# INTRODUCTION

The main goal of this analysis is to analyze the result of the previous campaigns and compare them with our target. The initial estimation is that we will be able to raise 15,000 USD. My task is to prove this right or wrong and provide recommendations. Furthermore, I will analyze information regarding backers: how many is needed, how many we can expect, etc. Also we will compare campaigns in different categories/subcategories. And finally, analyze the campaigns in terms of duration.

# INITIAL ANALYSIS

All analytics will be performed using the Jupyter Notebooks. You can find the details in the additional file.

After the initial look at the data I noticed the campaigns were held in different countries and hence used different currencies. Our budget is defined in USD so let's check all available currencies and countries.
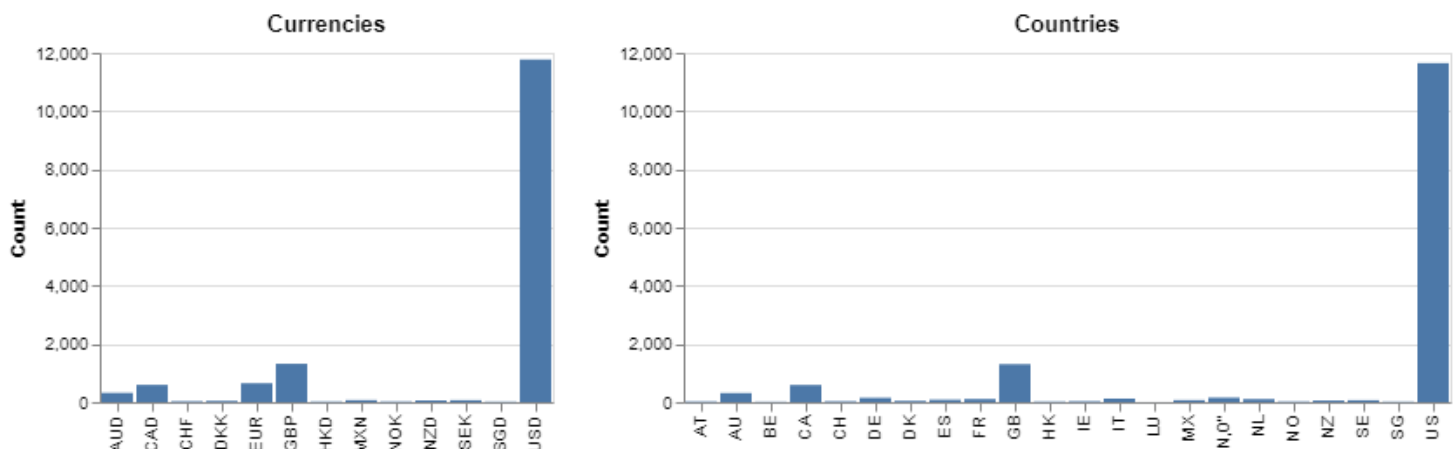


As we can see the majority of campaigns were held using **USD**. However, there is a small percentage of campaigns that were held outside of the US using non-USD currencies.

There are 2 options: exclude non-USD currencies; add currency exchange rate data and convert all currencies. The second approach have several issues: we need to get the additional external data which will take time, non-USD campaigns were held outside of the US hence they reflect a different market and habits. We will exclude non-USD campaigns from the analysis.

We also need to check all possible outcomes.
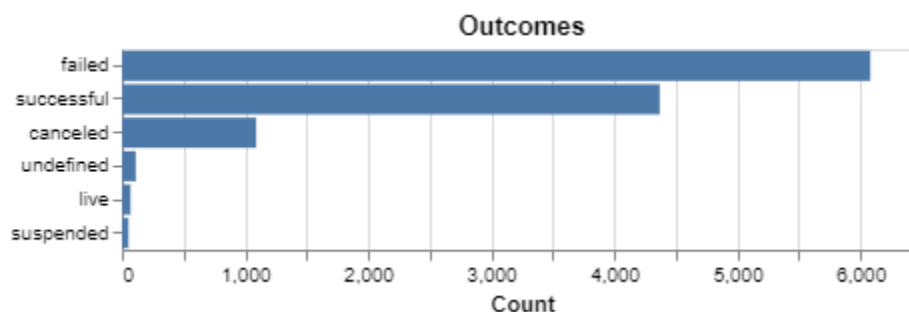


As you can see the majority of campaigns were either **successful** or **failed**. There are some canceled ones and other types. As we are focused on successful and failed campaigns only (we can't take into consideration uncompleted campaigns) I will filter out other outcomes.

As our business represents Board Games we need to analyze campaigns in the same market. Hence we will analyze **Games** category and **Tabletop Games** subcategory.

And finally we need to check for outliers. If we leave them we can get incorrect results, also it will not allow to build a proper visualizations.
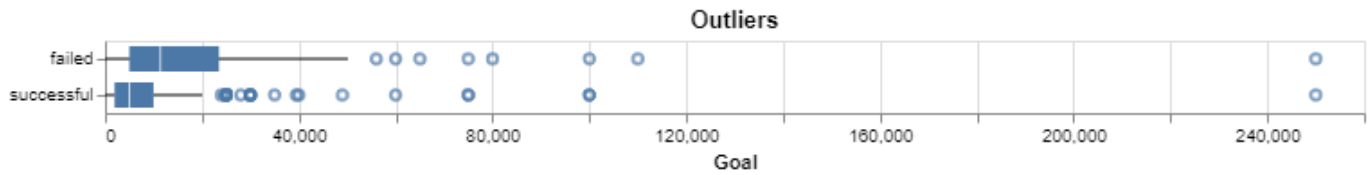


Based on the above I will leave the failed campaigns with goal less than **50,000** and successful campaigns with goal less than **20,000**.

# ANALYTICS AND VISUALIZATIONS

I will start the analysis with comparing goals for failed and successful campaigns with the budget.
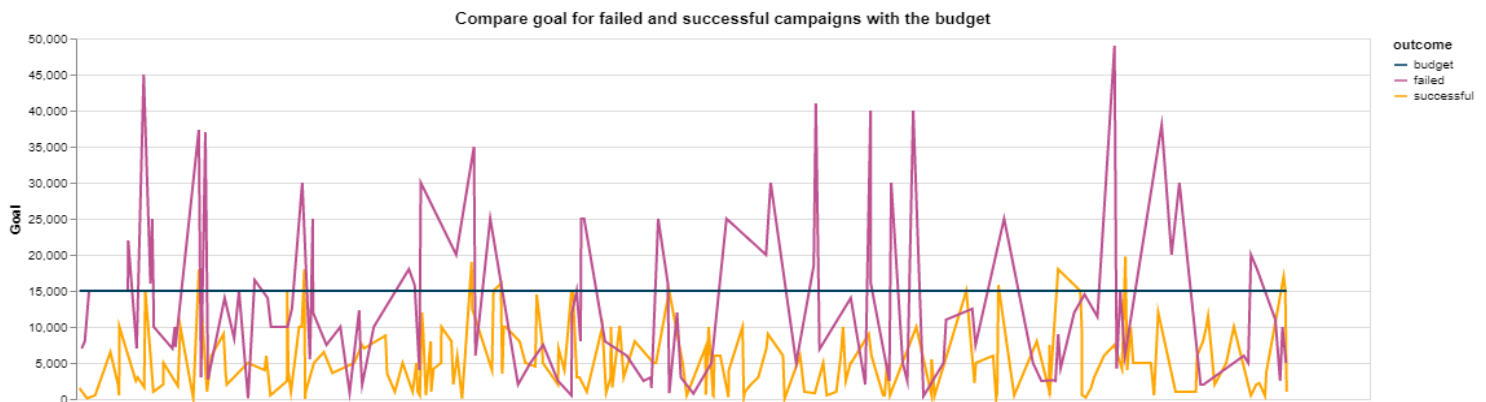


The chart above clearly shows that the goal for the failed campaigns was much higher than the one for the successful ones. Furthermore, almost all successful campaigns were unable to reach **15,000**. Now let's calculate the realistic goal based on the goal of other campaigns. I will analyze a statistical data for successful campaigns.
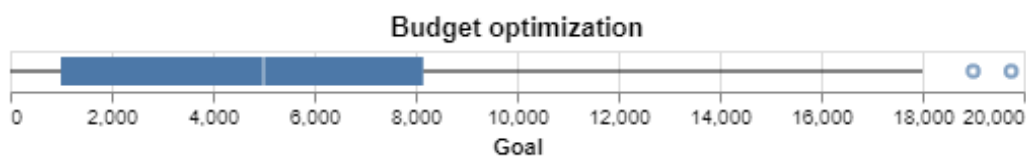


Median is 5,000, Q1 is 1,000 and Q3 is 8,150. It means that on average successful campaign's goal is **5,000**, in the most cases **1,000** is successful and it is very hard to reach at least **8,000**. However, we checked the goal only, we didn't check the actual amount of money that was raised. Let's do the same but for the pledged amount.
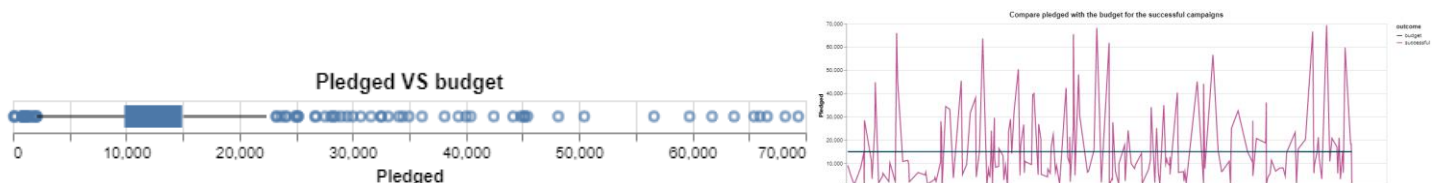


Median is 15,000, Q1 is 9,859 and Q3 is 15,000. The real results are much better than the projected ones. It is clear that **15,000** is a realistic goal. Furthermore, most probably we will definitely get at least **10,000**.

Let's think outside of the box and compare other categories/subcategories. It can be useful to find out how many bakers we need. We will find top/bottom categories/subcategories based on the number of backers for the successful campaigns.
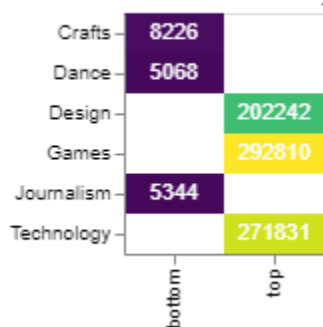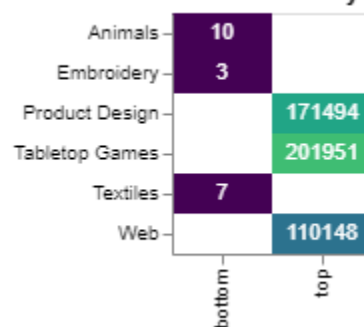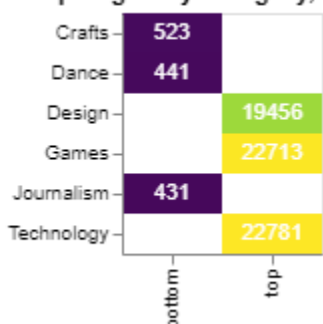


As we can see **Games/Tabletop Games** requires the highest number of backers among all categories/subcategories. Now let's find out how many backers we need. I did the same statistical analysis as the above. Median is 243, Q1 is 98 and Q3 is 696. It means that on average we will need **250** backers, to be on the safe side we will need **700**.
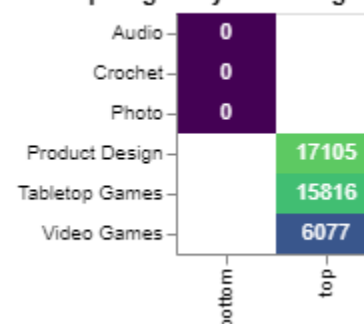
Now let's drill down on the company level and see the stats for the most successful board game company. It was **Gloomhaven (Second Printing)**, they raised **4,000,000** but needed **40,000** backers for that.

Just to get a general picture of the market we will find top/bottom categories/subcategories based on the money raised for all campaigns.



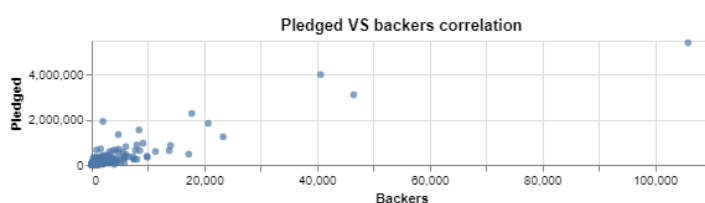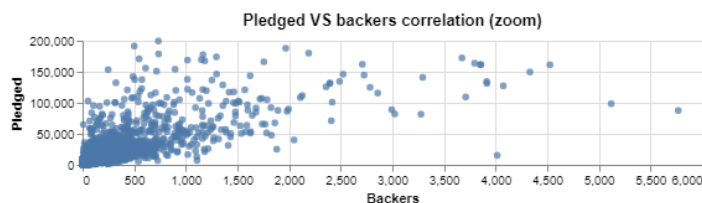Our category is the top and subcategory is almost the top. It means our business is the most profitable on the market.

Based on the numbers above we need more backers to raise more money. To prove that let's check the correlation between backers and money raised.



In addition the chart above I calculated the correlation using 3 different methods. The result proves the correlation between backers and money raised is very strong (**94%**, **90%** and **83%**). It means to raise more money we need more backers.

Finally, let's check the duration of campaigns.
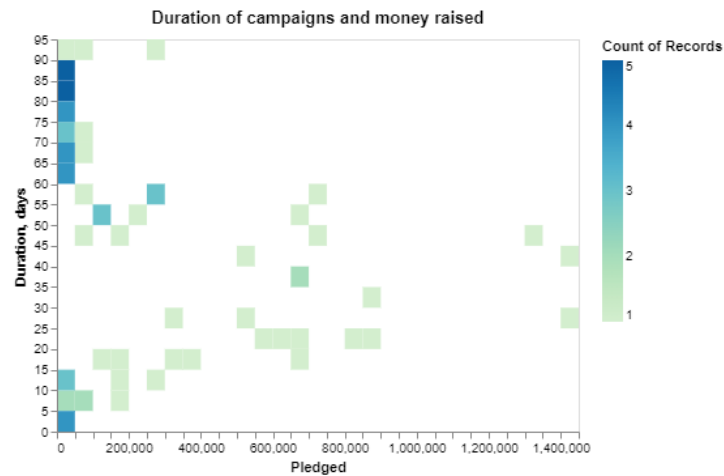


As you can see on the heat map above it is not necessarily you need longer campaigns to raise more money. For example, it can take **90** days to raise less than **50,000** and just **30** days to raise **1,500,000**. However, the pledged amount starts dropping if the duration is below 30 days. Furthermore, you can stop the campaign after 60 days. As mentioned previously to raise more money we need more backers.

# FINDINGS AND RECOMMENDATIONS

- The goal of 15,000 is realistic. If we want to be on the safe side we can reduce it to 10,000.
- We will need at least 250 backers. However, we should be prepared to get 700 for the campaign to be successful and meet the goal.
- If we want to increase the amount of money gained we will need more backers.
- You do not need longer campaigns to raise more money. To get the best result you will need 30-60 days.
- The downside of the business we run is that we need the highest number of backer. The advantage is that our business is the leader of the market.
- The most successful company was able to raise 4,000,000 with 40,000 backers.

# IMPROVEMENTS FOR THE FUTURE

- We excluded non-USD currencies, as we need additional data to convert them to USD and they were held outside of the US. If needed I can do an additional analysis for non-USD currencies. Maybe we need to do that if we think about expanding our business internationally.
- I excluded all outcomes except successful and failed. It is recommended to perform an additional analysis to see if that information can be useful.
- It is recommended to perform an additional Machine Learning analysis to find the best parameters more accurately.