



Maven Fuzzy Factory

Insights on Business Health, Financial Condition, Marketing Actions & Experiment Test

Prepared by: Ichfan Kurniawan
2023

Context of Work

Maven Fuzzy Factory is an e-commerce which sells toys full online. This company has been in the online toys market for 3 years, from March 2012 until now March 2015.

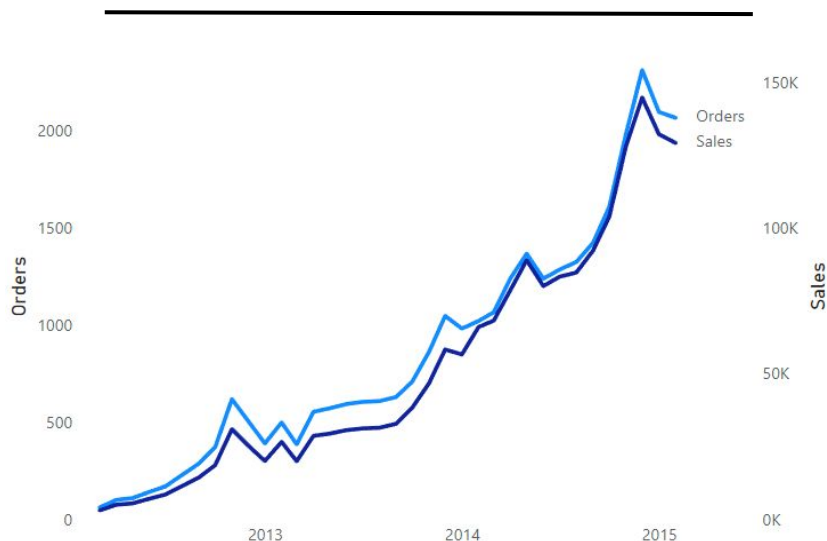
The dynamic nature of the online toys market, e.g. competitors, might influence the performance of the company. That makes it a must to evaluate the overall company performance and health based on significant metrics.

To improve the outcome, the company tried to improve the production process and the marketing process. Therefore, the changes should be evaluated to see if it is significantly improved the final outcome we are interested in.



The Maven Factory is expected to grow until the end year, dominate by new customers

Growth in sales, orders, and customers



The # of sales from March 2012 until now March 2015 positively grow from 3K USD to 130K USD. The daily sales on average is 1.77K USD growing from 170 USD/day to 4.8K USD/Day.

The percentage of net profit on average is 62% from sales.

The # of orders from March 2012 until now March 2015 positively grow from 60 orders to 2068 orders. The number of orders daily on average is 29.6 orders/day, growing from 3 orders/day to 77 orders/day.

The sales per order on average is 56.1 USD/order

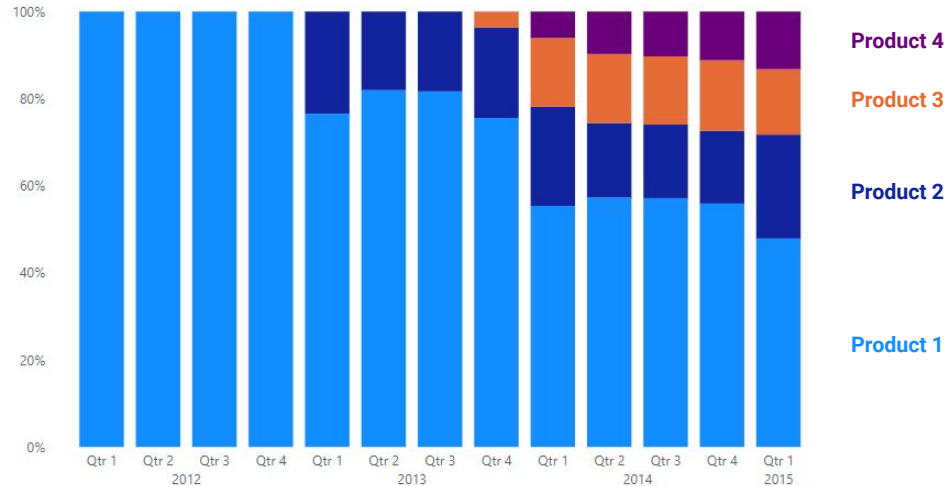
The # of users from March 2012 until now March 2015 positively grow from 60 users to 2053 users

The sales per user on average is 56.3 USD/user.

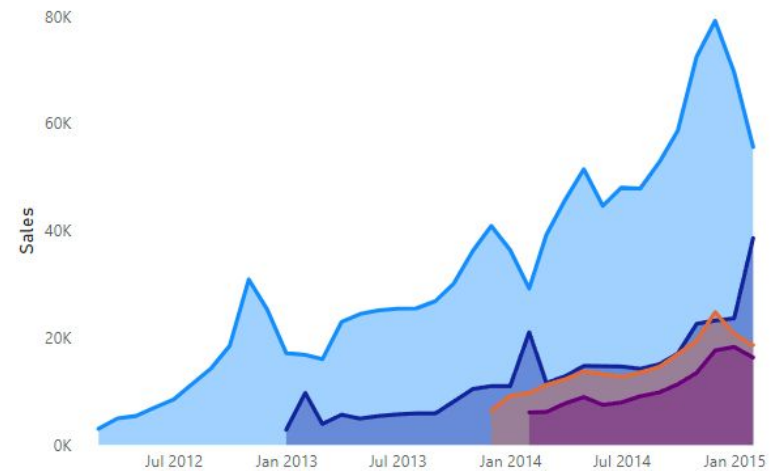


The newly launched products successfully target new market segments without disturbing existing products' market and continually grow

Sales share per product type

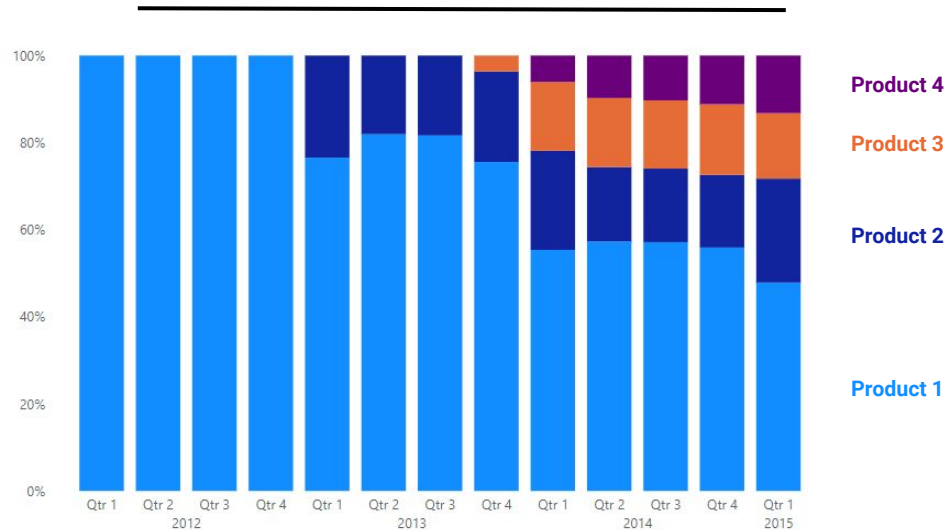


Sales growth per product type



The newly launched products successfully target new market segments without disturbing existing products' market and continually grow (cont)

Sales share per product type



Almost every year, the store makes a new product toy.

Up to now, there are 4 product toys in the store.

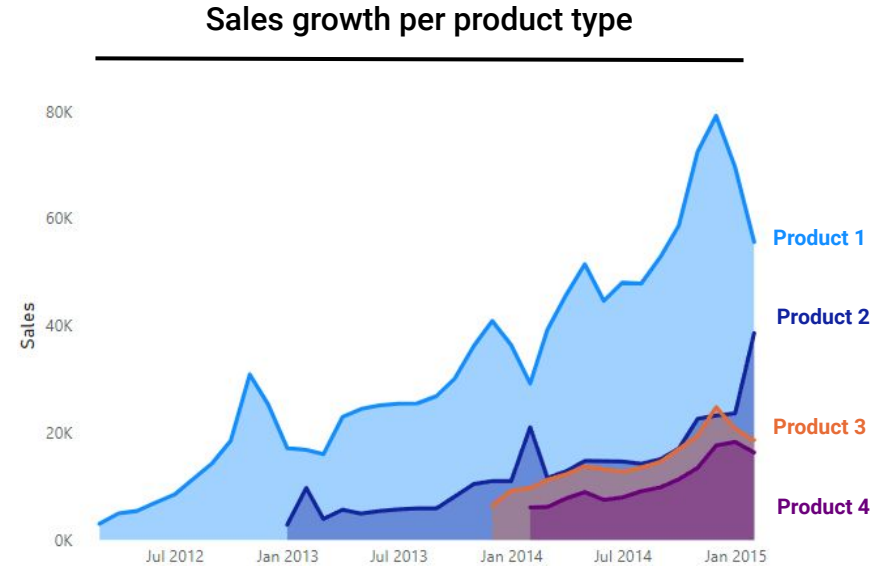
After the launch of new products, the new products could take a new market and give increase sales without further taking the previous products' share.



The newly launched products successfully target new market segments without disturbing existing products' market and continually grow (cont)

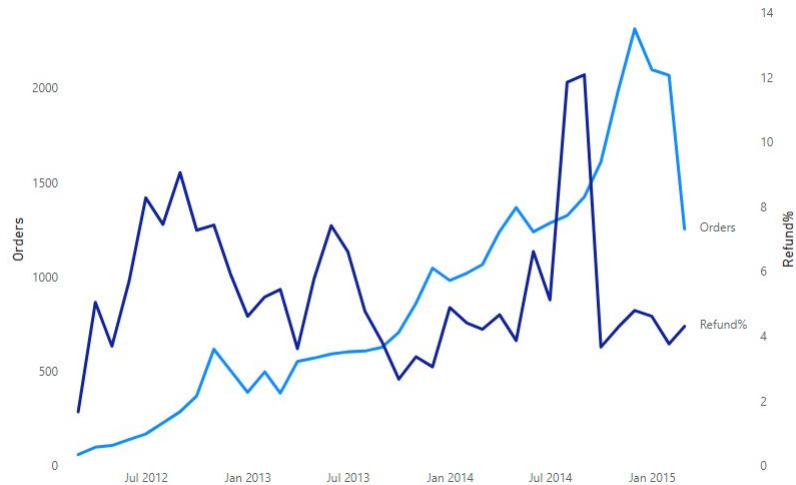
From March 2012 until now March 2015, "The Original Mr. Fuzzy" is the first product launched and also dominates the sales share by 62.5% on average.

Even, the sales share(%) from the product is decreased, the sales are always increasing in number.

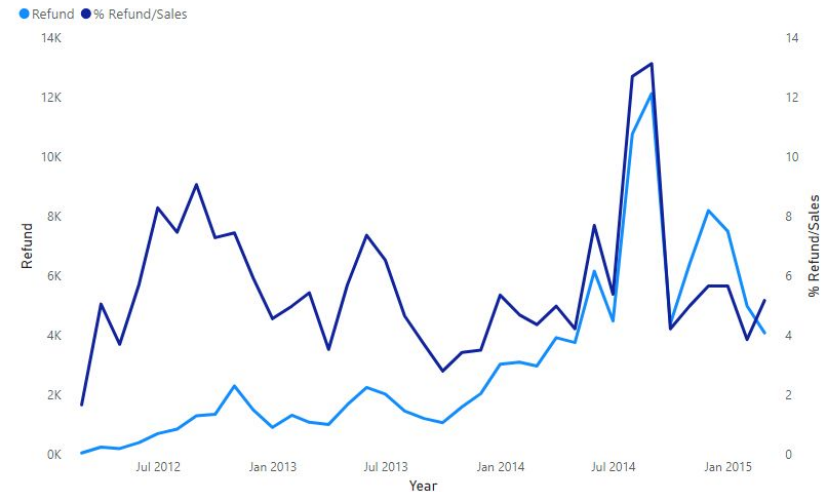


The % of refunds/orders occurred in the range of 1-14%/month. Further, analyzing the root causes of order refunds to reduce the large variability of % refunds/orders

The variability of refunds/orders



The % of refund amount over sales



The % of refunds/orders occurred in the range of 1-14%/month. Further, analyzing the root causes of order refunds to reduce the large variability of % refunds/orders (cont)

The variability of refunds/orders



The percentage of refunds on average is 5.5% refund/order.

The maximum percentage of refunds that had been occurred is 14% refund/order.

The higher numbers of refunds occurred repeatedly in June - October period.

The number of refunds is not strongly correlated with the number of orders.



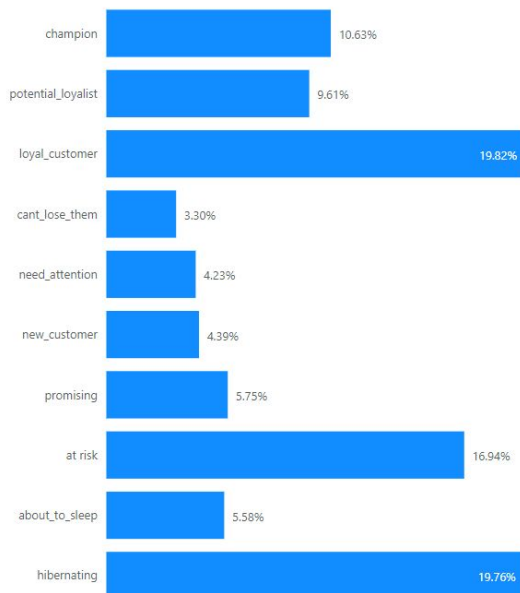
The % of refunds/orders occurred in the range of 1-14%/month. Further, analyzing the root causes of order refunds to reduce the large variability of % refunds/orders (cont)

Products 1 & 2, i.e. The Original Mr. Fuzzy & The Forever Love Bear respectively, have the highest percentage of refunds compared to the other two products.



Buying behavior - The user retention is very low, therefore focusing on the monetary value of user based on RFM for marketing actions

The distribution of customer segments (RFM)



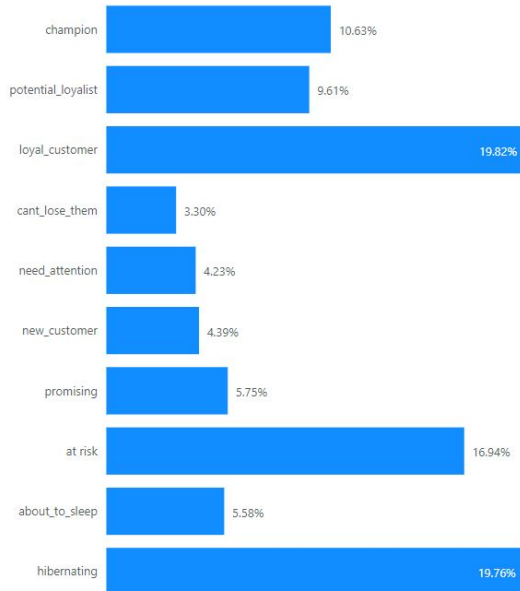
The retention rate of users/month (%)

	1	2	3	4
1	100.00	1.02	0.61	0.41
2	100.00	0.79	0.89	0.20
3	100.00	1.05	0.38	0.19
4	100.00	1.81	0.41	
5	100.00	0.75	0.52	0.22
6	100.00	0.90	0.41	0.16
7	100.00	0.56	0.95	0.08
8	100.00	1.23	0.54	0.08
9	100.00	1.08	0.58	0.29
10	100.00	1.14	0.63	
11	100.00	1.08		
12	100.00			



Buying behavior - The user retention is very low, therefore focusing on the monetary value of user based on RFM for marketing actions (cont)

The distribution of customer segments (RFM)



The RFM analysis shows that only the Recency and Monetary variables matter. This means that the frequency of users buying the product is very rare.

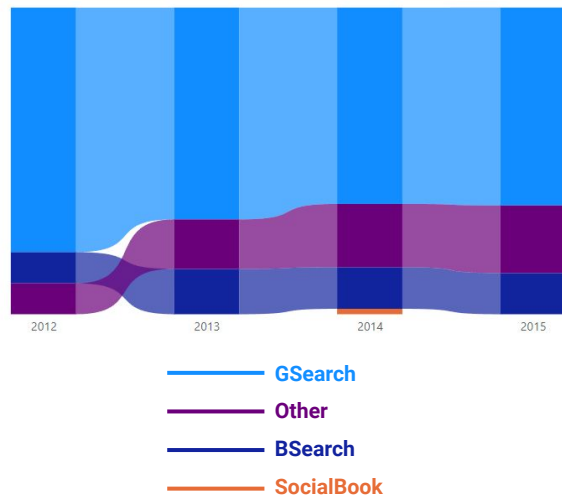
Based on the monetary value given and the portion of customer segments, then focusing on the (1) Potential Loyalist, (2) Champion, and (3) Loyal Customer is the marketing team's priority.

On a monthly and yearly basis, the retention rate of users is so low, which means that the customers only buy once for long period.

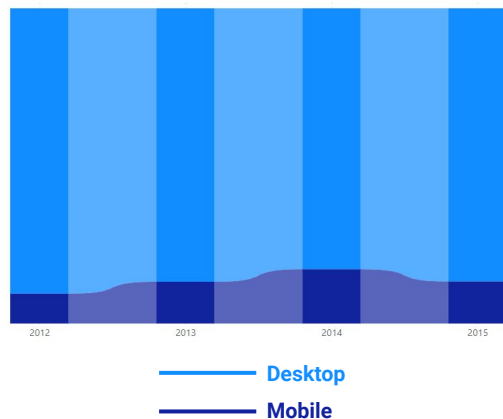


Marketing actions focusing on GSearch source & channel, nonbrand campaign, and targeting customers who use desktop device type should be the top priority

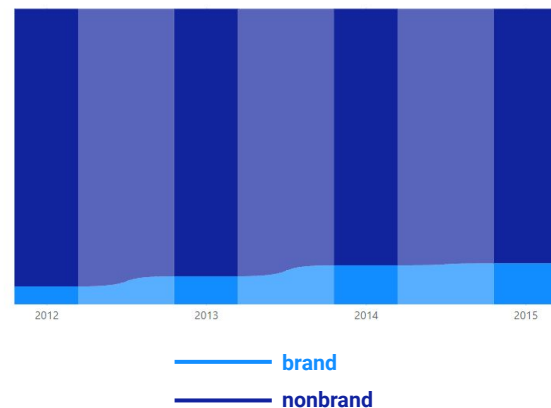
%Orders coming from GSearch source



%Orders coming desktop device type



%Orders coming from nonbrand campaign



Marketing actions focusing on GSearch source & channel, nonbrand campaign, and targeting customers who use desktop device type should be the top priority (cont)

1

Based on the number of sessions and orders, **the gsearch is the main drive and dominates >60% of sessions and orders**. However, there are no big differences in the conversion rate among marketing sources. The same thing happened in the marketing channel, the gsearch paid session dominates >63% of sessions.

2

By focusing on the gsearch marketing source, based on the number of sessions and orders, **the nonbrand campaign is >85% of sessions and orders** coming from. However, there are no big differences in the conversion rate between them.

3

By focusing on the gsearch marketing source and nonbrand campaign, based on the number of sessions and orders, **the desktop device is >85% and >69% of orders and sessions** coming from respectively. In addition, the desktop device is also better in the conversion rate by more than >10% rate.



Landing page type 5 and billing page type 2 successfully push the metrics, further to be implemented widely

Lander 5 improve daily sessions, orders, & CVR

Out of 5 experimental tests to improve the performance of the landing page based on the daily session, daily order, and CVR, **the best landing page is the lander-5 page.**

The lander-5 page could improve

daily session by 21.4% (p-value =0.8%),

daily order by 57.1% (p-value =5.2e-08),

CVR by 29.6% (p-value=7.6e-28)

Billing 2 improve daily session, orders, sales, CVR

Based on the daily session, daily order, daily sales, and CVR, **the best billing page is the billing-2 page.**

The billing-2 page could improve

the daily session by (0.36)% (p-value = 98%),

daily order by 36.5%(p-value = 3.7%),

daily sales by 36.5%(p-value = 3.7%),

CVR by 37%(p-value=3e-13)





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Acknowledge & Scripts

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Thanks for Maven Analytics for providing the datasets

Scripts

If you find out my work is useful, check out the SQL scripts that contains the data exploration and insights finding and also check out the Python notebook that contains the experiment testing

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