Fernando Araujo

Executive Presentation
Sell Boardgames

CONTEXT

Context

After completing your data organization and KPI construction, create a presentation to communicate to the executive level. The goal is to see what opportunities I uncover in the data and any suggested strategies I can come up with. At Sell Boardgames, we really believe in being curious. I might end up having more questions after reviewing the dataset that I would like to explore if I had more data. One of the goals is to include any of these questions in my presentation and what would be my strategy for digging deeper and finding the answers.

ANALYSIS

Orders Month over Month

The first analysis I did was a proposal for the exercise of analyzing the month against the previous month and observing the behavior.

Based on this analysis, the best scenario is continuous growth with a few months better due to special dates or new product launches.

When analyzing the data sent, we see a lot of oscillation between the months, with 5 months exceeding 40% of the difference in relation to the previous month, demonstrating these months as outliers with many sales.

The important point is to observe the drop in sales in July/August with recovery in September, before the big movement in October/November, and the movement in the following months after November.

Month over Month

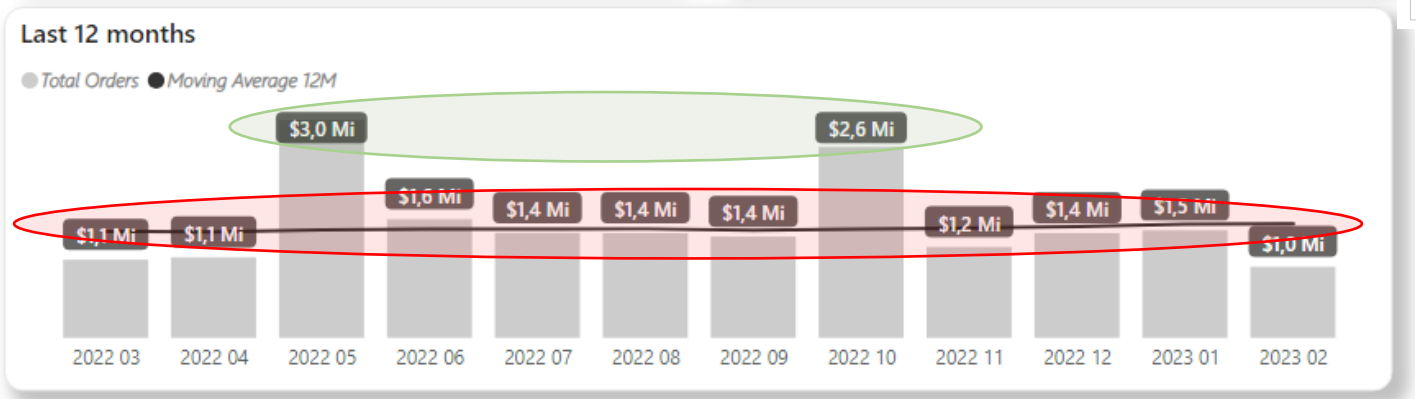
Month	Last Month	Current Month	MoM
2021 02	$0,00	$317.828,01	0,00%
2021 03	$317.828,01	$1.230.785,24	287,25%
2021 04	$1.230.785,24	$1.177.766,41	-4,31%
2021 05	$1.177.766,41	$2.636.363,93	123,84%
2021 06	$2.636.363,93	$1.458.375,32	-44,68%
2021 07	$1.458.375,32	$1.426.907,19	-2,16%
2021 08	$1.426.907,19	$1.405.301,41	-1,51%
2021 09	$1.405.301,41	$1.587.696,57	12,98%
2021 10	$1.587.696,57	$2.399.967,55	51,16%
2021 11	$2.399.967,55	$1.088.363,90	-54,65%
2021 12	$1.088.363,90	$1.186.829,01	9,05%
2022 01	$1.186.829,01	$1.057.423,11	-10,90%
2022 02	$1.057.423,11	$872.003,30	-17,54%
2022 03	$872.003,30	$1.060.529,42	21,62%
2022 04	$1.060.529,42	$1.092.579,17	3,02%
2022 05	$1.092.579,17	$2.958.476,83	170,78%
2022 06	$2.958.476,83	$1.611.236,03	-45,54%
2022 07	$1.611.236,03	$1.425.382,61	-11,53%
2022 08	$1.425.382,61	$1.421.682,58	-0,26%
2022 09	$1.421.682,58	$1.374.066,09	-3,35%

Orders Moving Average - 12 months

When we use the moving average as a reference, we can see two outliers out of the last 12 months. To see if they were outliers only within the same series, I contrasted them with the same month in the previous year. It is interesting to note that even though there was an increase compared to the previous year, it is not a large increase compared to previous months, indicating seasonality.

Did we have a product launch in those months? Did we carry out any major marketing actions with a specific date? How do we repeat this result more often?

Month	Year - 2020	Year - 2021	YoY - 2021	Year - 2022	YoY - 2022
January	$0,00	$1.518.071,71	0,00%	$1.524.177,89	0,40%
February	$0,00	$1.334.307,37	0,00%	$1.362.024,71	2,08%
March	$0,00	$1.753.039,10	0,00%	$1.476.137,11	-15,80%
April	$0,00	$2.530.517,34	0,00%	$2.719.030,52	7,45%
May	$0,00	$1.191.070,13	0,00%	$1.358.497,82	14,06%
June	$0,00	$1.156.039,38	0,00%	$1.401.754,32	21,25%
July	$0,00	$1.214.296,35	0,00%	$1.680.864,55	38,42%
August	$290.623,09	$1.015.237,64	249,33%	$1.233.691,71	21,52%
September	$1.256.877,37	$1.042.610,29	-17,05%	$0,00	-100,00%
October	$1.414.594,88	$1.224.508,02	-13,44%	$0,00	-100,00%
November	$2.465.751,53	$2.937.240,44	19,12%	$0,00	-100,00%
December	$1.866.572,25	$1.921.891,12	2,96%	$0,00	-100,00%



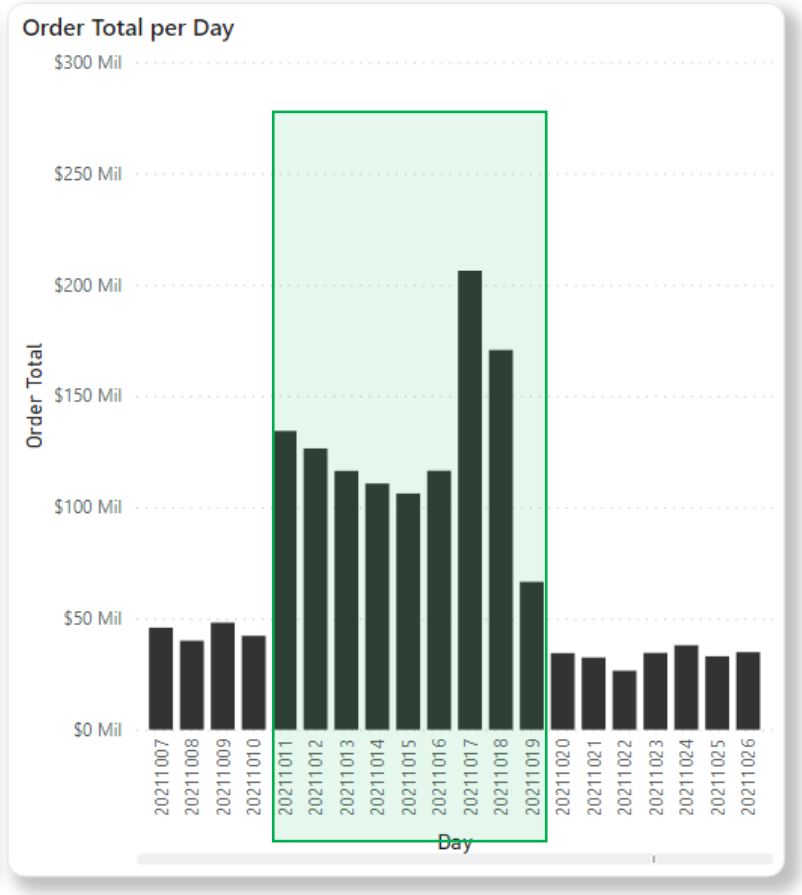
Orders Day by Day

To increase the accuracy of my analysis I changed the monthly analysis to a daily one.

Upon arriving in November, as expected, I realized that the large volume of sales was in the week of pré-Black Friday (17/Nov).

This is a very strong date for e-commerce, the other strong month is justified by Maybe4th (Star Wars Day) Week.

Two important dates for the company.

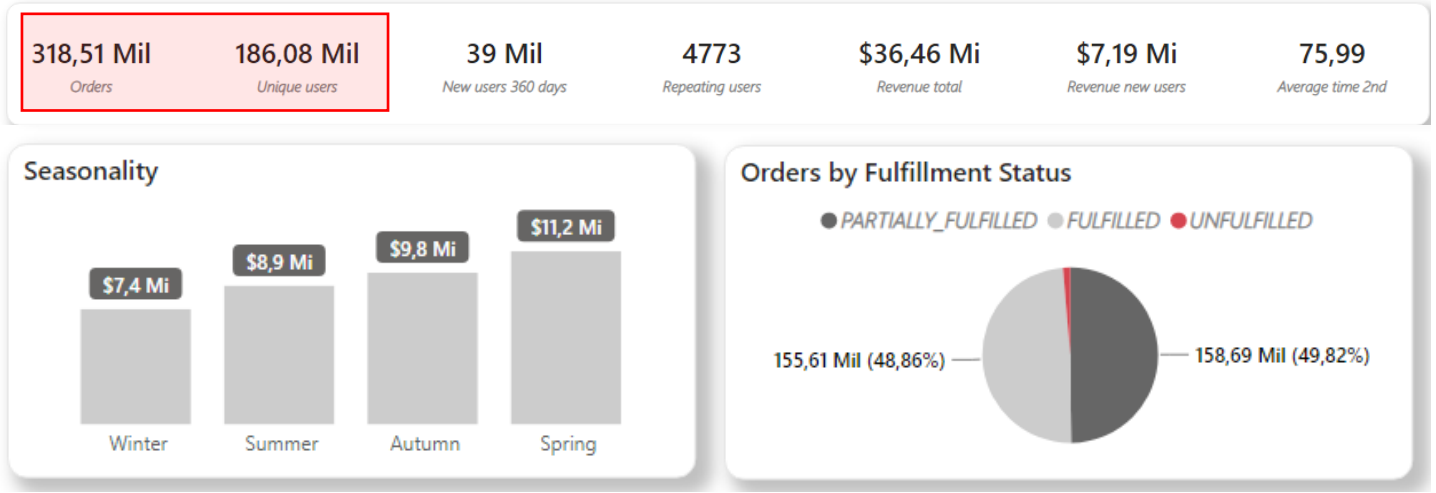


Big Numbers - Orders

Carrying out an analysis of the company's big sales numbers, we can observe a relatively small proportion between the number of orders and unique users, below 2 orders per user.

Using the breakdown by Season, we can see the impact mentioned in the previous slides, giving new evidence, by raising Autumn in relation to other seasons.

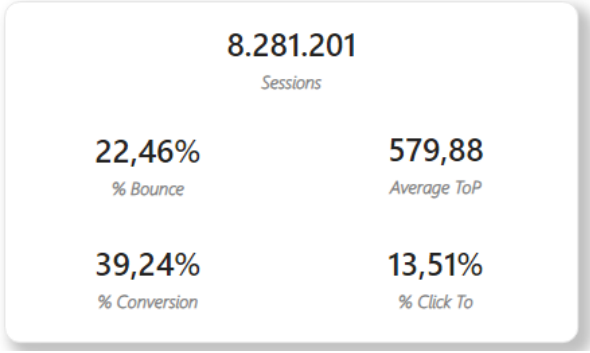
An important point is the low rate of unrealized sales.



Big Numbers – Google Analytics

Regarding Google Analytics, it is interesting to observe the top 10 among the most visited pages on the site and the distribution of indicators between them.

The % Bounce number seems quite high in this context, especially on the order-lookup page. This page is the most accessed on the site.



Top 10 Values - By Number of Sessions

Value	Sessions	% Total Sessions	% Bounce	Average ToP	% Conversion	% Click To
order-lookup	858.315	30,77%	66,07%	205,10	83,58%	0,09%
through-the-ages-a-new-story-of-civilization	634.310	22,74%	9,93%	23.388,11	27,10%	27,85%
gloomhaven	272.684	9,78%	12,77%	5.614,78	23,67%	12,53%
gaia-project	258.348	9,26%	18,55%	7.305,05	28,07%	15,03%
pandemic-legacy-season-1	227.959	8,17%	16,29%	4.347,99	27,39%	8,53%
spirit-island	226.989	8,14%	13,40%	19.648,07	25,92%	29,77%
spirit-island-2020	160.149	5,74%	12,37%	35.668,51	24,59%	0,00%
twilight-struggle	150.510	5,40%	14,70%	7.205,55	26,16%	11,59%

Trend Products - Sessions

When we analyze the trend of sessions in the company's 20 main products, we notice a downward trend in the group and the same very accentuated one in some items. It is possible to observe drops above 40% in the 5 items with more sessions in this period.

Did this fact occur due to changes in relation to the growth approach? Budget reduction? Changing platforms?

It would be interesting to analyze more deeply and talk with people responsible for other areas to understand this phenomenon.

Products	Trend Amount	Trend %
android-netrunner	-4038	-108%
azul	-1344	-67%
blood-rage	-357	-29%
brass-birmingham	1129	63%
caylus	-2278	-92%
eldritch-horror	-2357	-102%
gaia-project	-4582	-41%
gloomhaven	3814	48%
great-western-trail	-5540	-83%
mage-knight-board-game	-2930	-93%
pandemic-legacy-season-1	-7347	-68%
puerto-rico	1888	249%
scythe	-2329	-46%
star-wars-imperial-assault	-1016	-69%
terraforming-mars	-2355	-52%
the-castles-of-burgundy	-4686	-86%
trajan	-342	-27%
twilight-struggle	-2976	-48%
viticulture-essential-edition	8309	-386%
war-of-the-ring-second-edition	-1024	-20%
Trend - Top20	-23359	-32%

Rule Trend %	
>= 100%	
>= 20%	
>= -20%	
>= -100%	
< -100%	

Basic Statistics - Outliers

It may seem simple, but a table with all the basic statistics is usually the best way to start finding interesting numbers and then move on to other methodologies to improve the accuracy of the information.

In this case, the focus was on finding GOOD CUSTOMERS, that is, customers with a good volume of purchases and a good average ticket.

An important job is to understand this customer, and their profile and use the budget to bring more customers with this profile to the company.

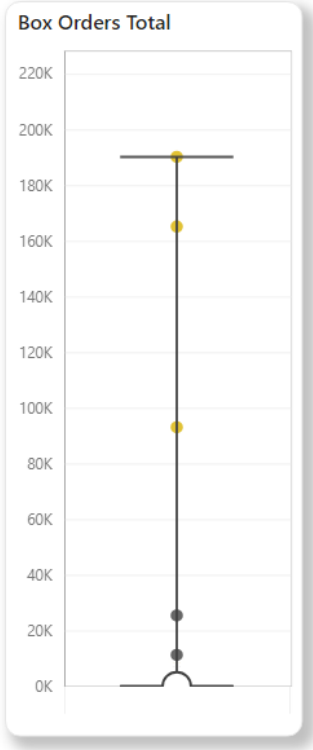
Customer	Total	Amount	AverageTicket	Smallest Purchase	Biggest Purchase	Median
7153750773955	$93.216,00	1	$93.216,00	$93.216,00	$93.216,00	$93.216,00
1005501948036	$190.349,05	6	$31.724,84	$0,00	$99.061,44	$2.945,89
6854766399683	$20.236,62	2	$10.118,31	$0,00	$20.236,62	$10.118,31
7222419722435	$6.243,43	1	$6.243,43	$6.243,43	$6.243,43	$6.243,43
6624295424195	$4.240,32	1	$4.240,32	$4.240,32	$4.240,32	$4.240,32
6439813484739	$3.722,88	1	$3.722,88	$3.722,88	$3.722,88	$3.722,88
6102158545091	$6.712,00	2	$3.356,00	$0,00	$6.712,00	$3.356,00
3439150436423	$165.343,48	55	$3.006,25	$168,43	$17.124,72	$1.961,78
1852256653383	$25.587,58	9	$2.843,06	$17,45	$8.618,75	$583,87
1003962708676	$4.530,72	2	$2.265,36	$1.324,32	$3.206,40	$2.265,36
6276605644995	$2.186,14	1	$2.186,14	$2.186,14	$2.186,14	$2.186,14
6563132838083	$1.648,56	1	$1.648,56	$1.648,56	$1.648,56	$1.648,56
1004928648004	$11.442,24	7	$1.634,61	$67,20	$2.073,60	$2.067,84
6875689062595	$1.620,51	1	$1.620,51	$1.620,51	$1.620,51	$1.620,51
5509664149699	$1.610,76	1	$1.610,76	$1.610,76	$1.610,76	$1.610,76
6775684960451	$1.501,96	1	$1.501,96	$1.501,96	$1.501,96	$1.501,96
6706795450563	$2.871,85	2	$1.435,93	$901,30	$1.970,55	$1.435,93
7177862320323	$1.429,53	1	$1.429,53	$1.429,53	$1.429,53	$1.429,53
4515889614919	$1.378,87	1	$1.378,87	$1.378,87	$1.378,87	$1.378,87
7154441294019	$1.344,34	1	$1.344,34	$1.344,34	$1.344,34	$1.344,34
3972147515463	$2.670,49	2	$1.335,25	$640,09	$2.030,40	$1.335,25
7141504094403	$1.252,24	1	$1.252,24	$1.252,24	$1.252,24	$1.252,24
7005861417155	$1.246,97	1	$1.246,97	$1.246,97	$1.246,97	$1.246,97
4461608210503	$1.228,26	1	$1.228,26	$1.228,26	$1.228,26	$1.228,26
1005395333956	$4.889,47	4	$1.222,37	$536,06	$1.761,12	$1.296,15
7189666304195	$1.221,55	1	$1.221,55	$1.221,55	$1.221,55	$1.221,55
6551626485955	$2.441,34	2	$1.220,67	$1.215,60	$1.225,74	$1.220,67
5517885051075	$1.214,05	1	$1.214,05	$1.214,05	$1.214,05	$1.214,05

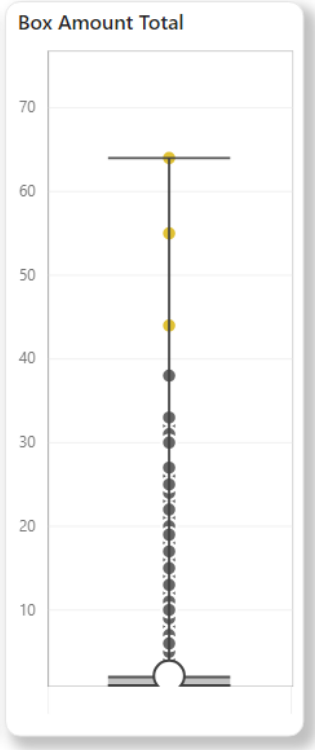
Quadrant Customers - Outliers

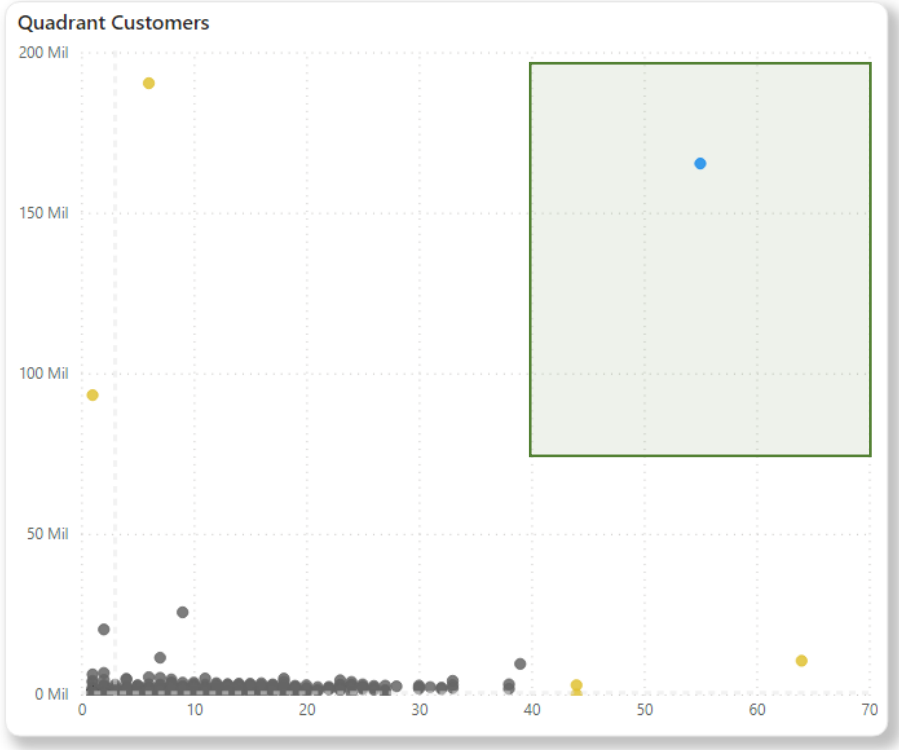
For the analysis of customer outliers, I used the number of purchases and the total. I first analyzed the two separate axes and then merged the two axes into a quadrant, finding a single customer with a high volume and quantity of purchases.

It is interesting to observe these outliers to understand the profiles. In general, POTV's products are products for the final consumer, and this seems incompatible with the outliers' consumption pattern.

Would they be sales to groups or companies? Are these recurring sales coming from a possible resale? What is the product mix of these outliers?







Quadrant Customers - Distribuition

By Total	Amount	%
>=500	14084	7,57%
<500	171992	92,43%
	186076	**100,00%**

By Amount	Amount	%
>= 3	28046	15,07%
<3	158030	84,93%
	186076	**100,00%**

By Amount		Total		
		<500	>=500	
Amount	>= 3	19561	8485	28046
	<3	152431	5599	158030
		171992	14084	**186076**

By %		Total		
		<500	>=500	
Amount	>= 3	10,51%	4,56%	15,07%
	<3	81,92%	3,01%	84,93%
		92,43%	7,57%	**100,00%**

When we analyze the distribution of customers within a quadrant, we can see that only 7.57% of them buy more than $500. And only 15.07% make at least 3 purchases.

One of the most important strategic points is to increasingly seek cross-selling and up-selling.

How to get more customers into the main sales quadrant? How is the after-sales contact ruler? I would like to do this analysis with more data.

Quadrant - Customers

When I tried to analyze the year-on-year evolution of customers within the quadrants, I was surprised that no customers made purchases in two different years.

This query displays the customer's quadrant for each year.

	CUSTOMER_ID	Y_2014	Y_2015	Y_2016	Y_2017	Y_2018	Y_2019	Y_2020	Y_2021	Y_2022
1	5179199914179	0	0	0	0	0	0	0	3	0
2	5639982481603	0	0	0	0	0	0	0	4	0
3	5426687705283	0	0	0	0	0	0	0	4	0
4	5922554216643	0	0	0	0	0	0	0	0	4
5	6140416295107	0	0	0	0	0	0	0	0	4
6	5220359700675	0	0	0	0	0	0	0	4	0
7	4480466878659	0	0	0	0	0	0	4	0	0
8	5858314879171	0	0	0	0	0	0	0	4	0
9	5376323354819	0	0	0	0	0	0	0	3	0
10	5071982297283	0	0	0	0	0	0	0	4	0
11	5637540774083	0	0	0	0	0	0	0	3	0
12	5458382028995	0	0	0	0	0	0	0	4	0
13	3065874939975	0	0	0	0	0	0	2	0	0
14	6150087377091	0	0	0	0	0	0	0	0	4
15	5745099276483	0	0	0	0	0	0	0	4	0
16	2551840112711	0	0	0	0	0	4	0	0	0
17	5097601564867	0	0	0	0	0	0	0	4	0
18	4619212816579	0	0	0	0	0	0	0	4	0
19	3018359210055	0	0	0	0	0	0	4	0	0

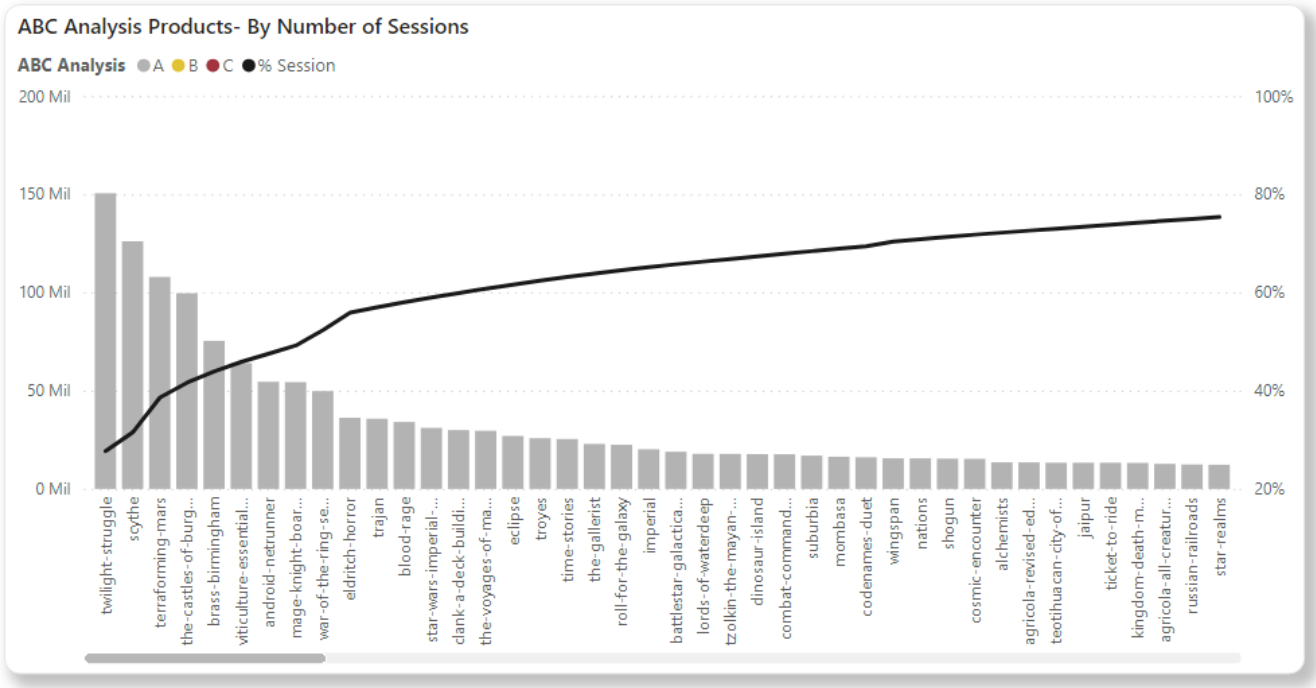
ABC Analysis – Products Sessions

I really appreciate the ABC analysis and its applicability to different types of items like customers or products.

In this case I constructed an analysis by the number of sessions. Interesting how only 66 products are responsible for 80% of the sessions, as well as 1292 products corresponding to only 5% of them.

This analysis allows us to direct our focus and budget to the products that bring the greatest impact to the business.

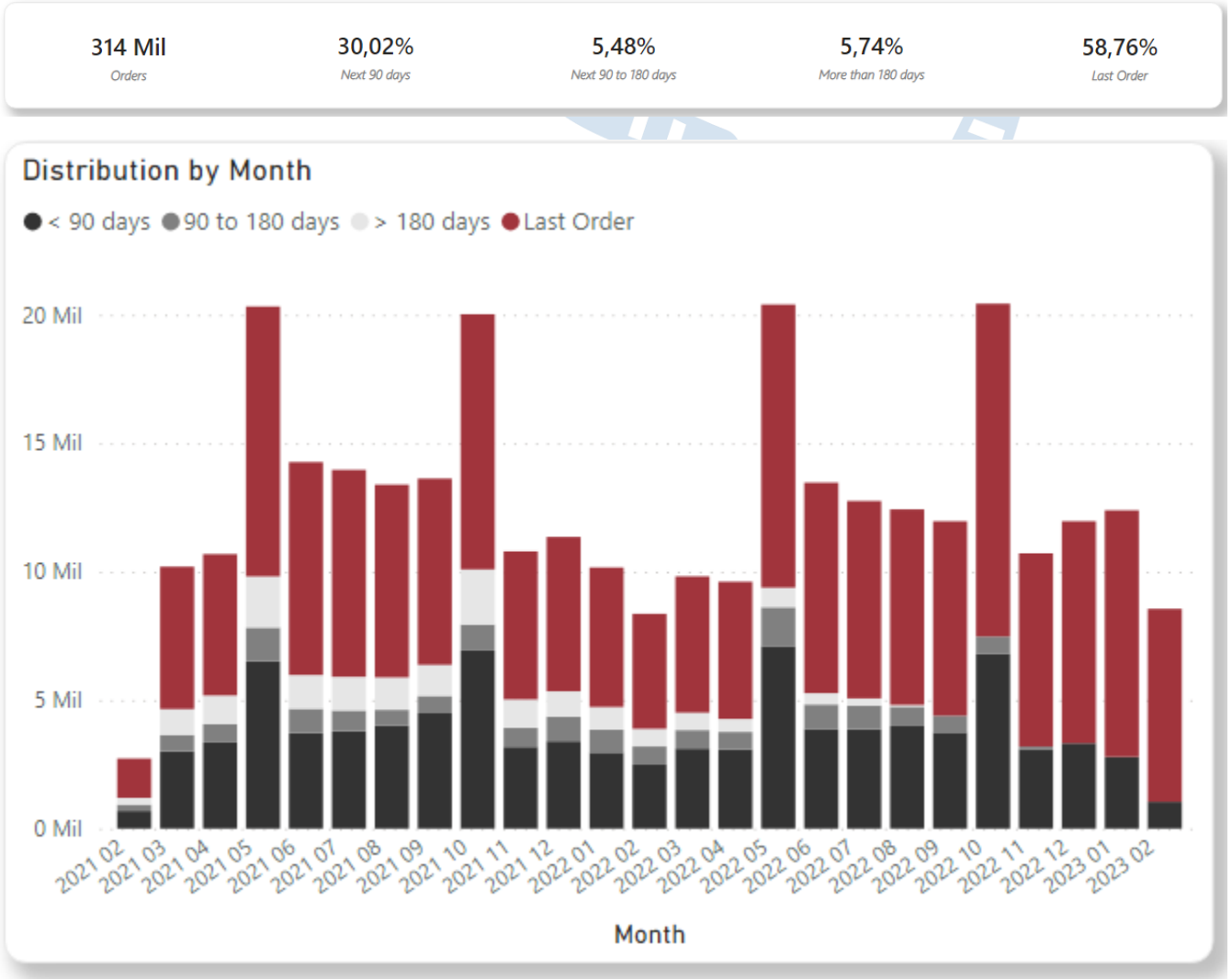
ABC Analysis	Amount	Cut Mark
A	66	79,94%
B	162	94,97%
C	1292	100,00%
Total	**1520**	**100,00%**



Next Order - Analysis

For this analysis, I observed the purchase date of a customer and looked for the date of the next purchase if it occurs.

It is quite interesting to note that 30% of the time customers buy again in less than 90 days, but naturally this number contrasts with the fact that almost 60% of the time a purchase is the customer's last.



Next Order - Analysis

This year-over-year open metric shows a decrease in the 90-day rebuy rate and an increase in the last order rate, which is both poor indicators.

But this number should be treated with care as it is the last year we have in the database.

Opening by Season, once again Autumn is a big highlight.

Open per Year

Year	Orders	Next 90 days	Next 90 to 180 days	More than 180 days	Last Order
2021	141314	30,46%	6,14%	9,71%	53,68%
2022	152047	31,22%	5,63%	2,83%	60,33%
2023	20940	18,33%	0,00%	0,00%	81,67%
Total	**314301**	**30,02%**	**5,48%**	**5,74%**	**58,76%**

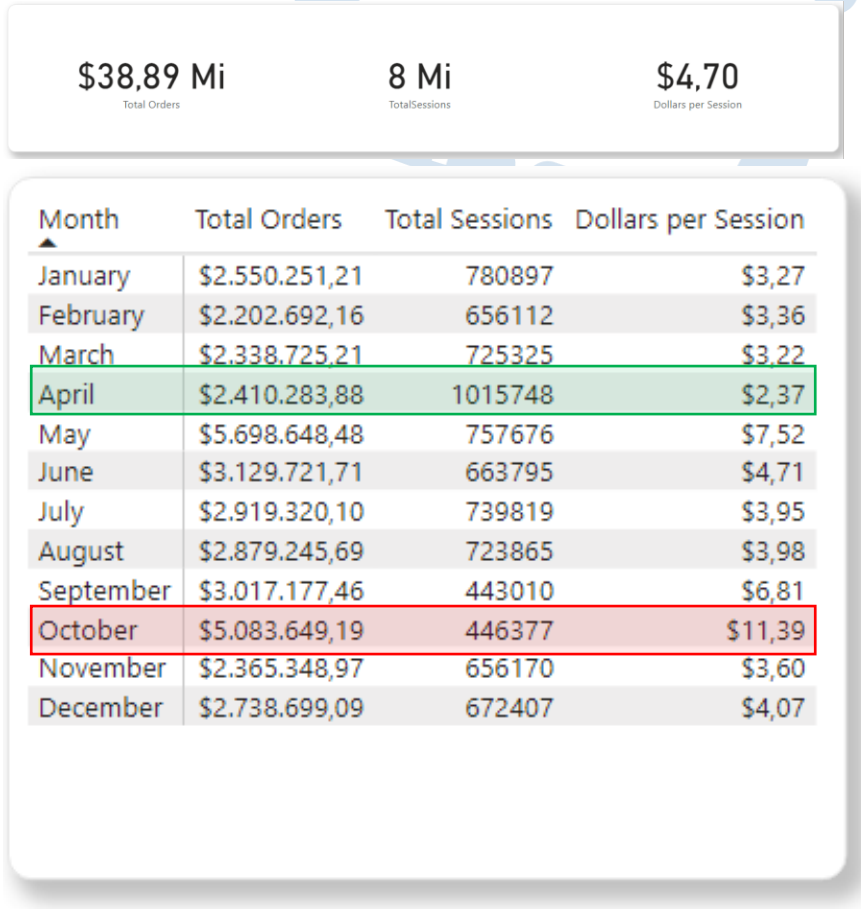
Open per Season

Season	Orders	Next 90 days	Next 90 to 180 days	More than 180 days	Last Order
Autumn	82435	31,61%	4,11%	5,02%	59,26%
Spring	87316	31,39%	6,86%	7,14%	54,60%
Summer	80181	30,19%	5,88%	5,46%	58,47%
Winter	64369	25,91%	4,87%	5,09%	64,13%
Total	**314301**	**30,02%**	**5,48%**	**5,74%**	**58,76%**

Dollars per Session

One metric I prepared for these analyzes is to look at the number of sessions in relation to the number of revenue generated.

It is quite interesting to observe the impact of the month of April, where we have a much smaller number of sales sessions, which demonstrates that consumer behavior changes during this period, tending towards more impulsive purchases.



$38,89 Mi	8 Mi	$4,70
Total Orders	TotalSessions	Dollars per Session

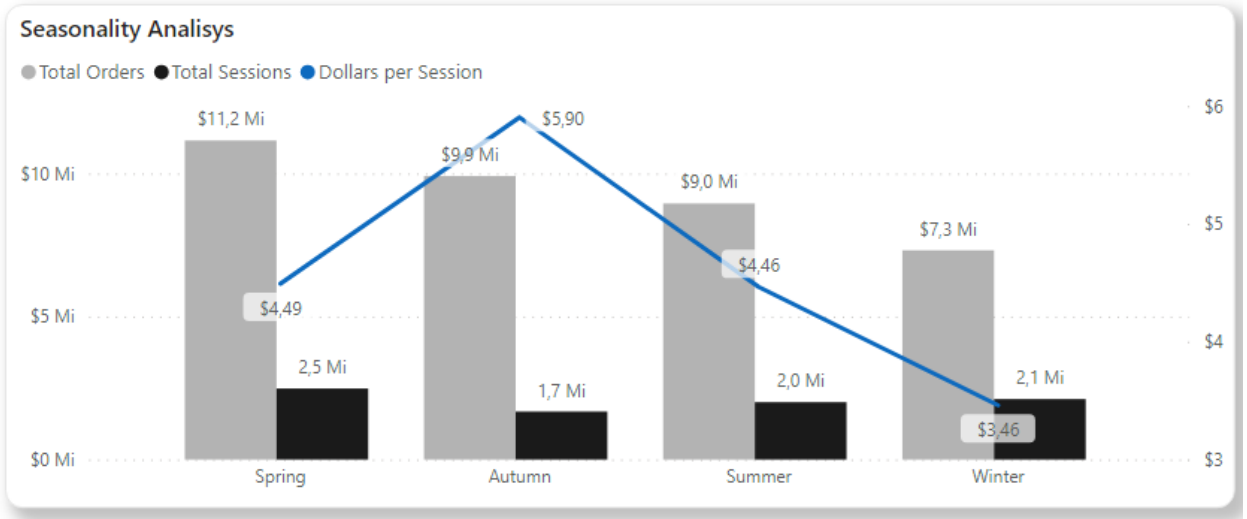
Month	Total Orders	Total Sessions	Dollars per Session
January	$2.550.251,21	780897	$3,27
February	$2.202.692,16	656112	$3,36
March	$2.338.725,21	725325	$3,22
April	$2.410.283,88	1015748	$2,37
May	$5.698.648,48	757676	$7,52
June	$3.129.721,71	663795	$4,71
July	$2.919.320,10	739819	$3,95
August	$2.879.245,69	723865	$3,98
September	$3.017.177,46	443010	$6,81
October	$5.083.649,19	446377	$11,39
November	$2.365.348,97	656170	$3,60
December	$2.738.699,09	672407	$4,07

Dollars per Session - Seasonality Analysis

Once again we are positively surprised by Autumn.

It is a period with a great contrast due to the drop in the number of sessions, but an increase in total purchases.

The weight of Black Friday in the company's numbers is visible.



QUESTIONS ABOUT THE PROVIDED DATASETS

Customer Data

- Gender
- Age range
- Salary range
- Location
- Marital status
- Schooling
- Individual or Company?
- What is the company's customer profile?

Product Data

- Supplier
- Average price
- What is the rate of returned products?
- What is the loss in stock for each product?
- What is the gross margin for each product?
- What is the active turnover for each product?
- What is the company's average Time to Value (TTV)?
- Which products have the highest Expansion Revenue?
- What is the most used mix of products?

OTHER QUESTIONS

Sales Data

- Do we have a geographic concentration of sales?
- How do sales work in places where cannabis is allowed and where it isn't?
- What is the relationship between sales and analytics searches?
- What is the CAC for each customer?
- Do we have the LTV of each customer?
- Do we have the Average Ticket for each customer?

Stock and Logistics

- How does the logistics process work?
- Do we have CDs in every major state with purchases?
- How does the stock work?
- How do supplier relationships work?
- Do we manage the inventory of products from other suppliers?
- What is the average waiting time?

Quality and After-sales

- Do we conduct NPS surveys?
- What is the relationship between NPS and average wait time?
- What is the factor that most impact negative NPS?
- What is the NPS for each product?
- Which products have the highest number of complaints and after-sales support?

Financial

- Balance Sheet Information with Vertical and Horizontal Analysis
- DRE information with Horizontal analysis
- What is the weighted average cost of capital?
- What is the company's liquidity structure?
- What is the participation of equity and third parties?
- What is the company's asset turnover?
- What is the Net Margin?
- What is the profitability and return on invested capital?
- What valuation calculation does the company use?
- How are the sales of each product contributing to this valuation in percentage terms?
- What are the factors that most impact this valuation?

Thank you!