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“Antitrust Applied: Examining Competition in App Stores”

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Chairwoman Klobuchar, Ranking Member Lee, and distinguished Senators of the Committee: Thank you for inviting me here today to discuss the Google Play ecosystem and the benefits it provides to millions of American consumers and developers.

My name is Wilson White and I am a Senior Director on the Government Affairs & Public Policy team at Google. In this role, I serve as the global policy lead supporting the Android and Google Play teams. I have been in technology for nearly two decades, both as a software engineer and technology lawyer. The technology landscape has evolved immensely over this period, fueled in large part by the explosion of innovation in digital content and services.

At Google, we believe that everyone should have equal access to the benefits of mobile devices. Before Android launched in 2008, the mobile ecosystem was highly fragmented and closed. Vertically integrated platforms were the norm. Compared to today, devices were more expensive with fewer quality services. The freedom, openness, and accessibility that Android and Google Play provide has helped to revolutionize the mobile ecosystem, as well as mobile app development and distribution.

In my testimony today, I will describe (1) why we built Android and Google Play and how they work, (2) how Android’s open ecosystem has increased competition and

choice, (3) how Google Play helps developers and consumers, and (4) how we fund and sustain the continued evolution of Android and Google Play.

Why We Built Android and Google Play, And How They Work

Google experienced firsthand the challenges of app distribution in the early days of the modern mobile ecosystem. Developers often had to pay both device makers and mobile carriers for distribution. Both would commonly exclude third-party services that rivaled their own services. And because of technical fragmentation across the ecosystem, development costs were high. For example, we built around 300 slightly different versions of Google Maps for Symbian, a popular operating system which ran on many early mobile devices. These kinds of hurdles combined to make app development in that era slow, expensive, and risky for app developers. Such challenges caused poor user experiences, hampered app innovation and developer market entry, and slowed the growth of mobile. We introduced Android and Google Play to help solve these challenges.

There are a few key characteristics that define Android:

First, Android is a free and open source operating system, which we launched in 2008. It was a revolution and remains unique today. Anybody - even competitors - can use Android for free without any requirement to pre-load or download our apps, or use our services. Amazon, for instance, modifies the Android open source code to create its proprietary Fire OS, which is the heart of Amazon's device and digital content ecosystem. Similarly, thousands of companies use the Android operating system to build their technology and businesses. If you've exercised with a Peloton bike or used the in-flight entertainment system on a JetBlue plane, you've used products built using Android. Google charges these companies nothing for any of this.

Second, Android gives device makers and wireless carriers enormous flexibility. Companies that want to make Android-compatible devices can modify the software and compete on a differentiated user experience while maintaining basic compatibility standards. This flexibility means that a device maker can preinstall its own software, customize its user interface, and build a unique identity and brand while still running a fully compatible version of Android. The compatibility standards ensure that an app developer can build their app once, with the confidence that the app will run properly

on a wide range of devices from different manufacturers, including Android devices that do not have any Google apps or services. Compatibility standards help device makers by ensuring that there is a wide-ranging ecosystem of third-party software that will work on their devices. In addition, compatibility standards provide critical features that help ensure device security.

The availability of third-party software is important in making sure that a mobile device meets consumers' expectations. Consumers selecting between competing mobile devices need to understand which of their favorite apps will be available and work on those devices.

This is where app stores come in. App stores give consumers a place to find their favorite content for their mobile devices. Successful app stores build a trusted brand by providing a useful, interesting, and above all, safe place for consumers to learn about and engage with great content.

We built Google Play as our vision of an ideal Android app store. We aspire for Google Play to be the best destination to find the apps and digital content that bring an Android device to life. We provide a consumer experience, the online storefront that consumers come to in order to learn about and find the best apps and games, as well as a developer experience, the app development, distribution, commerce and performance analysis tools that help companies develop better apps and grow their businesses.

Through freedom, openness, and accessibility, today, Android and Google Play are the foundation for a thriving and competitive device and app ecosystem. Android runs on more than 2.5 billion devices around the world; Google Play has more than 2 billion 30-day active users; and millions of businesses use these services to reach consumers around the world. Our efforts are part of the reason why the broader mobile ecosystem is thriving: last year consumers downloaded 218 billion apps and venture capital investment in mobile tech grew 27% to \$73 billion.¹

How Android's Open Ecosystem has Increased Competition and Choice

¹ "State of Mobile 2021." App Annie, 2021, www.appannie.com/en/go/state-of-mobile-2021/.

Android's hallmark of openness and flexibility extends to the wide latitude device makers and carriers have in determining the character and features of their products. They are free to use Android without Google Play or any of Google's other services, and some preload Google Play as well as a competing app store. For example, many of Samsung's devices include the Samsung Galaxy Store with Google Play. In fact, most Android devices come with 2 or more app stores preinstalled.

This flexibility has proven enormously valuable to device makers, since it lets them focus on innovating in other areas, instead of devoting resources to building an operating system and nurturing an ecosystem of devices and services around that operating system.

Indeed, one of the things we are most proud of is how Android has enabled *others* in our industry to succeed. Android has been at the heart of important developments by a number of other companies. We launched the first Android phone in 2008. By 2018, there were 1300 brands of phones world-wide that used the Android operating system and over a million apps in Google Play.

Today, Android devices are pushing the limits of mobile device technology in exciting ways. Samsung and Motorola launched Android phones featuring the first foldable touch screens in the world. Similarly, Microsoft used Android in its folding Surface Duo tablet launched late last year. Because of Android, for consumers considering which mobile device to purchase, their choices are not limited to one, two, or even a handful of alternatives. More than 1,300 companies around the world make Android devices, and there are more than 24,000 different Android device models to choose from.

Some of these Android devices cost less than \$100, which has made computing accessible to communities that had not been well-served by technology platforms in the past. Android is the most popular mobile OS in the U.S. and the world for these lower-priced devices. Android has helped democratize access to the internet and all the benefits of smartphones, making it easy for consumers to access digital content.

How Google Play Helps Developers and Consumers

Google Play is Google's global online digital content store, where we work to connect consumers to outstanding digital experiences and empower developers to do their

best work - helping them succeed by investing in tools and resources that support their growth.

Developers

Through freedom, openness, and accessibility, Android and Google Play have created untold opportunities: millions of developers have built thriving businesses on Android and Google Play, increasing competition and accelerating mobile innovation. In fact, as of February 2020, developers had earned \$80 billion through Google Play. And in 2020, the Android app economy, including Google Play, helped create nearly 2 million American jobs — from software engineers and developers of mobile applications, to the marketing and human resources teams that support them.

For developers, our global reach and distribution puts their apps and games in front of billions of users globally — and we have invested in comprehensive tools, resources and infrastructure that help them build great apps, lower their development costs and grow their businesses. Take Florida-based Caribu for example. Founded in 2017 by Maxeme Tuchman and Alvaro Sabido, Caribu is an [app](#) that is re-defining the way that kids and families connect through interactive virtual playdates that integrate games, coloring, and books into video-chats. Through Google Play, Caribu has now helped hundreds of thousands of families enjoy virtual playdates across 200+ countries.

From helping developers write their first lines of code in Android Studio to sophisticated tools that help [reduce testing burden](#), run [beta tests](#), or [monitor their app at scale](#), to name a few, we are focused on enabling developers to better serve their users. Our latest sentiment surveys of cross-platform developers show that this investment is working, as developer satisfaction with Google Play has grown each year.

Our developer education efforts share best practices to build a successful app or game business and keep developers updated on changes in our tools. The [Google Play Academy for App Success](#) is a free e-learning platform for developers, business people, and marketers of Google Play apps and games. The courses are completely free of charge.

Ultimately these tools have made app development more accessible and easier, and they allow developers to focus on innovating - reducing crash rates by 70% and

reducing app sizes by up to 65% (leading to more downloads and fewer uninstalls). In 2018 for example, our security tools helped 30,000 developers improve the security of over 75,000 apps.

We have accomplished this while giving developers choice and flexibility in app development and functionality. For example:

- There are alternatives to Google Play. Developers can distribute their app via many other Android app stores, directly to OEMs, or through direct downloads on their websites. And developers are free to contract directly with device makers or carriers to preload their apps on Android devices.
- Google Play allows developers to communicate directly with their users. Developers are free to use email marketing and other channels outside the app to provide promotional offers to their users. Google Play does not charge a subscription fee when a developer acquires a user outside of Google Play.
- Google Play provides developers with flexibility across platforms. We do not require app experiences, features, in-app purchases, or price parity, etc., across platforms. It is up to developers to decide how to manage their apps, and we support that flexibility. For example, a developer may decide (and would be free) to offer their digital content at a lower price on their website versus on Google Play. Likewise, developers decide whether or not to sell in-app purchases in apps distributed on Google Play. For example, if an app developer sells a subscription service outside of Google Play, users can still sign into their app and access the service, and Google Play will not charge a service fee.

Consumers

We have built Google Play with consumers in mind, helping them easily discover apps and games they will enjoy while also ensuring they have the protection and tools necessary to have a safe, secure, convenient and personalized experience.

- Play has built-in features to keep your device secure. Google Play Protect, our security solution, scans over 100 billion apps--even those not downloaded from Google Play--each day to make sure these apps are not behaving in harmful ways. In 2019, Google Play Protect also stopped 1.9 billion malware installs from non-Play sources.

- Play has features and options to help families ensure a safe online environment for children. Family Link parental controls empower parents to set appropriate ground rules and limits for their children’s digital activity. For example, parents can require that they approve any purchases their children want to make.
- Play’s billing system gives consumers a convenient, safe way to make purchases of digital content. Google Play makes it easy for users to choose the payment option most convenient for them. It offers gift cards to consumers in 875k+ retail locations, 177 direct carrier billing integrations in 66 markets, credit card integration in 150 markets, and payment service providers such as PayPal and locally preferred e-wallets across many more markets. To prevent any accidental purchases, our billing system, through a consistent purchase cart and user experience, ensures consumers will see the price and terms of any recurring payments prominently, and receive an email receipt after each payment. Consumers are also able to require authentication (for example, a password) anytime an item is purchased. And if something does go wrong, consumers can request a refund from Google. Consumers can see and manage all their subscriptions in one place on Google Play and, if they choose, set budgets to warn them when they are reaching their monthly spending limit.
- Play provides support to help developers make their apps more accessible. According to [The World Bank](#), 15% of the world's population has some type of disability. People with disabilities depend on apps and services that support accessibility to communicate, learn, and work. Google provides support to developers in making their apps more accessible through best practices, guidelines and testing tools so that more consumers can take advantage of more apps.

How We Fund and Sustain the Continued Evolution of Android and Google Play

Our business succeeds only when our developer partners succeed and consumers view us as a trusted and enjoyable destination for digital content. A vast majority of the games and apps on our platform are free -- over 90% of apps on Google Play are free to consumers. For the developers who decide to charge for some of their digital content, most of them use a “freemium” model, where the initial download is free so consumers can test out the app at no cost, but can then buy additional content if they so choose. We do not charge for the range of services Google Play provides unless it results in a sale of digital content for a developer, and even then only for a sale made in the app itself. This model supports entry and innovation and allows developers small

and large to instantly reach a global consumer audience and choose the business strategy that best fits their needs.

When our standard fee does apply, it covers everything from essential security updates, managing app installs and updates, and a vast array of developer tools for building and maintaining a global marketplace. Beyond our investments in the ecosystem, Google incurs other costs, such as payments to partners like mobile carriers. Similarly, the investment we make in the platform itself is substantial and it is not easy to sustain. We employ thousands of people dedicated to Android and Google Play, including engineers, designers, trust and safety reviewers, developer relations, and other roles.

This fee also reflects the substantial value of our distribution services and is competitive with industry practices that have existed long before Google Play was built: PC stores such as Steam, GOG, and the Microsoft Store; console stores such as the Playstation, Xbox Games, and Nintendo eSHOP; physical stores such as Gamestop, Amazon, Best Buy, and Walmart; and app stores such as Apple, Samsung, Microsoft, and Amazon all charge similar fees.² This list does not include a number of distributors who charge a much higher fee.

That said, we are always trying to support innovation and development on Android devices where we can. This is why Google Play announced a fee reduction just a few weeks ago. Starting on July 1, we are reducing the service fee Google Play receives when a developer sells digital goods or services to 15% for the first \$1 million of revenue every Play developer earns each year regardless of size. With this change, 99% of developers that sell digital goods and services with Play will see a 50% reduction in fees. These are funds that developers can decide to use as they see fit—for example, to scale up at a critical phase of their growth by hiring more engineers, adding to their marketing staff, increasing their server capacity, and more. We believe this is a fair approach that keeps our fees competitive with the industry, and aligns with Google’s broader mission to help all developers succeed.

We believe the value proposition of Google Play is a strong one. But in the Android ecosystem if a developer feels that the value proposition of Google Play is not

² “Apple’s App Store and Other Digital Marketplaces: A Comparison of Commission Rates.” Analysis Group, July 22, 2020, https://www.analysisgroup.com/globalassets/insights/publishing/apples_app_store_and_other_digital_marketplaces_a_comparison_of_commission_rates.pdf.

adequate, they can distribute their apps in a number of other ways, including directly to consumers via their website, through their own app store, through other third party app stores, or through pre-loading arrangements with device manufacturers and/or mobile carriers.

Conclusion

We are committed to providing a safe and engaging experience for developers and consumers around the world who upload, download, and stream amazing apps, games, books, and movies every day. Creating a global platform with access for all and providing useful tools for developers has been our goal since we launched the very first Android device. We are proud that our bet on openness has resulted in success for consumers, device makers, mobile carriers, developers and a wide range of other businesses. It has also lowered costs and created more choice for consumers, all while creating nearly 2 million jobs here at home. As consumer demand for digital content and Android devices evolve, so will Google Play, and we look forward to bringing developers and consumers the very best digital discovery and store experience well into the future.

We appreciate the Committee's interest in these issues and the opportunity to contribute our views.