

"We're trying to do two diametrically opposed things at once - provide an advanced and open platform to developers while at the same time protect iPhone users from viruses, malware, privacy attacks, etc.

This is no easy task."

Steve Jobs, 2007

DX-4254.001; DX-4566.001



Apple Executive Witnesses



TIM COOK



PHIL SCHILLER



CRAIG FEDERIGHI



Developers Have Tremendous Access to iOS, the App Store, and Apple's IP



StoreKit



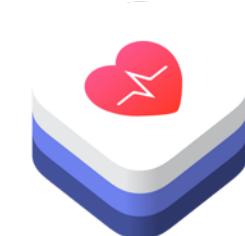
ResearchKit



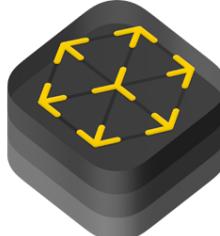
GameplayKit



SpriteKit



CareKit



ARKit



SceneKit



CloudKit



RealityKit



HealthKit



HomeKit



CoreML



Reality
Composer



Metal



Swift



iOS



SDK



Developers Have Tremendous Access to iOS, the App Store, and Apple's IP

"A fast, agile, feature-rich API like Metal is exactly what we need to bring a game designed for modern consoles and desktops to the battery-powered iPhone and iPad. As a developer, it blows away OpenGL in every way."

DX-3098.001



Reality
Composer



Metal



Swift



iOS



SDK



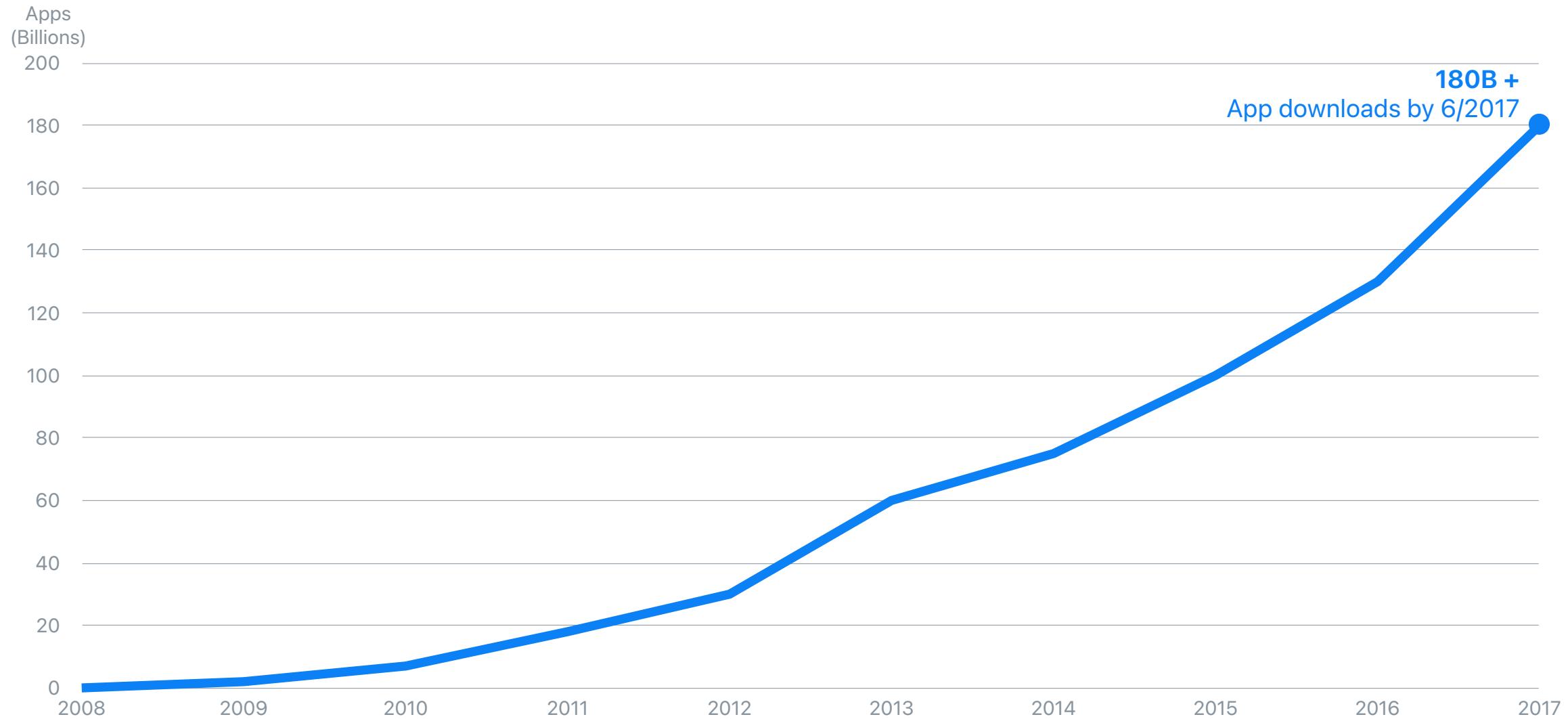
ARKit



CoreML



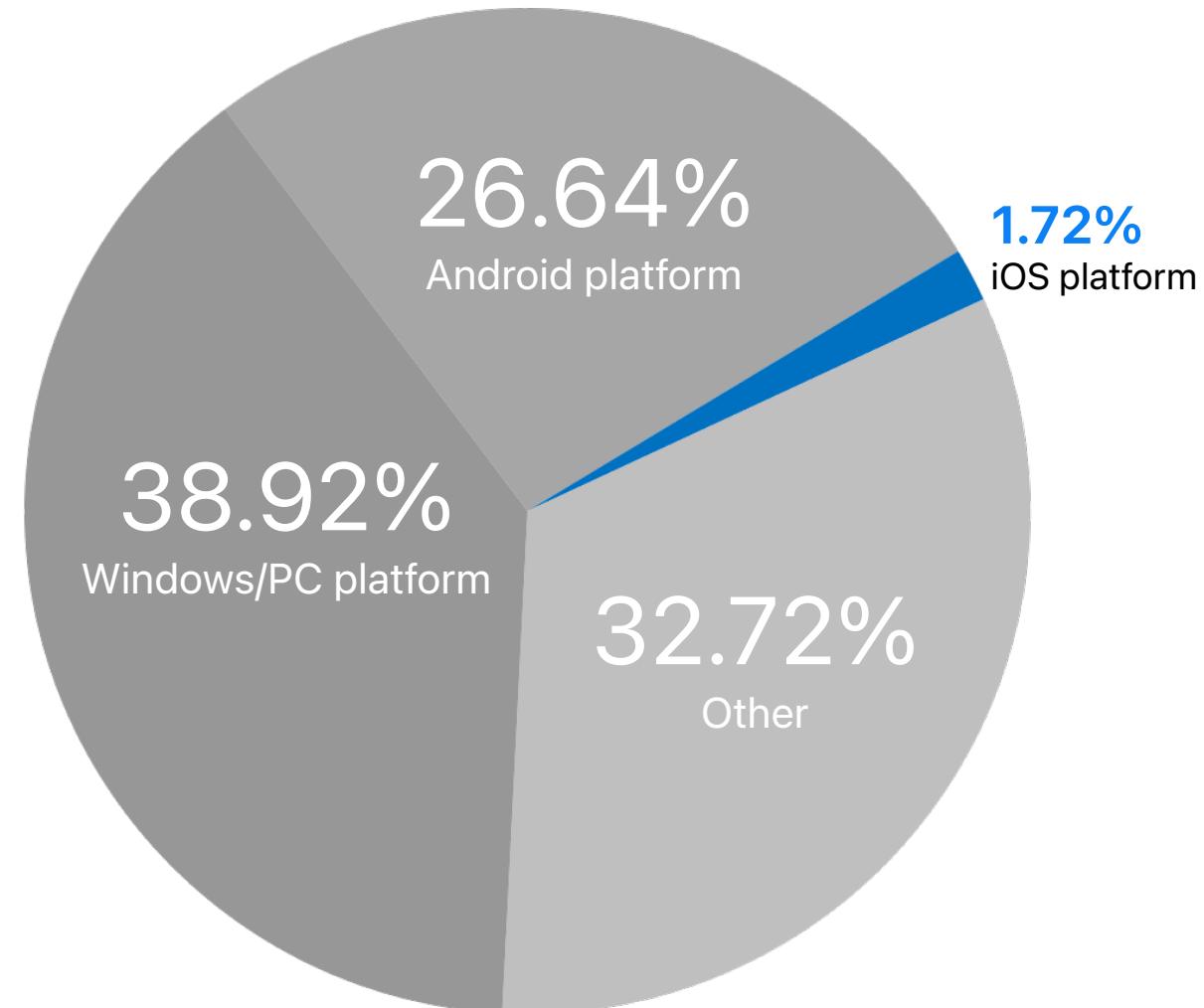
Apple's Integrated Ecosystem Exponentially Exceeded Expectations





Apple's Integrated Ecosystem Ensured Security, Privacy, and Reliability

Malware Infections





Apple Innovation Unlocks the Freemium Model with IAP

FREE In-App Purchases PAID





Freemium Made Fortnite's Success on iOS Possible

The screenshot shows the Fortnite Item Shop interface. At the top, there are tabs for PLAY, BATTLE PASS, CHALLENGES, COMPETE, LOCKER, ITEM SHOP (which is highlighted), CAREER, and STORE. A blue banner at the top right indicates "Creator supported: None". The top right corner shows a balance of 400 V-Bucks and a three-line menu icon.

FEATURED ITEMS

- SNUGGS** Outfit (1 of 2) - NEW! - 1,200 V-Bucks
- LASER CHOMP** Glider (2 of 2) - COLLECT THE SET! - OWNED ✓
- DEADFIRE** Outfit (1 of 5) - REACTIVE! - 2,000 V-Bucks

DAILY ITEMS

- ASTRO ASSASSIN** Outfit (1,500 V-Bucks)
- BATSICKLE** Harvesting Tool (800 V-Bucks)
- PIROUETTE** Emote (200 V-Bucks)
- SNUGGS SHINE** Wrap (500 V-Bucks)
- BLUE CAMO** Wrap (300 V-Bucks)
- TRUE LOVE** Emote (200 V-Bucks)

Text at the bottom:

These cosmetic items grant no competitive advantage. Certain items aren't useable in Save the World mode: Outfits, Backbling, Wraps, Gliders, and Trails. Outfits and Wraps don't include weapons.



Epic Launched "Project Liberty" Against the 30%

Executive Summary

The Agenda for today is to update the board on Project Liberty

- Epic Performance is Strong
 - Fortnite reached record engagement of 81.2mm MAUs in May 2020 and Season 13 Battle Pass launched June 2020 is on par with the best season ever -- Fortnite revenue in 1H was \$2.0bn beating forecast by 70%
 - We are seeing a slow down in engagement of last 30-day rolling active users and expect Fortnite revenue in 2H to be \$2.2bn ending the year at \$4.2bn of total Fortnite revenue
 - Post
- Tide is Turned
 - Multiplatform success
 - Unhappy customers, partners, and ecosystem
 - Negative Press
- Significant Planning has gone into Project Liberty, Epic's War Against Mobile Platform Fees
 - Epic has a detailed plan
- The Time is Now
 - AR is coming
 - Fortnite's all time high user base plus the Marvel Season and concerts adds pressure to Apple and Google
 - Growth is predicated on user generated content; stronger creator revenue share from lower mobile platform fees
 - Solve this problem before AR takes off and that rate is set at 30%



2



Epic Asked for a Special Side Deal from Apple

From: Matt Weissinger [REDACTED]
Sent: Fri, 22 May 2020 22:16:28 +0000 (UTC)

-Create narrative that we are benevolent

DX-3641.001

From: Tim Sweeney [REDACTED]
Subject: Consumer Choice & Competition
Date: June 30, 2020 at 4:00:09 PM PDT
To: Tim Cook [REDACTED] Phil Schiller [REDACTED] Craig Federighi
[REDACTED] Matt Fischer [REDACTED]

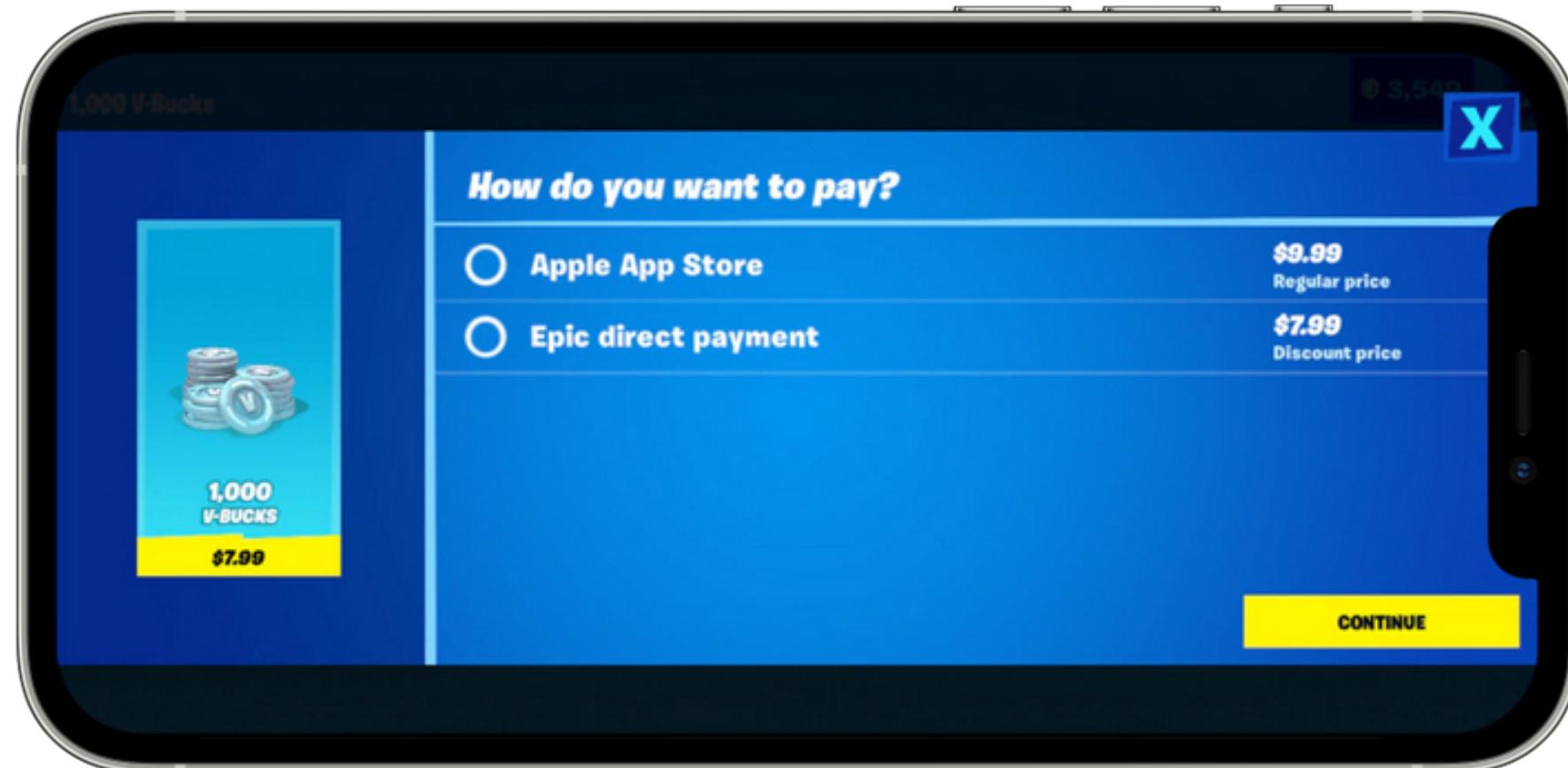
As you know, Epic was required to accept Apple's standard, restrictive contracts, like the Apple Developer Program License Agreement, in order to offer products on iOS devices through the iOS App Store. Epic is also required to comply with Apple's unilateral standards documents to obtain app approval, like Apple's App Store Review Guidelines. Apple's contracts and standards documents contain restrictions on how Epic can compete.

Apple would need to provide a side letter or alter its contracts
standards documents to remove such restrictions to allow Epic to provide a competing app store and competing payment processing option to iOS customers.

DX-4477.001



August 13, 2020: Epic Launches Its Hotfix on the App Store



DX-5317.003



Epic Deceived Apple But Gave Microsoft a Heads-Up About an “Extraordinary Opportunity” for Consoles and PCs



TIM
SWEENEY
Epic CEO
DX-4579.001

From: Tim Sweeney [REDACTED]
Sent: Wed, 5 Aug 2020 20:03:46 +0000 (UTC)
To: Phil Spencer [REDACTED]
Subject: Subscription-free multiplayer

If this is coming, please consider the possibility of timing the program to support Fortnite Season 14 launch on 8/27. This launch will follow the confidential Fortnite Mega Drop 20% price drop that's coming in mid August, and will be our biggest and best Fortnite season thanks to a huge collaboration with Disney/Marvel.

Epic has certain plans for August that will provide an extraordinary opportunity to highlight the value proposition of consoles and PCs, in contrast to mobile platforms, and to onboard new console users. While I can't share details with any third party at this point, I give you [REDACTED] Epic's assurance that our efforts will be positive and supportive of Microsoft, Xbox and Windows.

I realize this is incomplete information and you have a big ship that's slow to turn, so the specific ask is: please keep in mind this possibility for 8/27 and expect events throughout August to draw the specific opportunity into focus.



Tim Sweeney: Too Many Platforms . . . and They All Compete



TIM
SWEENEY
Epic CEO

DX-3768 at 26:31

"We have a lot of platforms coming together, there are the tablet platforms, there are the smartphone platforms, then computers, you know PC and Macintosh, and then there are consoles, Xbox 360, PlayStation 360, Wii, and some new handheld dedicated gaming devices, and god knows what else. This is too many platforms.... Over time, these platforms will be winnowed down into a much smaller set of competing platforms – there might be 1 or 2, maybe 3 winners worldwide across everything – computers, game platforms, smartphones, so we should expect a lot of consolidation here, and winners and losers, according to who picks the right directions and executes successfully on them."

- Technology and Gaming in the Next 20 Years, D.I.C.E. Summit, February 9, 2012



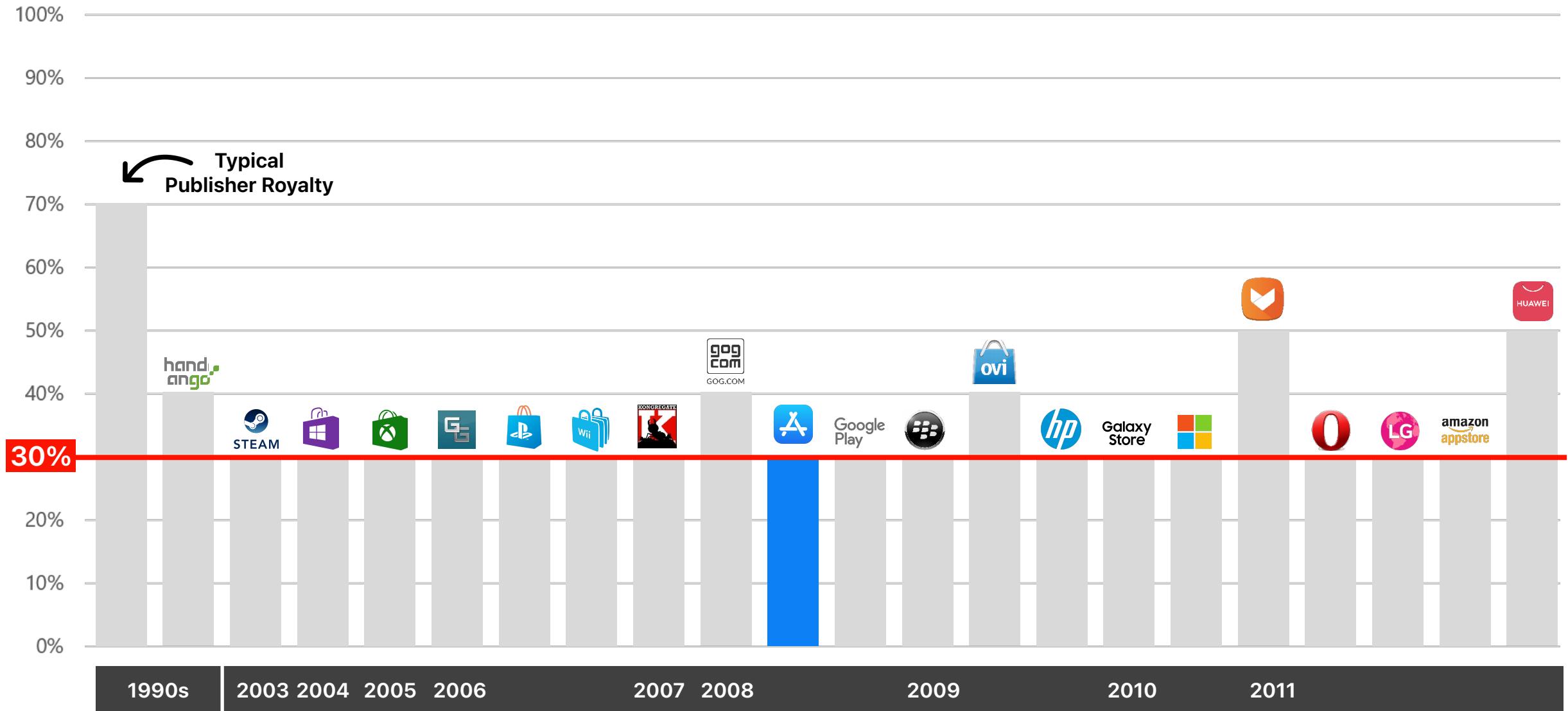
Epic Created The “Coalition for App Fairness” For This Litigation



For most purchases made within its App Store, Apple takes 30% of the purchase price. No other transaction fee – in any industry – comes close.



Competitors Before Apple Entered the Market Charged 30%





Epic Cannot Prevail

Epic is Wrong On Relevant Market

Epic Cannot Show Anticompetitive Conduct

Epic Cannot Show Anticompetitive Effects

Apple Can Show Procompetitive Justifications

Epic Cannot Prove a Tie



Relevant Market



Epic's "iOS App Distribution" Market is Both Too Broad and Too Narrow



FRANCINE
LAFONTAINE, PhD
Fmr. Director of the FTC's
Bureau of Economics,
Apple Expert

LaFontaine DWT ¶ 22

A proposed market definition is:

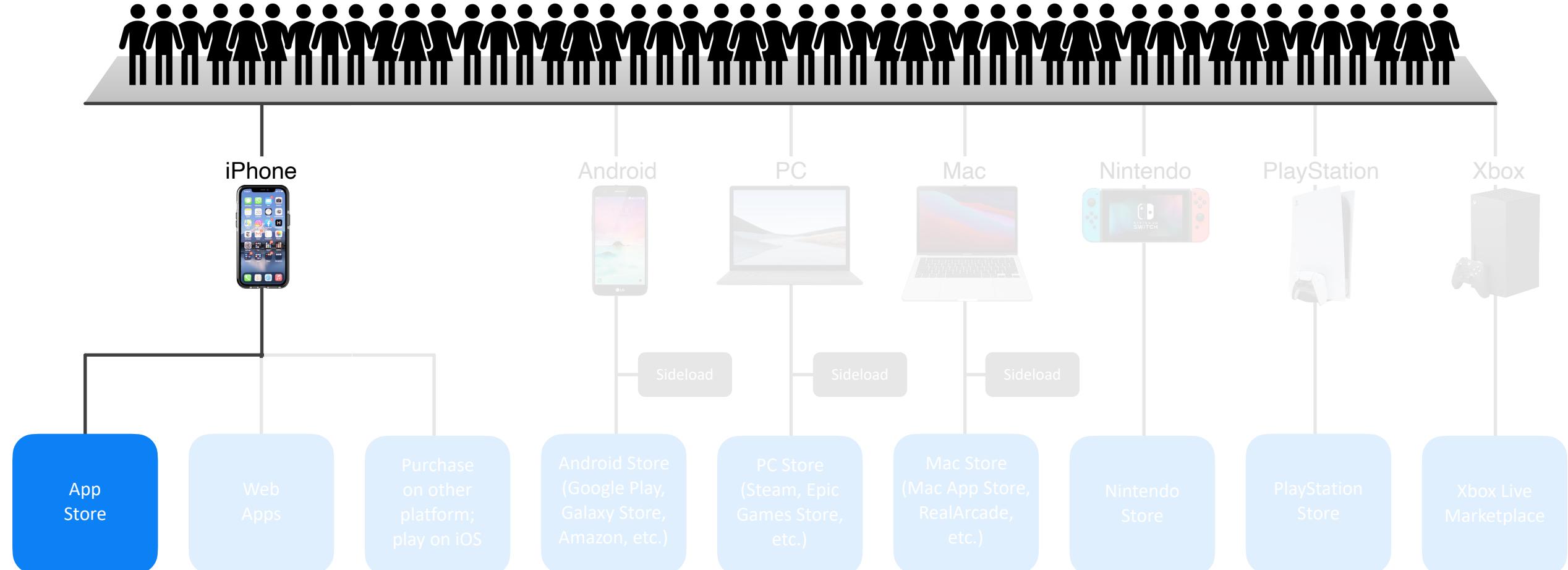
- **Too broad** if it includes products that customers are unlikely to substitute—all non-game apps; and
- **Too narrow** if it excludes alternatives that customers are likely to substitute—digital gaming transactions on other platforms.

The Court's PI Order at 14:

"The determination of a 'relevant market' is a highly factual question. See *Eastman Kodak*, 504 U.S. at 482 ('The proper market definition in this case can be determined only after a factual inquiry into the "commercial realities" faced by consumers.')."



Too Narrow: Many Substitutes for Digital Game Transactions





Multi-Homing: Survey of iOS Users

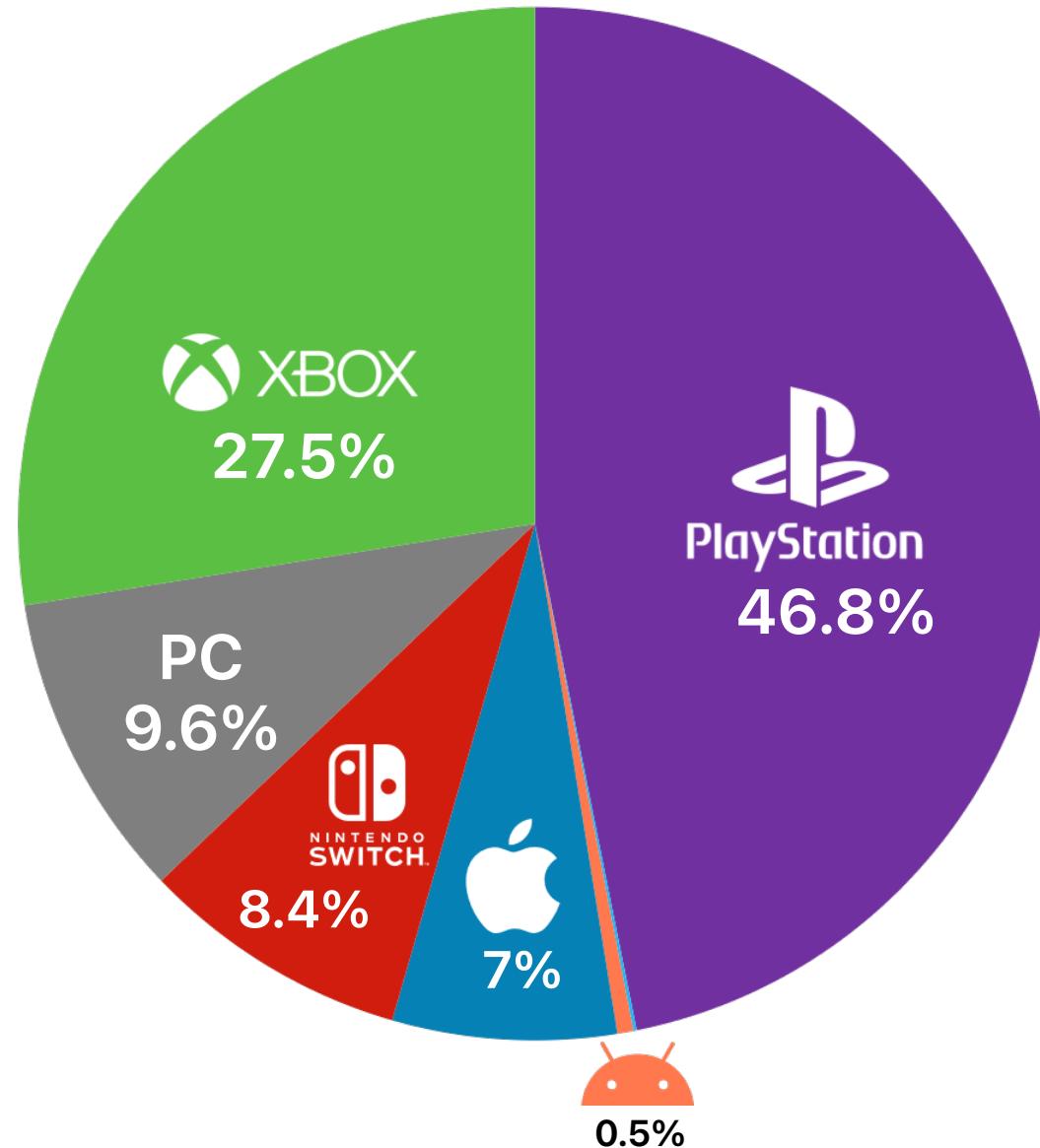
95%

regularly used or could have regularly
used devices other than their iOS device





Multi-Homing: Developers Offer Games on Multiple Platforms



FORTNITE

Fortnite revenue across platforms
(March 2018 – July 2020)

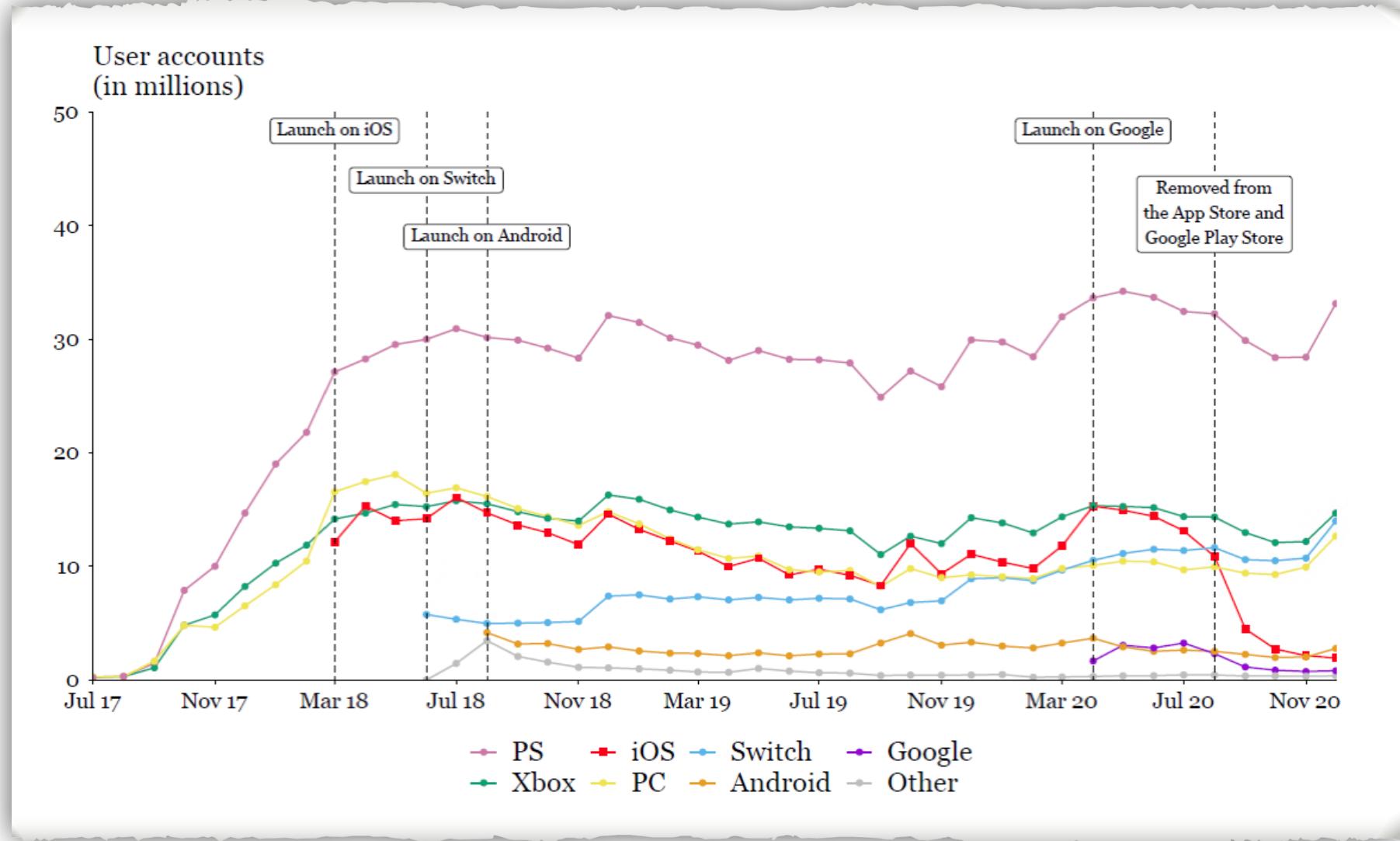


Dr. Hitt: The Majority of Fortnite User Accounts Are Not on iOS



LORIN
HITT

Hitt DWT Fig. 6





Epic Recognizes Substitutability Across Game Platforms

“If you’re left behind on iOS after the Chapter 2 - Season 4 launch, the party continues on PlayStation 4, Xbox One, Nintendo Switch, PC, Mac, GeForce Now, and through both the Epic Games App at [epicgames.com](https://www.epicgames.com) and the Samsung Galaxy Store... iOS players should check this list of alternative Fortnite-compatible devices, you may already have access to another way to play Fortnite. If so, simply install the game and login with your Epic account to get up and running.”

<https://www.epicgames.com/fortnite/en-US/news/freefortnite-cup-on-august-23-2020, DX-3724.002 & .006>

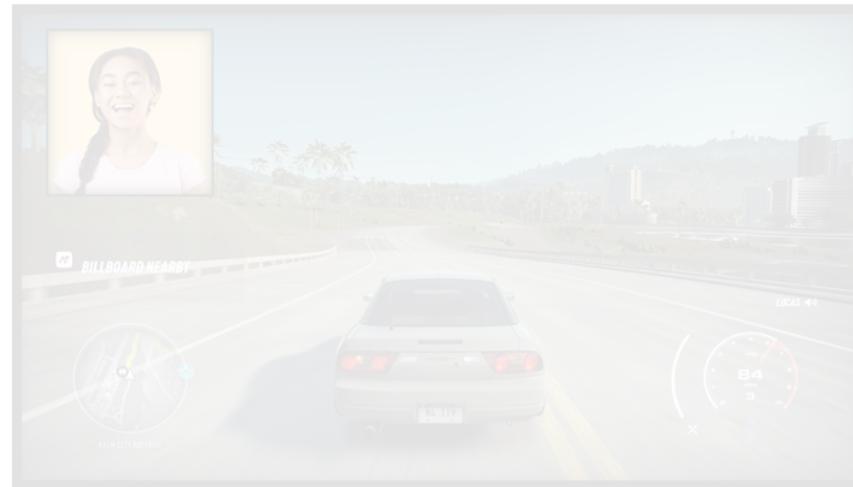


Cross-Platform Play: Consumers Play the Same Game at the Same Time on Different Platforms

XBOX



Nintendo
Switch



iPhone

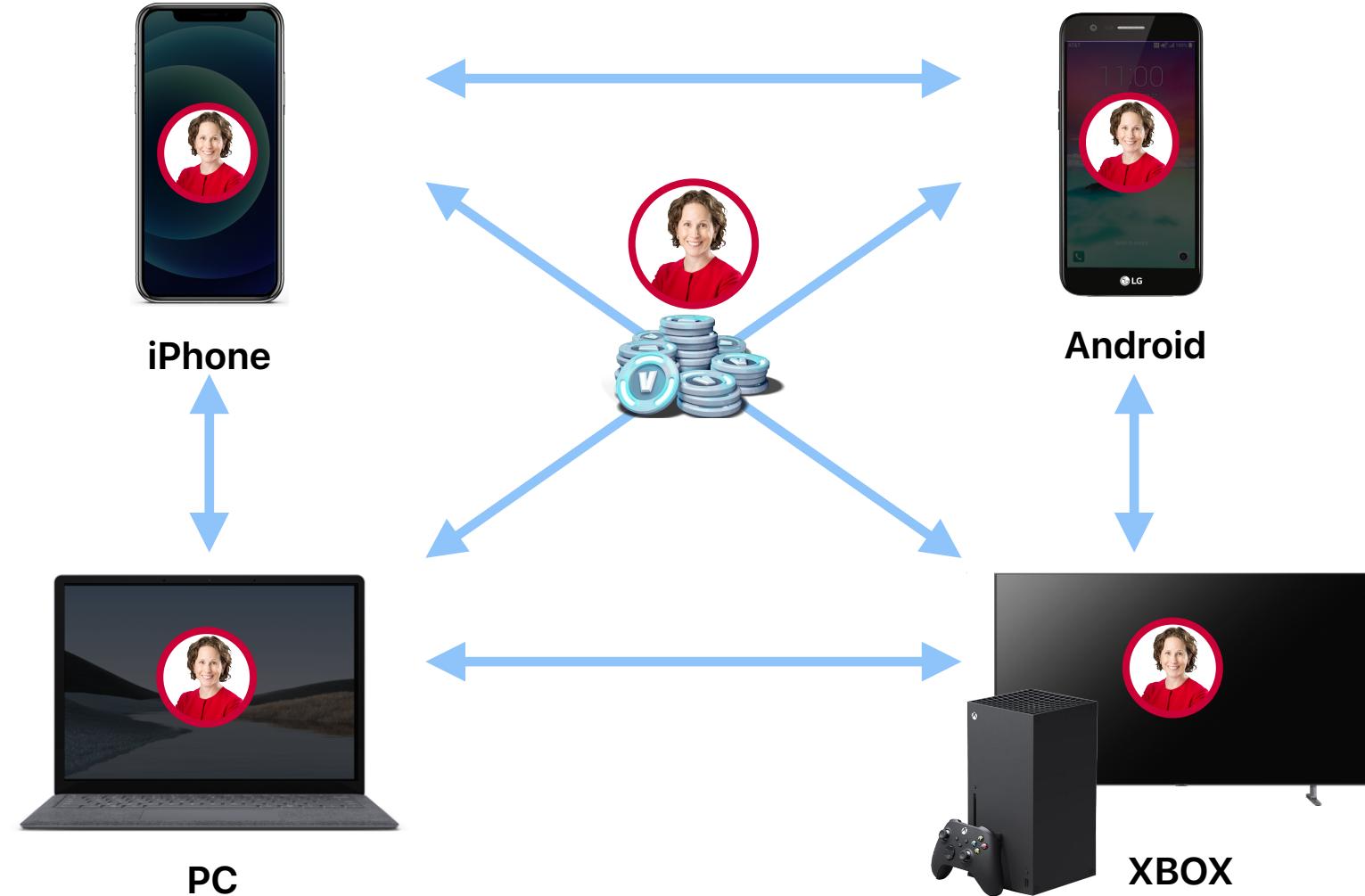


PC





Cross-Wallet Play: Consumers Buy Game Currency On One Platform, Spend on Another





With a Two-Sided Transaction Platform, the Product Is the Transaction

Two-sided transaction platforms exhibit “pronounced indirect network effects and interconnected pricing and demand” and are thus “best understood as supplying only one product – **transactions** – which is jointly consumed.”

Ohio v. Am. Express Co., 138 S. Ct. 2274, 2286 & n.8 (2018).



Too Broad: Epic's Market Includes All Apps Without Proving They Are Subject to the Same Competitive Conditions

The Court said "underlying these questions is a significant and unresolved dispute over clustering" PI Order at 20.

But Epic's Conclusions of Law do not mention a cluster market.

The App Store is a store with products that are not interchangeable substitutes.



The key question is are the items subject to the same competitive conditions. *Thurman Industries, Inc. v. Pay 'N Pak Stores, Inc.*, 875 F.2d 1369, 1375 (9th Cir. 1989); *FTC v. Staples, Inc.*, 190 F. Supp. 3d 100, 123 (D.D.C. 2016).



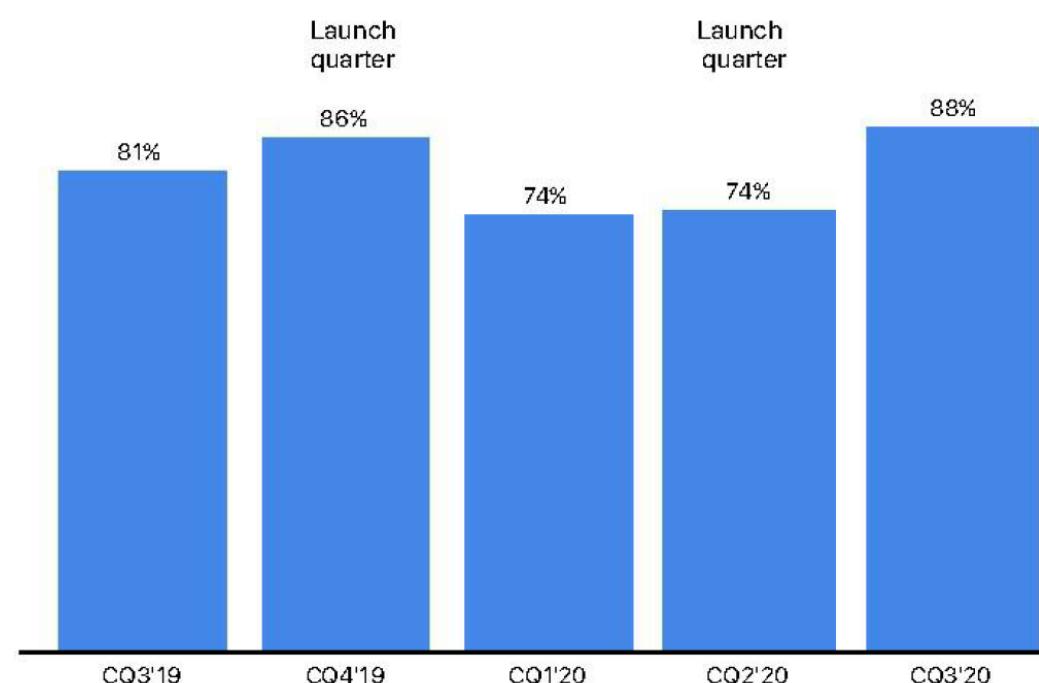
Apple Internal Documents Show Evidence of Switching

Smartphone Owners Who Did Not Change to Another
Smartphone By Quarter; All Others Did

OS loyalty

Among smartphone owners who changed to another smartphone each quarter

iOS loyalty



In 2019 and 2020, Apple's Market Research found meaningful switching quarter over quarter when iPhone owners purchased a new phone:
19%, 14%, 26%, 26%, and 12%

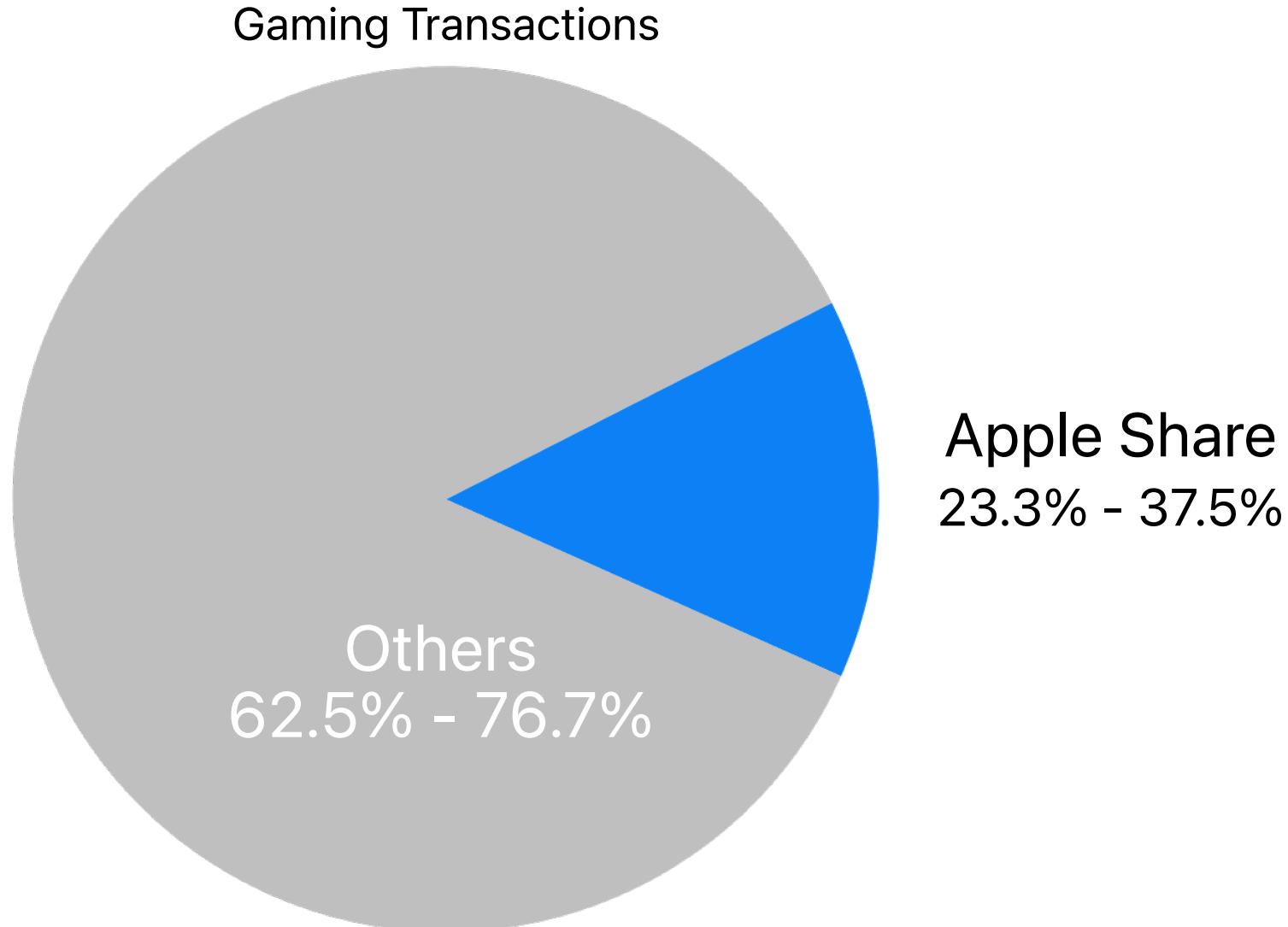


The Relevant Market is Gaming Transactions and Apple Does Not Have Monopoly Power in that Market



LORIN
HITT

Hitt DWT ¶ 8





No Anticompetitive Conduct



Epic Challenges Apple's Technical Design and Contracts That Block and Prohibit Third Party Native Apps, App Stores, and Payment Systems—a Refusal to Deal

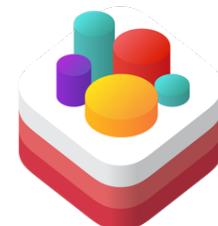
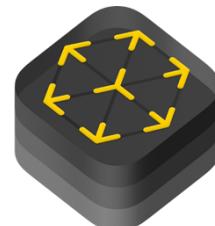
- Apple generally **prevents** the distribution of iOS-compatible apps to users of iOS devices except through its App Store. Evans DWT ¶ 38.
- The app-distribution restrictions **block** all channels of distribution, other than the App Store, for all iPhone users and iOS app developers. Evans DWT ¶ 159.
- Apple imposes a set of technical and contractual restrictions that **block** the emergence of middleware. Athey DWT ¶ 55.
- Apple **prohibits** developers from distributing their apps through a third-party app store. Evans DWT ¶ 38.
- What's been **foreclosed** from the relevant market are the payment solutions that would have been developed and used if Apple did not mandate use of IAP, and the Apple payment solution. Evans DWT ¶¶ 220, 289.



Epic Demands Forced Interoperability and a Compulsory License on Epic's Preferred Terms

“Apple has over 250,000 application programming interfaces that are available to developers and it is virtually impossible to develop an app for, or a toolset for development on, iOS or macOS without them.”

Epic’s Response to Apple’s First Set of Interrogatories,
Response to Interrogatory No. 6, DX-3691.015





The Law Prohibits Epic's Proposed Remedies

	Required to Deal	Required to License	Forced Interoperability
Sideloaded Apps	✓	✓	✓
3 rd Party App Stores	✓	✓	✓
3 rd Party Payment Processors	✓	✓	✓

For example:

Epic asks the Court to prohibit Apple from "Restricting, prohibiting, impeding or deterring users of iOS devices, through technical, contractual, financial, or other means, from downloading, executing, installing and/or updating iOS apps and app stores from a distribution channel other than the App Store." Epic's FOF & COL, App'x. 1, pages 161-62



No Anticompetitive Effects

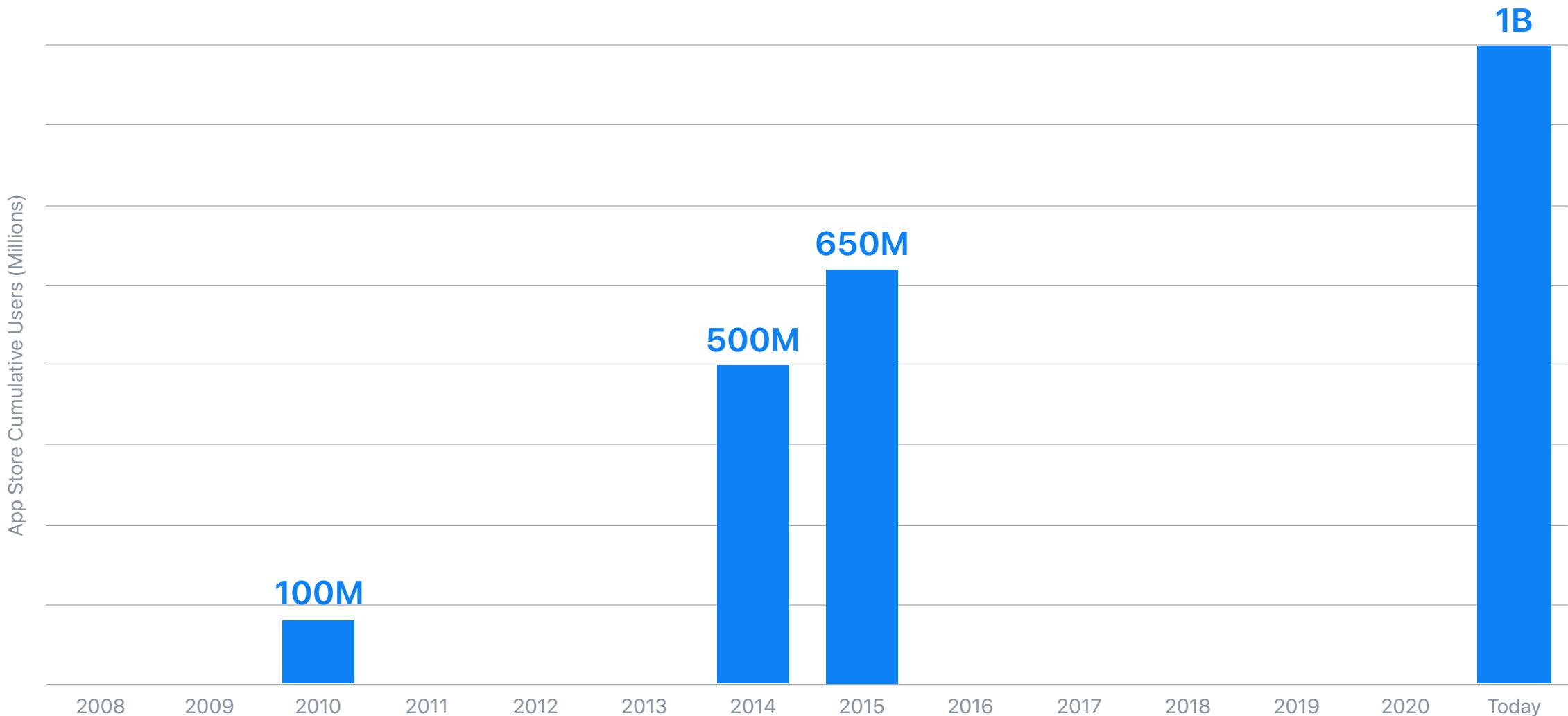


The Number of Apps in the App Store Has Dramatically Increased





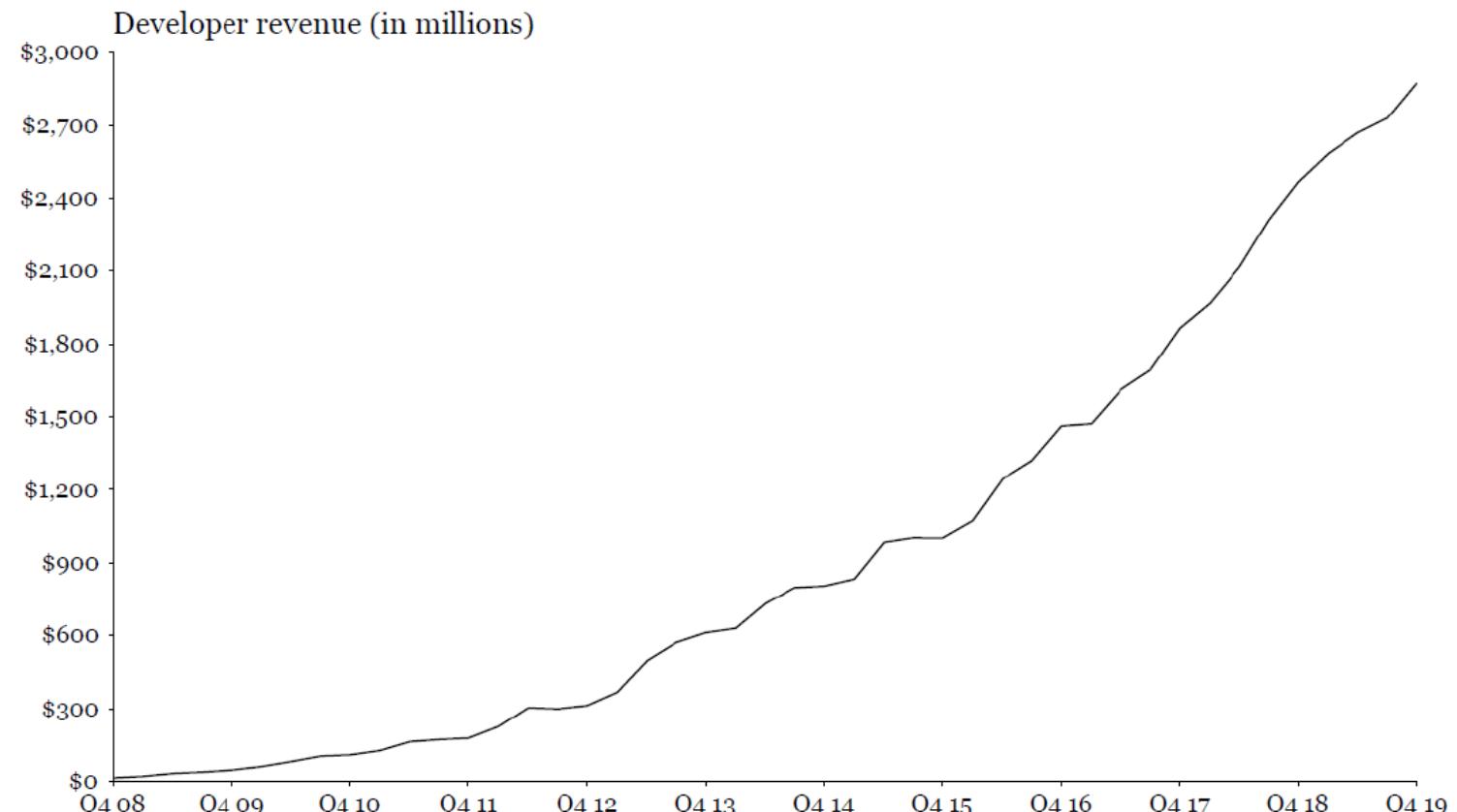
The Number of Users in the App Store Has Dramatically Increased





Developer Revenue Has Dramatically Increased

Developer revenue from App Store initial downloads and in-app purchases (July 10, 2008–September 30, 2019)





The App Store's Effective Commission Has Decreased

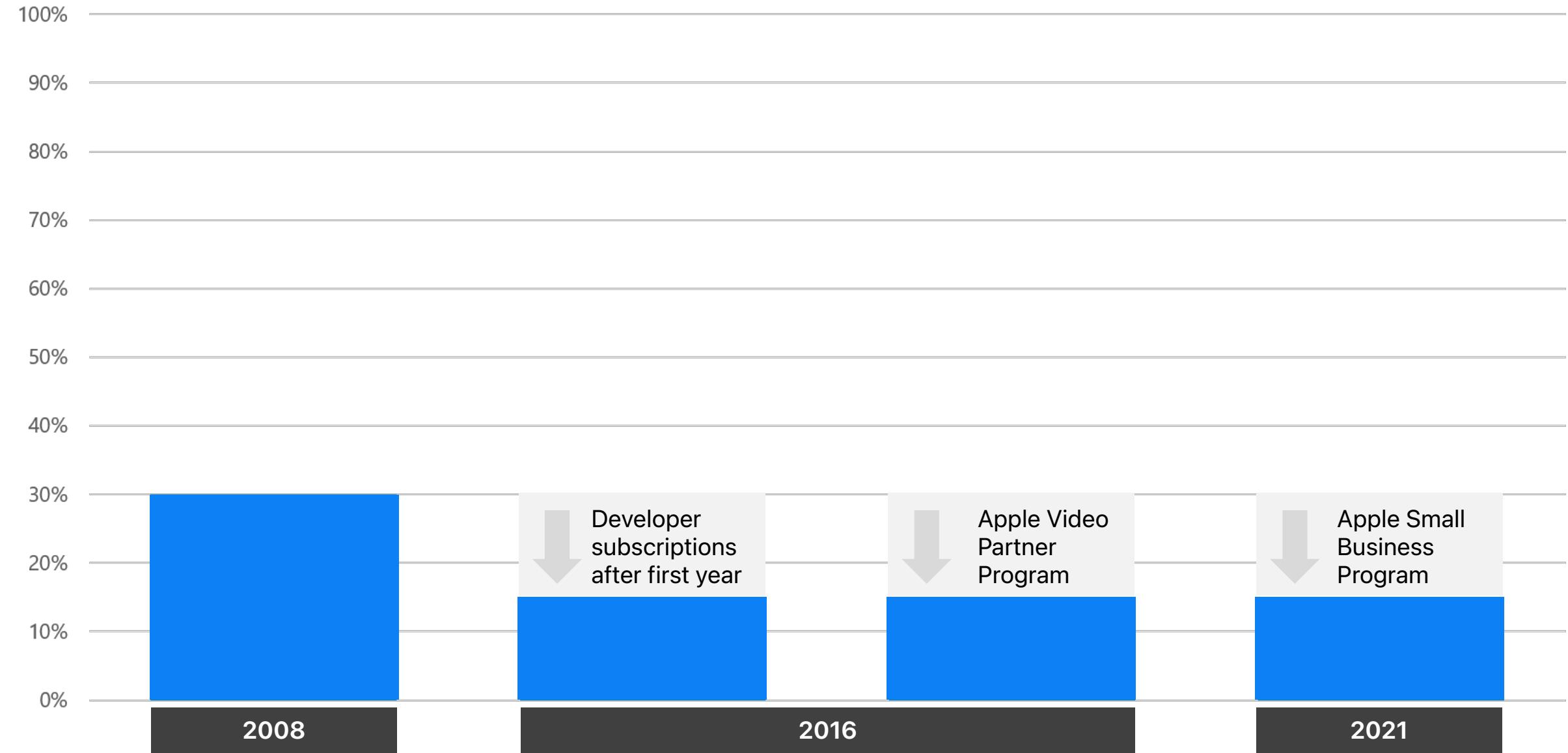
Price

Game App Effective Games Commission Rate (FY2019)	8.1%
All App Effective Commission Rate (FY2019)	4.7%
Game App Initial Download Commission Rate (FY2019)	0.2%

Today, 84% of apps are free



The App Store Has Reduced Commissions





Epic's Estimates of the App Store's Margins Are Misleading



RICHARD
SCHMALENSSEE, PhD
Apple Expert

"Mr. Barnes' estimate of the App Store's operating margin is unreliable because it looks in isolation at one segment of the iOS ecosystem in a way that artificially boosts the apparent operating margin of that segment. When one looks at Apple's device and services ecosystem as a whole, the operating margin falls to an unremarkable level."



Epic's Lead Economist: Apple Created Value



DAVID
EVANS

Epic Expert
Witness

"Apple has obviously made enormous profits and seen the market value of the firm increase because of the success of the iPhone and its application store. **iPhone users have done very well also as a result of the tens of thousands of applications they can choose** from, some of which enable them to do things that were not possible before. **New markets have opened for entrepreneurs** that use the iPhone, and some of them are earning significant profits or obtaining fame. **By bringing developers and users together the iPhone has served as a catalyst which has created value—and profit—out of thin air."**

David S. Evans, Platform Economics: Essays on Multi-Sided Businesses 378 (2011)



Epic's Lead Economist: Apple Created Value



DAVID
EVANS

Epic Expert
Witness

“There isn’t much controversy that Apple’s rules have enabled it to create a high-quality app ecosystem for the iPhone.”

David S. Evans et al, Vertical Restraints in a Digital World 29 (March 22, 2020).



Procompetitive Justifications



Apple's Procompetitive Justifications

Consumer Trust

Security and Privacy

Reliability

Quality

User Experience

Consumer Choice

Protecting Intellectual Property



Apple Refused to Sacrifice Security, Privacy, and Reliability



PHIL
SCHILLER

Dep. Tr. Vol. I,
56:8-18; 57:5-14

When we started working on iPhone, we thought about it as a product that would be different than the PC and Mac. We thought about the fact that the iPhone is a phone that you're carrying around, you need it to work for you as a phone, and we cared deeply about the security of that device so it would be more protected and more reliable than PCs were at the time.



iOS Devices Face An Extraordinary Threat Model



CRAIG
FEDERIGHI

Senior Vice President,
Software Engineering



AVIEL
RUBIN

Rubin DWT ¶ 3

Number of Devices	1.5 billion active devices almost always on
Number of Opportunities	1.8 million apps available for download; users who frequently download apps; users who engage in financial transactions
Value of Access	Camera/microphone/GPS hardware that follows the user everywhere; storage of sensitive data



iOS Devices Face An Extraordinary Threat Model



TRYSTAN
KOSMYNKA

Head of App Review

App Review uses computer-automated and human review on every app and update to ensure:

App performs as represented

App won't damage the user's device

App requests appropriate entitlements

App doesn't contain known malware

App does not contain objectionable content

App is not pirated or a copycat



App Review Protects Security, Reliability, and Functionality



DANIEL
RUBINFELD
DWT ¶ 46

Buggy apps

Insecure apps

Apps that install malware

Apps that harvest user's
private data

Apps that drain battery life

Apps that hog bandwidth

Dr. Evans' Response:

Apple "simply asserts that there is a rogue developer who lacks incentives to protect users or developers from harm." Evans' Rebuttal Report ¶ 377.



AVIEL
RUBIN
DWT ¶ 87



App Review By The Numbers

1,800,000
apps available
worldwide

150k+

submissions rejected last year
for violating privacy guidelines

1M+

apps removed
for objectionable
or illegal content

40%

submitted
apps
rejected

100%

apps automatically
screened for known malware

10,000

apps use health
technology to protect
patient privacy

2M+

apps removed because they haven't
been updated or don't work on the
latest OS release

500

dedicated
expert
reviewers

100k+

apps reviewed
each week

100k+

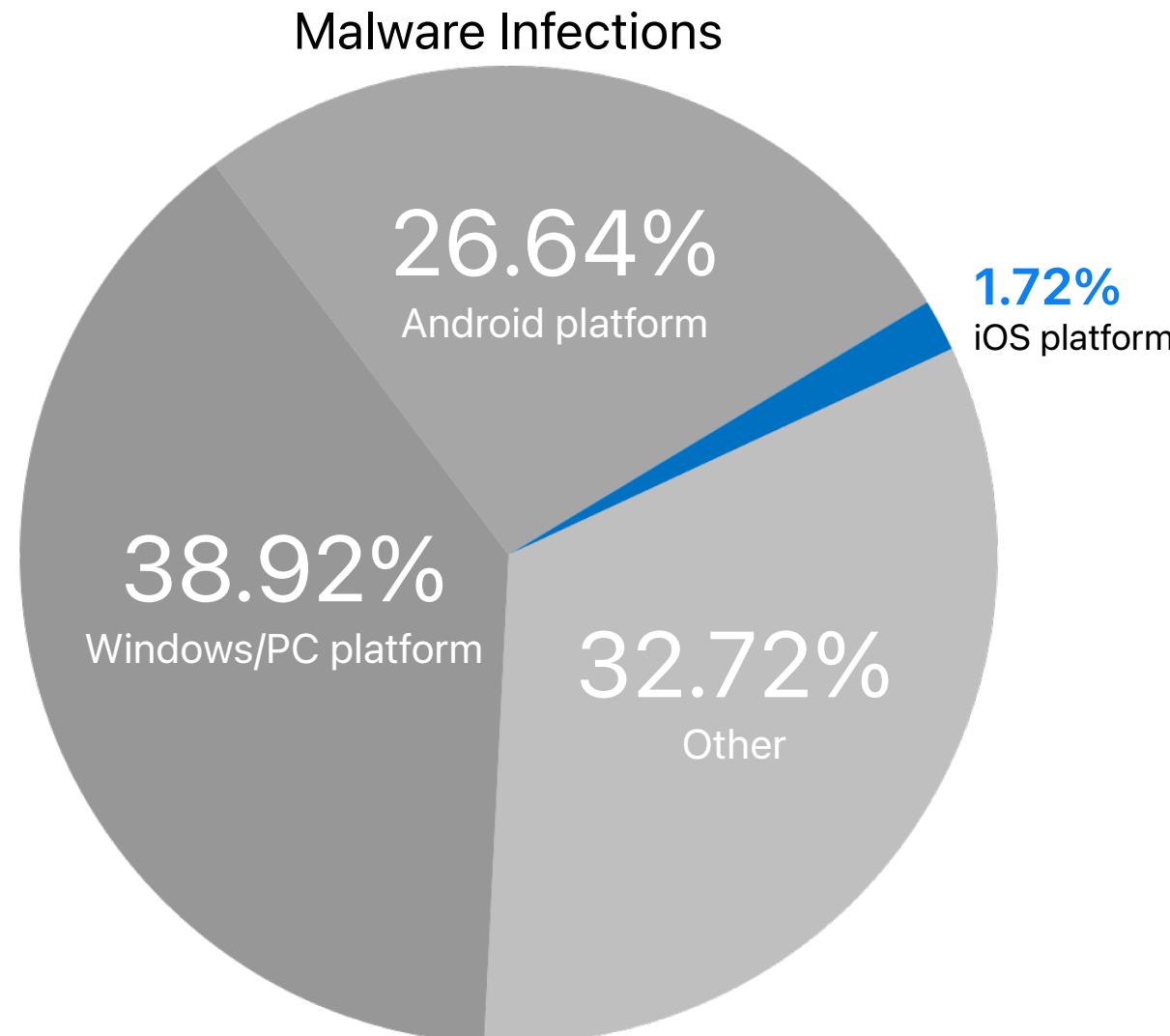
rejected for misuse or
unnecessary use of personal
information in 2020

500K+

developers' accounts were
terminated in 2020 for fraud or
distribution of illegal content



Epic Concedes: App Review Provides An Extra Layer of Security



Epic concedes:

"At most, App Review provides an additional layer of security by filtering out obviously malicious or otherwise dangerous apps."

Epic COL ¶ 149



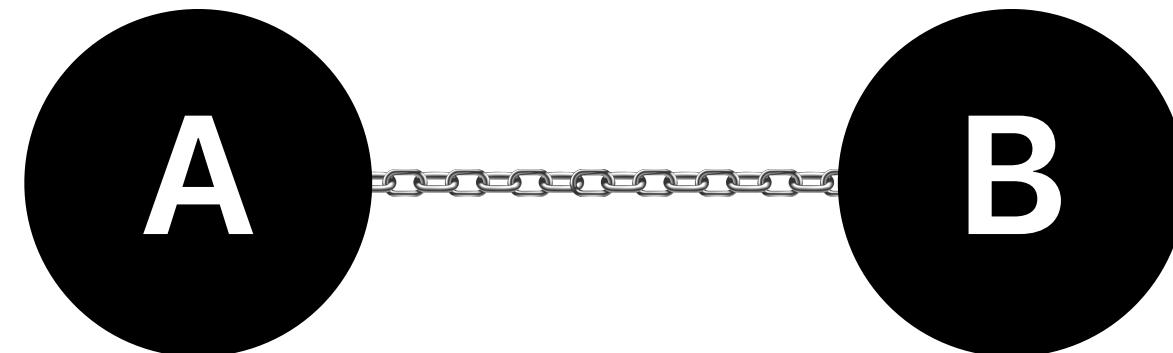
Tying



There is No Tie: IAP is Neither a Product Nor Required

A tie exists only if the defendant actually requires the plaintiff to “take the defendant’s product B in order to get its A.” Philip E. Areeda & Herbert Hovenkamp, *Antitrust Law: An Analysis of Antitrust Principles and Their Application* ¶ 1752c (4th ed. 2020).

A tie requires a “condition linked to a sale.” *Aerotec Int’l, Inc. v. Honeywell Int’l, Inc.*, 836 F.3d 1171, 1178 (9th Cir. 2016) (“A tie only exists where the ‘defendant improperly imposes conditions that explicitly or practically require buyers to take the second product if they want the first one.’”).





IAP is a Set of APIs Integrated with the App Store, Not A Separate Product

"Here, the IAP system appears to be integrated with the App Store and, historically, to have never been a separate product. If so, the construct of the IAP appears to reinforce the notion that the App Store is a digital marketplace where developers on the App Store are able to structure their business models however they choose. . . . The IAP system appears to have been created, in part, to capture the value of a developer being on the digital shelf of the App Store which is owed to Apple - either on the initial download, or in subsequent IAPs." PI Order at 23–24.

Apple has never charged separately for IAP.

Apple has never marketed IAP.

Apple has never offered to sell IAP separately.



There is No Tie: Developers Are Not Required to Use IAP

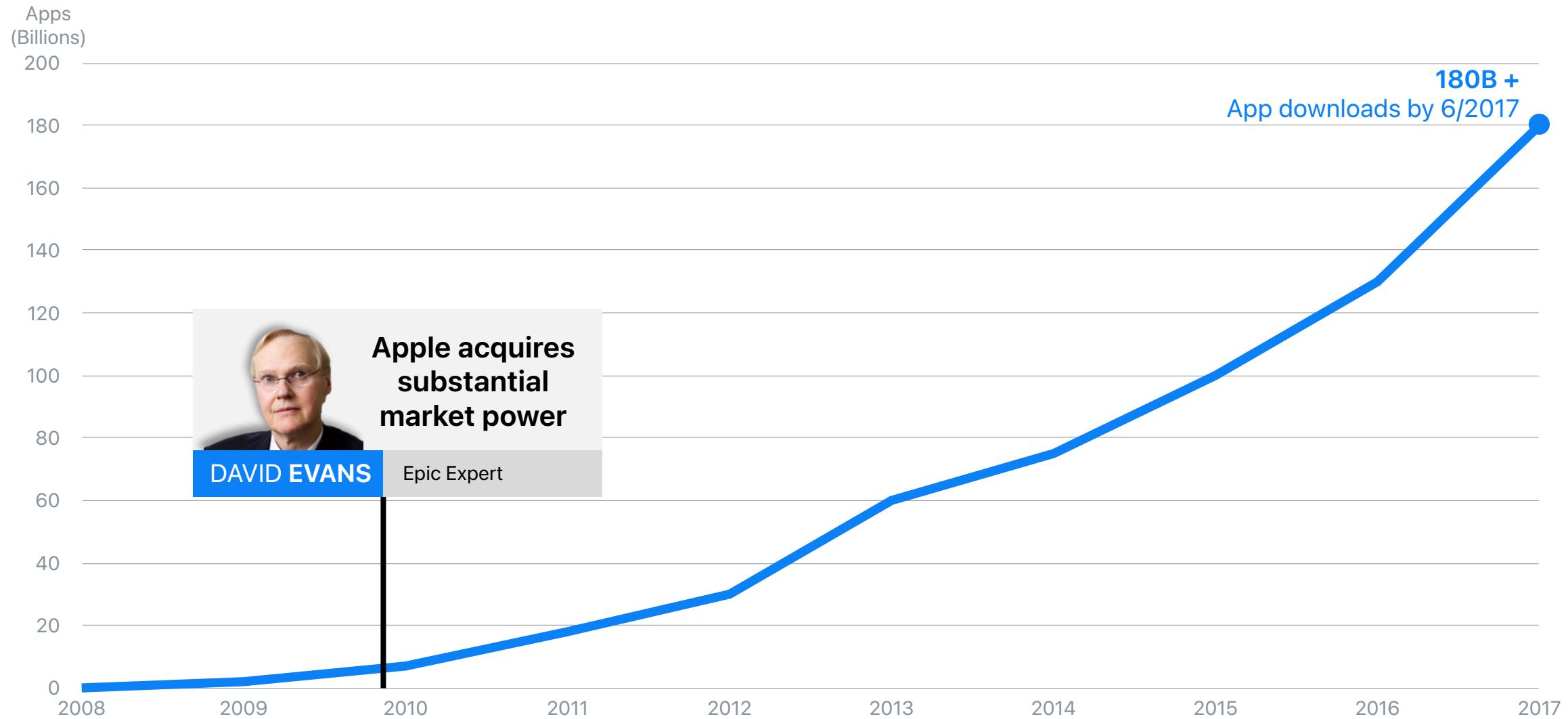
Ways Developers Can Monetize Their Apps	IAP
Optional in-app purchases of digital content	✓
Paid downloads + in-app purchases of digital content	✓
Subscriptions for sale in app	✓
In-app purchases of physical goods and services	✗
In-app ads	✗
In-app promotions/events	✗



Epic's Requested Relief Will Harm Consumers & Developers

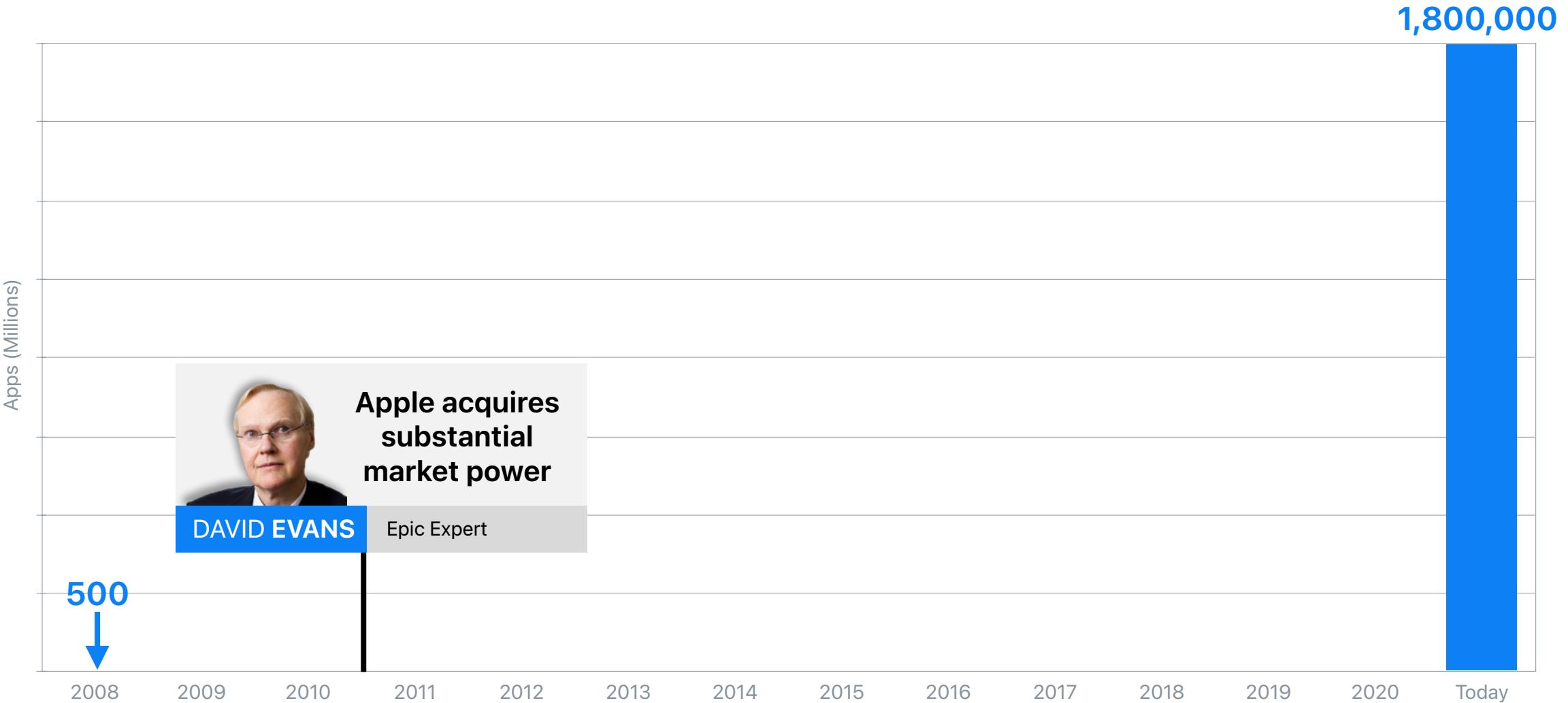


Apple's Integrated Ecosystem Exponentially Exceeded Expectations





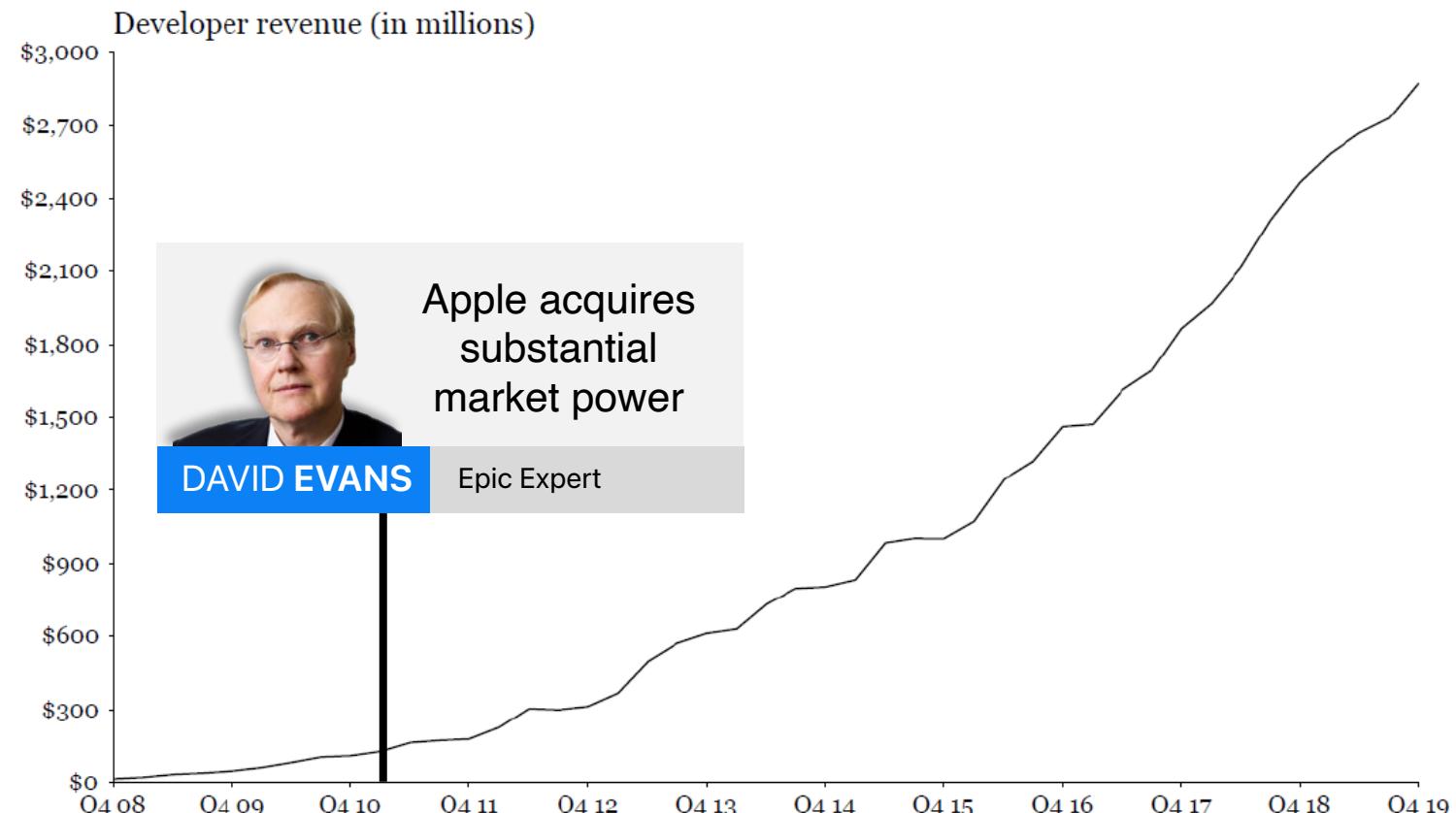
What If This Had Never Happened?





What If This Had Never Happened?

Developer revenue from App Store initial downloads and in-app purchases (July 10, 2008–September 30, 2019)





If Epic Prevails, Other Integrated Ecosystems Will Fall Too

"Sony, Nintendo and Microsoft all operate similar walled gardens or closed platform models as Apple As such, a final decision should be better informed regarding the impact of the walled garden model given the potential for significant and serious ramifications for Sony, Nintendo and Microsoft and their video game platforms." PI Order at 18.



TIM
SWEENEY

Dep. Tr. 79:14-80:1

Q: And do you consider the console manufacturers to be monopolists within their product?

A: **Without reference to all or any legal opinion or conclusion and with a number of exceptions, the console-makers generally do exercise a monopoly on distribution of purely digital games with respect to their platforms, and there are various exceptions.**



If Epic Prevails, Other Integrated Ecosystems Will Fall Too

	Commission	Prohibition on Sideloading and/or 3 rd Party App Stores	In-App Purchases
APPLE	30%	Yes	Yes
SONY	30%	Yes	Yes
NINTENDO	30%	Yes	Yes
GOOGLE	30%	No	Yes
SAMSUNG	30%	No	Yes



TIM
SWEENEY

Dep. Tr 70:20

“My preference would be that all stores were open.”



Some of the Many, Many Flaws in Dr. Evans' SSNIP "Tests"



DAVID
EVANS
Epic Expert
Witness

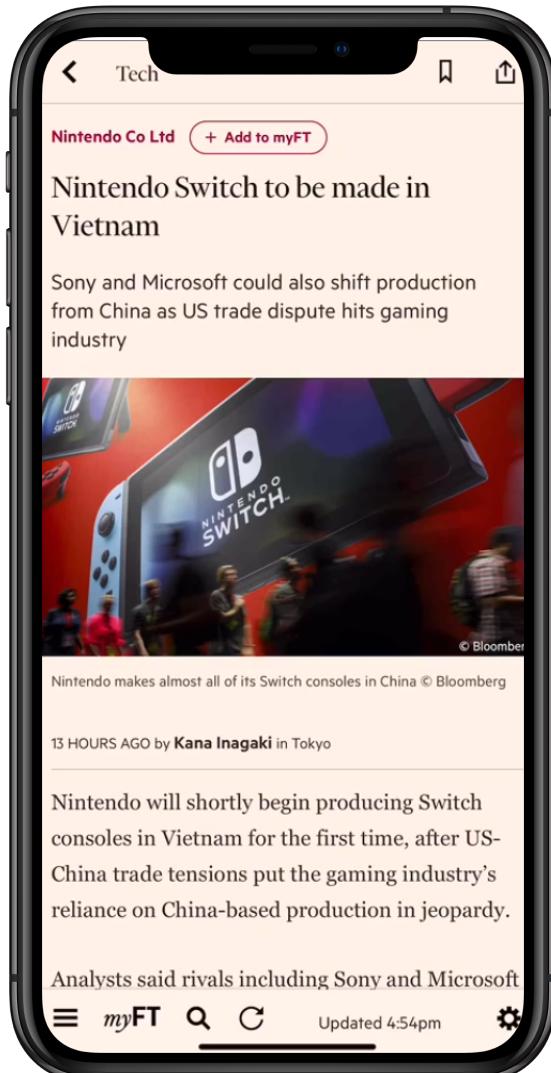
Dr. Evans performs **no quantitative analysis** with Apple consumer data showing actual substitution.

Dr. Evans conducts a SSNIP on operating systems which are **not commercially available**.

Dr. Evans **fails to analyze** indirect network effects.



Epic's Theory is Based on a False Premise



FT

Web
App



FT

Native
App