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### **Introduction**

DFC Intelligence is an industry analyst firm covering the video game industry since the mid-1990's

We provide insightful, realistic and actionable market analyses, forecasts, and user segmentations to a global roster of companies operating within the video game industry as well as investors looking for quality insights into where the opportunities and risk will be found.

DFC Intelligence has earned a reputation within the video game space as a firm that brings objectivity and a healthy dose of realism to the market segments it covers.

We offer full market subscription programs, segment specific services, market reports, targeted forecasts and customized client solutions.

Reach out to us at <a href="mailto:info@dfcint.com">info@dfcint.com</a> to schedule an introduction to our services.

# DFC Intelligence World-Wide Video Game Program

- Global coverage of hardware, software, subscription services, accessories, and emerging trends in cloud gaming, game development and AI, and more
- Forecasts by hardware platforms (PC, console and mobile), software products and services, user and geographic segments by dollars and units
- Company analysis and assessments of products, positioning and strategy
- Deep dive user segmentation and analysis
- Key trends and factors driving or impacting market growth
- Analyst inquiry and one-to-one engagements to address key client questions and initiatives, or hot takes on what DFC thinks about announcements, trends and more
- Customized surveys and client specific reports



### **Overview**

#### Intro

- This report summarizes major topics in the video game industry that DFC Intelligence will cover in greater detail throughout 2024
- There are some high-level forecasts, but the primary focus is on segmentation, strategy and opportunity

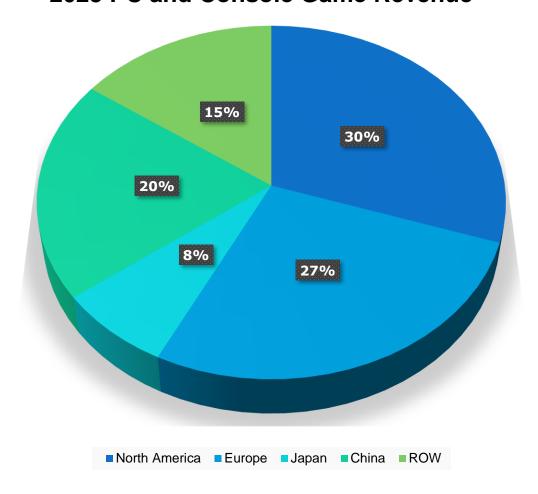
### **Major Issues**

- How did the market perform in 2023 and what are the growth forecasts for 2024?
- How will Microsoft's acquisition of Activision Blizzard impact the industry?
- How are subscription services and cloud gaming products impacting AAA games?
- Why is the hardware market expected to boom in 2024?
- What are major investment opportunities in the game space?
- How large are the major segments in the game space and who are the leading players?



### **2023 Highlights: PC and Console**

#### 2023 PC and Console Game Revenue





#### **Revenue Flat**

Total software revenue for 2023 forecasted to be \$74 billion versus \$75 billion for 2022. Video game console unit sales flat with Nintendo Switch decline.

#### **Layoffs and Merger**

The news was dominated by game company layoffs and the Microsoft/ATVI acquisition. The media is overly dramatic, but it is in an indication of overall major industry changes as the industry adopts new business models

#### **Big Games From Console Publishers**

Nintendo: The Legend of Zelda: Tears of the Kingdom; Sony: Marvel's Spider-Man 2; Microsoft: Starfield

#### Large Publishers Focus on Games as a Service

Releases are more updates of ongoing products such as EA Sports franchises, Call of Duty, Blizzard titles

### Big Opportunity for Small Publishers/Japan IP

Major releases from smaller companies and classic Japan game companies do well as larger publishers focus on live services model

#### **Video Game Industry Drives Hollywood Entertainment**

Video game IP brings in the audience, not the other way around. The Super Mario Bros Movie, The Last of Us, Five Nights at Freddy's, Gran Turismo, Twisted Metal

### **2023 Games: A Diverse Lineup**

### Some major titles of 2023 highlighted key industry trends



Baldur's Gate 3 game of the year was published by Belgian based Larian Studios Diablo IV from Blizzard did well at the start but it is uncertain if it will become a long-term live service product



Cyberpunk 2077:
Phantom Liberty
expansion brought
back a title that
initially disappointed



HOGWARTS

Hogwarts Legacy showed that big media IP can still translate to hit games



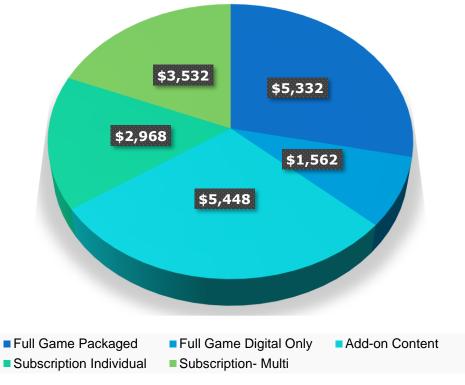
Lies of P from Korea based Neowiz is an example of how companies from Asia can expand West Alan Wake 2 from Epic is an example of copromotion with Epic Games Store and Fortnite





### 2024 Outlook





#### **Continued Year of Reorganization**

The movement away from a big box retail console business is difficult as companies continue to experiment with new models

#### **Limited Game Lineup Makes Forecasting Hard**

Larger players focus on ongoing live service products and major new product releases look sparse

#### **Sony Trying to Play Catchup in Live Services**

Sony has been behind the curve and is trying to adopt online business models it had ignored. Naughty Dog cancelling Last of Us Online is an example of the struggle

#### Microsoft Swallowing a Big Pill

The Activision Blizzard acquisition may consume Microsoft whose sales have been disappointing. Not much innovation is expected as the focus is on integrating the new business.

#### **Nintendo Looking to New Hardware**

DFC expects Nintendo to announce a new hardware system as Switch sales continue to decline.

#### A Year of Hardware Spending

Overall revenue in software is expected to be flat but hardware spending is expected to grow 21% setting up strong software sales in 2025+



### **2024 Games: Looking Limited**

### Big games from Japanese publishers and classic 1990s franchises



Alone in the Dark is an update on a 1990s horror game. Can the struggling Embracer Group get a hit?

Already delayed

Final Fantasy VII
Rebirth is the second
in an action-based
reimaging of the
classic 1997 game



Like a Dragon: Infinite
Wealth is part of
Sega's long running
Yakuza series. A
sandbox style gangster
game ala GTA



PRINCE OF GROWN

Prince of Persia: The Lost Crown is a new release in a classic Ubisoft series. Should be first major title of 2024



Star Wars Outlaws is an open-world game. Publisher Ubisoft has struggled with getting titles out the door Tekken 8 is a new title from the classic Bandai Namco fighting franchise. Tekken 7 did very well.





### **Mobile Games**

- This report focuses primarily on core console and PC games
  - Mobile games is a different business than core video games
  - Look at top titles and companies to understand business
  - Segmentation is very different (see next slide)
- Market is dominated by a handful of companies and games
  - Top games can last for years
  - Not many new games enter the list considering market size
- Distribution and monetization are most important role
  - Design focuses on monetization via item purchase and/or advertising
  - Focus is on short play sessions and impulse purchase
- Crossover synergy with console and PC franchises has been limited
  - Games as a platform is starting to see crossover
  - Best examples are Fortnite, Minecraft, Roblox

### Top Mobile Game Companies (by mobile game revenue)

| Company                         | Location  | Key Titles   |  |
|---------------------------------|-----------|--|--|
| Tencent                         | China     | PUBG, Honor of Kings, League of Legends, Supercell         |  |
| Netease                         | China     | Knives Out, Marvel Super War, Harry Potter: Magic Awakened |  |
| Sea Limited/ Garena             | Singapore | Free Fire, SE Asia distribution                            |  |
| Activision Blizzard (Microsoft) | USA       | Candy Crush Saga, Call of Duty Mobile                      |  |
| Cygames                         | Japan     | Shadowverse, Idolmaster                                    |  |
| Zynga (Take-Two Interactive)    | USA       | Zynga Poker, Words with Friends, Empires and Puzzles       |  |
| MiHoYo                          | China     | Genshin Impact   |  |
| Niantic                         | USA       | Pokemon Go   |  |
| EA                              | USA       | FC Mobile, Lord of Rings, Bejeweled, Sims Mobile           |  |
| GungHo Online                   | Japan     | Puzzles & Dragons, Ragnarok Mobile                         |  |



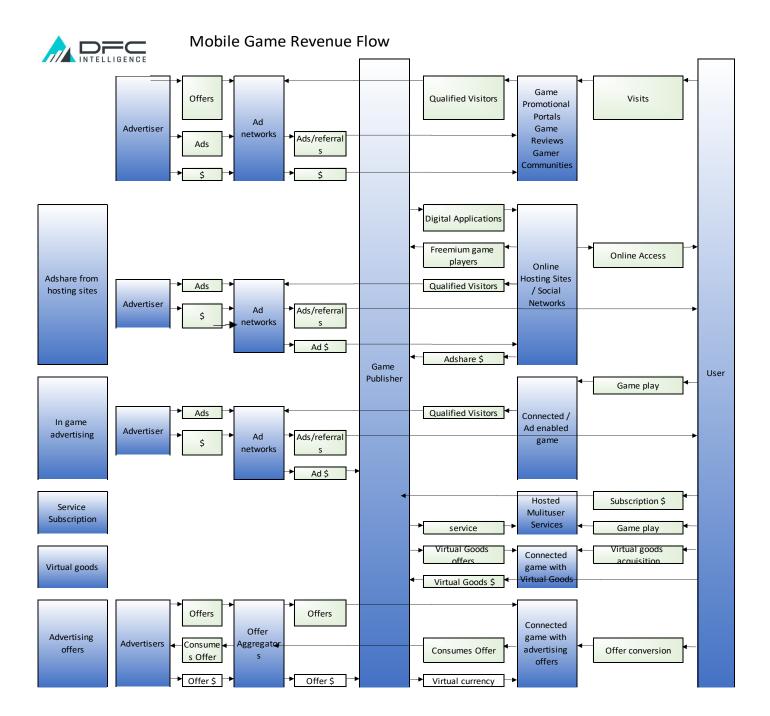
## **Mobile Games**

| Mobile Games of Note     |             |         |  |  |  |  |  |
|--------------------------|-------------|---------|--|--|--|--|--|
| Game                     | Publisher   | Release | Notes                                  |  |  |  |  |
| Call of Duty Mobile      | Activision  | 2019    | free version of top FPS title          |  |  |  |  |
| Candy Crush Saga         | Activision  | 2012    | biggest puzzle USA game                |  |  |  |  |
| Clash of Clans           | Supercell   | 2012    | mobile strategy tower defense          |  |  |  |  |
| Coin Master              | Moon Active | 2018    | simple hyper-casual casino style       |  |  |  |  |
| Fantasy Westward Journey | NetEase     | 2015    | Mobile version of leading China MMORPG |  |  |  |  |
| Fate/Grand Order         | Sony        | 2015    | RPG with gacha mechanic                |  |  |  |  |
| Fortnite                 | Epic        | 2019    | Battle Royale/Game as a Platform       |  |  |  |  |
| Genshin Impact           | MiHoYo      | 2020    | China open-world RPG                   |  |  |  |  |
| Honor of Kings           | Tencent     | 2015    | China MOBA                             |  |  |  |  |
| Minecraft                | Microsoft   | 2011    | UGC/Game as a platform                 |  |  |  |  |
| Monster Strike           | Mixi        | 2013    | Jjapan RPG/puzz;e                      |  |  |  |  |
| Pokemon Go               | Niantic     | 2016    | location based AR game                 |  |  |  |  |
| PUBG Mobile              | Multiple    | 2018    | Battle Royale                          |  |  |  |  |
| Puzzles & Dragons        | GungHo      | 2012    | match three that adds RPG elements     |  |  |  |  |
| Roblox                   | Roblox      | 2011    | UGC/Game as a platform                 |  |  |  |  |
| Zynga Poker              | Zynga       | 2011    | Classic card game                      |  |  |  |  |



# **Mobile Games Segmentation**

Mobile game business has a complicated distribution and many business models that do not translate to traditional game business





### **Top Game Publishers**

- There is a difference between developers, publishers and distributors
- Publishers have the closest relationship with consumer AFTER purchase
- Top publishers can act as distributors but it is a different roll (ex Tencent earns significantly more as a distributor versus publishing)
- With Activision Blizzard acquisition, Microsoft becomes top publisher NOT including distribution revenue from Xbox or Game Pass

These are estimates for publishing game revenue that are designed to eliminate distribution revenue

| Company                       | Revenue<br>(in billions) |  |
|-------------------------------|--------------------------|--|
| Microsoft Activision Blizzard | \$9.6                    |  |
| Tencent                       | \$7.5                    |  |
| Electronic Arts               | \$7.4                    |  |
| Nintendo                      | \$6.4                    |  |
| Epic                          | \$5.2                    |  |
| Take-Two Interactive          | \$4.8                    |  |
| Sony                          | \$3.0                    |  |
| Sea Limited                   | \$2.8                    |  |
| Nexon                         | \$2.7                    |  |
| Square Enix                   | \$2.5                    |  |
| MiHoYo                        | \$2.4                    |  |
| Embracer Group                | \$2.3                    |  |
| Roblox                        | \$2.2                    |  |
| CyberAgent                    | \$2.1                    |  |
| Ubisoft                       | \$2.0                    |  |
| Komani                        | \$2.0                    |  |
| NetMarble                     | \$2.0                    |  |
| Ncsoft                        | \$1.9                    |  |
| Bandai Namco                  | \$1.8                    |  |
| Warner Bros Discovery         | \$1.8                    |  |



### **Top Game Distributors**

- Distribution is the most powerful segment of the game space
- Distributors control getting product into consumer hands
- Without strong distribution channels publishers will not be able to get product into consumer hands
- Console hardware manufacturers have significant distribution control
- Google and Apple are major mobile distributors
- Valve's Steam service leads in PC games
- Battles for control of distribution among major players will be the MOST important trend to watch in the game space



This is a sample list of the top game distributors. Note revenue from game distribution will exceed publishing revenue and market analysis requires careful separation of roles to avoid double counting



# **DFC Intelligence Has Created Four Broad Content Categories for Forecasting**

#### **Full Game Content**

- Games that are delivered as a client to end user
- Can be bought in a physical package or digital delivery
- About 32% of core console and PC game revenue

#### **Individual Game Platforms**

- Games like Fortnite, Roblox, Minecraft focus on UGC
- Electronic Arts sports franchises, Take-Two's Grand Theft Auto operate as their services
- Subscription to individual games is expected to account for 20% of core console and PC game revenue in 2024

### Add-On Content

- Add-on content for games is leading revenue for mobile games and free-to-play games
- This is now a major revenue for core PC and console segments
- Should pass full game content revenue in 2024 and account for 33% of revenue

### **Bundled Subscriptions**

- Major subscription services include 1) enhance a subscription service; 2) standalone cloud service; 3) rent a PC/device service
- Microsoft GamePass, Sony PlayStation+ use cloud as an extra feature to enhance service
- Amazon Luna and Google Stadia are standalone cloud
- Nvidia GeForce NOW, Shadow, Loudplay, and Boosteroid are rent a device services
- These services are expected to account for 15% of core console and PC game revenue in 2024



### **DFC Segmentations for Forecasting**

### Business Models

- Focus on revenue generation
- Revenue per user is major focus

### User Type

- Focus on type of user
- Platform (mobile, console, PC) and region is key consideration

### Game Genre

- Focus is on the type of game
- See DFC core genres and subgenres



## **Business Models**

- DFC has several business model segments
- Custom reports can focus on specific areas including subscription revenue, digital add-on, full-game, retail packaged, F2P, cosmetic content, DLVC, cloud games, metaverse and more

### User Type

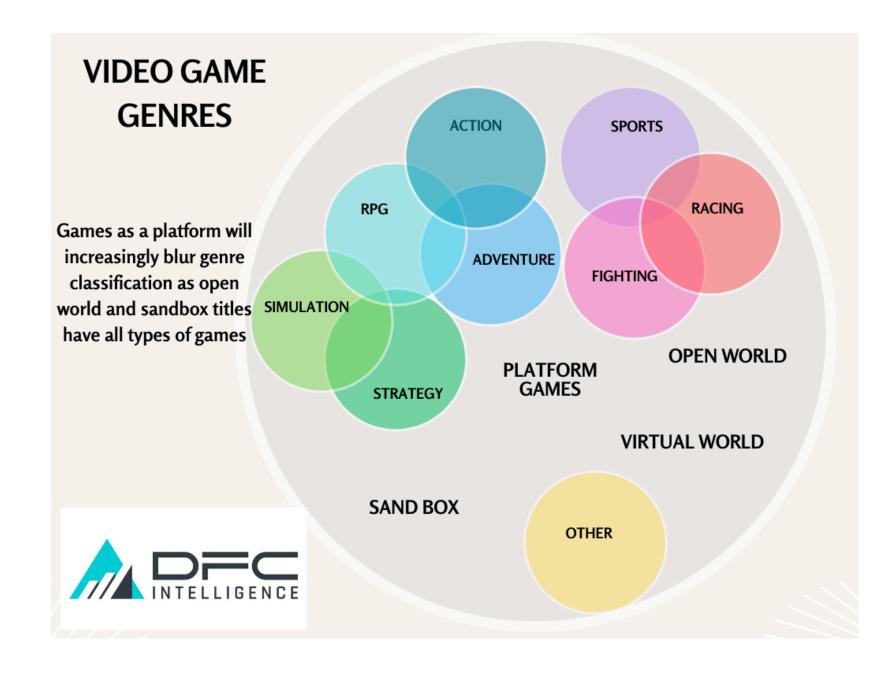
- Consumer Segmentation focuses on segmenting consumers by platform across 26 major countries/region
- ARPU by consumer type and region, system spend and attach rate, peripherals and accessories ARPU

### Game Genre

- Key genres include action, simulation, RPG, adventure, strategy, sports, racing, fighting and other (exercise/casual etc)
- Core genres are divided into 48 sub-genres
- Platform games are a core segment that blends genres

### **Video Game Genres**

Segmenting games by genre is getting increasingly difficult as genre types blur. Sub-genre analysis is critical





### **Video Game Sub-Genres**

Sub-genre is critical for a true understanding of product potential

| Sports              | Racing            | Fighting             | Simulation         | Strategy       |
|---------------------|-------------------|----------------------|--------------------|----------------|
| Arcade Sports       | Kart Racing       | Platform Fighter     | Vehicle Sim        | Turn-Based     |
| Management          | Arcade Racing     | One-on-One Fighter   | Construction/Mange | Real-Time      |
| Simulation          | Simulation Racing | 3D Fighter           | Life Sim           | Board Game     |
|                     |                   | Team Fighter         |                    | Card Game      |
|                     |                   |                      |                    | Grand Strategy |
|                     |                   |                      |                    | MOBA           |
|                     |                   |                      |                    | Puzzle         |
|                     |                   |                      |                    | Deck Building  |
| Adventure           | RPG               | Action               | Other              | Platform Games |
| Action Adventure    | Action RPG        | Platformer           | Board game         | Any Genre      |
| Narrative Adventure | Turn Based RPG    | Stealth              | Trivia             | Sand Box       |
| Visual Novel        | MMORPG            | Survival Horror      | Party              | Open World     |
| Point and Click     |                   | Beat em up           | Exercise           | Virtual World  |
|                     |                   | Hack and Slash       | Education          |                |
|                     |                   | Metroidvania         | Brian/Logic        |                |
|                     |                   | First-Person Shooter | Music/Rhythm       |                |
|                     |                   | Third-Peson Shooter  |                    |                |
|                     |                   | Battle Royale        |                    |                |



## **DFC Cloud Gaming Segmentation**



### **End-User**

- Hardware with screen
- Online connection
- Access to content

### **End-User Hardware**

- Game Console
- TV with streaming
- Mobile Device

### **End-User Service Content**

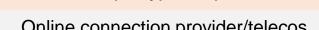
- Online Connection via Telco/ISP
- Content Service via hardware manufacturer, ISP/teleco or individual game provider

**Movement to subscription** and live services is a major trend but cloud games and subscription services are not well understood as of yet.



There are multiple types of providers

- Online connection provider/telecos
- Hardware manufacturers
- Multi-game subscription service providers
- Social networks
- Independent game and content creators





The handful of large providers that all other players must work with

- Amazon AWS
- Google Cloud
- Microsoft Azure
- Tencent Cloud, Alibaba (China)

### Secondary Cloud Technology

Additional players provide custom technology for major players in space

- **Analytics**
- White label services
- GPU virtualization/edge delivery
- Billing/customer support
- Core hardware for service provider

### **Core Assumptions for Cloud Games**

### **DFC Thesis**

- Cloud gaming is not a distinct market and will touch all segments of the gaming industry.
- Cloud gaming is already a big business

### **Key Basic Assumptions**

- Cloud gaming is not an independent segment but is instead technology that will enhance all areas of the game space.
- In many cases it will supplement high-end hardware and provide additional processing to games installed on the end user side (client).
- Subscription services to cloud games are only one segment of a much larger industry.
- A Netflix of video games is not a good analogy
- Cloud games are closely related to other hot topics in the game space including the growth of the metaverse, AI and individual game platforms that focus on user generated content (UGC) Roblox.
- To understand the true impact, it is important to look at individual segments within the larger game space and address how cloud delivery will impact that segment based on its unique characteristics.



### **Hardware Providers of the Future**

## **Console Hardware**

- Nintendo Switch: AIB 12/23 = 60 million on decline
- Sony PlayStation 5: AIB 12/23 = 45 million increasing
- Microsoft Xbox X/S: AIB 12/23 = 25 million increasing

### PC Hardware

- Hardware manufacturers have limited market influence
- Component providers Nvidia, AMD, Intel are active in promoting developer services
- DFC estimates PC game hardware at \$50 billion 2023
- DFC Segmentation: 2 billion PC users, 300 million high-end, 35 million core enthusiasts

### Mobile Hardware

- Growth in hardware for playing PC games
- Steam Deck, ASUS ROG Ally, PlayStation Portable, Logitech G Cloud and others
- Currently a minor market with no leader

# Connected Mobile

- Apple and Google provide distribution and services
- Manufacturers and telecos may provide custom services usually via white label (ex Samsung)
- Estimated 2.8 billion connected mobile consumers use games but most do not pay

#### **Smart TV**

- Smart TV providers have custom OS and can work with white label providers (Samsung Gaming Hub with Blacknut is an example)
- DFC Intelligence forecasts TV manufacturers will play only a minor role

# Headsets and Accessories

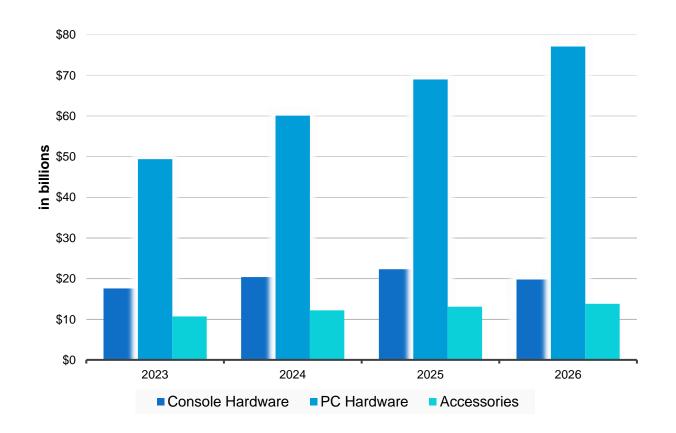
- A diversity of devices that enhance game play
- Accessories market is expected to reach \$12 billion in 2024



### **Video Game Hardware**



# Video Game Hardware Revenue by Type





Hardware spending is expected to soar after shortages and a post-Covid decline

### **Assume Nintendo Launches a New System**

Built in new system from Nintendo going forward. PS5 expected to be leading seller near-term

#### **Alternate Platforms**

Alternate platforms that are mobile and cloud focused could impact dominant position of Sony PlayStation hardware brand in a few years

### **DFC Survey Results**

DFC's recent hardware survey showed major purchase intent for all hardware categories.

### **Core PC Gamers Expected to Upgrade**

DFC survey found 84% of 2020 high-spend PC builders plan to upgrade in 2024/2025

#### **Consumers Look at Brands for Hardware**

Top rated brands include Sony, Nvidia, Corsair, Steel Series, Turtle Beach and Nintendo



### **Key Issues and Trends**

### **Live Service vs Single Player**

Large companies focus on live service products that open the opportunity for smaller publishers to focus on traditional single player

#### **Distribution Battle**

Can Microsoft take a leadership position via ATVI acquisition? Uncertain and it is expected to take years to play out among several players

### **Subscriptions and Live Services**

Living games and live services are separate from subscriptions. The classic Netflix subscription model is unproven. Individual games can operate as their own platform/subscription product

### **Investment Opportunity #1: IP**

Game IP has a long life across multiple media. Classic Japan game companies have some of top IP

### **Investment Opportunity #2: Tools and Tech**

Developers struggle to profitably deliver ongoing games. Al, engines and other tools will drive productivity

### **Investment Opportunity #3: Platforms**

User generated and AI content allow games like Roblox, Fortnite and Minecraft to operate as their own platforms



### **Conclusion**

### **Growing Pains as Industry Evolves**

- After major growth during Covid, the video game business remains strong but did not see major growth in 2023
- 2024 is expected to be flat as large game companies focus on a live services model

### **Key Points**

- The movement to subscription and live services is a major trend but a big growth area is the emergence of single player games as living games that generate ongoing revenue
- Individual games are starting to become significant distribution platforms
- Over the next few years there is likely to be a power shift among the major industry players. If Microsoft can successfully integrate Activision Blizzard it will likely severely undermine Sony's future position with PlayStation.
- Control of distribution will be the most important trend to watch. Battles among the major players over distribution could increase margin for content creators as distribution royalties decrease with competition.
- Hardware is expected to be a major growth area in 2024 and this may include a new system from Nintendo
- The growth in installed base of hardware will be a major industry driver in 2025 and on.





### **About DFC Intelligence**

DFC Intelligence provides a full spectrum of coverage of gaming for discerning clients. Our analysis and forecasts are sought out by companies who want an honest and realistic perspective on markets vs hype, inflated numbers and marketing speak. We support companies to identify the real market opportunities to maximize capital expenditures and pursue sound and profitable strategies.

Contact us at info@dfcint.com



#### Games

Mobile, console and PC games and subscription services broken out by market, user, genre and engine



#### **Platforms**

Shipment data and forecasts of gaming PCs, laptops, PC hardware and mobile devices.

Components too



#### **Accessories**

Breakouts by headsets, keyboards, mice, controllers and other hot accessories

### **Annual Services**

### **All-Access Program**

- Annual access to all DFC Intelligence Research
- Excel Forecasts update throughout the year
- Market Reports updated annually
- Industry Briefs and Market Trend Analysis
- Consumer Surveys conducted throughout the year
- Access to historical reports and research
- Analyst inquiry and one-to-one engagements
- Ability to provide input for customized surveys and white papers
- Program can be customized based on company size, number of users, market or segment interest

### **Coverage of Major Topics**

- Video game software latest trends
- Game hardware including PCs, consoles, mobile devices, VR, accessories
- Subscription services, cloud games, metaverse and new trends
- Customized surveys and white papers

### **Complete Forecasts**

- Multiple Excel file-based forecasts
- Updated throughout the year
- Forecasts for key market segments including console, PC, mobile, subscription services, digital delivery
- Forecasts for individual regions and countries

### **Regular Updates**

- New console launches and latest forecasts
- Analysis of upcoming games
- Quarterly market performance updates and analysis of key market players
- Topical market briefs
- Merger and acquisition analysis

### **Full Surveys**

- Multiple annual consumer surveys
- Summary survey reports plus raw data in (XLS/SPSS)
- Ability to provide input on questions and survey topics
- Customized survey options available



All DFC Intelligence Services come with analyst inquiry hours to discuss findings, address client specific inquiries, messaging or feedback sessions.

### **Off-the-Shelf Products**

### **Syndicated Reports**

- PC Hardware
- PC Game Software and Services
- Gamer User Segmentation
- Upcoming Game Tracker
- Global Gaming Accessories
- Console Gaming
- Streaming and Cloud Services

### **Market Forecasts**

- PC Hardware
- PC Games
- Console Games and Platforms
- Accessories
- Streaming and Cloud Services
- (Global, Regional and by Country)

### **Market Surveys**

- Console Gaming
- PC Hardware
- Accessories
- Security



**Custom** 

DFC Intelligence carries out short to medium-term engagements for clients for matters related to strategic planning, market modeling, investment decisions, M&A, new product introduction or market/product messaging.

Our approach to projects starts with DFC Intelligence's long-time history in video gaming. DFC's team possess over 100 years of combined experience in the space which enables us to provide an informed perspective on the issues and challenges facing companies and investors.

