Business Case: Project Tempest – First of a non-FPS action arena

Table of Contents

Contents

Abbreviations

Abbreviation	Meaning
NexaForge	NexaForge Studios
PvP	Player Versus Player
FPS	First Person Shooter
AI	Artificial Intelligence

1.Business Justification

1.1 Background

At NexaForge, we seek provide engaging experiences beyond AAA titles to a broad audience, balancing innovation and accessibility. To increase player retention, we propose project Tempest. Tempest is a 3rd person fantasy action-arena where players team up to battle against another team of players in quick rounds. Be it a warrior, a sorcerer, a cleric, an assassin, players can be the vanguard, control the battlefield, support their allies or disrupt the enemy backlines.
Our project aims to improve player retention rates, increase player play frequency and most of all, increase player engagement.

1.2 Current Situation and Problem/Opportunity Statement

NexaForge currently has only a Day 1/7/Three-Month retention of 30/12/8% respectively. This proposal seeks to bolster that on the next game launch.
As of now, PvP FPS games are very popular, and so are non-FPS action games, but there are no PvP non-FPS action games – most put you up against AI enemies instead of other players. This is an opportunity for a first mover's advantage by being the first game in the genre (Härmä & LeGrand, 2013, p21) to offer PvP non-FPS action battles.
Multiplayer games are the perfect way to engage players via competition, and conveniently encourages players to advertise it to their friends, multiplying our advertising (ARMS project Final Report, 2012 as cited in Härmä & LeGrand, 2013, p21).

1.2.1 Analysis of Options

Monetization model – One time purchase: Players buy our game, and that's it. This model needs a good amount of marketing/advertising, to overcome player inertia to buying the product.

Monetization model – Free to Play, Cosmetic loot-boxes: With a free-to-play model, we will draw far more players, but unhappy players can quickly stop spending. There is the ethical concern that loot-boxes (gambling) may be considered predatory, even if only for cosmetics.

Monetization model – Free to Play, Paid battle pass and/or early access: The battle pass incentives player retention, giving more value the more players play. It pairs well with offering early access to new characters/upgrades, which doubles as a public test. Early access runs the risk of alienating non-paying players (Lebres et al., 2018).

Recommendation:
The third option is recommended, as it requires less budget for marketing/advertising. It also offers the intangible benefit of allowing the developers to have a public test userbase, which would provide the data for a better game for the player-base, and is more ethical than the loot-

box option. This smoothens cash flow with a smaller upfront cost, and a longer lasting revenue stream, albeit with higher maintenance costs.

1.3 Project and Deliverable Description

The game itself: Tempest, a fantasy action-arena where players team up to battle against another team of players with various characters of diverse playstyles and archetypes to choose from.

Visual assets: The art and character models created for use in the game

Audio assets: The music and sound effect created for use in the game.

1.4 Ethical considerations and implications

Addiction: In both loot-boxes and the battle pass system, they make the game addictive, doubly so for loot-boxes and its gambling nature.

Fairness to players: It's easy to get carried away giving paying players advantages against non-paying players, creating an opportunity for discrimination. This can be mitigated by keeping rewards to cosmetics as they do not affect gameplay, but that is in direct conflict with more monetization.

Conflict of interest: With respect to the first 2 points, there is a clear conflict of interest: short of making the game a one-time purchase, as a company we want players to play more and spend more, while players want to spend and play in moderation. In fact, Hamari (2015) suggests that it may be optimal to companies for players to be addicted enough to keep playing but frustrated enough to not enjoy their current experience, which is of questionable ethics.

2. Schedule Estimate, Budget Estimate & Financial Analysis

2.1 Schedule Estimate
Milestones:
1. Character art/model completed – 1 month
2. Audio soundtracks completed – 1 month
3. Environment/map terrain completed – 2 months.
4. Character design/technical implementation completed – 3 months. This includes the character model, movement, and skills the character can use.
5. Core gameplay systems completed – 3 months. Integration of the above systems, and refinement of the game.

6. PC release – 2 months. Testing phase. PC games can be updated online, so it can be released to start gathering player feedback
7. Cross platform release – 12 months. The cross-platform release will be put on a low priority compared to updating the game and other projects, so this will take substantially longer.

This is an estimate of total time spent on each feature, although it will not be completely linear. It is estimated to take 1 year in total for the initial PC release at high priority, and another year for the cross-platform release at low priority.

2.2 Preliminary estimate of the costs involved

Almost all of the budget is spent on developer salaries to create the game. The initial cost is high at $933,200, but it is projected to pay itself off soon, with a NPV of $850,635 in just 3 years, a ROI of 58.0%. More of the project value will be in building a long-term player-base, a less tangible payoff which will take longer than 3 years to pay off.

3. Development Approach

Our development approach will be a hybrid approach, as while there is significant work to create the base game and assets, there quickly ends up being a lot of iteration to refine the game to be more "fun", a goal that is practically indefinable (*Software Engineering Challenges in Game Development*, 2009) – and this excludes the game's post-launch ongoing updates to keep the game fresh.

4. Risk and Quality

4.1 Uncertainty & Risk Analysis

1. Shifting market trends – the video game industry has been changing extremely rapidly. And it's not just due to technology advancements, or indie games would never have been able to rise to compete with AAA games. (Goh et al., 2023)

   Likelihood: Moderate
   Impact: Moderate

   Potential response: Mitigate – we can mitigate this risk by analysing market trends, and adapting our game to match market trends. Straying too far from our original audience will end up alienating our player-base, but a small and gradual amount of adaptation is generally safe enough.

2. Government regulations – Governments regulate gaming, and some countries do this a lot more than others. Some recent examples would be China restricting gaming time for minors, and Europe cracking down on gambling. These represent a risk in blocking our access to said countries.

   Likelihood: Low
   Impact: High

   Potential response: Mitigate – by designing our games ethically, we can be generally safe from changing regulations. Failing which, we can redesign our game and/or monetization strategies.

4.2 Quality Metrics and measurement

To encourage players to pay, Hamari (2015) suggests that players who want to continue playing are more likely to spend. To achieve this, Demediuk et al. (2018) suggests that players whose last match was more recent, and Kang et al. (2024), suggests that players who win and are on winning streaks, are more likely to continue playing. Interestingly, long win streaks of 10+ become a demotivator instead, and so is a clear metric to limit long win streaks.

As such, we propose the following metrics to be measured in addition to the decided D1 retention, D7 retention and M3 retention:

Variance in player recent win-rate: The 10th-90th percentile of players should have win-rates between 40% and 60%, and be on a win or lose streak of no longer than 10.

Time since last match: 50% of the monthly-active player base should have no longer than 1 week in between matches.

Daily and weekly average player count: Combines with time since last match for better analysis

Financial Exhibits

Preliminary Cost/Benefit Estimate (Shapley, n.d.)

Discount rate	**15%**				
Discount factor	**1.00**	**0.87**	**0.76**	**0.66**	
Year	**0**	**1**	**2**	**3**	**TOTAL**
Benefits	$0	$750,000	$1,012,500	$1,366,875	$3,129,375
Discounted benefit	$0	$652,174	$765,595	$898,743	$2,316,512
Costs	$933,200	$233,300	$233,300	$233,300	$1,633,100
Discounted costs	$933,200	$202,870	$176,408	$153,399	$1,465,876
Cash flow	($933,200)	$516,700	$779,200	$1,133,575	$1,496,275
Discounted cash flow	($933,200)	$449,304	$589,187	$745,344	$850,635
Cumulative disc cash flow	($933,200)	($483,896)	$105,291	$850,635	
NPV	**$850,635**				
ROI	**58.0%**				

Assumptions			
Costs	**#Days**	**Cost/day (Melb)**	**Total cost**
Project Manager	44	900	39600
Lead Engineer	110	1200	132000
Senior Developer	440	900	396000
Developer	440	700	308000
Senior Test Analyst	72	800	57600
Total	933200		
Reserve	191800		
Benefits			
Sales	750000		
Expected Growth/Year	1.35		

References

Härmä, A., & LeGrand, N. (2013, May 31). *THE SUCCESS FACTORS OF THE FINNISH MOBILE GAME INDUSTRY: A STRATEGIC OVERVIEW - Cases Rovio & Supercell*. International Business Degree Programme. https://www.theseus.fi/bitstream/handle/10024/62924/Harma_Aleksanteri.pdf

Lebres, I., Rita, P., Moro, S., & Ramos, P. (2018). Factors determining player drop-out in Massive Multiplayer Online Games. *Entertainment Computing*, *26*, 153–162. https://doi.org/10.1016/j.entcom.2018.02.010

Software Engineering Challenges in Game Development. (2009, April 1). IEEE Conference Publication | IEEE Xplore. https://ieeexplore.ieee.org/abstract/document/5070627

Goh, E., Al-Tabbaa, O., & Khan, Z. (2023). Unravelling the complexity of the Video Game Industry: An integrative framework and future research directions. *Telematics and Informatics Reports*, *12*, 100100. https://doi.org/10.1016/j.teler.2023.100100

Hamari, J. (2015). Why do people buy virtual goods? Attitude toward virtual good purchases versus game enjoyment. *International Journal of Information Management*, *35*(3), 299–308. https://doi.org/10.1016/j.ijinfomgt.2015.01.007

Demediuk, S., Murrin, A., Bulger, D., Hitchens, M., Drachen, A., Raffe, W. L., & Tamassia, M. (2018). Player retention in league of legends. *Proceedings of the Australasian Computer Science Week Multiconference.* https://doi.org/10.1145/3167918.3167937

Kang, H., Suh, C., & Kim, H. K. (2024). Match experiences affect interest: Impacts of matchmaking and performance on churn in a competitive game. *Heliyon*, *10*(3), e24891. https://doi.org/10.1016/j.heliyon.2024.e24891

Shapley, A. (n.d.). *IT CONTRACTOR RATES GUIDE*. https://www.hays.com.au/documents/276732/1102429/Hays+Technology+Contractor+Rates+Guide.pdf

Acknowledgements