

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA**

FEDERAL TRADE COMMISSION
600 Pennsylvania Avenue, N.W.
Washington, DC 20580

Plaintiff,

v.

FACEBOOK, INC.
1601 Willow Road
Menlo Park, CA 94025

Defendant.

Case No.: 1:20-cv-03590-JEB

**PUBLIC REDACTED VERSION OF
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**SUBSTITUTE AMENDED COMPLAINT FOR INJUNCTIVE AND OTHER
EQUITABLE RELIEF**

Plaintiff, the Federal Trade Commission (“FTC”), by its designated attorneys, petitions this Court pursuant to Section 13(b) of the Federal Trade Commission Act (“FTC Act”), 15 U.S.C. § 53(b), for a permanent injunction and other equitable relief against Defendant Facebook, Inc. (“Facebook”), to remedy and prevent its anticompetitive conduct and unfair methods of competition in or affecting commerce in violation of Section 5(a) of the FTC Act, 15 U.S.C. § 45(a).

I. NATURE OF THE CASE

1. Facebook is the world’s dominant online social network, with a purported three billion-plus regular users. Facebook has maintained its monopoly position in significant part by pursuing Chief Executive Officer (“CEO”) Mark Zuckerberg’s strategy, expressed in 2008: “*it is better to buy than compete.*” True to that maxim, Facebook has systematically tracked potential rivals and acquired companies that it viewed as serious competitive threats. Facebook

supplemented this anticompetitive acquisition strategy with anticompetitive conditional dealing policies, designed to erect or maintain entry barriers and to neutralize perceived competitive threats.

2. Facebook holds monopoly power in the market for personal social networking services (“personal social networking” or “personal social networking services”) in the United States, primarily due to its control of two of the largest and most profitable social networks in the world, Facebook and Instagram. The Facebook social network is known internally at Facebook as “Facebook Blue” and has more than [REDACTED] monthly users in the United States. Instagram attracts more than [REDACTED] monthly users. No other personal social networking provider in the United States remotely approaches Facebook’s scale. Snapchat is the next-largest provider of personal social networking services, but its user base pales in comparison: Snapchat has tens of millions fewer monthly users than either Facebook Blue or Instagram.

3. Facebook’s dominant position provides it with staggering profits. Facebook monetizes its personal social networking monopoly principally by selling surveillance-based advertising. Facebook collects data on users both on its platform and across the internet and exploits this deep trove of data about users’ activities, interests, and affiliations to sell behavioral advertisements. Last year alone, Facebook generated revenues of more than \$85 billion and profits of more than \$29 billion.

4. As Facebook has long recognized, its personal social networking monopoly is protected by high barriers to entry, including strong network effects. In particular, because a personal social network is more valuable to a user when more of that user’s friends and family are already members, a new entrant faces significant difficulties in attracting a sufficient user base to compete with Facebook. Facebook’s internal documents confirm that it is very difficult to win

users with a social networking product built around a particular social “mechanic” (i.e., a particular way to connect and interact with others, such as photo-sharing) that is already being used by an incumbent with dominant scale. Oftentimes, even an entrant with a superior product cannot succeed against the overwhelming network effects enjoyed by an incumbent personal social network.

5. Strong network effects can insulate a dominant personal social networking provider from competitive threats until a disruptive or innovative technology emerges to open up new ways for users to connect. In a competitive environment, Facebook’s success would depend on its ability to anticipate and adapt to periods of technological transition by developing innovative tools that create value for the company’s social network. But in navigating its own transition from small startup to business behemoth, Facebook’s leadership came to the realization—after several expensive failures—that it lacked the business talent required to maintain its dominance amid changing conditions. Unable to maintain its monopoly by fairly competing, the company’s executives addressed the existential threat by buying up new innovators that were succeeding where Facebook failed. The company supplemented this anticompetitive spending spree with an opened-first-closed-later scheme that helped cement its monopoly by further thwarting nascent rivals.

6. A critical transition period in the history of the internet, and in Facebook’s history, was the emergence of smartphones and the mobile internet in the 2010s. The emergence of these technologies fundamentally disrupted the digital economy by allowing people to connect on the go. As users increasingly shifted online activities to the mobile internet, opportunities arose for innovative, upstart companies to challenge Facebook and other giants that had grown dominant in the desktop age. Venture capital and other funding flowed to startups like Instagram, which

allowed users to connect through photo sharing, and WhatsApp, which provided messaging services. These upstarts became popular quickly.

7. Facebook recognized that the transition to mobile posed an existential challenge—and that Facebook had a brief window of time to stymie emerging mobile threats. Facebook’s CEO, Mr. Zuckerberg, described the period as a “very dangerous platform transition, where we were very vulnerable,” and recognized “that, historically, a lot of companies had not been able to make that leap.” Failing to compete on business talent, Facebook developed a plan to maintain its dominant position by acquiring companies that could emerge as or aid competitive threats. By buying up these companies, Facebook eliminated the possibility that rivals might harness the power of the mobile internet to challenge Facebook’s dominance.

8. Facebook buttressed its acquisition strategy by implementing and enforcing a series of anticompetitive conditional dealing policies that pulled the rug out from under firms perceived as competitive threats. Facebook included these policies in agreements with third-party developers of software apps that ran on or connected to Facebook’s platform. Beginning in 2007, Facebook actively invited app developers onto its platform, granting them open access to critical application programming interfaces (“APIs”) and tools needed to interconnect with Facebook. This open access policy drove developer and user engagement with Facebook, which in turn helped to fuel Facebook’s massive advertising profits. But as developers expanded popular offerings, Facebook came to view them as a threat, recognizing that some could aid emerging rivals or even challenge Facebook directly. In response, Facebook retooled its API policies into an anticompetitive weapon: developers could only access Facebook’s platform if they agreed (i) not to compete with Facebook’s core services and (ii) not to facilitate the growth of potential rivals to Facebook. App developers or websites that stayed loyal to Facebook by adhering to these conditions were given

access to valuable Facebook platform interconnections. In contrast, app developers that worked with or themselves emerged as potential competitive threats to Facebook lost access to those interconnections, forcing some out of business. But for the restrictions imposed by Facebook's anticompetitive conditional dealing policies, developers could promote competitive threats to Facebook or become threats themselves. By preventing them from doing so, Facebook reduced the opportunities available to nascent threats. In other words, Facebook beat competitors not by improving its own product, but instead by imposing anticompetitive restrictions on developers. This conduct is no less anticompetitive than if Facebook had paid off these nascent competitive threats to cease competing.

9. Through these actions, Facebook implemented an anticompetitive scheme that prevented differentiated and innovative firms from gaining scale, thus enabling Facebook to maintain its dominance. Facebook's course of conduct has eliminated nascent rivals and extinguished the possibility that such rivals' independent existence might allow other internet platforms to overcome the substantial barriers to entry that protect Facebook's monopoly position. In doing so, Facebook deprives personal social networking users in the United States of the benefits of competition, including increased choice, quality, and innovation.

10. By interfering with the emergence and growth of personal social networking rivals, Facebook also suppresses meaningful competition for the sale of advertising. Many personal social networking providers monetize their platforms through the sale of advertising; thus, more competition in personal social networking is also likely to mean more competition in the provision of advertising. By monopolizing personal social networking, Facebook thereby also deprives advertisers of the benefits of competition, such as lower advertising prices and increased choice, quality, and innovation related to advertising.

11. Facebook’s unlawful course of conduct to maintain its monopoly continues today and must be enjoined. Facebook continues to hold and operate the assets it acquired unlawfully and continues to keep them positioned to provide a protective “moat” around its personal social networking monopoly. Moreover, Facebook continues to monitor competitive threats and will seek to acquire or kneecap them unless enjoined.

II. JURISDICTION AND VENUE

A. Jurisdiction

12. This Court has subject matter jurisdiction over this action pursuant to Sections 5(a) and 13(b) of the FTC Act, 15 U.S.C. §§ 45(a) and 53(b), and 28 U.S.C. §§ 1331, 1137(a), and 1345. This is a civil action arising under Acts of Congress protecting trade and commerce against restraints and monopolies, and is brought by an agency of the United States authorized by an Act of Congress to bring this action.

13. This Court has personal jurisdiction over Facebook because Facebook has the requisite constitutional contacts with the United States of America pursuant to 15 U.S.C. § 53(b).

14. Facebook’s general business practices, and the unfair methods of competition alleged herein, are “in or affecting commerce” within the meaning of Section 5 of the FTC Act, 15 U.S.C. § 45.

15. Facebook is, and at all relevant times has been, a corporation, as the term “corporation” is defined in Section 4 of the FTC Act, 15 U.S.C. § 44.

B. Venue

16. Venue in this district is proper under 15 U.S.C. § 22, 28 U.S.C. § 1391(b)(1), and 15 U.S.C. § 53(b). Facebook resides, transacts business, and is found in this district.

III. THE PARTIES

17. Plaintiff FTC is an administrative agency of the United States government, established, organized, and existing pursuant to the FTC Act, 15 U.S.C. §§ 41 *et seq.*, with its principal offices in the District of Columbia. The Commission is vested with authority and responsibility for enforcing, among other things, Section 5 of the FTC Act, 15 U.S.C. § 45, and is authorized under Section 13(b) of the FTC Act, 15 U.S.C. § 53(b), to initiate court proceedings to enjoin violations of any law the FTC enforces and to seek equitable remedies.

18. The FTC is authorized to bring this case in federal court because it has reason to believe that Defendant Facebook is violating or is about to violate a provision of law enforced by the FTC, and this is a proper case for permanent injunctive relief within the meaning of Section 13(b) of the FTC Act, 15 U.S.C. § 53(b).

19. Defendant Facebook is a publicly traded, for-profit company, incorporated in Delaware and with its principal place of business at 1601 Willow Road, Menlo Park, CA 94025. Facebook's principal businesses are in technologies that facilitate digital interactions and communications, including Facebook Blue, which provides personal social networking; Instagram, which provides personal social networking; Facebook Messenger, which provides mobile messaging services; and WhatsApp, which provides mobile messaging services.

IV. INDUSTRY BACKGROUND

A. The Rise of Personal Social Networking and Facebook's Beginnings

20. In the early 2000s, the widespread use of personal computers and internet connectivity enabled a new way of connecting and communicating with other people: online social networking with friends and family. In contrast to the limited functionality of email and text messaging, personal social networking gained popularity by providing a distinct way for people to

maintain personal connections. Personal social networking enables people to stay up to date and share personal content with friends and family. It is now an integral part of the daily lives of millions of Americans.

21. Through an account on a personal social network, people can post content about their own lives and interests, and view content that personal connections have posted. Because many people use personal social networking to engage with personal connections, the presence of a critical mass of people on a particular personal social network both attracts new users and keeps existing users on the network. In this sense, social networks share features of telephone systems, operating systems, and other services characterized by strong network effects: the value of the service to individual consumers increases with the number of other consumers that use the service. Internal Facebook investor call talking points expressed this phenomenon crisply: “[O]ur network effects are substantial, your friends are all here.”

22. Friendster, launched in March 2002, was one of the first personal social networks to gain significant popularity, and Myspace followed the next year.

23. Subsequently, in February 2004, Mr. Zuckerberg and his college classmates launched Facebook (then styled “TheFacebook”). They first launched the product on their school campus, and then quickly expanded to other college campuses. Following rapid uptake in university settings, Facebook became widely available to members of the general public in 2006. Facebook’s rapid initial growth led to substantial private investment in the company, which in turn fueled more growth.

B. Facebook Launched Facebook Platform, and Provided Access to Critical Interfaces, to Induce App Developers to Interoperate with Facebook Blue

24. The early, rapid growth of Facebook’s user base was of critical importance to the company. Facebook needed to add users rapidly not only to sell itself to investors, but also to

achieve a critical mass of users that could allow it to establish and benefit from network effects: As more users actively and regularly engaged with Facebook’s offerings, users would be more likely to stay with Facebook and attract yet more users—and leave potential competitors with little room to maneuver. Facebook therefore sought to quickly expand its offerings to users.

25. In furtherance of this goal, Facebook in 2007 launched “Facebook Platform.” The Platform initiative leveraged Facebook’s control over its rapidly expanding user base to encourage software developers to build an entire ecosystem of apps and tools—ranging from games and page design tools to video-sharing tools and e-marketing apps—that interoperate with Facebook Blue. Facebook aimed to turn Facebook Blue into a dominant platform for apps: If Facebook could induce developers to use Facebook Blue to promote and distribute innovative apps that appealed to users, Facebook would benefit from increased user engagement, yielding greater and more granular data about its users and their online activities, and cementing network effects to insulate itself from competition.

26. When it launched Platform, Facebook explicitly “welcome[d] developers with competing applications” to build on Platform, representing that it had “designed Facebook Platform so that applications from third-party developers are on a level playing field with applications built by Facebook.”

27. Facebook’s Platform initiative allowed it to conserve its own resources and leverage the creativity of third parties to ensure that engagement continued on Facebook. Without Platform, Facebook itself would be required to build apps that increased the value of its network—meaning that Facebook would have to try to predict what apps users wanted; design, code, and scale those apps across its user base and network; and bear the risk and resource drain of guessing wrong and making mistakes.

28. Platform allowed Facebook to avoid these risks and costs—and to reap the benefits derived from the efforts of third-party app developers. Facebook would not need to spend significant resources to develop new apps or test new business models—third parties would do that instead. Facebook could merely wait for an app built for Platform to gain widespread adoption, then either build a competing app or reap the benefits of that popular app’s user engagement, including valuable new social data for Facebook. The potential to extract profits from the work of these developers—including from the apps these developers built and the users they attracted—led Facebook to actively seek out and invite developers to build apps on Platform.

29. Facebook rolled out Facebook Platform as a program that would provide *all* app developers with the freedom to design apps. When Facebook introduced Facebook Platform, Mr. Zuckerberg stated, “[u]ntil now, social networks have been closed platforms. Today, we’re going to end that. With this evolution of Facebook Platform, any developer worldwide can build full social applications on top of the social graph, inside of Facebook.”

30. Facebook marketed Facebook Platform as a way to empower all app developers because it recognized that doing so would be critical to its business. In a 2007 press release, Mr. Zuckerberg stated, “[Facebook Platform] is good for us because if developers build great applications then they’re providing a service to our users and strengthening the social graph. This is a big opportunity. We provide the integration and distribution and developers provide the applications. We help users share more information and together we benefit.”

31. Mr. Zuckerberg and Facebook continued to repeat the message that Facebook benefited from an “open” Facebook Platform that allowed any social app developer to interoperate. In 2008, Mr. Zuckerberg observed that “Platform is key to our strategy because we believe that there will be a lot of different social applications . . . and we believe that we

can't develop all of them ourselves.” In early 2012, a Facebook Initial Public Offering document stated that “[t]he success of our Platform developers and the vibrancy of our Platform ecosystem are key to increasing user engagement [on Facebook Blue]. We continue to invest in tools and APIs that enhance the ability of Platform developers to deliver products that are more social and personalized and better engage users on Facebook [Blue], across the web, and on mobile devices.”

32. Facebook's open platform was designed to attract not only new developers, but also (i) new Facebook users attracted by the developers that interoperated with Facebook's Platform; and (ii) greater engagement from existing Facebook users as they enjoyed new functionality on the platform. In each case, Facebook's Platform was designed to create and leverage the network effects that come with an increased user base and engagement. And each drove the other: more users meant more developers, and more developers meant more users. Both were good for Facebook.

33. Following the 2007 launch of Platform, Facebook frequently added new tools for developers to use, usually at its semi-annual “f8” developers conference. For example, in 2008, Facebook launched Facebook Connect, a tool that enabled developers to let their users log into the developer's websites or apps using their Facebook credentials, “bring their Facebook account information, friends and privacy” to the developer's service, and share content back to Facebook. Use of Facebook Connect by developers benefitted Facebook by increasing the amount of engaging content on Facebook Blue and making Facebook more ubiquitous across the internet.

34. Facebook continued to add functionalities to Platform, including APIs that allowed third-party apps access to Facebook user data. An API is a structured way for different pieces of

software to communicate and share data or functionality with one another. APIs are used widely online to facilitate communication among businesses and other entities, integration or interoperation between products and services, and the development of new products built “on top of” the features or data of others.

35. By providing an API, businesses can enable third-party developers to programmatically interact with certain data or functionality from the API provider. This is a common pattern for businesses that wish to enable the development of products that are complementary or adjacent to their own products without building those products themselves. In these situations, the API provider makes available to third-party developers the data and functionality needed to interoperate with the provider. By providing critical interoperability, many APIs effectively serve as a means of distribution for third-party developers in digital markets.

36. Facebook Platform comprises access to many different APIs, and many have changed over time. Graph API, launched in 2010, is one of the core Facebook Platform APIs. Although it, too, has changed over the years, its general purpose has been to facilitate the exchange of a multitude of different types of information and data between Facebook’s social graph and other apps, including both Facebook and third-party products. After Facebook grants a third-party developer access to particular endpoints of Graph API, that developer can use Graph API to retrieve and/or create those particular types of information within Facebook’s social graph. For example, Graph API can be used to retrieve the photos that a user has uploaded to Facebook Blue, or to publish a video to a user’s Facebook Blue timeline. The data available through Graph API can provide developers with an important means to achieve distribution and grow their user bases.

37. In 2010, Facebook provided third-party apps with access to critical APIs through Graph API, including the Find Friends API (providing information about a user's Facebook friends) and other APIs used to access user content from Facebook Blue. The Find Friends API, in particular, was a valuable growth tool for third-party apps because it enabled users of such apps to find their Facebook Blue friends who also used the third-party app and to invite those friends who did not.

38. In 2010, Facebook also added the Open Graph and Social Plugins to Facebook Platform, which enabled third-party apps and websites to add features such as the Facebook "Like" button to their own services. Using the Like button, Facebook Blue users could like and share their interest in the third-party app. Third-party apps were motivated to install the Like button and encourage its use, as a "Like" would be shared on the user's news feed and profile on Facebook Blue, which could attract additional users to the third-party app.

39. Open access to Facebook Platform was important to developers from the time that Facebook introduced it for at least three primary reasons. First, Facebook Platform offered developers a unique distribution channel for their products and services, promising to allow developers to exploit Facebook's massive social graph to "spur mass distribution." Second, tools like Graph API, Social Plugins, and Open Graph provided developers with the ability to engage their users through personalized experiences: "For example, if you like a band on [the music service] Pandora, that information can become part of the graph so that later if you visit a concert site, the site can tell you when the band you like is coming to your area." Third, Facebook Platform enabled developers to advertise their products and conduct in-app transactions. With these benefits on offer, and the company's active encouragement, developers were induced to rely on Facebook's open access policies and invested in developing compatible products.

40. Usage of Open Graph grew rapidly. One week after the introduction of Open Graph, over 50,000 websites had installed Open Graph plug-ins. Those sites realized the immediate benefits of a massive new distribution channel. By July 2008, one year after it launched, more than 400,000 developers were already using Facebook Platform. By April 2010, over one million developers were using Facebook Platform. By July 2012, Open Graph was being used to share nearly one billion pieces of social data each day to Facebook Blue, giving Facebook substantially greater and more granular information about its users and their online activities.

41. This strategy not only integrated users' online activities more fully into Facebook Blue, but also drove profits for Facebook. As a Facebook executive summarized in a May 2012 email to Facebook Chief Operating Officer ("COO") Sheryl Sandberg: "Because we have this critical mass of people, that attracts new people to sign up, it attracts developers who want to find customers for their apps and websites, and it attracts advertisers [who] want to reach the audience[.]" The executive explained that Facebook had "[r]eached a size now where you can imagine as a developer that most of your current and future users/customers are on Facebook[.]" noting that "[7] of the top 10 apps in the Apple App store are Facebook enabled[.]"

42. Further, third-party apps helped Facebook grow through Facebook plug-ins and by directing social data, such as "Likes," back to Facebook Blue. These interactions also provided Facebook with critical information about the extent to which users interacted with third-party apps and enabled it to closely track and identify usage trends in their incipiency.

C. **Facebook Surpassed Early Competitors to Become the Dominant Social Network**

43. Facebook grew rapidly following its 2006 expansion beyond schools to the general public. According to ordinary course documents, between May 2007 and May 2008, Facebook's monthly active users grew 34%, while those of Myspace—its primary competitor—grew just

seven percent over the same period. By 2009, Facebook had surpassed Myspace and established itself as the most popular personal social networking provider in the United States and the world. In October 2011, according to internally circulated figures, Facebook had 156 million unique users in the United States averaging 441 minutes per visitor on the service. At the same time, Myspace had just twenty-seven million users in the United States averaging merely ten minutes per visitor. By 2011, Facebook was touting to its advertising clients that “Facebook is now 95% of all social media in the US.”

44. Facebook’s Platform policies helped to fuel its growth. After launching its Facebook Platform and Open Graph initiatives, Facebook grew significantly, adding an average of more than ten million monthly active users in the United States each year from 2010 to 2018.

D. Facebook’s Business Model: Selling Advertising Based on Detailed User Data

45. While there are several ways in which personal social networking could be monetized, Facebook has chosen to monetize its product by mining the personal data of its users and selling behavioral advertising.

46. This practice has been highly profitable for Facebook. Advertisers now pay billions—approximately \$84 billion in 2020—to display their ads to specific sets of Facebook Blue and Instagram users. Facebook serves up these “audiences” using proprietary algorithms that analyze the vast quantity of data the company collects on its users. This allows advertisers to target different campaigns and messages to different groups of users. Ads displayed by Facebook are interspersed with—and can be similar in appearance to—user-generated content.

47. Facebook recognizes the unique characteristics of the advertising that a personal social network can offer (“social advertising”). For example, in earnings calls, Facebook COO Sheryl Sandberg described Facebook Blue as the “world’s first global platform that lets marketers

personalize their messages at unprecedented scale,” and called Facebook Blue and Instagram the “two most important mobile advertising platforms” in the world.

48. Social advertising is distinct from other forms of advertising, including other forms of display advertising, search advertising, and “offline” advertising (e.g., television, radio, and print).

49. Social advertising is a distinct form of display advertising. Display advertising refers to the display of advertisements—in the form of images, text, or videos—on websites or apps when a user visits or uses them. Display advertising is distinct from “offline” advertising, such as television, radio, and print advertising, because it offers the ability to reach consumers during their online activity (including during their use of mobile devices like smartphones and tablets), allows for interactive ads, and permits rich ad targeting to users using personal data generated and collected through their online activity. Display advertising is also distinct from search advertising, which is a form of digital advertising that is shown to a person when he or she enters a specific search term in an online search engine, like Google or Bing. Advertisers buy search advertising to target consumers who are actively inquiring about a particular type of product or service. By contrast, display advertising reaches consumers who are not actively querying a search engine, including consumers who may be further from making a specific purchase decision.

50. Social advertising is a type of display advertising, but it is distinct in several ways from the non-social display advertising found on websites and apps that are not personal social networks. For example, in part because users must log in to a personal social network with unique user credentials, social advertising enables advertisers to target users based on personalized data regarding users’ personal connections, activities, identity, demographics, interests, and hobbies. Also, in contrast to display advertising on other websites and apps, social advertising leverages

high engagement and frequent contact with users, as well as the integration of advertisements directly into a user’s feed of content generated by personal connections (including ads that resemble “native” content and boosted content). In addition, social advertising facilitates forms of engagement with the advertisement that are not available with other forms of display advertising—such as allowing a user to share an advertisement with a personal connection, or to “like” or follow an advertiser’s page. Among other things, the foregoing characteristics enable social advertising providers to sell advertisers access to personally targeted “audiences” of highly engaged users, and to reach users that need not be actively searching for—or even aware of—the advertised product or service.

51. As Ms. Sandberg emphasized in a 2012 earnings call: “[O]n the question of where advertisers are, you know as I’ve said before, we are a third thing. We’re not TV, we’re not search. We are social advertising.” Facebook in particular has a preeminent ability to target users with advertising due to its scale, its high level of user engagement, and its ability to track users both on and off Facebook properties to measure outcomes.

52. Benefiting from the vast trove of data Facebook collects on users, Facebook’s social advertising business is extraordinarily profitable. According to its public earnings reports, Facebook earns “substantially all of [its] revenue from selling advertising placements to marketers.”

E. The Threat to Facebook from the Emergence of the Mobile Internet

53. Beginning around 2010, the widespread adoption of smartphones marked a significant change in the way that people in the United States consumed digital services, with users shifting from desktop computers to mobile devices. In the fourth quarter of 2009, smartphones were adopted by only 21% of all mobile subscribers in the United States and only 30% of

customers who had recently acquired a new cell phone. By the second quarter of 2012, smartphones were adopted by 55% of all mobile subscribers in the United States and accounted for 67% of new mobile phone purchases. Estimates suggest that mobile data traffic increased 62% from 2011 to 2012, and that by 2012, mobile data traffic was approximately seventy-three times larger than U.S. mobile data traffic in 2007.

54. The shift to smartphones opened up opportunities for new businesses. Among other features, smartphones are portable and offer integrated digital cameras. Social networking with family and friends through taking, sharing, and commenting on photographs via a mobile app optimized for that activity became increasingly popular, as services attempted to take advantage of what Instagram co-founder Kevin Systrom termed “the most differentiated feature” of mobile phones—the ability to take and share photos on the go.

55. Businesses that sought to ride the mobile wave—or use it to challenge entrenched desktop-bound competitors—had to act promptly. As Mr. Systrom explained, “people were going to go from computing on their desktop . . . to computing on the go on their phone. And there was a brief moment and opening where computing had shifted, but the services created for computing had not shifted to mobile in a big enough way.” According to Mr. Systrom, there was a “window where, if you started a mobile company . . . in 2009, 2010, 2011, there were lots of opportunities to recreate experiences people used to have on the desktop that now they were going to have on mobile because those desktop companies had not made the shift quickly enough.” By 2012, Mr. Systrom explained, “[i]t was clear that companies that had taken advantage of mobile were out ahead and had an advantage, and companies that were behind desperately needed to find ways to catch up.”

56. Smartphones also facilitated the explosion of mobile messaging, which includes (i) text messaging via short-message-service or multimedia-message-service protocols (“SMS”), and (ii) text messaging via internet-based, over-the-top mobile messaging apps (“OTT mobile messaging services”). Since 2011, when the messaging volume of SMS peaked, the messaging volume of OTT mobile messaging services has grown astronomically. By April 2012, Mr. Zuckerberg believed that “messaging is the single most important app on anyone’s phone.”

57. WhatsApp co-founder Jan Koum also saw the “fundamental shift” in how people were using their devices and chose to focus on mobile messaging. Smartphone-enabled OTT mobile messaging services, like WhatsApp, posed a threat to Facebook Blue. OTT mobile messaging services generally have not charged a per-message fee and have provided improvements over SMS, like enhanced features for sharing content (e.g., photos, videos, sound clips, and GIFs) and the option to create persistent groups of users.

58. Facebook offered Facebook Blue on mobile devices in an effort to address the rise of mobile smartphones, but Facebook Blue’s performance on mobile devices was initially weak. Facebook launched its first Facebook Blue mobile website in January 2007, its first native Facebook Blue iPhone app in July 2008, and its first native Facebook Blue Android app in September 2009. In a post announcing Facebook Blue for iPhone, the engineer responsible for the app wrote “applications built for the iPhone have access to more technology than websites. For example, with the native application you can take photos with the iPhone’s camera and upload them instantly.” But by 2010, Facebook decided to re-write its native applications in HTML—the language used for pages designed to be viewed in a web browser. The effort, which it called Faceweb, failed to improve Facebook’s mobile offerings, and by June 2011, reviews for Facebook

Blue for iPhone had languished to an all-time low average of two-stars. Mr. Zuckerberg would later call the decision to write in HTML “the biggest mistake we made as a company.”

59. By late 2011, Mr. Zuckerberg and other executives realized that Facebook Blue offered a relatively poor experience for mobile users, and that this made Facebook’s monopoly position more vulnerable than it had ever been. In addition, Facebook struggled to translate its social advertising model onto mobile devices. The transition to mobile required Facebook to transform the manner in which its advertisements were displayed: as Mr. Zuckerberg described it, “the way that ads worked had to change completely.”

60. Given these mounting consecutive failures, Facebook justifiably feared that its personal social networking monopoly, and its enormous advertising profits, would be threatened by a mobile-first competitor emerging and gaining traction by connecting users in innovative ways and exploiting mobile phones’ photo or messaging capabilities. Such an entrant could substantially threaten Facebook’s advertising profits. A competitor able to launch a popular product could capture a rich set of data on mobile users’ behavior, which would not be available to Facebook due to its unattractive mobile performance. Facebook had an acute need for such data as it increasingly sought to target advertisements based on granular information about individual users, including their identities, behavior, and locations. In order to monetize its user base, Facebook needed to target advertising to individuals who would be most receptive. And Facebook could not determine which users would be most receptive to which advertisements without a critical mass of data regarding users’ activity. Alternatively, a competitor could offer an advertisement-free business model, which could undermine Facebook’s ability to monetize user attention. In particular, WhatsApp emerged as a rapidly growing OTT mobile messaging app that pursued an advertising-free business model (prior to its acquisition by Facebook).

61. To ensure it continued to dominate despite its sub-par mobile performance, Facebook undertook a “major technical risk”—a “multiyear journey of rewriting all of [its] code from scratch to . . . work on mobile.” But Facebook could not accept the possibility that a rival might threaten its monopoly position, and its enormous advertising profits, in the time it would take Facebook to improve its inferior mobile offerings. Realizing it could not maintain its monopoly based on the merits of its own offerings, Facebook then sought to “derisk” the transition to mobile through anticompetitive actions to protect its dominance.

F. For Many Years, Facebook Has Focused on Acquiring Potential Rivals and Those Who Might Aid Potential Rivals

62. The proliferation of smartphones and the transition to the mobile internet in the 2010-2014 timeframe transformed the way that users consumed social networking and other digital services. This critical yet fleeting transition period introduced the risk that a new and nimble startup could be better placed than Facebook to quickly exploit these changes in technology and user behavior.

63. One way to deal with this threat was to acquire any startup that could threaten Facebook’s dominance during this window of opportunity. Acquiring competitive threats that introduce innovative mechanics is particularly attractive to a dominant incumbent during periods of disruption, such as the transition to the mobile internet. This proposition was especially true in Facebook’s case, given the company’s failing attempts to transition its own offerings to this new environment.

64. Maintaining its monopoly through acquisition was a natural choice for Facebook. The company has long sought to achieve and maintain dominance through acquisitions rather than competition, reflecting a deeply rooted view within Facebook that, as Mr. Zuckerberg put it in a June 2008 internal email, “it is better to buy than compete.” Facebook’s acquisitions have often

focused on arresting the growth of potential rivals: for example, following Facebook's failed 2008 attempt to acquire Twitter, Mr. Zuckerberg wrote: "I was looking forward to the extra time that would have given us to get our product in order." Facebook has also made multiple overtures to acquire Snapchat over the years, moving quickly when it believed that Snapchat might have had other well-financed suitors that could have bolstered its competitive position.

65. Personal social networking services are characterized by strong network effects: a provider's service is generally more valuable to a user when more of the user's friends and family are using that service. Once a personal social networking service has achieved dominant scale, these effects make competition and entry harder, even for a rival that users perceive as offering a higher quality product.

66. As a result, and as Facebook well understands, the most significant competitive threats to Facebook Blue may arise from a differentiated product that is able to gain scale quickly by offering users a superior "mechanic" (that is, a distinctive way of interacting with friends and family, such as sharing photos). Facebook's strategy to prevent innovative entrants from gaining scale and benefiting from network effects has consisted of acquiring innovators and—where possible—transforming their products into integral parts of the company's competitive "moat." Mr. Zuckerberg clearly explained this strategy in a February 2012 email advocating the acquisition of Instagram: "[T]here are network effects around social products and a finite number of different social mechanics to invent. Once someone wins at a specific mechanic, it's difficult for others to supplant them without doing something different. It's possible someone beats Instagram by building something that is better to the point that they get network migration, *but this is harder as long as Instagram keeps running as a product.*" (Emphasis added.)

67. As Mr. Zuckerberg recognized, by simply acquiring firms able to gain scale, Facebook could make up for its failure to innovate and forestall future threats: “[O]ne way of looking at this is that what we’re really buying is time. Even if some new competitors spring[] up, buying Instagram, Path, Foursquare, etc now will give us a year or more to integrate their dynamics before anyone can get close to their scale again. Within that time, if we incorporate the social mechanics they were using, *those new products won’t get much traction since we’ll already have their mechanics deployed at scale.*” (Emphasis added.)

68. Facebook has long focused on detecting potential threats at an early stage, in order to neutralize them before they have a chance to either grow on their own or facilitate the growth of other potential Facebook rivals.

69. Facebook’s focus on detecting threats early is illustrated by its 2013 acquisition of Onavo, a firm which billed itself as the “most comprehensive market intelligence service in the mobile industry.” Onavo marketed itself to users as providing secure virtual private networking services, but—unknown to many users—it also tracked users’ activity online. Facebook understood that surveilling users would enable it to identify services that were growing rapidly and potentially diverting users from Facebook, thus making Onavo “really cool for identifying acquisition targets.”

70. In October 2013, Facebook acquired Onavo for \$140 million, and within days, Onavo’s business customers were informed that their access to Onavo’s services would be terminated in six days. The move thwarted potential Facebook rivals that could have used Onavo’s services to identify firms they might partner with or acquire in order to compete with Facebook. Cut-off Onavo customers expressed their frustration.

71. By acquiring Onavo, Facebook obtained control of, and denied its potential rivals access to, data that it used to track the growth and popularity of other apps. As a December 2013 internal slide deck noted: “With our acquisition of Onavo, we now have insight into the most popular apps. We should use that to also help us make strategic acquisitions.” Facebook has used Onavo data to generate internal “Early Bird” reports for Facebook executives, which focused on “apps that are gaining prominence in the mobile eco-system in a rate or manner which makes them stand out.”

72. Facebook has used its Onavo data to identify acquisition targets, including WhatsApp, to execute the playbook Mr. Zuckerberg identified in connection with the Instagram purchase: acquire a potential rival and keep the rival’s mechanics deployed to frustrate others’ efforts to gain scale using similar mechanics. For example, Facebook reportedly used Onavo to identify acquisition target “tbh,” a polling app that had achieved 2.5 million daily active users within only nine weeks of launch. At the time of the 2017 acquisition, tbh was popular amongst teens and growing rapidly. Although Facebook initially announced plans to maintain tbh as a distinct brand, it ended up ultimately shuttering it.

73. Facebook shut down Onavo in 2019 following public scrutiny; however, it continues to track and evaluate potential competitive threats using other data.

74. While Onavo’s mobile data turbo-charged Facebook’s ability to identify and eliminate potential threats, Facebook had been executing the same basic strategy for years prior to the Onavo acquisition. For example, in 2008, Facebook licensed contact importing services from a company called Octazen. Contact importing services facilitate the rapid growth of networks of contacts—critical to direct network effects—by seamlessly pulling contacts from a user’s digital address book and importing them for use in an app. Facebook soon realized that acquiring Octazen

would deprive rivals and potential rivals of this “key” resource for growth and engagement. As an executive explained: “By [buying Octazen], we would: . . . Let [sic] everyone else in the industry without a provider for contact importer libraries.” In discussing the acquisition, Facebook executives focused not on what Octazen would add to Facebook, but on how the acquisition would let Facebook deny rivals a technology key for increasing user interactions and generating network effects. Describing this dynamic, another executive explained that the Octazen “acquisition could be interesting if *for a few million we could slow some competitors down for a quarter or so . . .*” Immediately after completing the acquisition in February 2010, Facebook terminated all third-party access to Octazen.

75. Likewise, in 2012, Facebook learned that Google was “aggressively courting” a new “social discovery” app that might have fueled the growth of Google’s new Google+ personal social networking service. The app, called Gancee, used geolocation services to help users meet new people. Facebook then acquired Gancee and simultaneously shut the app down, terminating services to Gancee’s 30,000 users. Two years later, Facebook launched a location-based feature on Facebook Blue that utilized Gancee’s technology, but in a scaled-back form that allowed users to know only when their existing Facebook friends were nearby.

76. Similarly, after learning that Snapchat and others were interested in EyeGroove, an app that allowed users to create and share music videos with augmented reality effects, Facebook decided to move quickly to acquire it in 2016—and then shut the app down.

V. FACEBOOK’S ANTICOMPETITIVE CONDUCT

77. Central to Facebook’s efforts to “derisk” the transition to mobile was its strategy to buy or bury innovators threatening to out-compete Facebook in the new mobile environment.

78. Facebook’s anticompetitive course of conduct includes the acquisition and continued control of Instagram, which has neutralized a significant independent personal social networking provider; and the acquisition and continued control of WhatsApp, which has neutralized a significant competitive threat to Facebook’s personal social networking services monopoly. Acquiring these competitive threats has enabled Facebook to sustain its dominance—to the detriment of competition and users—not by competing on the merits, but by avoiding competition.

79. Facebook’s course of conduct also includes conditional dealing policies embodied in agreements with firms that interoperated with its platform, which Facebook introduced as a way to weaponize platform access. Facebook implemented these agreements, and enforced them where necessary, to bury other potential threats and prevent rivals from eroding its monopoly power.

A. Facebook Has Engaged in Anticompetitive Acquisitions to Protect Its Dominant Position, Including the Acquisitions of Instagram and WhatsApp

1. Facebook Acquired Instagram to Neutralize a Competitor

80. Instagram was a serious threat to Facebook’s dominance given its made-for-mobile offerings. Following its launch in October 2010 for iOS devices, Instagram quickly gained popularity with users seeking a product that facilitated photo-based social interactions with friends and family.

81. Instagram’s growth was stellar. It gained 25,000 users on its first day; 100,000 users in a week; one million users in less than three months; and ten million users in less than a year—all while available only on Apple’s iOS devices and before launching on Android devices.

82. Facebook watched Instagram’s emergence with mounting anxiety. In February 2011, Mr. Zuckerberg wrote to colleagues: “In 4 months they’re up to 2m users and 300k daily photo uploads. That’s a lot. We need to track this closely.”

83. Facebook initially tried to compete on the merits with mobile photo-sharing capabilities, dedicating significant resources to developing its own camera app, code-named “Snap.” But despite relentless pressure from senior management, these efforts achieved limited success. In July 2011, one executive demanded: “[W]hy is mobile photos app development moving so slowly? We still are getting our ass kicked by Instagram.” And by September 2011, Mr. Zuckerberg was railing: “In the time it has taken us to get ou[r] act together on this[,] Instagram has become a large and viable competitor to us on mobile photos, which will increasingly be the future of photos.”

84. Recognizing that photos were integral to the popularity of many Facebook Blue features, and therefore to Facebook Blue’s overall prevalence, in that same September 2011 email, Mr. Zuckerberg warned that Instagram was a major threat:

One theme in many of the products we’re about to launch -- News Feed, Timeline, Open Graph -- is that people love nice big photos. A lot of the time people don’t even understand how the new News Feed or Timeline work, but they love those products because of the bigger and richer photos. While this is nice in the short term, I view this as a big strategic risk for us if we don’t completely own the photos space. If Instagram continues to kick ass on mobile or if Google buys them, then over the next few years they could easily add pieces of their service that copy what we’re doing now, and if they have a growing number of people’s photos then that’s a real issue for us.

They’re growing extremely quickly right now. It seems like they double every couple of months or so, and their base is already -5-10m users. As soon as we launch a compelling product a lot of people will use ours more and future Instagram users will find no reason to use them. But at the current rate, literally every couple of months that we waste translates to a double in their growth and a harder position for us to work our way out of. (Emphasis added.)

85. Facebook employees scrambled to meet Mr. Zuckerberg’s demands. In an internal email dated September 13, 2011, Facebook’s Director of Engineering reminded her team: “Zuck is anxious for the [Facebook] snap app (mainly motivated by a desire to slow down Instagram’s growth).”

86. Facebook’s leadership feared not only an independent Instagram, but also an Instagram in the hands of another purchaser, such as Google (mentioned by Mr. Zuckerberg in the September 2011 email above), Apple, or Twitter. In April 2012, a Facebook engineer warned Mr. Zuckerberg of “the potential for someone like Apple to use [Instagram] as a foothold.” And an investor in Instagram and former Facebook executive underscored the threat of Twitter: “if twitter and instragram [sic] became one company it would make life more difficult for facebook.”

87. As Instagram soared, Facebook’s leaders began to focus on the prospect of acquiring Instagram rather than competing with it. For example, in January 2012, the head of Facebook’s internal Mergers and Acquisitions (“M&A”) group wrote to Mr. Zuckerberg to suggest “m&a” as a solution to this problem, in order to increase users’ switching costs, retain engagement, and lock users into Facebook Blue:

[I] think photos in general and certainly in conjunction with mobile is a weak spot for us, yet represents a large part of many users['] engagement on fb. i view this as both a significant threat (google/picasa/android, instagram, etc.) and opportunity. . . . imo, photos (along with comprehensive/smart contacts and unified messaging) is perhaps one of the most important ways we can make switching costs very high for users - if we are where all users’ photos reside because the uploading [sic] (mobile and web), editing, organizing, and sharing features are best in class, will be very tough for a user to switch if they can’t take those photos and associated data/comments with them. i think this area should be a priority for us organically and through m&a especially given competitive dynamics. (Emphasis added.)

88. By February 2012, Mr. Zuckerberg predicted that an independent Instagram could soon achieve massive scale, and suggested that Facebook should move to acquire it:

If [my analytical] framework holds true, then we should expect apps like Instagram to be able to grow quite large. If it has 15m users now, it might be able to reach 100-200m in the next 1-2 years. (Intuitively this is not crazy because in the next year alone iOS should double and it should spread to Android, so even without further increase in market share it should grow by at least 4x this year.) If those assumptions hold true, then we should perhaps be more open to buying these companies than we currently seem to be. (Emphasis added.)

89. Throughout this period, Mr. Zuckerberg repeatedly explained the case for acquisition in terms of Instagram's threat as a personal social networking competitor. In February 2012, he wrote:

I wonder if we should consider buying Instagram, even if it costs ~\$500m. . . . For the network piece, one concerning trend is that a huge number of people are using Instagram every day -- including everyone ranging from non-technical high school friends to even FB employees -- and they're only uploading some of their photos to FB. This creates a huge hole for us and one that I'm [sic] sure anything we're going to do on platform or with social dynamics will completely solve. Sometimes you don't want to bug all your FB friends with a lot of photos so you put them in the photo-posting place instead. With [Facebook] Snap, our basic thesis is that what people need is a good way to post a bunch of photos on FB. We're doing some work on filters but not a ton, and the team is approaching this more as a nice feature and somewhat of a gimmick. Instagram, on the other hand, is approaching this problem from the perspective of how to help people take beautiful photos. I think it's quite possible that our initial thesis was wrong and that theirs is right -- that what people want is more to take the best photos than to put them on FB. If so, [Facebook] Snap might be a good first step but we'd be very behind in both functionality and brand on how one of the core use cases of Facebook will evolve in the mobile world, which is really scary and why we might want to consider paying a lot of money for this. (Emphasis added.)

90. Later that month, Mr. Zuckerberg wrote in similar terms to David Ebersman, Facebook's Chief Financial Officer ("CFO") at the time:

One business questions [sic] I've been thinking about recently is how much we should be willing to pay to acquire mobile app companies like Instagram and Path that are building networks that are competitive with our own. These companies have the properties where they have millions of users (up to about 20m at the moment for Instagram), fast growth, a small team (10-25 employees) and no revenue. The businesses are nascent but the networks are established, the brands are already meaningful and if they grow to a large scale they could be very disruptive to us. These entrepreneurs don't want to sell (largely inspired [by] our success), but at a high enough price -- like \$500m or \$1b -- they'd have to consider it. Given that we think our own valuation is fairly aggressive right now and that we're vulnerable in mobile, I'm curious if we should consider going after one or two of them. What do you think about this? (Emphasis added.)

91. Mr. Ebersman cautioned that acquiring a nascent competitor was a poor reason for an acquisition since "someone else will spring up immediately in their place" and "[w]e will

always have upstarts nipping at our heels.” But, as Mr. Zuckerberg explained, Mr. Ebersman was wrong:

It’s a combination of (1) [i.e., neutralizing a potential competitor] and (3) [integrating acquired products into Facebook]. The basic plan would be to buy these companies and leave their products running while over time incorporating the social dynamics they’ve invented into our core products. One thing that may make [neutralizing a potential competitor] more reasonable here is that there are network effects around social products and a finite number of different social mechanics to invent. Once someone wins at a specific mechanic, it’s difficult for others to supplant them without doing something different. It’s possible someone beats Instagram by building something that is better to the point that they get network migration, but this is harder as long as Instagram keeps running as a product. [Integrating acquired products into FB] is also a factor but in reality we already know these companies’ social dynamics and will integrate them over the next 12-24 months anyway. The integration plan involves building their mechanics into our products rather than directly integrating their products if that makes sense. By a combination of (1) and (3), one way of looking at this is that what we’re really buying is time. Even if some new competitors spring[] up, buying Instagram, Path, Foursquare, etc now will give us a year or more to integrate their dynamics before anyone can get close to their scale again. Within that time, if we incorporate the social mechanics they were using, those new products won’t get much traction since we’ll already have their mechanics deployed at scale. (Emphasis added.)

92. On March 9, 2012, Mr. Zuckerberg emailed Facebook’s Vice President of Engineering (and later Chief Technology Officer) Mike Schroepfer to let him know that “Kevin [Systrom] from Instagram called me yesterday to talk about selling his [company] to us. He said he thinks he’ll either raise money or sell at \$500m.” Mr. Schroepfer replied that “not losing strategic position in photos is worth a lot of money.”

93. Similarly, on April 4, 2012, Ms. Sandberg and other senior managers received an email report that compared usage of Instagram and Facebook Blue on the iPhone, which flagged that “Facebook is not that far ahead [of Instagram] on iPhone.” Ms. Sandberg forwarded the email to Mr. Zuckerberg, noting: “This makes me want instagram more[.]”

94. Meanwhile, Facebook employees continued their efforts to compete with Instagram by developing a standalone photo-sharing app for the Facebook Blue network. In an email dated

April 3, 2012, Mr. Schroepfer reminded a Facebook engineer, with respect to Facebook's own photo app: "[W]e need to get into ship mode asap. Not sure if you saw the recent instgram [sic] numbers but we just don't have much time." The engineer responded: "Yeah, Instagram stats are scary and we need to ship asap. I'll communicate to the team that we need to enter into launch mode."

95. On April 9, 2012, Facebook announced that it had reached an agreement to acquire Instagram for \$1 billion, Facebook's most expensive acquisition as of that date. Facebook paid a premium for Instagram, reflecting the significant threat that Instagram posed to Facebook's monopoly. The same day, Mr. Zuckerberg wrote privately to a colleague to celebrate suppressing the threat: "I remember your internal post about how Instagram was our threat and not Google+. You were basically right. One thing about startups though is you can often acquire them."

96. Meanwhile, Facebook employees celebrated the acquisition of an existential threat. For example, on April 10, 2012—two days after the announcement—the head of Facebook's internal M&A group wrote to Mr. Ebersman emphasizing that Instagram had "done a great job in one of the main tenets of social networking as we know it today (photos), but where social networking is clearly headed (mobile)." He noted that "their growth trajectory is pretty incredible, mark asked them yesterday during their visit when they will reach 100m users and they said their projections are for end of this year."

97. Other close observers of Facebook recognized that Facebook had neutralized a significant competitive threat by buying Instagram. For example, in an email dated April 12, 2012, a major Facebook shareholder and former Facebook executive wrote to Instagram co-founder Kevin Systrom:

I have been prodding various FB folks, including Zuck, for at least 6 months to do this, do it quickly, and do it at any cost. From my perspective the risk of not buying

you guys (and someone like Google snapping you up) was beginning to make me, and a lot of other major shareholders, extremely uncomfortable. . . . [I]n the last few years [Facebook] allowed [its] core photos product (and its mobile offering) to languish. As a result the photos product never realized its ultimate potential, and worse, it ran the risk of the unthinkable happening - being eclipsed by another network with a "parallel graph". As you know, photos is the lifeblood of Facebook, propping up the whole network through the usage, interaction, and positive feedback loops it generates, and time on site is directly linked to photo browsing. Going back to 2005, shortly after I launched photos it was generating ~50% of all Facebook page views, a stat which remained fairly steady until the introduction of games on platform. (Emphasis added.)

98. Less than two weeks after the acquisition was announced, Mr. Zuckerberg suggested canceling or scaling back investment in Facebook's own mobile photo app as a direct result of the Instagram deal, writing in an email dated April 22, 2012: "Examples of things we could scale back or cancel: . . . Mobile photos app (since we're acquiring Instagram)." And Facebook did indeed allow it to die, making only two updates to it before discontinuing it entirely in 2014.

99. In the wake of the Instagram acquisition, Facebook employees felt that they no longer needed to fear that a personal social networking competitor would emerge using mobile photo-sharing. For example, in an email dated April 23, 2012, a Facebook business development manager wrote to colleagues that he was unconcerned about the apps Camera+ and Hipstamatic because, among other things, "Instagram is clear winner on iOS and would [be] difficult to compete with at this point[.]" In an October 2012 document, a Facebook product director recognized that its ownership of Instagram meant it "effectively dominate[d] photo sharing," and would not be "require[d] to do much work to maintain or extend" that dominance.

100. Facebook's acquisition of Instagram neutralized a singularly threatening personal social networking competitor and an increasingly serious threat to Facebook Blue's monopoly. An investor slide deck dated May 31, 2011, underscored Instagram's founders' plan "to develop a

complete social networking service.” Mr. Systrom emphasized the breadth of this vision to Mr. Zuckerberg in private correspondence shortly before the acquisition:

[My vision for Instagram] means *not limiting the scope of Instagram to just photos - but to explore other mediums as well which support the original vision of Burbn [Instagram’s original name] being to improve the way we communicate and share in the real world. . . . Is it a next-generation photos app or is it a next-generation communication app?* I don’t mean to get overly philosophical, *but the limits of our ambitions have really yet to be tested, and I want to see that through at least for now. The desire to have an effect at the scale of FB is real and tangible, and one that is actually quite hard to balance in our minds.* (Emphasis added.)

101. Instagram also planned and expected to be an important advertising competitor. An investor slide deck dated May 31, 2011, records Instagram’s plan to earn revenues through mobile advertising. Likewise, in a January 2012 email, Mr. Systrom explained to an external partner: “[W]e believe in the long run brands will pay to either be featured, have their content featured, or run targeted ‘instagrams’ to people as advertisements. Right now we raised enough money that we can work on building a product people love before going to try to sell to advertisers. We want an audience first[.]”

102. By acquiring Instagram, Facebook neutralized Instagram as an independent competitor to Facebook Blue. Since the acquisition, Facebook has taken actions to reduce the impact of Instagram on Facebook Blue, confirming that Instagram is a significant threat to Facebook’s personal social networking monopoly. For instance, after the acquisition, Facebook limited promotions of Instagram that would otherwise have drawn users away from Facebook Blue. This disappointed Mr. Systrom, who complained in a November 2012 email: “you keep mentioning how you can’t promote Instagram until you understand it’s [sic] effect on FB engagement. Who decided this?”

103. Facebook’s Vice President of Growth responded: “Chris [Cox, Vice President of Product,] voiced the concern (which btw I agree with) about instagram’s feed cannibalizing our

own / training users to check multiple feeds—which is why we want to first measure the impact of Instagram’s usage on our engagement / wire things up to make sure it is all accretive. . . . I am not sure growing Instagram blindly through promotions without understanding the impact on FB’s engagement makes sense[.]”

104. Nevertheless, despite Facebook’s efforts to minimize Instagram’s impact on Facebook Blue, Facebook Blue continues to lose ground to Instagram. For example, a September 2017 document noted: “Dynamics across users suggest a sustained turn towards Instagram, in part at Facebook’s expense.” Another internal slide deck put it succinctly: “FB and IG seem either/or for friends+feed app.”

105. In sum, Facebook’s acquisition and control of Instagram represents the neutralization of a significant threat to Facebook Blue’s personal social networking monopoly and the unlawful maintenance of that monopoly by means other than competition on the merits. This conduct deprives users of the benefits of competition from an independent Instagram (either on its own or acquired by a third party), including, among other things: the presence of an additional locus of competitive decision-making and innovation; a check on Facebook Blue’s treatment of and level of service offered to users, including ad load and level of privacy; an alternative provider of personal social networking for users untethered from Facebook’s control; and a spur for Facebook to compete on the merits in response. Facebook’s ownership and control of Instagram also maintains a protective “moat” that deters and hinders competition and entry in personal social networking.

106. Facebook cannot substantiate merger-specific efficiencies or other procompetitive benefits sufficient to justify the Instagram acquisition.

2. Facebook Acquired WhatsApp to Neutralize a Competitive Threat to Its Personal Social Networking Monopoly

107. After neutralizing the threat from Instagram, Facebook turned to what it considered “the next biggest consumer risk” for Facebook Blue: the risk that an app offering mobile messaging services would *enter* the personal social networking market, either by adding personal social networking features or by launching a spinoff personal social networking app. Facebook identified the popular and widely used mobile messaging app, WhatsApp, as the most significant threat in this regard. Once again, though, rather than investing and innovating in an effort to out-compete WhatsApp, Facebook responded to the competitive threat by acquiring it.

108. Facebook’s leadership soon realized that a mobile messaging app that reached sufficient scale could, by adding additional features and functionalities, enter the personal social networking market at competitive scale and undermine or displace Facebook Blue’s personal social networking monopoly. By early 2012, the risk that a successful mobile messaging app available on multiple mobile operating systems could break into personal social networking had become a strategic focus for the company’s leadership. In an April 2012 email, for example, Mr. Zuckerberg identified a troubling global trend of “messaging apps . . . using messages as a springboard to build more general mobile social networks.” And by October 2012, the threat was widely recognized within Facebook, with a Facebook business growth director predicting internally that “[t]his might be the biggest threat we’ve ever faced as a company.”

109. Facebook’s leadership feared that mobile messaging would serve as a path for a serious competitive threat to enter the personal social networking market. For example, in an April 2012 email, a Facebook data scientist noted: “[W]hile these [mobile messaging] apps began as alternatives to SMS, they are increasingly expanding into domains that more closely resemble traditional social-networking services.” A couple of weeks later, he wrote again to colleagues:

“We’re continuing to focus on mobile messenger apps. Two takeaways: several of these apps are trying to expand into more full-fledged social networking; and a number are working on international expansion but with varying degrees of success.” Likewise, in an August 2013 email, the head of Facebook’s internal M&A group warned that “the scary part, of course, is that this kind of mobile messaging is a wedge into broader social activity / sharing on mobile we have historically led in web.”

110. Facebook executives and employees saw this as a serious strategic threat. For example, in an email dated October 4, 2012, Facebook’s Director of Product Management wrote to colleagues on the subject of competition from mobile messaging services: “[T]his is the biggest threat to our product that I’ve ever seen in my 5 years here at Facebook; it’s bigger than G+, and we’re all terrified. These guys actually have a credible strategy: start with the most intimate social graph (I.e. [sic] the ones you message on mobile), and build from there.”

111. Similarly, notes included with a February 2013 Facebook board presentation titled “Mobile Messaging” warned that mobile messaging services were “a threat to our core businesses: both [with respect to] graph and content sharing. [T]hey are building gaming platforms, profiles, and news feeds. [T]hese competitors have all the ingredients for building a mobile-first social network. . . . At its current rate, WhatsApp will be near SMS levels of messaging in 1 year[.]”

112. Mr. Zuckerberg also recognized the strategic value of mobile messaging services as popular and important services in their own right. For example, in April 2012, he wrote: “I actually think that messaging is the single most important app on anyone’s phone. It may not be the biggest business, but it is almost certainly by far the most used app, and therefore it’s a critical strategic point for us.” He continued: “Since we bought Instagram (and extended the close date!), I now feel like we’re ahead in photos but falling increasingly behind in messages.”

113. Facebook's fears soon focused on WhatsApp, the leading OTT mobile messaging services provider and a significant competitive threat to Facebook Blue's personal social networking monopoly. Launched in November 2009, WhatsApp's distinctively strong user experience and top-grade privacy protection had fueled stellar growth. By February 2014, WhatsApp had more than 450 million monthly active users worldwide and was gaining users at a rate of one million per day, placing it "on a path to connect 1 billion people."

114. Unlike other mobile messaging apps that had built a large user base in parts of Asia but had not made inroads in the West, WhatsApp had not only achieved vast scale in Asia and Europe, but was also building share in the United States. Unlike Apple's iMessage app, which is confined to the iOS operating system on Apple devices, WhatsApp was available on all the major smartphone operating systems, positioning it as a credible threat to achieve significant cross-platform scale. And unlike traditional SMS, WhatsApp offered a rich content-sharing ability akin to a social network and increased encryption for privacy-conscious users. As a result, by 2014 WhatsApp was the clear "category leader" in mobile messaging and threatened a move or spin-off into the personal social networking market.

115. In a direct effort to prevent WhatsApp from gaining scale, Facebook in the fall of 2011 launched Facebook Messenger, an app that offered OTT mobile messaging services. On the date of its global launch, the product director of Facebook Messenger wrote to his team that: "We have a great shot of competing with Whatsapp on being the app for serious mobile messaging users worldwide. . . . Whatsapp has 15 million (registered?) users. Let's see how quickly can we get to 10 million daily actives."

116. But Facebook soon realized that it was far behind WhatsApp. To improve its performance and usage, Facebook would have had to spend considerable resources to catch up.

As Mr. Zuckerberg put it in April 2012:

[R]ight now, aside from Facebook integration, WhatsApp is legitimately a better product for mobile messaging than even our standalone Messenger app. It's more reliable and faster for sending messages. You get better signal and feedback via read receipts and last seen times. You can even reach most people easily via the contacts integration. . . . [W]hatsApp sends more mobile messages per day than we do by more than 2x, and they're growing about 3x faster week-over-week. This is a big deal. . . . [U]nfortunately for us, I don't think there's any way to directly minimize the advantage which is their momentum and growth rate. Their growth comes from the product and network they've built, so the best things that we can do is build out our product and network as well and as quickly as we can.

117. Facebook executives saw clearly that WhatsApp credibly threatened to increase its scale in mobile messaging in the United States as it had already done in Europe and elsewhere. One executive wrote to Mr. Zuckerberg on August 8, 2013: “[I] am really worried . . . these guys [WhatsApp] are the real deal!” He continued: “With the window of opportunity to solve the messaging situation shrinking there are a couple of things we might want to add to messenger 3.0 I will run it by you offline briefly to get your thoughts / see if we should double down now (it might be now or never given how fast these guys keep growing / the ambitions they are signaling)[.]” Mr. Zuckerberg responded: “[I]f they build substantive features beyond just making SMS free, that could be enough for them to tip markets like the US where SMS is still the primarily [sic] platform.”

118. Facebook executives and employees repeatedly identified WhatsApp internally as a unique threat to Facebook Blue that it would not be able to forestall through competition via Facebook Messenger. For example:

- a. In May 2013, a Facebook director of product growth commented of WhatsApp's CEO, Jan Koum, that he is “our biggest competitor/threat today[.]”

- b. In July 2013, a director of engineering wrote: “‘If we don’t build the thing that kills Facebook, someone else will,’ and that’s WhatsApp (see below). I personally think companies like WhatsApp are Facebook’s biggest threat . . . [.]”
- c. In August 2013, the Vice President of Growth noted: “We are definitely not playing in the same field as whatsapp does [W]e might be already too late as of today for a ‘start from scratch strategy’ . . . [.]”
- d. In September 2013, the Vice President of Growth wrote further that if WhatsApp became a platform “in a way that makes the user experience better / fuels growth -> we are f.ed / this cements them as leader[.]”

119. Facebook feared not only what WhatsApp would do independently, it also feared what WhatsApp would do in the hands of another purchaser. As Facebook’s Vice President of Growth wrote in October 2012, the “[b]iggest problem would be if it lands in the wrong hands...[.]” Facebook particularly feared an acquisition of WhatsApp by Google. As a manager of engineering and co-founder of a messaging app that Facebook acquired in 2011 warned colleagues in October 2012: “[T]he case for Google acquiring WhatsApp has only gotten stronger in the past 6 months. . . . [I]f [WhatsApp] is acquirable at all, the risks of us not being the acquirer have grown.” Facebook’s Vice President of Growth agreed: “[T]hat is definitely what I would do if I was them...[.]”

120. As with Instagram, Facebook decided to acquire WhatsApp rather than compete with it, in an effort to neutralize a significant competitive threat to its personal social networking monopoly. In April 2012, Mr. Zuckerberg wrote: “[I]’m the most worried about messaging. WhatsApp is already ahead of us in messaging in the same way Instagram was ‘ahead’ of us in photos.” He added: “I’d pay \$1b for them if we could get them.”

121. Facebook first reached out to WhatsApp about a potential acquisition in November 2012; and it reached out again in February 2014, this time with more success. On February 19, 2014, Facebook announced an agreement to buy WhatsApp for \$19 billion. This valuation

reflected the seriousness of the threat that WhatsApp posed to Facebook’s personal social networking monopoly.

122. For the second time in two years, Facebook employees celebrated the neutralization of an existential competitive threat. In an instant message dated February 19, 2014, a Facebook manager noted approvingly: “[W]orth it. Their numbers are through the roof, everyone uses them, especially abroad it [sic]. *Prevents probably the only company which could have grown into the next FB purely on mobile[.] . . . [1]0% of our market cap is worth that[.]*” (Emphasis added.)

123. A few days later, a Facebook executive wrote to colleagues summarizing the WhatsApp acquisition as a “land grab”—a significant response to a limited period of competitive vulnerability, rather than something that would have to be repeated regularly in the future:

A big concern expressed is that we are going to spend 5-10% of our market cap every couple years to shore up our position. I like David’s answer that we think this is a “point in time” where change is coming to the mobile landscape. I hate the word “land grab” but I think that is the best convincing argument and we should own that.

124. Outside Facebook, industry analysts also understood that the WhatsApp acquisition had neutralized a significant competitive threat to Facebook. The investment bank SunTrust Robinson Humphrey laid out the case for the deal with remarkable clarity:

[W]e feel it is easy to see why WhatsApp was more than just a “messaging” threat. Much like how the acquisition of Instagram by Facebook was both an offensive and defensive move, we think this acquisition not only expands the company’s [total addressable market] and capabilities but also covers it’s [sic] flank from the fast growing “messaging companies”. At first glance, one may assume that WhatsApp is “merely a texting app”. However WhatsApp is much more, sharing 600m photos, 100m videos, 200m voice messages, and 19B messages per day. Moreover, users can also share locations, places, and communicate 1-to-1 or 1-to-many. Given this functionality by WhatsApp and the focus of Facebook on communication and linking the world’s population, we think WhatsApp and Facebook were likely to more closely resemble each other over time, potentially creating noteworthy competition, which can now be avoided.

125. Another firm, Bernstein Research, noted of the deal:

The “distance” between the WhatsApp mobile stream and Facebook’s mobile Newsfeed is not great and one could see the emergence of another 1 billion user service that could, over time, become a competitor to Facebook for user engagement. As an independent company or as part of another business such as Google, Twitter, or eBay, WhatsApp graph could be extended and used to create a feasible competitor to Facebook.

126. By acquiring WhatsApp, Facebook has suppressed the competitive threat that WhatsApp poses to Facebook’s personal social networking monopoly. Facebook has kept WhatsApp cabined to providing mobile messaging services rather than allowing WhatsApp to become a competing personal social networking provider, and has limited promotion of WhatsApp in the United States. For example, in February 2019, Mr. Cox told Mr. Zuckerberg he had refused permission for certain forms of WhatsApp promotion and noted the success of WhatsApp in the United States *despite* Facebook’s refusal to actively promote it there: “[W]A is 2/3 of the message volume of Messenger in the U.S., and we’ve barely tried to promote it.”

127. In sum, Facebook’s acquisition and control of WhatsApp represents the neutralization of a significant threat to Facebook Blue’s personal social networking monopoly, and the unlawful maintenance of that monopoly by means other than competition on the merits. This conduct deprives users of the benefits of competition from an independent WhatsApp (either on its own or acquired by a third party), which would have the ability and incentive to enter the U.S. personal social networking market. Moreover, WhatsApp embraced privacy-focused offerings and design, including the principle “of knowing as little about you as possible” and an ads-free subscription model. Such distinctively valuable options for many users would provide an important form of product differentiation for WhatsApp as an independent competitive threat in personal social networking. Facebook’s ownership and control of WhatsApp also maintains a protective “moat” that deters and hinders other mobile messaging apps that could credibly threaten to enter the personal social networking market.

128. Facebook cannot substantiate merger-specific efficiencies or other procompetitive benefits sufficient to justify the WhatsApp acquisition.

129. Facebook’s monopolization through acquisition is ongoing today. Facebook continues to hold and operate Instagram and WhatsApp, which neutralizes their direct competitive threats to Facebook, and continues to keep them positioned to provide a protective “moat” around its personal social networking monopoly. Specifically, Facebook recognizes that so long as it maintains Instagram and WhatsApp operating at scale, it will be harder for new firms to enter and build scale around their respective mechanics. Thus, Facebook benefits from precisely the dynamic that Mr. Zuckerberg emphasized when explaining the value of the Instagram acquisition: “new products won’t get much traction since we’ll already have their mechanics deployed at scale.” Facebook continues to look for other competitive threats and will seek to acquire them unless enjoined from doing so.

B. Facebook Maintained and Enforced Anticompetitive Conditions for Platform Access to Deter Competitive Threats to Its Personal Social Networking Monopoly

130. Even firms as large as Facebook cannot eliminate every competitive threat through acquisition. Facebook therefore supplemented its acquisition campaign with a series of anticompetitive actions designed to protect Facebook’s personal social networking monopoly by hobbling and denying scale to firms that could grow into threats to its monopoly or aid other firms that could do so.

131. As detailed above, Facebook’s decision to allow open interconnections to its platform drove significant benefits to app and web developers and users—and to Facebook. With the wide adoption of Facebook Platform, Facebook became important infrastructure for third-party

apps and obtained immense power over apps' developmental trajectories, competitive decision-making, and investment strategies.

132. Facebook has used this power to deter and suppress competitive threats to its personal social networking monopoly. In order to protect its monopoly, Facebook adopted and required developers to agree to conditional dealing policies that limited third-party apps' ability to engage with Facebook rivals or to develop into rivals themselves.

133. Specifically, Facebook required that developers seeking to use Facebook Platform and access commercially significant APIs agree to contractual restrictions imposed by Facebook, including any new or changed restrictions or policies that Facebook imposed over time. These restrictions limited the types of activities developers could engage in using the platform. As detailed below, these restrictions changed over time, but at various points included requirements that developers agree that their apps would not compete with Facebook (including, at relevant times, by "replicating core functionality" offered by a Facebook product) and would not promote competitors. Facebook punished apps that violated these conditions, cutting off their use of commercially significant API functionality, including the Find Friends API, that allowed them to scale their operations and hindering their ability to develop into stronger competitive threats to Facebook Blue. In short, Facebook entered into agreements through which Facebook exchanged valuable access to key APIs for a commitment by those firms to refrain from competing against Facebook.

134. In cutting off developers from key APIs, Facebook made a deliberate decision to sacrifice the benefits that cut-off apps would otherwise bring to Facebook, including ad spend. This sacrifice was made to achieve a longer-term goal for Facebook: extinguishing potential competitive threats and maintaining monopoly power.

1. Facebook’s Anticompetitive Platform Policies, Embodied in Agreements with Developers, Neutralized Competitive Threats from App Developers

135. In its 2012 Annual Report, Facebook disclosed as a significant risk factor to its operations the possibility that “Platform partners may use information shared by our users through the Facebook Platform in order to develop products or features that compete with us. . . . As a result, our competitors may acquire and engage users at the expense of the growth or engagement of our user base, which may negatively affect our business and financial results.”

136. To address this risk, from July 2011 until December 2018, Facebook introduced and maintained a series of anticompetitive policies, embodied in agreements with app developers governing developers’ access to Facebook Platform.

137. In June 2011, Google launched a personal social network called Google+. On July 27, 2011, Facebook responded by introducing a new policy regarding actions that apps accessing the Facebook Platform could take: “Apps on Facebook may not integrate, link to, promote, distribute, or redirect to any app on any other competing social platform.” This policy was intended to harm the prospects for—and deter the emergence of—competition, including personal social networking competitors. Indeed, the immediate impetus for the policy was Google’s launch of the Google+ personal social network. In a July 27, 2011 email, a Facebook manager explained: “[W]e debated this one a lot. In the absence of knowing what and how google was going to launch, it was hard to get very specific, so we tended towards something broad with the option to tighten up as approach and magnitude of the threat became clear.” Later that same day, another Facebook employee protested the anticompetitive move to colleagues: “I think its [sic] both anti user and sends a message to the world (and probably more importantly to our employees) that we’re scared that we can’t compete on our own merits.”

138. In July and August of 2011, Facebook terminated API access of several third-party developers because their apps allowed users to move their Facebook contacts into Google+ or another social network.

139. Following that, Facebook imposed several other policies restricting app developers' use of Facebook Platform, including Facebook APIs. Through these policies, Facebook used its control over APIs to deter and suppress the threat posed by developers on Facebook Platform.

140. September 2012: no exporting data to competitor social networks. On September 12, 2012, Facebook introduced a new condition to which developers were required to agree: "Competing social networks: You [developers] may not use Facebook Platform to export user data into a competing social network without our permission[.]"

141. January 2013: no promotion / data export to any app that "replicates a core Facebook product or service." On January 25, 2013, Facebook further revised its standard agreement with app developers to add a new condition that prevented developers from "replicating core functionality" (i.e., competing with Facebook), or assisting others who might do so:

Replicating core functionality: You may not use Facebook Platform to promote, or to export user data to, a product or service that replicates a core Facebook product or service without our permission.

142. With the implementation of these anti-competition policies, developers who had relied on Facebook's expressions of openness suddenly found themselves targeted by Facebook. For example, the developers of personal social networking app Path began development in 2010, a time when Facebook was extolling the openness of Platform and inviting even competing apps to interconnect. Similarly, local social network Circle also began development in 2010. For a time, these developers were able to interconnect with Facebook and access Platform APIs to distribute their products.

143. In 2013, Facebook cut off both apps' access to key API functionality because, it said, they were in violation of the new Platform policies. Both developers made changes to their apps in an attempt to mollify Facebook and thus regain access to crucial APIs, but both were rebuffed. In the case of Circle, one Facebook executive explained to another that its access would not be restored even though Circle had taken steps to address Facebook's concerns, because Circle was a local social network that might ultimately emerge as a competitive threat: "While I appreciate that Circle has done all of the items below (or agrees to do them), we ultimately still have the replicating core functionality piece, which can't be 'fixed.'"

144. Facebook continued to evaluate further Platform restrictions on firms that might pose competitive threats, fueling internal dissent, as well as repeated explicit recognition of the importance of API access to the growth and success of apps and businesses in the Facebook Platform ecosystem. In an email from December 2013, a Facebook software engineer wrote:

[S]o we are literally going to group apps into buckets based on how scared we are of them and give them different APIs? How do we ever hope to document this? Put a link at the top of the page that says "Going to be building a messenger app? Click here to filter out the APIs we won't let you use!" And what if an app adds a feature that moves them from 2 to 1? Shit just breaks? And a messaging app can't use Facebook login? So the message is, "if you're going to compete with us at all, make sure you don't integrate with us at all."? I am just dumbfounded.

145. Facebook's Head of Developer Products responded, noting that Facebook already targeted competitive threats for access restrictions: "[Y]eah, not great, but this already happens to some degree - e.g. Path isn't allowed to use certain things. . . . [T]he absolute numbers in terms of who is considered a competitor are pretty small." Another Facebook engineer agreed: "[m]ore than complicated, it's sort of unethical[.]" while an engineering manager noted: "[w]ell, I agree it is bad[.]" The Head of Developer Products replied: "[S]o, I agree this sucks but you are reading this too absolutely. . . . [R]ealistically only the top 5 messaging apps will ever raise an eyebrow."

But the software developer was unsatisfied: “[T]hat feels unethical somehow, but I’m having difficulty explaining how. It just makes me feel like a bad person.” The Head of Developer Products replied: “[T]his is kind a [sic] political safety net internally that allows Platform to escape-hatch situations that the rest of the company isn’t happy about.”

146. A later internal email discussion among Facebook executives reveals that while Facebook’s stated rationale for denying access to particularly important API functionality to apps with messaging or feed functionality was [REDACTED] the real reason for the discriminatory denial of access was [REDACTED] [REDACTED] Facebook’s goal all along was [REDACTED] and the manner in which the policy was implemented left little doubt as to its true purpose to deter competitive threats: [REDACTED]

147. In sum, Facebook has repeatedly conditioned access to commercially significant API functionality on developers’ agreement to terms that prohibited competition with Facebook. As a general matter, interconnection with developers provides significant benefits to Facebook, including increased user engagement and the financial rewards that come from this, but Facebook provided full interconnection access only to those app developers that would not take acts to competitively threaten Facebook.

148. Facebook’s policy conditions and developer agreement terms changed the incentives of app developers and deterred them from developing competing functionalities or supporting competing personal social networks.

149. Moreover, Facebook knew and expected that API access was sufficiently important to affect the incentives of developers and the developmental trajectories of their apps. Developers

were incentivized to make decisions that would not jeopardize their access to Facebook’s APIs. An internal Facebook slide deck dated January 2014 dealing with Facebook Platform policies directly acknowledged the importance of API access, asking whether Facebook was “[c]omfortable altering / killing prospects of many startups[.]”

150. December 2018: removal of explicit anticompetitive conditioning policy. On December 4, 2018, Facebook removed its “core functionality” restrictions. The following day, a Member of the U.K. Parliament published a cache of documents, obtained from litigation between Facebook and the app Six4Three, highlighting Facebook’s anticompetitive conduct toward app developers.

151. Facebook’s suspension of the explicit anticompetitive conditioning policy in December 2018 was driven by anticipated public scrutiny from the release of the documents and did not represent a disavowal by Facebook of the underlying anticompetitive conduct. On the day that Facebook expected the documents to be made public, Ms. Sandberg wrote a note to Facebook’s board of directors stating: “In anticipation of the Six4Three documents becoming public, we that [sic] we are removing Section 4.1 from our developer platform policies. This term prohibited developers from using our APIs to ‘replicate core functionality that Facebook already provides.’ . . . We felt it was important to get this change out before the Six4Three documents are released.” Having suspended its anticompetitive platform policies in response to anticipated public scrutiny, Facebook is likely to reinstitute such policies if such scrutiny passes. Indeed, to this day, Facebook continues to screen developers and can weaponize API access in ways that cement its dominance. Moreover, Facebook is likely to reinstitute its conditioning or other, similar anticompetitive practices when it next faces acute competitive pressures from a period of technological transition. Such pressures may arise, for example, around increased use of artificial

intelligence or around Facebook’s own view that future dominant technology companies will offer users a compelling “metaverse,” a virtual environment that hosts users in digital spaces—and that, as Mr. Zuckerberg recently said, will be “the successor to the mobile Internet.”

152. There is no government sanction barring Facebook from reinstating its policies, and Facebook’s own representations have proven meaningless on multiple occasions. In fact, since 2012, Facebook has paid heavy penalties relating to misrepresentations to both users and regulatory authorities. For example, the FTC in 2011 alleged, in an eight-count complaint, that Facebook made deceptive representations to users about how it shares and protects their data. To resolve the allegations, Facebook agreed to a consent order restricting it from making certain misrepresentations about user privacy and obligating it to create a new privacy program. The Decision and Order became final in August 2012. Yet, only a few months after signing the 2012 Consent Order, Facebook reverted to conduct that would lead the FTC to take enforcement action yet again. Following a subsequent investigation, the FTC brought a second action stating that Facebook’s continued failure to protect user privacy and its series of misrepresentations violated the FTC Act and the 2012 Consent Order. To resolve the new charges, Facebook agreed to a settlement requiring that it pay a record-breaking \$5 billion penalty and imposing new injunctive provisions set forth in modifications to the Decision and Order, including a new corporate structure with additional privacy compliance channels and oversight layers. In granting the motion to accept the settlement and enter the stipulated order, Judge Timothy Kelly wrote that Facebook’s alleged violations of “both the law and the administrative order is stunning.” *United States v. Facebook, Inc.*, 456 F. Supp. 3d 105, 117 (D.D.C. 2020).

153. Facebook has also previously misrepresented information to other authorities. In 2014, as part of Facebook’s efforts to receive clearance from the European Commission to acquire

WhatsApp, Facebook twice represented that it would be unable to establish reliable automated matching between Facebook Blue users' accounts and WhatsApp users' accounts. Approximately two years later, however, Facebook updated WhatsApp's terms of service and privacy policy to allow it to connect WhatsApp users' phone numbers with Facebook users' identities. Following an investigation into Facebook's misrepresentations, the European Commission found that the technical feasibility of matching Facebook Blue and WhatsApp users' identities already existed at the time of Facebook's misrepresentations and that Facebook staff were aware of those capabilities. The European Commission found that Facebook's repeated misrepresentations deprived the European Commission of relevant information needed for assessing the acquisition. As a result, the European Commission fined Facebook €110 million.

2. Facebook's Enforcement of Its Anticompetitive Conditions Deterred Emerging Threats

154. The terms of Facebook's agreements with app developers, including as changed over time by Facebook policy updates, themselves impacted app developers' incentives and ability to compete. App developers generally had to agree to accept the terms in order to use Facebook Platform. Facebook's inclusion of these restrictive contractual provisions changed developers' incentives and ability to compete. And Facebook's decision to aggressively enforce these provisions further ensured the message to developers was crystal clear: competing with Facebook would come at a serious cost. Facebook's actions to enforce these agreements by cutting off access to commercially valuable API functionality were generally directed against apps in three groups.

155. First, Facebook targeted promising apps that provided personal social networking. For example, Facebook took actions against a personal social networking competitor, Path, which was founded by a former Facebook manager. In or around April 2013, Facebook terminated Path's access to key API functionality, and Path's growth subsequently slowed significantly.

156. The second group of targets were promising apps with some social functionality. For example, Circle was an app that was attempting to build a local social network that came to Facebook's attention in December 2013. In proposing to cut off Circle's access to key API functionality, a Facebook manager emphasized Circle's competitive promise: "Circle positions itself as the 'local social network' and has seen some strong growth over the last four days (+800K downloads yesterday, +600K FB logins yesterday, #1 in the App Store in the UK)." While Facebook claimed externally that the termination was because Circle had "spammed" users, internal correspondence after Circle had resolved the spam problems revealed the real reason was because Circle posed a threat: "They are duplicating the [social] graph - and doing a rather excellent job if [sic] it. . . . They are also very directly creating a competing social network on top of that graph." Indeed, Facebook continued to withhold access to API functionality after Circle remedied concerns that Facebook had flagged, with a Facebook manager stating: "While I appreciate that Circle has done all of the items below (or agrees to do them), we ultimately still have the replicating core functionality piece, which can't be 'fixed'." Over the following weeks, Circle's daily new users dropped from six hundred thousand per day to nearly zero.

157. Similarly, in January 2013, Facebook's Director of Platform Partnerships and Operations wrote to colleagues: "[T]witter launched Vine today which lets you shoot multiple short video segments to make one single, 6-second video. As part of their NUX [new user experience], you can find friends via FB. Unless anyone raises objections, we will shut down their friends API access today. [W]e've prepared reactive PR, and I will let Jana know our decision." Mr. Zuckerberg replied: "[Y]up, go for it." By cutting off Vine, Facebook prevented it from accessing important API functionality that would have helped it grow.

158. The third group of targets were promising apps that offered mobile messaging services, that were existing competitors of Facebook Messenger, or that threatened to develop into competitive threats to Facebook Blue. Throughout 2013 and beyond, Facebook blocked mobile messaging, video, and photo apps from using commercially significant API functionality:

- a. In January 2013, Facebook cut off key API access to Voxer, a mobile messaging app featuring voice communication, shortly after Facebook Messenger launched competing voice functionality. Following the cutoff, Voxer shifted away from consumer-facing mobile messaging and pivoted to push-to-talk business communications.
- b. In February 2013, messaging app MessageMe soared in popularity and achieved nearly one million users within a week of release. But shortly after MessageMe reached one million users, Facebook shut off key API access. Following the cutoff, MessageMe stagnated and eventually shut down.
- c. In August 2013, Facebook undertook an enforcement strike against a number of messaging apps simultaneously, with the Head of Developer Enforcement directing colleagues to restrict them from “accessing any read APIs beyond basic info[,]” instructing that “we will not be communicating with the [developers] in any way about these restrictions.”
- d. In October 2016, Facebook cut off certain API functionality to Tribe, a video-messaging app that was generating buzz around that time.

159. Facebook’s enforcement of its anticompetitive conditions on Platform access hindered the ability of individual businesses to grow and threaten Facebook’s personal social networking monopoly.

160. Facebook’s enforcement actions also alerted other apps that they would lose access to commercially significant Facebook APIs if they, too, posed a threat to Facebook’s personal social networking monopoly. For instance, one third-party app contacted Facebook about its Platform practices soon after Facebook cut off Vine. A Facebook manager reported internally about the third-party app: “They’re super concerned about the viability of relying on our platform moving forward when there’s this lingering chance that we can shut them down under grounds like this.”

161. Collectively, Facebook’s announcement and enforcement of its anticompetitive agreements have served to hinder, suppress, and deter the emergence of promising competitive threats to its U.S. personal social networking monopoly. Accordingly, this exclusionary conduct has contributed to the maintenance of Facebook’s U.S. personal social networking monopoly. By deterring entry by other apps and excluding developers whose apps threatened to compete with it, Facebook solidified the network effects that insulate it from competition—effects that persist to this day.

162. Facebook’s actions, individually and in the aggregate, have suppressed the ability and incentive of apps operating on Facebook’s Platform to become competitive threats to Facebook—and its personal social networking monopoly—in at least two ways. First, the terms of the Facebook-mandated agreements that app developers were required to enter in order to access Facebook’s APIs changed developers’ incentives, deterring them from developing features and functionalities that would present a competitive threat to Facebook, or from working with other platforms that might compete with Facebook. Second, enforcement of the agreements—i.e., the actual termination of API access for apps that attracted Facebook’s attention as potential competitive threats—hindered the ability of individual businesses to threaten Facebook’s personal social networking monopoly.

163. There are no procompetitive benefits sufficient to justify the anticompetitive conditioning of access to Facebook Platform.

VI. FACEBOOK’S MONOPOLY POWER

164. Facebook holds monopoly power in the provision of personal social networking in the United States and has held such power continuously since at least 2011. Multiple sources of evidence demonstrate that Facebook has monopoly power with respect to U.S. personal social

networking services. First, Facebook has maintained a dominant share of the relevant market for U.S. personal social networking from 2011 until the present day. Second, direct evidence indicates that Facebook has monopoly power with respect to U.S. personal social networking services. Further, Facebook's monopoly power is durable due to significant entry barriers, including direct network effects and high switching costs.

A. Personal Social Networking in the United States Is a Relevant Market

165. The provision of personal social networking services in the United States is a relevant market.

166. Personal social networking services are a relevant product market. Personal social networking services consist of online services that enable and are used by people to maintain personal relationships and share experiences with friends, family, and other personal connections in a shared social space. Personal social networking services are a unique and distinct type of online service. Three key elements distinguish personal social networking services from other forms of online services provided to users.

167. First, personal social networking services are built on a social graph that maps the connections between users and their friends, family, and other personal connections. The social graph forms the foundation upon which users connect and communicate with their personal connections, and can reflect friendships, online conversations, a desire to see someone's updates, visits to places, and other shared connections to personal interests and activities, including groups, locations, businesses, artists, and hobbies. Personal social networking providers use the social graph as the backbone for the features they offer users, including the two other key elements of personal social networking discussed below.

168. Second, personal social networking services include features that many users regularly employ to interact with personal connections and share their personal experiences in a shared social space, including in a one-to-many “broadcast” format. In this shared social space, which may include a news feed or other similar feature, users share content—such as personal updates, interests, photos, news, and videos—with their personal connections. Personal social networking providers can use the social graph to inform what content they display to users in the shared social space and when. This generally applies to all forms of content on the personal social networking service, including user-created content like user “news feed” posts, publisher-created content like news articles, and advertisements.

169. Third, personal social networking services include features that allow users to find and connect with other users, to make it easier for each user to build and expand their set of personal connections. The social graph also supports this feature by informing which connections are suggested or available to users. Within the United States, the most widely used personal social networking services are Facebook Blue, Instagram, and Snapchat.

170. The relevant geographic market is the United States. The United States is a relevant geographic market for personal social networking services due to several factors, including differences in broadband access and social norms that vary at the country level. In addition, network effects between users are generally stronger between users in the same country, because for most users the vast majority of relevant friends, family, and other personal connections reside in the same country as the user. Accordingly, users in the United States predominantly share content with other users in the United States. For users in the United States, a personal social networking service that is not popular in the United States, even if it is popular in another country, is therefore not reasonably interchangeable with a personal social networking service that is

popular in the United States. Facebook and other industry participants recognize these distinctions and track their performance, and that of rivals, separately by country.

171. As described below, other types of internet-based services available in the United States that facilitate the sharing or consumption of content are not adequate substitutes for personal social networking services.

172. Personal social networking is distinct from, and not reasonably interchangeable with, mobile messaging services. Mobile messaging services do not feature a shared social space in which users can interact, and do not rely upon a social graph that supports users in making connections and sharing experiences with friends and family. Indeed, users of mobile messaging services generally do not and cannot query a mobile messaging service to find contact information they do not already possess, nor can they query the service to find other users connected to the people, places, things, and interests that matter to them. Instead, users of mobile messaging services employ such services primarily to send communications to a small and discrete set of people generally limited to a set of contacts entered by each user. Mr. Zuckerberg described this distinction in a 2019 post, calling personal social networking providers like Facebook Blue “the digital equivalent[] of the town square,” and contrasting the private communication offered by mobile messaging apps like WhatsApp as “the digital equivalent of the living room.”

173. Personal social networking is distinct from, and not reasonably interchangeable with, specialized social networking services that are designed for, and are utilized by users primarily for, sharing a narrow and highly specialized category of content with a narrow and highly specialized set of users for a narrow and distinct set of purposes. As a result, users employ these services primarily to maintain or communicate with a distinct or narrow set of connections—like engaging in professional networking—and not to connect with friends and family and share the

experiences of their personal daily lives. Examples include networks that focus on professional (e.g., LinkedIn) or interest-based (e.g., Strava) connections. Other examples of services that users view as appropriate for limited sharing with a narrow set of connections include some online dating services and Nextdoor, a service which focuses on facilitating sharing only among users that reside in close physical proximity to one another.

174. Personal social networking is distinct from, and not reasonably interchangeable with, online services that focus on the broadcast or discovery of content based on users' interests rather than their personal connections. Prominent examples are Twitter, Reddit, and Pinterest. These services do not focus on connecting friends and family: Twitter focuses on enabling users to stay informed about topics that interest them, while Reddit facilitates conversations centered around topics of interest to the participants. As a result, users employ these services primarily to stay informed about and discuss events relevant to their interests (e.g., Twitter), or engage in conversations with communities of mostly anonymous people who share a particular interest (e.g., Reddit), rather than to connect with friends, family, and other personal connections. Therefore, such services are not reasonable substitutes for personal social networking services. In a similar vein, Pinterest allows users to browse content by conducting searches based on their interests, and allows connections based on such interests, but does not focus on connecting users with friends and family and therefore is not an adequate substitute for personal social networking services that do so.

175. Personal social networking is distinct from, and not reasonably interchangeable with, online services focused on video or audio consumption such as YouTube, Spotify, Netflix, and Hulu. Users employ such services primarily for the passive consumption of specific media content (e.g., videos or music) from and to a wide audience of typically unknown users. These

services are not used primarily to communicate with friends, family, and other personal connections, and therefore are not adequate substitutes for personal social networking services that do so.

176. TikTok is a prominent example of a content broadcasting and consumption service that is not an acceptable substitute for personal social networking services. TikTok users primarily view, create, and share video content to an audience that the poster does not personally know, rather than connect and personally engage with friends and family. The purpose for which users employ TikTok, and the predominant form of interaction on the platform, is not driven by users' desire to interact with networks of friends and family.

177. Facebook's own statements and internal documents indicate that it understands the distinction between personal social networking services and other services. In a July 2009 email to Apple, Facebook's head of mobile business explained to an Apple representative that: "Posting on youtube is posting to a large video web site, but none of your friends are aware you just posted the video and most of them will never see it. Posting on youtube is good for fun, for strangers, for the entire planet to see, if people can find it." In February 2015, a Facebook executive reported to Mr. Zuckerberg that her team had analyzed YouTube usage on Onavo and found that "nothing seems to indicate that cannibalization [between Facebook and Youtube] is happening" and that "YT and Facebook serve nearly disjoint use cases with respect to video consumption." Similarly, in January 2019, Facebook assessed internally that "people are hiring TikTok for very different jobs to Instagram and they are not directly competing in the core areas of focus for our business," and further that "TikTok is not hired for sharing with friends and family."

178. Facebook's own statements and internal documents also indicate that it recognizes that Facebook Blue is providing personal social networking services, and that personal social

networking services are the predominant value and use of Facebook Blue to users. For example, from the beginning, Mr. Zuckerberg has described Facebook Blue as being “about real connections to actual friends, so the stories coming in are of interest to the people receiving them, since they are significant to the person creating them.” More recently, in August 2020, Mr. Zuckerberg testified that “the use cases that we’ve focused on the most over time are helping you connect . . . with your friends and family.” Similarly, Ms. Sandberg testified in September 2020 that the value Facebook Blue provides to its users is “helping you stay in touch with friends and family and helping you know what’s going on with them in a very efficient way.” Additionally, an internal Facebook-conducted poll of users in 2018 confirmed that the top uses of Facebook Blue are to “[s]ee the daily casual moments of people I care about or what they are up to” and “[s]tay up-to-date with people I care about when they have a special moment.” Likewise, internal documents from 2014 and 2015 indicate that Facebook focused on optimizing Facebook Blue to prioritize “friend sharing” over other types of activities on the platform.

179. Instagram provided personal social networking at the time Facebook acquired it. Instagram’s founders set out to build a “mobile social network” and succeeded in doing so. Since its founding, Instagram has provided the defining features of personal social networking, including maintaining a social graph with personal connections, enabling users to interact with their personal connections and share their personal experiences via a shared social space, including in a one-to-many “broadcast” format, and offering features that allow each user to find and connect with other users in order to build a network of personal connections. Additionally, recent internal documents indicate that Facebook has optimized Instagram to prioritize “friend sharing” over other types of interactions.

180. Providers of personal social networking typically sell advertising spots that they display to their users. Any positive indirect network effects (i.e., increases in the value of one service as a function of usage of another) between a personal social networking provider's services to users and its sale of advertising to advertisers operate in only one direction: users either are indifferent to the amount of advertising that the personal social networking provider displays, or would prefer fewer or no advertisements.

B. Facebook's Dominant Share of the U.S. Personal Social Networking Market

181. Facebook provides personal social networking to users via its Facebook Blue and Instagram services, and has been the dominant provider of such services since at least 2011. Further, Facebook Blue and Instagram are the two largest personal social networking services in the United States.

182. Facebook Blue has been the dominant and largest personal social networking service in the United States since at least 2011. Based on analysis of data maintained by Comscore,¹ a commercially-available data source, in every month of last year, more than 200 million people in the United States visited Facebook Blue, with U.S. users spending in total an average of more than four billion minutes per day on the service. Further, in 2020, over 80% of U.S. internet users in each month, on average, used Facebook Blue.

183. Since the 2012 acquisition, Facebook has also controlled Instagram. Based on analysis of Comscore data, last year more than 138 million people in the United States used Instagram each month, with U.S. users spending in total an average of more than 1.5 billion minutes per day on the service. Further, in 2020, approximately 54% of U.S. internet users in each month, on average, used Instagram.

184. After Facebook, Snapchat is currently the next-largest provider of personal social networking services in the United States. Launched in 2011, Snapchat worked to differentiate itself as a mobile messaging service, in particular by offering users the ability to send their contacts “ephemeral” messages that are available for only a short time before becoming inaccessible. Snapchat has added features over time, and now, unlike consumption-focused services (e.g., TikTok), and typical of personal social networking services, Snapchat provides a shared social space that users employ to engage in personal sharing with friends and acquaintances.

185. Snapchat’s user base and engagement level are only a fraction of the size of those of Facebook Blue and Instagram. Based on analysis of Comscore data, last year an average of about 75 million people per month used Snapchat in the United States, spending in total an average of roughly 600 million minutes per day on the service. By comparison, this represents only about 15% of the time that users spent on Facebook Blue. Further, in 2020, only about 28% of U.S. internet users in each month, on average, used Snapchat.

186. Other smaller personal social networking services have launched from time to time in the United States, but have not gotten significant traction and pale in size compared to Facebook. For example, MeWe launched in 2016 with the tagline “No Ads. No Tracking. No BS.” MeWe provides personal social networking services without advertising, but charges users for additional storage and premium features. Based on analysis of Comscore data, last year an average of only 1.4 million people per month visited MeWe in the United States, spending in total an average of less than 5.5 million minutes per day on the service. By comparison, this represents less than 0.15% of the time users spend on Facebook Blue. Further, in 2020, less than 1% of U.S. internet users in each month, on average, used MeWe.

187. Underscoring the significant barriers to entry, multiple firms—including even well-known, sophisticated, and well-financed firms—have also tried but failed to successfully enter the U.S. personal social networking market. For instance, in June 2011, Google launched Google+, a personal social networking offering. The entry of Google+ into the U.S. personal social networking market initially triggered a significant response from Facebook, offering insights into the potential benefits of a non-monopolized relevant market. For example, Ms. Sandberg remarked internally within weeks of the launch of Google+: “For the first time, we have real competition and consumers have real choice....I think this will have the same impact on us as competition has in every industry—we will have to be better to win, our margins may go down over time, we will no longer be able to make as many mistakes and hold onto our core users.” Consistent with this, Facebook executives scrambled to react to Google+—mobilizing efforts to improve user satisfaction with Facebook Blue, including rolling out features to give users greater control over their information.

188. Despite Facebook’s early concern, however, Google+ failed to gain significant traction after its launch. Facebook commented internally in December 2011 about the entry barriers that appeared to be blocking the growth of Google+: “People who are big fans of G+ are having a hard time convincing their friends to participate because 1/ there isn’t yet a meaningful differentiator from Facebook and 2/ switching costs would be high due to friend density on Facebook.” Facebook’s initial concern with and reactions to Google+ therefore dissipated within months of its launch. Google+ continued to operate but without meaningful traction, and it was ultimately shuttered by Google in 2019.

189. Other providers have, like Google+, also exited the U.S. personal social networking services market. Now-defunct providers include Friendster, Myspace, Orkut (which was owned

and operated by Google), and Path. Friendster and Myspace achieved popularity in the United States prior to Facebook's launch and rise in the mid-2000s, but they were surpassed by Facebook by early 2009. Orkut and Path launched after Facebook and, like Google+, failed to attract a mass of users sufficient to sustain the product. Both products were discontinued by the end of 2018.

190. Facebook has today, and has maintained since 2011, a dominant share of the relevant market for U.S. personal social networking services, as measured using multiple metrics: time spent, daily active users ("DAUs"), and monthly active users ("MAUs"). Individually and collectively, these metrics provide significant evidence of Facebook's durable monopoly power in personal social networking services since at least 2011.

191. Measurements of a personal social networking service's active user base and how much users use the service are appropriate measurements of market shares and market power for personal social networking services. This is true for several reasons.

192. First, a personal social networking service's attractiveness to users, and therefore its competitive significance, is related to its number of users and to how intensively its users engage with the service. A consumer is more likely to use and engage with, and less likely to switch away from, a personal social networking service that offers the opportunity to share and engage with a larger number of the person's friends and family. Facebook's ordinary course documents recognize the unique value of a network that facilitates connections and communications between friends and family. A personal social networking provider's ability to offer this opportunity is indicated by its number of users, and by how intensively its users engage with the service.

193. Second, in the ordinary course of business, Facebook's executives and investors, rival personal social networking providers, and industry observers have assessed the performance of Facebook Blue, Instagram, and other personal social networking providers using measures of

active user base and how much people use the services—with DAUs, MAUs, and the amount time spent by users on the service being common units of measure.

194. For example, Facebook’s internal presentations assessing the performance of Facebook Blue and Instagram focus on time spent per month, MAUs, and DAUs. And Facebook relies on these same metrics to assess its rivals’ competitive significance. For example, Mr. Zuckerberg was provided with such metrics when he sought an assessment of Snapchat in December 2014, asking two of his top executives: “Are you guys more worried about them [Snapchat] now than you were over the summer?” In response, Mr. Zuckerberg’s lieutenants provided him with an analysis of Snapchat in different geographic regions, including the United States, based on metrics including MAUs and share of time spent, as well as its “reach,” or the percentage of internet users who used the product in a particular month within a particular geographic area.

195. Other firms that offer or have offered personal social networking services, including Snapchat and Google, have also used MAUs, DAUs, and time spent to gauge their own growth and the performance of others. For example, Snapchat’s recent ordinary course documents compare the performance of Snapchat and Instagram by observing the firms’ MAUs, DAUs, and time spent, among other metrics. Similarly, Google tracked the performance of both Orkut and Google+ using MAUs, DAUs, and time spent. When evaluating a potential acquisition of a personal social networking provider, Google also evaluated the target company’s MAUs, DAUs, and time spent.

196. Commercial data sources track the usage of online services within the United States, including metrics like MAUs, DAUs, and time spent. For example, Comscore is a commercial data provider that directly observes the online behavior of large panels of internet

users, as well as trillions of monthly interactions on tagged websites and apps, and extrapolates industry statistics based on panel behavior and tagged traffic. Comscore data is relied upon by industry participants and observers, including Facebook, to assess the usage of online services within the United States and elsewhere.

197. Facebook itself relies on such commercial data sources to track the performance of Facebook Blue and Instagram. For example, multiple internal Facebook presentations cite Comscore as the source for metrics such as time spent, and Facebook has relied on Comscore statistics as inputs to prepare important materials for Mr. Zuckerberg.

198. Analysis of commercial data tracking online services in the United States indicates that Facebook (through Facebook Blue and Instagram) has had a dominant share of the relevant market for personal social networking services in the United States since 2011, whether measured using time spent, MAUs, or DAUs.

199. Specifically, Facebook's share of the time spent by users of apps providing personal social networking services in the United States has exceeded 80% since 2012 and was at least as high in 2011. In particular:

- a. Analysis of data maintained by Comscore indicates that, from September 2012 through December 2020, Facebook's share of time spent by users of apps providing personal social networking services in the United States has averaged 92% per month, and did not drop below 82% in any month. The combined shares of other providers, including Snapchat, Google+, Myspace, Path, MeWe, Orkut, and Friendster, did not exceed 18% in any month during this period. Of these firms, only Snapchat reached a share above 10%.
- b. Data from Comscore maintained in Facebook's files from 2011 indicates that Facebook's share of time spent by users of apps providing personal social networking services was at least as high as it was in the later 2012 to 2020 period described above.

200. Facebook's share of DAUs of apps providing personal social networking services in the United States has exceeded 70% since 2016 and was at least as high in 2011. In particular:

- a. Comscore maintains daily visitor data separately for each of smartphones, tablets, and desktop computers. Analysis of data maintained by Comscore indicates that, from September 2016 through December 2020, Facebook's share of DAUs among apps providing personal social networking services in the United States averaged 80% per month for smartphones, 86% per month in tablets, and 98% per month for desktop computers. Facebook's share of DAUs has not dropped below 70% in any month on any device-type. The combined shares of other providers, including Snapchat, Google+, Myspace, Path, MeWe, Orkut, and Friendster, did not exceed 30% on any device type during any month in this period. Only Snapchat reached a share higher than 10% on any device-type.
- b. Periodic snapshots of data from Comscore maintained in Facebook's files from 2011 indicate that Facebook's share of DAUs among apps providing personal social networking services was at least as high as it was in the later 2016 to 2020 period described above.

201. Facebook's share of MAUs of apps providing personal social networking services in the United States has exceeded 65% since 2012 and was at least as high in 2011. In particular:

- a. Comscore maintains monthly visitor data separately for mobile devices (including smartphones and tablets) and desktop computers. Analysis of data maintained by Comscore indicates that, from September 2012 to December 2020, Facebook's share of MAUs among apps providing personal social networking services in the United States averaged 76% per month on mobile devices and 90% per month on desktop. During this period, Facebook's share of MAUs did not drop below 68% in mobile or 77% in desktop in any month. The combined shares of other providers, including Snapchat, Google+, Myspace, MeWe, Path, Orkut, and Friendster, did not exceed 32% on either device type, mobile or desktop, in any month during this period.
- b. Data from Comscore maintained in Facebook's files from 2011 indicates that Facebook's share of MAUs among apps providing personal social networking services was at least as high as it was in the later 2012 to 2020 period described above.

202. As indicated above, Facebook recognizes that Facebook Blue and Instagram are predominantly used as personal social networking services. Contrary to that, even if one were to assume, *arguendo*, that half of the time that U.S. users spend on Facebook Blue and Instagram was not in fact spent using personal social networking services, Facebook would still have maintained a dominant share of the U.S. personal social networking market. Specifically, analysis of Comscore time spent data indicates that, even assuming that U.S. users spend only half of their

time on Facebook Blue and Instagram using personal social networking services—while U.S. users spend all of their time on Snapchat, MeWe, Path, Orkut, Google+, Myspace, and Friendster using personal social networking services—Facebook’s share of time spent on U.S. personal social networking services in each month would still have averaged 85% since September 2012, and would have been approximately 70% at its lowest.

203. Other antitrust authorities have also used time spent, MAUs, DAUs, or combinations of those metrics to assess the competitive significance of Facebook in their countries and have concluded that Facebook has market power with respect to offering a user service in their countries. For example:

- a. In 2020, the United Kingdom’s Competition and Markets Authority (“CMA”) concluded that “Facebook has significant and enduring market power in social media” within the United Kingdom. The CMA’s conclusion that Facebook possessed significant market power was based in part on commercially available data, from Comscore, indicating time spent by users on Facebook services and Facebook’s reach among U.K. internet users. The CMA determined that Facebook, including WhatsApp, accounted for more than 70% of the time that U.K. users aged 13 and over spent on social media platforms as of February 2020 and “around 75%” of time spent on social media for a number of years. The CMA also observed that Facebook apps reached over 85% of U.K. internet users.
- b. In 2019, Germany’s Federal Cartel Office (Bundeskartellamt or “BKartA”) determined that Facebook’s data terms of service constituted “an abuse of a dominant position on the market for social networks for private users.” In reaching its determination that Facebook had a dominant position for social networking services within Germany, BKartA relied in part on assessments of DAUs and MAUs of Facebook and other firms within Germany. BKartA concluded that from 2012-2018, for social networking providers within Germany, Facebook enjoyed a DAU share of above 90% and a MAU share above 70%.
- c. In 2019, the Australian Competition and Consumer Commission (“ACCC”) published the results of its Digital Platforms Inquiry which, among other things, assessed Facebook’s “market power” within Australia based on, among other factors, monthly users of social media services within Australia and the time that users spend engaging with the services. Specifically, the ACCC conducted a survey to assess the percentage of digital platform users who used various platforms on a daily basis, and commercially available information regarding Facebook’s monthly audience and time spent. The ACCC concluded, inter alia, “Facebook is insulated from dynamic

competition by barriers to entry and expansion, advantages of scope, and its acquisition strategies.” Among other factors relevant to barriers to entry, the ACCC found that “[t]he size of Facebook’s audience is more than three times larger than the size of Snapchat’s audience (the closest competitor to the Facebook platforms). This network effect creates a significant barrier to entry and expansion.”

204. DAUs and MAUs do not reflect a person’s intensity of use of two different personal social networking services within a day (for DAUs) or within a month (for MAUs). As described herein, DAUs and MAUs are nonetheless measures used by Facebook, and other industry participants and observers, to assess the competitive performance of Facebook and other personal social networking providers. Further, the greater intensity of use of Facebook is established by its predominant share of time spent throughout the relevant period. As such, any imprecision in intensity of use reflected in the DAU and MAU measurements *understates* Facebook’s competitive significance. Even so, Facebook has had a dominant share of DAUs and MAUs during the relevant period.

C. Direct Evidence, Including Historical Events and Market Realities, Confirms that Facebook Has Market Power

205. Multiple sources of other evidence indicate and confirm that Facebook wields significant market power with respect to providing personal social networking services in the United States.

206. First, historical events indicate that even when Facebook’s conduct has caused significant user dissatisfaction, Facebook does not lose significant users or engagement to competitors. This is an indicator of market power. For instance, after news broke in 2018 that Facebook user data had been secretly harvested by a firm known as Cambridge Analytica, Facebook experienced an unparalleled, rapid [REDACTED]. Although users were unhappy with Facebook, the incident [REDACTED] and did not keep Facebook from [REDACTED]. An internal

Facebook analysis likewise [REDACTED]
[REDACTED] on Facebook Blue and concluded there was [REDACTED]
[REDACTED] Facebook's ability to withstand significant user dissatisfaction while experiencing a minimal loss of user engagement on Facebook Blue indicates inelastic demand and market power.

207. More generally, Facebook has also engaged in other activities that have degraded the user experience, including the misusing or mishandling of user data. For example, the FTC charged Facebook with engaging in a range of serious user privacy and related abuses in 2012 and 2019, and both times Facebook agreed to Consent Orders (and, in 2019, to pay a \$5 billion penalty). Facebook's ability to harm users by decreasing product quality, without losing significant user engagement, indicates that Facebook has market power.

208. Second, despite causing significant customer dissatisfaction, Facebook has enjoyed enormous profits for an extended period of time, suggesting both that it has monopoly power and that its personal social networking rivals are not able to overcome entry barriers and challenge its dominance. Since 2011, Facebook has sustained high profits and market capitalization. In 2020, for example, Facebook was the world's sixth largest public company by market capitalization and generated \$29 billion in profits worldwide on approximately \$85 billion in revenue—of which \$42 billion in revenue was generated in the United States and Canada. In the fourth quarter of 2020, Facebook reported its average revenue per user (“ARPU”) was \$53.56 in the United States and Canada. Since 2013—its first full year as a public company—Facebook's profit margin has significantly exceeded that of the average of the firms that make up the S&P 500, as well as that of the firms in the S&P 500 information technology sector. Facebook's durable monopoly power over users is a significant driver of these profits. And investors appear to believe that Facebook's

monopoly power will persist: its exceptional market cap indicates an expected stream of high profits for many years to come.

209. Facebook’s profits massively outstripped equivalent figures from personal social networking rivals in the United States. Snapchat, for example, has never recorded a profit. In 2020, Snapchat reported an overall net loss of \$944.8 million on approximately \$2.5 billion of revenue. Approximately \$1.6 billion of that revenue was generated from users within the United States. In the fourth quarter of 2020, Snapchat’s reported ARPU was \$7.19 in North America.

210. Facebook’s monopoly power is further demonstrated by its ability to crush the prospects of application developers by enforcing restrictive policies that deny potential competitive threats access to Facebook’s enormous base of personal social networking users. As detailed above, Facebook undertook a series of actions to prevent apps that it viewed as competitive threats from interconnecting with Facebook’s Platform. As a result, apps were unable to emerge as meaningful competitive constraints on Facebook’s monopoly power, and in several instances they shut down entirely. Facebook’s ability to exclude firms that could emerge as or aid competitive threats is direct evidence of its monopoly power.

211. Facebook’s ability to harm app developers’ prospects derives from—and illustrates—its dominance of personal social networking services, as a Facebook executive summarized in a May 2012 email to Facebook COO Sheryl Sandberg: “Because we have this critical mass of people, that attracts new people to sign up, it attracts developers who want to find customers for their apps and websites, and it attracts advertisers [who] want to reach the audience.” According to the executive, as early as 2012 Facebook had “[r]eached a size now where you can imagine as a developer that most of your current and future users/customers are on Facebook[.]” noting that “[7] of the top 10 apps in the Apple App store are Facebook enabled[.]”

D. Facebook's Dominant Position is Protected by Barriers to Entry

212. Facebook's dominant position in the U.S. personal social networking market is durable due to significant entry barriers, including direct network effects and high switching costs. Direct network effects refer to user-to-user effects that make a personal social network more valuable as more users join the service. Direct network effects are a significant barrier to entry into personal social networking. Specifically, because a core purpose of personal social networking is to connect and engage with personal connections, it is very difficult for a new entrant to displace an established personal social network in which users' friends and family already participate. As a Facebook executive expressed succinctly in May 2012: "Why are we hard to compete with. Your friends are here. You have made a big investment in your Facebook network and identity." Mr. Zuckerberg himself also recognized the significant advantage Facebook enjoyed due to these structural barriers, writing in April 2012: "[p]erhaps the most valuable thing about Facebook is that it is by far the world's most comprehensive directory of people and their connections [which is] a huge structural advantage[.]"

213. In addition to facing these network effects, a potential entrant in personal social networking services would also have to overcome the high switching costs faced by users. Over time, users of Facebook's and other personal social networks build more connections and develop a history of posts and shared experiences, which they cannot easily transfer to another personal social networking provider. Further, these switching costs can increase over time—a "ratchet effect"—as each user's collection of content and connections, and investment of effort in building each, continually builds with use of the service. Indeed, a Facebook ordinary course document notes that there are "many lines of evidence for a substantial 'ratchet' effect" and that ratchet effects "can confer [a] permanent advantage."

214. Facebook’s dominance among U.S. personal social networking providers in time spent, DAUs, and MAUs suggest that it benefits from strong direct network effects, reinforcing its dominance and making potential rivals’ entry more difficult.

215. Moreover, Facebook’s internal data confirms that it benefits from ratchet effects that have strengthened over time. As one indication, the number of Facebook friends per monthly active Facebook Blue user (measured on the first day of each month) in the United States increased from [REDACTED] in January 2009 to [REDACTED] in October 2019.

216. Facebook has long recognized that users’ switching costs increase as users invest more time in, and post more content to, a personal social networking service. For example, in January 2012, a Facebook executive wrote to Mr. Zuckerberg: “one of the most important ways we can make switching costs very high for users - if we are where all users’ photos reside . . . will be very tough for a user to switch if they can’t take those photos and associated data/comments with them.” Facebook’s increase in photo and video content per user thus provides another indication that the switching costs that protect Facebook’s monopoly power remain significant. From 2012 to 2018, Facebook’s average number of images posted per MAU increased by more than [REDACTED], and its average number of videos posted per MAU increased [REDACTED].

217. Facebook’s anticompetitive conduct has further buttressed barriers to entry. Facebook’s acquisition of Instagram and WhatsApp created a “moat” that protects Facebook from entry into personal social networking by another firm via mobile photo-sharing or mobile messaging. And Facebook’s conditions governing app developers’ access to Facebook Platform created roadblocks for potential rivals that might have emerged as competitive threats.

VII. HARM TO COMPETITION AND CONSUMERS FROM FACEBOOK'S CONDUCT

218. Through the conduct described above, Facebook has hindered, suppressed, and deterred the emergence and growth of rival personal social networking providers and unlawfully maintained its monopoly in the U.S. personal social networking market through means other than competition on the merits.

219. Through the conduct described above, Facebook has excluded potential competitors from effective distribution channels and thus denied these firms the scale needed to emerge as meaningful competitors in the U.S. personal social networking market.

220. The conduct described above harmed, and continues to harm, competition by limiting and suppressing competition that Facebook otherwise would have to face in the provision of personal social networking. As a result, users of personal social networking in the United States have been deprived of the benefits of competition for personal social networking.

221. Competition benefits users in some or all of the following ways: additional innovation (such as the development and introduction of new features, functionalities, and business models to attract and retain users); quality improvements (such as improved features, functionalities, integrity measures, and user experiences to attract and retain users); and consumer choice (such as enabling users to select a personal social networking provider that more closely suits their preferences, including, but not limited to, preferences regarding the amount and nature of advertising, as well as the availability, quality, and variety of data protection privacy options for users, including, but not limited to, options regarding data gathering and data usage practices).

222. Consumers have been harmed by the lack of sufficient competitive constraints on Facebook, which has enabled Facebook to exercise its monopoly power. Without meaningful

competition, Facebook has been able to provide lower levels of service quality on privacy and data protection than it would have to provide in a competitive market.

223. Facebook's continuing illegal monopoly power, and the harms to consumers that flow from it, are particularly intractable given that its illegitimate monopoly is buttressed by strong network effects. Competition can be restored only via an injunction that is tailored to counter these effects.

224. The harm to consumers from Facebook's conduct is particularly severe because Facebook increased barriers to entry and excluded competition during a critical period of technological transition in which nascent competitors could have effectively challenged Facebook's monopoly power. Facebook's anticompetitive conduct stunted innovation and the development of new products that could have disrupted Facebook's monopoly during this period of transition.

225. By monopolizing the U.S. market for personal social networking, Facebook also harmed, and continues to harm, competition for the sale of advertising in the United States. In particular, because personal social networking providers typically monetize their platform through the sale of advertising, Facebook's suppression of competing personal social networking providers has also enabled Facebook to avoid close competition in the supply of advertising services. This has had predictable results on the value that Facebook provides to advertisers: for example, Facebook has been repeatedly criticized for its non-transparent and sometimes unreliable advertising reporting metrics, and for the prevalence of fake accounts on its platform, which undermines advertisers' ability to assess the effectiveness of their ads.

226. Competing personal social networking providers would have been close competitors of Facebook Blue in the supply of advertising. This is because they would have been

able to offer the distinctive advertising features described above that distinguish social advertising from other forms of display advertising, search advertising, and “offline” advertising. Instagram and WhatsApp, in particular, were each well-situated to develop into meaningful competitive constraints on Facebook Blue in the sale of advertising. Instagram’s founders planned to develop advertising offerings to monetize the Instagram personal social network. And an independent WhatsApp that developed a personal social networking offering would have had incentives to monetize it either by offering advertising or pursuing an alternative model. Competing social networks may also have explored and developed alternative advertising models that consumers and advertisers could have preferred.

227. Therefore, Facebook’s anticompetitive conduct to maintain its personal social networking monopoly has also neutralized, suppressed, and deterred competition for the sale of advertising, and deprived advertisers of the benefits of additional competition.

228. The benefits to advertisers of additional competition include some or all of the following: additional users to advertise to (as a result of increased innovation and improved quality of personal social networking for users); lower advertising prices (as additional advertising competition would incentivize reductions in advertising prices); additional innovation (as additional advertising competition would incentivize the development and introduction of additional features, functionalities, and business models in order to attract advertisers); quality improvements (as additional advertising competition would incentivize quality improvement, such as with respect to transparency, integrity, authentication of ad views, customer service, accuracy in reporting performance and other metrics, and brand safety measures such as sensitivity to neighboring content); and choice (as additional advertising competition would enable advertisers to select a personal social networking provider that more closely suits their preferences, including,

but not limited to, preferences regarding different forms of advertising and/or different options for users).

229. Facebook cannot justify this substantial harm to competition with claimed efficiencies, procompetitive benefits, or business justifications that could not be achieved through other means.

**VIII. COUNT 1 – MONOPOLY MAINTENANCE THROUGH
ANTICOMPETITIVE ACQUISITIONS**

230. The FTC re-alleges and incorporates by reference the allegations in paragraphs 1-229 above.

231. At least since 2011, Facebook has had monopoly power in the United States with respect to personal social networking.

232. Facebook has willfully maintained its monopoly power through its course of anticompetitive conduct consisting of its anticompetitive acquisitions. Through its conduct, Facebook has excluded competition and willfully maintained its monopoly in personal social networking through means other than competing on the merits.

233. Facebook's course of conduct is ongoing. Facebook continues to hold and integrate the competitive threats it acquired, including Instagram and WhatsApp. Facebook's continued ownership and operation of Instagram and WhatsApp both neutralizes their direct competitive threats, and creates and maintains a "moat" that protects Facebook from entry into personal social networking by another firm via mobile photo-sharing and mobile messaging. Facebook continues to monitor the industry for competitive threats and likely would seek to acquire any companies that constitute, or could be repositioned to constitute, threats to its personal social networking monopoly.

234. There is no procompetitive justification for Facebook's exclusionary conduct in maintaining its personal social networking monopoly.

235. Facebook's anticompetitive acts constitute unlawful monopolization in violation of Section 2 of the Sherman Act, 15 U.S.C. § 2, and are thus unfair methods of competition in violation of Section 5(a) of the FTC Act, 15 U.S.C. § 45(a).

IX. COUNT 2 – MONOPOLY MAINTENANCE THROUGH AN UNLAWFUL COURSE OF CONDUCT INCLUDING ANTICOMPETITIVE ACQUISITIONS AND ANTICOMPETITIVE CONDITIONAL DEALING POLICIES EMBODIED IN AGREEMENTS GOVERNING DEVELOPERS' ACCESS TO FACEBOOK PLATFORM

236. The FTC re-alleges and incorporates by reference the allegations in paragraphs 1-229 above.

237. At least since 2011, Facebook has had monopoly power in the United States with respect to personal social networking.

238. Facebook has willfully maintained its monopoly power through its course of conduct that includes both anticompetitive acquisitions and its anticompetitive conditional dealing practices, and maintaining and enforcing anticompetitive agreements relating to Facebook Platform to deter competitive threats to its personal social networking monopoly. As described above, Facebook has maintained its personal social networking monopoly through anticompetitive acquisitions, through conditional dealing policies embodied in agreements extracted in exchange for third-party apps' access to Facebook Platform, and by enforcing its anticompetitive agreements by cutting off apps' access to critical APIs.

239. Through its course of conduct, Facebook has excluded competition and willfully maintained its monopoly in personal social networking through means other than competing on the merits.

240. Facebook’s course of conduct is ongoing. Facebook continues to hold and integrate the competitive threats it acquired in Instagram and WhatsApp. Facebook recognizes that its continued ownership and operation of Instagram and WhatsApp both neutralizes their direct competitive threats, and creates and maintains a “moat” that protects Facebook from entry into personal social networking by another firm via mobile photo-sharing and mobile messaging. Facebook continues to monitor the industry for competitive threats, and likely would seek to acquire any companies that constitute, or could be repositioned to constitute, threats to its personal social networking monopoly. Facebook also continues to screen developers and can allow or deny API access for any reason it chooses. Facebook maintained its restrictive agreements with developers until December 2018, when public scrutiny of its policies related to app developers forced it to claim that it would not enforce the policies embodied in the agreements, and Facebook is likely to reinstitute such policies if such scrutiny stops or other conditions change.

241. There is no procompetitive justification for Facebook’s exclusionary conduct in maintaining its personal social networking monopoly.

242. Facebook’s anticompetitive acts constitute unlawful monopolization in violation of Section 2 of the Sherman Act, 15 U.S.C. § 2, and are thus unfair methods of competition in violation of Section 5(a) of the FTC Act, 15 U.S.C. § 45(a).

X. POWER TO GRANT RELIEF

243. Section 13(b) of the FTC Act, 15 U.S.C. § 53(b), empowers this Court to issue a permanent injunction against violations of the FTC Act and, in the exercise of its equitable jurisdiction, to order equitable relief to remedy the injury caused by Facebook’s violations.

XI. PRAYER FOR RELIEF

WHEREFORE, the FTC requests that this Court, as authorized by Section 13(b) of the FTC Act, 15 U.S.C. § 53(b), and pursuant to its own equitable powers, enter final judgment against Facebook, declaring, ordering, and adjudging:

- A. that Facebook's course of conduct, as alleged herein, violates Section 2 of the Sherman Act and thus constitutes an unfair method of competition in violation of Section 5(a) of the FTC Act, 15 U.S.C. § 45(a);
- B. divestiture of assets, divestiture or reconstruction of businesses (including, but not limited to, Instagram and/or WhatsApp), and such other relief sufficient to restore the competition that would exist absent the conduct alleged in the Complaint, including, to the extent reasonably necessary, the provision of ongoing support or services from Facebook to one or more viable and independent business(es);
- C. any other equitable relief necessary to restore competition and remedy the harm to competition caused by Facebook's anticompetitive conduct described above;
- D. a prior notice and prior approval obligation for future mergers and acquisitions;
- E. that Facebook is permanently enjoined from reaching anticompetitive agreements governing, or imposing anticompetitive conditions on, developers' access to APIs and data;
- F. that Facebook is permanently enjoined from engaging in the unlawful conduct described herein;
- G. that Facebook is permanently enjoined from engaging in similar or related conduct in the future;

- H. a requirement to file periodic compliance reports with the FTC, and to submit to such reporting and monitoring obligations as may be reasonable and appropriate; and
- I. any other equitable relief, including, but not limited to, divestiture, restructuring, or interoperability requirements as the Court finds necessary to redress and prevent recurrence of Facebook's violations of law, as alleged herein.

Dated: September 8, 2021

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¹ References to analyses of Comscore data are based on data collected for U.S. desktop users ages 2 and older, and U.S. mobile users ages 18 and older. Comscore data is subject to a disclaimer from Comscore, Inc.: “DUE TO THE CONFIDENTIAL NATURE OF THIS ANALYSIS, COMSCORE, INC. WAS NOT PERMITTED TO REVIEW ITS CONTENTS AND THEREFORE ASSUMES NO RESPONSIBILITY WHATSOEVER FOR ANY THIRD PARTIES’ RELIANCE ON ANY INFORMATION CONTAINED HEREIN. COMSCORE, INC. DISCLAIMS ANY AND ALL LIABILITY REGARDING THE ACCURACY OR COMPLETENESS OF ANY COMSCORE DATA USED IN ASSOCIATION WITH THIS ANALYSIS.”