of sessions and orders. 2015 have started with extremely well performance since the no. of orders is the maximum till date.

Hence, we can assume that 2015 will have an excellent performance & hence this would be the perfect time for the investors to grow their funds.

PERFORMANCE IMPROVEMENT

Showcase of company's efficient improvement. Quarterly figures for 'session-to-order conversion rate', 'revenue per order', 'revenue per session'.

The output of the table will contain the same methodology of time series analysis with new Factors which will be introduced with the existing features. We will introduce:

'session order-conv rate'- this will give the conversion rate from sessions to orders which is expressed in percentage.

'revenue per order'- this will give the average revenue achieved through per orders and can give an idea of estimated order revenue in future.

'revenue per session'- this gives the idea of cost associated with every session which can help the marketing team to decide a threshold of spend when associated with paid marketing campaigns to increase the session volume.

	yr	quater	sessions_to_order_conv_rate	revenue_per_order	revenue_per_session
▶	2012	1	0.0319	49.990000	1.596275
	2012	2	0.0304	49.990000	1.517233
	2012	3	0.0405	49.990000	2.024222
	2012	4	0.0463	49.990000	2.316217
	2013	1	0.0642	52.142396	3.346809
	2013	2	0.0694	51.538312	3.578211
	2013	3	0.0665	51.734533	3.441114
	2013	4	0.0645	54.715688	3.530741
	2014	1	0.0656	62.160684	4.078136
	2014	2	0.0724	64.374207	4.662462
	2014	3	0.0706	64.494949	4.554298
	2014	4	0.0774	63.793497	4.934885
	2015	1	0.0844	62.799917	5.301965

Table 2: Performance metrics

Observations from Performance Trend

- 'Conversion rate' has consistently increased over the years every quarter which says that the company's is consistently expanding its business and trying to utilize more leads for bringing revenue.
- 'revenue per order' has almost increased by 13% since operation in just 25 months which is again a significant factor in growth of the company.
- 'revenue per session' has almost increased by 5 times since its inception which is the most important factor. This means the traffic which are generated by different marketing campaigns are going into right direction by not only generating leads but also bringing revenue from the generated traffic.
- All these factors contribute to the efficient performance improvement which can impress the investors.

GROWTH OF SPECIFIC CHANNELS

Quarterly view of orders from Gsearch nonbrand, Bsearch non brand, brand search overall, organic search & direct type in

This time series analysis will demonstrate the session from different marketing campaigns and the effectiveness of the optimization method obtained.

	yr	quater	gsearch_nonbrand_orders	bsearch_nonbrand_orders	brand_orders	organic_search_orders	direct_type_in_orders
►	2012	1	60	0	0	0	0
	2012	2	291	0	20	15	21
	2012	3	482	82	48	40	32
	2012	4	913	311	88	94	89
	2013	1	766	183	108	125	91
	2013	2	1114	237	114	134	119
	2013	3	1132	245	153	167	143
	2013	4	1657	291	248	223	197
	2014	1	1667	344	354	338	311
	2014	2	2208	427	410	436	367
	2014	3	2259	434	432	445	402
	2014	4	3248	683	615	605	532
	2015	1	3025	581	622	640	552

Table 3: Growth of Specific Channels

Observations from channel view over the years

- Each of the marketing channels have performed tremendously over the years and geared up the number of orders which indicated more revenue.
- Initially the organic_search, direct_type_in, and brand orders were just 56 overall which was almost like 20% of the paid campaigns whereas after optimizing channels it has witnessed significant growth and currently resulted in 50% of the paid campaigns.
- This also means there is less dependency from the paid campaigns as the organic & direct_type in orders have grown exponentially generating more margin without much investment.

Hence, Investors can now rely on the company to generate revenue without much investment which is again a positive factor for rapid growth of the company.

CONVERSION RATE TREND QUARTERLY BY CHANNELS

The `Conversion_rate` has increased simultaneously. Hence, we need to understand the impact of the optimization methods or improvements of the different marketing channels

	yr	quater	gsearch_nonbrand_cvr	bsearch_nonbrand_cvr	brand_cvr	organic_cvr	direct_type_in_cvr
►	2012	1	0.0324	NULL	0.0000	0.0000	0.0000
	2012	2	0.0284	NULL	0.0526	0.0359	0.0536
	2012	3	0.0384	0.0408	0.0602	0.0498	0.0443
	2012	4	0.0436	0.0497	0.0531	0.0539	0.0537
	2013	1	0.0612	0.0693	0.0703	0.0753	0.0614
	2013	2	0.0685	0.0690	0.0679	0.0760	0.0735
	2013	3	0.0639	0.0697	0.0703	0.0734	0.0719
	2013	4	0.0629	0.0601	0.0801	0.0694	0.0647
	2014	1	0.0693	0.0704	0.0839	0.0756	0.0765
	2014	2	0.0702	0.0695	0.0804	0.0797	0.0738
	2014	3	0.0703	0.0698	0.0756	0.0733	0.0702
	2014	4	0.0782	0.0841	0.0812	0.0784	0.0748
	2015	1	0.0861	0.0850	0.0852	0.0821	0.0775

Table 4: Conversion_rate of different channels

Observations of Conversion_rate trend by Channels

- The `gsearch_nonbrand` conversion_rate has increased from 3% to over 8% over the years which is excellent for the growth of the company. This means we are generating more revenue for same traffic.
- Similar story is observed for `bsearch_nonbrand` conversion_rate which has also witnessed increase up to 8%
- The `organic_search` and the `direct_type_in` has also seen increase in conversion ratio which means now the company is generating revenue more without investment.

These factors are definitely good for the investors as the company has reached certain stability where they can generate revenue with much less investment in marketing campaigns.

MONTHLY TREND FOR REVENUE AND MARGIN BY PRODUCTS

Since the company's operation from selling a single product, it has now a multiple product. Here we are going to analyze the revenue and margin by product to identify any seasonality pattern.

	yr	months	fuzzy_rev	fuzzy_marg	bear_rev	bear_marg	panda_rev	panda_marg	minibear_rev	minibear_marg	total_rev	total_margin
	2012	3	2999.40	1830.00	NULL	NULL	NULL	NULL	NULL	NULL	2999.40	1830.00
	2012	4	4949.01	3019.50	NULL	NULL	NULL	NULL	NULL	NULL	4949.01	3019.50
	2012	5	5398.92	3294.00	NULL	NULL	NULL	NULL	NULL	NULL	5398.92	3294.00
	2012	6	6998.60	4270.00	NULL	NULL	NULL	NULL	NULL	NULL	6998.60	4270.00
	2012	7	8448.31	5154.50	NULL	NULL	NULL	NULL	NULL	NULL	8448.31	5154.50
	2012	8	11397.72	6954.00	NULL	NULL	NULL	NULL	NULL	NULL	11397.72	6954.00
	2012	9	14347.13	8753.50	NULL	NULL	NULL	NULL	NULL	NULL	14347.13	8753.50
	2012	10	18546.29	11315.50	NULL	NULL	NULL	NULL	NULL	NULL	18546.29	11315.50
	2012	11	30893.82	18849.00	NULL	NULL	NULL	NULL	NULL	NULL	30893.82	18849.00
	2012	12	25294.94	15433.00	NULL	NULL	NULL	NULL	NULL	NULL	25294.94	15433.00
	2013	1	17146.57	10461.50	2819.53	1762.50	NULL	NULL	NULL	NULL	19966.10	12224.00
	2013	2	16796.64	10248.00	9718.38	6075.00	NULL	NULL	NULL	NULL	26515.02	16323.00
	2013	3	15996.80	9760.00	3899.35	2437.50	NULL	NULL	NULL	NULL	19896.15	12197.50
	2013	4	22945.41	13999.50	5639.06	3525.00	NULL	NULL	NULL	NULL	28584.47	17524.50
	2013	5	24445.11	14914.50	4919.18	3075.00	NULL	NULL	NULL	NULL	29364.29	17989.50
	2013	6	25144.97	15341.50	5399.10	3375.00	NULL	NULL	NULL	NULL	30544.07	18716.50
	2013	7	25444.91	15524.50	5699.05	3562.50	NULL	NULL	NULL	NULL	31143.96	19087.00
	2013	8	25494.90	15555.00	5879.02	3675.00	NULL	NULL	NULL	NULL	31373.92	19230.00
	2013	9	26844.63	16378.50	5879.02	3675.00	NULL	NULL	NULL	NULL	32723.65	20053.50
	2013	10	30143.97	18391.50	8098.65	5062.50	NULL	NULL	NULL	NULL	38242.62	23454.00
▶	2013	11	36192.76	22082.00	10438.26	6525.00	NULL	NULL	NULL	NULL	46631.02	28607.00
	2013	12	40891.82	24949.00	10978.17	6862.50	6392.61	4378.50	NULL	NULL	58262.60	36190.00
	2014	1	36392.72	22204.00	10978.17	6862.50	9198.00	6300.00	NULL	NULL	56568.89	35366.50
	2014	2	29194.16	17812.00	21056.49	13162.50	9703.89	6646.50	6057.98	4141.00	66012.52	41762.00
	2014	3	39242.15	23942.50	11578.07	7237.50	11221.56	7686.00	6147.95	4202.50	68189.73	43068.50
	2014	4	45840.83	27968.50	12837.86	8025.00	12279.33	8410.50	7767.41	5309.50	78725.43	49713.50
	2014	5	51489.70	31415.00	14757.54	9225.00	13751.01	9418.50	8937.02	6109.00	88935.27	56167.50
	2014	6	44641.07	27236.50	14697.55	9187.50	13245.12	9072.00	7467.51	5104.50	80051.25	50600.50
	2014	7	48040.39	29310.50	14637.56	9150.00	12693.24	8694.00	7917.36	5412.00	83288.55	52566.50
	2014	8	47890.42	29219.00	14217.63	8887.50	13521.06	9261.00	9086.97	6211.50	84716.08	53579.00
	2014	9	52789.44	32208.00	15057.49	9412.50	14578.83	9985.50	9806.73	6703.50	92232.49	58309.50
	2014	10	58638.27	35776.50	17037.16	10650.00	16924.32	11592.00	11306.23	7728.50	103905.98	65747.00
	2014	11	72535.49	44255.50	22616.23	14137.50	19545.75	13387.50	13465.51	9204.50	128162.98	80985.00
	2014	12	79184.16	48312.00	23216.13	14512.50	24788.61	16978.50	17634.12	12054.00	144823.02	91857.00
	2015	1	69586.08	42456.00	23636.06	14775.00	20695.50	14175.00	18293.90	12505.00	132211.54	83911.00
	2015	2	55638.87	33946.50	38633.56	24150.00	18625.95	12757.50	16314.56	11152.00	129212.94	82006.00
	2015	3	43191.36	26352.00	13377.77	8362.50	12095.37	8284.50	10286.57	7031.50	78951.07	50030.50

Table 5: Monthly Trend for Revenue & Margin

Monthly Trend by Products

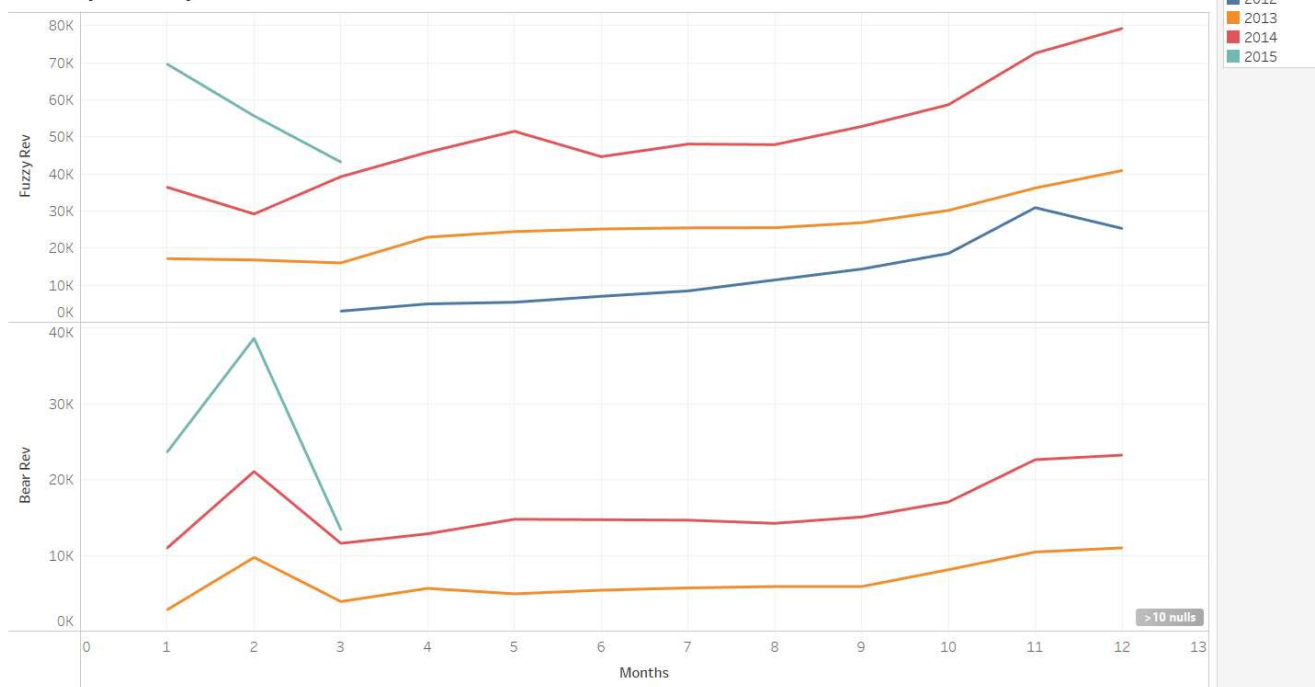


Fig 1: Monthly Trend for Revenue & Margin for 'The original Mr. Fuzzy' & 'The Forever Love Bear'

Observations from the Monthly trend of Revenue & margin by products

- Product 'The original Mr. Fuzzy' is the very 1st product. 'The Forever Love bear' is the 2nd product which is introduced in Jan 2013, 'The Birthday Sugar Panda' is the 3rd product which is introduced in the month of December of same year 2013, finally the company introduced 'The Hudson River Mini bear' in the month of February of 2014.
- Seasonality:
 - The product 'The original Mr. Fuzzy' has a seasonality pattern of increase in revenue over the month and most of the revenue was generated in the month of **November**.
 - The product 'The Forever Love bear' has seasonality pattern of boost in sale for the month of February. This product may be targeted to the couples as a gift which may be due to Valentine's day in the month of February.
- We do not have much data to identify the trend of the other 2 products as those are very new and does not seems to have much significant information from the captured data.

This tells us that each of the product introduced has a good impact on the revenue and launching of new product did not interfere in the revenue generation of previous product which is a very positive note for the investors.

IMPACT OF INTRODUCING NEW PRODUCT

We will be deep driving here to understand the impact of the new product which are introduced. So, we are going to pull the monthly sessions to the product page, and show how the % of those sessions clicking through another page has changed over time, along with a view of how conversion from products to placing an order has improved.

	yr	months	sessions_to_product	clicked_to_next_page	click_through_rate	orders	product_to_order_rate
►	2012	3	743	530	0.7133	60	0.0808
	2012	4	1447	1029	0.7111	99	0.0684
	2012	5	1584	1135	0.7165	108	0.0682
	2012	6	1752	1247	0.7118	140	0.0799
	2012	7	2018	1438	0.7126	169	0.0837
	2012	8	3012	2198	0.7297	228	0.0757
	2012	9	3126	2258	0.7223	287	0.0918
	2012	10	4030	2948	0.7315	371	0.0921
	2012	11	6743	4849	0.7191	618	0.0917
	2012	12	5013	3620	0.7221	506	0.1009
	2013	1	3380	2595	0.7678	391	0.1157
	2013	2	3685	2803	0.7607	497	0.1349
	2013	3	3371	2576	0.7642	385	0.1142
	2013	4	4362	3356	0.7694	553	0.1268
	2013	5	4684	3609	0.7705	571	0.1219
	2013	6	4600	3536	0.7687	594	0.1291
	2013	7	5020	3890	0.7749	603	0.1201
	2013	8	5226	3951	0.7560	608	0.1163
	2013	9	5399	4072	0.7542	629	0.1165
	2013	10	6038	4564	0.7559	708	0.1173
	2013	11	7886	5900	0.7482	861	0.1092
	2013	12	8840	7026	0.7948	1047	0.1184
	2014	1	7790	6387	0.8199	983	0.1262
	2014	2	7960	6485	0.8147	1021	0.1283
	2014	3	8110	6669	0.8223	1065	0.1313
	2014	4	9744	7958	0.8167	1241	0.1274
	2014	5	10261	8465	0.8250	1368	0.1333
	2014	6	10011	8260	0.8251	1239	0.1238
	2014	7	10837	8958	0.8266	1287	0.1188
	2014	8	10768	8980	0.8340	1324	0.1230
	2014	9	11128	9156	0.8228	1424	0.1280
	2014	10	12335	10235	0.8298	1609	0.1304
	2014	11	14476	12020	0.8303	1985	0.1371
	2014	12	17240	14609	0.8474	2314	0.1342
	2015	1	15217	12992	0.8538	2099	0.1379
	2015	2	14373	12187	0.8479	2067	0.1438
	2015	3	9022	7723	0.8560	1254	0.1390

Table 6: Performance of Product Page to orders

Observations:

- The most important observation from the table is the 'clickthrough rate'. It has increased consistently from 71.3% to 85.6% over the time period. There is a sudden boom in 'clickthrough rate' from 2013 which may be due to launch of new product.
- Same pattern is noticed toward the end of the year 2013. There is another drastic increment of the 'clickthrough rate' from the month of December 2013 which is the result of another product launch by the company.
- The two products 'The Forever Love bear' & 'The Birthday Sugar Panda' have good impact of increasing the clickthrough rate.
- Similarly, the order rate from the product page has also significantly increased 6-7% in 2012 to 14% in 2015 which is almost double. This increase in order is due to the contribution of the new products which made the visitors to move to order page and order from the product page.

Hence the introduction of new products has positive impact on the growth of the company which is again an advantage for the investor to rely on the product of the company.

PERFORMANCE OF ALL PRODUCT AFTER 4TH PRODUCT WAS MADE AVAILABLE AS PRIMARY PRODUCT

The 4th Product was made available as primary product from cross selling product on 05 December 2014. Hence this analysis will give the performance of all the products each cross sell from one another.

	primary_product_id	orders	xsell_p1	xsell_p2	xsell_p3	xsell_p4	p1_xsell_rt	p2_xsell_rt	p3_xsell_rt	p4_xsell_rt
▶	1	4467	0	238	553	933	0.0000	0.0533	0.1238	0.2089
	2	1277	25	0	40	260	0.0196	0.0000	0.0313	0.2036
	3	929	84	40	0	208	0.0904	0.0431	0.0000	0.2239
	4	581	16	9	22	0	0.0275	0.0155	0.0379	0.0000

Table 6: Product Cross-Sell Performance

Observations:

- Product 1 is the most sold primary product being the oldest in the store. Now if we look into the cross selling, the product 4 really does well with product.
- Furthermore, Product 4 have performed extremely well as a cross selling product with all other product when compared to its performance after making it Primary product.
- More specifically, product 4 has performed as it has 22% of cross selling with product 3.
- This may be because Product 4 has lower order value and hence it became the major contributor in increasing the average order value with revenue and margin.

Hence the most rated cross selling product is the Product 4 which has extremely well performance with most of the Primary Product.

RECOMMENDATIONS & OPPORTUNITIES

In addition to telling the investors about what we've already achieved, we still have plenty of resources in the tank. Based on the analysis here are some recommendations and opportunities for us going forward.



Cross Sell Products

We can definitely add some products similar to product 4 (*'The Hudson River Mini bear'*) in order to increase the average order value thus giving us a rise in revenue & margin

Product Launch

We can launch new product from the influence of seasonality because this can gain audience attention & generate revenue during the peak seasons

Landing Page

Since there is a seasonal pattern of sessions and orders which also influences the clickthrough rate. We can try an optimizing method such as introducing new lander page including during Q1. Since Q1 has lower sessions and orders, new page can grab audience attention and can influence the order_rate

Marketing

Various Optimizing method on marketing channels can be explored to experience any changes.