

Marketing Metrics Report

Project Elephants

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Metrics

Unit Margin

$$5.00 - (5.00 * 0.3) - (5.00 * 0.7 * 0.09) = \$3.19$$

Unit margin is the actual profit pulled in from a single unit sale, in this case the purchase and download of our game. Our target unit price is \$5.00 selling through a digital marketplace that takes a flat 30% from all sales. In addition to the \$1.50 taken by the digital marketplace, we're allocating a per-unit marketing budget of \$0.32 in order to further the advertising and marketing efforts. Pre-allocating that extra \$0.32 and factoring it into the unit margin here helps us to better estimate

Unit Margin %

$$\frac{5.00}{3.19} = 0.638 = 63.8\%$$

Unit margin percent is the percentage of the end-user's purchase price that we can count as profit. Our unit margin percent is decently high, meaning that if we continue to make positive sales, we will eventually recoup the fixed costs of the project and begin making a steady profit. Our margin percent would increase a great deal if the product were sold through direct sales to schools instead of through Steam, as 30%, though standard across the industry, is quite a steep cut from our potential profits.

Marketing Budget

9% of per-unit profit.

$$5.00 * 0.7 * 0.09 = \$0.32 \text{ per unit}$$

The marketing budget is the amount spent on all marketing efforts including advertisements and other campaigns. According to survey done by WebStrategies, average marketing spending percentages range from around 6.5% to 10% with outliers extending in either direction (*How Much Should You Budget For Marketing In 2020?*). The tech sector averages at around 9.7% of revenue for marketing, so we're going to work with a slightly more conservative percentage of 9% since we're targeting a smaller, more localized market. That leaves us with a total marketing budget of \$62,000 with which to recoup the fixed costs of the project, and a total of \$138,000 to hit the target sales volume.

Fixed Costs

$$(8576.92 + 242.31 + 147.69 + 141.92 + 23.08 + 7.38) * 67.5 = \$616,903$$

** full calculations in the attached spreadsheet*

The fixed costs for the project include all expenditures that do not vary based on sales. Once this value is met by the sales, all further sales become profit.

This calculation factors in the salaries of all 8 team members as well as the subscription costs of all the software the team uses including Unity, Adobe Creative Cloud, and others. For ease of calculation due to the semester-based project duration, monthly and yearly values have been factored out into a total weekly cost of \$9,139 which was then multiplied by the average estimate of the project's timeline based on current velocity (67.5 weeks).

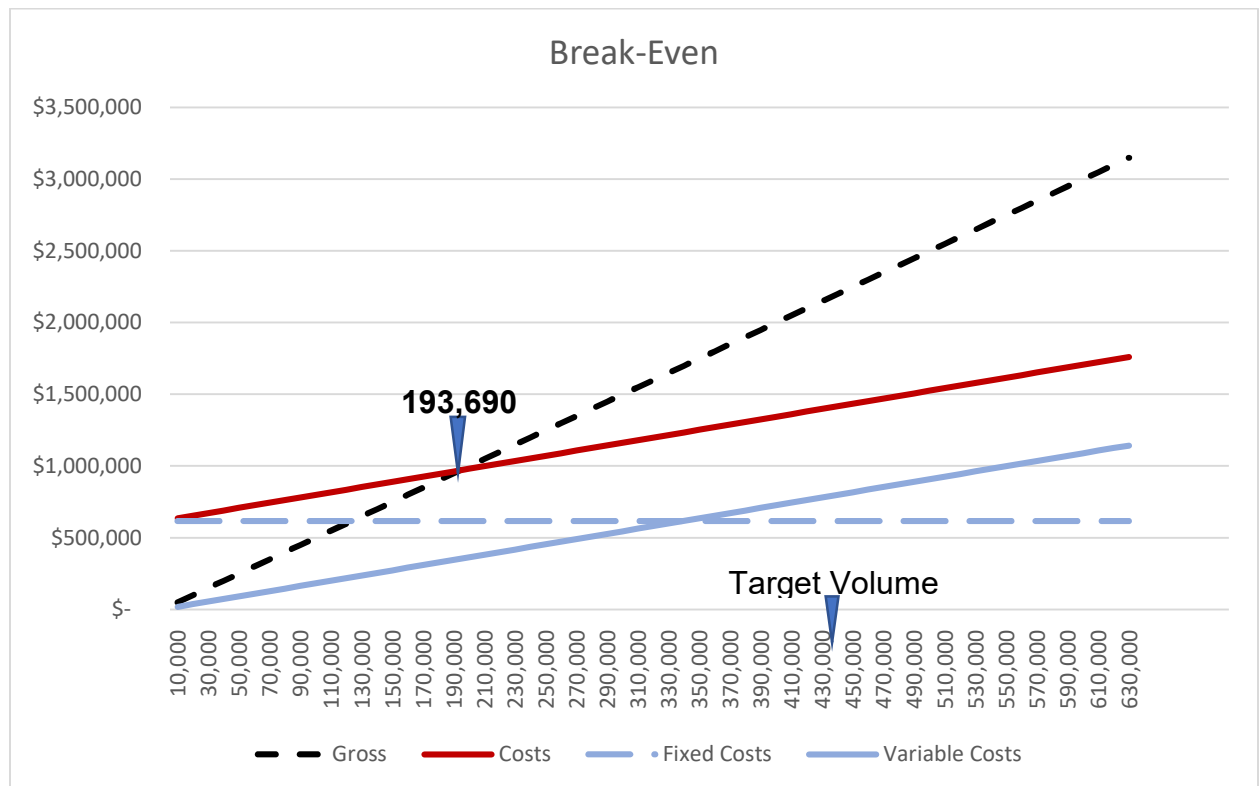
Variable Costs

$$1.50 + 0.32 = \$1.82 \text{ per unit}$$

The variable costs for the project include all expenditures that vary based on the number of sales. As this is a per-sale/unit number, it can be cleanly removed from the sales price to determine profits. For this project since we're deploying through a digital marketplace that takes a 30% cut from all sales, our variable costs include a \$1.50 value which is 30% of the sales price of \$5.00. In addition, we're allocating a marketing budget equivalent to 9% of the per-unit profit of \$3.50, which calculates out to \$0.32 per unit.

Break Even Volume

$$\frac{616,903}{3.19} = 193,690 \text{ units}$$



The break-even volume is the number of sales after which the project starts making pure profit from each sale. In other words, it is number of sales that the profits of which equal the fixed costs of the project.

This project has a fixed cost of \$616,903; based on salaries, licenses costs, and the estimated project timeline. Including both the marketplace cut of \$1.50 and the budgeted market spend of \$0.32, the contribution per unit, the amount of money per sale that goes to pay back the fixed costs, is \$3.19. Taking those figures into account, the project needs to make 193,690 sales in order to break even and begin making a positive profit.

Target Profit & Volume

$$\left(\frac{1,125,000}{13}\right) * 5 = 432,692 \text{ target volume}$$

$$432,692 * 3.19 = \$1,378,125 \text{ target profit}$$

Target profits are generally high-level goals for a project that are then used to calculate the target volumes necessary to reach those goals. For this project, since it's not primarily a money-making endeavor, we've flipped the calculation to prioritize volume over profit.

The target market for this project is school children in Arizona in the grade range of late elementary through early high school. Arizona's student population is approximately 1,125,000 across all grades K-12 (*AZ School Report Cards: State Reports*), and if we assume that the number of students per grade is roughly even, that leaves us approximately 83,500 students per grade. Multiplying that by grades 5-9 results in a target market, and target volume, of just over 432,000 sales. Generally, target market and target volume are not the same number, but in this instance since the project's distribution plan is to hopefully become part of the state-wide curriculum, they do overlap.

Definitions & Assumptions

Unit Sale Price

\$5.00; based on estimation provided by project lead, factoring in games of comparable quality and content on the Steam marketplace.

Unit Retailer Cut

30%; based on assumption that game is distributed through Steam or some other digital marketplace instead of directly to the consumer (schools).

Salary Costs

Entry-Level Producer: \$60,000 / year; extrapolated down from salary data of producers at higher levels of experience.

Entry-Level Designer: \$53,000 / year

Entry-Level Programmer: \$70,000 / year

Entry-Level Artist: \$50,000 / year

Entry-Level Marketer: \$60,000 / year; extrapolated down from salary data of marketing/PR/sales employees at higher levels of experience.

Software & License Costs

Unity Pro: \$150 / user / month

Adobe CC: \$80 / user / month

Maya: \$205 / user / month

Office 365: \$12.50 / user / month

GitHub: \$4 / user / month

Trello: \$0 / user / month; based on assumption that the team does not require the advanced features of Trello, as the free version is feature-rich.

Target Market

Total AZ Students: 1,125,000; value includes all grades from K-12

Total AZ Students in Target Grade Range: 432,700; assuming a balanced number of students in each grade (K-12), and that the content of the product is most appropriate for students grade 5-9.

Project									Market								
Role	Name	Salary (yr)	Unity	Adobe	Maya	Office	Git	Hub	Trello	Duration (wks)		AZ Schools		Price			
PO	Kevin	60,000.00	X	X		X	X		X	Min	60	Students	1,125,000	Per Unit	5.00		
Lead Designer	Christian	53,000.00	X	X		X	X		X	Max	75	Per Grade	86,538	Steam %	30%		
Designer	Mark	53,000.00	X	X		X	X		X								
Lead Programmer	Jacob	70,000.00	X	X		X	X		X	Fixed Costs							
Lead Artist	Daniel	50,000.00	X	X	X	X	X		X	Min							
Artist	Thomas	50,000.00	X	X	X	X	X		X	\$ 548,358.46							
Artist	Priscilla	50,000.00	X	X	X	X	X		X	Max		Sales		Revenue			
Marketing	Jake	60,000.00		X		X	X		X	\$ 685,448.08		Steam (30%)		Steam 3.50			
	Cost (seat/mo)								Average		# To Recoup Min		Final 3.19				
		150.00	80.00	205.00	12.50	4.00	-		\$ 616,903.27		172,169						
	Cost (seat/yr)										# To Recoup Max						
		1,800.00	960.00	2,460.00	150.00	48.00	-				215,211						
	Cost (yr)										# To Recoup Average						
	446,000.00	12,600.00	7,680.00	7,380.00	1,200.00	384.00	-				193,690		Targets				
	Cost(wk)												Revenue \$ 1,378,125				
	8,576.92	242.31	147.69	141.92	23.08	7.38	-						Volume 432,692				
									Total Cost (wk)								
									9,139.31								
															Marketing Budget		
															%		
															Per Unit 0.32		

Sources

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