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THE GLOBAL DIGITAL GAMING MARKET QUARTERLY UPDATE

November 7, 2018



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With over 30 years of industry expertise, IDG Consulting is the premier research firm specializing in the worldwide video game markets and provides a full range of consulting and advisory services to the consumer electronics and interactive entertainment industries. The Global Digital Gaming Market – Quarterly Update was written and compiled by IDG's team: Emilie Avera, Christina Kei, Tejinder Mangat, Jeremy Miller, and Yoshio Osaki.

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METHODOLOGY

- In this report, IDG covers digital games sales that are not covered by the main retail tracking services
- All digital gaming revenue is categorized into one of the following three platforms: mobile devices (including tablets), gaming consoles, or PCs
- Europe encompasses all countries in Western, Central and Eastern Europe
- Asia only includes China, Hong Kong, South Korea and Japan
- Rest of World territories include Canada, Latin America, Southeast Asia, Africa, India, Middle East, Australia/ New Zealand
- In developing its digital gaming forecast, IDG leverages and triangulates among as many primary resources as possible, including company earnings reports and industry channel checks with key stakeholders for market intelligence across publishers, platform holders, manufacturers, retailers and other contacts. Secondly, IDG considers information available from digital data tracking services as well as other analyst research for validation purposes.
- Forecast figures in charts have been rounded to the nearest \$10M for numbers >\$10M and to the nearest \$1M for figures <\$10M

IDG'S DIGITAL CATEGORIES

MOBILE

Gaming revenues derived from mobile phones and tablets



iOS

Android

DIGITAL CONSOLE

Gaming revenues derived from console and handheld online networks



MSFT XBL

Sony PSN

Nintendo Network

DIGITAL PC

Gaming revenues for PC-based games that do not include a retail-based transaction



RPG

MOBA

Shooter

Casual

Other



EXECUTIVE SUMMARY

- It's a testimony to how much influence China wields in the digital games market that IDG's global forecast for 2018 was lowered by about \$4 billion this quarter, mainly due to softness in China's mobile and PC gaming markets
- IDG's forecast for the US and Rest of World remain largely unchanged, while Europe's forecast was raised slightly, primarily due to stronger than expected performance in the PC and console categories
- DLC/Virtual Goods purchases account for the vast lion's share of digital games revenue—but its 77% share in 2018 is down slightly from 2017's peak of 78%
- Digital Console remains the smallest of the three categories but is expected to grow its market share by 2% in 2018 and continue to chip away at market share from Mobile and Digital PC over the next 4 years
- Overall, the global digital games market is expected to reach a value of \$137 billion in 2018 and grow to \$176 billion in 2022E

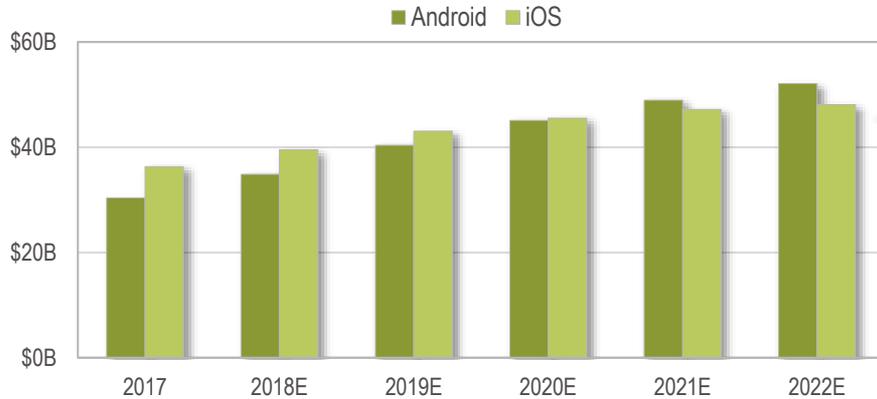




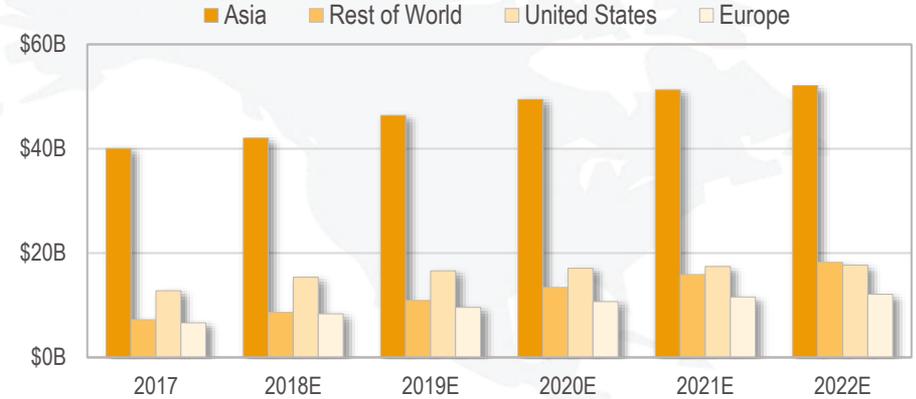
MOBILE

MOBILE SEGMENT SNAPSHOT

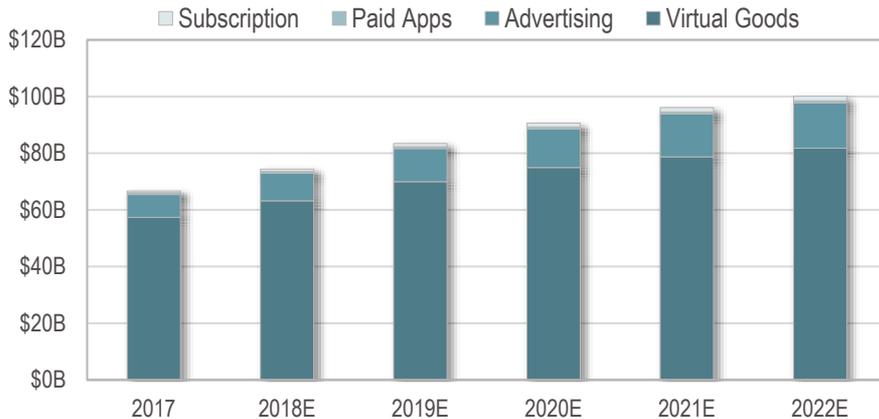
PLATFORM



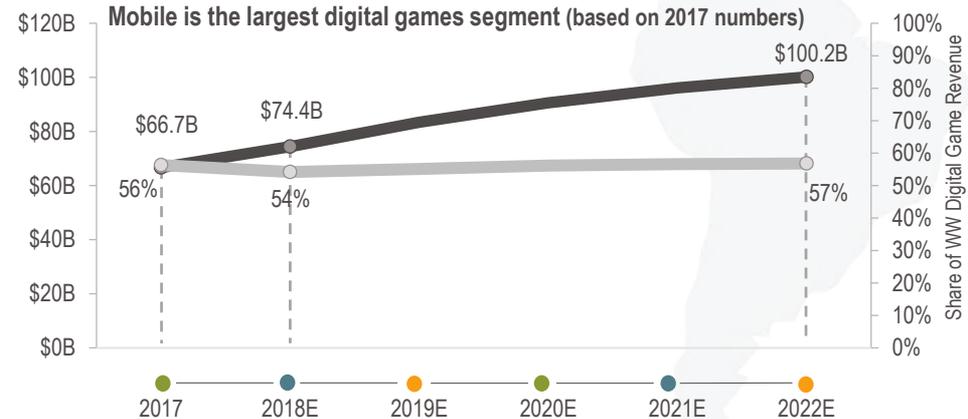
TERRITORY



REVENUE STREAM



THE BIGGER PICTURE



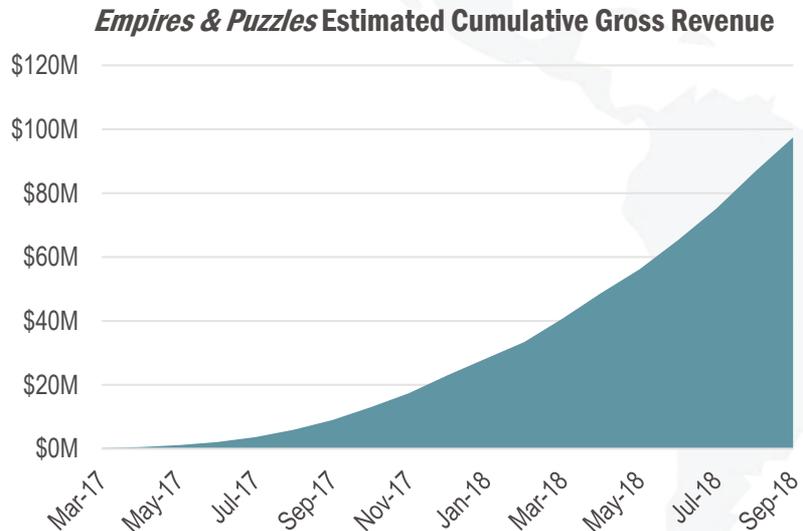
SUMMARY OF FORECAST – MOBILE

- IDG maintained its mobile gaming forecast for the US and Europe—estimated to be up 20% and 26% y/y, respectively—as these markets have been tracking in-line with expectations
 - Games like *PUBG Mobile* and *Fortnite* have been very successful on mobile, but the growth spurred by new hit titles was already baked into IDG’s forecast
- IDG incrementally increased its Rest of World mobile forecast for 2018, as these markets have seen stronger-than-expected growth over the past few quarters
- Asia’s mobile gaming forecast, on the other hand, was lowered considerably for 2018, primarily due to the slowdown in the Chinese market, which is discussed in further detail on pages 12-13
 - Even with two *PUBG* titles released in China this year, the games top China’s Download charts but do not make an appearance on its Top Revenue charts due to Tencent’s inability to implement monetization mechanisms in the game
- Altogether, the mobile gaming market is estimated to reach \$74 billion in 2018 and exceed \$100 billion by 2022E, representing a 5-year compound annual growth rate of 8%



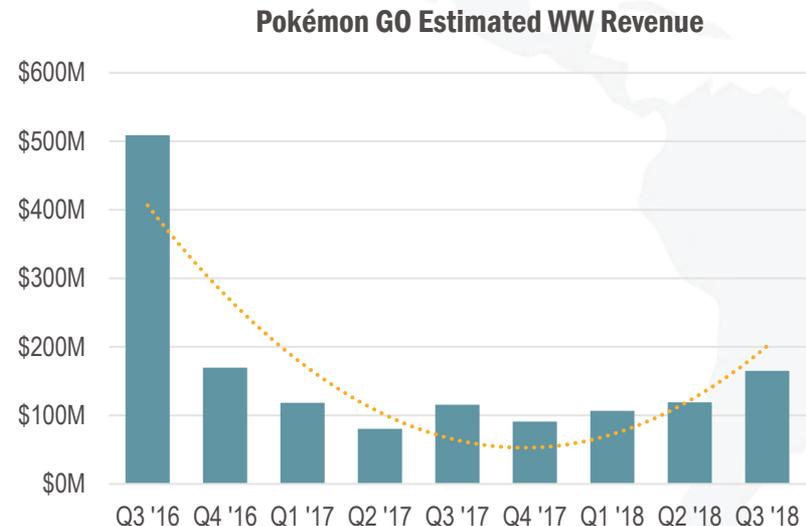
EMPIRES & PUZZLES

- The mobile market is often credited with being dominated by select major publishers, so it is rare when a standout hit like *Empires & Puzzles* emerges from a small company—Small Giant Games (SGG)
 - SGG previously worked on a casual game, but pivoted to midcore because the developer found the casual market to be oversaturated. However, this meant they would be going up against mobile giants like Machine Zone and Gung Ho.
 - The game is a Puzzle RPG which debuted in March 2017. It blends match-3 battle mechanics in the style of *Puzzles and Dragons*, base building mechanics as seen in games like *Game of War*, and adds its own PvP segment with the company touting aim mechanics, strategy modes, a low threshold for onboarding, and a deep meta for core fans as its key differentiators for success.
- Key milestones:
 - *Empires & Puzzles* broke into the Top 100 Grossing charts for several key Western markets during its first year
 - ▲ It won Google Play's Best Breakthrough Hit award in May 2018
 - In February 2018, SGG raised \$41 million in an investment round led by EQT Ventures, with Creandum, Spintop Ventures, and PROfounders participating
 - In July 2018, Small Giant Games' CEO said the title had 1.2 million DAUs, 3 million MAUs, and 15 million LTD downloads and that the studio employed just 35 people at the time



POKÉMON GO'S COMEBACK

- Though it may never reach the same heights seen in the Summer of 2016, *Pokémon GO* has recently seen a significant resurgence following its sharp drop-off after its first year
 - The summer quarters (Q3) remain important periods for the game as youth players are on break from school and the weather is more favorable for outdoor play
- Q3 2018 is estimated to have generated 43% more revenue than the same period last year, with a few key changes to the game being credited to the resurgence:
 - Niantic claims that the inclusion of new social features in the game (including friends and item gifting) have helped boost engagement metrics 35% over the 4 months ended September 2018
 - The game has incorporated new features like PvE raids and special research tasks to give players more modes to engage in, with PvP expected to be introduced by the end of 2018
 - The company has also done a better job of consistently operating live ops and community-focused events to keep gameplay from growing stale



MOBILE AD NETWORK LANDSCAPE

- There are various mobile advertising networks that can drive installs for a mobile game
- AppsFlyer ranked the top sources for installs by mobile game genre based on the volume of installs and retention of those users globally
 - Facebook's platform is dominant across all genres, but Google's share for app installs has reportedly grown 23% worldwide
 - ▲ Google's growth has not only been attributed to emerging markets like Latam, Southeast Asia, and India, but also initiatives like its Universal App Campaigns that streamline ad buying across its services (Google Play, YouTube, etc.)
 - Apple has already broken into the top ranks after bringing search ads to the App Store less than 2 years ago

RANK	CASUAL	MIDCORE & STRATEGY	CASINO & GAMBLING
#1	Facebook Ads	Facebook Ads	Facebook Ads
#2	Google Ads	Google Ads	Google Ads
#3	AppLovin	AppLovin	Apple Search Ads
#4	Apple Search Ads	Apple Search Ads	AppLovin
#5	Unity Ads	ironSource	Chartboost
#6	Vungle	Unity Ads	Unity Ads

Source:  AppsFlyer H1'18 Mobile Ad Performance Index



THE CHINA SITUATION

- The Chinese government and media have been continually aiming their critical eye on games for the past several quarters
 - In Q3, in an effort to prevent and reduce myopia (near-sightedness) in children, the government announced it would be limiting the amount of time children can play games, introducing age ratings, and would approve fewer games moving forward
 - The state media recently aired a segment that claimed games were “ruining” Chinese children, particularly those growing up in rural regions
- The government’s moratorium on new games approvals has continued since March 2018, supposedly due to “bureaucratic infighting”
 - There are now no fewer than three regulatory bodies that may or may not be involved in handling game approvals—the Ministry of Culture, the General Administration of Press and Publications, and the newly formed State Administration of Radio and Televisions
- The stocks of Chinese gaming companies have been under fire as a result, even those of powerful conglomerates
 - In Q3, Tencent was forced to shut down several games due to government regulations. The company has lost as much as \$190 billion in valuation so far this year due to continuing bad news of this variety, and most recently announced its first corporate restructuring in six years.



THE CHINA SITUATION (CONT'D)

- It isn't just the stocks of public companies that have taken a hit; the entire Chinese gaming market has been negatively impacted by the game approval freeze
 - Without new titles to spur the market, total game revenues are estimated to be flattish YTD
- Even after game approvals recommence, the market will likely be facing permanent and more stringent changes to requirements
 - Tencent has already had to implement numerous age verification measures on *Honour of Kings*
- While the impact on large companies like Tencent have been hogging the limelight, the unfortunate truth is that smaller developers have been the most affected by the current situation and will continue to be
- There was a momentary blip of hope in the fall
 - A “green channel” was opened up that allowed certain games to be tested under very specific circumstances, but this channel was officially closed in October
 - Internal reorganization was completed in September and rumors circulated that the Ministry of Culture had recommenced the process of approving games again. But since then, publishers who have been awaiting games approval have become pessimistic by the lack of communication from the approval agencies.
- It is now estimated that approvals may not recommence until 2019, and even then, there are sure to be many new and stricter parameters in place, particularly for foreign-made games
- Despite these complex developments, IDG is still modeling a resumption of Chinese mobile growth in 2020 and the outer years, based on the assumption that the approvals process will resume by sometime in 2019. However, our IDG Team will be keeping a watchful eye on this development in the months to come.



“TRY NOW” COMES TO GOOGLE PLAY

- Google Play, in partnership with developer AppOnboard, has implemented the ability for consumers to try new games from directly within the Google Play store without having to download or install an app
- Purchase friction on mobile is already much lower than other platforms—since most games are already free to play—but recent studies have shown that even then, the number of mobile users who download new apps has been in decline
- Removing the barrier of app installation may stimulate growth in the already massive mobile games market, or potentially give new games a chance to break into the entrenched top mobile games charts
- But there are other potential benefits as well
 - Games developers who have used the Try Now feature have reported higher engagement from Try Now-converted consumers compared to organic installs
 - Developers can leverage feedback from players who engaged with a Try Now trial but chose not to download in order to improve their games
 - The Try Now feature can be used to drive pre-registration for new games
- There has not been any word yet if Apple will be partnering with AppOnboard to implement similar tech within its iOS App Store



FORTNITE ON ANDROID

- Even though it's still in beta, *Fortnite* probably made quite a splash when it released on Android devices—except the market will never really know since developer Epic chose to eschew releasing the game through Google Play
 - What we do know are only cryptic snippets of data that Epic deigns to unveil on its blog, such as “the conversion rate for Android beta is similar to that of the iOS beta”
- The fact that a game that is likely to be a top 5 title on mobile—if not #1—is not being captured through any major app store is a huge step backwards for analysts, publishers, or anyone with a vested interest in the mobile games market
 - It's especially unhelpful since Epic is a private company—similar to how Steam's dominance in the PC market renders that industry a veritable black box
 - What's more, Epic's example could start a trend of other big publishers opting out of releasing through Google Play
 - In another troubling potential scenario, enterprising startups may see this as a market opportunity to open up third-party app stores that offer more favorable revenue share rates, and if these were to begin proliferating in the US, it would fragment the market, making it as difficult to size as China
 - At the same time, the companies with the power and scale of an Epic are few and far between, but it does set a very unique precedent going forward



NINTENDO STILL DOESN'T GET IT?

"I can't say that our fixed-cost model has really been a success [on mobile]. But we're going to continue pushing it forward until it becomes entrenched." –Shigeru Miyamoto (August 2018)

- It's no secret that Nintendo's F2P mobile games have been exponentially more successful and profitable than its premium-priced games
- But if Nintendo makes good on Miyamoto's pledge, it does not bode well for the company's mobile strategy
 - The mobile market is simply too entrenched in favor of F2P for a single brand without any dominating influence to swing the entire market the other way
- On the other hand, it's not clear how much Miyamoto's POV represents Nintendo's strategy as a company
- What makes things more difficult to decipher is the fact that new Nintendo President Shuntaro Furukawa took the reins in June of this year, and it's unclear whether the company's current mobile strategy is one Furukawa backed or simply inherited
 - However, interviews with departing President Kimishima suggest Furukawa was involved with key corporate decisions even before his appointment as president
- It's possible that there is internal division within Nintendo between the camp that still believes in the traditional fixed-cost model and that which believes the company needs to adapt to the current market



DRAGALIA LOST– LAUNCH ANALYSIS

- Nintendo's latest mobile game, *Dragalia Lost*, was released in Q3 and is as far from Miyamoto's creed as a game can be—it relies heavily on aggressive gacha-style monetization tactics
- It is also the first Nintendo mobile game that is based on a brand new IP, which probably gave the company more leeway to experiment with monetization techniques that don't align 100% with Nintendo's more traditional philosophies
- Interestingly, Nintendo President Furukawa was quoted back in May as saying he intends to grow Nintendo's mobile business to ¥100B with a single blockbuster title—based on the timing of this interview and the unveiling of the title, it's possible *Dragalia Lost* was the hoped-for blockbuster hit
- According to Sensor Tower, the game has had the worst launch performance of any Nintendo mobile title to date, but this is understandable as it is a new IP, was only launched in 5 markets, and is more tailored towards a Japanese audience
 - Sensor Tower estimates that the title grossed \$28 million in its first month, with consumer spend per download in Japan achieving an average of \$25 (four times that of *Fire Emblem: Heroes*)
- Japanese gamers are more open-minded toward gacha mechanics anyway and are the highest-spending mobile gamers in the world, so not all is lost for *Dragalia Lost*



TOP IOS GAMES BY REVENUE – Q3'18

Global Top Games

Title	Publisher	Release
<i>Honour of Kings</i>	Tencent	Nov. 2015
<i>Fantasy Westward Journey</i>	NetEase	Feb. 2015
<i>Fate/Grand Order</i>	Aniplex	Aug. 2015
<i>Fortnite</i>	Epic Games	Mar. 2018
<i>Candy Crush Saga</i>	King	Apr. 2012
<i>I am MT 4</i>	Tencent	Aug 2018
<i>Monster Strike</i>	Mixi	Aug. 2013

China Top Games

Title	Publisher	Release
<i>Honour of Kings</i>	Tencent	Nov. 2015
<i>Fantasy Westward Journey</i>	NetEase	Feb. 2015
<i>I am MT 4</i>	Tencent	Aug 2018

US Top Games

Title	Publisher	Release
<i>Fortnite</i>	Epic Games	Mar. 2018
<i>Candy Crush Saga</i>	King	Apr. 2012
<i>Pokémon GO</i>	Niantic	Jul 2016

Japan Top Games

Title	Publisher	Release
<i>Fate/Grand Order</i>	Aniplex	Aug. 2015
<i>Monster Strike</i>	Mixi	Aug. 2013
<i>Knives Out</i>	Netease	Nov. 2017

Source: AppAnnie

Top games are based on estimates of overall revenue generated from paid downloads and/or virtual good purchases combined



TOP IOS GAMES BY DOWNLOAD – Q3'18

Global Top Games

Title	Publisher	Release
<i>Happy Glass</i>	Lion Studios	Aug 2018
<i>Hole.io</i>	Voodoo	May 2018
<i>Hello Stars</i>	Fastone	Jun 2018
<i>Helix Jump</i>	Voodoo	Feb. 2018
<i>PUBG: Exciting Battlefield</i>	Tencent	Feb 2018
<i>Tenkyu</i>	Voodoo	Jan 2017
<i>Fortnite</i>	Epic Games	Mar. 2018

China Top Games

Title	Publisher	Release
<i>PUBG: Exciting Battlefield</i>	Tencent	Feb 2018
<i>PUBG Mobile</i>	PUBG Corp/Tencent	Feb 2018
<i>Happy Glass</i>	Lion Studios	Aug 2018

US Top Games

Title	Publisher	Release
<i>Happy Glass</i>	Lion Studios	Aug 2018
<i>Hello Stars</i>	Fastone	Jun 2018
<i>Hole.io</i>	Voodoo	May 2018

Japan Top Games

Title	Publisher	Release
<i>Identity V</i>	Netease	Jul. 2018
<i>Happy Glass</i>	Lion Studios	Aug 2018
<i>Hole.io</i>	Voodoo	May 2018

Source: AppAnnie



TOP GOOGLE PLAY GAMES BY REVENUE – Q3'18

Global Top Games

Title	Publisher	Release
<i>Fate/Grand Order</i>	Aniplex	Jul. 2015
<i>Lineage M</i>	NCsoft	Jun. 2017
<i>Monster Strike</i>	Mixi	Dec. 2013
<i>Pokémon GO</i>	Niantic	Jul. 2016
<i>Dragon Ball Z Dokkan Battle</i>	Bandai Namco	Jul. 2015
<i>Candy Crush Saga</i>	King	Nov. 2012
<i>Black Desert</i>	Pearl Abyss	Feb. 2018

Japan Top Games

Title	Publisher	Release
<i>Fate/Grand Order</i>	Aniplex	Jul. 2015
<i>Monster Strike</i>	Mixi	Dec. 2013
<i>Disney Tsum Tsum</i>	Line	Jan 2014

US Top Games

Title	Publisher	Release
<i>Pokémon GO</i>	Niantic	Jul. 2016
<i>Candy Crush Saga</i>	King	Nov. 2012
<i>Slotomania</i>	Playtika	Dec. 2011

South Korea Top Games

Title	Publisher	Release
<i>Lineage M</i>	NCsoft	Jun. 2017
<i>Black Desert</i>	Pearl Abyss	Feb. 2018
<i>Lineage II Revolution</i>	Netmarble	Dec. 2016

Source: AppAnnie

Top games are based on estimates of overall revenue generated from paid downloads and/or virtual good purchases combined



TOP GOOGLE PLAY GAMES BY DOWNLOADS – Q3'18

Global Top Games

Title	Publisher	Release
<i>Helix Jump</i>	Voodoo	Mar. 2018
<i>Rise Up</i>	Serkan Ozyilmaz	Mar 2018
<i>Subway Surfers</i>	Kiloo	Sept. 2012
<i>Hello Stars</i>	Fastone	Apr 2018
<i>Love Balls</i>	Lion Studios	Apr. 2018
<i>Kick the Buddy</i>	Playgendary (Chill Fleet)	May 2018
<i>Free Fire</i>	Garena Online	Oct. 2017

Source: AppAnnie

India Top Games

Title	Publisher	Release
<i>Ludo King</i>	Gamotronix	Dec. 2016
<i>Temple Run 2</i>	Imangi	Jan. 2013
<i>Subway Surfers</i>	Kiloo	Sept. 2012

Brazil Top Games

Title	Publisher	Release
<i>Helix Jump</i>	Voodoo	Mar. 2018
<i>Free Fire</i>	Garena Online	Oct. 2017
<i>Rise Up</i>	Serkan Ozyilmaz	Mar 2018

US Top Games

Title	Publisher	Release
<i>Hello Stars</i>	Fastone	Apr 2018
<i>Hole.io</i>	Voodoo	Jun 2018
<i>Word Link</i>	Worzzle	Oct 2017



Q3'18 NEWS – MOBILE

- Ubisoft announced that **8%** of its revenue in its fiscal Q1 came from **mobile platforms**, beating out the Switch with 5% platform share (July)
- Samsung opened up a **new mobile phone manufacturing factory** in India; it's reported to be the “world's largest mobile factory” (July)
- Netease unveiled that *Identity V*, its new asymmetrical multiplayer game, was downloaded **more than 100 million times** in its first month, with more than half of those downloads coming from China (July)
- **Zynga** was granted the license to develop mobile games based on the **Star Wars IP**, as well as take over development of existing title *Star Wars: Commander* (August)
- Facebook announced it would **no longer be charging a platform fee** for in-app purchases within **Instant Games on Android platforms**, as developers are already paying a 30% fee to Google (August)
- Apple **pulled 25,000 apps** from the Chinese iOS App Store following **pushback from local regulators** over gambling (August)
- Activision Blizzard partnered with Tencent to launch a **Call of Duty mobile game in China** developed by **PUBG Mobile developer Timi** (August)



Q3'18 NEWS – MOBILE (CONT'D)

- Epic announced it would not be releasing the **mobile version of *Fortnite*** on Google Play, but rather through **its own website** in order to avoid paying Google the 30% platform fee (August)
- Apple announced October would be the **end of its App Store Affiliate program**, which paid commissions to websites that referred customers to its App Store (August)
- The **Twitch** mobile app became one of the **most downloaded free apps in China** during the Asian Games, after which the app was **blocked and removed** from stores per the Chinese government (September)
- Daybreak Game Company, formerly known as Sony Online Entertainment, **opened a mobile-focused studio** with plans to bring *H1Z1* and *Everquest* to mobile platforms (September)
- Sensor Tower reported that *Fortnite* generated **\$300 million in its first 200 days on iOS**, with daily average spending **increasing** from \$1.5M to \$2.5M per day **after the launch of Season 6** (October)
- Razer unveiled its **2nd generation 120-hertz display smartphone for gamers**, priced at \$800; the device reportedly outperforms the iPhone XS in response time and refresh speed (October)



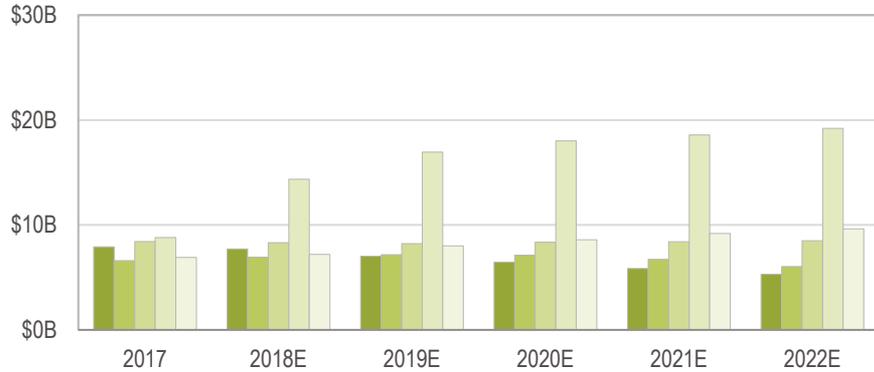


DIGITAL PC

DIGITAL PC SEGMENT SNAPSHOT

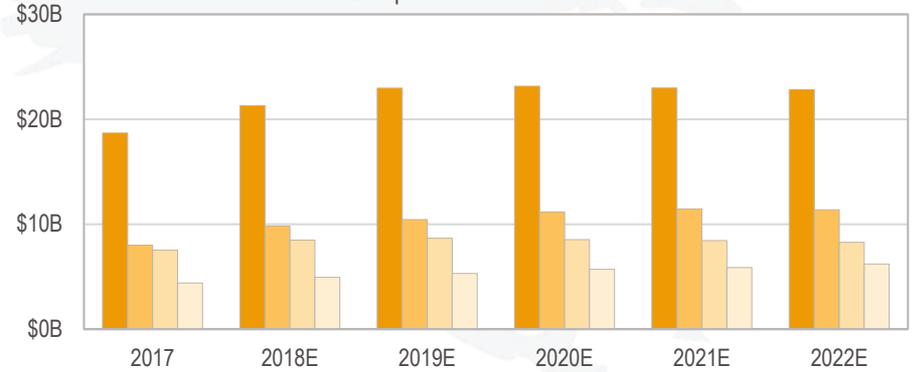
GENRE

MOBA Casual RPG FPS Other



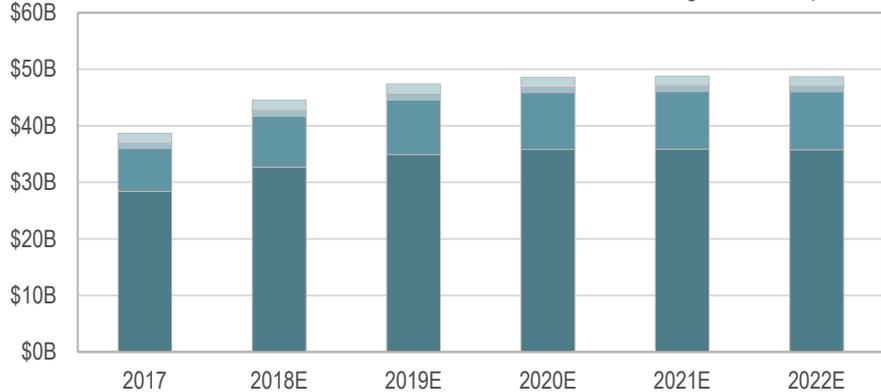
TERRITORY

Asia Europe United States Rest of World



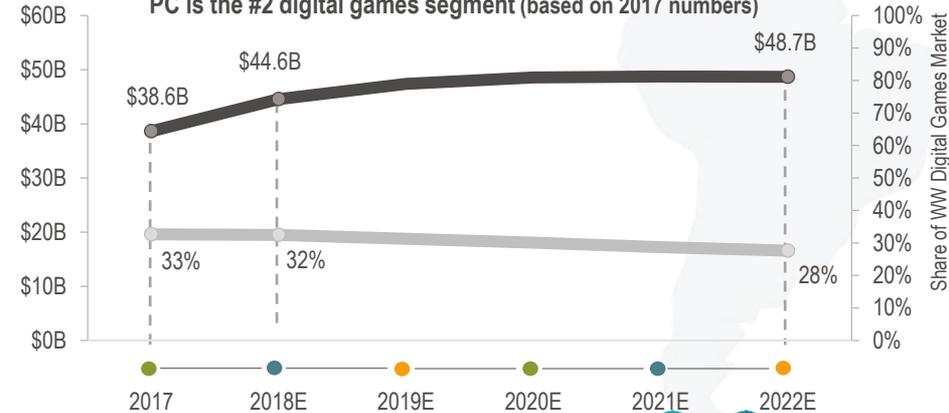
REVENUE STREAM

DLC/Virtual Goods Full Game Purchase Advertising Subscription



THE BIGGER PICTURE

PC is the #2 digital games segment (based on 2017 numbers)



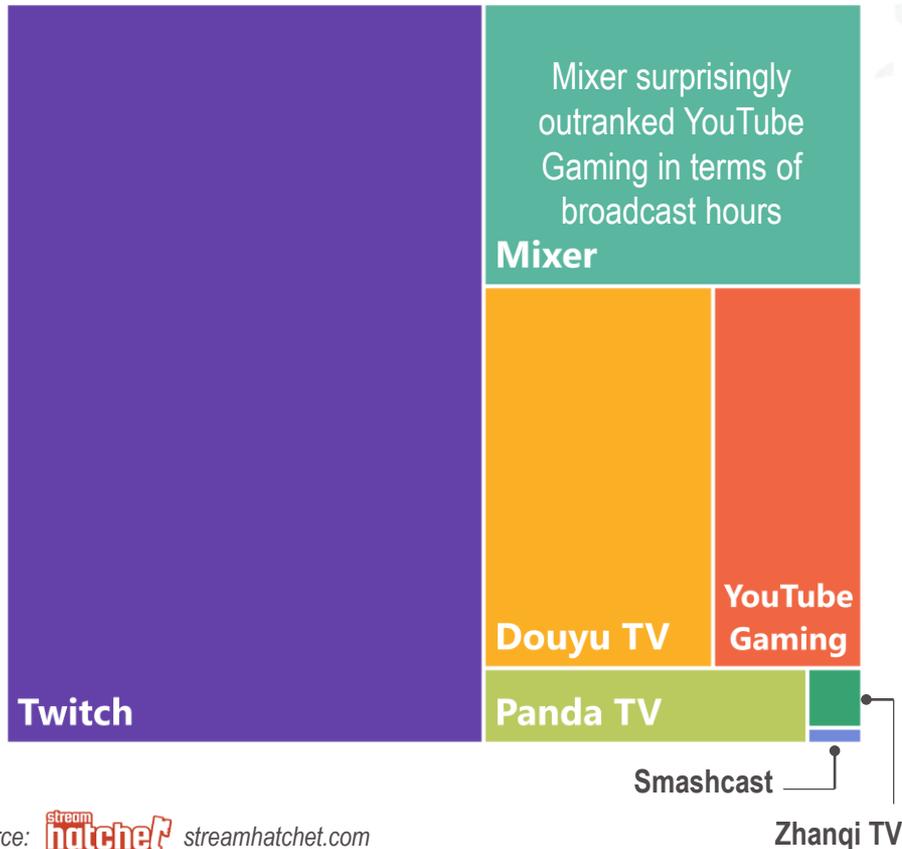
SUMMARY OF FORECAST – DIGITAL PC

- Many of the key public companies that operate in the digital PC games market have reported weaker than expected revenue in 2018
 - This is partially a function of cannibalization from games like *Fortnite* and *PUBG*, but tellingly, the trend is more pronounced among companies that have been expending greater efforts in the mobile gaming market
- In addition, the Chinese PC games market has been experiencing a bit of a slowdown—granted it is not as marked as the contraction of the Chinese mobile games market
 - For more information on the Chinese PC games market, see page 33
- Overall, IDG’s forecasts for the Digital PC market in the US, Europe and Rest of World were generally maintained from the previous quarter, but the forecast for Asia was lowered slightly
- The total Digital PC market is estimated to reach \$44.6 billion in 2018 and grow to \$48.7 billion by 2022E, representing a 5-year CAGR of 5%

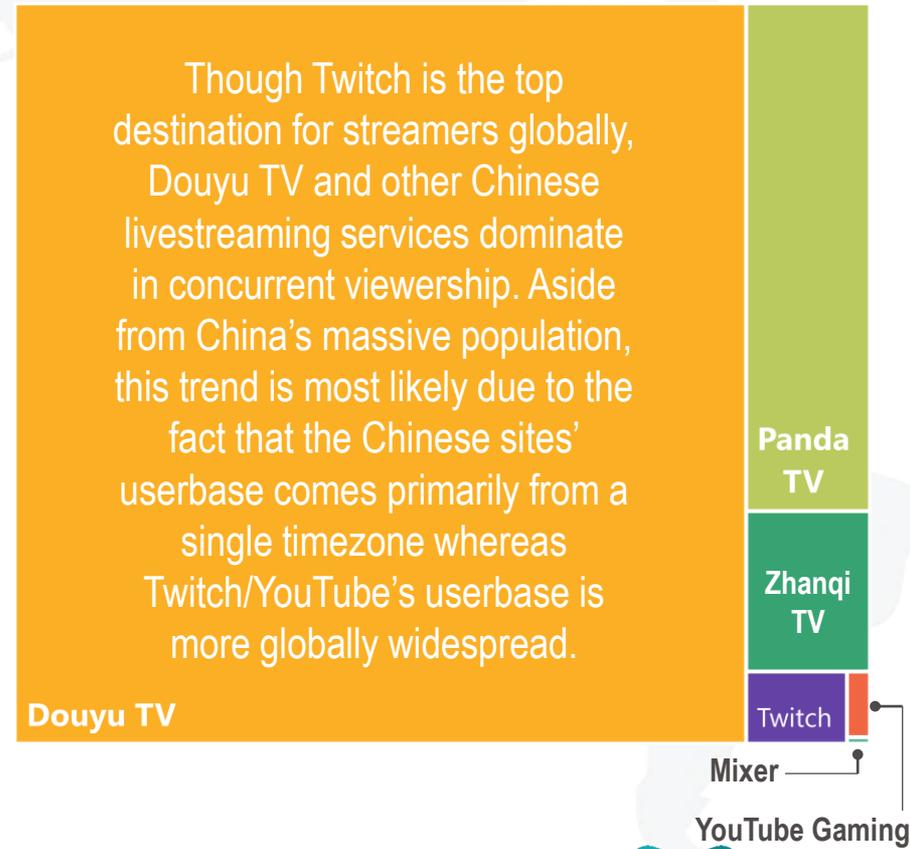


GLOBAL LIVESTREAMING LANDSCAPE

Share by Broadcast Hours – Aug. 2018



Share by Avg Concurrent Viewers – Aug. 2018

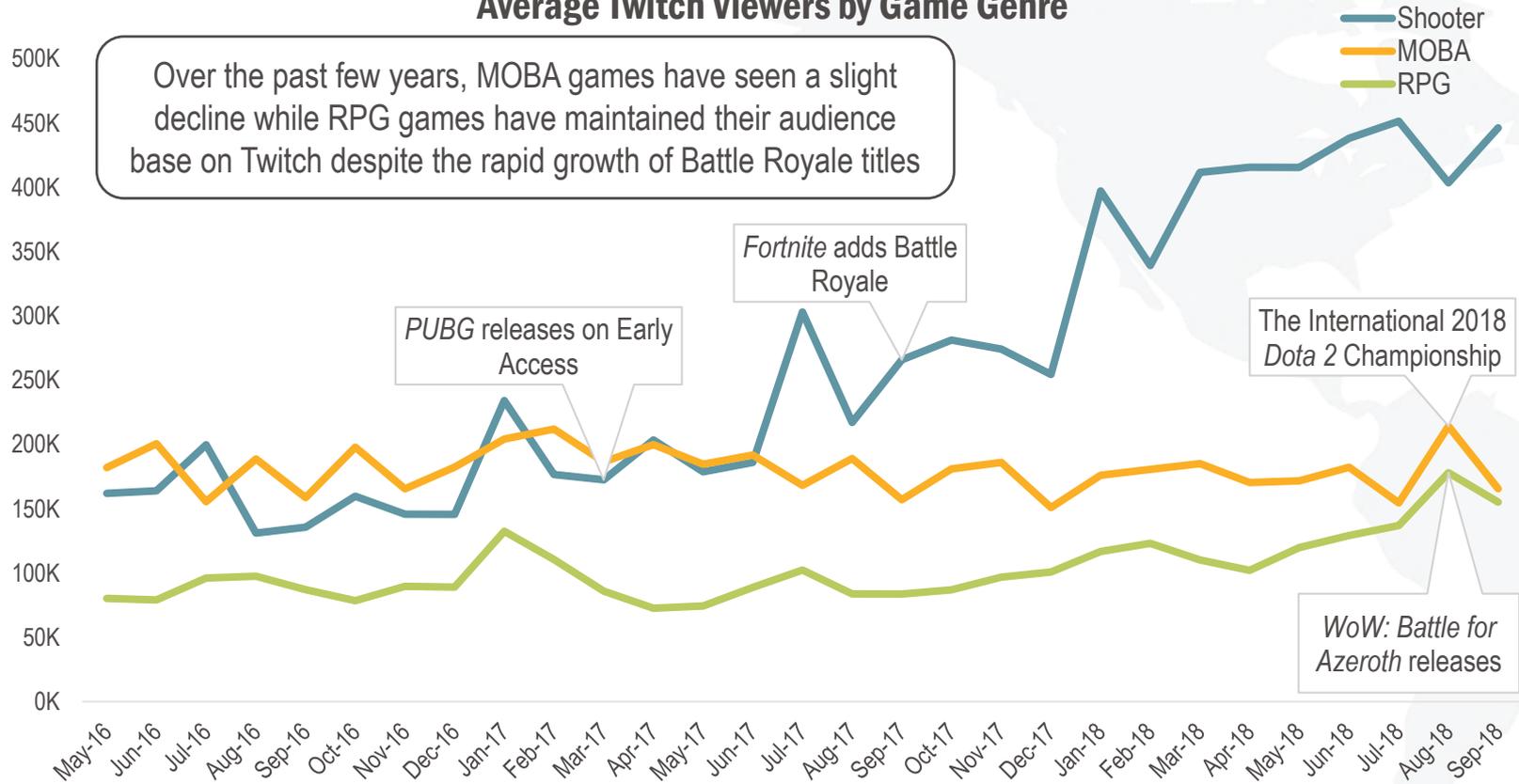


Source:  streamhatcher.com



TWITCH GENRE ANALYSIS

Average Twitch Viewers by Game Genre



Source: streamhatcher.com

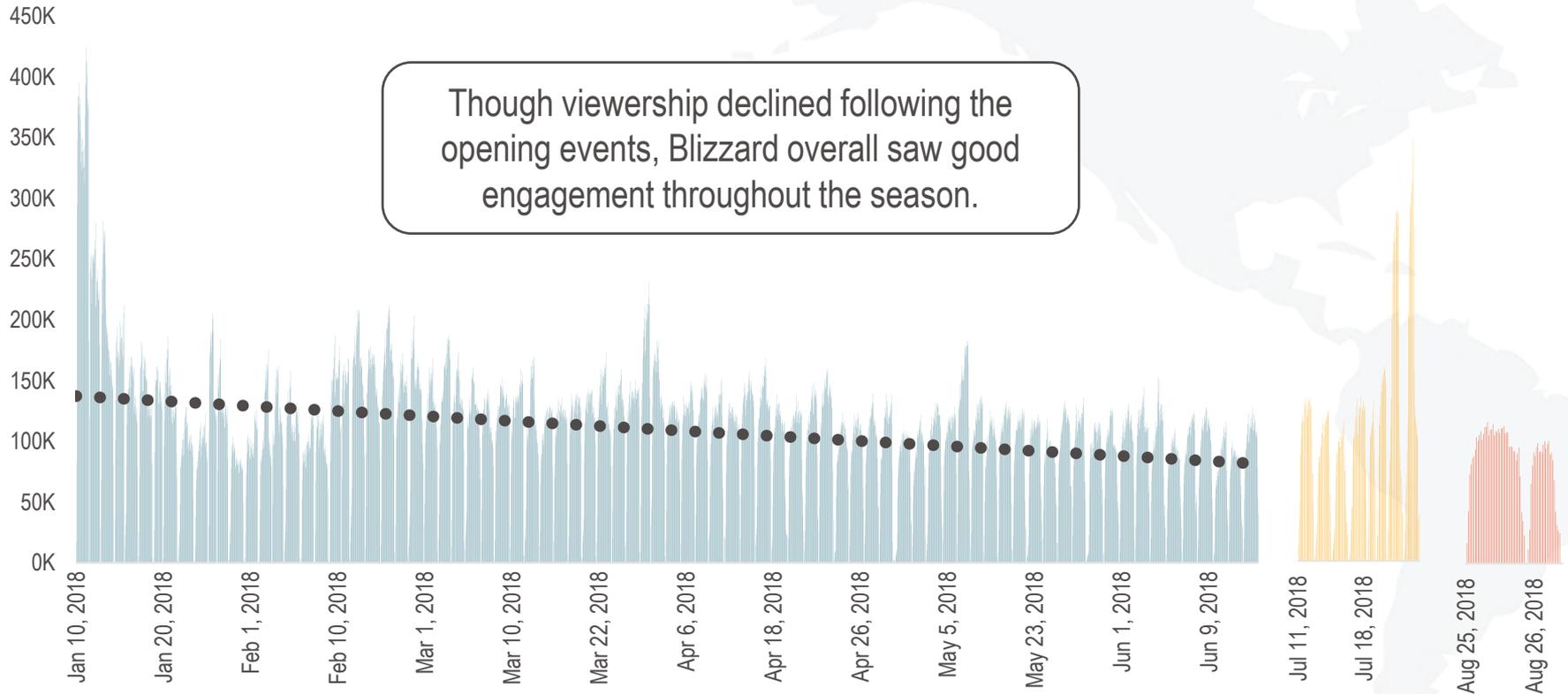


OVERWATCH LEAGUE INAUGURAL SEASON IN REVIEW

Season 1 Twitch Viewership

Playoffs

All-Star
Weekend



Source:  streamhatcher.com



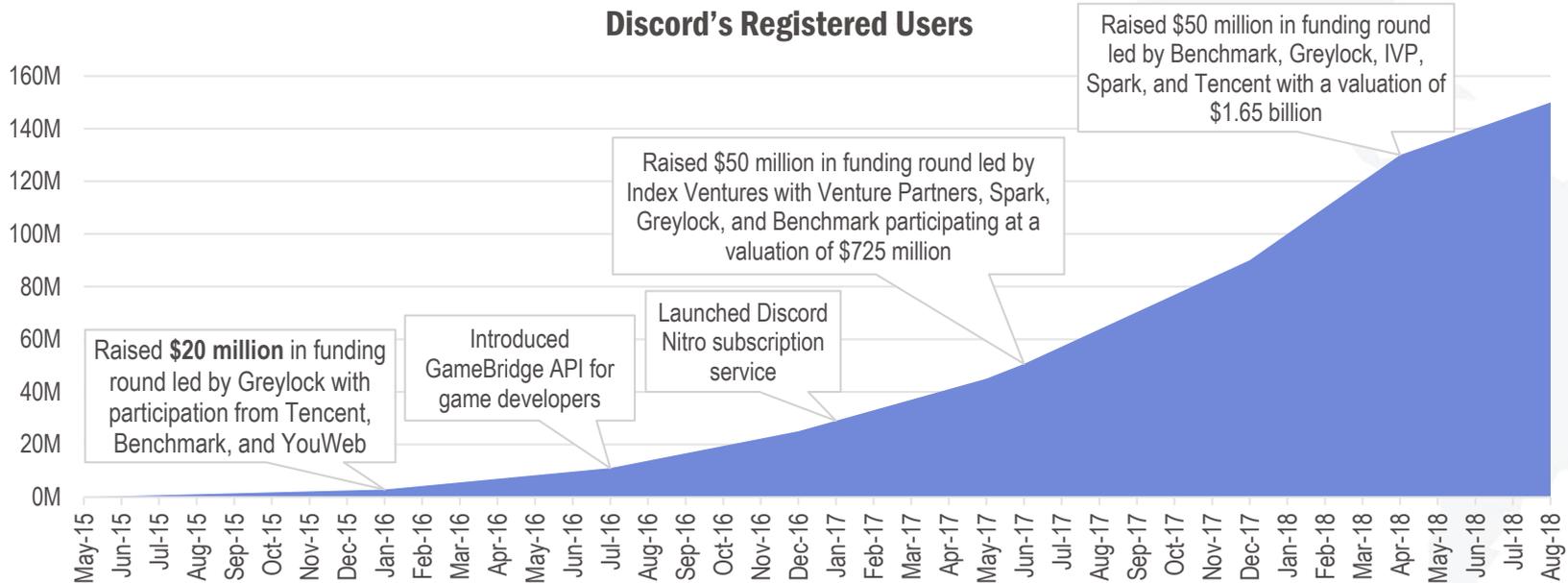
DISCORD AS A RETAILER

- Discord, a popular voice and text chat client for PC gamers, rolled out a beta storefront to sell select indie games in Q3
 - The global launch began on October 16th and includes 23 titles, including 5 that released “First on Discord”
 - This coincides with the launch of new tiers for Discord’s Nitro subscription service that offers access to a library of PC games
- The company isn’t likely to rival Steam anytime soon as this is still early days, but its path into this space is intriguing
 - Discord launched in May 2015 aiming to solve chat for PC gamers, which had historically always been a pain point for gamers
 - The userbase has since grown sharply, having reached 150 million users as of August 2018
 - Game developers have been embracing the platform, taking advantage of Discord’s Rich Presence features to better integrate with the social network
 - Discord now also features a Games tab that essentially acts as a launcher for a user’s various PC games across different clients (Steam, Battle.net, etc.), allowing users to showcase what game they’re currently playing to their Discord friends



DISCORD (CONT'D)

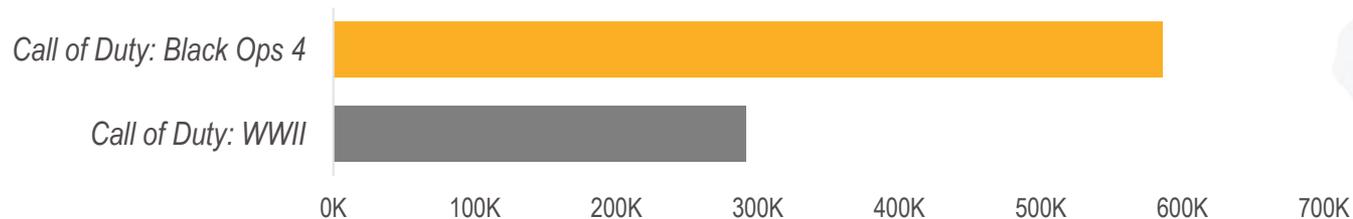
- Innovations like the Games tab indicate a natural progression towards a Digital PC storefront rather than a bullish entry into the market
 - If PC gamers are choosing to make Discord their first stop to play, then why not start buying their games there too?
- On the other hand, Discord represents one of many platforms trying to enter the PC digital distribution space, and prior entrants such as Twitch have reportedly not found overwhelming success in game retail as a side business



CALL OF DUTY ON BATTLE.NET

- Following the launch of *Call of Duty: Black Ops 4*, Activision announced that the title more than doubled PC launch weekend sales of last year's *Call of Duty: WWII*
 - This is an impressive feat for Activision not only because of the title's strength, but also because *Black Ops 4* marked the series' move off of Steam and onto Blizzard's Battle.net
 - The success shows that the title's hotly anticipated battle royale mode was able to outweigh the need to launch on Steam despite its network effect and also overcome any potential lack of synergy between Activision and Blizzard's PC titles

Estimated Launch Weekend PC Sales



CoD WWII Source:  **SGC** STRATEGIC GAME CONSULTING strategicgameconsulting.com

- Bethesda is also poised to launch *Fallout 76* onto a proprietary platform instead of Steam this year, with the series' first multiplayer foray likely to bring core fans over



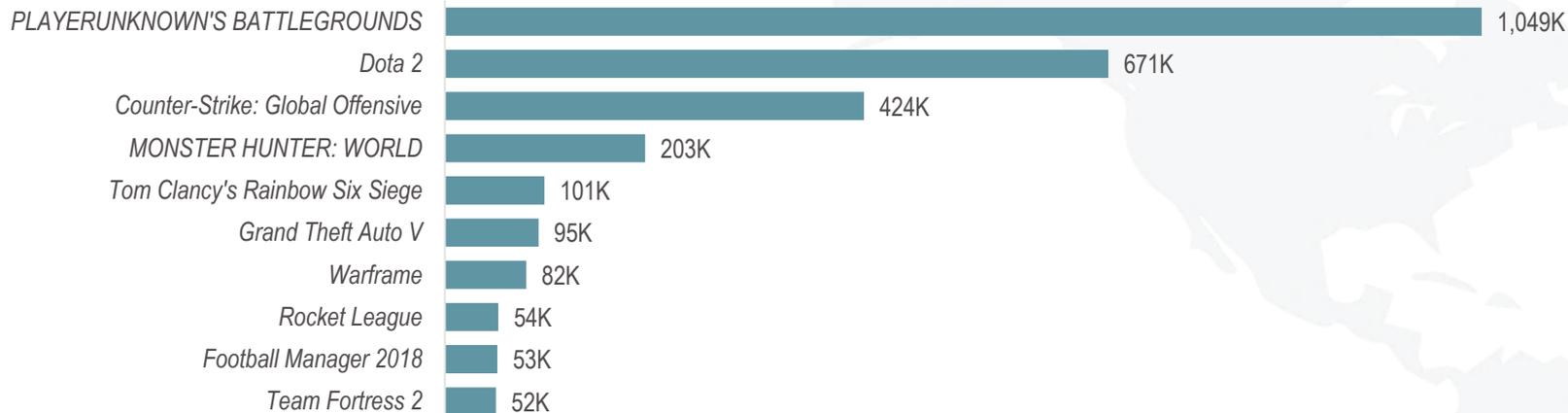
THE BATTLE FOR CHINA

- At the beginning of Q3, Tencent announced that its WeGame digital PC distribution platform—set to take on Valve’s Steam head-on—was slated to launch in Hong Kong, with an international release to soon follow
- In a rare stumble on Tencent’s part, the much anticipated launch of WeGame has not gotten off to the strong start that many might’ve anticipated based on Tencent’s stellar track record
- Due to government restrictions, on more than one occasion, Tencent was forced to remove games from its WeGame platform and issue refunds to players
- In addition, with the continuing ban on new game approvals, Chinese gamers have been turning increasingly to Steam for their gaming fix, rather than supporting their homegrown WeGame platform
 - Several times throughout Q3, it was noted that the most popular games on Steam were titles that were only available in Chinese
- In Q2, it had been reported that Valve was working with Perfect World to get Steam officially approved within the Chinese market, but in retrospect, it appears Steam has been enjoying more success in China for the very fact that it is operating in the gray area just outside of Chinese oversight
 - It is probably only a matter of time until the Chinese government scrutinizes Steam, but until then, Steam will probably continue to gain traction within the Chinese market

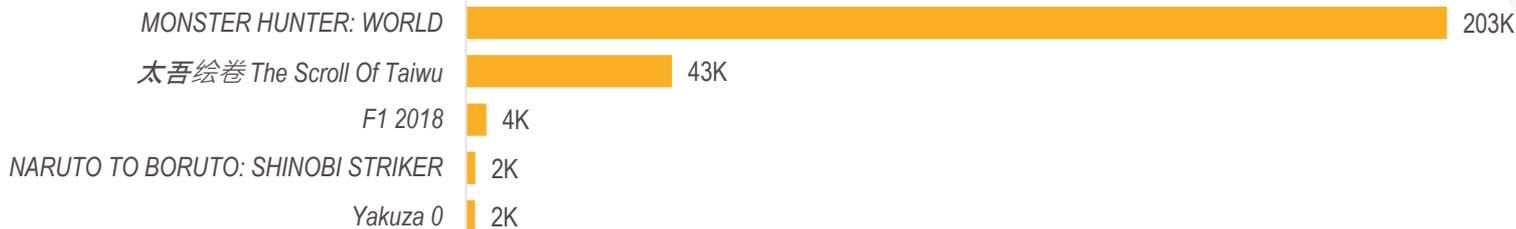


TOP TITLES STEAM – Q3'18

TOP STEAM TITLES – AVG. PEAK CONCURRENT USERS



TOP STEAM RELEASES – AVG. PEAK CONCURRENT USERS



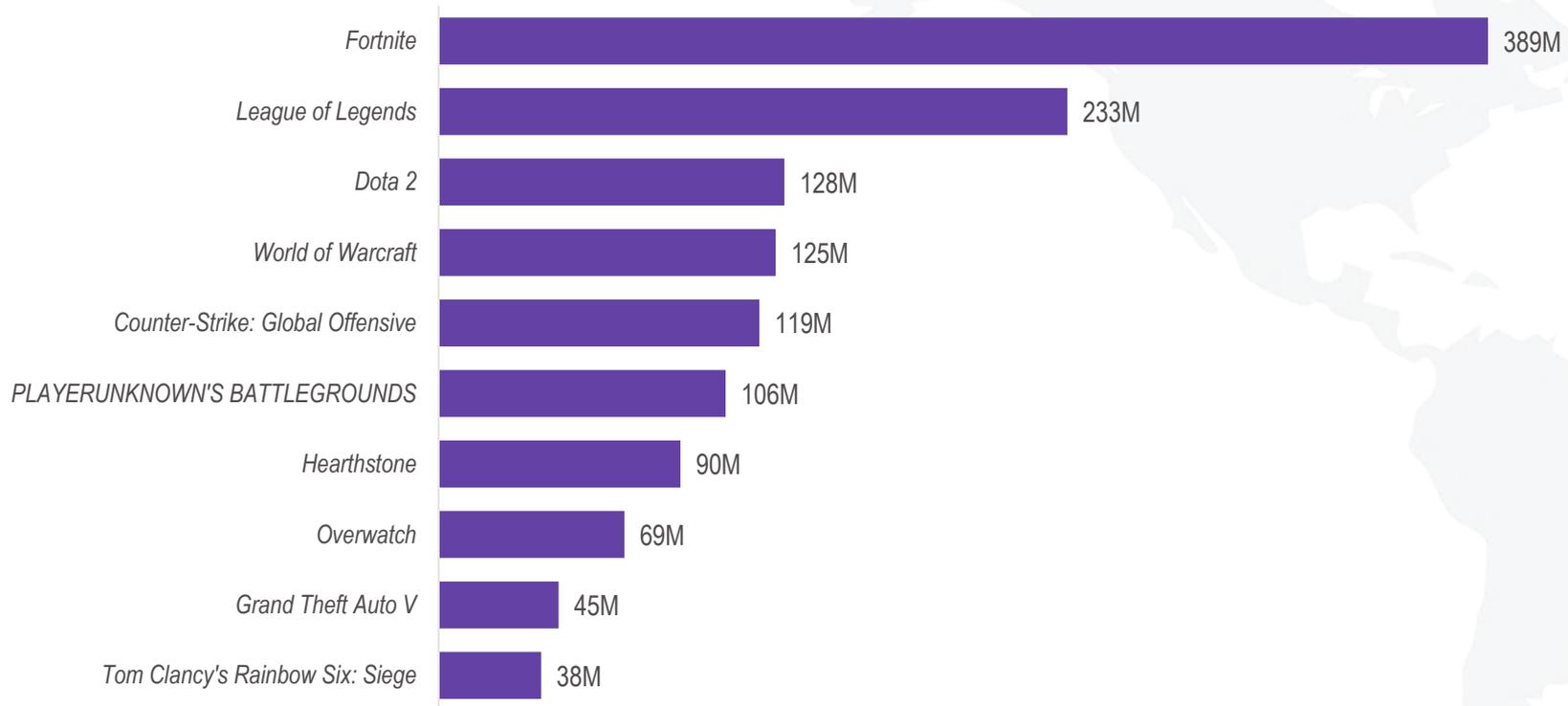
Note: Each chart axis has a different min/max scale

Source:  **SGC** strategicgameconsulting.com



TOP TITLES **twitch** – Q3'18

TOP PC TITLES STREAMED ON TWITCH BY HOURS VIEWED



Source:  streamhatcher.com



Q3'18 NEWS – DIGITAL PC

- Psyonix became the latest publisher to begin releasing **loot box drop rates** for its hit title, *Rocket League* (July)
- Developer MercurySteam **transitioned** its shooter *Raiders of the Broken Planet* from an **episodic model** to a **free-to-play model** (July)
- **Epic's first foray** into organizing an **esports tournament for *Fortnite*** was **prematurely aborted** due to poor server performance and low watchability of gameplay (July)
- Thanks to **Ubisoft's strong performance** operating the GaaS model, the company reported in its fiscal Q1 earnings report that **PC was its 2nd largest platform** with 24% revenue share (July)
- Valve **disabled loot boxes for CS:GO** in the Netherlands and Belgium following pushback over gambling regulations (July)
- Valve temporarily **halted the publishing of adult-themed games** on Steam; the company lifted the ban two months later after adding in **new optional filters** as a means to address adult-themed games (July)
- Blizzard **added Japan as a region** for its *Heroes of the Storm* esports tournament, a major win for the country that only recently allowed paid esports (July)



Q3'18 NEWS – DIGITAL PC (CONT'D)

- Epic Games **changed the revenue share split** for Unreal Engine Marketplace from 70/30 to **88/12** (July)
- Nvidia **opened up beta** for GeForce Now on its Shield platform, which allows users to **stream PC** games (July)
- EA **delayed** the release of ***Battlefield V*** by one month, causing the company's stock to drop nearly 10% (August)
- With the release of ***The Battle of Azeroth*** expansion pack, Blizzard made the original *World of Warcraft* game and all previous expansion packs **free for subscribers**; the latest XP sold 3.4M units in the first day, a **new record** for the franchise (August)
- Valve released an update that allows **Linux users to play Windows PC games** (August)
- Valve **inadvertently unveiled Steam.tv**, a streaming site that many suspect could be setup to eventually rival Twitch.tv but which for now has only been used to stream esports broadcasts for a small set of titles (August)
- Tencent was forced to **remove *Monster Hunter: World*** from its WeGame storefront due to complaints from users that eventually brought the game to the Chinese government's attention (August)



Q3'18 NEWS – DIGITAL PC (CONT'D)

- GameFly **shut down its game streaming service** following the sale of its streaming technology to EA (August)
- Digital games retailer **Green Man Gaming** is **set to IPO** with a £100M offering, making it the 4th UK games company to IPO in the past 12 months (September)
- The **Overwatch League** got **6 new teams** for the 2019 season, representing the cities of Paris, Chengdu, Hangzhou, Toronto, Vancouver and Washington DC (September)
- PUBG became the first Steam game to have **1M concurrent players for 365 consecutive days** (September)
- The South Korean government is in the process of **formulating new laws** around **online game harassment** (September)
- YouTube **retired its YouTube Gaming app** and transferred the features to a Gaming section on its main video streaming app (September)
- After much demand from developers, Valve agreed to more **actively moderate game discussions** on Steam (September)
- Going against trends, *Faeria*, a premium-priced collectible card game on Steam that switched to F2P, recently **switched back to a pay-to-play model** (September)



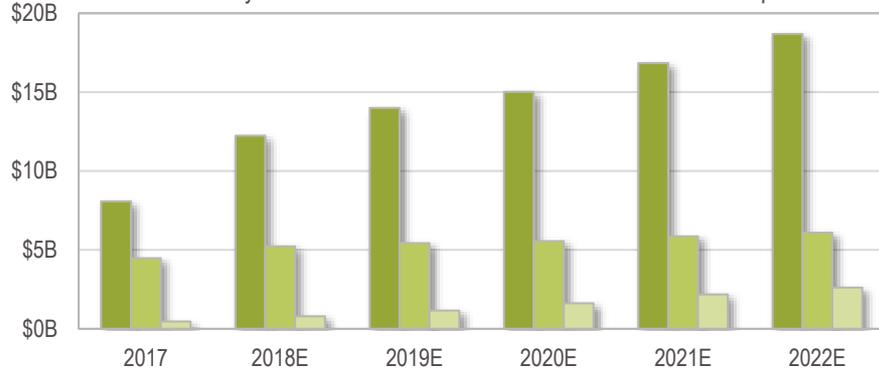


DIGITAL CONSOLE

DIGITAL CONSOLE SEGMENT SNAPSHOT

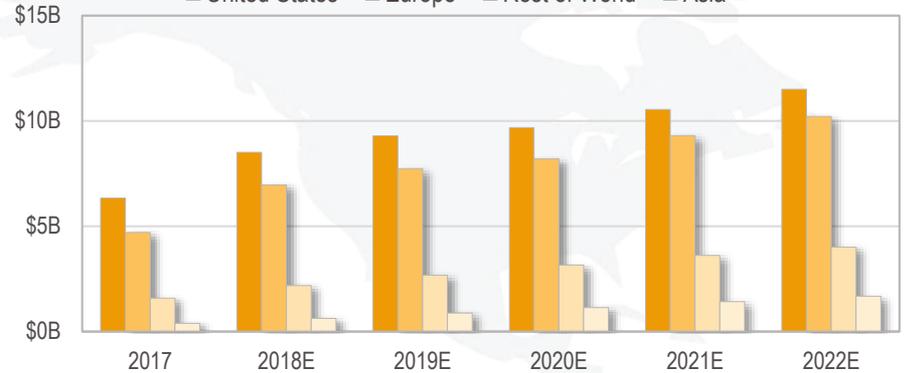
PLATFORM

■ PlayStation Network ■ Xbox Live ■ Nintendo eShop



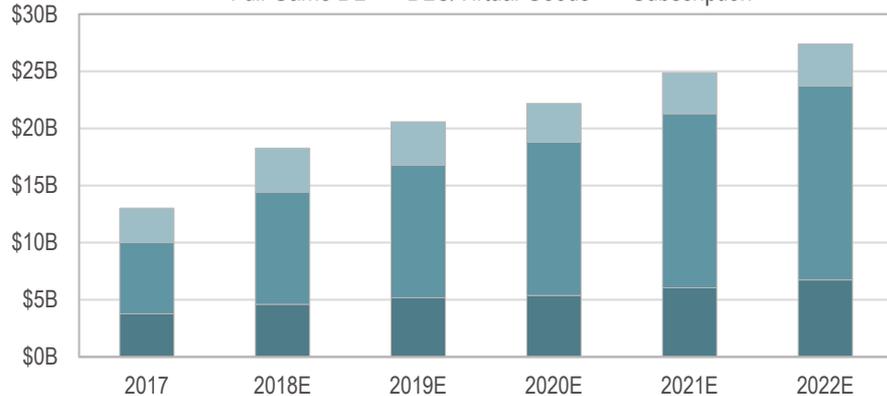
TERRITORY

■ United States ■ Europe ■ Rest of World ■ Asia



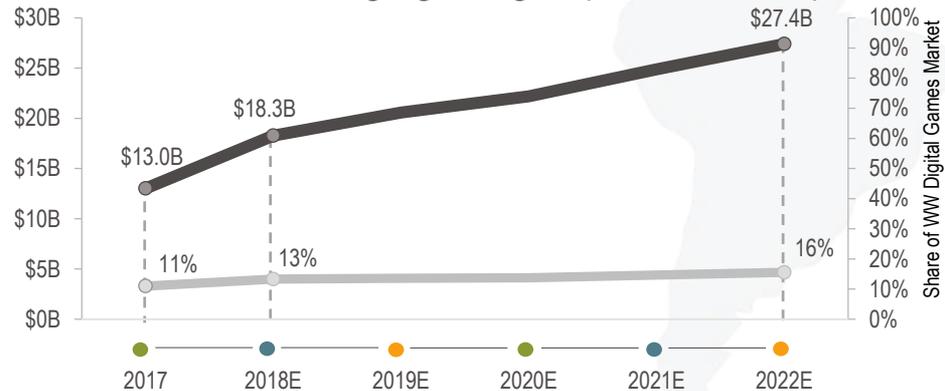
REVENUE STREAM

■ Full Game DL ■ DLC/Virtual Goods ■ Subscription



THE BIGGER PICTURE

Console is the smallest digital games segment (based on 2017 numbers)



SUMMARY OF FORECAST – DIGITAL CONSOLE

- Microsoft's Digital Console business appears to be tracking in-line with expectations, and its forecast for 2018 remains unchanged
- Sony, on the other hand, continues to outperform IDG's forecast for 2018, and its digital console revenue is now expected to grow 52% y/y worldwide, particularly thanks to strong growth in Europe
 - Most of that growth is expected to happen within the DLC/Virtual Goods revenue category as F2P titles such as *Fortnite* have really begun to take root on PlayStation
- Nintendo also reported stronger-than-expected digital revenue growth in its latest quarterly earnings, which only included about 2 weeks of its Nintendo Switch Online subscription service being live
 - IDG is conservatively estimating 70% y/y growth for Nintendo's digital console revenue but would not be surprised if year-end saw Nintendo exceed this target
 - IDG also shifted more revenue share toward DLC/Virtual Goods revenue for Nintendo, upon reports that *Fortnite* had been installed on "nearly half" of all Nintendo Switches
- Altogether, Digital Console revenue is expected to reach \$18.3 billion in 2018 and grow to \$27.4 billion by 2022E, representing the largest 5-year CAGR of the three digital segments of 16%



PROJECT STREAM VS. XCLOUD

- Google has finally showcased its work in game streaming
 - The company partnered with Ubisoft to release a beta for *Assassin's Creed Odyssey* that's fully playable in Google Chrome
 - IDG's initial perspective on the beta is that the game runs very well with the right internet connection and is indeed easy to setup
- Microsoft soon followed up with the announcement of Project xCloud, showcasing its ambitions for its own game streaming service built off of the Azure cloud platform
 - The company is looking to run AAA games on any platform, including mobile
 - It is even intending to design new touch controls to operate streamable games to smartphones/tablets, with the expectation that 5G could make the experience possible from anywhere



Project xCloud: Forza on a smartphone with controller

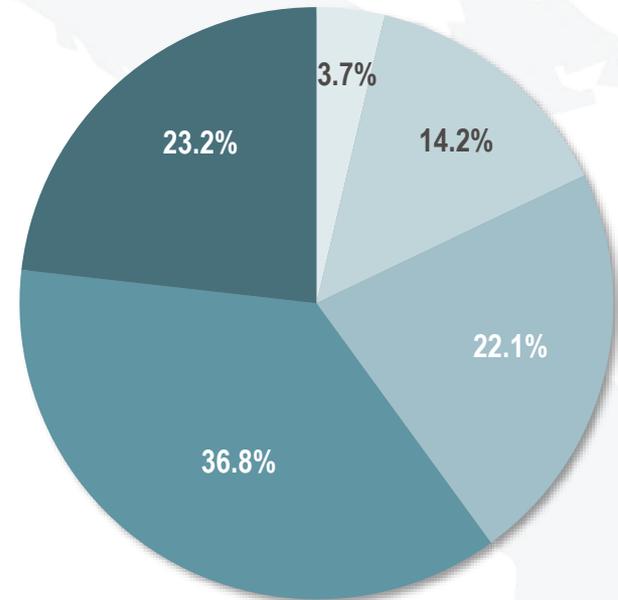


Project xCloud: Halo on a tablet with touch controls

PROJECT STREAM VS. XCLOUD (CONT'D)

- Interestingly, Google's Project Stream beta recommends internet connections with a 25 Mbps downstream while Microsoft's Project xCloud is aiming to stream games for connections as low as 10 Mbps
 - As it currently stands, this would mean that Project xCloud would target 82% of US households (86.8 million households), whereas Google would only be looking towards 60% of US households (63.4 million households)
- Microsoft has stated that it fully intends to keep consoles as its flagship offering for gaming, but the push into cloud streaming could ultimately cannibalize this
 - On the other hand, Google has no real stake in the console market and can afford to tackle it without jeopardizing existing relationships with physical retailers
 - Both companies are leveraging these experiments to showcase the full breadth of their cloud platforms to game developers in an attempt to capture customers away from other enterprise cloud services like AWS

Distribution of Fixed US Broadband Connections by Downstream Speed as of December 31, 2016



■ Less than 3 Mbps (3.9 million)
■ At least 3 Mbps & less than 10 Mbps (15.0 million)
■ At least 10 Mbps & less than 25 Mbps (23.4 million)
■ At least 25 Mbps & less than 100 Mbps (38.9 million)
■ At least 100 Mbps (24.5 million)

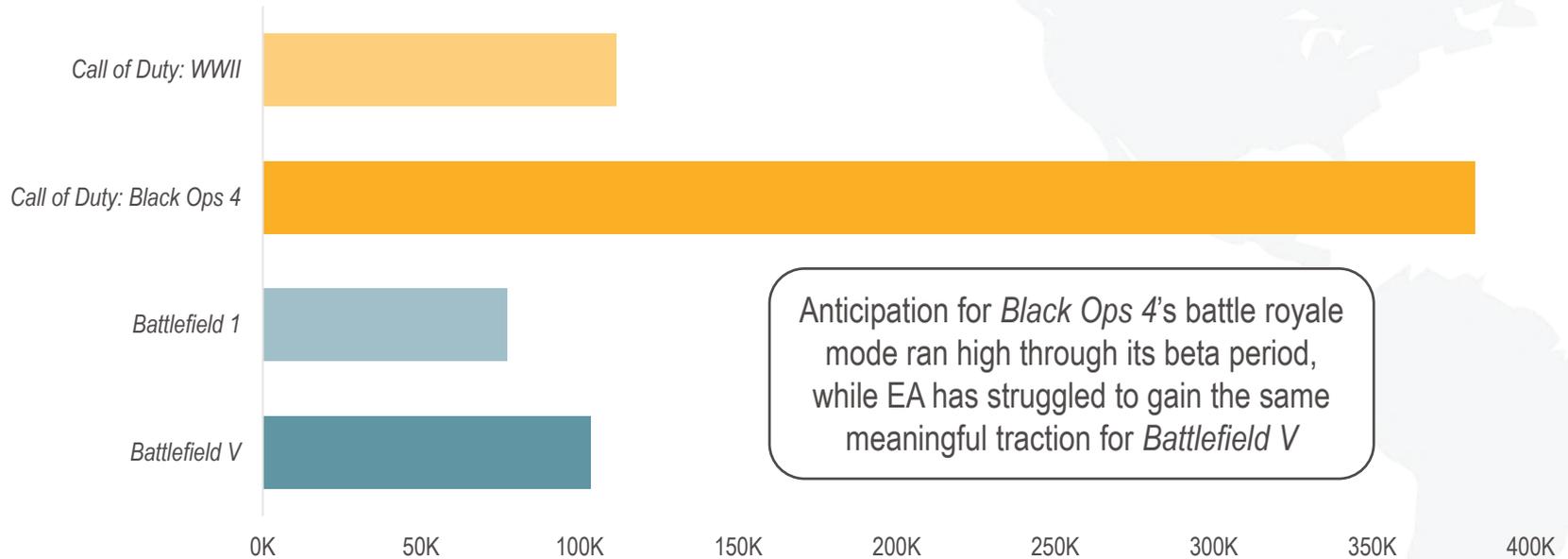
Source: FCC Internet Access Services Report (Feb 2018)



PREVIEW BETA HYPE



Peak Concurrent Twitch Viewers during Beta Periods



Anticipation for *Black Ops 4's* battle royale mode ran high through its beta period, while EA has struggled to gain the same meaningful traction for *Battlefield V*

Source:  streamhatchet.com



RETROSPECTIVE ON TELLTALE

- The abrupt closure of Telltale Games came as a shock to much of the industry, leaving 250+ employees out of work, without severance, and with only nine days of healthcare coverage
 - Following *The Walking Dead's* breakout success in 2012, the company expanded quickly and started taking on more licenses, including *Borderlands*, *Game of Thrones*, *Minecraft*, etc.
 - Telltale's headcount in the years after *TWD* ballooned up from 125 employees to ~400 employees by mid-2017, but in November of 2017 the company laid off 90 staff members
 - By March of 2018, reports started to emerge that the studio was suffering from a toxic work culture and in June the firm was sued by former CEO Kevin Bruner for breach of contract
- So what went wrong? The quick expansion was troubled for a number of reasons, often stemming from poor decisions made from upper management:
 - The company's roots as an indie studio never adapted when it needed to sustain a larger size, ranging from long hours of crunch, to a heavy workload, and a failure to document important processes
 - The quality of Telltale's games were impacted by major delays and technical bugs
 - ▲ Management was said to have called for massive re-writes or other changes when developers were already far into a production schedule
 - ▲ The company's proprietary game engine, Telltale Tool, didn't scale well for current-gen consoles, but it was only in June of 2018 that the studio finally tried to transition to Unity's game engine
 - Studio management often misunderstood the audience for the IPs it was taking on
 - ▲ Former Telltale narrative designer Emily Grace Buck claimed that at one point executives were targeting a Teen ESRB rating for *Minecraft: Story Mode*, clearly out of line with *Minecraft's* heavy youth audience, and also pushed for a dark and gritty tone for *Guardians of the Galaxy*, despite the IP's emphasis on humor



2018: DIGITAL'S TIPPING POINT?

- After many years of industry observers predicting prematurely that digital share would eclipse retail share for key titles in the console market, we are beginning to see signs that this is now beginning to happen in a more widespread manner
- To be sure, mobile and PC have already been dominated by digital distribution for years, but console, and especially console AAA, had been the anomaly in the market
- In this day and age, retail distribution remains extremely important—without it, marquee titles such as *Red Dead Redemption 2* would find it impossible to reach their lofty sales goals
- But at the same time, IDG's channel checks indicate that many of the more recently-launched marquee titles are reaching much higher digital software shares versus historical precedent
- In some cases, top-tier AAA titles are now approaching or even surpassing 50% digital software share



2018: DIGITAL'S TIPPING POINT? (CONT'D)

- 2018 has been a perplexing and intriguing year for the games market, with some strange oddities marking the current environment:
 - The biggest console game is actually free-to-play (*Fortnite*)
 - Call of Duty's digital share is increasingly on par with its retail share for *Black Ops 4*
 - Top-tier frontline content such as *Assassin's Creed: Odyssey* can now be streamed via Google's Project Stream on PC in the Chrome web browser
 - An increasing number of smaller games are eschewing retail altogether in favor of pure digital distribution
- IDG believes that this year, 2018, will be viewed as the seminal year when the digital tipping point was reached on console, similar to 2012 on mobile, or when Netflix pivoted from DVD-by-mail to a strategic focus on streaming as the main delivery mechanism
- Retail will still remain relevant and important over the next five years, especially since console gaming still relies heavily on a hardware component that is much easier to transact at brick-and-mortar versus digital storefronts, and also thanks to retail's ability to act as a primary evangelizer for new products and IPs



2018: DIGITAL'S TIPPING POINT? (CONT'D)

- Beyond the vastly improved digital infrastructure provided by Xbox Live, PlayStation Network, and Nintendo eShop/Switch Online, new entrants such as Google with Project Stream, and 3rd party digital ecosystems such as EA Origin/Access, there are several other catalysts explaining this digital tipping point:
 - Improved consumer comfort and familiarity with digital distribution consumption
 - Accelerating bandwidth speeds to expedite downloads and streaming in the home
 - Decreasing reliance on single-player gameplay, which has a high correlation with retail sales share, and greater reliance on online multiplayer, which has a high correlation with digital sales share
 - Increasing ubiquity of cross-platform play, which is a major catalyst for digital distribution and is fleshed out in more detail on the following page



FORTNITE PS4 CROSS-PLATFORM PLAY

- Sony has finally acquiesced to industry and consumer pressure, allowing Epic to beta cross-platform play *Fortnite* on PS4 with other consoles
- The door has not yet been opened for other developers that have asked for this, but the industry is still gearing up for a larger policy shift
 - Psyonix, which was already an early proponent of cross-platform play, announced that RocketID, a feature to operate cross-platform parties in *Rocket League*, is being rolled out in early 2019 while the company prepares its use on all platforms
 - EA has publicly stated they would support cross-platform play for major franchises such as Battlefield
 - Bethesda has stated that *The Elder Scrolls: Legends* would only launch on platforms that support cross-platform play
- However, it is important to note that Sony has historically moved slowly on big policy changes like this and their support will likely come with some caveats:
 - Epic will have to prove to Sony beyond a reasonable doubt that *Fortnite* can function fully cross-platform with other consoles
 - Sony will remain selective as to which developers will be allowed to offer cross-platform play
 - PlayStation will likely want to maintain control of communications with players on other platforms, taking whatever steps possible to limit the ability of toxic players from other platforms to interact with PSN players



TOP TITLES Nintendo eShop – Q3'18

Rank	Switch eShop Games	Publisher	SRP (USD)
1	<i>Hollow Knight</i>	Team Cherry	\$15.00
2	<i>Minecraft</i>	Mojang AB	\$29.99
3	<i>Stardew Valley</i>	Chucklefish LTD	\$14.99
4	<i>Mario Kart 8 Deluxe</i>	Nintendo	\$59.99
5	<i>Dead Cells</i>	Motion Twin	\$24.99
6	<i>Overcooked 2</i>	Team17 Digital	\$24.99
7	<i>Arcade Archives Vs. Super Mario Bros.</i>	HAMSTER, Co.	\$7.99
8	<i>Octopath Traveler</i>	Square Enix	\$59.99
9	<i>Mario Tennis Aces</i>	Nintendo	\$59.99
10	<i>Rocket League</i>	Psyonix	\$19.99
11	<i>Zelda: Breath of the Wild</i>	Nintendo	\$59.99
12	<i>Enter the Gungeon</i>	Devolver Digital	\$14.99
13	<i>Mega Man X Legacy Collection 2</i>	Capcom	\$19.99
14	<i>Okami HD</i>	Capcom	\$19.99
15	<i>Super Mario Odyssey</i>	Nintendo	\$59.99

Source: **NINTENDO EVERYTHING** nintendoeverything.com



TOP TITLES PlayStation® Store - Q3'18

Rank	PlayStation 4 Games	Publisher	SRP (USD)
1	<i>Marvel's Spider-Man</i>	Sony	\$59.99
2	<i>Madden NFL 19</i>	Electronic Arts	\$59.99
3	<i>NBA 2K19</i>	Take-Two	\$59.99
4	<i>Grand Theft Auto V</i>	Take-Two	\$59.99
5	<i>Battlefield 1</i>	Electronic Arts	\$59.99

Rank	PlayStation VR Games	Publisher	SRP (USD)
1	<i>Firewall Zero Hour</i>	Sony	\$39.99
2	<i>Rick and Morty: Virtual Rick-ality</i>	Adult Swim	\$29.99
3	<i>Job Simulator</i>	Owlchemy Labs	\$19.99
4	<i>SUPERHOT VR</i>	SUPERHOT VR	\$24.99
5	<i>PlayStation VR Worlds</i>	Sony	\$14.99

Rank	PlayStation Free-to-Play Games	Publisher
1	<i>Fortnite Battle Royale</i>	Epic Games
2	<i>H1Z1: Battle Royale</i>	Daybreak Games
3	<i>Brawlhalla</i>	Blue Mammoth Games
4	<i>Defiance 2050</i>	Trion Network
5	<i>Warframe</i>	Digital Extremes

Source:  PlayStation.Blog



Q3'18 NEWS – DIGITAL CONSOLE

- **Nintendo Network news:**

- Nintendo announced it plans to release **20-30 indie titles** per week on the **Switch eShop** moving forward (July)
- In its fiscal Q1 earnings report, **Nintendo** reported **digital sales increased 68% y/y** (July)
- **Nintendo** launched its paid **Switch Online** multiplayer service (September)
 - ▲ **Pricing** is set at \$4 for one month, \$8 for three months, or \$20 for a year for individual accounts, while a family plan allows for up to 6 accounts priced at \$35 per year
 - ▲ **Free-to-play** games like *Fortnite* and *Paladins* are still playable online without the service
 - ▲ The service offers **cloud saves**, but this was confirmed to not be supported for titles like *Pokémon! Let's Go*, *Splatoon 2*, *Dead Cells*, *Dark Souls Remastered*, *FIFA 19*, and *NBA 2K19*
 - ▲ The service suffered **connection failures** in **China** for key first-party titles, with the problem likely due to the introduction of Google-based servers that are banned in mainland China. (September)
- Nintendo introduced a **Switch console bundle** and some in-game currency and cosmetics for **Fortnite** (October)

- **PlayStation Network news:**

- In its fiscal Q1 earnings report, **Sony** reported **43% of its full games were sold digitally**, up from 39% the previous year (July)



Q3'18 NEWS – DIGITAL CONSOLE (CONT'D)

- **Xbox Live news**

- **Microsoft** announced a two-year, contract subscription bundle that would include an Xbox One console, Xbox Live Gold, and Xbox Game Pass ranging from \$22-\$35 a month, dubbed **Xbox All Access** (August)
- **Xbox Game Pass** executives publicly stated that they don't expect subscription access services to replace the direct purchase model (August)
 - ▲ They noted that Game Pass members have increased their time spent gaming on Xbox by ~20%, increased the number of games played by 40%, and increased purchasing and engagement with non-Game Pass titles

- **Microtransaction/loot box news:**

- Warner Bros. **removed all microtransactions** from **Shadow of War** in response to player criticism (July)
- Turn 10 Studios **removed loot boxes** and paid tokens from **Forza Motorsport 7** following overwhelming negative feedback (July)
- Sony and **Polyphony Digital** added **microtransactions** to racing title **Gran Turismo Sport**, despite series producer Kazunori Yamauchi saying the game wouldn't have them prior to launch (July)
- Take-Two disabled purchasing of card packs in **NBA 2K MyTeam** in **Belgium** in line with local loot box regulations (August)



Q3'18 NEWS – DIGITAL CONSOLE (CONT'D)

- **Cloud streaming news:**

- Unconfirmed reports claimed that **Microsoft** is aiming to release a **cheaper game streaming hardware solution**, codenamed Scarlett (July)
- **Activision Blizzard's** COO Collister Johnson said the company is in talks with several cloud providers for game streaming as it could help to expand the publisher's reach, but noted that it is a challenging tech hurdle and said that the company was primarily focused on growth from mobile (August)
- Sony added a **download option** for some titles in its **PlayStation Now** streaming service (September)

- **All other news**

- **Take-Two** reported in its fiscal Q1 earnings that revenue from digital streams accounted for 81% of the company's revenues as there were no major releases in the quarter (August)
- EA's Chief Design Officer **Patrick Soderlund** left the company after 12 years (August)
- **Rockstar** announced that *Red Dead Redemption 2's* multiplayer, **Red Dead Online**, would launch in beta in November, as the developer aims to emulate the success of GTA Online (September)
- **Rainbow Six: Siege**, a title that launched in 2015, saw a major sales boost in August following a **free-to-play weekend**, an esports tournament, and digital/retail promotions (September)
- Epic introduced **pets** in **Fortnite's Season 6**, which are believed to cater to female and younger gamers (September)





Q3'18 M&A, INVESTMENTS & PARTNERSHIPS

M&A / INVESTMENTS / PARTNERSHIPS

DATE	HOST	TARGET	NOTES
July 2018	 THQ NORDIC	 HandyGames™	THQ Nordic acquired German mobile, VR, and wearable studio HandyGames
July 2018	 EA	 INDUSTRIAL TOYS	EA acquired mobile developer Industrial Toys, the studio behind mobile shooter franchise Midnight Star
July 2018	 WB INTERACTIVE ENTERTAINMENT	 plexchat	Warner Bros. acquired Plexchat, a communications platform for mobile games, with WB planning to use the technology for its portfolio of mobile games
July 2018	 AT&T	 magic leap	AT&T invested in heavily-hyped AR startup Magic Leap, with AT&T becoming the exclusive wireless distributor for Magic Leap products in the US
July 2018	 N I A N T I C	 SEISMIC GAMES	Niantic continued its acquisition spree with the purchase of mobile and VR developer Seismic Games
July 2018	 NetEase Games	 JUMPSHIP.	NetEase acquired a minority stake in indie developer Jumpship
July 2018	 IQIYI	 SKYMOONS	Chinese video platform iQiyi acquired Chinese mobile studio Skymoons for \$190 million upfront and \$107 million over the next two years, assuming the studio hits certain performance benchmarks



M&A / INVESTMENTS / PARTNERSHIPS

DATE	HOST	TARGET	NOTES
July 2018	 Keywords STUDIOS	 snowed in STUDIOS	Keywords acquired Canadian firm Snowed In Studios
July 2018	 SQUARE ENIX™	 Blacknut	Square Enix partnered with European game streaming service Blacknut to launch a number of its mobile games on the platform
July 2018	 NetEase Games	 IMPROBABLE	NetEase invested \$50 million in Improbable, the company behind the SpatialOS platform for developing expansive game worlds, as Improbable looks to reach Chinese developers
July 2018	 DISNEY	 21ST CENTURY FOX	Disney and Fox shareholders approved the acquisition of 21st Century Fox for \$71.3 billion, including the FoxNext games division
August 2018	 animoca	 PIXOWL	Animoca Brands acquired Pixowl, the mobile studio behind <i>Peanuts: Snoopy's Town Tale</i> and <i>Goosebumps HorrorTown</i> for \$4.9 million
August 2018	 NORDISK FILM EGMONT	 RAW FURY	Danish investment company Nordisk Film Games invested \$5.5 million in indie publisher Raw Fury for a minority stake
August 2018	 CD PROJEKT	 spokko	CDProjekt expanded into mobile games through a partnership with Polish mobile games studio Spokko
August 2018	 SUMO DIGITAL	 The Chinese Room	Publisher Sumo Digital acquired developer The Chinese Room



M&A / INVESTMENTS / PARTNERSHIPS

DATE	HOST	TARGET	NOTES
August 2018			Apple acquired Akonia Holographics, a startup focused on making lenses for augmented reality glasses, signaling Apple's ambitions in the space
August 2018			Square Enix struck a strategic alliance with Tencent to increase their foothold in China for AAA games
September 2018			Tetragon Works merged with the Canadian developer, Brace Yourself Games
September 2018			Pearl Abyss, the publisher of <i>Black Desert Online</i> , acquired CCP Games, the developer of <i>EVE Online</i> , for \$425 million, following CCP's bad bet on VR and its refocusing on PC and mobile
September 2018			Overwolf partnered with Intel on a \$7 million fund for apps, extensions, and overlays for PC games, available to developers of existing games that will be distributed on Overwolf's app store
September 2018			Daybreak Game Company received a new investment from Nantworks to set up a mobile-focused studio that will bring <i>H1Z1</i> and <i>Everquest</i> to mobile platforms.



M&A / INVESTMENTS / PARTNERSHIPS

DATE	HOST	TARGET	NOTES
September 2018		 	Nielsen acquired SuperData Research to gain a bigger foothold in the gaming space and esports
September 2018		 	Ex-Riot Games developers secured a \$2.5 million investment for their new development studio, Singularity 6, from London Venture Partners to develop a social simulation experience
September 2018		 	Bigben Interactive acquired Eko Software for €8.5 million, as the publisher continues to expand its international development prospects. Bigben will receive 100% of the shares and voting rights of the French studio, which previously produced titles such as <i>Rugby 18</i> and <i>Handball 17</i> , and will work on <i>Warhammer: Chaosbane</i> under Bigben.

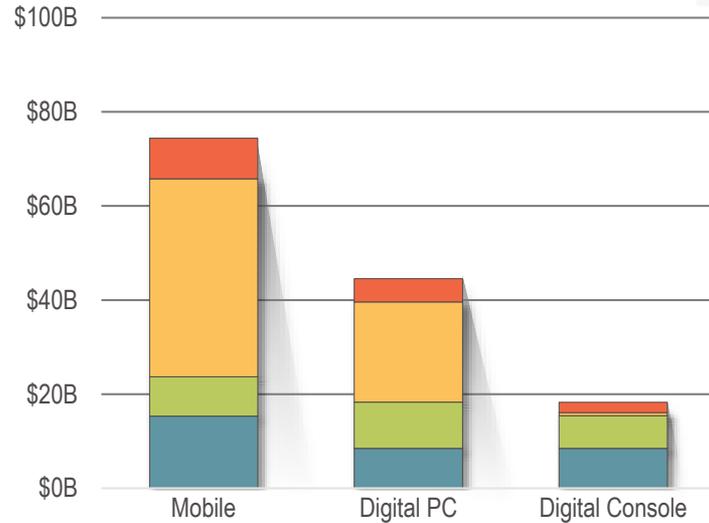




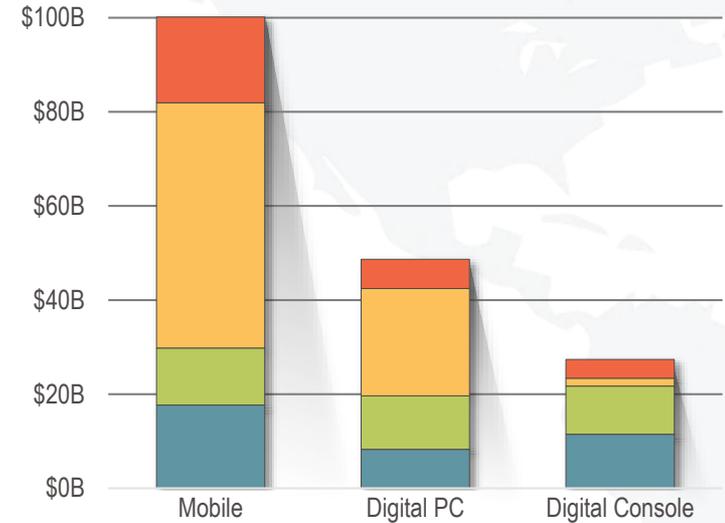
2018E – 2022E DIGITAL GAME SEGMENTS BY TERRITORY

'18E – '22E REVENUE BY TERRITORY & CATEGORY

2018E Revenue by Territory & Category



2022E Revenue by Territory & Category

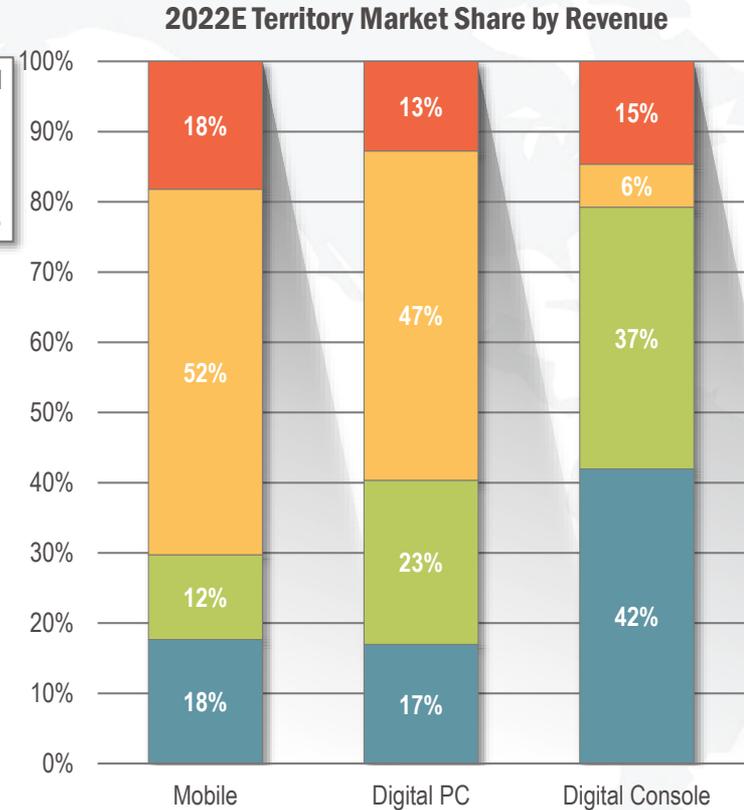
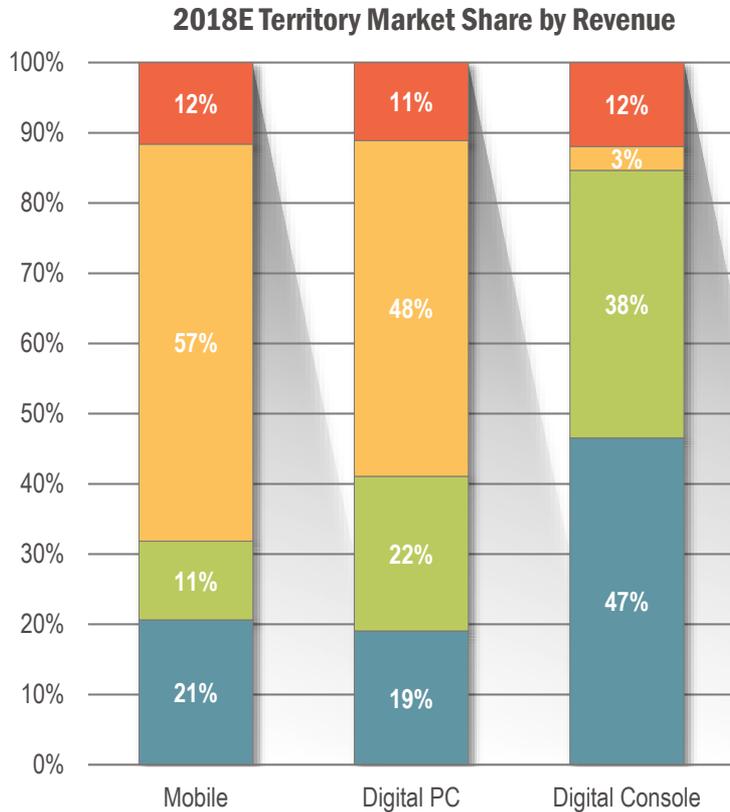


Territory	Mobile	Digital PC	Digital Console
United States	\$15.4B	\$8.5B	\$8.5B
Europe	\$8.3B	\$9.8B	\$7.0B
Asia	\$42.1B	\$21.3B	\$0.6B
Rest of World	\$8.6B	\$4.9B	\$2.2B
TOTAL	\$74.4B	\$44.6B	\$18.3B

Territory	Mobile	Digital PC	Digital Console
United States	\$17.7B	\$8.3B	\$11.5B
Europe	\$12.1B	\$11.4B	\$10.2B
Asia	\$52.1B	\$22.8B	\$1.7B
Rest of World	\$18.2B	\$6.2B	\$4.0B
TOTAL	\$100.2B	\$48.7B	\$27.4B

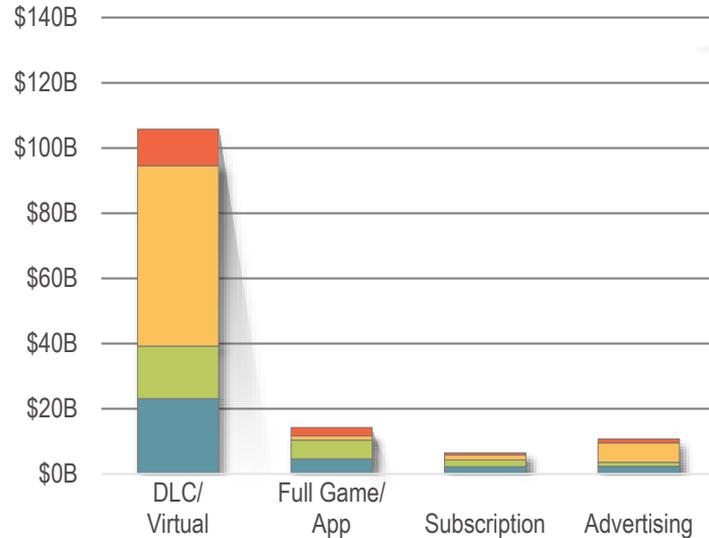


'18E – '22E REVENUE BY TERRITORY & CATEGORY – MARKET SHARE



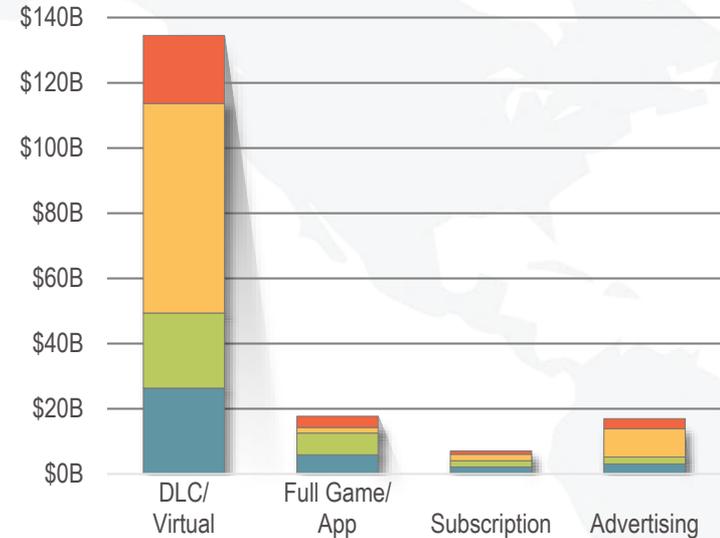
'18E – '22E REVENUE BY TERRITORY & MONETIZATION SCHEME

2018E Revenue by Territory & Monetization Scheme



TOTAL	\$105.7B	\$14.3B	\$6.5B	\$10.7B
Rest of World	\$11.2B	\$2.6B	\$0.7B	\$1.2B
Asia	\$55.3B	\$1.3B	\$1.5B	\$5.9B
Europe	\$16.1B	\$5.7B	\$2.0B	\$1.2B
United States	\$23.1B	\$4.6B	\$2.3B	\$2.3B

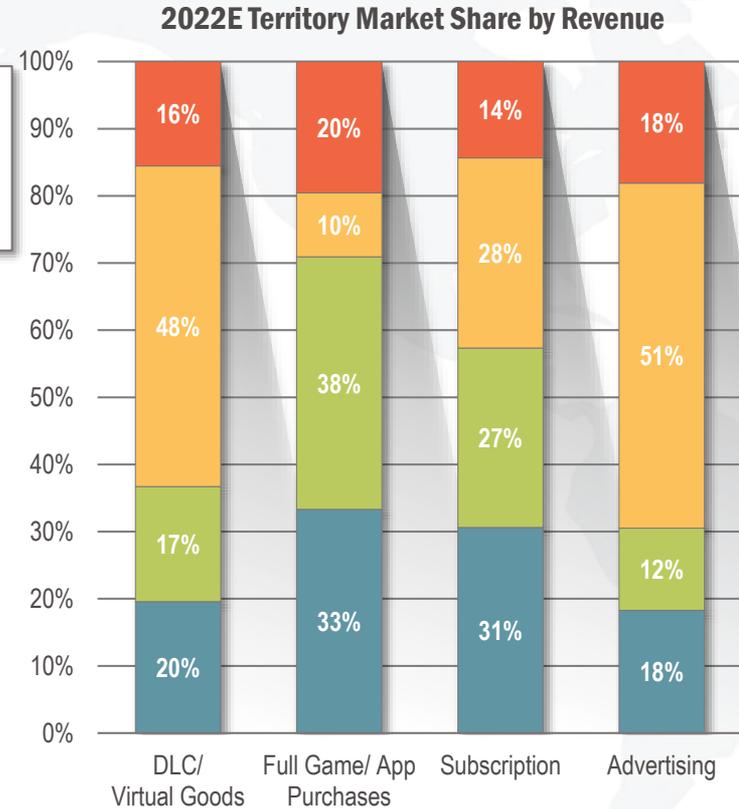
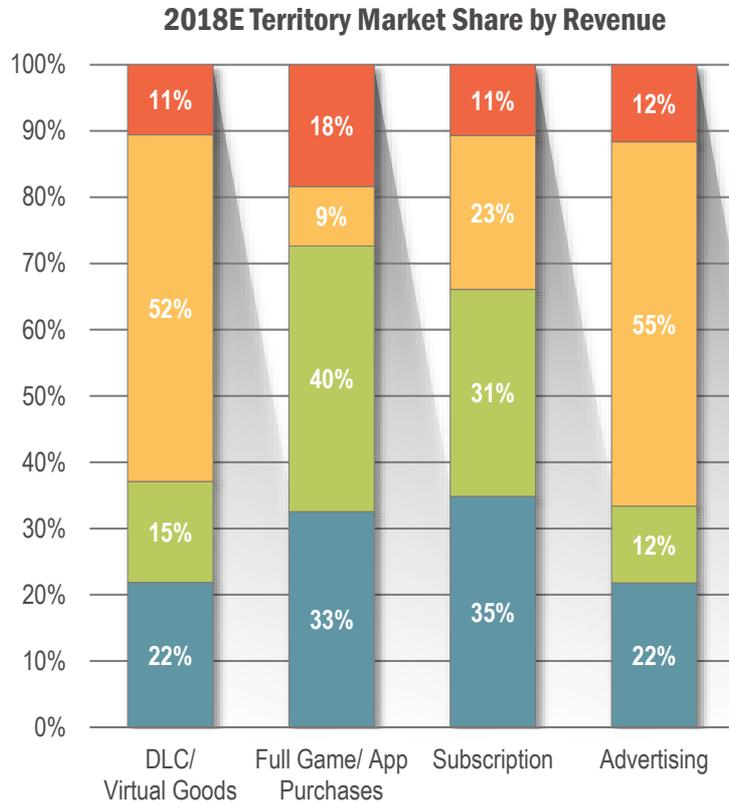
2022E Revenue by Territory & Monetization Scheme



TOTAL	\$134.5B	\$17.7B	\$7.1B	\$16.9B
Rest of World	\$20.9B	\$3.5B	\$1.0B	\$3.1B
Asia	\$64.2B	\$1.7B	\$2.0B	\$8.7B
Europe	\$23.1B	\$6.7B	\$1.9B	\$2.1B
United States	\$26.3B	\$5.9B	\$2.2B	\$3.1B

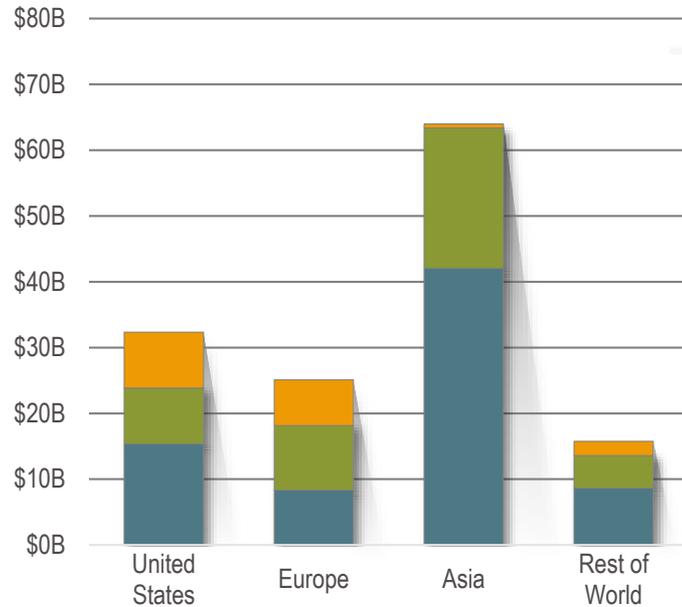


'18E – '22E REV. BY TERRITORY & MONETIZATION SCHEME – MARKET SHARE



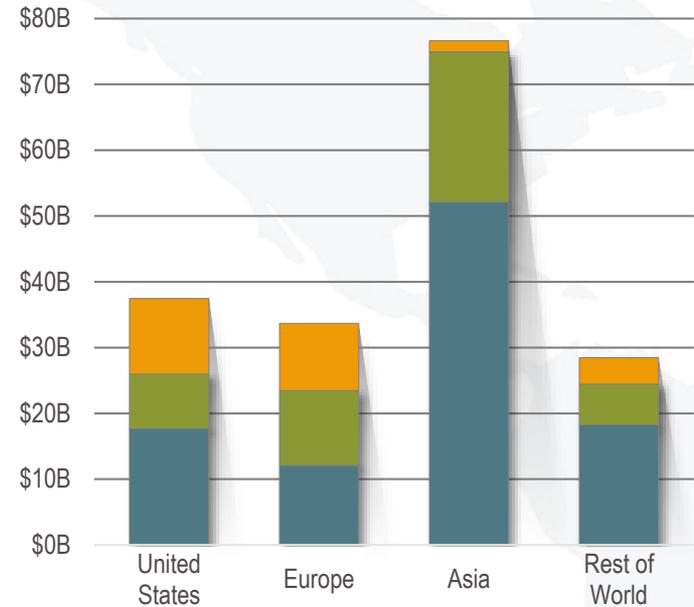
'18E – '22E REVENUE BY TERRITORY & CATEGORY

2018E Revenue by Category & Territory



Territory	Mobile	Digital PC	Digital Console	TOTAL
United States	\$15.4B	\$8.5B	\$8.5B	\$32.3B
Europe	\$8.3B	\$9.8B	\$7.0B	\$25.1B
Asia	\$42.1B	\$21.3B	\$0.6B	\$64.0B
Rest of World	\$8.6B	\$4.9B	\$2.2B	\$15.8B

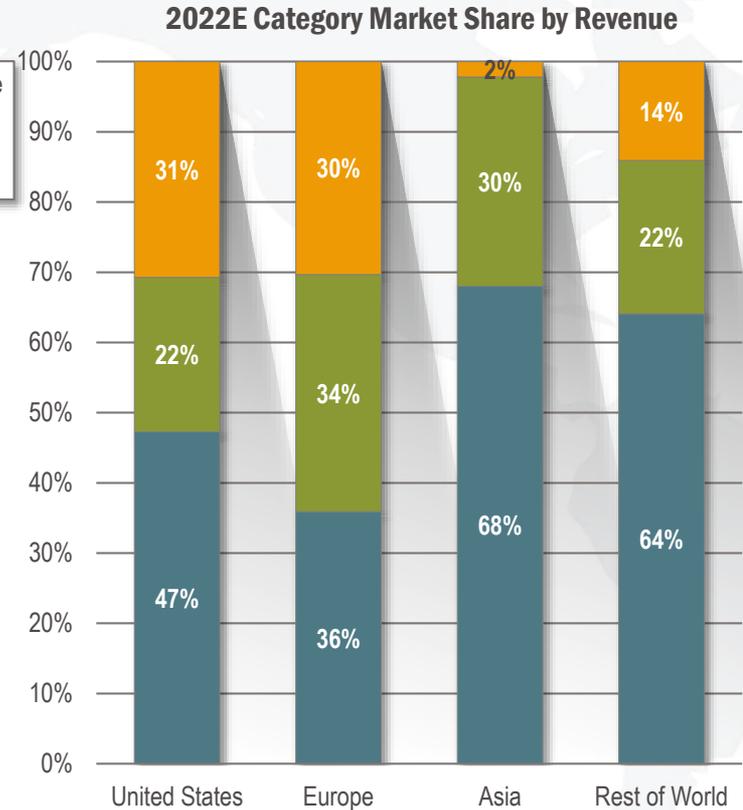
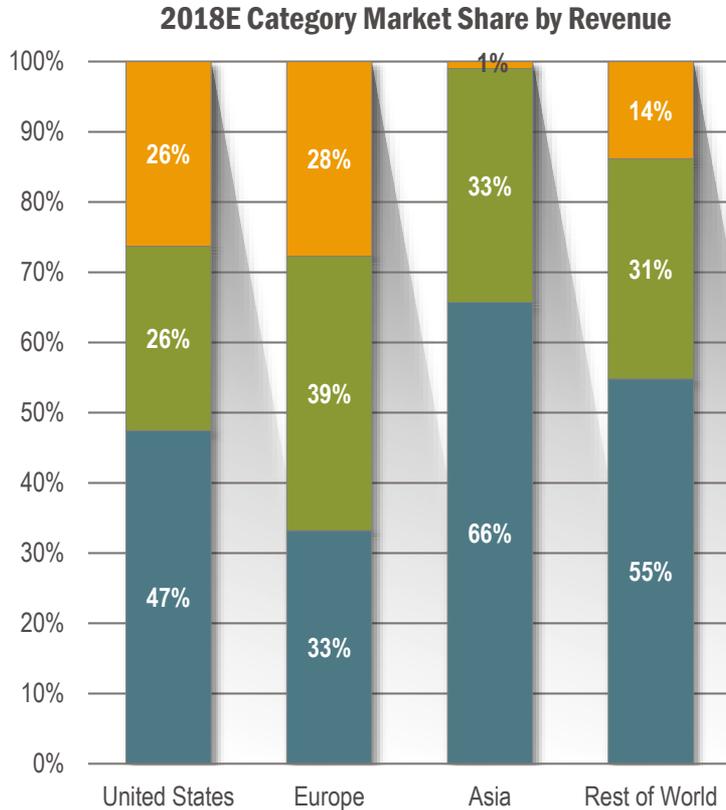
2022E Revenue by Category & Territory



Territory	Mobile	Digital PC	Digital Console	TOTAL
United States	\$17.7B	\$8.3B	\$11.5B	\$37.5B
Europe	\$12.1B	\$11.4B	\$10.2B	\$33.7B
Asia	\$52.1B	\$22.8B	\$1.7B	\$76.6B
Rest of World	\$18.2B	\$6.2B	\$4.0B	\$28.5B



'18E – '22E REVENUE BY TERRITORY & CATEGORY – MARKET SHARE





2018E DIGITAL SALES BY MONETIZATION SCHEME

2018E DIGITAL GAME SEGMENTS DASHBOARD

United States

		Virtual Goods	Paid Downloads	Advertising	Subscription	
Mobile	iOS	\$7,444 M	\$96 M	\$1,140 M	\$88 M	\$15,355 M
	Android	\$5,619 M	\$33 M	\$856 M	\$79 M	
Digital PC		\$5,451 M	\$2,335 M	\$340 M	\$365 M	\$8,490 M
Digital Console	Microsoft Xbox Live	\$1,974 M	\$980 M	-	\$856 M	\$8,504 M
	Sony PlayStation Network	\$2,464 M	\$1,030 M	-	\$862 M	
	Nintendo eShop	\$159 M	\$169 M	-	\$10 M	
	Total	\$23,110 M	\$4,643 M	\$2,336 M	\$2,260 M	\$32,350 M



2018E DIGITAL GAME SEGMENTS DASHBOARD

Europe

		Virtual Goods	Paid Downloads	Advertising	Subscription	
Mobile	iOS	\$2,735 M	\$205 M	\$444 M	\$34 M	\$8,338 M
	Android	\$4,147 M	\$74 M	\$640 M	\$59 M	
Digital PC		\$5,386 M	\$3,826 M	\$157 M	\$441 M	\$9,811 M
Digital Console	Microsoft Xbox Live	\$434 M	\$211 M	-	\$286 M	\$6,960 M
	Sony PlayStation Network	\$3,332 M	\$1,301 M	-	\$1,200 M	
	Nintendo eShop	\$90 M	\$102 M	-	\$4 M	
	Total	\$16,124 M	\$5,719 M	\$1,241 M	\$2,025 M	\$25,108 M



2018E DIGITAL GAME SEGMENTS DASHBOARD

Asia

		Virtual Goods	Paid Downloads	Advertising	Subscription	
Mobile	iOS	\$19,685 M	\$185 M	\$3,004 M	\$231 M	\$42,061 M
	Android	\$16,245 M	\$19 M	\$2,464 M	\$227 M	
Digital PC		\$19,076 M	\$853 M	\$426 M	\$959 M	\$21,314 M
Digital Console	Microsoft Xbox Live	\$3 M	\$1 M	-	\$1 M	\$626 M
	Sony PlayStation Network	\$218 M	\$113 M	-	\$81 M	
	Nintendo eShop	\$95 M	\$110 M	-	\$5 M	
	Total	\$55,322 M	\$1,280 M	\$5,894 M	\$1,505 M	\$64,001 M

