### Apple: Distinctive Products with a Seamless, Integrated User Experience

The House Judiciary Committee (the "Committee") began its investigation into competition in digital markets nearly one year ago. Since that time, Apple has testified before the Committee, has responded to the Committee's September 13, 2019 letter requesting that Apple voluntarily provide certain documents to assist the Committee's investigation, and has addressed the Committee on issues that have arisen in subsequent hearings. Apple appreciates the opportunity to explain its view of the record the Committee has developed.

**Apple is different.** The Committee has stated that the purpose of its bipartisan investigation is to investigate "the rise of market power online" and whether "giant tech platforms" have the "market power" and the "incentive and ability to harm the competitive process."<sup>1</sup> The record the Committee has assembled demonstrates that Apple is not the type of "giant tech platform" that presents the issues the Committee's investigation seeks to address. Apple does not have monopoly power in any market. It faces aggressive competition across all of its business.

**Apple is a product company.** Apple's business model is simple: to make great products and sell them. And, for over forty years, Apple has delivered on that model with products like the Mac, iPod, iPhone, and Apple Watch. These products reflect a conviction that design should be at the heart of the development process. They also reflect a relentless focus on making sophisticated technology accessible, simple, and easy to use. This focus allows Apple to make truly unique, tangible products that consumers recognize and love the world over.

Apple designs high-quality products with a focus on a streamlined and easy user experience with high levels of privacy protection and digital security. Apple has long embraced a holistic product development approach from hardware to software to services. Apple believes the whole is greater than the sum of its parts. From the very first Macintosh launched in 1984, Apple has built software applications that are fully integrated with the rest of the product. This approach enables deeper innovation and creativity. It allows Apple to design products so that the user experience is seamless across devices, from the user's Mac to iPhone to iPad. The iPhone reflects the same approach Apple took nearly forty years ago with the Macintosh. The iPhone was designed with a suite of integrated software applications and services to deliver on Apple's promise to make its products work right out of the box. And many apps and functions, such as Apple's Camera app, benefit from this integrated approach: as a result, Apple's Camera is capable of doing things that other cameras simply cannot.

This approach also allows Apple to deliver on its promise of security and integrity. Apple's products are widely recognized as being among the most, if the not the most, secure consumer technology products on the market. Apple has long been committed to ensuring that its users are protected from external attacks, and that user data remains secure.

Apple has made significant investments to enable cutting-edge third-party development within its ecosystem. This is because the success of Apple's products depends in part upon

<sup>&</sup>lt;sup>1</sup> See Press Release, U.S. H.R. Comm. on Judiciary, House Judiciary Committee Launches Bipartisan Investigation into Competition in Digital Markets (June 3, 2019), https://judiciary.house.gov/news/documentsingle.aspx? DocumentID=2051.

*creating competition* so that users have access to a wide variety of third-party apps—which enhances the overall user experience and increases the desirability of Apple's products.

There are two primary issues that dominate the competition debate over "giant tech platforms." But they have very little to do with Apple or its business model. First, there is a concern over the collection, exploitation, and monetization of data. Second, there is a concern that these digital platforms have grown large, at least in part, because of the acquisition of nascent or potential competitors.

For some companies, data is an end unto itself: their platforms and marketplaces leverage user data by allowing advertisers to utilize that data to target specific users, to generate new users, or to disseminate user data to others. Their business model depends on access to data. Thus, these companies prefer a platform that can facilitate more data flow. They also design their rules in ways that allow easier transmission of personal data. This is not, and never has been, Apple's business model. Apple is a product company. As a result, Apple is singularly focused on selling products to consumers—be it an iPhone or digital music. In this way, Apple differs significantly from some companies that focus predominately, if not exclusively, on monetizing user data. Those companies are not focused on sales *to consumers*; they are focused on selling their consumers' profiles *to advertisers*.

Moreover, Apple has not embarked on a strategy of acquiring nascent competitors in service of its growth and market position. Instead, Apple's acquisitions generally are meant to complement its product business by accelerating innovation and building out new features and technologies for Apple's hardware and software offerings.

**Apple does not have a monopoly or market power in** *any* **of the markets in which it competes.** Apple is a leader in innovation. However, Apple is not a monopolist in any market. Apple—the leading domestic mobile device manufacturer—competes aggressively in the smartphone market with competitors from China and Korea. Apple similarly faces strong competition across its businesses (*e.g.*, media streaming devices, tablets, wearables, desktop and notebook computers, maps, music, payments, messaging, and eBooks). Every facet of Apple's business is subject to fierce competition, from the likes of Samsung, Google, and Huawei in smartphones; Microsoft, Dell, and Lenovo in computing; Spotify, Amazon, Google, and Pandora in music; Facebook, Snapchat, and WeChat in messaging; and the list goes on and on. And Apple is constantly confronting new competition.

Apple launches innovative services and applications to create a unique experience for its customers and to differentiate itself in an intensely competitive smartphone market. Apple's holistic approach to product development allows it to create unique services and applications for consumers that can demonstrate the creativity and uniqueness of Apple's technology. Be it the Camera, Messages, or Apple Music, these applications help make an iPhone an *iPhone*, and not just another product. The opportunity to pursue new services and applications is critical to Apple's ability to compete in the smartphone, tablet, and computing markets.

**Apple depends on innovation by third-party developers to compete in these markets.** Soon after the iPhone was launched, Apple recognized that consumers' enjoyment of the iPhone would be enhanced by unlocking the power of third-party developers. Apple has made clear since

launching the first-of-its-kind App Store that its purpose "is to add value to the iPhone."<sup>2</sup> Apple's incentives are to give consumers choices, while ensuring that its consumers are not exploited. Today, the App Store plays an important role in Apple's ability to sell the iPhone and iPad to consumers and is a key feature of the iPhone and iPad. There are now almost two million apps on the App Store, fewer than 50 of which were developed by Apple over the last ten years.

The availability of a wide variety of high-quality third-party apps on the App Store enhances the user experience and increases the desirability of Apple devices. As Apple introduces new features, new functionalities, and new products, it works hard to make those technologies available to third-party developers. At the same time, Apple remains scrupulously careful when providing access to these new technologies to ensure that the security and integrity of the user experience is not sacrificed.<sup>3</sup> Apple has invested—and continues to invest—heavily in creating tools and services to enable app developers to provide high-quality apps on iOS. For example, Apple created the Swift coding language to level the playing field for developers; Swift makes it easy for anyone from the student at home to the independent entrepreneur to the small business to create great iOS apps. Apple has also created thousands of APIs that are available to all developers regardless of whether their apps compete with Apple's. As Steve Jobs said when announcing the App Store in 2008: "The developer and us have the same exact interest, which is to get as many apps out in front of as many iPhone users as possible."<sup>4</sup>

**The App Store has created competition and launched an entire industry around app design and development.** Apple's decision to open iOS in 2008 created a completely new and unique technology environment that has resulted in an explosion in software development. Before Apple introduced the App Store, consumers bought applications from software retailers such as Circuit City and were limited to what those retailers had in stock. Installation was complicated and prices were steep. Over the last decade, the App Store has *created* competition and *expanded* app output a thousand-fold. There are now approximately 20 million app developers and millions of apps worldwide. The App Store offers these developers—including small start-ups—the opportunity to reach millions of App Store customers in 175 countries. The App Store is responsible for more than 1.9 million American jobs, across all fifty states. It has proven to be an engine of economic growth and opportunity. Developers were conservatively estimated to have generated \$519 billion in revenues through the App Store last year.<sup>5</sup> Now, more than ever, the App Store is critical to facilitating the development of powerful tools and getting them into consumers' hands quickly. For example, in the fight against COVID-19, communities are depending on apps to be credible

<sup>&</sup>lt;sup>2</sup> See 'The Mobile Industry's Never Seen Anything Like This': An Interview With Steve Jobs at the App Store's Launch, Wall St. J. (July 25, 2018), https://www.wsj.com/articles/the-mobile-industrys-never-seen-anything-like-this-an-interview-with-steve-jobs-at-the-app-stores-launch-1532527201.

<sup>&</sup>lt;sup>3</sup> See Steve Jobs confirms native iPhone SDK by February, Apple Insider (Oct. 17, 2007), https://appleinsider.com/ articles/07/10/17/steve\_jobs\_confirms\_native\_iphone\_sdk\_by\_february ("It will take until February to release an SDK because 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.").

<sup>&</sup>lt;sup>4</sup> Steve Jobs Introduces the App Store – iPhone SDK Keynote, YouTube (Mar. 13, 2008), https://www.youtube.com/ watch?v=xo9cKe\_Fch8.

<sup>&</sup>lt;sup>5</sup> See Jonathan Borck, Juliette Caminade & Markus von Wartburg, *How Large Is the Apple App Store Ecosystem? A Global Perspective for 2019*, Analysis Group (June 15, 2020), at 2, https://www.apple.com/newsroom/pdfs/app-store-study-2019.pdf.

news sources—helping users to understand health innovations, find out where they can get support if needed, or provide assistance to their neighbors. Apps have also become a lifeline for many brick-and-mortar businesses that might close without the revenue channel facilitated by online platforms like the App Store.

**Like all stores, the App Store has rules.** The App Store Review Guidelines are designed to ensure that the App Store remains a safe and trusted place for consumers to discover and download software for their Apple devices and to fairly compensate Apple for creating and operating the store. Consumers expect apps to work seamlessly on Apple's devices. Apple invests significant effort into ensuring that apps will work on iOS. Indeed, the presence of security-related bugs or flaws within an app are the most common reasons for Apple to initially reject it. Apple's App Review Process is one reason why iOS is the most secure operating system on the market.

**Stronger security and privacy protections may not be in every developer's business or commercial interest**—but they are in Apple users' interest. Apple believes privacy is a fundamental human right, and privacy has long been an integral part of Apple's brand.<sup>6</sup> As Steve Jobs remarked in 2010: "Silicon Valley is not monolithic. We've always had a very different view of privacy than some of our colleagues in the Valley. We take privacy very seriously."<sup>7</sup> Apple's products and features include innovative privacy technologies and techniques designed to minimize how much user data Apple—or anyone else—can access. Apple is constantly working on new ways to keep users' personal information safe. And features like Apple's human-led App Review Process work to ensure that apps will work, will protect user privacy, and will be secure.

Some have claimed that Apple's operation of the App Store stifles competition. Facts show that is not the case. By opening the App Store, Apple made a conscious decision to give consumers greater options and to enable greater competition—even with third-party apps that compete against Apple's own apps.<sup>8</sup> Apple has provided an ever-growing number of tools and resources for developers to create amazing applications on iOS. The evidence shows that Apple does not engage in conduct to give its applications an unfair advantage. To the contrary: in many cases third-party apps have a greater market share than Apple's own apps.

**Over 84% of all apps on the App Store share none of the revenue they make from the App Store with Apple.** Twelve years after the launch of the App Store, Apple's longstanding business model for the App Store is being second-guessed. That business model grants Apple a 30%

<sup>&</sup>lt;sup>6</sup> See, e.g., Tim Cook (@tim\_cook), Twitter (Oct. 24, 2018, 2:57 AM), https://twitter.com/tim\_cook/status/105503 5539915718656; Privacy, Apple, https://www.apple.com/privacy/; Katie Benner & Paul Mozur, *Apple Sees Value in Its Stand to Protect Security*, N.Y. Times (Feb. 20, 2016), https://www.nytimes.com/2016/02/21/technology/apple-sees-value-in-privacy-vow.html.

<sup>&</sup>lt;sup>7</sup> See Paul Resnikoff, *What Steve Jobs Said About Protecting Privacy In 2010*, Digital Music News (Mar. 25, 2018), https://www.digitalmusicnews.com/2018/03/25/steve-jobs-user-privacy-2010/.

<sup>&</sup>lt;sup>8</sup> See, e.g., Online Platforms and Market Power, Part 2: Innovation and Entrepreneurship. Before the H. Subcomm. On Antitrust, Commercial, and Admin. Law, 116th Cong., at 4 (2019) (written testimony of Morgan Reed, President, The App Association) ("Consumers and developers experienced significant changes since the various platforms entered the market. In addition to having more choices, consumers also benefit from lower prices for software and even access to new markets that did not previously exist. Similarly, developers benefit from lower overhead costs, built-in customer trust, and wider distribution and market access.").

commission for sales of digital content through the App Store. The commission compensates Apple for creating and operating the App Store and for connecting app developers with customers, enabling Apple to realize a return on its investment and to make millions of free apps available to consumers. And, in turn, Apple continues to invest in third-party app development through the creation of developer tools and services such as several software frameworks and APIs, programming language and tools, conferences and trainings, and analytics software. The vast majority of apps share no revenue with Apple—indeed, Apple receives no compensation from apps that generate revenue from advertising or from the sale of physical goods and services. In 2019, developers generated more than \$413 billion from the sale of physical goods and services and \$45 billion from advertising through their iOS apps.<sup>9</sup> Companies also use the App Store to circulate free apps that work with, and improve, their products or services. These "companion apps" raise the value of the goods or services. The brand value is immeasurable and freely available to developers under Apple's current business model.

Apple's commission is *substantially less* than the 50% to 70% industry-standard revenue share charged on all software application sales when Apple launched the App Store. Apple adopted its business model for the App Store well before it launched Apple Music, Apple TV+, Apple News, and many of Apple's other applications and services. Yet, Apple has not sought to implement new rules as it introduced new services and applications.

Apple has never increased the commission despite the fact that the App Store has grown; in fact, Apple has *lowered* it for certain transactions. Specifically, Apple has reduced its commission on subscription purchases, and after the first year of a subscription purchased through the App Store, Apple receives only a 15% commission on subscriptions. This change has benefitted all developers, including those that compete with Apple's own services. Apple has also introduced additional flexibility for apps distributing digital content with policies like the Reader Rule. Developers can make available in their app content that was purchased elsewhere by users; that is, if a user has purchased a product outside an app (like a subscription to Netflix, Spotify, *The Economist, The New York Times*, or a book title from Amazon to use in the Kindle app), those products and subscriptions can be used in the app. Apple receives no compensation from these transactions.

\* \* \*

Apple, a successful American company, has a long history of *creating* competition through its innovation. Apple started in a California garage forty years ago. Today, while Apple is an international company that produces world-class hardware, software, and services, Apple remains a uniquely American company driven by an entrepreneurial spirit focused on innovation and the user experience. Apple's introduction of the iPhone and iPad ushered in a new era of mobile computing—touching off the globally competitive modern smartphone and tablet markets, which require constant innovation for Apple, and others, to remain competitive. As of August 2019,

<sup>&</sup>lt;sup>9</sup> Press Release, Apple, *Apple's App Store ecosystem facilitated over half a trillion dollars in commerce in 2019*, Apple Newsroom (June 15, 2019), https://www.apple.com/newsroom/2020/06/apples-app-store-ecosystem-facilitated-over-half-a-trillion-dollars-in-commerce-in-2019.

Apple directly employed 90,000 people in all fifty states, and is responsible for creating and supporting 2.4 million American jobs.<sup>10</sup>

Apple is very different from the companies it is grouped with in this investigation. The record the Committee has assembled in this investigation demonstrates that Apple is not the type of "giant tech platform" the Committee seeks to address. Apple does not hold a monopoly market share in any market and is competing aggressively, often against foreign companies, in every market in which it competes. Apple's business is centered on the design and sale of distinctive, integrated products. Apple created a digital storefront for third parties to bring their great ideas to users of Apple devices. The success of Apple's business depends on a vibrant offering of popular and innovative third-party apps—which make Apple's devices more attractive to consumers.

Since launching the first-of-its-kind App Store in 2008, the record shows that Apple's App Store has been a democratizing force for software development. By lowering the barriers to entry for new developers with innovative ideas, the App Store has both dramatically expanded the offerings of apps available to Apple users and increased competition.

<sup>&</sup>lt;sup>10</sup> Update, Apple, *Apple's US jobs footprint grows to 2.4 million*, Apple Newsroom (Aug. 15, 2019), https://www.apple.com/newsroom/2019/08/apples-us-job-footprint-grows-to-two-point-four-million/.

## Key Facts, Figures, and Information\*

## App Stores like Apple's Have Been an Engine of Economic Growth

The App Store revolutionized the distribution of software and led to the emergence of hundreds of thousands of new software developers. The App Store reduced barriers to entry for developers and provided developers with the potential for broader distribution and access to a worldwide audience.

An entire industry has been built around app design and development since 2008—creating competition and economic opportunity. The App Store offers developers the opportunity to reach customers all over the world, in 175 countries, with the push of a button. In the words of one Silicon Valley historian: "The App Store changed the model for software development entirely. All a programmer needed was an idea and facility with Apple's mobile software code. With those two components, anyone could build and distribute their own apps and market them to millions of people instantly."<sup>1</sup> Meanwhile, for "people opening the App Store at home, it was like walking into the aisles of their local Best Buy. Unfettered access to millions of games and programs on their iPhone required little more than a Wi-Fi connection and a few extra bucks."<sup>2</sup> Consumer choice proliferated and prices plummeted. Software that once cost scores or hundreds of dollars and required a trip to the mall or box store (not to mention laborious installation at home) could now be downloaded instantaneously at a fraction of the cost and effort.<sup>3</sup>

- Twelve years ago, before the App Store, only a handful of the very biggest developers could reach such an audience. Today, developers, large and small, have the opportunity to reach a global audience and build a business with very little cost.
- There are now around 20 million app developers in the Apple Developer Program and millions of apps worldwide, with thousands of apps delivering groundbreaking new services, new experiences, and even entirely new business categories.<sup>4</sup>
- The App Store is responsible for more than 1.9 million American jobs across all fifty states,<sup>5</sup> and in 2019 alone, supported \$138 billion in billings and sales in the United States.<sup>6</sup>

<sup>\*</sup> This white paper cites to material that Apple has produced to the Committee and designated as Highly Confidential. Material designated as Highly Confidential contains sensitive business information. The citation to that material and the inclusion in this white paper of certain information drawn from the material in no way suggests that the underlying material stamped as Highly Confidential should no longer be protected by the Committee as such.

<sup>&</sup>lt;sup>1</sup> Mike Isaac, *Super Pumped: The Battle for Uber*, at 39 (2019).

 $<sup>^{2}</sup>$  Id.

<sup>&</sup>lt;sup>3</sup> See, e.g., Online Platforms and Market Power, Part 2: Innovation and Entrepreneurship. Before the H. Subcomm. On Antitrust, Commercial, and Admin. Law, 116th Cong., at 5 (2019) (written testimony of Morgan Reed, President, The App Association) (scanning software that cost \$450 in 2006 now costs \$10 or less).

<sup>&</sup>lt;sup>4</sup> App Store – Principles and Practices, Apple, https://www.apple.com/ios/app-store/principles-practices/.

<sup>&</sup>lt;sup>5</sup> Letter from Kyle Andeer, Vice President, Corporate Law & Chief Compliance Officer, Apple, Inc. to Chairman Jerrold Nadler, *et al.* (Feb. 17, 2020), at 2, https://docs.house.gov/meetings/JU/JU05/20200117/110386/HHRG-116-JU05-20200117-SD004.pdf.

<sup>&</sup>lt;sup>6</sup> See Jonathan Borck, Juliette Caminade & Markus von Wartburg, *How Large Is the Apple App Store Ecosystem? A Global Perspective for 2019*, Analysis Group (June 15, 2020), at 4, https://www.apple.com/newsroom/pdfs/app-store-study-2019.pdf.

• Over 84% of apps on the App Store do not share any of the revenue they make from the App Store with Apple.<sup>7</sup>

Apple's App Store is just one of many options for developers in a dynamic and changing market. Developers may elect to offer their apps or software outside of the App Store on Apple devices (like through web-based content), or elsewhere for use on non-Apple devices. Likewise, Apple does not prevent developers from selling their apps on other platforms.

#### **Apple's Business Model**

Apple is a product company. It sells products to consumers.<sup>8</sup> It does not sell its consumers' personal information to advertisers or others. Unlike other companies that operate digital platforms or offer digital services, more than 75% of Apple's revenue comes from selling Apple products like the iPhone, iPad, Apple Watch, and MacBook.<sup>9</sup>



<sup>&</sup>lt;sup>7</sup> App Store – Principles and Practices, *supra*.

<sup>&</sup>lt;sup>8</sup> See, e.g., Edwin Chan, Apple won't blindly pursue market share: report, Reuters (Jan. 11, 2013), https://www.reuters.com/article/us-apple-iphone/apple-wont-blindly-pursue-market-share-report-idUSBRE9091CR 20130111 ("Apple has always focused on providing the best products for its consumers[;] we've never blindly chased market share.").

<sup>&</sup>lt;sup>9</sup> The graph reflects Apple, Google, and Facebook's gross revenue as reported for the first quarter of 2020. Google's earnings report divides its revenue by Advertising (\$33.8B), Cloud Services (\$2.8B), and Other (\$4.4B); Facebook divides its revenue by Advertising (\$17.4B) and Other (\$300M). Google's and Facebook's "Other" are included as "Products" in this graph. Google's Advertising and Cloud Services, as well as Facebook's Advertising revenue, were assigned to the "Advertising/Service" category. Press Release, Apple, *Apple Reports Second Quarter Results*, Apple Newsroom (Apr. 30, 2020), https://www.apple.com/newsroom/2020/04/apple-reports-second-quarter-results/; Press Release, Alphabet, *Alphabet Announces First Quarter 2020 Results* (Apr. 28, 2020), https://abc.xyz/investor/ static/pdf/2020Q1\_alphabet\_earnings\_release.pdf; Facebook, *Facebook Reports First Quarter 2020 Results* (Apr. 29, 2020), https://s21.q4cdn.com/399680738/files/doc\_news/Facebook-Reports-First-Quarter-2020.pdf.

The App Store is a key component of what makes Apple's products uniquely attractive to consumers. From the beginning, Apple has made clear that a central "purpose in the App Store is to add value to the iPhone."<sup>10</sup> As Steve Jobs explained in 2008, shortly after the launch of the App Store: "We expect it to add value to the iPhone. We'll sell more iPhones because of it."<sup>11</sup>

Apple does offer a small number of its own apps on its devices, but this limited number of apps, introduced over 12 years, represents only a small fraction of the millions of apps that are available to consumers who use Apple products. Indeed, Apple's business model *depends* on the availability of high-quality third-party apps that customers can integrate with Apple's products. The App Store features numerous third-party apps that compete with Apple's own Calendar, Camera, Cloud Storage, Mail, Maps, Messaging, Music, Notes, Podcasts, TV, Video Chat, and Web Browsing apps. Many of the most popular apps compete against Apple's own services.

- Third-party apps enhance the functionality of Apple products and, by providing a superior user experience, increase their desirability for consumers. This in turn increases consumers' desire for Apple devices like iPhones and iPads.
- Third-party apps have enjoyed large-scale success in the App Store, compete with Apple's apps across every category, and, in many cases, have a greater market share than Apple's own apps.
  - Spotify has twice as many paid subscribers as Apple Music does worldwide.<sup>12</sup>
  - Google Maps and Waze have been downloaded by Apple users hundreds of millions of times over the past five years.<sup>13</sup>
  - Snapchat and Facebook Messenger were among the most frequently downloaded free iPhone apps in 2019.<sup>14</sup>
  - Mail competes with dozens of other mail apps on the App Store, many of which are free to download, including Gmail, Spark, Yahoo Mail, and Canary.

<sup>&</sup>lt;sup>10</sup> See 'The Mobile Industry's Never Seen Anything Like This': An Interview With Steve Jobs at the App Store's Launch, Wall St. J. (July 25, 2018), https://www.wsj.com/articles/the-mobile-industrys-never-seen-anything-like-this-an-interview-with-steve-jobs-at-the-app-stores-launch-1532527201.

<sup>&</sup>lt;sup>11</sup> *Id*.

<sup>&</sup>lt;sup>12</sup> See How many users do Spotify, Apple Music and other big music streaming services have?, MusicAlly (Feb. 19, 2020), https://musically.com/2020/02/19/spotify-apple-how-many-users-big-music-streaming-services/.

<sup>&</sup>lt;sup>13</sup> Kyle Andeer Responses to Questions for the Record from the Honorable David N. Cicilline, at 7, https://docs. house.gov/meetings/JU/JU05/20190716/109793/HHRG-116-JU05-20190716-SD036.pdf.

<sup>&</sup>lt;sup>14</sup> Brenda Stolyar, *Apple unveils the most popular iPhone apps of 2019*, Mashable (Dec. 2, 2019), https:// mashable.com/article/apple-most-popular-iphone-apps-2019/.

### 🔹 Apple













iWork





Apple TV







Camera





Mai



Spotify



Facebook Messenger

Google Maps





Microsoft Word



Box



Amazon Prime Video

















Amazon Music

Ş

Snapchat

ü

Waze

Google Duo

P

Microsoft Powerpoint

\*\*

Dropbox

HBO

HBO Max

(A)

Overcast

Firefox

Instagram

Rakuten kobo Rakuten Kobo

Gmail

4

music





**Competing Apps on App Store** 

Pandora







Google Play Music

-

Google Hangouts

WhatsApp

Google Slides

Microsoft One Drive

Netflix

ii

Google Podcasts

C

Microsoft Edge

Nook



Here WeGo

\*\*\*

Tidal

LINE

LINE Messenger





₽

Google Docs



Dienep



Ć

The Podcast App







Google Play Books



Audible

Yahoo! Mail









~

Facebook Messenger





















Google Chrome

From the very first iPhone, Apple products have had built-in certain core functionality to provide customers with a great experience out of the box.<sup>15</sup> And to differentiate Apple in an increasingly competitive market, Apple also relies on its own services (*e.g.*, Apple Music, iMessage, and FaceTime) as one way to differentiate its product offerings from those of Apple's many competitors. Two-thirds of Apple's built-in apps, however, can be deleted by users. The remaining Operating System Apps are a core part of the operating system (and thus Apple's devices) and cannot be removed.

**U.S. Market Share:** Apple does not hold a monopoly share in any market in America or around the world. In *all* markets, Apple faces strong competition. The market shares change quarter to quarter, reflecting the dynamic and intense competition in the market.

- *Wireless Phones (iPhone):* As of 2019, Apple holds a 35% market share, and competes particularly with foreign companies including Samsung, LG, TCL, Lenovo, and others.<sup>16</sup>
- *Media Streaming Devices (Apple TV):* As of 2019, Apple holds a 16% market share, and competes with Roku, Amazon, Google, and others. This data does not account for smart TVs, gaming consoles, and other devices that provide streaming services to customers.<sup>17</sup>
- *Tablets (like iPad):* As of 2019, Apple holds a 46% market share, and competes with Amazon, Samsung, Microsoft, and others.<sup>18</sup> These shares do not account for e-readers, many of which have similar functionality to tablets.
- *Wearables (like Apple Watch):* As of 2019, Apple holds a 42% market share, and competes with Fitbit, Samsung, Garmin, and others.<sup>19</sup>
- *Desktop and Notebook Computers:* As of 2019, Apple's products hold a 6% market share in the desktop computer market and a 13% market share in the notebook computer market, and compete with HP, Dell, Lenovo, and others.<sup>20</sup>

<sup>&</sup>lt;sup>15</sup> This information is relevant to the Committee's request for information concerning "Apple's policy regarding whether iPhone users can choose non-Apple apps as default apps, including but not limited to, defaults for web browsers, maps, e-mail client, maps services, or music players." Request B.1.f.

<sup>&</sup>lt;sup>16</sup> HJC-APPLE-000010 (Apple's Response to Request A.3); HJC-APPLE-000021 to HJC-APPLE-000022 (Apple's Response to Request A.4).

<sup>&</sup>lt;sup>17</sup> HJC-APPLE-000008 (Apple's Response to Request A.3); HJC-APPLE-000016 to HJC-APPLE-000017 (Apple's Response to Request A.4).

<sup>&</sup>lt;sup>18</sup> HJC-APPLE-000010 (Apple's Response to Request A.3); HJC-APPLE-000022 to HJC-APPLE-000023 (Apple's Response to Request A.4).

<sup>&</sup>lt;sup>19</sup> HJC-APPLE-00008 to HJC-APPLE-00009 (Apple's Response to Request A.3); HJC-APPLE-000017 to HJC-APPLE-000018 (Apple's Response to Request A.4).

<sup>&</sup>lt;sup>20</sup> HJC-APPLE-000010 to HJC-APPLE-000011 (Apple's Response to Request A.3); HJC-APPLE-000023 to HJC-APPLE-000024 (Apple's Response to Request A.4).



Apple's acquisition strategy is focused on acquiring unique talent, technology, and features that can fuel its organic product innovation. Apple has not grown through mergers and acquisitions. It has not pursued a strategy of acquiring nascent potential competitors or picking off digital platforms. Instead, where Apple has acquired other companies, Apple has done so to improve its hardware or software.

For example, in 2012, Apple acquired AuthenTec—a company which developed fingerprint sensor technology for laptops and other applications.<sup>21</sup> In 2013, Apple integrated AuthenTec's fingerprint sensor technology into the iPhone 5S, and later into other Apple products. Apple acquired an existing technology, refined it, and integrated it into a completely new application: Touch ID. Touch ID allows users to more seamlessly unlock their Apple devices, make secure purchases, and otherwise verify their identity—all while increasing security by requiring use of the user's unique fingerprint. The AuthenTec acquisition reflects Apple's strategy of acquiring technologies and capabilities that enable Apple to introduce new features and capabilities in its devices.



<sup>&</sup>lt;sup>21</sup> HJC-APPLE-004076 to HJC-APPLE-004280 (HSR Filing); *see also* Poornima Gupta & Sinead Crew, *Apple buys mobile security firm AuthenTec for \$356 million*, Reuters (July 27, 2012), https://www.reuters.com/article/us-authentec-acquisition-apple/apple-buys-mobile-security-firm-authentec-for-356-million-idUSBRE86Q0KD20120727.

During the period for which the Committee has requested information, Apple has entered into the following additional transactions that required submitting a filing under the Hart-Scott-Rodino Act ("HSR") to the DOJ or FTC:

- Apple acquired certain Nortel Networks Corporation patents in 2011.<sup>22</sup>
- Apple acquired Beats Music and Beats Electronics in 2014, a subscription streaming music service and headphone company.<sup>23</sup>
- Apple acquired LuxVue Technology in 2014, an LED display manufacturing company.<sup>24</sup>
- Apple acquired FoundationDB in 2015, a durable database company.<sup>25</sup>
- Apple acquired the majority of Intel's 5G smartphone modem business in 2019.<sup>26</sup>

## Apple: A Reputation for Security, Quality, and Privacy-by-Design

Apple has built a reputation for quality products that also protect user security and privacy both through the operation of the App Store—which is designed to ensure that apps meet Apple's standards, add value to users, and safeguard users' privacy and security—and through the creation of high-quality devices that contain built-in privacy features and software.

**Apple's Privacy-by-Design Commitment:** Privacy is embedded in the DNA of Apple's products and the App Store Review Process.

• Apple believes privacy is a fundamental human right, and privacy has long been an integral part of Apple's brand.<sup>27</sup> As Steve Jobs said over ten years ago, Apple has "always had a

<sup>&</sup>lt;sup>22</sup> HJC-APPLE-004017 to HJC-APPLE-004075 (HSR Filing); *see also* Press Release, U.S. Dep't of Justice, Statement of the Department of Justice's Antitrust Division on Its Decision to Close Its Investigations of Google Inc.'s Acquisition of Motorola Mobility Holdings Inc. and the Acquisitions of Certain Patents by Apple Inc., Microsoft Corp., etc. (Feb. 13, 2012), https://www.justice.gov/opa/pr/statement-department-justice-s-antitrust-division-its-decision-close-its-investigations.

<sup>&</sup>lt;sup>23</sup> HJC-APPLE-004281 to HJC-APPLE-004776 (HSR Filing); *see also* Press Release, Apple to Acquire Beats Music & Beats Electronics (May 28, 2014), https://www.apple.com/newsroom/2014/05/28Apple-to-Acquire-Beats-Music-Beats-Electronics/.

<sup>&</sup>lt;sup>24</sup> HJC-APPLE-010873 to HJC-APPLE-010913 (HSR Filing); *see also* Daisuke Wakabayashi, *Apple Acquires LuxVue, Which Makes Next-Gen LED Displays*, Wall St. J. (May 2, 2014), https://blogs.wsj.com/digits/2014/05/02/ apple-acquires-luxvue-which-makes-next-gen-led-screens/.

<sup>&</sup>lt;sup>25</sup> HJC-APPLE-010914 to HJC-APPLE-010929 (HSR Filing).

<sup>&</sup>lt;sup>26</sup> HJC-APPLE-006999 to HJC-APPLE-007192 (HSR Filing); *see also* Press Release, Apple, Apple to acquire the majority of Intel's smartphone modem business (July 25, 2019), https://www.apple.com/newsroom/2019/07/apple-to-acquire-the-majority-of-intels-smartphone-modem-business/.

<sup>&</sup>lt;sup>27</sup> See, e.g., Privacy, Apple, https://www.apple.com/privacy/ ("Privacy is a fundamental human right.... We design Apple products to protect your privacy and give you control over your information."); Catherine Clifford, *Apple CEO Tim Cook:* '*Privacy to us is a human right...a civil liberty*,' CNBC (Apr. 10, 2018) https://www.cnbc. com/2018/04/10/apple-ceo-tim-cook-on-the-importance-of-consumer-privacy.html; Katie Benner & Paul Mozur, *Apple Sees Value in Its Stand to Protect Security*, N.Y. Times (Feb. 20, 2016), https://www.nytimes.com/2016/02/21/ technology/apple-sees-value-in-privacy-vow.html ("Privacy and security have become part of [Apple's] brand, especially internationally.").

very different view of privacy than some of our colleagues in [Silicon] Valley. We take privacy very seriously."<sup>28</sup>

- Apple's business model is not based on the collection or sale of user data.
  - Apple's CEO, Tim Cook, has explained that Apple could "make a ton of money if [it] monetized [its] consumer," but doing so would be "an invasion of privacy" and Apple would rather adhere to the company's core values.<sup>29</sup>
  - Other companies, by focusing less on privacy, have had to suspend large numbers of apps for privacy concerns. Recently, another tech company suspended 69,000 apps from its platform following revelations that some apps were "improperly sucking up users' personal information and [committing] other transgressions."<sup>30</sup>

Apple's products themselves are designed to promote privacy. Apple's iOS, including significant recent updates Apple released in iOS 13, includes privacy features like encryption, retaining sensitive user data on a user's device (rather than the cloud or data servers), and associating data on many occasions with a random identifier if the data is transmitted to Apple's servers.<sup>31</sup>

- Apple believes that users have a right to know when an app uses their location data before a user decides to share that data indefinitely.
- iOS 13 makes clear to users when their location data is being accessed by an app, and gives users more control over whether or not they wish to share that data.
- Users are prompted to authorize the use of location data when an application first attempts to use continuous location tracking in the background after a user is no longer actively using the app.
- When a user authorizes an app to continually access her location data, iOS 13 periodically reminds the user when the app uses that permission or changes its amount of use.<sup>32</sup>

**App Store Review Process:** Apple seeks to ensure that apps are held to a high standard for privacy and security, because nothing is more important to Apple than maintaining the trust of its users. Consumers expect devices that work seamlessly right out of the box. Apps must both work and be integrated with the Apple devices upon which they will be used.

Apple has reviewed apps since the opening of the App Store in 2008. Apple expended significant effort to put various "controls in place," allowing the company to "turn off the spigots" when

<sup>&</sup>lt;sup>28</sup> See Paul Resnikoff, *What Steve Jobs Said About Protecting Privacy In 2010*, Digital Music News (Mar. 25, 2018), https://www.digitalmusicnews.com/2018/03/25/steve-jobs-user-privacy-2010/.

<sup>&</sup>lt;sup>29</sup> Clifford, CNBC, *supra*.

<sup>&</sup>lt;sup>30</sup> Kate Conger, Gabriel J.X. Dance & Mike Isaac, *Facebook's Suspension of 'Tens of Thousands' of Apps Reveals Wider Privacy Issues*, N.Y. Times (Sept. 20, 2019), https://www.nytimes.com/2019/09/20/technology/facebook-data-privacy-suspension.html.

<sup>&</sup>lt;sup>31</sup> See, e.g., Privacy Policy, Apple, https://www.apple.com/privacy/features/; Differential Privacy, Apple, https://www.apple.com/privacy/docs/Differential\_Privacy\_Overview.pdf; John Martellaro, *Apple CEO Tim Cook Says Privacy is a Fundamental Human Right*, Mac Observer (May 1, 2018, 6:51 PM), https://www.macobserver.com/ analysis/apple-ceo-tim-cook-privacy-is-human-right/.

<sup>&</sup>lt;sup>32</sup> iOS 13 Features, Apple, https://www.apple.com/ios/ios-13/features/; Letter from Kyle Andeer to Chairman Jerrold Nadler, *supra*.

harmful third-party apps are detected.<sup>33</sup> But the primary safeguard is that "when people submit their applications, [Apple] will make sure that [the app is] not doing things it shouldn't be doing."<sup>34</sup> In other words, "there are going to be some apps"—such as apps containing pornography, "malicious apps," and "apps that invade [user] privacy"—"that [Apple will] say no to."<sup>35</sup>

To ensure apps available on Apple's devices meet these standards, Apple's App Store, like all stores, has rules: the App Store Review Guidelines.<sup>36</sup> Apple publishes these guidelines for all to see.

- The Guidelines provide transparency to developers and users, ensuring that apps do what they say they will do. This makes the App Store a safe and trusted place for consumers to discover and download apps.<sup>37</sup>
- The Guidelines apply equally to everyone—including Apple's own apps that are on the App Store.
- Because Apple develops both the hardware and software for its devices, distribution through the App Store allows Apple to "take full responsibility for the user experience."<sup>38</sup>
- Apple's products, like the iPhone and iPad, could offer access to a trove of users' personal data—data which unscrupulous actors could seek to collect or exploit. Apple's rigorous App Review Process is designed to protect users of Apple's devices from malware and security threats.

Apple's human-led App Store Review Process is designed to ensure that apps meet Apple's standards, add value to users, and safeguard users' privacy and security.

- Apple reviews, on average, 100,000 submissions for apps or app updates per week—most within 24 hours of submission. This process includes roughly 1,000 calls per week to developers to diagnose and cure issues.<sup>39</sup>
- Apple rejects approximately 40% of the reviewed apps. Many of these apps are rejected because they have software glitches or bugs, and/or would compromise users' data privacy or security.<sup>40</sup>
- The most common reason Apple rejects an app is because the app does not work as intended.
- Apple puts many of its own apps through the App Store Review Process. Even those apps are rejected at times.

<sup>&</sup>lt;sup>33</sup> Steve Jobs Introduces the App Store – iPhone Software Roadmap Event, YouTube (Mar. 6, 2008), https://www.you tube.com/watch?v=MfQtnQHLNcs.

<sup>&</sup>lt;sup>34</sup> Id.

<sup>&</sup>lt;sup>35</sup> Id.

<sup>&</sup>lt;sup>36</sup> This information is relevant to the Committee's request for information concerning "Apple's policy regarding whether to allow on the iPhone any app stores other than the Apple App Store." Request B.1.g.

<sup>&</sup>lt;sup>37</sup> App Store Review Guidelines, Apple, https://developer.apple.com/app-store/review/guidelines/.

<sup>&</sup>lt;sup>38</sup> HJC-APPLE-016272; see also HJC-APPLE-016203.

<sup>&</sup>lt;sup>39</sup> App Store – Principles and Practices, *supra*.

<sup>&</sup>lt;sup>40</sup> Id.

• When an app is not approved for use in the App Store, Apple provides the developer with the reason the app was rejected, citing to the Guideline violation that caused the rejection. Developers are encouraged to re-submit the app once they have corrected the issue.<sup>41</sup> Most rejected apps ultimately make it onto the App Store.

Apple's App Store Review Process prioritizes the protection of users and developers alike from fraud, malware, and unwarranted intrusion into their privacy. This may not be in the short-term commercial interests of some developers that monetize and leverage users' personal data. For example, with respect to COVID-19-related apps, Apple is evaluating apps to ensure data sources are reputable and that developers presenting these apps are from recognized entities.

The App Store Review Guidelines are intended to ensure that apps offered in the App Store are secure. And these Guidelines have worked: Apple's stringent screening process has resulted in a significantly smaller number of malicious iOS apps than those available on Android.<sup>42</sup>

- In 2018, the iPhone platform accounted for just 0.85% of malware infections. By contrast, Android accounted for 47.15% and Windows/PC accounted for 35.82%.<sup>43</sup>
- Similarly, a 2013 U.S. Department of Homeland Security study found that 79% of mobile device malware attacks were for the Android platform, and only 0.7% for iOS.<sup>44</sup>
- Among app stores, Android app stores have significantly higher numbers of malicious apps than the App Store.<sup>45</sup>

Apple's emphasis on security is also the reason for Apple's requirement that apps use the WebKit browser rendering language.<sup>46</sup>

- WebKit protects user privacy and security, because nefarious websites have analyzed other web browser engines, finding flaws that have not been disclosed and exploiting those flaws when a user goes to a particular website to silently violate user privacy or security.
- By requiring that apps use WebKit, Apple can rapidly and accurately address exploits across its entire user base and most effectively secure users' privacy and security. Apple

<sup>&</sup>lt;sup>41</sup> See App Review, Apple, https://developer.apple.com/app-store/review/.

<sup>&</sup>lt;sup>42</sup> Internet Security Threat Report, Symantec, at 11 (Apr. 2016) ("Apple is well-known for its stringent screening processes, which is why the number of malicious iOS apps is so much smaller than for Android."), https://docs.broadcom.com/doc/istr-21-2016-en.

<sup>&</sup>lt;sup>43</sup> See Nokia Threat Intelligence Report – 2019, Nokia, https://pages.nokia.com/T003B6-Threat-Intelligence-Report-2019.html.

<sup>&</sup>lt;sup>44</sup> See Roll Call Release, U.S. Dep't of Homeland Security & Federal Bureau of Investigation (July 23, 2013), https://info.publicintelligence.net/DHS-FBI-AndroidThreats.pdf.

<sup>&</sup>lt;sup>45</sup> See 2019 Mobile App Threat Landscape Report, RiskIQ (2019), https://www.riskiq.com/research/2019-mobile-threat-landscape-report/.

<sup>&</sup>lt;sup>46</sup> The information in this section is relevant to the Committee's request for information concerning "Apple's policy regarding whether third-party web browsers in the App Store must use any specific browser rendering engine, including but not limited to, WebKit." Request B.1.i; *see also* Guideline 2.5.6, Apple, App Store Review Guidelines, https://developer.apple.com/app-store/review/guidelines/.

can provide security updates to all users quickly and accurately, no matter which web browser a user decides to download from the App Store.<sup>47</sup>

Apple's App Store Review Guidelines promote users' privacy in multiple ways, including by requiring:

- That apps "should only request access to data relevant to the core functionality of the app and should only collect and use data that is required to accomplish the relevant task";<sup>48</sup>
- That apps must not "surreptitiously build a user profile based on collected data" and may not "attempt, facilitate, or encourage others to identify anonymous users";<sup>49</sup>
- That every app implement measures sufficient to ensure secure handling of any user data subject to collection;<sup>50</sup>
- That apps collecting user or usage data "must secure user consent for the collection, even if such data is considered to be anonymous at the time of or immediately following collection";<sup>51</sup> and
- That apps must not use, transmit, or share a user's personal data without first obtaining user permission. To obtain permission, the app "must provide access to information about how and where the data will be used," and data collected from apps "may only be shared with third parties to improve the app or serve advertising."<sup>52</sup>

Apple's protection of user privacy, and the enhancements it regularly introduces to honor its commitment to its users, may conflict with certain developers' commercial interests. In those instances, while protecting user privacy remains paramount, Apple works with developers to ensure their apps are safe, functional, and secure, and thus can be accessible on the App Store.<sup>53</sup>

• Recently, some developers have argued that iOS 13's added data protection and security measures (*i.e.*, prompts that give users better control over how apps use their location) hinder the effectiveness of their apps.<sup>54</sup>

<sup>&</sup>lt;sup>47</sup> Kyle Andeer Responses to Questions for the Record from the Honorable David N. Cicilline, at 2, *supra*.

<sup>&</sup>lt;sup>48</sup> Guideline 5.1.1(iii), Apple, App Store Review Guidelines, https://developer.apple.com/app-store/review/ guidelines/.

<sup>&</sup>lt;sup>49</sup> Guideline 5.1.2(iii), Apple, App Store Review Guidelines, https://developer.apple.com/app-store/review/ guidelines/.

<sup>&</sup>lt;sup>50</sup> Guideline 1.6, Apple, App Store Review Guidelines, https://developer.apple.com/app-store/review/guidelines/.

<sup>&</sup>lt;sup>51</sup> Guideline 5.1.1(ii), Apple, App Store Review Guidelines, https://developer.apple.com/app-store/review/guidelines/.

<sup>&</sup>lt;sup>52</sup> Guideline 5.1.2(i), Apple, App Store Review Guidelines, https://developer.apple.com/app-store/review/guidelines/.

<sup>&</sup>lt;sup>53</sup> The information in this section is relevant to the Committee's request for information concerning "Apple's decision to remove from the App Store or to impose any restrictions on certain screen-time and parental-control apps, including but not limited to, the following apps." Request B.1.a.

<sup>&</sup>lt;sup>54</sup> Online Platforms and Market Power, Part 5: Competitors in the Digital Economy. Before the H. Subcomm. On Antitrust, Commercial, and Admin. Law, 116th Cong. at 17 (2020) (testimony of Kristen Daru, General Counsel, Tile) (citing unofficial Congressional Quarterly transcript).

- That is not accurate: iO3 13 did not restrict apps' ability to access location data or hinder their performance. Instead, iOS 13 provides users with more control over whether or not they wish to share location data with developers.<sup>55</sup>
- As recent media reports have shown, securing user location data is now more important than ever, because such information "reveals people's travels in startling detail, accurate to within a few yards and in some cases updated more than 14,000 times a day."<sup>56</sup>
- Following feedback from developers, Apple is fine-tuning iOS location data notification prompts to address their concerns, while at the same time ensuring that user privacy is not compromised.
- As another example, in 2018, Apple became aware that several apps were using mobiledevice-management (or "MDM")—a highly invasive technology intended for enterprise use that gives a third-party control and access over a device and its most sensitive information such as user location, app use, email accounts, camera permissions, and browsing history—including using that technology in parental control apps that were being used by children.<sup>57</sup>
  - When Apple found out about these Guideline violations, Apple communicated these violations to the app developers, giving developers 30 days to submit an updated app to avoid availability interruption in the App Store.<sup>58</sup>
  - Although several developers released updates to bring their apps in line with these policies, apps that did not were removed from the App Store.
  - In response to developer concerns, Apple later amended its Guidelines to permit the use of the MDM technology by parental control apps subject to a strict set of conditions and an MDM capability application program designed to protect the privacy and security of Apple users. Those changes included adding new rules concerning apps developed for children under age 13.<sup>59</sup>
  - Apple has always supported third-party parental control apps on the App Store; removal of those using MDM technology invasively was a matter of privacy and security.
  - Apple does not believe that personal data from children should be shared by an app with third parties.<sup>60</sup>

<sup>&</sup>lt;sup>55</sup> Letter from Kyle Andeer to Chairman Jerrold Nadler, *supra*.

<sup>&</sup>lt;sup>56</sup> Jennifer Valentino-DeVries, Natasha Singer, Michael H. Keller & Aaron Krolik, *Your Apps Know Where You Were Last Night, and They're Not Keeping it Secret*, N.Y. Times (Dec. 10, 2018), https://www.nytimes.com/interactive/2018/12/10/business/location-data-privacy-apps.html.

<sup>&</sup>lt;sup>57</sup> See, e.g., HJC-APPLE-013240; HJC-APPLE-013271; HJC-APPLE-013267.

<sup>&</sup>lt;sup>58</sup> See Statement, Apple, *The facts about parental control apps*, Apple Newsroom (Apr. 28, 2019), https://www.apple.com/newsroom/2019/04/the-facts-about-parental-control-apps/; *see also* HJC-APPLE-012288; HJC-APPLE-013269.

<sup>&</sup>lt;sup>59</sup> See Updates to the App Store Review Guidelines, Apple (June 3, 2019), https://developer.apple.com/news/?id=0603 2019j; see also HJC-APPLE-012459.

<sup>&</sup>lt;sup>60</sup> HJC-APPLE-012288; *see also* Guideline 1.3, Apple, App Store Review Guidelines, https://developer.apple.com/ app-store/review/guidelines/.

#### **Apple's Investment in Third-Party Development**

Apple has invested—and continues to invest—heavily in creating tools and services to enable app developers to provide high-quality apps on iOS. Apple's suite of software tools is specially optimized to help developers create, test, publish, and manage their apps. These continued investments and innovations are what makes the App Store a success and attractive to developers from the student coder to the independent entrepreneur to the small and medium business.

- Developers get access to bespoke developer tools (Xcode) and an easy-to-use, intuitive coding language for the Apple environment (Swift 5), as well as beta testing software (TestFlight) to ensure that apps work properly before they are launched on the App Store. Apple's guides and documentation contain step-by-step instructions on how to use the company's extensive development tools and resources; and Apple's dedicated developer support team helps to troubleshoot and provide advice and support.<sup>61</sup> These tools make developing apps as easy to learn as Apple's products are to use. Swift, in particular, provides an intuitive programming language for macOS, iOS, watchOS, and tvOS. The code is safe by design, yet also produces software that runs lightning-fast.<sup>62</sup>
- Developers can also access a variety of software frameworks that provide the resources for developers to easily integrate innovative and complex technologies like machine learning and augmented reality into their apps.
- Apple also provides developers with marketing, billing, and security technology services, as well as a range of services associated with cross-border transactions, including tax, VAT, payment card fee, and collections services.<sup>63</sup>
- Other tools and services Apple has created to help app developers include: (i) purchase fraud detection and management; (ii) thousands of improved APIs;<sup>64</sup> (iii) analytics tools to assess app performance and user engagement;<sup>65</sup> (iv) monitoring for bugs and coding errors;<sup>66</sup> (v) a mechanism to resolve intellectual property disputes;<sup>67</sup> (vi) consultation on complying with App Store Review Guidelines; (vii) an annual World Wide Developer Conference to introduce new software capabilities;<sup>68</sup> (viii) improved discoverability;<sup>69</sup> (ix) App Store academies and related programs for developer training, outreach, and

<sup>&</sup>lt;sup>61</sup> See Distributing Your App for Beta Testing and Releases, Apple, https://developer.apple.com/documentation/ xcode/distributing\_your\_app\_for\_beta\_testing\_and\_releases.

<sup>&</sup>lt;sup>62</sup> See Swift, Apple, https://developer.apple.com/swift/.

<sup>&</sup>lt;sup>63</sup> See Apple Developer Documentation, Apple, https://developer.apple.com/documentation.

<sup>&</sup>lt;sup>64</sup> See DeviceCheck, Apple, https://developer.apple.com/documentation/devicecheck.

<sup>&</sup>lt;sup>65</sup> See Apple Analytics, Apple, https://developer.apple.com/app-store-connect/analytics/.

<sup>&</sup>lt;sup>66</sup> See Bug Reporting, Apple, https://developer.apple.com/bug-reporting/.

<sup>&</sup>lt;sup>67</sup> See App Store Content Dispute, Apple, https://www.apple.com/legal/internet-services/itunes/appstorenotices/ #?lang=en.

<sup>&</sup>lt;sup>68</sup> Press Release, Apple, *Apple's Worldwide Developers Conference 2020 kicks off in June with an all-new online format*, Apple Newsroom (Mar. 13, 2020), https://www.apple.com/newsroom/2020/03/apples-wwdc-2020-kicks-off-in-june-with-an-all-new-online-format/.

<sup>&</sup>lt;sup>69</sup> Choosing a Category, Apple, https://developer.apple.com/app-store/categories/.

education;  $^{70}$  (x) marketing tools; (xi) app financial data, including sales and download data.  $^{71}$ 

# **The App Store Business Model**<sup>72</sup>

Apple has invested and continues to invest significant sums in the App Store; the commission that Apple charges enables Apple to realize a return on that investment, as well as to fund further App Store innovation. That business model has not fundamentally changed in the decade since the first-of-its-kind App Store was launched.

**App Store Commission:** When it created the App Store, Apple implemented a revenue share policy to ensure that Apple could continue to offer a quality digital marketplace for third-party developers to connect with consumers.

- The basic bargain of the App Store is simple: if a developer charges for software purchased in the App Store, the developer pays a commission to Apple.
- Apple's commission reflects the value of the App Store as a channel for the distribution of developers' apps and the cost of many services—including app review, app development tools, and marketing services—that make the App Store a safe and trusted marketplace for customers and a great business opportunity for developers.
  - Apple's commission reflects Apple's role in connecting app developers with users who value the quality of Apple's devices and have an expectation that purchasing and using apps from the App Store will be a quality, secure experience.
  - The commission also enables Apple to realize a return on its investment in the App Store and in Apple's intellectual property, and to fund future App Store innovation.

Apple's commission works as follows:<sup>73</sup>

- Apple receives a 30% commission on purchases made through the App Store for:
  - Purchases of paid apps;
  - In-app purchases of digital content; or
  - Digital subscriptions purchased for use in an app (after the first year of digital subscriptions, Apple receives only a 15% commission from those subscriptions).
- Apple receives **no commission** when developers:
  - Offer apps for free;

<sup>&</sup>lt;sup>70</sup> Andrew Griffin, *Apples' Developer Academy: Inside the Elite School Where iPhone Developers of the Future are Being Trained*, Independent (May 17, 2017), https://www.independent.co.uk/life-style/gadgets-and-tech/features/ apple-developer-academy-iphone-developer-naples-school-training-elite-future-university-a7740546.html.

<sup>&</sup>lt;sup>71</sup> Sarah Perez, *Apple launches a dedicated mobile app for its developer community*, TechCrunch (Nov. 18, 2019) https://techcrunch.com/2019/11/18/apple-launches-a-dedicated-mobile-app-for-its-developer-community/.

<sup>&</sup>lt;sup>72</sup> The information in this section is relevant to the Committee's request for information concerning "Apple's policy regarding whether and under what circumstances any specific app or any categories of apps in the App Store are permitted to use payment systems other than Apple's payment system"; "Apple's policy regarding whether apps are permitted to include in-app links to non-Apple payment systems"; and "Apple's revenue-share policy for in-app purchases, including but not limited to, the precise percentage cut that Apple does or should take." Requests B.1.c, d, e.

<sup>&</sup>lt;sup>73</sup> App Store – Principles and Practices, *supra*.

- Offer apps that generate revenue from in-app advertising;
- Sell physical goods and services in their app; or
- Offer reader apps, where users exclusively purchase or subscribe to content outside of the app, but can access that content (like music, books, and video) inside the app on their devices.
- Overall, Apple receives **no commission on 84% of apps** in the App Store; in other words, 84% of all apps share none of their revenue with Apple but still have access to the App Store and its users. In 2019, iOS apps were estimated to have generated \$413 billion in sales of physical goods and services. Yet those developers paid Apple only a \$99 program fee. Developers generated an additional \$45 billion in advertising revenue from their iOS apps in 2019. Again, Apple did not share in any of that revenue.<sup>74</sup>

Apple's 30% commission offers Apple a fair return on its investment in the App Store, the value of Apple's intellectual property, and the App Store's value in connecting developers to users. Apple's commission is *substantially less* than the industry-standard revenue share (50% to 70%) at the time Apple launched the App Store.<sup>75</sup> Apple's 30% commission has not increased since the inception of the App Store; rather, it has *decreased* (to 15% for subscriptions after the first year).

- Alternatives, like requiring *all apps* to pay a fee (including free apps), would tend to favor larger developers and would be stacked against smaller developers—meaning that small developers with innovative but untested ideas might never make it to market.
- Paying the 30% commission does not reduce developers' access to the App Store or ability to bring apps to Apple devices. Spotify provides a helpful example:
  - 99% of Spotify's paid subscribers were acquired outside of the App Store; Spotify therefore does not pay a commission to Apple on more than 99% of its paid subscribers.
  - For the less than 1% of subscribers that Spotify did acquire through the App Store, Spotify pays only a 15% commission (since those subscriptions are more than a year old).
  - Spotify pays no commission (and never has) for its ad-supported users.
  - The commission Spotify pays on less than 1% of its paid users does not force Spotify to charge higher prices in its apps; notably, when Apple decreased the commission on subscriptions after the first year to 15%, Spotify did not reduce its price to consumers.
  - Although Spotify made the business choice to discontinue use of Apple's In-App Purchasing System in 2016, Spotify has since only *increased* its users and premium subscribers. And, despite no longer obtaining premium subscribers through the app and thus not paying Apple a commission on new subscriptions, Spotify has not lowered its price since that time.
  - Spotify has a market-leading 232 million active users and more than 108 million paid subscribers.

<sup>&</sup>lt;sup>74</sup> See Borck, Caminade & von Wartburg, *supra*, at 2.

<sup>&</sup>lt;sup>75</sup> HJC-APPLE-016112.

**Apple's In-App Purchasing System:** Apple's In-App Purchasing System provides users with a safe and easy way to buy digital content on the App Store, provides developers with an efficient and simple way to receive payment from users, and enables a number of App Store features (for example, Family Sharing). Apple's In-App Purchasing System is also the means by which Apple collects its commission. In this regard, the In-App Purchasing System is akin to the cash register of a brick-and-mortar store.

- Apple's In-App Purchasing System helps Apple provide the security and privacy services that users have come to expect from Apple, including fraud detection, customer care, and developer support.
- Users have access to a centralized payment method that keeps their financial information secure because they do not have to register their credit card information with *every* individual app developer from whom they make a purchase.
- Using a universal payment system also ensures that users can access their purchased content across their Apple devices.

Apple's restriction on developers or apps using other payment systems is neither unusual nor anticompetitive. If developers could avoid using Apple's system to make in-app sales, Apple would not get paid. This Anti-Circumvention Rule is employed by a number of platforms (including, for example, Roku and eBay).

# **App Store Search Algorithm**<sup>76</sup>

Apple's App Store search algorithm fairly connects users to apps available in the App Store.

- Search results are based on dozens of characteristics (including downloads, text relevance, and user behavior).<sup>77</sup>
- Apple has consistently worked to prevent fraud and manipulation of its App Store search results while also improving search results for users and developers alike.<sup>78</sup>
- Apple does not intentionally favor its services through its App Store search algorithm.

As evidenced by the below chart, the majority of search queries (60% to 70%) are "navigational" rather than "functional"—meaning the user query is for a *specific app* (such as "Spotify," "Netflix," or "Google Map") rather than a *type of app* (such as "music streaming," "movies," or "navigation").

• Thus, most users do not use the App Store search function like they would a traditional search engine. Most users know which app they are looking for when they input the search query into the App Store. For example, while there were 3,800 functional searches for "music streaming," there were 2.9 million navigational searches for "Spotify."

<sup>&</sup>lt;sup>76</sup> The information in this section is relevant to the Committee's request for information concerning "[t]he App Store algorithm that determines the search ranking of apps in the App Store, including but not limited to, discussions examining whether Apple should modify this algorithm in any way." Request B.1.b.

<sup>&</sup>lt;sup>77</sup> HJC-APPLE-007852.

<sup>&</sup>lt;sup>78</sup> See, e.g., HJC-APPLE-007667; HJC-APPLE-007769; HJC-APPLE-008095.

• Because many of Apple's apps are named after generic topics (such as Music, Maps, and Podcasts), those apps benefit from functional queries that have essentially become navigational.

Functional Query (# of Searches)	Navigational Query (# of Searches)		
"Music Streaming" (3.8K)	"Spotify" (2.9M)	"Pandora " (1.8M)	"Amazon Music" (434K)
"Movies" (100K)	"Netflix (3.6M)"	"Hulu" (1.9M)	"Prime Video" (338K)
"Ebooks" (12K)	"Kindle (290K)"	"Nook" (22K)	"Comixology" (12K)
"Navigation" (15K)	"Google Map" (1.1M)	"Waze" (1.2M)	"City Mapper"(33K)

Based on Search Queries 4 weeks prior to October 22, 2019

###