BrainStation: Data Science Diploma

# **Admissions Challenge**

Small Board Game Company: Kickstarter Campaign

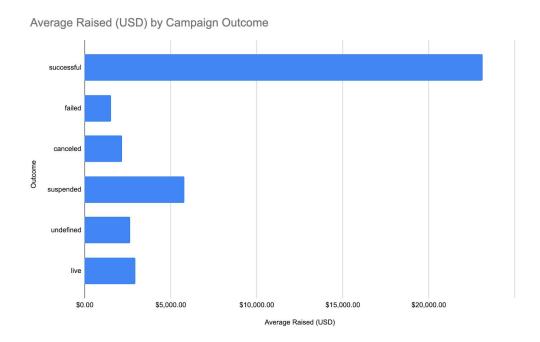
#### Introduction

This report will highlight the process, findings and recommendations based on Kickstarter data provided for this project. MySQL and Google Sheets were used to organize and perform visualizations to help provide recommendations. The recommendations will assist in setting up the Kickstarter campaign to raise a minimum of \$15,000 USD and help decide the asking amount and offering (rewards) to early backers/supporters.

# **Preliminary Data Analysis**

Based on preliminary data analysis of ks-data.sql using MySQL and Google Sheets the findings show the following:

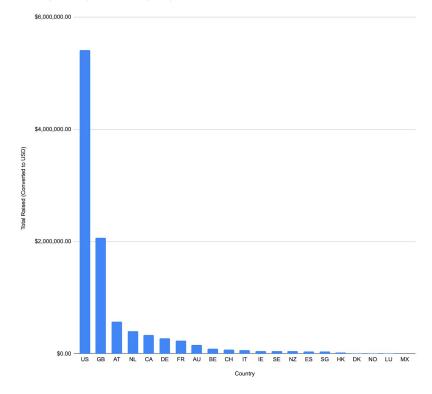
When comparing the outcome of the campaigns, successful campaigns raised significantly more dollars than all other unsuccessful outcomes. On average successful campaigns raised US\$23,117.09 in an average of 33 days, whereas failed campaigns on average raised US\$1,527.99 in an average of 35 days (*ref. Appendix A.1.0*).



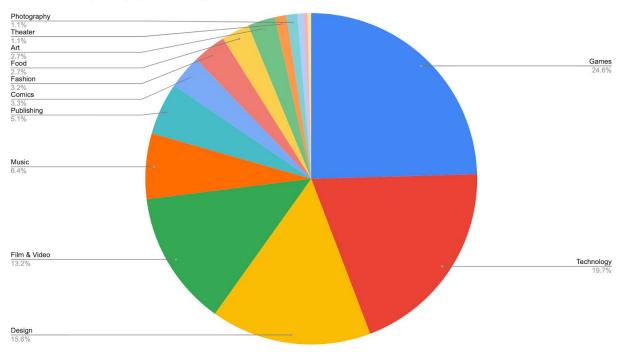
The top three countries that raised the most money were US, Great Britain and Austria (*ref. Appendix A.1.1*).

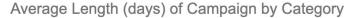
Based on all countries, the top three categories with the most backers are Games, Technology, and Design. The bottom three categories with the least backers are Crafts, Journalism, and Dance (ref. Appendix A.2.0).

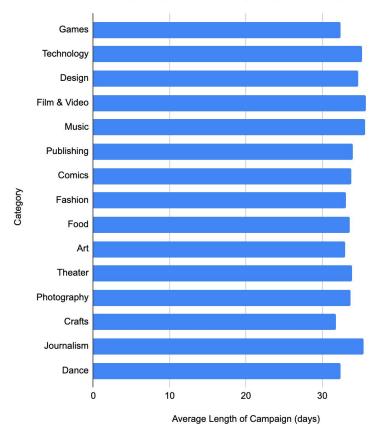




#### Total Backers by Category of Campaign





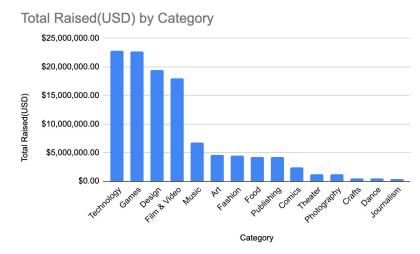


The average length of all campaigns is 34 days. The average length of the top three categories were 32 days for Games, and 35 days for Technology and for Design. The average length of the bottom three categories were 35 days for Journalism, and 32 days for Crafts and for Dance (ref. Appendix A.2.0).

The top three categories that have raised the most money are Technology, Games, and Design. The bottom three that have raised the least amount of money is Crafts, Dance,

and Journalism. The top three categories that have raised the most money are not different from the top three

categories with the most backers. Potentially, the reason that they are the same categories could be because the volume of pledges by backers equals more money raised. There is a difference in ranking of the top three categories, where Technology raises more



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money but has less backers than Games. The reason could be the goal for funding a game

could cost less than funding technology. Therefore, on average the asking pledge in Technology is more than in Games (*ref. Appendix A.3.0*).

The amount the most successful board game company raised was US\$3,999,795.77 with 40,642 backers (*ref. Appendix A.4.0*) .

The top three countries with the most successful campaigns in terms of dollars are the US with US\$5,408,916.95, Great Britain with US\$2,065,308.31 and Austria with US\$570,285.51 (*ref. Appendix A.1.1*). In terms of the number of campaigns backed, the top three countries are the US with 11,649 campaigns, Great Britain with 1,304 campaigns and Canada with 588 campaigns (*ref. Appendix A.5.0*).

On average shorter campaigns of around 30 days tend to raise more money than longer campaigns. This conclusion is drawn from the average length of all successful campaigns and the top three categories by most money raised, the average length of these successful campaigns are between 32 - 36 days (*ref. Appendix A.1.0; A.3.0*).

### **Findings & Recommendations**

Based on the findings of the average raised by successful campaigns and the average raised by campaigns under the Games category, the Small Board Game Company should aim to raise US\$20,000. This recommended goal is over the minimum the company requires to get the project off the ground and is realistic based on the findings.

Based on the average total raised and average number of backers for campaigns in the Games category, the average pledge is US\$69.11 per backer. To meet the minimum goal of US\$15,000, the company should aim for 218 backers. To meet the recommended goal of US\$20,000, the company should aim for 290 backers.

Based on trends in the Games category, the company can realistically expect between 300 - 350 backers.

# **Appendix A**

A.1.0 The output shows the outcome and it's total raised, average raised and average length in days. The outcome is shown for USD currency from the ks-data.sql file.

```
SELECT outcome,

ROUND(SUM(pledged), 2) AS totalUSD_raised,

ROUND(AVG(pledged), 2) AS avgUSD_raised,

AVG(DATEDIFF(deadline, launched)) AS avg_dayslength

FROM sys.campaign

WHERE currency_id = 2

GROUP BY outcome

ORDER BY 2 DESC;
```

# outcome	totalUSD_raised	avgUSD_raised	avg_dayslength
successful	\$100,998,571.55	\$23,117.09	33
failed	\$9,290,196.13	\$1,527.99	35
canceled	\$2,376,463.84	\$2,180.24	37
suspended	\$301,666.33	\$5,801.28	36
undefined	\$293,647.21	\$2,621.85	34
live	\$202,167.00	\$2,929.96	41

A.1.1 The sample output shows the total amount raised by the country. Currency was converted to USD in Sheets based on rates from Morningstar, 06-01-2020.

```
SELECT country.name AS country, MAX(pledged) AS total_raised, currency.name AS currency
FROM campaign
LEFT JOIN country
ON campaign.country_id = country.id
LEFT JOIN currency
ON campaign.country_id = currency.id
GROUP BY country_id
ORDER BY total_raised DESC;
```

rank	# country	total_raised	currency	converted_USD*
1	US	5408916.95	USD	\$5,408,916.95
2	GB	1652246.65	GBP	\$2,065,308.31
3	AT	513770.73	EUR	\$570,285.51

A.2.0 The sample SQL output shows campaigns based on category with the number of backers and length in days. Then processed in a pivot table to group by category and output total backers for each category and average length of campaigns for each category.

category	backers	days_length
Art	C	30
Art	C	30
Art	C	60
Art	C	45
Art	C	10
Art	C	30
Art	C	16
Art	C	30
Art	C	30
Art	C	41
Art	C	3
Art	C	30

category	SUM_backers	AVG_days_length
Games	411671	32
Technology	329751	35
Design	262245	35
Film & Video	220693	36
Music	107240	36
Publishing	85254	34

Art	44591	33
Theater Photography	18755 18009	34
Crafts	10418	32
Journalism	6206	35
Dance	6022	32
<b>Grand Total</b>	1676688	34

A.3.0 The sample SQL output shows campaigns based on category with the amount raised(USD), backers and length in days. Then processed in a pivot table to group by category and output total raised, average raised per campaign, average length per campaign, total backers, and average backers per campaign.

```
SELECT category.name AS category, pledged AS raised, DATEDIFF(deadline, launched) AS days_length, backers
FROM sys.campaign
JOIN sub_category
ON campaign.sub_category_id = sub_category.id

JOIN category
ON sub_category.category_id = category.id
WHERE currency_id = 2
ORDER BY 2 ASC;
```

category	raised	days_length	backers
Fashion	0	30	0
Technology	0	30	0
Publishing	0	30	0
Film & Video	0	30	0
Film & Video	0	60	0
Publishing	0	31	0
Film & Video	0	36	0

category	sum_raised(USD)	avg_raised(USD)	avg_days_length	sum_backers	avg_backers
Technology	\$22,780,924.01	\$25,799.46	36	289656	328

Games	\$22,712,894.49	\$24,396.23	32	328306	353
Design	\$19,456,282.19	\$21,194.21	35	222310	242
Film & Video	\$17,981,387.75	\$8,332.43	36	205117	95
Music	\$6,752,303.82	\$3,787.05	36	98629	55
Art	\$4,557,097.23	\$5,286.66	34	37781	44
Fashion	\$4,497,225.53	\$7,005.02	33	44365	69
Food	\$4,247,095.91	\$5,382.88	34	41321	52
Publishing	\$4,213,179.07	\$3,263.50	34	68164	53
Comics	\$2,412,139.17	\$6,572.59	34	49953	136
Theater	\$1,272,523.25	\$3,402.47	35	15593	42
Photography	\$1,184,385.63	\$3,857.93	34	13872	45
Crafts	\$523,395.55	\$1,931.35	31	9516	35
Dance	\$440,839.21	\$4,321.95	33	5387	53
Journalism	\$431,039.25	\$4,585.52	36	5703	61
Grand Total	\$113,462,712.06	\$9,638.35	35	1435673	122

# A.4.0 The SQL output shows the top three board games with the most money raised and the number of backers

# boardgame_name	raised	backers	length_days
Gloomhaven (Second Printing)	\$3,999,795.77	40642	28
Ghostbusters™: The Board Game	\$1,546,269.50	8396	30
Shadows of Brimstone	\$1,341,305.03	4727	33

#### A.5.0 The SQL output shows the top three countries with most backed campaigns.

```
SELECT country.name AS country, COUNT(campaign.name) AS num_backedcampaign
FROM campaign
LEFT JOIN country
ON campaign.country_id = country.id
WHERE campaign.backers IS NOT NULL
OR campaign.backers > 0
GROUP BY country_id
ORDER BY 2 DESC
LIMIT 3;
```

# country	num_backedcampaign
US	11649
GB	1304
CA	588