

VIDEO GAME ANALYSIS

Problem Statement:

The project aims to analyze and visualize video game sales and engagement data to uncover trends in game popularity, user behavior, and platform performance. By merging sales and engagement data, we seek to offer insights into how game features, platforms, and genres influence sales, wishlists, and ratings. SQL will be used to structure and store the data, while Power BI dashboards will be developed to guide decision-making for game developers, marketers, and publishers.

Business Use Cases:

Game Marketing Strategy:

- Identify high-performing genres and platforms to target marketing efforts.
- Analyze rating and wishlist trends to understand user preferences.

Product Development:

- Evaluate how different game attributes (e.g., rating, genre, developer) relate to sales and engagement.
- Determine the features that correlate with successful game launches.

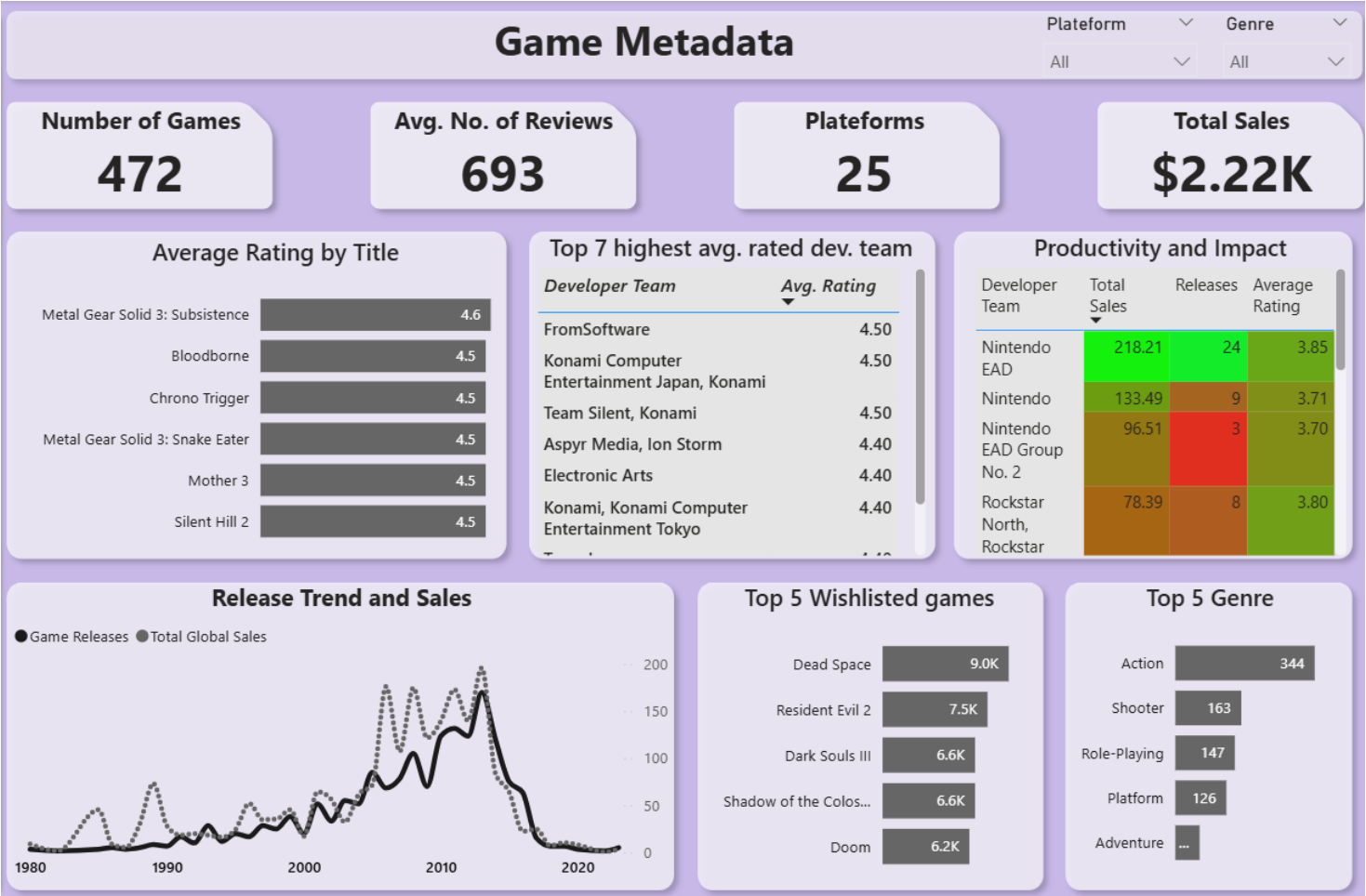
Sales Forecasting:

- Analyse past performance to forecast game demand.
- Evaluate the impact of game ratings and wishlists on global sales trends.

Resource Allocation:

- Focus development on platforms and genres with proven commercial success.
- Detects regions or genres with lower saturation and high opportunity.

Game Metadata



1. Overview Metrics:

Number of Games: 472

Average reviews per Game: 693

Total Sales: \$2.22K

Platforms Covered: 25

Insight:

The dataset represents a moderately diverse and well-reviewed collection of games across many platforms, suggesting a mature and competitive market segment.

Business implication:

Developers and publishers should focus on multi-platform releases to reach wider audiences. Cross-platform optimization could drive further sales growth.

2. Average Rating by Title:

Top rated games (avg. > 4.5):

Metal Gear Solid 3: Subsistence

Bloodborne

Chrono Trigger

Mother 3

Silent Hill

Insight:

High rated titles are mostly story driven action/adventure or role playing games known for deep narrative and unique experiences.

Business Implication:

Investing in high quality storytelling, strong world building and unique gameplay mechanics significantly boosts player satisfaction and long term brand loyalty.

3. Top 5 Highest Average rating Developers

Top teams include:

From Software, Konami Computer Entertainment Japan, Team Silent, Aspyr Media, Electronic Arts etc.

Insight:

Studios with consistent critical acclaim maintain strong brand value.

Business Implication:

- Publisher can collaborate or acquire high- performing studios for future projects.
- Smaller studios should emulate production quality and marketing strategies of these top-rated developers.

4. Productivity and Impact

High number of Releases + high Average Sales: These are the “Production Powerhouses”. They can maintain high output while still generating strong revenue, suggesting efficient pipelines and broad market appeal.

Low Number of Releases + High Average Sales: These are like “Event Studios”. They focus on massive, high budget, infrequent releases that dominate the market.

Business Implication:

(High Rating, Low Sales)

- Action: **acquisition or Partnership.** These studios have a proven ability to deliver quality without the huge budget pressure of top-tier AAA games. A large publisher should acquire them and provide superior marketing, localization, and distribution to unlock their hidden commercial potential.

- **Focus:** Maintain creative independence but fund a larger marketing push for their next title.

(Low rating, high sales)

- **Action: Quality Intervention.** While they are profitable, poor ratings pose a long-term risk to brand loyalty. The publisher must invest in the development pipeline and allocate resources specifically to **polish and innovation** to push the average rating up.
- **Focus:** Use post-release consumer data to identify and fix the biggest complaints (e.g., poor server stability, technical bugs) to protect the long-term franchise value.

(Low Rating, Low Sales)

- **Action: Restructuring or Repurposing.** Immediately halt large-scale projects and initiate a review. Reassign the team to support a more successful studio (as a support team for ports, QA, or DLC) rather than leading new IP development, or consider consolidation.
- **Focus:** Cut losses and reallocate talent to profitable areas.

5. Release Trend and Sales

- Game releases and global sales peaked between 2005–2015, then sharply declined.
- Post-2020 shows a drop, possibly due to market saturation, longer development cycles, or shifts to digital/mobile gaming.

Insight:

There's a trend toward fewer but more polished games being released.

Business Implication:

- Studios should focus on sustainability and replay ability rather than annual releases.
- Explore live-service models or downloadable content (DLC) to maintain engagement post-launch.

6. Top 5 Wish listed Games

Dead Space – 9.0K

Resident Evil 2 – 7.5K

Dark Souls III – 6.6K

Shadow of the Colossus – 6.6K

Doom – 6.2K

Insight:

All top wish listed games are action-horror or dark fantasy genres with immersive experiences.

Business Implication:

- There's strong market demand for remakes and reboots of classic horror/action franchises.
- Investing in atmospheric storytelling, remastered visuals, and nostalgia marketing can drive engagement.

7. Top 5 Genres

Action, Shooter, Role-Playing, Adventure

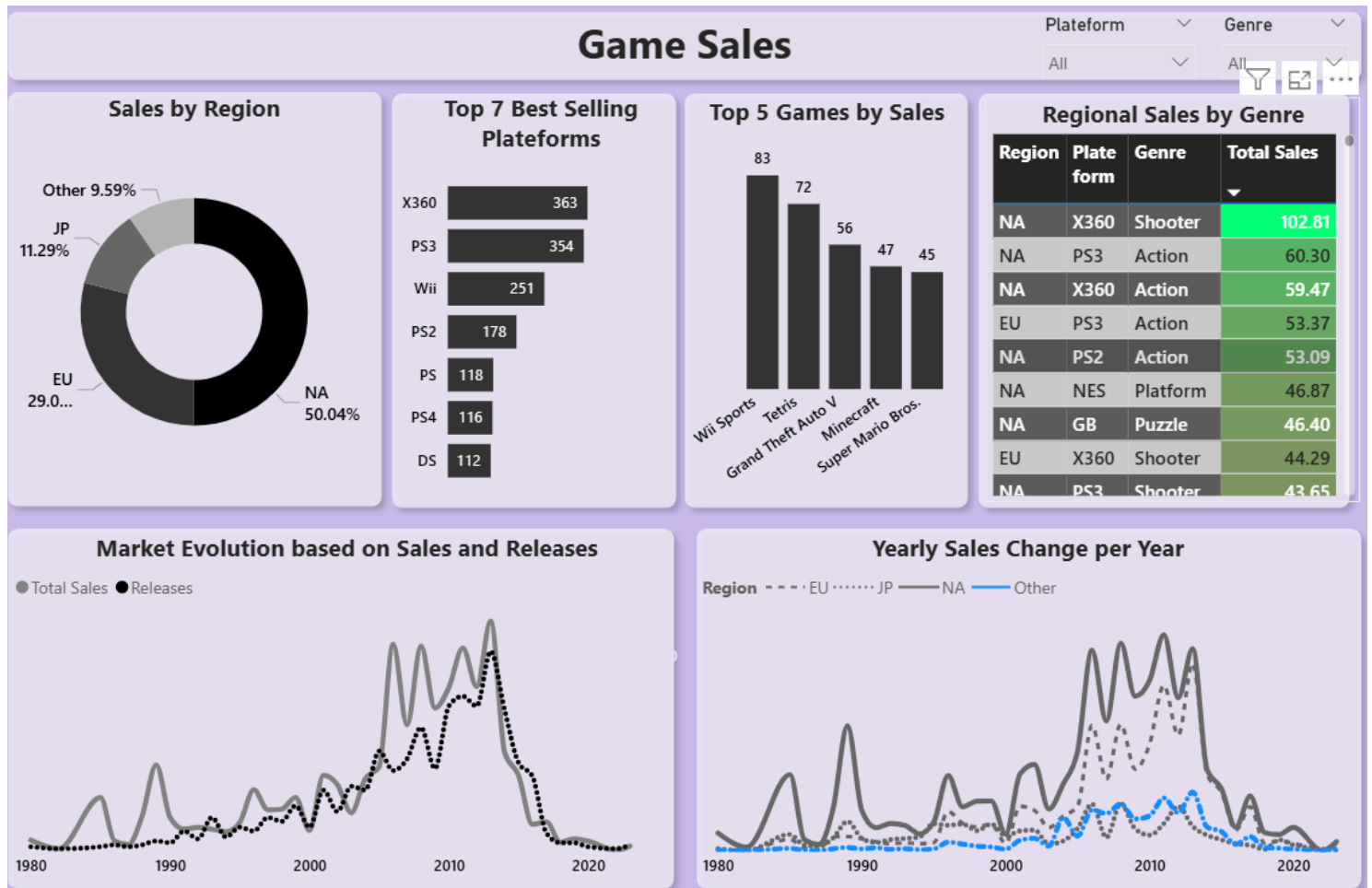
Insight:

Action remains dominant, but role-playing and shooter genres also have strong presence.

Business Implication:

- New developers should consider hybrid genres (Action-RPG, Action-Adventure) to capitalize on the two most popular categories.
- Niche genres (e.g., simulation, puzzle) may have less competition but untapped opportunities.

Game Sales



1. Regional Sales Distribution

North America (NA): 50.04% of total sales (dominant market)

Europe (EU): 29.09%

Japan (JP): 11.29%

Other Regions: 9.59%

Insight:

North America and Europe together account for nearly 80% of global sales, highlighting their dominance in the console and mainstream gaming markets. Japan remains influential but more focused on region-specific franchises.

Business implication:

- Prioritize marketing, distribution, and localization in NA and EU for maximum returns.
- For Japan and other regions, cultural adaptation and genre targeting (like RPGs and handheld games) can boost regional engagement.

2. Top Selling Platforms

Insight:

The Xbox 360 and PlayStation 3 era (mid-2000s to early 2010s) was the most profitable generation, driven by strong competition, online gaming, and franchise releases.

Business Implication:

- Future platforms (like PS5, Xbox Series X) should focus on backward compatibility and exclusive franchises, as historical data shows these factors drive adoption.
- Publishers should optimize releases for multi-console launches during the peak lifecycle of each console generation.

3. Top 5 games by Sales

Insight:

- Wii Sports, Tetris, GTA V, Minecraft, Super Mario Bros. are top selling Games.
- All top-selling titles share broad accessibility and replayability, with strong brand recognition. Games like GTA V and Minecraft also benefited from cross-platform longevity and online communities.

Business Implication:

- Simplicity + replay value + community engagement drives long-term sales.
- Companies should invest in evergreen titles that evolve over time (updates, remasters, expansions).
- New developers can learn from these IPs' strong social and multiplayer ecosystems.

4. Regional Sales by Genre

Top-performing combinations:

NA – X360 – Shooter (\$102.81M)

NA – PS3 – Action (\$60.30M)

EU – PS3 – Action (\$53.37M)

NA – PS2 – Action (\$53.09M)

NA – NES – Platform (\$46.87M)

Insight:

- Shooter and Action genres dominate North America and Europe.
- Platform games have historical strength but lower recent traction.

Business Implications:

- For NA/EU, continue to prioritize Action, Shooter, and Open-World titles.
- Cross-genre innovation (Action-RPG hybrids) could capture global audiences.

5. Market Evolution (Sales & Release Over Time)

- Both sales and releases peaked between 2008–2013, then declined sharply.
- The rise aligns with the PS3/X360/Wii era, while the fall suggests market saturation and digital transition.

Insight:

Physical sales fell as digital downloads, indie titles, and mobile games became mainstream after 2015.

Business Implications:

- Future strategies should focus on digital-first distribution and subscription models (Game Pass, PS Plus).
- Quality curation matters more than quantity—fewer releases with stronger engagement metrics yield better ROI.

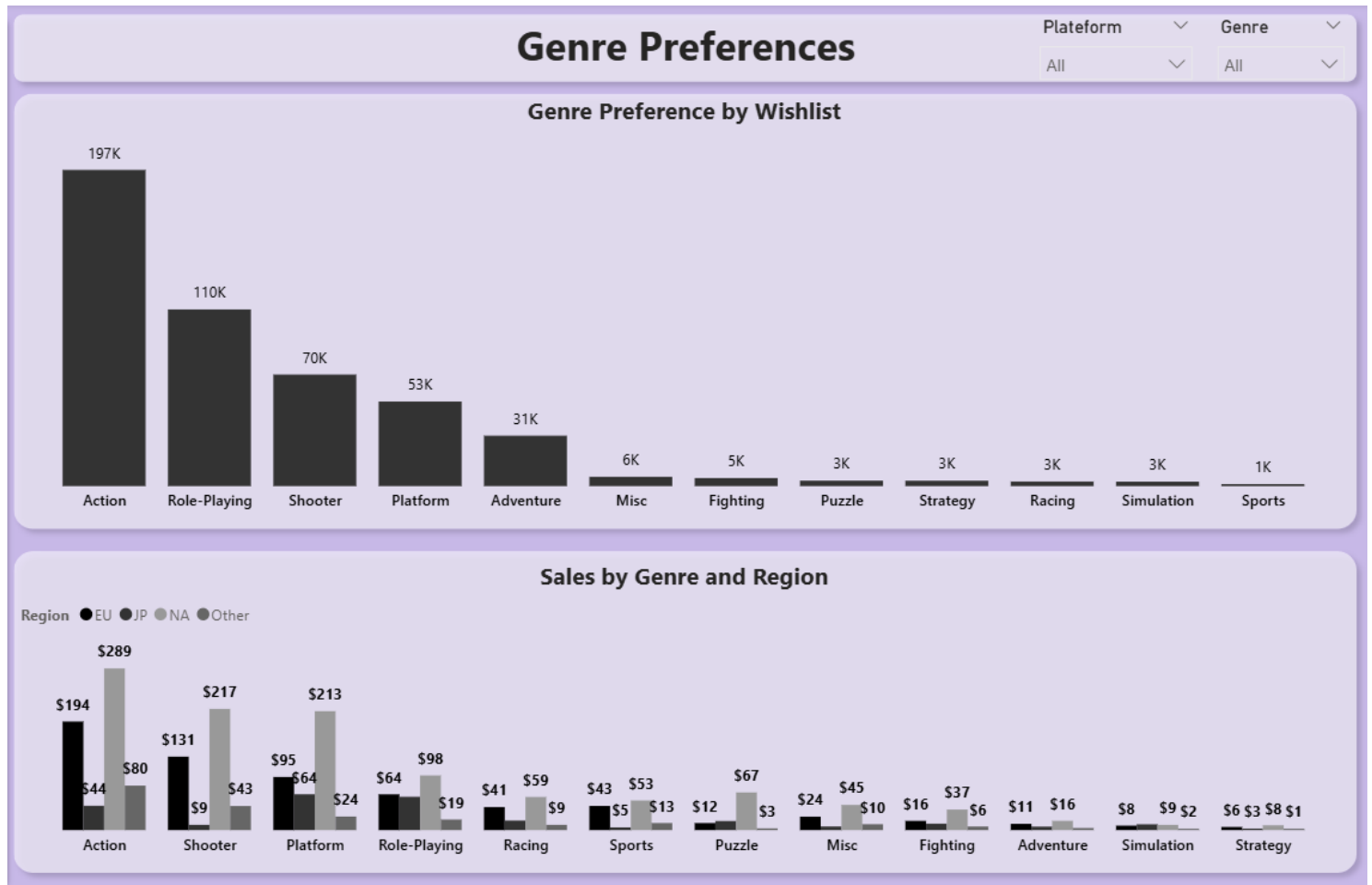
6. Yearly Sales Change by Region

- North America consistently outperformed all regions.
- Europe followed similar trends, showing parallel growth cycles.
- Japan's share is steady but smaller, with less volatility.
- A global decline post-2015 indicates the transition from traditional console sales to hybrid/digital ecosystems.

Business Implication:

- Global developers should analyze sales cycles regionally and time launches around high-performing markets.
- Diversify revenue streams with digital stores, downloadable content (DLCs), and live-service models.

Genre Preferences



Insight:

- Action dominates with almost double the Wishlist count of the next genre, highlighting its universal popularity.
- RPGs and Shooters also have high engagement, showing players' preference for immersive gameplay, character progression, and competitive elements.
- Lower Wishlist counts in genres like Puzzle, Strategy, and Sports suggest more niche or casual appeal.

Business Implication:

- Developers should prioritize Action, RPG, and Shooter genres for mainstream success.

- Studios focusing on smaller genres (e.g., Puzzle, Strategy) should target mobile or casual markets where shorter play sessions are valued.
- Cross-genre innovation (e.g., Action-RPG, Shooter-RPG hybrids) can tap into overlapping audiences.

Insights by Region:

- North America (NA) is the largest market for almost every genre — especially Action, Shooter, and Platform games.
- Europe (EU) also shows strong demand for Action and Shooter, but at smaller scale.
- Japan (JP) has modest sales across genres, indicating a more specialized market (e.g., RPGs, Fighting, Platform).
- Other regions (e.g., Latin America, Oceania) contribute smaller but growing shares, especially in Action and Platform games.

Business Implication:

- NA & EU should remain the primary target markets for global game launches, particularly for Action/Shooter titles.
- Japan favors RPGs and Fighting games, so local publishers should invest in narrative-heavy and character-driven gameplay.
- Emerging markets may be responsive to simpler or mobile-oriented versions of popular genres.

Genre Popularity vs. Sales Correlation

Insights:

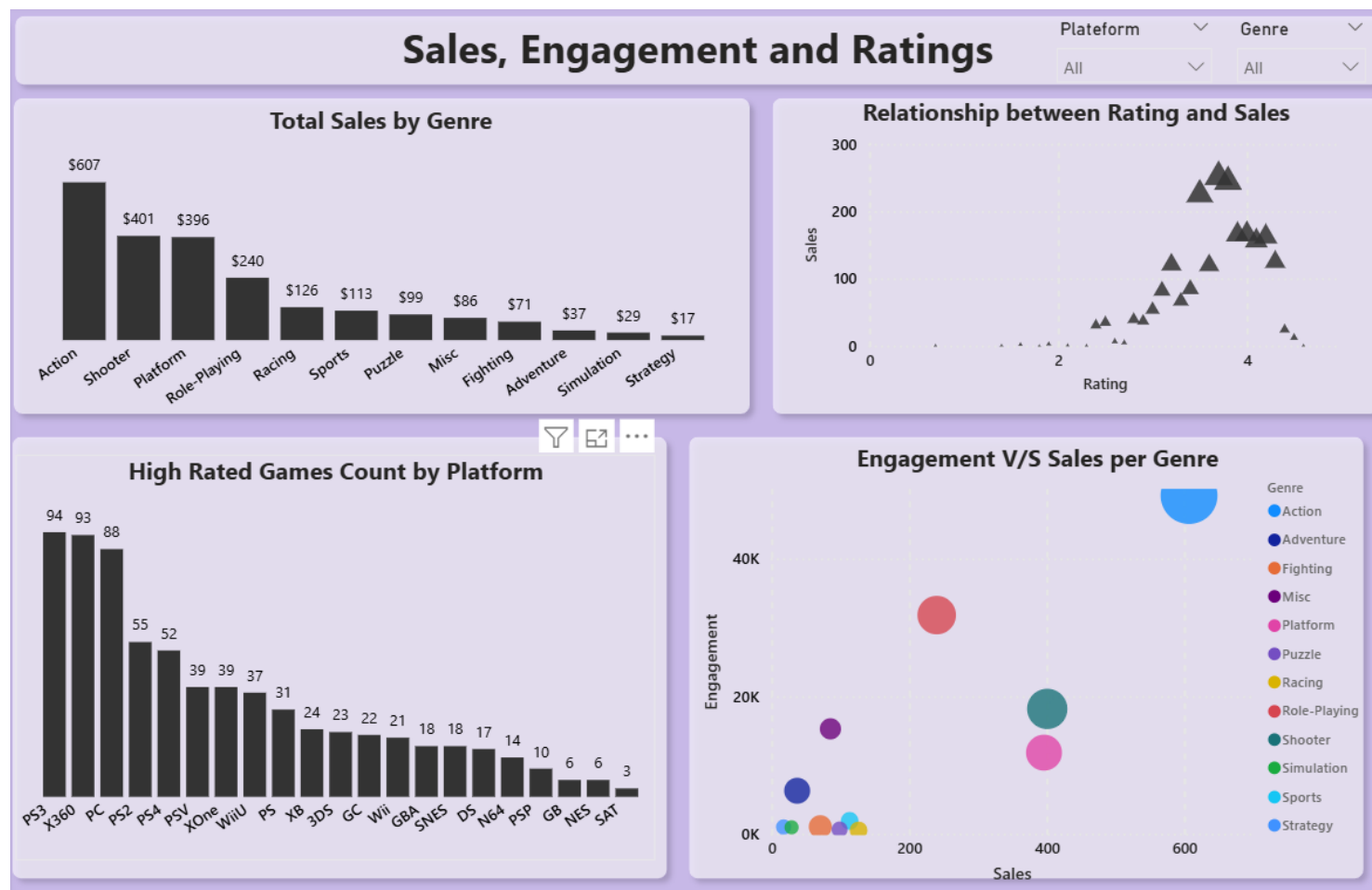
- Genres with high wishlist interest (Action, RPG, Shooter) also generate the highest sales, proving strong alignment between player anticipation and purchase behavior.
- Some genres like Platform show lower wishlist numbers but high sales, possibly driven by legacy franchises (e.g., Mario, Sonic).
- Conversely, Puzzle and Strategy genres have minimal wishlists but decent sales, suggesting casual, impulse-driven buyers rather than long-term fans.

Business implication:

- Studios should monitor wishlist trends early in development to gauge market potential.
- Legacy IPs (especially Platform games) can still deliver strong returns despite less hype—ideal for remakes and re-releases.

- Casual genres should focus on low-cost development and mass accessibility (mobile, free-to-play models).

Sales, Engagement and Ratings



1. Total Sales by Genre

Insights:

- **Action games dominate** with the highest sales (\$607M), followed by **Shooter** and **Platform** genres.
- Genres like **Strategy**, **Simulation**, and **Adventure** have relatively low sales volumes.

Business Strategy:

- Double down on Action/Shooter titles — they clearly drive the most revenue. Allocate more marketing and development budgets here.
- Invest in Platform and Role-Playing games, which also show strong sales momentum and dedicated audiences.
- For lower-performing genres (Simulation, Strategy), consider:
 - Targeted niche marketing to specific audiences.

- Bundling or subscription inclusion (e.g. add to game pass or discount packages) to drive volume.

2. Relationship Between Rating and Sales

Insights:

- There is a strong positive correlation between higher ratings and higher sales.
- Games rated between 3.5–4.5 generate the majority of sales.
- Few low-rated games achieve significant sales.

Business Strategy:

- Quality is a key sales driver. Focus on improving gameplay, story depth, and graphics to maintain high ratings.
- Use early access feedback loops and community-driven testing to boost quality before launch.
- Leverage reviews and ratings in marketing — highlight critical acclaim and user satisfaction.

3. High – Rated Games Count by Platform

Insights:

- PS3, Xbox 360, and PC have the highest number of highly rated games (94, 93, and 88 respectively).
- PlayStation platforms (PS3, PS4, PSV) consistently perform well in quality.
- Older or handheld platforms (GBA, PSP, DS) have fewer top-rated games.

Business Strategy:

- **Prioritize cross-platform releases** for PC, PS, and Xbox to maximize exposure and reach.
- **Optimize marketing and ports** for these top-performing ecosystems.
- Explore **backward compatibility and remasters** for PS3/X360 classics to leverage nostalgic fanbases.

4. Engagement vs Sales per Genre

Insights:

- Action games again lead both in sales and engagement — showing sustained player interest.
- Role-Playing and Platform genres show balanced engagement and sales, indicating loyal user bases.

- Other genres show modest engagement despite low sales — possible niche audiences.

Business Strategies:

- For Action and Role – Playing, invest in:
 - Live service models, DLCs, and multiplayer expansions.
 - Community-building(events, tournaments, influencer campaigns).
- For low-engagement genres, focus on re-engagement strategies:
 - Add Social or competitive features.
 - Use cross-promotions with popular genres(e.g. Action-Adventures hybrid).

Conclusion:

The analysis reveals that the video game market is driven by quality, genre alignment, and regional targeting. Action, Shooter, and Role-Playing games dominate both sales and engagement, making them the most profitable and strategically vital genres. Developers should prioritize these categories, while using hybrid genre innovation (e.g., Action-RPG, Shooter-RPG) to reach broader audiences.

Quality consistently correlates with commercial success—games with higher ratings achieve stronger sales and long-term engagement. Therefore, studios should invest in storytelling, technical polish, and user feedback integration to sustain high review scores. Leveraging early-access testing, post-launch updates, and live-service models can further enhance player retention and lifetime revenue.

Regionally, North America and Europe account for nearly 80% of global sales, making them the core focus for marketing and distribution. However, Japan remains influential in niche markets like RPGs and Fighting games, while emerging regions offer opportunities for mobile and simplified releases.

Platform performance highlights the strength of PlayStation, Xbox, and PC ecosystems, suggesting that cross-platform releases, backward compatibility, and remasters of classic titles are key growth avenues. Additionally, the shift toward digital sales, subscriptions, and DLCs means that digital-first and community-driven strategies now offer the highest ROI.

In summary, success in the modern gaming industry depends on investing in top-performing genres, maintaining high-quality standards, optimizing multi-platform launches, and adapting marketing to regional demand. Studios should focus on fewer but higher-impact titles, enhanced through continuous engagement and digital monetization models, to ensure sustainable long-term profitability.

