

△ DEFENDANT △	Case No. <u>4:20-cv-05640-YGR</u> Case Title <u>Epic Games, Inc. v. Apple, Inc.</u> Exhibit No. <u>DX-4270</u> Date Entered _____ By: _____, Deputy Clerk
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# FORTNITE

Mobile

## Adam Sussman Onboarding - January 2020

*Brian Chu and Haseeb Malik*

## Background

### Highlights

- **New Accounts:** Mobile accounts for **38%** of daily new accounts - (*2019 Average*)
- **iOS:** Launched March 16, 2018
  - **85M** Downloads, **64M** Accounts New to Fortnite, **\$614M** in Revenue
- **Android:** Launched August 13, 2018
  - **Epic Games App:** **121M** downloads of EGA
  - **Fortnite:** **20M** Downloads, **12M** Accounts New to Fortnite, **\$45M** in Revenue
- **OEM Partnerships:** Key growth driver for the Epic Games App
  - Samsung represents **79%** of Fortnite downloads
  - 4 major OEM partners (Samsung, Huawei, Sony, and LG)
  - Preinstall deals on flagship devices and system level whitelist permissions

## Priorities and Challenges

### 2020 Priorities

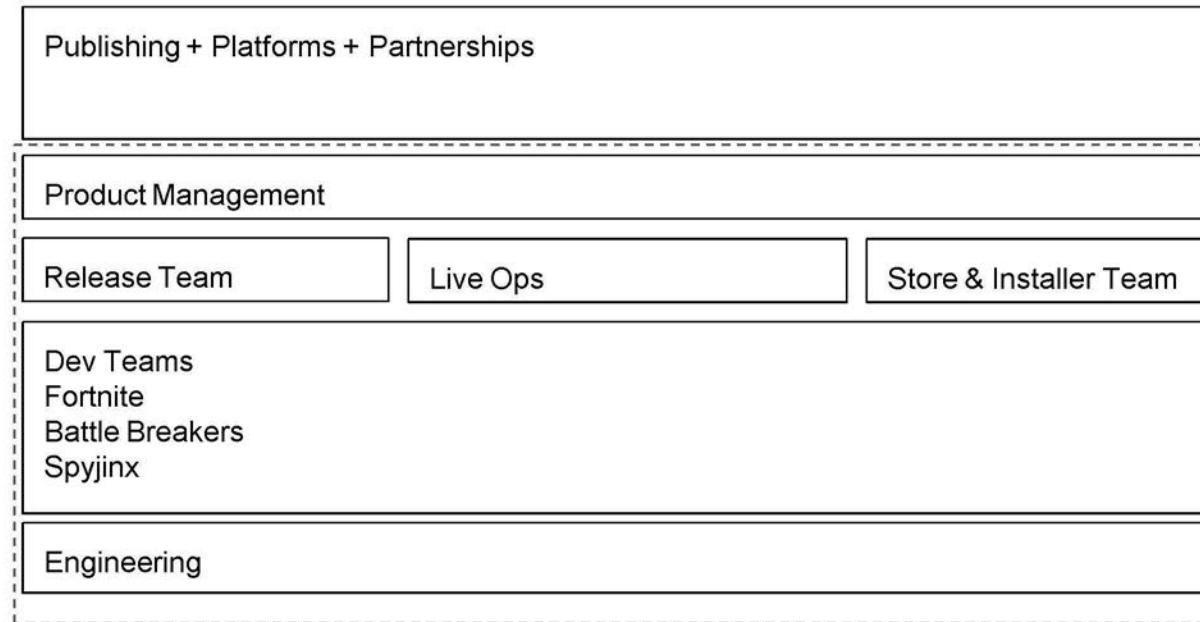
- **Product Optimizations:** Improve the player experience to increase retention
- **Android Scale:** Expand OEM and Carrier partnerships to increase distribution and while adding carrier billing to reduce payment friction
- **iOS Reacquisition:** Use Apple, paid media and CRM to bring back churned players

### Major Challenges

- **Min Spec on Android:** Device filtering and compatibility limits wide distribution on Fortnite
- **OEM Partnerships:** Haven't yet driven download of Epic Games App at scale
- **Lapsed Players:** iOS lapsed players represent significant win back opportunity

## Mobile @ Epic Games

Purpose of this slide is to show how we as publishing interact with the various parts of the business that work on mobile



## Slide 4

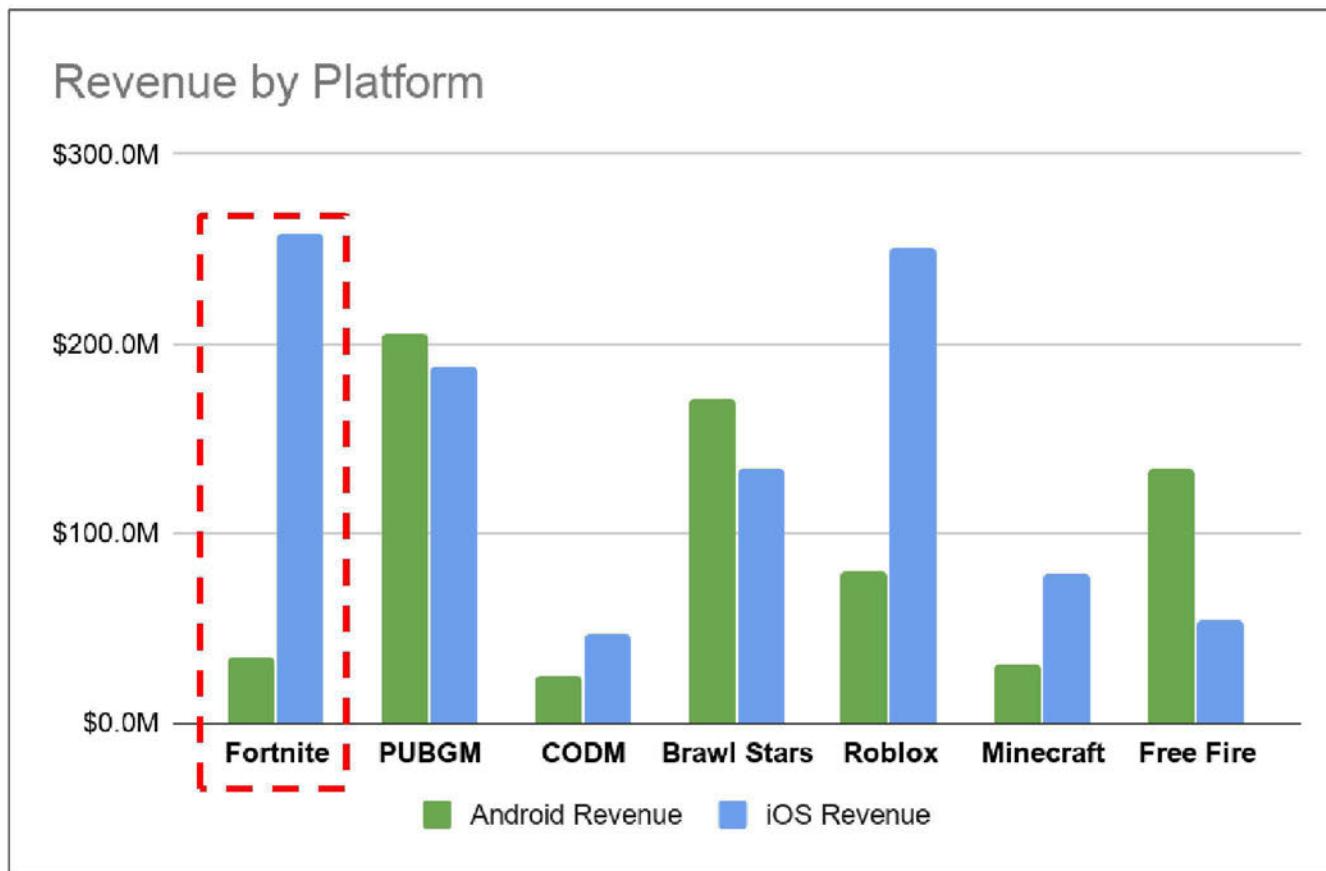
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- 1 Feels like we've made a lot of Go to Markets that deal with product and campaign launches but that isn't necessarily reflected here. Should we add that? It's more of the traditional marketing stuff. Ex: we always have a mobile plan for campaigns promoting a new season launch.  
Alec Shobin, 1/20/2020
- 1 Good call, lets pull a few and put them in the appendix. We can flip to them if the conversation heads that direction.
- 1 or 2 from FN  
BB GTM  
Haseeb Malik, 1/20/2020

# COMPETITIVE OVERVIEW

## Mobile Competitors - 2019 Revenue

Despite best in class iOS revenue, Fortnite's Android revenue trails key comps suggesting room for growth on the platform



Caveat: CODM launched late Sept 2019

SOURCE: Fortnite actuals; Comps from App Annie, excluding regional SKUs (ex: PUBGM Japan) and any data from China in non-regional SKUs

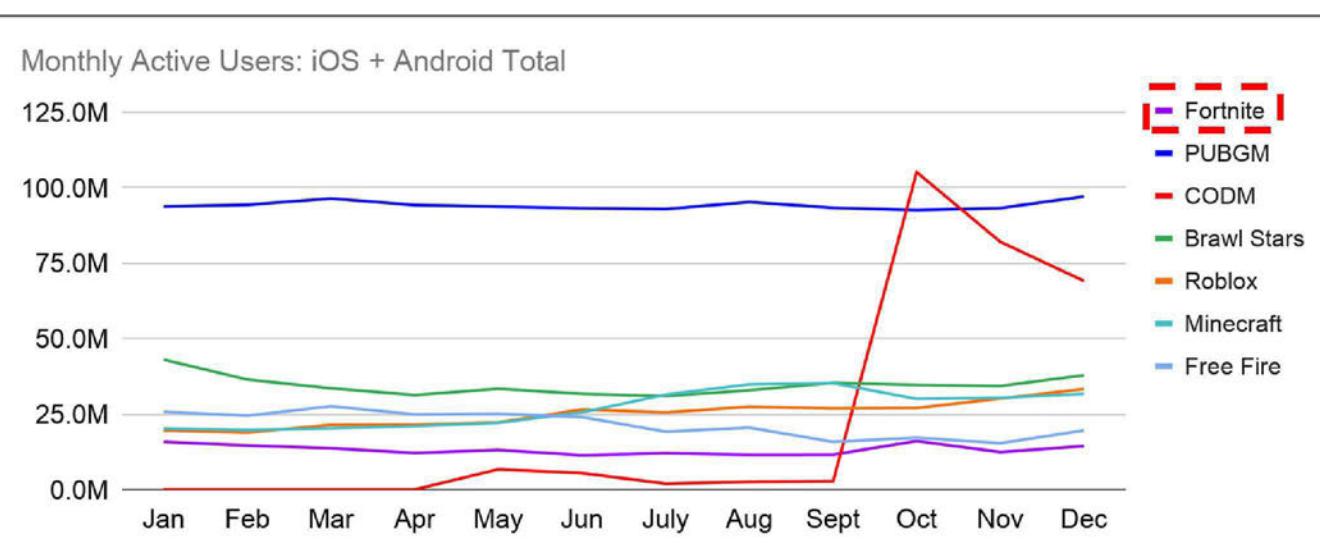
## **Speaker Notes for Slide 6**

Raw data:

<https://docs.google.com/spreadsheets/d/1H1gPEiMd6thqS4LEbyFDCPRUIGytoQNNfQWZcZg68k/edit?usp=sharing>

## Mobile Competitors - 2019 MAU

**Fortnite's lower Android revenue is a function of FN Android MAU being significantly below comps**



### Dec MAU by Platform:

	iOS	Android	Total	% Android
Fortnite	11.1M	3.3M	14.4M	23%
PUBGM	10.7M	86.3M	97.1M	89%
CODM	20.8M	48.3M	69.1M	70%
Brawl Stars	10.8M	27.1M	37.9M	72%
Roblox	14.0M	19.3M	33.3M	58%
Minecraft	8.6M	23.1M	31.7M	73%
Free Fire	1.4M	18.2M	19.6M	93%

- Fortnite has leveled off to around **14M MAU** in 2019
- Roblox and Minecraft increased their MAU trends in Q3 and Q4
- CODM launch saw high engagement, closing the year at **69.1M MAU**
- PUBGM and CODM MAU was significantly higher than comps due to Android (89% and 70% respectively)

SOURCE: Fortnite actuals; Comps from App Annie, excluding regional SKUs (ex: PUBGM Japan) and any data from China in non-regional SKUs

## **Speaker Notes for Slide 7**

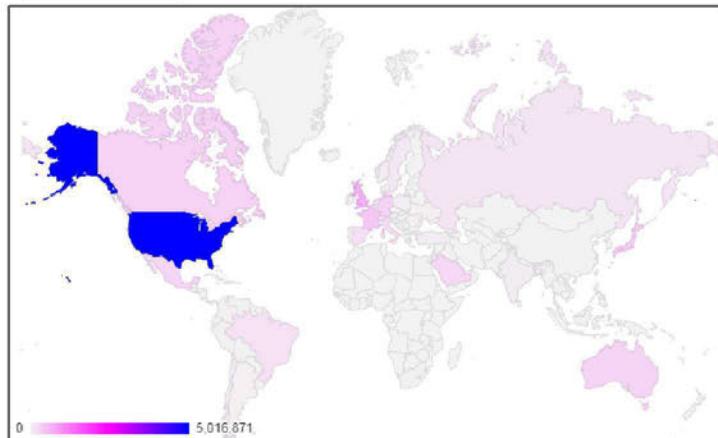
Raw data:

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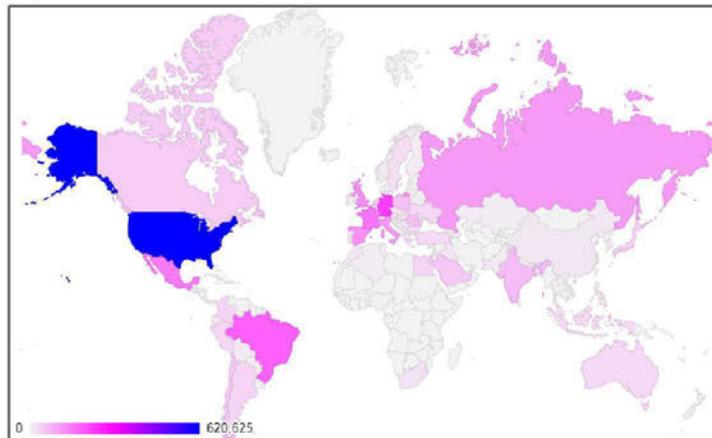
## Mobile Competitors - 2019 Dec MAU by Region

84% of PUBGM's Android MAU comes from emerging markets, while still outperforming FN in established geos like the US

iOS MAU



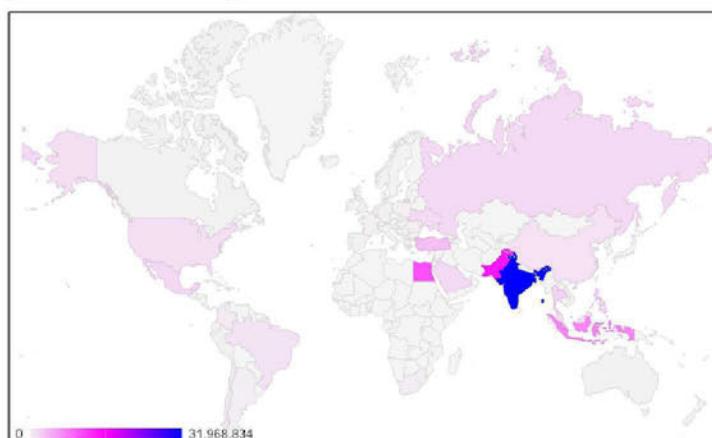
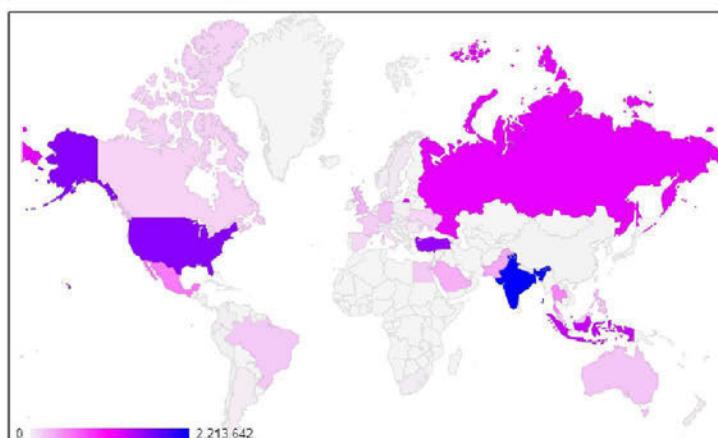
Android MAU



% MAU by Continent

	FNM	PUBGM
EU	30%	10%
NA	50%	4%
SA	4%	2%
AS	12%	71%
OCE	3%	0%
AF	1%	13%

PUBG Mobile



Android MAU

	FNM	PUBGM
US	0.6M	1.3M
India	0.1M	32.0M
Pakistan	0.0M	14.5M
Egypt	0.0M	10.7M
Indonesia	0.0M	7.0M
Russia	0.1M	1.6M
Germany	0.2M	0.2M

SOURCE: Fortnite actuals; Comps from App Annie, excluding regional SKUs (ex: PUBGM Japan) and any data from China in non-regional SKUs

## **Speaker Notes for Slide 8**

Raw data:

<https://docs.google.com/spreadsheets/d/1H1gPEiMd6thqS4LEbyFDCPRUIGytoQNNfQWZcZg68k/edit?usp=sharing>

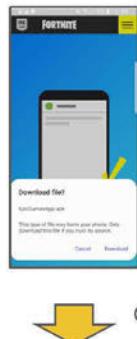
## Mobile Competitors - Android Product Comparison

Fortnite's Android growth is challenged by a higher min spec than the competition, in addition to sideloading issues

### Android Funnel Dropoff

Data suggests min spec is a bigger deterrent than sideloading (but both still cause dropoff)

Clicked  
Download  
on web

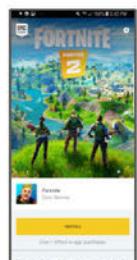


-40% due to  
confusion  
with  
sideloading  
experience

Opened  
EGA



Completed  
EGA Min  
Spec  
Check for  
FN



-62% due  
to failing  
min-spec  
check

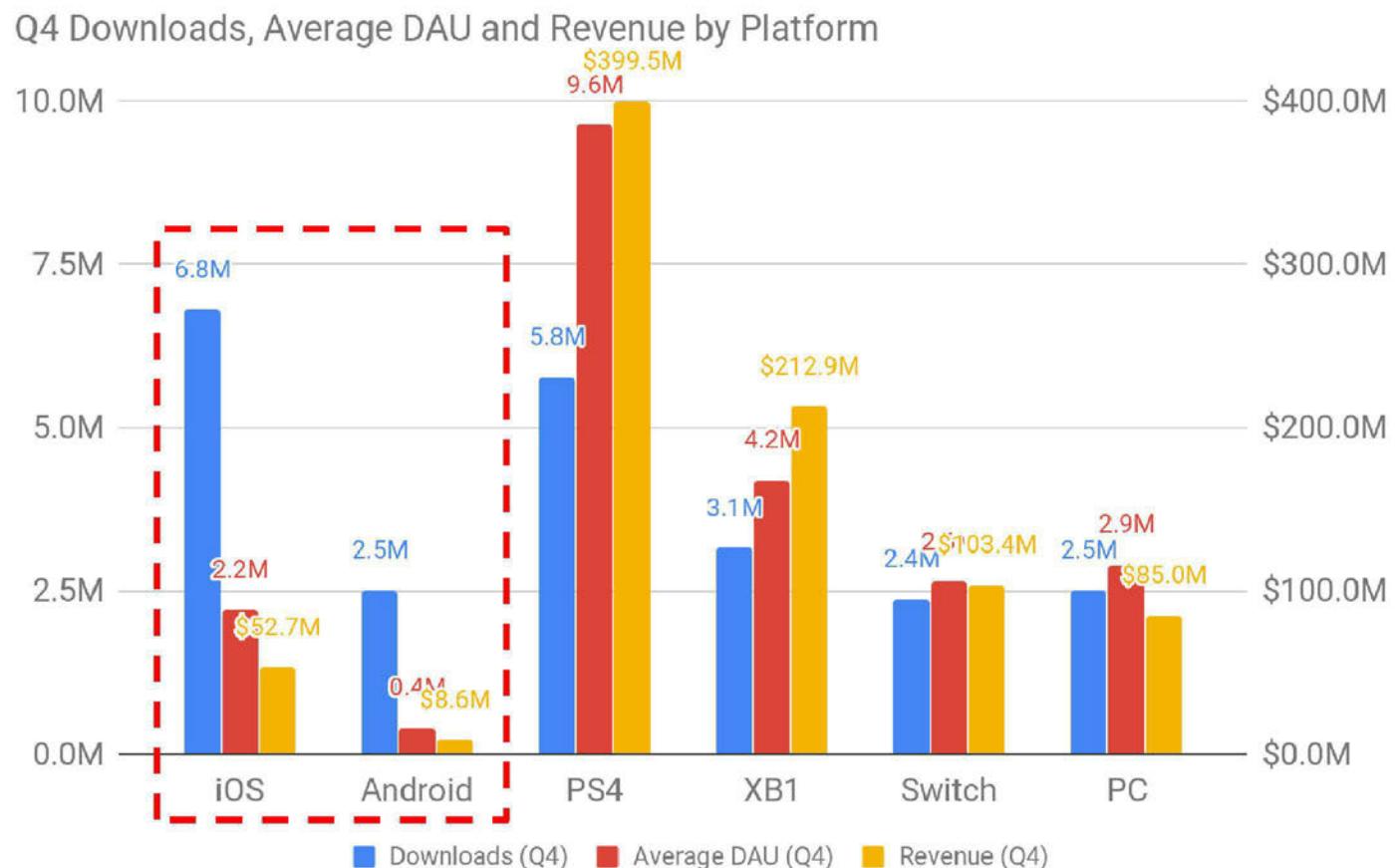
	Fortnite Mobile	Call of Duty Mobile	PUBG Mobile
Android Min-Spec	Android 8.0+, 64 Bit, 3GB RAM, Adreno 530+, Mali G71- MP20, Mali G72 MP12+	Android 5.0+, 2GB RAM ( <i>Unofficially:</i> <i>Snapdragon 625+,</i> <i>Adreno 506+ GPU</i> )	Android 5.0+, 2GB RAM
Estimated WW Device Coverage	600M Devices	1.8B Devices	1.8B Devices

Source: IDC Mobile Tracker

# KPIs

## Fortnite by Platform: Q4 Installs, DAU, Revenue

While 40.3% of new players were on mobile, mobile DAU (9.9%) and revenue (7.1%) was much lower than all other platforms



In Q4 Mobile accounted for:

- 40.3% of new to network downloads of Fortnite
- 13.8% of MAU
- 9.9% of DAU
- 7.1% of Revenue

## **Speaker Notes for Slide 11**

Raw Data:

[https://docs.google.com/spreadsheets/d/1XrxOAvx7Whbg0lqh5sDBof\\_goAPx0ZOhZ4F\\_vYo2XD0/edit?usp=sharing](https://docs.google.com/spreadsheets/d/1XrxOAvx7Whbg0lqh5sDBof_goAPx0ZOhZ4F_vYo2XD0/edit?usp=sharing)

## Fortnite by Platform: Retention and Monetization

Mobile DAU and revenue is held back by lower retention and monetization on iOS and Android

Platform	D1	D7	D30	D120	ARPDAU	ARPPU
iOS	41%	13%	6%	3%	\$0.30	\$19.70
Android	35%	11%	4%	2%	\$0.20	\$20.10
PC	35%	11%	4%	4%	\$0.33	\$18.08
PS4	49%	26%	16%	13%	\$0.42	\$18.94
XB1	44%	21%	11%	9%	\$0.51	\$17.82
Switch	53%	28%	21%	16%	\$0.39	\$19.38

Date Range: 2019 (First Seen on Platform Retention)

Slide 16

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2 [REDACTED] and [REDACTED] do we call out the lack of Android background downloads in this deck and what we're doing to address it?

Assigned to Brian Chu

Alec Shobin, 1/30/2020

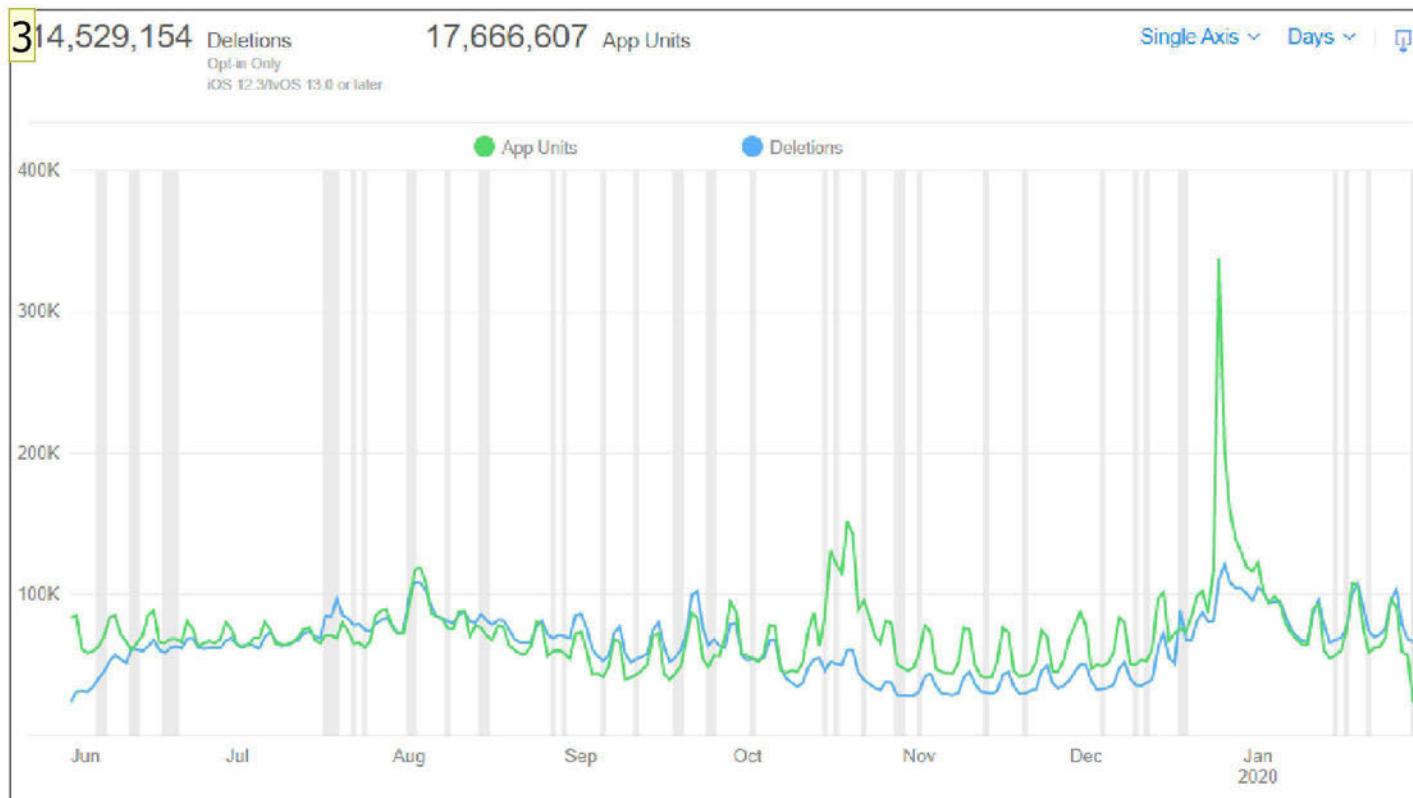
## **Speaker Notes for Slide 12**

Data:

[https://docs.google.com/spreadsheets/d/1XrxOAvx7Whbg0lqh5sDBof\\_goAPx0ZOhZ4F\\_vYo2XD0/edit?usp=sharing](https://docs.google.com/spreadsheets/d/1XrxOAvx7Whbg0lqh5sDBof_goAPx0ZOhZ4F_vYo2XD0/edit?usp=sharing)

## Fortnite Mobile: Reacquisition Opportunity

App Store data shows a significant amount of players deleting the app, suggesting a potential reacquisition opportunity



Caveat: App Store deletion data isn't shown before June 2019

### New Reacquisition Tactics:

- Apple featuring and new targeted messaging tools
- Android OEM incentives and SMS campaigns
- CRM push notifications (March)
- Paid Media reacquisition campaigns (expected to be at scale in June)

- 3 [REDACTED] this deletion data from the app store might visualize the opportunity better (also kind of scary)

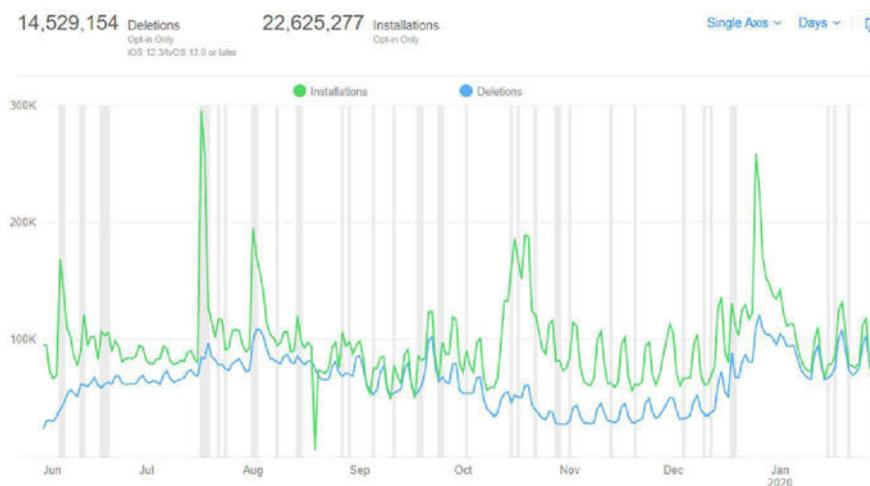
Assigned to Haseeb Malik

Alec Shobin, 1/30/2020

## Fortnite Mobile: Reacquisition Opportunity

Lower mobile retention created a high number of churned players that could be reacquired more cheaply than new players

Platform	Downloads (LTD)	MAU (Q4 Avg)	Churned Players	DAU Increase
iOS	85M	7.7M		
Android	20M	2.1M		
<b>Total</b>	<b>105M</b>	<b>9.8M</b>		



### Reacquisition Tactics:

- Apple featuring and new targeted messaging tools
- Android OEM incentives and SMS campaigns
- CRM push notifications (March)
- Paid Media reacquisition campaigns (expected to be at scale in June)

Slide 19

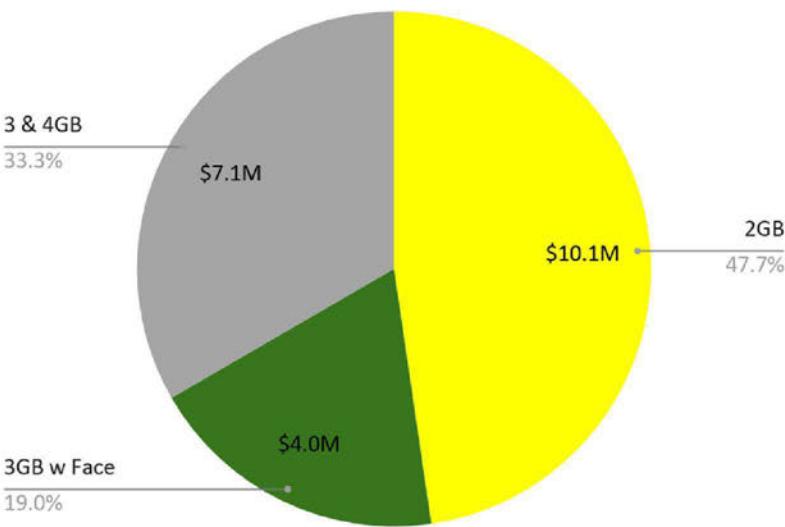
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- 4 Working with Kent on these when he returns later this week  
Alec Shobin, 1/30/2020
- 5 churn dash is here: <http://tableau.epicgames.net/#/site/SensitiveData/views/LastSeen/PlatformAccountsNotSeenbyDateRaw?:id=1>  
Alec Shobin, 1/30/2020
- 2 It might be interesting to show in flows (new accounts mobile daily) and out flows (churned players daily). This could be shown in a line graph for both and the goal would be to close the gap. This would set up a very visual representation of where the impact from the activities you have listed along with the optimizations are being seen throughout the year.  
Haseeb Malik, 1/30/2020
- 6 Good idea! Adding - [REDACTED] for vis  
Alec Shobin, 1/30/2020

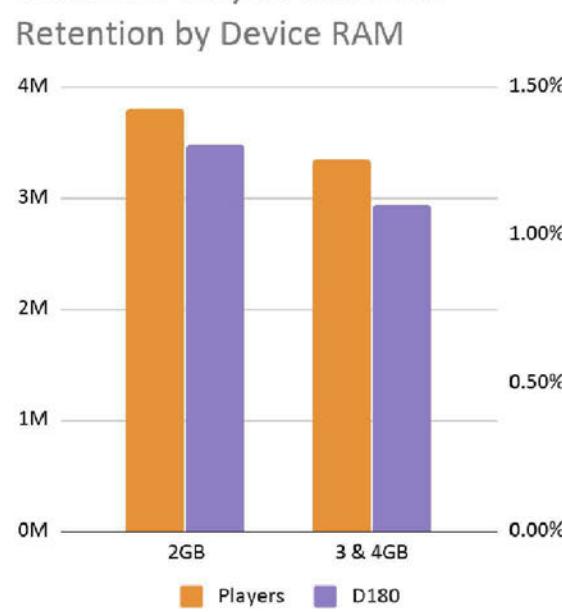
## Fortnite Mobile: Xcode 9 Memory Accounting Entitlement

Fortnite runs on 2GB iOS devices due to a bug in Xcode 9 that incorrectly measure memory use - Apple wants Fortnite to stop using this incorrect memory accounting but 2GB devices drive close to 48% of iOS revenue and 53% of MAU

December Revenue by Device RAM



December Players and D180 Retention by Device RAM



### Entitlement Context:

- Negotiated an entitlement to use the old memory accounting last June
- Apple is now asking when we can lose the entitlement - engineering teams don't think it's possible
- Options:
  - Cut support for 2GB devices
  - Continue regular negotiations to keep the entitlement
  - Get engineering resources to fix the issue

## **Speaker Notes for Slide 15**

[https://docs.google.com/spreadsheets/d/1ZuEsGpEwfNINSwQk98OQdQ0DZKlwR63IZ62MjW\\_s6iw/edit?usp=sharing](https://docs.google.com/spreadsheets/d/1ZuEsGpEwfNINSwQk98OQdQ0DZKlwR63IZ62MjW_s6iw/edit?usp=sharing)

# 2020 GOALS

## Fortnite 2020 Mobile Priorities

Inflect the curve and return mobile DAU to growth from 1.8M baseline through improved top of funnel acquisition, reacquisition, and retention improvements.

### Increase Android Market Penetration

- Develop new and existing mobile partnerships (OEM, Carrier, DCB)
- Increase # of FN compatible devices

### Increase Early and Elder Retention

- Contextual Tips
- Guided Tutorial
- 4v4 Bots Mode at Startup
- Resolve top requested community bug fixes

### Improve Mobile Stability and Patch/Load Experience

- Reduce package size
- Increase package # to parallelize installation
- iOS MTBF improvements
- Optimizations to loading screen (UI/UX)
- Item Shop Preview in Party Hub

### Achieve Closer Mobile Gameplay Parity with Console

- Make sure mobile supports new FNBR features in a mobile friendly way
- HUD Layout Tool
- Improve LTM gameplay quality on mobile

## Fortnite 2020 Mobile KPI Goals

	Current Projection for 2020	Improve Mobile Retention (+5% relative on iOS, +15% relative on Android)	Increase Android Install Volume by 120% (11M Incremental Installs)	Improve Retention and Install Volume
iOS DAU	1.03M	1.17M	Unchanged	1.17M
Android DAU	260K	330K	570K	730K
Total DAU	1.29M	1.50M	1.59M	1.90M
%DAU Lift	N/A	16%	23%	47%

### Key Drivers

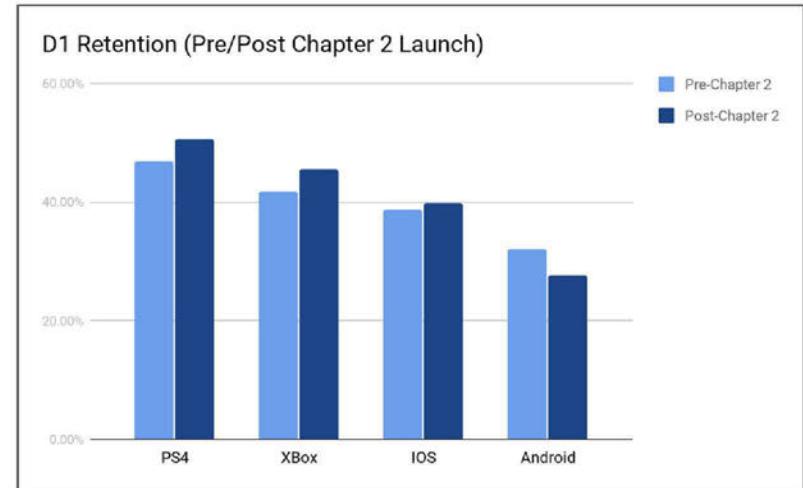
- Increase Android Install Volume: Fortumo + Carriers in X Countries + Increased device compatibility by 10%
- Iterate on Guided Tutorials to increase iOS D1 Retention to 43%, Android D1 Retention to 41%
- Additional technical resources focused on improving download/patch time and mobile performance

# PRODUCT OPTIMIZATIONS

## Increase Early and Elder Retention

### Retention Trends

- Android retention has declined by 300 basis points from 30% to 27% since the start of Q4 2019.
- iOS retention has remained relatively steady since the start of Q4 2019, but lags behind the lift seen in other platforms in Q4 after the introduction of Bots.



### Action Items to Address

- Contextual Tips (Smart Tips) - Currently in game, continued iteration on tips to improve player competence
- Guided Tutorial - Released with 11.31. Will A/B test tutorial with 12.0 release to measure impact on retention
- 4v4 Bots Mode at Startup - In design. Prototype has been built in Creative, but not ready for release yet
- Resolve top requested community bug fixes - Ongoing. We continue to prioritize and fix community issues, but development bandwidth is limited.

## **Speaker Notes for Slide 20**

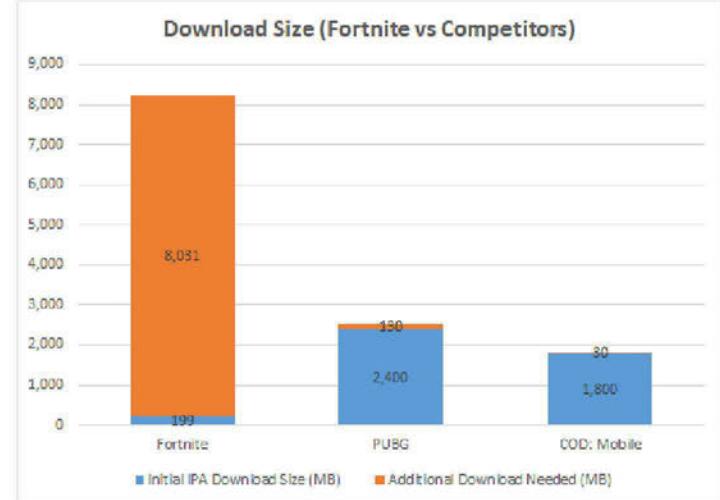
Jan 1 2019 to Nov 2019 DAU mobile declined by 68%, non mobile platforms are down 46%, iOS represents the largest decline of all platforms at 67%, while Android has seen a 44% decline (as of 11/14/19)

2.5M DAU lost on iOS in 2019 represents winback opportunities. Saw some temp lift through CH2 featuring and Glow. What else can we do here?

## Improve Mobile Stability and Patch/Load Experience

### Download/Patching Trends

- Fortnite Mobile currently takes more than 8GB of storage, more than 2x larger than PUBG Mobile and more than 3x larger than COD: Mobile.
- Total time to download and patch takes ~15 min for FN vs 3-4 min for PUBG Mobile and COD: Mobile.

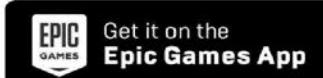


### Action Items to Address

- Reduce download package size and deliver more content on demand
- Increase number of install packages to parallelize installation
- Optimizations to loading screen (UI/UX)
- Item Shop Preview in Party Hub so players have something to do while game is loading

# PARTNERSHIPS

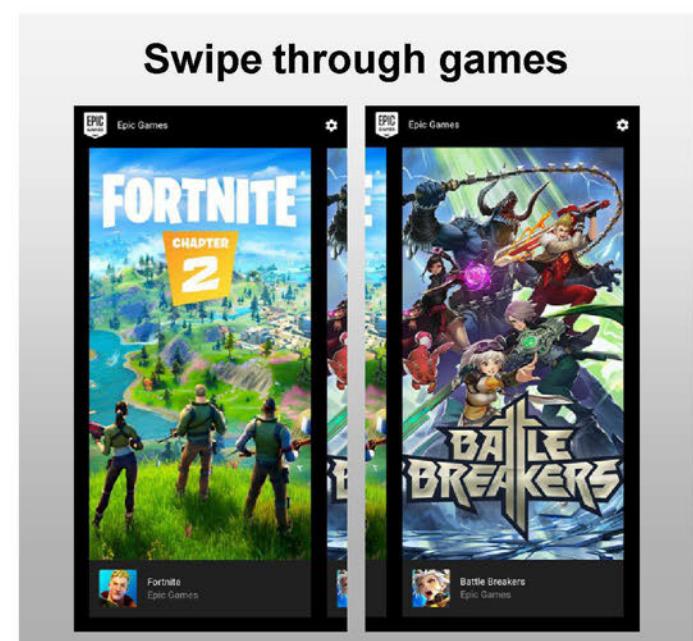
## Epic Games App Overview



**What it is:** The Fortnite Installer adapted and rebranded as the Epic Games App, with the goal of becoming the Epic Games Store on Mobile and hosting multiple third-party mobile games

**Distribution:** App is currently available for download via APK at EpicGames.com and preinstalls on select mobile devices through OEM partnership agreements

**Challenges:** Awareness, availability, install flow, understanding of what it is, limited content offering, differing game package sizes, product ownership, existing OEM agreements and established terms



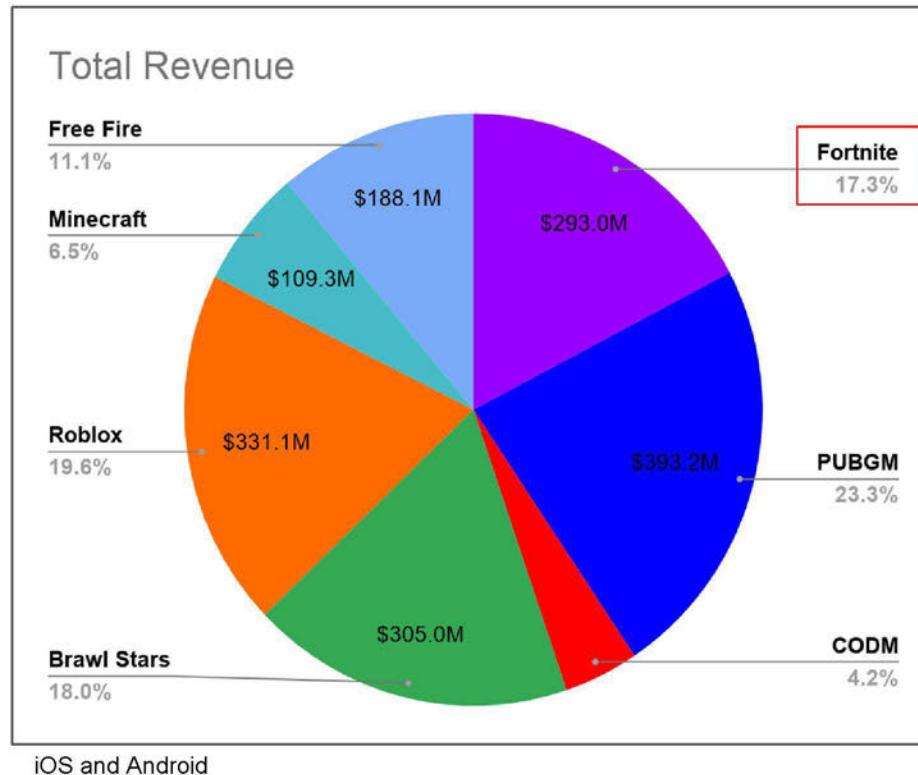
## OEM Partnerships Snapshot

Manufacturer	Samsung	Huawei	Sony	LG
Contract Terms	<b>3 Years</b>  (Starting Aug 9, 2018, culminating Aug 8, 2021)	<b>1 Year</b>  (Ended Dec 31, 2019, extension under negotiation)	<b>2 Years</b>  (Starting March 1, 2019, culminating Feb 28, 2021)	<b>1 Year</b>  (Starting April 1, 2019, culminating March 30, 2020)
Rev split	<b>YES</b>  (Starting 2/9/20, terms shift from: 85/15 → 88/12 Fortnite 94/6 → 95/5 Battle Breakers)	<b>NO</b>	<b>NO</b>	<b>NO</b>
Preinstall Agreements	<b>YES</b>  (App preinstalled on +1 Screen of unlocked Galaxy S10 devices in Europe)	<b>YES</b>  (App preinstalled on +1 Screen of unlocked HONOR View20 & HONOR 20/20 Pro devices)	<b>YES</b>  (App preinstalled on +1 Screen of Xperia 1 and Xperia 5 devices)	<b>YES</b>  (App preinstalled on +1 Screen of unlocked V50 Dual Screen devices)
OEM App Store Availability	<b>YES</b>  (Galaxy Store)	<b>YES</b>  (App Gallery)	<b>N/A</b>	<b>NO</b>  (Not available in SmartWorld)
Whitelisted Install Flow / Reduced Permissions	<b>YES</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>

# **EXHIBITS**

## Mobile Competitors - 2019 Revenue

Fortnite's 2019 mobile revenue was below the competition despite best in class iOS revenue



SOURCE: Fortnite actuals; Comps from App Annie, excluding regional SKUs (ex: PUBGM Japan) and any data from China in non-regional SKUs

## **Speaker Notes for Slide 26**

Raw data:

<https://docs.google.com/spreadsheets/d/1H1gPEiMd6thqS4LEbyFDCPRUIGytoQNNfQWZcZg68k/edit?usp=sharing>

## Fortnite Mobile Performance Overview

Platform	Downloads (Q4)	Gross Revenue (Q4)	DAU (Q4 Avg)	MAU (Q4 Avg)
<b>Mobile</b>	<b>9.3M</b>	<b>\$61.5M</b>	<b>2.6M</b>	<b>9.8M</b>
iOS	6.8M	\$52.7M	2.2M	7.7M
Android	2.5M	\$8.6M	400K	2.1M
Console (XBOX, PS4, Switch)	11.3M	\$717M	20.7M	52.2M
PC	2.5M	\$85M	2.9M	9M
<b>Totals</b>	<b>23.1M</b>	<b>\$863.5M</b>	<b>26.2M</b>	<b>71M</b>

- In Q4 Mobile accounted for:
  - **40.3%** of new to network downloads of Fortnite
  - **13.8%** of MAU
  - **9.9%** of DAU
  - **7.1%** of Revenue

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

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## 2020 Mobile Revenue and Marketing Forecast

<b>2020 Revenue Forecast</b>	<b>2019</b>	<b>2020</b>	<b>+/-</b>
iOS	\$254M	\$194M	-24%
Android	\$25M	\$28M	+11%
Total Mobile	\$279M	\$222M	-20.43%
<i>Total Revenue Forecast</i>	<i>\$3,705M</i>	<i>\$2,770M</i>	<i>-25%</i>
<b>2020 Marketing Budget Forecast</b>	<b>2019</b>	<b>2020</b>	<b>+/-</b>
iOS	\$36M	\$22M	-41%
Android	\$3.6M	\$3.1M	-14%
Total Mobile	39.6M	\$25.1M	-36.6%
<i>Total Marketing Budget</i>	<i>\$529M</i>	<i>\$309M</i>	<i>-42%</i>

## **Speaker Notes for Slide 29**

Link:

[https://docs.google.com/presentation/d/1nigg\\_Psw8yKTETKwdQ6ICsC877M8-JLgKWp3-InKrGo/edit#slide=id.g7062b18754\\_4\\_22](https://docs.google.com/presentation/d/1nigg_Psw8yKTETKwdQ6ICsC877M8-JLgKWp3-InKrGo/edit#slide=id.g7062b18754_4_22)

## Fortnite Mobile Performance Overview

Platform	Downloads (LTD)	Gross Revenue (LTD)	DAU (Q4 Avg)	MAU (Q4 Avg)
<b>Mobile</b>	<b>105M</b>	<b>\$659M</b>	<b>2.6M</b>	<b>9.8M</b>
iOS	85M	\$614M	2.2M	7.7M
Android	20M	\$45M	400K	2.1M
Console (XBOX, PS4, Switch)	140M	\$8.29B	20.7M	52.2M
PC	77M	\$1.07B	2.9M	9M
<i>Totals</i>	<i>322M</i>	<i>\$10.02B</i>	<i>26.2M</i>	<i>71M</i>

- Mobile represents the following of the totals
  - **33%** of downloads
  - **13.80%** of MAU
  - **9.92%** of DAU
  - **6.58%** of revenue

## OEM Partnerships Scorecard

Manufacturer	Samsung	Huawei	Sony	LG	Total
Preinstall* Results to date	5M	234K	1M	600K	6,834,000
App Store Install Results to date*	15.3M	2M	N/A	N/A	17,300,000
Outfit Results	Galaxy (Note9): <b>934,340</b> iKONIK (S10): <b>1,165,761</b> GLOW (All devices): <b>1,705,160</b>	Honor Guard (View20): <b>47,761</b> Wonder (Honor 20): <b>59,791</b>	N/A	N/A	3,912,813
Total Steps to Install	11	18	18	18	N/A

\*of Epic Games App

### Summary:

- Epic Games App is currently preinstalled and discoverable on a limited number of devices because existing preinstall deals only applied to new, unlocked flagship device models
- Epic Games App store installs are greater but due to significantly lower organic traffic than Google Play and OEM marketing campaigns focusing on Brand and Product sales instead of Content and Services, they only account for **14%** of total Epic Games App installs lifetime
- Samsung outfit promotions have been successful and generated biggest new player acquisition beats on Android, but Huawei outfit promotions did not see the same level of success due to lack of reach and marketing support
- Preinstall install flow only removes one prohibitive security prompt from sideload install flow and still takes **18** steps while requiring users to accept “Sources unknown”

## OEM Partnerships 2020 Plan

### Objectives:

- Increase app availability (background download available on all devices versus only new flagships)
- Improve install flow (reduced steps and prompts similar to Samsung)
- Refocus co-marketing campaigns around OEM-owned CDM to better leverage exclusive in-game marketing content (leading more qualified traffic to install location of Epic Games App and greater conversion)
- Establish more partners to cover ~95% of supported Android market share

### Proof of Concept:

- Test currently in production with OnePlus to reach all devices with optimized install flow that we can shop to other OEM partners:  
<https://cloud.protopie.io/p/f25696d076>

Targeted 2020 Partners	Samsung	Huawei	Sony	LG	OnePlus	OPPO	Vivo	Xiaomi	Lenovo	Total
Status	In Contract	In Renewal	In Contract	In Contract	In Draft Phase	In Negotiation	In Negotiation	In Negotiation	Making Contact	N/A
Total Supported (Fortnite) Device Market Share (excl. China)*	56%	22%	4%	2.8%	3.1%	TBD	1.4%	4%	1.1%	94.4%

\*Based on IDC sales data from Q3/2015-Q2/2019

## Carrier Partnerships Snapshot

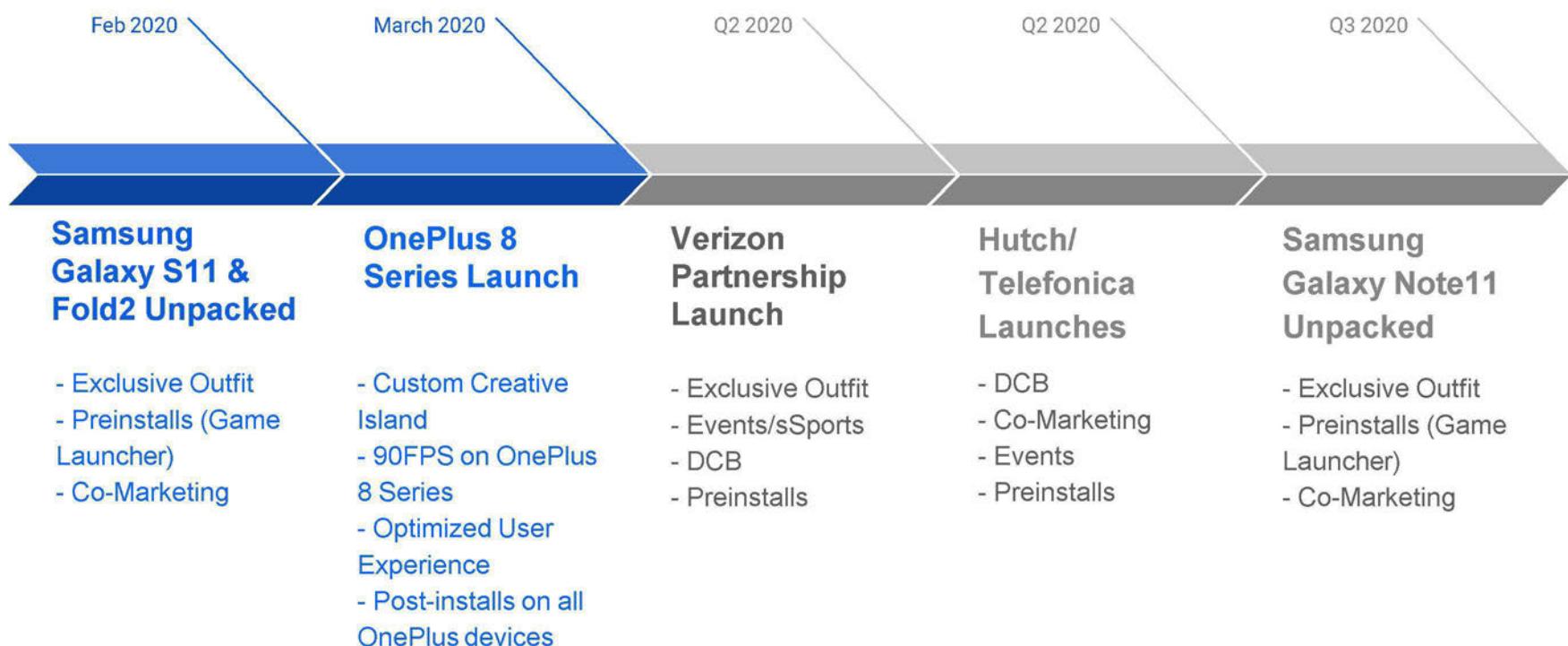
### Status:

- Direct Carrier Billing pilot program launching Q1 2020 with Fortumo as official Merchant of Record / aggregator and potential for pre & post-installs and co-marketing agreements with carriers in key European and US markets
- Agreement currently with Epic Finance and Legal

Telecom Group	Hutchison	Telefonica	Verizon
Carriers	- Three - Wind Tre	- O2 - Movistar	Verizon
Countries	UK, Ireland, Denmark, Sweden, Austria, Italy	Spain, Germany	USA
Direct Carrier Billing	YES	YES	YES
Commercial Terms	95/5 (+Up to 3% in bad debt)	95/5 (+Up to 3% in bad debt)	95/5 (+Up to 3% in bad debt)
Potential for Pre/post-installs	YES	YES	YES
Co-Marketing (IP Usage, events, promotions)	YES	YES	YES
Target Partnership Announcement	April 30 - Season 3 Launch	April 30 - Season 3 Launch	March/April Timeframe

## Mobile Partnerships Marketing Timeline

### Co-Marketing Big Beats



## Achieve Closer Mobile Gameplay Parity with Console

- Make sure mobile supports new FNBR features in a mobile friendly way
- HUD Layout Tool
- Improve LTM gameplay quality on mobile

## iOS: Outstanding Challenges

Open issues from 2019, ranked by severity

### 1. Memory Accounting Entitlement

- Context: Xcode 9 bug allowed Fortnite to run on 2GB devices - Xcode 10+ fixed that bug
- Result: Negotiated memory accounting entitlement with Apple so that Fortnite can continue running on 2GB devices - negotiation included our commitment to ultimately get the game working on 2GB devices without entitlement OR drop support for 2GB devices (expected 30% decrease in DAU)
- Next Steps: Apple looking to us for timeline for removing memory accounting entitlement

### 2. Propagation

### 3. Apple Sign-In

- Context: Apple's new login process for Apps (think: Sign In with Google/Facebook)

### 4. App Review Issues

- In-app download time
- Video asset rejections

## **Speaker Notes for Slide 36**

NOTES: Add a few lines on what we do, feature placement, day to day contact, escalations, tracking submissions with release team - highlight account management - critical path for forced releases - show times from submission to cert, number of propagation problems

# Competitive First Experience / Patching

	Fortnite	PUBG	COD: Mobile	Insights:
<b>Initial IPA Download Size</b>	199MB	2.4GB	1.8GB	
<b>Initial IPA Download Time<sup>1</sup></b>	22s	3m 50s	3m	
<b>Final Download Size</b>	8.23GB	2.53GB	1.83GB	
<b>First Load/Patch Time<sup>1</sup></b>	14m 24s	6s	33s	
<b>Days Between Patch: Last 90 Days<sup>2</sup></b>	7.5	9	15	
<b>Sign In Time<sup>1,4</sup></b>	22s <sup>3</sup>	10s	5s	

1: All games were tested once as fresh installs on 12/11/2019 on iPhone X over the EPIC-SECURE network in CRIV.

2: COD: Mobile was released 10/1.

3: 1m 30s including BP video for FTUE

4: Does not include 'optimization' step.

## Next Steps:

- Collect more data on times with lower end devices & higher sample size
- Collect greater granularity of patching steps, including into "optimizing" by device

## **Speaker Notes for Slide 37**

Only about 9% of players use an Iphone X, but this gives us an idea of relative performance. We will test additional devices.

QA did extensive testing on IPhone 7 and it takes 70 seconds to hit lobby, compared to 22 seconds on the IPhone X

# Competitive Landscape

	Fortnite	Shooters: Min	Shooters: Average	Shooters: Max	Top Mobile: Average
Lifetime Revenue (\$Mn)	\$639	\$7	\$247	\$607	\$1567
Lifetime Downloads (Mn)	100	22	175	450	319
Last Quarter Average DAU (Mn)	2.2	0.1	14.3	46.8	14.0
D1%	44%	38%	50%	65%	58%
D7%	14%	15%	21%	34%	32%
D30%	6%	6%	11%	18%	20%
Avg Time / Day	43	18	71	103	59
Last Quarter RPI	\$1.65	\$0.61	\$1.46	\$6.38	\$5.53
Initial Download Size	199	1100	2017	2520	247
Final Download Size	8230	1150	2141	2910	516
Last Quarter Patch Frequency	12	0	5	13	6

*Shooter Competitive Set: COD: Mobile, PUBG, Free Fire, Game for Peace\*, Knives Out, Rules of Survival, Cyber Hunter, Creative Destruction.*  
*Top Mobile Competitive Set: Arena of Valor, Pokemon Go, Candy Crush Saga, Mario Kart Tour, Clash Royale, Fate/ Grand Order, DBZ Dokkan Battle\*, Homescapes, Minecraft, Roblox.*

Source: App Annie. D1, D7, D30 Retention data not available for \* titles. [Analysis by game here](#).

## Insights:

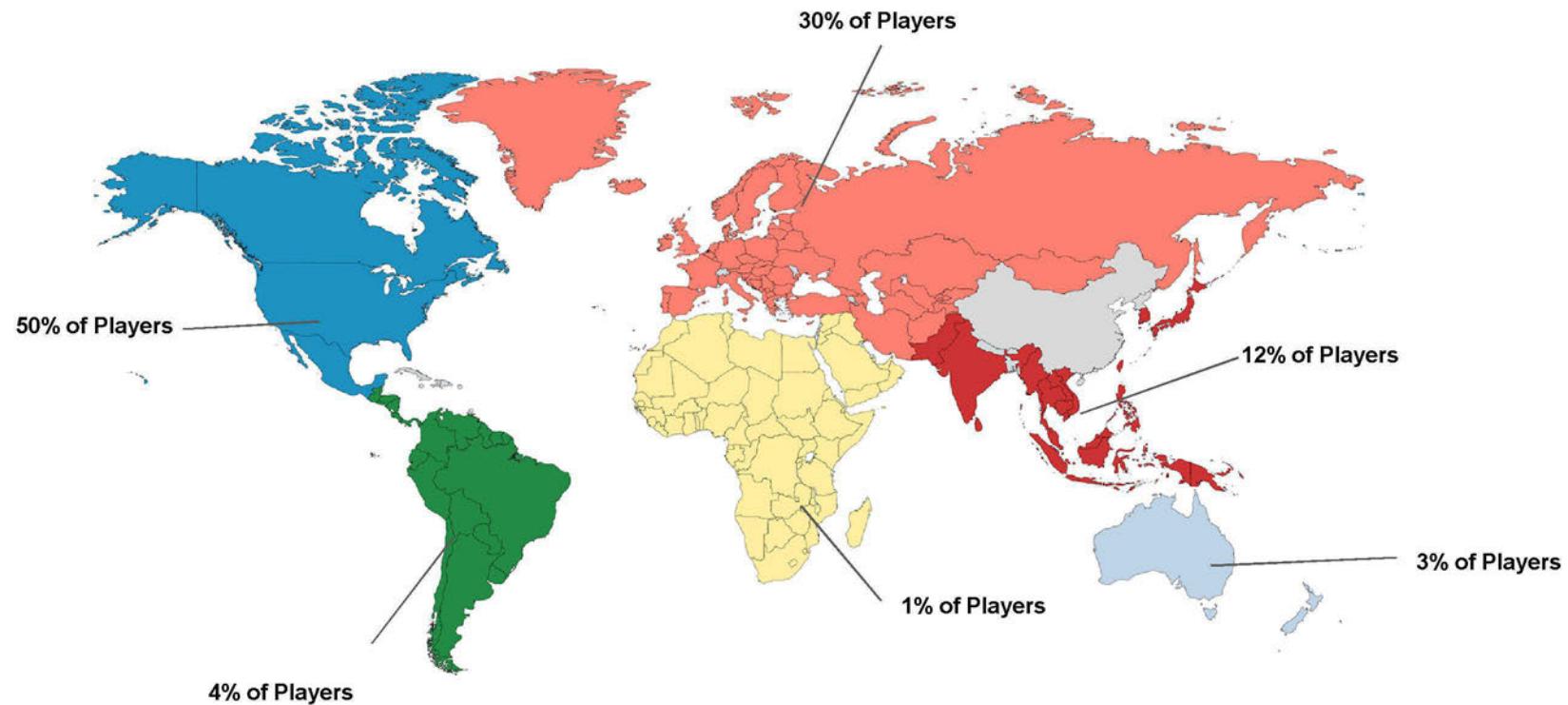
- D7 & D30 retention are lowest of set
- Play time is in the bottom half
- Total revenue is top amongst shooters, but RPI has room to grow
- File size is substantially larger than the competition
- Patches are substantially more frequent than the average

## Next Steps:

- Compare time to sign in
- Query distribution for Fortnite time to sign in
- Measure average patch size
- Measure “as needed” content updates

## Fortnite Geographical Breakdown - MAU

80% of our mobile audience is from North America and Europe (iOS + Android)



## Fortnite Geographical Breakdown - MAU

By comparison, 71% of PUBG Mobile Users are from APAC (iOS + Android)

