# ACT | The App Association

# Competition in Digital Technology Markets: Examining Self-Preferencing by Digital Platforms

*Testimony of*

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*Before the*

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Subcommittee on Antitrust, Competition Policy and
Consumer Rights

# I. Introduction

We thank the Senate Judiciary Subcommittee on Antitrust, Competition Policy and Consumer Rights for holding this hearing on the effect large, technology-driven platform companies have on competition. This hearing provides an important venue for the debate around how certain public policy concepts, including competition law, apply in a variety of markets characterized by the presence of large companies with global reach. ACT | The App Association is the voice of small business tech entrepreneurs, and we appreciate the Subcommittee welcoming the views of our members on how best to safeguard innovative market activity and job creation in tech-driven industries.

The App Association is a trade group representing about 5,000 small to mid-sized software and connected device companies across the globe. In the United States, our member companies are part of a $1.7 trillion industry, supporting about 5.9 million jobs. If these seem like surprisingly high figures, it could be because there is a tendency to look only at the consumer-facing or most-downloaded apps in the Apple App Store or Google Play when referencing the market for apps. But these are a small fraction of the app economy. Most of our member companies make white label software—that is, they build software and provide services for other companies. If a member company makes an app for another firm, it's usually the client's logo that goes on the app. And the app itself may not be consumer-facing at all, it may be a management program for internal use by a brewery, hospital, or manufacturer. What virtually all of them have in common, though, is that they leverage software platforms to reach their clients and customers. We urge the Subcommittee to look beyond sales to consumers when thinking about the App Association's members and the app economy in general.

We actively facilitate engagement between app developers, investors, and platforms in fora across the country.[1] For example, just last month, we concluded a series of 12 events across the nation (Developed | The App Economy Tour) highlighting local success stories from the app ecosystem. Our destinations included Minneapolis, Charleston, and St. Louis. Our panelists ranged from founders of fledgling small mobile software companies to venture capitalists to legal experts discussing subjects like federal and state privacy legislation, access to funding, and workforce development.[2] The constituents of members of this Subcommittee drive competition in the app ecosystem, and with these events, we showcased the innovation happening everywhere in the United States. We urge this Subcommittee to carefully consider how any potential changes to relevant federal law would affect your constituents. As the App Economy Tour highlighted, competition is alive, well, and thriving in the states you represent. The tour itself, which featured small startups and innovators taking on major challenges, is a testament to how software platforms have helped democratize entrepreneurship, seeding thriving app ecosystems in every state across the nation.

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[1] *See, e.g.*, ACT | The App Association, "Queen City Mobile Summit highlights Cincinnati as mobile tech hub," (Feb. 23, 2016), *available at* https://actonline.org/2016/02/23/queen-city-mobile-summit-highlights-cincinnati-as-mobile-tech-hub/.

[2] *See* ACT | THE APP ASSOCIATION, DEVELOPED | THE APP ECONOMY TOUR, https://actonline.org/developed/ (last visited Mar. 9, 2020).

In this hearing, the Subcommittee is examining the characteristics of competition between larger companies that act as both platforms and competitors in adjacent markets. Our testimony focuses not on social media or retail platforms, but on software platforms. Software platforms are the app stores—which in some cases come with operating systems and smart devices—on which developers sell their apps and from which our member companies buy developer services. It is through this root system that the app economy has permeated and redefined the economy as a whole, rendering notions of a separate "tech industry" outdated. Software platforms and developers— leveraging ubiquitous connectivity and access to cloud computing—are superimposing a tech-driven element to virtually all industries across the economy from agriculture to healthcare. As a result, competition has new and dynamic characteristics not just in tech, but everywhere. App Association member companies are at the center of these market changes, and their continued ability to create jobs in your states depends on robust enforcement of antitrust laws where appropriate and allowing competition to take place where intervention is inappropriate.

We urge the Subcommittee to take a few important considerations into account in this inquiry. First, software platforms have reduced barriers to entry for tech entrepreneurs and enhanced choices for consumers. Second, software platforms help innovators enter and even create new markets. Third, the antitrust concerns that focus on software platforms are often overstated and should be weighed against other policy considerations. Fourth, software platforms are not perfect. Developers want more transparency and continued improvements to security and safety. Our member companies want platforms to compete for their business, and they want to ensure competition is robust.

## II. Platforms Have Reduced Costs for Developers and Enhanced Competition and Choices for Consumers

Consumers and developers experienced significant changes since the introduction of various mobile software platforms. 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.

Choices proliferated because entry into the software market is much easier now than it was before platforms.[3] Before platforms, the nature of the marketplace forced software developers to take on tasks that were well beyond their core competencies—from marketing to protecting their intellectual property and negotiating with a variety of different types of companies to distribute their products. The transaction costs of taking

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[3] Daniel Ershov, *The Effects of Consumer Search Costs on Entry and Quality in the Mobile App Market*, TOULOUSE SCHOOL OF ECON. (Apr. 18, 2018), *available at* https://www.cemfi.es/ftp/pdf/papers/wshop/DErshov_MobileAppCompetition_Jan2018.pdf.

on all these extra tasks were significant, and platforms have eliminated many of them. The resulting environment is one in which small companies like App Association members can retain their size, stay where they were founded, and thrive. Our member companies experience a wide variety of growth trajectories, meaning growth to the size of companies like Facebook or Uber is not the only measure of success. To fully appreciate the depth of the app economy and its potential, one must look well beyond the "Top 10" apps in the major app stores or the eye-catching headlines covering the initial public offerings of unicorn companies.

Before the ubiquity of mobile platforms, the software ecosystem ran on personal computers. This forced early app companies, often with teams of just one or two developers, to wear many hats to develop, market, and manage their products. App companies were not only required to write code for their products, but they were also responsible for: 1) managing their public websites, 2) hiring third parties to handle financial transactions, 3) employing legal teams to protect their intellectual property, and 4) contracting with distributors to promote and secure consumer trust in their product. App developers, trained in software coding and project management, were not well-equipped to carry out these tasks, and the additional steps cost them valuable time and money, with little tangible benefit.

Without platforms, developers had to take all of these additional steps, creating friction at each point, which meant that the only software titles that were available to the public were those that made the complicated journey from development to publishers to retailers like CompUSA or Best Buy. In 2003, CompUSA rolled out an early concept of a software platform consisting of a kiosk that burned made-to-order CDs containing software applications. With this system, the retailer could offer more software programs than it could fit on its shelves (which is how software was sold at that time), providing 1,200 titles from 200 different publishers.[4] Now, there are more than 317,673 companies active in the mobile app market in the United States[5] and more than 2 million apps available on the major app platforms. The kiosks are now in our smartphones—there are more than 5.28 billion mobile broadband subscriptions worldwide as of 2018[6]—which are attached to smartphones in the pockets of over 80 percent of Americans,[7] saving them the trip to Best Buy to purchase the box software.[8]

In the internet economy, immediate consumer trust is almost impossible without a substantial online reputation, and not attaining that trust spells death for any app company. However, what does "trust" mean? In this context, trust refers to an

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[4] Brian Osborne, "CompUSA offers software vending machines," GEEK.COM (Dec. 12, 2003), *available at* https://www.geek.com/news/compusa-offers-software-vending-machines-551706/.
[5] DELOITTE, THE APP ECONOMY IN THE UNITED STATES (Aug. 17, 2018), available at http://actonline.org/wp-content/uploads/Deloitte-The-App-Economy-in-US.pdf.
[6] Mike Murphy, "Cellphones now outnumber the world's population, QUARTZ (Apr. 29, 2019), available at https://qz.com/1608103/there-are-now-more-cellphones-than-people-in-the-world/.
[7] Adam Lella, U.S. Smartphone Penetration Surpassed 80 Percent in 2016, COMSCORE (Feb. 3, 2017) Available at: http://bit.ly/2pT04qo.
[8] *See,* Ashley Durkin-Rixey, "Out of the Box: How Platforms Changed Software Distribution," (Sept. 28, 2018), *available at* https://actonline.org/2018/09/28/out-of-the-box-how-platforms-changed-software-distribution/.

established relationship between the app company and customer where the customer has the confidence to install the app and disclose otherwise personal information to an app company. Prior to platforms, software developers often handed over their products to companies with a significant reputation to break through the trust barrier.

At first, developers were reluctant to join platforms, worried that the model might not accommodate their ability to "launch fast and iterate"[9] their apps. But successful platforms changed the app ecosystem by providing app developers with ubiquitous access to a broader swath of consumers. Platforms provide a centralized framework for app developers to engage and secure visibility with the 3.4 billion app users[10] worldwide. With lower costs and barriers to entry, both fledgling and established app developers can find success. For example, educational app company L'Escapadou secured 1.3 million downloads and earned more than $1.5 million from app sales between 2010 and 2014,[11] a success attributed to the centralized nature of platforms. Founder Pierre Abel specialized the language, content, and pricing of each of his apps based on consumer and market needs and marketed them on different platforms to reach a variety of consumers around the world.

# III. There's a Platform for That

As successful as the past 12 years have been for the app economy, the next decade could be even better. In just the third quarter of 2019, the two major app stores generated $21.9 billion in revenue—a robust 23 percent year-over-year increase from the third quarter of 2018.[12] This growth suggests the developer-platform model is still succeeding. Moreover, app economy growth is likely to endure because developers are continuing to create new products, services, and markets that did not exist prior to platforms. Perhaps the most notable of these is the market for ridesharing. Connecting a driver—using his or her own car—to a potential passenger in real-time for an on-demand ride to a destination selected by the passenger was impossible before developers could use the GPS capabilities and data connections of smartphones. Ridesharing is an important example of how app developer ingenuity meets the capabilities, built-in trust, and developer services of platforms to create new options for consumers.

Just as ridesharing fundamentally changed how we get around, developers and platforms also revolutionized how we access healthcare. A current shortage of about 30,000 physicians in the United States—projected to increase to up to 90,000 in the

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[9] To launch fast and iterate is often used to describe a software developer's business plan, where software developers like to launch products as soon as they are finished and like to update newer iterations of their product actively. Paul Graham, "Apple's Mistake," PAULGRAHAM.COM (Nov. 2009), *available at* http://www.paulgraham.com/apple.html.

[10] Simon Kemp, "The global state of the internet in April 2017," TNW (Apr. 11, 2017), *available at* https://thenextweb.com/contributors/2017/04/11/current-global-state-internet/.

[11] Steve Young, "Making $1.5 Million with Educational Apps with Pierre Abel," APP MASTERS (Apr. 30, 2015), *available at* http://bit.ly/2hgDzZH.

[12] Craig Chapple, "Global App Revenue Grew 23% Year-Over-Year Last Quarter to $21.9 Billion," Sensor Tower Blog (Oct. 23, 2019), *available at* https://sensortower.com/blog/app-revenue-and-downloads-q3-2019.

next six years[13]—contributed to the need for caregivers and patients to find new ways of communicating. Compounding the caregiver shortage, 133 million Americans currently live with chronic conditions—most of them residing in rural areas with long drives to their nearest provider.[14] Devices, sensors, and software are now capable of gathering and analyzing physiological data like movement, heart rate, or blood oximetry so that physicians can better monitor their patients at home and address potential problems before they occur or worsen.[15] Studies show that preventive care regimes that use connected health tools are especially useful for patients with chronic conditions like diabetes and heart failure, which tend to affect underserved and rural communities especially.[16] But how do these capabilities reach patients and consumers, specifically those who need them most? Most Americans already interact with platforms, through a variety of devices. We know that smartphone adoption rates are increasing among underserved populations in the United States and that for many, their handheld device is their only means of accessing the internet.[17] Here again, developers are leveraging the ubiquity and trusted framework of platforms to produce healthcare innovations that address a variety of health conditions. Moreover, in this case, the platform-developer dynamic helps caregivers reach patients in rural and underserved areas.

One of the central markets at issue is the market for developer services, where a developer pays a platform for assorted services including distribution, marketing, etc. This market also experiences vigorous competition. There is a tendency to include only two platform companies, Apple and Google, in this category of competitors. But for developers, the market is much wider. A game developer can choose platforms like Epic or Steam, and enterprise developers can look to hundreds of proprietary, custom platforms or could create their own. For example, companies like App47 create app platforms for everything from "bulldozers to ultrasound devices."[18] Moreover, for developers looking to reach a general audience, using the web is an alternative, especially for companies that are looking for different kinds of distribution or search services than those available on platforms. Additionally, software developers could choose to advertise on Facebook or distribute their products through Amazon, or one of

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[13] *See* Connected Health Initiative, "Testimony of Morgan Reed, Executive Director, The Connected Health Initiative, Before the U.S. Senate Committee on Health, Education, Labor, and Pensions (HELP) Subcommittee on Primary Health and Retirement Security," (Sept. 25, 2018), *available at* https://actonline.org/wp-content/uploads/CHI-Testimony-Health-Care-in-Rural-America.pdf.
[14] *See Id.*
[15] *Id.*
[16] *See, e.g.,* Clinical Outcomes, Care innovations, at 2, available at http://www.connectwithcare.org/wp-content/uploads/2017/06/2016_Outcomes_Clinical-1.pdf (showing the results of a study by Care innovations and University of Mississippi Medical Center, indicating that the first 100 patients with diabetes enrolled in a program with a remote monitoring component saved the state $336,184 in Medicaid dollars over six months); Testimony of Michael P. Adcock, Exec. Dir., University of Mississippi Med. Ctr., Hearing on "Telemedicine in the VA: Leveraging Technology to Increase Access, Improve Health Outcomes & Lower Costs," (May 4, 2017), available at https://www.appropriations.senate.gov/imo/media/doc/050417-Adcock-Testimony.pdf ("The Mississippi Division of Medicaid extrapolated this data to show potential savings of over $180 million per year if 20 percent of the diabetics on Mississippi Medicaid participated in this program").
[17] Charkarra Anderson-Lewis, MPH, PhD, et al, "mHealth Technology Use and Implications in Historically Underserved and Minority Populations in the United States: Systematic Literature Review," (Jun. 18, 2018), *available at* https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6028762/.
[18] APP47, *available at* https://app47.com/.

the giant Chinese platforms. It is worth noting, however, that there are some important distinctions between software platforms—like the App Store or Google Play which provide a marketplace for software apps—and social media platforms or "aggregators" that connect people with information and run on data.[19] Aggregators like Facebook and Twitter, for example, connect people with information and other people (and generate valuable data in the process), while the Google Play store and the App Store provide a marketplace for consumers and app developers to transact directly. These differences illustrate the diversity in the market for distribution methods, as developers may prefer one model over another.

Perhaps most importantly, the universe of platforms is continuing to evolve and expand as diverse kinds of hardware connect to the network. New platforms are cropping up for wearables made by companies like Garmin. Connected home devices and cars drive cross-platform interoperability so that Alexa can communicate with your Samsung appliances or your Ford Fusion—further weighing against conceptions of platform markets where a single player wields market power. These characteristics tend to show that developer services will continue to improve and evolve along with demand. Federal intervention may be necessary where market power exists and raises prices undisciplined by competition or maintain a monopoly position in order to reduce quality or decrease output. But when those factors are not present and competition drives the market, as it does in developer services, intervention is unlikely to help and may harm competition or consumer welfare.

# IV. Antitrust Concerns Specific to Software Platforms are Often Exaggerated and Should be Weighed Against Other Policy Considerations

Platforms play an important role not just in tech-driven markets but also across a variety of economic sectors. They exist to bundle together a set of services for sellers and connect those sellers with specific categories of buyers, thus "disintermediating" the market. Under a typical antitrust analysis, self-preferencing by platforms is in most cases procompetitive because it is an example of vertical integration.[20] Where vertical integration or self-preferencing lead to greater efficiency, better quality, or lower costs for consumers, there is no antitrust issue, and there is also no reason to consider extending antitrust law to bar such pro-consumer activity. For example, requiring Apple or Google to uninstall software supporting the cameras on smartphones would probably not be a pro-consumer development—the vertical integration of that feature into the platform is on balance a good thing for smartphone users. But make no mistake, vertical integration does not get a free pass. Antitrust authorities should analyze instances of self-preferencing and vertical integration generally and they have brought enforcement

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[19] *See, e.g.,* Ben Thompson, "Tech's Two Philosophies," STRATECHERY (May 9, 2018).
[20] *See* Maurits Dolmans and Tobias Pesch, "Should We Disrupt Antitrust Law?" Cleary Gottlieb Steen & Hamilton LLP (Jul. 18, 2019), *available at* https://www.clearygottlieb.com/-/media/files/should-we-disrupt-antitrust-law-pdf.pdf.

actions against companies that apply the antitrust laws on the books, establishing important precedent that bars harmful vertical integration. Nonetheless, with smartphones serving as music players, cameras, and multimodal communications devices, a skeptical view of the integration of those features into the devices is incongruous with the way consumers experience them. Moreover, we can expect competition to discipline examples where self-preferencing is bad for consumers because they can leave the platform. Just like other categories of market activity, an antitrust inquiry into self-preferencing is generally only appropriate where the company at issue has market power (in other words, a lack of adequate competition) and where it is using that market power to harm competition and consumers. Unfortunately, the European Union (EU) has proposed flipping the burden to platforms to show that self-preferencing has "no long-run exclusionary effects" and "either the absence of adverse effects on competition or an overriding efficiency rationale."[21] We would discourage such a proposal in the United States because it would chill market activity that is likely to benefit consumers.[22] Although it would appear to help some of our member companies in the short run to target self-preferencing, the long-term effects of making procompetitive activity more difficult or illegal would tend to harm the economy and ultimately our member companies as well.

Some competitors are asking for an increase in the scope of antitrust law, but they tend to overstate the problems they identify. For example, advocates for legislative intervention point to the cost of the services software platforms provide to developers as evidence that Congress should expand antitrust law.[23] To show that paying for developer services is unfair, they compare the cost of software distribution to the cost of payment processing.[24] This is kind of like comparing the cost of a set of tires to the cost of a car. Yes, the tires are a part of the car, but nobody thinks a car is only a set of tires or that tires should always cost the same as a car. Similarly, payment processing is just one element of the array of services you get on a software platform, which include: immediate availability through hundreds of millions of people's devices; payment processing; marketing through the app store; privacy features embedded in the platform; assistance with intellectual property protection; and security features built into the platform. The stated problem, therefore, seems to be that software platform developer services are too expensive. But again, the problem is overstated because this cost is being compared to the cost of a much less substantial service. Therefore, it does not appear to be a compelling reason to expand antitrust law or create a regulatory regime with a purpose of reducing the price of developer services.

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[21] HEIKE SCHWEITZER, JACQUES CRÉMER AND YVES-ALEXANDRE DE MONTJOYE, COMPETITION POLICY FOR THE DIGITAL ERA: FINAL REPORT 7 (2019) (the "EU Report"), *available at* https://ec.europa.eu/competition/publications/reports/kd0419345enn.pdf.

[22] It is unclear how the EU would apply this concept and researchers point to a lack of direct caselaw on the theory of harm as it was raised in a case against Google. *See* Beata Mäihäniemi (LL.D.), "Lessons from the Recent Commission's Decision on Google. To Favour Oneself or Not, That is the Question," Working Paper, The Legal Tech Lab, Univ. of Helsinki 13 ("This new theory of harm . . . is however, difficult to apply . . . in practice, as one cannot find any direct case law on the issue in question.").

[23] *Online Platforms and Market Power, Part 5: Competitors in the Digital Economy: Hearing Before the H. Judiciary Comm., Subcomm. on Antitrust, Commercial, and Admin. L.*, 116th Cong. 7 (2020) (statement of David Heinemeier Hansson, CTO & Cofounder, Basecamp) ("Most mobsters would not be so brazen as to ask for such an exorbitant cut . . ..") (Basecamp Testimony).

[24] *Id.* at 7.

The other evidence advocates offer to show harm to competition is that making software available on the open internet is free (it is not),[25] whereas software distribution on a platform generally costs money.[26] As alluded to above, selling software on the open internet requires the seller to take on several tasks the software platform bundles together (including marketing, intellectual property policing, privacy controls, security features, and payment processing). And even taking it at face value, the premise has the inconvenient characteristic of proving the opposite point—that is, selling software on the open internet can be a substitute for selling software on a platform. Not only that, detractors of software platforms say they have no choice but to submit to software platform demands and then in the next paragraph, admit that they need not submit to software platform demands because they sell their software on the open internet instead.[27] It is hard to imagine that this internal inconsistency goes unnoticed, and observers likely cannot help but discern from this that software sellers have options. Indeed, other developers have made the transition off platforms without claims of anticompetitive conduct.[28] Substitutes, even when they are not identical, are common in market economies and tend to signal healthy competition.

The other conclusion we can draw from these arguments is that policymakers should be wary of opportunistic behavior by well-resourced competitors disguised as antitrust concern. Those who are most vocal often imply they are speaking for the app economy as a whole,[29] but in reality, they tend to be larger companies seeking to use antitrust law or other policy levers to undermine competitors. Right now, the largest software platforms charge the same (as a percentage of revenue) for developer services regardless of the company's size or political clout. Smaller developers have the advantage in this arrangement because they do not have the leverage to negotiate better terms on their own, as larger companies do. Overtures to have Congress involve itself in developer-platform relations, therefore, may benefit the largest software companies on the platforms but may actually make small developers like App Association members worse off. If large software companies are able to convince Congress to require software platforms to give them a better deal, App Association members and their clients and customers are forced to subsidize the resulting discount for these larger companies. Adding insult to injury, many of our member companies

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[25] If a software company opts to reach its customers through the open internet instead of a software platform, the company still needs to invest in overhead costs the platform would otherwise handle, including marketing, intellectual property management, privacy and security features, and payment processing.

[26] *Id.*

[27] *See, e.g.,* Basecamp Testimony at 7.

[28] *See*, *e.g.*, Nick Statt, "Fortnite for Android will ditch Google Play Store for Epic's website," THE VERGE (Aug. 3, 2018), *available at* https://www.theverge.com/2018/8/3/17645982/epic-games-fortnite-android-version-bypass-google-play-store ("CEO Tim Sweeney says the primary motivation here is twofold. Epic wants to maintain its direct relationship with consumers."); Chris Welch, "Netflix stops offering in-app subscriptions for new and returning customers on iOS," THE VERGE (Dec. 28, 2018), *available at* https://www.theverge.com/2018/12/28/18159373/netflix-in-app-subscriptions-iphone-ipad-ios-apple.

[29] Daniel Ek, Founder and CEO, Spotify, "Consumers and Innovators Win on a Level Playing Field," Spotify (Mar. 13, 2019), *available at* https://newsroom.spotify.com/2019-03-13/consumers-and-innovators-win-on-a-level-playing-field/ ("So, let me be clear that this is not a Spotify-versus-Apple issue. We want the same fair rules for companies young and old, large and small.").

compete with these larger firms, so the advantage handed to the larger companies could directly disadvantage App Association members.

Even as the antitrust concerns expressed in this area are often overstated, a competition analysis of these dynamics is not always the final say, and antitrust concerns may conflict with countervailing policy priorities. For example, policymakers raised alarms over measures software platforms use to protect consumer privacy. In one instance, a software platform faced antitrust concerns after a decision to curtail apps' ability to track a consumer's location even when the app is not running unless the consumer clearly consents. Advocates exert a steady stream of pressure on software companies and platforms to improve their privacy practices, especially with respect to location data.[30] They often point to the opaque or even misleading manner in which companies collect such sensitive personal information. As one advocate argues, "[p]rivacy is often framed as a matter of personal responsibility, but a huge portion of the data in circulation isn't shared willingly—it's collected surreptitiously and with impunity."[31] Privacy controls at the platform level help ameliorate this perceived problem by making it easier to set collection rules for all or specific apps.

Policymakers at all levels have made it clear that companies should embed privacy into the design of their products and services.[32] Accordingly, the purpose of a privacy prompt from the platform's operating system should not be to confuse a consumer into selecting an option that gives away more data than they intended. It follows that requiring platforms to make it easier to provide location data (even when an app is not running) than it is to protect that data runs headlong into the policy imperative of privacy by design. Looking at the issue solely from a competition lens is, therefore, an incomplete view. Moreover, the more privacy protective approach of one software platform differentiates it competitively from other platforms that arguably make it easier for developers to collect sensitive data. In resolving these policy tangles, the focus should be on what works best for consumers. Antitrust law by itself rightfully addresses consumer welfare—it does not seek to benefit competitors. So, if a platform has an offering that a consumer prefers over the offering of an independent developer, policymakers should ask whether the complaints of powerful competitors necessitate legislating away that choice.

App Association members are selective about the markets they enter, but they compete aggressively. And the presence of a powerful and well-resourced competitor is not always enough to totally discourage entry. For example, our Minneapolis-based member company Vemos provides a dashboard for nightlife and event venues to manage the growth of their businesses.[33] The presence of incumbents like Eventbrite

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[30] *See, e.g.*, EPIC.ORG, LOCATIONAL PRIVACY, *available at* https://epic.org/privacy/location/.
[31] "EFF Report Exposes, Explains Big Tech's Personal Data Trackers Lurking on Social Media, Websites, and Apps," Press Release (Dec. 2, 2019), *available at* https://www.eff.org/press/releases/eff-report-exposes-explains-big-techs-personal-data-trackers-lurk-social-media (quoting Bennett Cyphers, EFF staff technologist and report author).
[32] *See, e.g.,* "FTC Issues Final Commission Report on Protecting Consumer Privacy," Press Release, FED. TRADE COMM'N (Mar. 26, 2012), *available at* https://www.ftc.gov/news-events/press-releases/2012/03/ftc-issues-final-commission-report-protecting-consumer-privacy.
[33] VEMOS, https://www.vemos.io/ (last visited Mar. 9, 2020).

was not a deterrent because Vemos differentiates itself from incumbents by compiling data from and interoperating with a variety of event management tools and analyzing the data to provide insights into how clients can improve their events and businesses. Having a lot of resources is an undeniable advantage as a competitor (whether it is a platform or not), but our member companies exist because they fill a niche with a differentiated product, they can compete on price, or they can simply outmaneuver the larger competitors. The continued existence and success of camera apps on the two largest app stores are an example of companies competing directly with a platform. Camera+ was an early app that exceeded the software capabilities of Apple's early camera app, pressing Apple to produce better camera software. Now, Camera+, ProCamera, Halide, and several other camera apps are all popular downloads and offer iPhone users a variety of options aside from the native app.[34] But that is not to say a company with a competing offering should never be purchased by a larger company. There are three main definitions of success for a small company: passing the company along to the next generation; being purchased by a larger company; or (much less often) an initial public offering (IPO). Being purchased is often the best of these three options for the business owner and consumers—after all, IPOs are expensive and fraught with risk.[35] A purchase that helps produce better products or services for consumers is both a natural and beneficial end for some companies and healthy from a competition perspective.

# V. Platforms Aren't Perfect

Although developers can choose from multiple platforms, there is no such thing as a perfect platform. Our member companies pay a fee to platforms for developer services, and they expect those services to meet their needs. Just as online companies must clearly communicate their data practices to consumers, so must platforms clearly define the requirements and details of their terms of service to developers. For example, when platforms change their developer guidelines, they must communicate clearly and ensure developers understand what the changes mean for them and their customer relationships. Occasionally, we hear from a member company that an ill-defined change significantly impacted their business. For example, a software platform recently put a member company that provides a call blocking app on notice for temporary removal unless it made changes to how it obtained permission for gathering incoming call data.[36] The platform did not clearly explain how its policies changed or why they would necessitate action on the app's part, but it was the first removal notice of its kind in the

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[34] *See* Tara Schatz, "10 best camera apps for iPhone that beat the iOS camera," MACPAW (Dec. 24, 2018, *updated* Feb. 13, 2019), *available at* https://macpaw.com/how-to/best-iphone-camera-apps.

[35] *See* Will Rinehart, "Welcome to the Kill Zone? A closer look at merger and start-up data suggests it's a cultivation zone," THE BENCHMARK (Feb. 27, 2020), *available at* https://medium.com/cgo-benchmark/welcome-to-the-kill-zone-852339601fbb ("For startups, going public isn't a sure path to success. Companies typically sign away 4 to 7 percent of their gross proceeds to an investment bank to sell shares of the stock. They also tend to incur an additional $4.2 million in costs to go through the process of getting listed. On top of this, a company will have to fork over another $1 to $2 million for federal compliance every year. Most IPOs perform worse than the overall market.").

[36] Graham Dufault and Madeline Zick, "What's More Control with Fewer Options?" ACT | THE APP ASSOCIATION (May 21, 2019), *available at* https://actonline.org/2019/05/21/whats-more-control-with-fewer-options/.

app's nine years on the platform. Ultimately, the platform did not remove the app, but the process for remaining on the store was opaque and difficult enough to navigate that the company looked to us, their trade association, for help. Relevantly, this occurred amid a major update to California's privacy laws, so it may be an example of the unintended consequences of government intervention.

Especially for enterprise app developers, a software platform's safety and security are essential elements of developer services. Software platforms' security features improved markedly over the course of their existence. Whereas unlocking a device used to require a four-digit passcode, devices are now capable of biometric-based authentication, and software platforms make these authentication measures available to developers as well so that they can also benefit from these heightened security measures. But the game of cat-and-mouse between cybersecurity professionals and hackers will never end, and security must continue to evolve to meet and beat the threats. Although some platforms do not control device security, developers want the platform's security features to work seamlessly with any relevant hardware and that they account for all attack vectors. Software platforms should continue to improve their threat sharing and gathering capabilities to ensure they protect developers across the platform, regardless of where threats originate. Moreover, they should approve and deploy software updates with important security updates rapidly to protect consumers as well as developers and their clients and users. The same is true when it comes to privacy controls. App developers strongly desire platform-level privacy controls they can adapt for their products and services. The types and nature of these controls vary among platforms and this variation should result in continuously improving options that iterate with end user expectations and privacy risks.

Similarly, software platforms play a significant role in helping small developers enforce their intellectual property (IP) rights. Our member companies' IP helps eliminate the inherent disadvantages of being a small, innovative company by enabling them to protect the fruits of their ingenuity from larger firms that might want to take it. Unfortunately, some of our member companies fall victim to IP thieves that succeed in selling the pirated content or using it to steal ad revenue on platforms. Ad networks can and do help mitigate the pirated ad revenue problem,[37] but platforms must also vigorously police their app stores for stolen content. With vast online stores, it is difficult for a platform to verify legitimate requests to remove allegedly pirated content. But a single app developer should not need the help of a legal team or trade association to resolve the issue. In one instance, an App Association member company, Busy Bee Studios, approached us when it was unable to convince the platform to investigate an app that appeared to have been stolen from Busy Bee. With our assistance, the platform investigated the issue and found that the infringing app was in fact stolen content.[38] But the time and resources it took our member company—which only has a few employees—to resolve the issue were significant and could have gone toward the development of their next app. Since this issue arose, IP resolution processes improved

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[37] *See, e.g.,* Trustworthy Accountability Group, *available at* https://www.tagtoday.net/.
[38] *See* Alex Cooke, "Member Monday: How One Small Developer Fought a Rogue App," (Nov. 26, 2018), *available at* https://actonline.org/2018/11/26/member-monday-how-one-small-developer-fought-a-rogue-app/.

across the board, but the story is a reminder that they are important and in-demand developer services that platforms should improve in order to compete for developers.

# VI. Congress Can Help Maintain a Level Playing Field

Our members' ability to create jobs and develop innovative software depends on strong IP protections, a stable standards-setting system, and access to talent. In order to ensure the growth of the app economy, small, innovative companies must be able to pursue IP claims affordably and challenge claims that should not have been granted in the first place. For instance, we applaud the House of Representatives' recent passage of the Copyright Alternative in Small-Claims Enforcement (CASE) Act of 2019 (S. 1273), which would establish a voluntary small claims board at the Copyright Office, a less-expensive alternative for companies with important infringement claims but fewer resources. Similarly, when it comes to patents our members support the current process for *inter partes* review (IPR) because IPR proceedings cost on average in the low six-figure range versus up to $5 million for a typical patent in federal court. While the low six-figures is still out of reach financially for many small businesses, an IPR provides much-needed leverage to companies faced with the possibility of litigation in federal court.

Another IP-related issue important to our members is their ability to rely on technical standards like WiFi, 4G, and 5G. In the United States, the private sector leads standards setting, with the participation of government actors. For example, IEEE recently finalized the WiFi 6 (or IEEE 802.11ax) standard.[39] Like many technical standards, WiFi 6 consists of technologies, many of which are patented, volunteered by companies who seek to make their IP "essential" to the standard. In other words, in order to manufacture a device that interconnects to WiFi 6, the manufacturer must obtain a patent license from each of the companies with patents essential to WiFi 6. As a corollary, the companies that own these standard-essential patents (SEPs) must agree to license their SEPs to any willing licensee on terms that are fair, reasonable, and non-discriminatory (FRAND).[40] When SEP owners go back on these promises and instead refuse to license to manufacturers, and then seek exorbitant license fees from downstream companies, antitrust concerns are raised. This is an area where antitrust law certainly plays a role and should be appropriately enforced by regulators. The Federal Trade Commission (FTC) recently brought such an antitrust complaint against Qualcomm, and the App Association filed an amicus brief supporting the FTC's claims.[41] The case is on appeal with the 9th Circuit. If Qualcomm successfully overturns

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[39] Robert Saracco, "WiFi 6 is Rolling," IEEE BLOG (Nov. 8, 2019), *available at* https://cmte.ieee.org/futuredirections/2019/11/08/wifi-6-is-rolling/.

[40] DEPT. OF JUSTICE, NAT'L INSTITUTE FOR STANDARDS AND TECH., AND UNITED STATES PATENT AND TRADEMARK OFFC., POLICY STATEMENT ON REMEDIES FOR STANDARDS-ESSENTIAL PATENTS SUBJECT TO VOLUNTARY F/RAND COMMITMENTS (Dec. 19, 2019), *available at* https://www.justice.gov/atr/page/file/1228016/download.

[41] Brief of Amicus Curiae ACT | The App Association in opposition to Qualcomm's Motion for Partial Stay Pending Appeal, *Fed. Trade Comm'n v. Qualcomm Inc.*, 9th Cir. No. 19-16122 (filed Jul. 19, 2019).

the ruling against it at the district court level, it could have dire consequences—not just for the smartphone ecosystem but for automakers and the IoT ecosystem generally[42]—as SEP owners adopt the licensing practices at issue in that case. We urge this Subcommittee to ensure antitrust law is enforced vigorously where SEP abuse harms competition and consumers.

# VII. Conclusion

We appreciate this opportunity to provide testimony in this important hearing. Our member companies have a strong interest in maintaining a competitive app economy that enables them to compete with larger firms worldwide through innovative products and services for their customers and clients. The entry of platforms created novel opportunities for consumers and developers. But while platforms provide some of the infrastructure, developers bring smart devices to life. Without apps, a smartphone is just a phone. The symbiotic relationship between apps and platforms is not perfect, but it has created a powerful ecosystem that continues to benefit consumers. We look forward to discussing the pro-competitive effects and public policy concerns platforms have generated and welcome the discussion around how large, tech-driven firms affect smaller counterparts.

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[42] "FTC v. Qualcomm – The Big Tech Case Nobody's Talking about," ACT | THE APP ASSOCIATION (Feb. 7, 2020), *available at* https://actonline.org/2020/02/07/ftc-v-qualcomm-the-big-tech-antitrust-case-nobodys-talking-about/.

# Appendix: App Economy Innovators in Your Districts

## Majority

### Chairman Michael Lee (UT)
### Company: 1564B
Located in Salt Lake City, 1564B is a one-man management consulting group that provides advice on marketing and content development as it relates to technical markets, like the internet of things (IoT). Founded in 2014, 1564B's clients range from startups and growing companies to global corporations.

### Senator Chuck Grassley (IA)
### Company: Higher Learning Technologies
Higher Learning Technologies (HLT) works to empower learners through easy-to-use textbook and test prep platforms spanning a variety of disciplines such as medical, dental, and business, as well as preparatory tests for college and military entrance exams. Located in Coralville, Iowa, and founded in 2012, HLT offers services on the App Store, Google Play store, and through web browsers.

### Senator Mike Crapo (ID)
### Company: TaxAct
Founded in 1998, TaxAct is a leading provider of affordable digital and downloadable tax preparation solutions for individuals, business owners, and tax professionals. Their flagship product promises users the highest degree of accuracy and was designed by their own in-house programmers and tax accountants. All available forms are IRS and state approved, and they introduced a mobile application in 2018.

### Senator Joshua Hawley (MO)
### Company: Topik
In 2015, two friends co-founded Topik, a mobile blogging application that makes it easy for anybody to create and share blog posts on an easy to use mobile platform. Based in St. Louis, Missouri, Topik is completely self-funded and, with only two employees, is set to launch their first mobile app later this year.

### Senator Marsha Blackburn (TN)
### Company: Quiet Spark
Established in 2011 in LaVergne, Tennessee, a wife and husband team founded Quiet Spark after noticing their son's issues with spelling. Their first app was SuperSpeller, an iOS app that makes learning spelling fun for children through learning games and reward features. They have also created other apps that help users keep track of their lives through categories like exercise, reading time, scheduling, homework, and more.

# Minority

**Ranking Member Amy Klobuchar (MN)**
**Company: VEMOS.io**
Located in the Twin Cities and founded in 2013, Vemos is a platform solution for bars, restaurants, and other venues as a one-stop-shop for the digital tools needed to manage and grow their businesses. Operating with only eight full-time employees, Vemos found a way to harness and present a venue's data in a humanized way, which helps venues understand who their customers are and how to market to them effectively.

**Senator Patrick Leahy (VT)**
**Company: Aprexis Health Solutions**
Aprexis Health Solutions is a cloud-based software that helps patients with personalized services for Medication Therapy Management and includes more than 1,000 participating pharmacies and more than 1 million patients. Founded in 2009, Aprexis works with health plans, pharmacy networks, corporate employers, and providers to deliver improved, patient-centric health outcomes.

**Senator Cory Booker (NJ)**
**Company: Micro Integration Services, Inc.**
Founded in 1985, Micro Integration Services is a father and son team who transitioned from selling and maintaining hardware to an entirely software-based consulting business. MIS is focused on solving problems and helping their clients develop software for mobile and web turnkey business solutions. Although they have maintained their two-man team, Micro Integration Services works with major corporations like Kraft and the Philadelphia Eagles.

**Senator Richard Blumenthal (CT)**
**Company: Pixellet**
Located in Stamford, Connecticut, Pixellet is a full-service web and mobile development and design firm with dozens of offered services, including digital marketing and e-commerce. Founded in 2014, Pixellet only has one employee and has served a variety of industries including real estate, health care, financial services, and education, among others.