IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

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and

STATE OF WYOMING
2320 Capitol Avenue
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Plaintiffs,

v.

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

Defendant.

COMPLAINT

The Plaintiff States[1] bring this action, by and through their Attorneys General, for injunctive and other equitable relief under Section 16 of the Clayton Act, 15 U.S.C. § 26, and

[1] Plaintiff States are Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, District of Columbia, Florida, the territory of Guam, Hawaii, Idaho, Illinois, Iowa, Indiana, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.

under common law, to redress violations of Section 2 of the Sherman Act, 15 U.S.C. § 2, and Section 7 of the Clayton Act, 15 U.S.C. § 18, by Facebook, Inc. ("Facebook").

I. Introduction

1. Every day, more than half of the United States population over the age of 13 turns to a Facebook service to keep them in touch with the people, organizations, and interests that matter most to them. For them, Facebook provides an important forum for sharing personal milestones and other intimate details about their lives to friends and family: for example, announcing the birth of a child or grieving the loss of a close relative; sharing photos and videos of children and grandchildren; and debating politics and public events.

2. Users do not pay a cash price to use Facebook. Instead, users exchange their time, attention, and personal data for access to Facebook's services.

3. Facebook makes its money by selling ads. Facebook sells advertising to firms that attach immense value to the user engagement and highly targeted advertising that Facebook can uniquely deliver due to its massive network of users and the vast trove of data it has collected on users, their friends, and their interests. The more data Facebook accumulates by surveilling the activities of its users and the more time the company convinces users to spend engaging on Facebook services, the more money the company makes through its advertising business.

4. For almost a decade, Facebook has had monopoly power in the personal social networking market in the United States. As set forth in detail below, Facebook illegally maintains that monopoly power by deploying a buy-or-bury strategy that thwarts competition and harms both users and advertisers.

5. Facebook's illegal course of conduct has been driven, in part, by fear that the company has fallen behind in important new segments and that emerging firms were "building networks that were competitive with" Facebook's and could be "very disruptive to" the company's dominance. As Facebook's founder and CEO, Mark Zuckerberg observed, "[o]ne thing about startups . . . is you can often acquire them," indicating at other times that such acquisitions would enable Facebook to "build a competitive moat" or "neutralize a competitor."

6. Zuckerberg recognized early that even when these companies were not inclined to sell, if Facebook offered a "high enough price . . . they'd have to consider it." Facebook has coupled its acquisition strategy with exclusionary tactics that snuffed out competitive threats and sent the message to technology firms that, in the words of one participant, if you stepped into Facebook's turf or resisted pressure to sell, Zuckerberg would go into "destroy mode" subjecting your business to the "wrath of Mark." As a result, Facebook has chilled innovation, deterred investment, and forestalled competition in the markets in which it operates, and it continues to do so.

7. Facebook's unlawfully maintained monopoly power gives it wide latitude to set the terms for how its users' private information is collected, used, and protected. In addition, because Facebook decides how and whether the content shared by users is displayed to other users, Facebook's monopoly gives it significant control over how users engage with their closest connections and what content users see when they do. Because Facebook users have nowhere else to go for this important service, the company is able to make decisions about how and whether to display content on the platform and can use the personal information it collects from users solely to further its business interests, free from competitive constraints, even where those choices conflict with the interests and preferences of Facebook users.

8. Users of personal social networking services have suffered and continue to suffer a variety of harms as a consequence of Facebook's illegal conduct, including degraded quality of users' experiences, less choice in personal social networks, suppressed innovation, and reduced investment in potentially competing services. Facebook's conduct deprives users of product improvements and, as a result, users have suffered, and continue to suffer, reductions in the quality and variety of privacy options and content available to them.

9. By eliminating, suppressing, and deterring the emergence and growth of personal social networking rivals, Facebook also harms advertisers in a number of ways, including less transparency to assess the value they receive from advertisements, and harm to their brand due to offensive content on Facebook services.

10. Facebook's anticompetitive campaign to forestall competing services that might threaten its dominance in personal social networking services includes a variety of tactics.

11. Facebook has intensively monitored the growth of scores of applications (or "apps") and purchased those it believed might threaten its monopoly power, sometimes snatching them from other firms in whose hands the acquired firms might flourish and become challengers to Facebook's dominant personal social networking service.

12. Two of Facebook's largest acquisitions, the mobile social photo app Instagram and the mobile messaging service WhatsApp, each posed a unique and dire threat to Facebook's monopoly. Each had enormous and rapidly growing user networks, and each was well-positioned to encroach on Facebook's dominant market position. Facebook kept both services running after the acquisitions to fill the void, so they would not be replaced by another app with the potential to erode Facebook's dominance.

13. When Facebook opted not to purchase a firm presenting a competitive threat, or was rebuffed, Facebook cut off access to key components of its immensely valuable network.

14. As part of its strategy to thwart competitive threats, Facebook pursued an open first–closed later approach in which it first opened its platform to developers so that Facebook's user base would grow and users would engage more deeply on Facebook by using third-party services. This strategy significantly boosted engagement on Facebook, enhanced the data it collected, and made the company's advertising business even more profitable. Later, however, when some of those third-party services appeared to present competitive threats to Facebook's monopoly, Facebook changed its practices and policies to close the application programming interfaces ("APIs") on which those services relied, and it took additional actions to degrade and suppress the quality of their interconnections with Facebook.

15. This policy change thwarted particular competitive threats and more broadly, it told developers in no uncertain terms that valuable access to Facebook's APIs was conditioned on their staying away from Facebook's turf in personal social networking services, thus chilling, deterring, and suppressing competition.

16. For these reasons, Plaintiff States, by and through their Attorneys General, bring this action to halt Facebook's anticompetitive conduct and the harm to the States, their economies, and their citizens that has flowed, and continues to flow, from that conduct; to prevent Facebook from continuing to engage in similar such conduct in the future; and to restore lost competition and enable future competition.

II. The Parties

17. The Plaintiff States bring this action, by and through their Attorneys General, in their sovereign capacities to enforce relevant law, and in their quasi-sovereign capacities to safeguard the wellbeing of the states and their residents.

18. The Attorneys General are the chief legal officers of their respective states. They have authority under federal and state antitrust laws to bring actions to protect the economic wellbeing of their states and residents, and to seek injunctive relief to remedy and protect against harm resulting from violations of those laws.

19. Facebook's actions complained of herein have harmed the general welfare and economies, as well as the residents, of the Plaintiff States.

20. Facebook's actions complained of herein threaten continuing harm to competition and consumers, and to the general welfare and economies of Plaintiff States.

21. Facebook is a Delaware corporation with its headquarters and principal place of business at 1601 Willow Road, Menlo Park, California.

III. Jurisdiction and Venue

22. Facebook is engaged in activities that substantially affect interstate commerce. It provides personal social networking services throughout the United States and sells advertising in connection with these services throughout the United States.

23. This Court has personal jurisdiction over Facebook. Facebook transacts business in this district.

24. This Court has subject matter jurisdiction over this matter under 28 U.S.C. §§ 1331 and 1337.

25. Venue is proper under 15 U.S.C. § 22 and 28 U.S.C. §§ 1391(b) and (c).

IV. The Relevant Market

A. The Personal Social Networking Services Market

26. The provision of personal social networking services ("Personal Social Networking Services" or "Personal Social Networking") in the United States is a relevant market.

27. 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 predominately share 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.

28. 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 from other forms of online services provided to users.

29. 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.

30. 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.

31. Third, Personal Social Networking Services include features that allow users to find and connect with other users to build a network of personal connections. The social graph also supports this feature by informing which connections are suggested or available to users to build their network.

32. Historically, Personal Social Networking providers have refrained from charging a monetary price for providing Personal Social Networking to users, relying instead on monetizing user data and engagement through advertising. Personal Social Networking providers compete for users based on a variety of factors, including quality of the user experience, functionality, and privacy protections, among other factors.

33. While users may engage with other websites and applications, other types of internet services are not adequate substitutes for Personal Social Networking Services.

34. Personal Social Networking Services are distinct from, and not reasonably interchangeable with, specialized social networking services like those that focus on professional (e.g., LinkedIn) or interest-based (e.g., Strava) connections. Specialized networks are designed for, and utilized 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.

35. Personal Social Networking is distinct from, and not reasonably interchangeable with, online video or audio consumption-focused services such as YouTube, Spotify, Netflix, and Hulu. Users employ such services for the passive consumption and posting of specific media content—videos or music—primarily from and to a wide audience of often unknown users. These services are not used primarily to communicate with friends, family, and other personal connections.

36. 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. Zuckerberg described this distinction in a 2019 post, calling personal social networking providers like Facebook "the digital equivalent of a town square," and contrasting the private communication offered by mobile messaging services like WhatsApp as "the digital equivalent of the living room."

37. Some mobile messaging services are platform-specific. For example, iMessage is a mobile messaging service that is only available on devices that utilize Apple's iOS and Mac operating systems. Thus, consumers need an iPhone, iPad, or Mac to send or receive iMessage content (although Apple users may also send and receive SMS messages to non-Apple devices). Android offers similar functionality, where users must have an Android phone to send or receive chats via its Messages application. This platform-specific limitation differentiates these mobile messaging services from cross-platform mobile messaging services like Facebook Messenger and WhatsApp.

38. Facebook has monopoly power in the market for Personal Social Networking Services in the United States.

B. Barriers to Entry

39. The market for Personal Social Networking Services is characterized by several significant barriers to entry that affect the nature of competition in the market.

40. While simply "going live" in the market with a new application that offers social networking services to users is not all that difficult or expensive, meaningful entry into the

Personal Social Networking Services market with the scope and scale required to grow into a viable long-term service with a monetizable business requires, among other things, engagement with a high number of users. There are significant barriers to such meaningful entry.

41. The most significant barrier to entry into the Personal Social Networking Services market is network effects. Because the value of a social networking service to users increases as more and more users join the service, new entrants to the market find it extremely difficult to gain traction when going up against a large, well-established incumbent with millions of users. In short, because a core purpose of a Personal Social Networking Service is to connect and engage with a network of friends and family, it is very difficult for a new entrant to displace a dominant established network without already having built a comparable network for users to connect and engage.

42. A compelling illustration of the impact of network effects is found in the results of a 2011 Facebook survey of users regarding the failure of Google+, a social networking platform introduced in June 2011 by online search behemoth Google, to gain traction in the Personal Social Networking Services market. Facebook's survey found that "[p]eople who are big fans of G+ are having a hard time convincing their friends to participate because 1/thereisn't [sic] yet a meaningful differentiator from Facebook and 2/ switching costs would be high due to friend density on Facebook."

43. Another barrier to meaningful entry into the Personal Social Networking Services market is that there are high switching costs for users substituting another Personal Social Networking Service for Facebook. In January 2012, just three months before Facebook acquired Instagram, Facebook's Business Development Manager Amin Zoufonoun told his colleagues that gaining better functionality in photos was "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 (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."

44. An important type of switching cost is ratchet effects. Ratchet effects are the "sunk costs"—the investment of time that users have made in developing their profiles, data, and relationships on Facebook. One Facebook executive explained the "stickiness" that results from ratchet effects in the Personal Social Networking Services market like this: "The idea is that after you have invested hours and hours in your friend graph or interest graph or follower graph, you are less likely to leave for a new or different service that offers similar functionality."

45. Another barrier to entry into the Personal Social Networking Services market is data. Facebook has a substantial competitive advantage with respect to data, because of its ability to align Facebook user identity across the family of apps it has acquired (Instagram, WhatsApp, and others) and with users' off-Facebook data. The volume, velocity (freshness), and variety of Facebook's user data give it an unprecedented, virtually 360-degree view of the user and her contacts, interests, preferences, and activities, which allows Facebook to personalize content to its users that other platforms are not able to provide.

46. Facebook has a significant advantage over its competitors in the Personal Social Networking Services market in its ability to monetize its services. Barriers in the Personal Social Networking Services market (described above) make putative competitors unlikely to be able to match Facebook's access to users' time and attention, which in turn determines the volume of inventory for ads they can sell to advertisers.

V. Facebook's Business Model: Selling Ads Based on Detailed User Data

47. Facebook's Personal Social Networking Services are about connecting friends and family, but its business model is advertising.

48. While there are other ways to monetize a Personal Social Networking Service, Facebook has chosen to monetize through advertising. Although users don't pay a fee to use Facebook, advertisers pay billions—nearly [redacted] billion in the U.S. alone in 2019—to display their ads on Facebook. They do so because Facebook can offer advertisers unparalleled access to a large, highly engaged user base, and finely targeted advertising audiences derived from the vast quantity of user data the company has amassed.

49. Facebook provides advertisers with a venue for Display Advertising—online advertising where marketers show static or video ads to audiences on websites, apps, or social media—by interspersing those ads with the content that Facebook users access.

50. Social Advertising is a type of Display Advertising that is distinct from other forms of Display Advertising for a number of reasons. Social Advertising is characterized by its social context, native-format ads, and its unique ability to target users based on personalized data regarding users' activities, connections, identity, demographics, interests, and hobbies. Social advertising is also differentiated from other forms of display advertising because the advertisements are integrated into social networking services that facilitate forms of engagement with the advertisement that are not available with other forms of display advertising—such as allowing a user to share an ad with a personal connection or to "like" or follow an advertiser's page. Because Social Advertising can be displayed amid a feed of high-interest content from a user's friends and family, it is particularly appealing for certain kinds of advertisers, and Social Advertising also supports particularly broad reach and high rates of contact with users.

51. Facebook in particular has a unique ability to accurately target users due to its scale, its high level of user engagement, its extensive collection of demographic and behavioral data abouts its users, and its ability to track users both on and off of Facebook to measure outcomes. As Facebook's Chief Operating Officer ("COO"), Sheryl Sandberg, put it "[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 . . . ."

52. Small and medium businesses ("SMBs"), in particular, rely on Social Advertising to reach specific audiences and precisely target their advertisements. These smaller advertisers lack effective substitutes for Social Advertising and rely more heavily on Social Advertising than do larger advertisers, as their limited advertising budgets do not allow them to opt for broad-based traditional advertising such as television advertising. Indeed, Facebook's COO has acknowledged that most SMBs "would never be able to hire a film crew and buy a TV ad." These SMBs are particularly dependent on the Social Advertising available on Facebook and Instagram to reach targeted audiences across the United States.

53. Display Advertising is distinct from traditional non-digital advertising such as billboard, print, radio, and television advertising because it offers the ability to reach, target, and measure ads to the breadth of consumers active online, often using data generated about users through their online activity.

54. Display Advertising is distinct from search advertising. Search advertising is a category of digital advertising where advertisements are shown to users when a user enters a specific key search term in an online search engine, like Google or Bing. Search advertisements typically are links, identified by the word "Ad" or "Sponsored," that are included in search results that are responsive to the user's inquiry. Advertisers buy search advertising to target

users who are actively searching for a particular type of product or service, and advertisers are limited to bidding on a finite set of search terms. Display Advertising, on the other hand, appears as banners, text, or videos on a publisher's web page when a user visits, or in a news feed on Facebook Blue and similar sites. Display Advertising seeks to inform and attract users more generally than the specific key word response of search advertising.

55. At a minimum, Facebook has market power in both Display Advertising and in Social Advertising in the United States.

56. Facebook's sale of advertising services to advertisers is separate and distinct from its provision of services to users. In this respect it bears similarity to a newspaper and the relationship between newspaper readers and advertisers. The services that Facebook offers are not transactions that are jointly consumed by both Facebook users and its advertisers.

57. Network effects between Facebook users and advertisers, if any, are indirect. Network effects are the benefits gained by existing users of a network when others join it. In the presence of two different groups, network effects are considered "indirect" when one group benefits from the growth of the other. Here, advertisers benefit from the large network of Facebook users, but the reverse is not the case—Facebook users are generally indifferent to the number of advertisers placing ads on the Facebook platform or may prefer no advertisers at all. Thus, any network effects between the two groups are indirect and operate only in one direction.

VI. <u>The Rise of Facebook and The Origins of Its Anticompetitive Strategy</u>

A. Background: The Origins of Social Networking

58. The precursors to today's Personal Social Networks were websites on which users could create a webpage, personalize it with photos and messages, and interact with "friends" that

they knew or with whom they had a common interest. In the late 1980s and early 1990s, America Online (AOL) captured the public's imagination by offering not only the ability to send electronic communications to others, but also the ability to create "communities" and searchable "member profiles."

59. The public embraced searching for connections among other users' profiles on the platform, organizing those users into a network, and communicating with that network. By the mid-1990s, websites appeared which focused solely on that functionality, distinct from AOL's email-focused product. Classmates.com and SixDegrees.com were among the earliest of these sites.

60. In 2002, the launch of Friendster and its "Circle of Friends" ushered in the age of social networking. That same year, Myspace entered the market, ultimately taking on Friendster with great success. In 2006, Myspace overtook Google as the most-visited website in the world.

B. Facebook's Path to Monopoly Power in the Personal Social Networking Market

61. Facebook was created in 2004 as the product of then-Harvard undergraduate Mark Zuckerberg's ("Zuckerberg") talent at coding and his desire to create a way for Harvard students to connect with each other by using the internet.

62. The popularity of "The Facebook" at Harvard led Zuckerberg and some fellow students to try expanding the product to other college campuses and even high schools.

63. The endeavor was a success, as students at other universities became quickly enamored with the platform.

64. In 2006, Zuckerberg and his small team launched "The Facebook" beyond the confines of the college student audience, competing in the Personal Social Networking Services market then dominated by Myspace.

65. Public response to Facebook was favorable. Its user base started modestly, but soon began to grow rapidly.

66. In April 2008, Facebook surpassed its primary competitor, Myspace, with over 120 million active users globally. According to market research circulated among executives at Facebook, at the end of 2011, Facebook had 156 million active users in the United States averaging 441 minutes per month on this service. At the same time, Myspace had just 27 million users in the United States averaging merely 10 minutes a month.

67. In October 2008, responding to a request from Facebook Chief Operating Officer Sheryl Sandberg to top Facebook executives, the Vice President of Partnerships wrote that one of his goals was to "try to tip every single major market where FB hasn't yet tipped . . . ." He listed nine countries or regions of the world that fell into that category. The United States was conspicuously absent because Facebook was well aware of its growing power in the United States.

68. At least as early as 2011, Facebook had become the dominant player in the Personal Social Networking Services market. Indeed, Facebook touted to its advertising clients that "Facebook is now 95% of all social media in the US."

69. A 2016 survey revealed that Facebook was "the most widely used social network in the US, with 78% of respondents visiting the platform at least once a month . . . ."

70. Personal Social Networking Services rely on users to post content that can be displayed to other users. A 2018 Facebook internal study found that [redacted]

[redacted]

71. Facebook offers a suite of services to its users. The core of that family of services is the original Facebook product, or Facebook Blue, as it is known internally. Facebook Blue is the company's most popular product, and it is also—by far—the largest Personal Social Networking Service in the United States. In addition to Facebook Blue, Facebook's publicly branded services include Facebook Messenger, a mobile messaging service, Instagram, another Personal Social Networking Service, and WhatsApp, another mobile messaging service.

72. Facebook's monopoly position in the Personal Social Networking Services market has proven to be durable, continuing to the present day.

C. Facebook's Features Enabled it to Win Early Battles with Competitors

73. Facebook Blue's meteoric growth was unprecedented in the Personal Social Networking Services market. That early growth was largely attributable to offering users what they then desired but were not getting from other social networking sites. Facebook competed on innovative features (fueled by its open platform policies discussed below), a higher-quality user experience, and better privacy protections than were then available on Myspace, which was failing in all three categories.

74. Indeed, Facebook's early strategy for competing against its rivals centered around the view that "the user is king." During those early years, the company focused on changes to its services that would make "Facebook a more desirable place for users to connect and share information."

75. Facebook's efforts to distinguish itself from rival Myspace as the more premium, private, personal social networking experience were successful, as industry analysts, the

press, and Facebook's own brand studies confirmed that Facebook had strategically positioned Facebook Blue during this very early period as "best in class" on privacy.

76. In a 2008 internal report entitled "Facebook Secret Sauce," the company identified as one of the four pillars of its success the fact that it was responsive to users' desire for privacy and gave them control over their data: "Users will share more information if given more control over who they are sharing with and how they share."

77. Similarly, Facebook distinguished itself from Myspace by urging users to participate under their authentic identities, which allowed Facebook Blue's users to be more confident that the personal information they were sharing on Facebook Blue was being shared with specific individuals known to the user, typically the user's friends and family.

78. Early in its history, Facebook was sensitive and responsive to users' feedback on privacy. In 2007, Facebook introduced and then quickly rolled back a controversial product called Beacon, which showed purchases that users made on third-party websites on the user's Facebook Blue news feed. After public backlash, Facebook allowed users to opt out. Similarly, in early 2009, a public outcry ensued after Facebook updated its terms of service to allow Facebook to continue to use users' content after they removed it from Facebook. Facebook responded by reverting to the previous terms of service (which barred such use), and inviting users to contribute to a Bill of Rights and Responsibilities.

D. Open Access Policies Were Key to Facebook's Growth and Success

79. One critical reason for Facebook's accelerated growth trajectory was a series of initiatives that opened Facebook up to mutually beneficial partnerships with third parties.

80. In 2007, Facebook launched Facebook Platform—an innovative tool that set it apart from other firms. Facebook Platform had a set of open APIs—mechanisms for sharing data

between independent services—that enabled developers to build applications that interoperated with the Facebook social networking site. Developers scrambled to create applications on the Facebook Platform, enhancing Facebook Blue's functionality, driving more users to the Facebook site, and increasing the engagement of existing users. Facebook Platform created a symbiotic relationship between Facebook and developers that yielded significant value for both.

81. In 2008, Facebook introduced Facebook Connect—a tool that facilitated still greater interconnection with Facebook Blue. Through Facebook Connect, users could sign in to third-party websites using their Facebook credentials. By 2011, Facebook Connect had become one of the most popular ways to sign in to services across the internet as users took advantage of the efficiency afforded to them. As was the case with the Facebook Platform, third-party sites and Facebook itself found the relationship fostered by Facebook Connect to be a mutually valuable one. Facebook provided third parties with information about users and their friends and drove traffic to third-party sites by making it easier for users to sign in. In return, Facebook captured valuable data about users' off-Facebook activity to enhance its social graph and ability to target advertising.

82. In April 2010, Facebook invited even more interaction with third-party websites and apps. It launched the Open Graph API, enabling those sites to add plug-ins, such as the Facebook "Like" button that allowed Facebook Blue users to become "fans" of the third-party site. The sites were highly motivated to install the Like button and encourage its use, as a "Like" would be shared on the user's news feed and profile, thereby promoting the site to the user's friends and family. One week after the introduction of Open Graph, 50,000 websites had installed Open Graph plug-ins. Those sites realized the immediate benefits of a massive new distribution channel, and Facebook's growth increased accordingly.

E. Facebook Hones its Tactics to Avoid Competition on the Merits

83. Even as Facebook gained market power through competition, its leadership team honed some tactics that it would later use to lock in the company's power. These tactics sought to extinguish or impede, rather than outperform or out-innovate, any competitive threat that might challenge Facebook's dominance.

84. One important example was Facebook's approach to acquisitions. Even in the earlier days, the driving motivation for Facebook's decision to acquire some companies was to harm competition rather than strengthen the quality of its products and services.

85. An example of this is Facebook's acquisition of FriendFeed. FriendFeed was a real-time feed aggregator that pulled together feed content from other sources on its main page, similar to Facebook. Early conversations about an acquisition of FriendFeed in 2007 focused on the potential value of bringing that company's engineering talent on board. Ultimately, however, it was the fear that FriendFeed posed a competitive threat on its own or in the hands of a potential rival that drove Facebook to take action. In August 2009, believing that Twitter was in the process of trying to acquire FriendFeed, Facebook made an aggressive overture to the company. Chief Product Officer Chris Cox told Zuckerberg that blocking Twitter from acquiring this asset was of paramount importance, saying: "Them going to twitter would be a bad scene."

86. On August 10, 2009, FriendFeed accepted Facebook's offer. As Facebook employees internally discussed via email on the day of the acquisition, "I remember you said to me a long time (6 months ago): 'we can just buy them' when I said to you that Friendfeed is the company I fear most. That was prescient! :)."

87. The story of Facebook's relationship with a small Malaysian company called Octazen Solutions ("Octazen") is similarly revealing. In December of 2008 Facebook signed a licensing deal for contact importing services with Octazen. Contact importing services pull contacts from a user's digital address book, format the data into a prescribed structure, and import it for use in an app.

88. Facebook's Octazen license began to pay off immediately, as it gave Facebook valuable access to contact information for significant numbers of prospective users. Adding users is especially valuable to Personal Social Networking Services, because existing users engage more on those services when they have more friend connections.

89. In July 2009, Head of International Growth Javier Olivan learned that Twitter was also licensing Octazen's services. He emailed two other Facebook executives to suggest that, as valuable as *licensing* Octazen's services was proving to be, *owning* them would be even better. Complete control of Octazen would enable Facebook to deprive rivals and potential rivals of this important resource. Olivan explained his rationale: "Would it make sense to try to buy these guys? By doing so, we would: 1) Keep in-house the expertise of building and maintaining improved importers 2) Let [sic] everyone else in the industry without a provider for contact importer libraries."

90. One of those executives agreed, responding: "Yes – smart idea. we should buy them and own this leverage point . . . ." Focusing not on what Octazen would add to Facebook, but rather on the fact that the acquisition would give Facebook the ability to deny rivals a key technology for generating network effects, the executive explained that: "an acquisition could be interesting if for a few million we could slow some competitors down for a quarter or so . . . ."

91. Facebook and Octazen reached an agreement for the acquisition on February 19, 2010. Immediately after the acquisition was completed, Facebook terminated all third-party access to Octazen.

F. Facebook's Competitive Response to The Threat from Google

92. Facebook faced a daunting challenge in 2010. Internet search giant Google was preparing to launch its own social network, GoogleMe (later known as Google+).

93. Google took longer than Facebook had anticipated to launch Google+, rolling it out to the public the following summer on June 28, 2011. Facebook responded, when faced with the threat of serious competition for the first time since Myspace was vanquished, with a sharp focus on improving. As Sandberg put it: "for the first time, we have real competition and consumers have real choice . . . we will have to be better to win . . . ."

94. The company was focused on improvements to its site and the user experience, as well as new product development during this period. One Facebook executive summarized the "most urgent priorities in response to the competitive threat from Google+" for the product and engineering team as including: "roll-out 1 new product per week in rolling thunder fashion," and "improve site stability / performance / quality to shore-up our user experience."

95. In the summer of 2011, Facebook changed course on planned privacy changes, in response to competitive pressure from Google+. For example, at the time, Facebook allowed users to "untag" themselves from photos where another user had "tagged" them (meaning that another user had identified them as a person represented in the photo). Facebook was planning to eliminate the ability of users to "untag" themselves, but it was concerned that this change, among others, might court controversy because the changes reduced the user's control over their privacy. As one Facebook executive put it, "IF ever there was a time to AVOID controversy, it

would be when the world is comparing our offerings to G+." He then recommended that Facebook save any controversial changes "until the direct competitive comparisons begin to die down." Ultimately, Facebook dialed back a number of its planned changes, and in particular continued to allow users to "untag" themselves in photos.

96. By early 2012, Facebook saw signs that Google+ was failing to gain traction with users. Google+ had succeeded in attracting a significant number of users, but those users' engagement with the platform was significantly below Facebook's. Personal Social Networking Services rely on users to generate and share content, which attracts the attention of other users, who generate and share more content, and so on. New users can be discouraged by low levels of content and disinclined to further engage with a social network that feels devoid of content. The results of a Facebook research study pointed to network effects as a key factor to the competitor's difficulties. It found that Google+ users were "enthusiastic," but that they were "having a hard time convincing their friends to participate because 1/ thereisn't [sic] yet a meaningful differentiator from Facebook and 2/ switching costs would be high due to friend density on Facebook."

97. Google+ failed to achieve success as a social network, and on October 8, 2018, Google announced that it was finally "sunsetting" the product.

VII. Facebook's Anticompetitive Conduct: Buy or Bury the Competition

98. After the Google+ threat had passed, Facebook increasingly took anticompetitive steps to maintain its monopoly in the Personal Social Networking Services market.

99. Flush with new investor funding from its May 2012 initial public offering (IPO) which yielded $11.8 billion in cash, the most ever for an internet company at that time, Facebook

was well-positioned to pursue an anticompetitive strategy aimed at maintaining its monopoly power by constructing a "moat" that competitors could not cross.

100. By 2012, the advent of mobile devices had begun to transform the internet. Mobile devices changed consumer behavior in at least two important ways. First, consumers increasingly used mobile devices to send texts or messages to friends and family. Second, many smartphones also had built-in cameras, enabling consumers to take pictures wherever and whenever they wanted—pictures they wanted to share. Companies started building internet services to leverage and support these new functions. Moreover, these new services were—unlike Facebook—built to look and function well on a mobile device in the first instance. These developments presented unique threats to Facebook's dominance.

101. By early 2012, other companies were well ahead of Facebook in the mobile world. This frightened Facebook executives at the highest level. They were afraid that one of those mobile applications could deploy an attractive new feature designed for the mobile environment to grow quickly in the Personal Social Networking market and displace Facebook Blue's dominant position, or that other applications would soon "morph" into a Personal Social Network that would compete with, or even unseat, Facebook Blue.

102. For example, in February 2012, Zuckerberg wrote about a mobile-first application called Instagram, which allowed users to share photographs with a network of personal connections. Zuckerberg worried that Facebook Blue was already "very behind" Instagram "in both functionality and brand on how one of the core use cases of Facebook will evolve in the mobile world." Being so far behind, said Zuckerberg, was "really scary" and therefore a reason that Facebook "might want to consider paying a lot of money" for Instagram. When a high-

ranking Facebook executive asked whether one of Zuckerberg's goals in trying to purchase Instagram was to "neutralize a potential competitor," Zuckerberg answered that it was.

103. Facebook executives also soon became frightened about the threat to Facebook's dominance by companies that offered cross-platform mobile messaging services that allowed users to communicate across mobile device operating platforms. As Javier Olivan, Facebook's VP of Growth, put it in January 2013, the prospect of "mobile + messenger services morphing into fully fleshed SSN [social networking] sites" was "the biggest competitive threat we face as a business." Zuckerberg agreed, writing in February 2013 that the risk of a mobile messaging service transforming into a broader social network presented the "biggest competitive vector" for Facebook.

104. Facebook's strategy in response to these threats was to buy or bury rivals or potential rivals that presented a viable competitive threat, either standing alone or if acquired by a larger firm. Although the goal was singular, Facebook used two primary tactics to achieve it. Through a continuing string of acquisitions of all sizes, and exclusionary deployment of its power and position to block potential rivals from access to key inputs, Facebook achieved the outcome it desired—its monopoly remained intact and stronger than ever, and remains so today.

A. Buying Competitive Advantage and Eliminating Threats

105. From 2012 to June 2020, Facebook acquired dozens of companies, and pursued many more acquisitions that did not come to fruition.

106. Some of those acquisitions were competitively neutral, but others helped Facebook maintain its monopoly power by eliminating firms that presented competitive threats to Facebook—either standing alone or combined with another potential competitor. Others

deprived potential competitors of key inputs or added tools that Facebook used to surveil and acquire firms that presented competitive threats.

1. Instagram

107. One of Facebook's first significant acquisitions under this defensive strategy was its April 2012 purchase of Instagram—a company with 16 employees and zero revenue—for $1 billion. As described above, Instagram presented a significant competitive threat at a time of particular vulnerability for Facebook, because of Instagram's swiftly growing user base and its innovative approach to sharing and editing photos taken on rapidly proliferating mobile phones.

108. Facebook was keenly aware that it had fallen behind in photos and in the transition to mobile. It recognized that once a firm such as Instagram obtained a robust enough network of users who shared photos with one another, it could become a full-featured Personal Social Networking Service to rival Facebook Blue.

109. Instagram was a young photo-sharing startup built for mobile, launched by founders Kevin Systrom and Mike Krieger in October 2010. Camera phones had become so popular by that time that most consumers rarely went anywhere without a camera in hand. Instagram recognized this phenomenon and capitalized on it. Within hours of its public launch, Instagram had more than 10,000 users.

110. Instagram continued to grow at an astounding pace, as word spread of the quality of its user experience and innovative features. Instagram was honored with Apple's "iPhone App of the Year" award at the end of 2011. The size of Instagram's rapidly expanding user base was especially remarkable given that when it was first introduced, it was only available on iPhones, not Android phones.

111. Meanwhile, Facebook was starting to feel the heat from the enthusiastic reception for Instagram. On January 9, 2012, Zuckerberg told his top executives that mobile apps like Instagram had "features that users want" and that those features provided "ways for those apps to replace us."

112. On January 21, 2012, a Facebook investor informed Zuckerberg that he was looking into investing in Instagram. Instagram, the investor believed, was raising investor money based upon a $500 million valuation. Zuckerberg viewed that valuation as "crazy," given that the app was still essentially in its infancy. Far from dismissing the idea, however, Zuckerberg went on to say that if the rumors were true that "50% of their MAUs [monthly active users were] coming back daily," he found that both interesting and surprising.

113. In the coming weeks, Zuckerberg's interest in Instagram continued to grow. He posted to other executives on an internal company message board: "I wonder if we should consider buying Instagram, even if it costs ~$500m." He explained that Facebook's meager attempt at responding to the growing public demand for mobile photo-sharing functionality by creating a feature on Facebook Blue called "Snap" or "Facebook Camera" left it vulnerable to competition from Instagram's far-superior product.

114. In late February 2012, Zuckerberg asked for input from Facebook Chief Financial Officer David Ebersman on the prospect of acquiring Instagram and another social app, Path (whose user network was also expanding rapidly, and which Facebook later crippled by cutting off access to critical APIs). Zuckerberg said to Ebersman:

> 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 . . . . 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 our success), [sic] but at a high enough price – like $500m or $1b – they'd have to consider it. (Emphasis added)

115. Ebersman reacted to the idea cautiously in light of the high price. He asked for further explanation on the motivation for the proposed acquisition. Specifically, he probed whether Zuckerberg was trying to "1) *neutralize a potential competitor?* . . . 2) acquire talent? . . . 3) integrate their products with ours in order to improve our service? . . . [or] 4) other?" In response, Zuckerberg admitted: "*It's a combination of (1) and (3)*" (Emphasis added). He went on to explain that "what we're really buying is time. Even if some new competitors springs [sic] 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 . . . . [T]hose new products won't get much traction since we'll already have their mechanics deployed at scale*" (Emphasis added).

116. Zuckerberg understood that by acquiring Instagram and its "established" network, Facebook could reinforce strong network effects and high switching costs that protected its dominance in Personal Social Networking. Such an acquisition would make it difficult for an Instagram alternative to break into the market and challenge Instagram's position—or Facebook's. Alternatively, Zuckerberg knew that if Instagram was able to continue its growth, either on its own or combined with the capabilities of another firm, those very same dynamics could be devastating for Facebook Blue.

117. On April 4, 2012, Sandberg forwarded to Zuckerberg a "Competition update" that tracked metrics for major competitive threats as well as providing "early recognition of potentially disruptive smaller services." The statistics that it contained on Instagram showed "remarkable growth" in the first quarter, and that Instagram photos were receiving nearly as many "Likes" per day as Facebook Blue. Sandberg added simply: "This makes me want Instagram more."

118. On April 6, 2012, Instagram succeeded in raising $50 million from a trio of venture capital investors based on a $500 million valuation.

119. Zuckerberg recognized that the Instagram investors' $500 million valuation did not take into account the value that Facebook would realize if it no longer had to deal with the competitive threat presented by the innovative and forward-thinking Instagram. He had previously told his executives: "[W]e might want to consider paying a lot of money for this." Having built in a premium for the value of neutralizing this threat, Zuckerberg went to Kevin Systrom, CEO of Instagram, with a $1 billion offer, which was accepted on April 8, 2012.

120. Zuckerberg's success in convincing Systrom to sell was based in no small part upon Zuckerberg's growing reputation for wielding Facebook's power as a sword. After the initial overture by Zuckerberg in February, Systrom contacted Instagram investor Matt Cohler for advice. Systrom asked: "you know him better than I do . . . . Will he go into destroy mode if I say no." Cohler's response was blunt: "probably (and probably also if we just don't engage at all)." Systrom summed up the futility of trying to fend off Facebook once it had entered "destroy mode" by saying: "bottom line I don't think we'll ever escape the wrath of mark . . . it just depends how long we avoid it . . . ." Because Instagram relied in significant part on Facebook for exposure and distribution, invoking Zuckerberg's "wrath" would have negative consequences for the company.

121. Indeed, Zuckerberg made it clear to Systrom that there would be ominous ramifications if Instagram did not partner with Facebook: "At some point soon, you'll need to figure out how you actually want to work with us. This can be an acquisition, through a close relationship with Open Graph, through an arms length relationship using our traditional APIs, or perhaps not at all. . . . Of course, at the same time we're developing our own photos strategy, so

how we engage now will determine how much we're partners vs. competitors down the line -- and I'd like to make sure we decide that thoughtfully as well."

122. At the time of the acquisition, Instagram had no revenue stream. A significant portion of the purchase price was a premium paid to remove a competitive threat from the market. Zuckerberg defended the billion-dollar price tag by saying that the small size of the company was deceiving because it was "on the path to win."

123. On the day the Instagram purchase agreement was signed, Zuckerberg wrote to a Facebook Product Designer, confirming that the Instagram acquisition was intended to extinguish a competitive threat, saying: "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."

124. Shortly after announcing the Instagram acquisition, Zuckerberg suggested winding down work on Facebook Camera, 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, discontinuing it entirely in 2014.

125. Facebook's conduct after the Instagram acquisition confirmed that it had feared that Facebook Blue would be cannibalized by Instagram. For example, in 2018, [redacted]

126. [redacted]

127. Following the acquisition, Facebook also degraded Instagram users' privacy by matching Instagram and Facebook Blue accounts so that Facebook could use information that users had shared with Facebook Blue to serve ads to those users on Instagram.

128. Instagram had presented a uniquely powerful competitive threat to Facebook's Personal Social Networking Services market monopoly. Rather than responding to the threat with innovative product development, Facebook simply eliminated Instagram through acquisition. Facebook's acquisition of Instagram substantially lessened competition and further entrenched Facebook's monopoly power in Personal Social Networking Services.

2. [redacted]

129. In [redacted], Zuckerberg paid a personal visit to [redacted], founder of [redacted] and creator of the app [redacted].

130. Founded in [redacted] by [redacted] was a photo-sharing app, but unlike Instagram's broad sharing model, [redacted] The app quickly became extremely popular, especially with younger users.

131. In [redacted], Zuckerberg's team provided him with an assessment of the new app: [redacted] one said. Another reported that [redacted] was [redacted]

[redacted] Zuckerberg responded: [redacted]

132. When Zuckerberg met with [redacted], he informed [redacted] that Facebook was on the verge of releasing an app with virtually the same functionality as [redacted], implying that Facebook intended to crush [redacted] if it refused to sell.

133. The meeting did not lead to formal acquisition discussions. Consistent with its buy-or-bury approach, Facebook took two steps against the rival. First, as Zuckerberg had threatened, Facebook released a [redacted]. Then, in [redacted], Zuckerberg gave the order to make an even more aggressive move towards [redacted]—to cut off [redacted] API access to the Facebook Platform. A Facebook executive conveyed the directive: [redacted] Facebook accordingly decided that it would [redacted], in turn, [redacted]

134. Zuckerberg remained intent on keeping [redacted] out of the hands of any firm with the resources to transform [redacted] into a major competitive threat to Facebook. In [redacted], for example, Zuckerberg offered [redacted] Several weeks later, with [redacted] still refusing to sell, Zuckerberg reached out to [redacted] he instructed.

135. Zuckerberg's overtures to [redacted] continued throughout [redacted], but [redacted] steadfastly refused the overtures. The new Facebook app that Zuckerberg had threatened [redacted] failed to gain traction in the marketplace. In [redacted] Zuckerberg reached out to [redacted] again, writing: [redacted] declined to engage with Zuckerberg's overture.

136. Facebook's efforts to coerce [redacted] into selling are further evidence of its practice of using acquisitions and other anticompetitive tactics to damage competition and entrench its monopoly.

3. Onavo

137. In October 2013, Facebook made another acquisition designed to hamper competition. But this time, instead of acquiring a rival or potential rival, Facebook acquired an important tool, "the planet's largest mobile [data] panel," with which Facebook could intensively monitor scores of applications and identify and assess emerging competitive threats, including, for example, WhatsApp. The acquisition of the company that owned that tool—an Israeli data analytics company, Onavo Mobile, Ltd ("Onavo")—also enabled Facebook to deny other firms that might seek to acquire these emerging threats access to the Onavo tool.

138. Onavo's core mission as a startup had been to provide data compression and virtual private network ("VPN") services to consumers. By virtue of the data that ran through its service, however, Onavo had the ingredients necessary to offer rich data analytics and the ability to monitor app usage, mobile and Wi-Fi data usage, location data, and in-app user engagement with content by millions of users on their mobile devices.

139. Onavo obtained its data in real time from its network of millions of mobile users that had downloaded the Onavo apps and used its VPNs to access websites around the world—and licensed this data through its "Insights" service. It described itself as the "most comprehensive market intelligence service in the mobile industry." Before its acquisition, Onavo's technology helped its growing roster of technology and venture capital clients, including Facebook, assess and quantify metrics like market trends, user engagement, and user behavior on new and emerging apps and internet services.

140. In April 2013, Facebook had entered into a licensing agreement with Onavo. During the negotiation of this licensing agreement, Facebook demanded that a provision be included that gave Facebook the right to notice and an opportunity to bid in the event Onavo considered being acquired by another company. Onavo founder Guy Rosen told the Onavo board that such a demand "has become [Facebook's] standard M.O. these days with startups."

141. Before Onavo launched its Insights service in February 2013, Facebook had explored the possibility of building its own data panel as there were no "third-party vendors that offer[ed] high-quality mobile [usage] data," and this was a "huge hole" to its monitoring of potential threats. But after only a month of licensing this treasure trove of tracking data, VP of Growth, Javier Olivan, who sponsored the Onavo acquisition, realized the possibilities Onavo could unlock and requested a meeting with Zuckerberg to explain that Onavo offered powerful "competitive insights" and that it was "really cool for identifying acquisition targets." Olivan later explained that "Onavo makes sense strategically since it solves the mobile market data problem 10x better than any other alternative – and you know how important this data becomes any time we have engagement or competition questions . . . ."

142. By July 2013, it became apparent to Zuckerberg and his team that Onavo could make an even greater contribution to their overriding goal of maintaining Facebook's monopoly if Onavo were owned and controlled—not merely licensed—by Facebook. Such an acquisition would enable Facebook to gain exclusive control over what could be a key component to an early warning system for detecting competitive threats, allowing it to identify and eliminate or debilitate those threats in their nascency. Acquiring Onavo also allowed Facebook to terminate the access of rivals and potential rivals to Onavo's valuable tools.

143. On October 9, 2013, Facebook sought Board approval to acquire Onavo for $115 million in cash. The deal closed on October 25, 2013.

144. Within days after the deal closed, Rosen contacted customers to inform them that their access to Onavo's services would be terminated in six days. Myriad Onavo customers, including firms who could use Onavo to identify and acquire firms that could compete with Facebook, expressed their frustration.

145. After the acquisition, Facebook made extensive use of Onavo's functionality, tracking a wide array of metrics of other applications with virtually up-to-the-minute precision.

146. The Facebook team generated reports using Onavo data that identified "early birds"—defined as "apps that are gaining prominence in the mobile eco-system in a rate or manner which makes them stand out." The goal of the Early Birds program was to "Identify Threats and Opportunities in the Apps Ecosystem."

147. Zuckerberg and his top executives closely monitored the Early Birds Reports and other analyses derived from Onavo data to watch for emerging competitive threats. For example, Onavo data and analytics played a significant role in Facebook's targeting and ultimate acquisition of WhatsApp. According to one Facebook executive, Zuckerberg was "focused on

Onavo data" identifying new market entrants with "extreme growth." Sheryl Sandberg, according to Guy Rosen, applauded the Onavo acquisition and described it as the "gift that keeps on giving."

148. Facebook's acquisition of Onavo furthered Facebook's goal of maintaining its monopoly power by giving Facebook access to and control over unparalleled competitive intelligence. Moreover, after Facebook's acquisition of Onavo, competitors and potential competitors of Facebook were foreclosed from licensing Onavo's valuable market intelligence data and analytics; it was available only to Facebook.

4. WhatsApp

149. As discussed earlier, Facebook's leadership had become increasingly concerned with the rapid global adoption of cross-platform mobile messaging services and the potential for one or more of these popular apps to add features and compete in the Personal Social Networking Services market. Mobile messaging services enable consumers to send messages over an internet connection, rather than by SMS (the short message service commonly known as text messaging). Mobile messaging services appeal to users because they can offer rich content and better-quality media messaging and because users can send messages without incurring SMS messaging charges. The proliferation of smartphones with internet access created this new use case and a unique threat to Facebook's monopoly.

150. As users became more reliant on mobile devices for services traditionally provided by personal computers, Zuckerberg recognized the significant advantage that a widely used mobile messaging service would have in developing into a Personal Social Network. In April 2012, he commented to a colleague: "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." Later, Zuckerberg echoed these concerns in his update to the Facebook Board on February 11, 2013. He wrote: "[T]he biggest competitive vector for us is for some company to build out a messaging app for communicating with small groups of people, and then transforming that into a broader social network . . . . [T]his is a big risk for us."

151. The leading mobile messaging services used the contact list in a user's mobile phone, which is a network more trusted and familiar to most users than self-identified users on platforms such as Facebook Blue (which can be faked). Facebook recognized the potential for such an app to take its robust and trusted network and use it to disrupt the Personal Social Networking Services market. In a follow-up email to an October 2012 meeting of the Growth team for Facebook's mobile messaging service, Messenger, Facebook's Director of Product Management said: "We are facing a huge threat with messaging competitors. . . . [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."

152. While most mobile messaging services were primarily geared towards providing services similar to SMS services—sending text messages, photographs, videos, and hyperlinks—Facebook anticipated that one or more of them could add additional features and then compete in the Personal Social Network market. In a February 2013 slide deck entitled "Mobile Messaging," the Director of Product Management warned that mobile messaging services were "a threat to our core businesses: both [with respect to] graph and content sharing. They are building gaming platforms, profiles, and news feeds. These competitors have all the ingredients for building a mobile-first social network."

153. VP of Growth Javier Olivan emailed the upper echelon of Facebook leadership on January 9, 2013 with this ominous warning: "The sum-product of shift to mobile + messenger services morphing into fully fleshed SSN [social networking] sites is IMO [in my opinion] the biggest competitive threat we face as a business . . . . IMO messenger services deserve special treatment, since it arguably is one of the most dangerous beach heads to morph into Facebook."

154. Facebook focused on several emerging mobile messaging services as potential competitive threats, such as Line, WeChat, and Kakao, but was particularly concerned with WhatsApp, which it viewed as a "category leader" that had "better interface" and was simply a "better product."

155. In contrast to the other leading mobile messaging services, which had little traction outside Asia, WhatsApp achieved significant adoption in Europe and was building share in the United States. In early 2014, WhatsApp had over 400 million active users worldwide.

156. WhatsApp was a reliable, privacy-focused service that collected minimal information about users and did not show ads. WhatsApp founder Jan Koum believed that engineers should focus on making the user experience better rather than spending time on ads, and that WhatsApp users placed great value on the privacy of their communications.

157. WhatsApp first launched in the Apple App Store and, for some users, required payment of a one-time $0.99 download fee. It later launched on Android as a free download, and shifted to a subscription model at a cost of $0.99 per year. WhatsApp's total revenue for 2013 was just over $10 million and for the first six months of 2014, its revenue was just under $16 million.

158. While the adoption of WhatsApp in the United States was slower than in other parts of the world, Zuckerberg feared that WhatsApp could make inroads into the U.S. by

introducing the types of features that had driven Facebook Blue's popularity. In August 2013, he wrote to Javier Olivan: "My point about WhatsApp's direction is that if 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 primary platform."

159. Facebook employees estimated that WhatsApp surpassed Facebook Messenger in August 2013 to become number one in the world in overall daily volume of messages sent—12.2 billion messages per day, as compared to Facebook Messenger's 11.7 billion messages per day.

160. Upon learning that WhatsApp had reached this milestone, Zoufonoun expressed his growing concern in an email to Zuckerberg and Olivan, that WhatsApp might go beyond simply beating Messenger in the mobile messaging services market and actually develop enough popularity and user contact data to enable it to try entering Facebook's core market, Personal Social Networking Services, by building additional social tools. He said: "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." Another executive echoed these fears a few weeks later: ". . . WhatsApp launching a competing platform is definitely something I'm super-paranoid about."

161. Zuckerberg, continuing to believe that WhatsApp had the potential to enter Facebook's core market and erode its monopoly power, had been making periodic overtures to WhatsApp, hoping to ultimately convince the founders to sell.

162. The Onavo acquisition discussed above had supercharged Facebook's ability to detect, at the earliest possible time, when an app was starting to gain traction. The Onavo system confirmed Zuckerberg's suspicions—with its rapid growth in users and user engagement, WhatsApp had the potential to become a threat to Facebook's monopoly power.

163. In December of 2013, Zuckerberg sent an email to senior management at Facebook informing them that a new WhatsApp feature had hardened his view that the company was a competitive threat: "I want to call out two competitive near term issues we face. The first is WhatsApp adding a feature like this for public figures . . . . If the space is going to move in this direction, being the leader and establishing the brand and network effects matters a lot. This alone should encourage us to consider this soon. . . . When the world shifts like this, being first is how you build a brand and network effect. We have an opportunity to do this at scale, but that opportunity won't last forever. I doubt we even have a year before WhatsApp starts moving in this direction."

164. Zuckerberg also feared that, even if an independent WhatsApp did not opt to pivot towards Personal Social Networking Services, it might make such a shift if it was acquired by a company like Google, which had tried and was failing in its independent effort to enter the Personal Social Networking Services market. Javier Olivan wrote in October 2012, that the "[b]iggest problem would be if [WhatsApp] lands in the wrong hands . . . ." A Facebook Software Engineer warned colleagues in October 2012, that "the case for Google acquiring WhatsApp has only gotten stronger in the past 6 months," and that "if [WhatsApp] is acquirable at all, the risks of us not being the acquirer have grown." Olivan agreed: "That is definitely what I would do if I was them . . . ."

165. By February 2014, Zuckerberg was concerned that another potential buyer was interested in WhatsApp. He acted quickly, approaching WhatsApp co-founder Jan Koum with an exorbinant offer. Over the next three days, Koum and Brian Acton, the other co-founder, negotiated with Zuckerberg over a number of items including continued autonomy of the company, remaining ads-free, and maintenance of encryption to ensure users' privacy.

166. Facebook entered into an agreement to acquire WhatsApp on February 19, 2014 for nearly $19 billion. When the transaction was announced, Zuckerberg boasted "WhatsApp is on a path to connect 1 billion people."

167. Although valuations of WhatsApp had varied widely over the years, neither Facebook's nor those of industry analysts had approached anywhere close to $19 billion. Two years before the acquisition, Zuckerberg had received word that another company offered to purchase WhatsApp for $100 million. At that time, Zuckerberg wrote to Zoufonoun, "I'd pay $1b for them if we could get them." Zoufonoun agreed.

168. The rapid growth of WhatsApp's user network, and the addition of new features such as the ability to share pictures, privacy blocking, group chat, backup and restore, transport encryption, location sharing and profile photos, inflated the price that Facebook was willing to pay to acquire it. On June 28, 2013, Zuckerberg recommended paying between $5 billion and $6 billion for WhatsApp, based on his belief that WhatsApp would have 1 billion users within the ensuing few years.

169. Facebook's own personnel expressed shock and surprise at how much Facebook paid for WhatsApp. One employee, while conceding that WhatsApp's rapid growth made it a valuable company, said the price "sounds insane." Another employee stated, "only [Facebook] can value [WhatsApp] that highly – their numbers are through the roof." Others predicted questions about whether the acquisition lessened the importance of Facebook's own mobile messaging service, Messenger.

170. As some analysts recognized, the only rationale for Facebook's $19 billion purchase price was the elimination of a potential competitor poised to mount a major challenge

to Facebook's monopoly. The investment bank SunTrust Robinson Humphrey laid out the case for the deal with remarkable clarity at the time:

> *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 TAM [Total Available Market] and capabilities but also covers its 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 overtime, potentially creating noteworthy competition, which can now be avoided.*

171. To date, Facebook has not meaningfully monetized WhatsApp, despite having over six years to formulate, develop, and implement a plan to do so.

172. On August 20, 2020, Zuckerberg admitted that [redacted]

173. Despite the enormous purchase price, Facebook COO Sheryl Sandberg stated that [redacted]

174. WhatsApp's true value to Facebook was to prevent WhatsApp (or another company that wished to acquire WhatsApp) from growing the application into what could become a viable competitor to Facebook Blue. Zuckerberg admitted that the prospect of WhatsApp serving over 1 billion users was central to justifying its acquisition.

175. Facebook demonstrated the true purpose of its acquisition by keeping WhatsApp positioned as a mobile messaging service rather than becoming a Personal Social Network provider [redacted] For example, in February

2019, [redacted]

176. While Facebook did not evince any genuine desire to expand WhatsApp's feature set and user base, it did take active steps to utilize WhatsApp data in efforts to promote its core platform, despite disavowing any such plans at the time of the acquisition. In the course of negotiating and securing regulatory approval for the acquisition of WhatsApp, Facebook had represented to the U.S. Federal Trade Commission, European regulators, the WhatsApp founders, and WhatsApp users that Facebook would not combine user data across the services, that it would not change the way WhatsApp used customer data, and that WhatsApp data would not be useful to Facebook's ad-targeting business.

177. But once free from the competitive threat WhatsApp presented, in August 2016, Facebook changed WhatsApp's terms of service and privacy policy and eroded the pre-acquisition promises it had made. It combined user data across the services by linking WhatsApp user phone numbers with accounts on Facebook Blue, enabling WhatsApp user data to be used across all Facebook products. Thus, Facebook Blue users who had declined to give their phone numbers to Facebook suddenly found their phone numbers connected to their Facebook Blue accounts anyway. Facebook was able to use that additional data in its recommended friend ("People You May Know") ranking, leading to growth of its social graph. This harm to users' privacy resulted from Facebook's acquisition of WhatsApp.

178. Facebook took great pains to avoid negative press coverage of its change of course on these important policies, trying to spin the narrative in its favor. At one point, Koum was cautioned in advance of a dinner event where he might have to address the changes to WhatsApp's data sharing policy to "Try not to get too much into the weeds on the types of data

we're sharing and for what use cases. It will get you trouble. Instead be prepared with a couple 'safe' examples, like spam/abuse."

179. Facebook's acquisition of WhatsApp eliminated a firm with a massive network that was well positioned to enter the Personal Social Networking Services market, either on its own or if acquired by another firm, and thus well positioned to begin to exert considerable competitive pressure on Facebook.

180. Facebook's acquisition of WhatsApp thus substantially lessened competition and further entrenched Facebook's monopoly power in the Personal Social Networking Services market. Moreover, Facebook's subsequent degradation of the acquired firm's privacy features reduced consumer choice by eliminating a viable, competitive, privacy-focused option.

5. Acquisitions and Attempted Acquisitions of Selected Other Potential Competitors

181. The examples set forth above in the prior section illustrate Facebook's anticompetitive acquisition strategy, driven by its objective to acquire rivals and potential rivals to make its moat even wider and more impenetrable. The company has constantly scoured the landscape for potential competitors to eliminate, hobble, or keep out of the hands of well-resourced firms that might enhance their competitive significance.

182. Facebook's corporate development team selects rivals or potential rivals as acquisition targets by identifying websites or apps that have "amazing traction" or are "becoming huge." Facebook regularly monitors and analyzes its market intelligence data for signs that a firm is becoming a competitive threat to Facebook Blue.

183. Facebook targets rivals or potential rivals for acquisition when it appears likely that the firm would fall into the hands of a larger firm with the resources to make it a competitive

threat to Facebook Blue. Facebook's 2015 analysis of a potential acquisition of Foursquare, for example, described its strategy as "Competitive defense – We could keep Foursquare away from competitors."

184. At times, Facebook has even terminated the services of the acquired firm immediately following an acquisition, having accomplished its goal of keeping it out of the reach of another firm that could develop the asset, as in the case of Glancee, a "social discovery" app that used geolocation services to help users meet new people, in 2012. Facebook acquired Glancee and simultneously shut the app down, terminating services to Glancee's 50,000 users. Two years later, Facebook launched a location-based feature on Facebook Blue that utilized Glancee's technology, but in a scaled-back form that allowed users to know only when their existing Facebook friends were nearby. In the case of EyeGroove, an app that allowed users to create and share music videos with augmented reality effects, Facebook decided to acquire the app in 2016 upon learning that Twitter and Snapchat were interested—and then shut the app down.

185. Facebook's acquisitions strategy serves to: (a) extinguish competitive threats; (b) hobble competitors and potential competitors by depriving them of important tools upon which they have become reliant; (c) keep the acquisition targets out of the hands of other firms that are well-positioned to use them to compete against Facebook Blue in the Personal Social Networking Services market; and (d) prevent competitors or potential competitors from having access to next generation technology that might threaten Facebook's monopoly. The result is less competition, less investment, less innovation, and fewer choices for users and advertisers.

B. Burying Threats and Potential Threats

186. For actual or potential competitors that it was unable or disinclined to acquire, Facebook turned to an arsenal of exclusionary tactics to foreclose them from access to key resources they had come to rely upon, often foregoing profitable business relationships in the process. Short-term profits, under this strategy, took a backseat to the long-term benefits of keeping Facebook's moat wide and its monopoly intact.

187. These tactics had the purpose and effect of hobbling emerging competitive threats and deterring potential rivals from offering competing services, lest they lose access to critical inputs from Facebook.

188. As described above, the Facebook Platform service, publicly launched in 2007, is a suite of tools, such as APIs, software development kits ("SDKs"), and plug-ins, that enables third-party developers to build apps and websites that interact with Facebook and leverage its various social functionalities.

189. 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."

190. In its earliest iteration, Platform was focused on allowing developers to build what it called "canvas" apps: apps that were displayed within the Facebook website, rather than elsewhere on the internet. For example, a developer could build a personality test app, through which the user could answer questions and be assigned a personality type, then invite their Facebook friends to take the test and compare their results. This last step in particular enabled the development of "social" apps, in which users could easily and seamlessly interact with all

their Facebook friends through the app. One key API enabling this functionality was "friends.get," which was commonly referred to as the "Find Friends" API.

191. From 2008 to 2010, Facebook created new tools that allowed free-standing apps and websites to interconnect with Facebook, including a tool that allowed third-party developers to let users sign into their services with their Facebook login credentials (introduced as "Facebook Connect"). Facebook Platform continued to expand, culminating in the 2010 launch of "Open Graph." While Platform had previously enabled external apps and websites to interact with Facebook's social graph in a somewhat limited fashion, Open Graph "extended the social graph . . . to include websites and pages that people liked throughout the web," allowing third-party developers to integrate independent apps with Facebook in new ways. A primary feature of Open Graph was the "social plugin," which allowed third parties to place "like" or "share" buttons on their external apps or websites that would enable their users to connect with these apps and websites and share their content on Facebook.

192. The following year, Facebook announced that it was "extending the Open Graph to include other actions and objects created by apps and enabling these apps to integrate deeply into the Facebook experience."

193. Facebook's Open Graph enabled developers to build standalone websites that fully integrated with Facebook, much like Facebook "canvas" apps had previously. Through Open Graph, free-standing websites could use a number of Facebook plugins—including the like button—to connect with the Facebook Platform to enable social features. For example, a user reading an article on ESPN.com, could now like the article on ESPN's site, and choose to post a link of the article to the user's Facebook profile directly from the ESPN.com website.

194. Facebook's promotion of Open Graph was successful, and developers started integrating APIs into their products en masse. Over 10 million apps and websites had integrated with Facebook by May 2013. Access to Facebook integrations became an important way for third-party developers to drive traffic and engagement, and Facebook "like" buttons, comment sections, and other integrations quickly became common across the internet. Facebook, its users, and third-party developers each derived significant benefit from Platform during this "open" phase.

195. Facebook benefited in numerous ways. It benefited from the significant goodwill and positive media coverage generated by the "open" nature of Platform. Facebook also recognized that it did not have the resources to create and develop every useful social feature and that its Platform would enable third-party developers to expand the services available on Facebook, thus making Facebook more valuable and attractive for both existing Facebook users and new users who joined Facebook because of these apps. Platform thereby helped Facebook grow and increase user engagement, further strengthening its network effects.

196. Facebook also benefited monetarily. Third-party applications accessible through Platform expanded Facebook's opportunities to show advertisements because users spent more time on Facebook services, third-party developers purchased ads on Facebook, and for a period of time Facebook took a 30% share of the revenue third-party applications earned from in-app purchases. These monetary benefits were hardly insignificant: a single third-party developer was responsible for over 10% of Facebook's total 2011 revenue.

197. Third-party developers benefited from the reduced friction in the registration and sign-in processes, thus encouraging Facebook users to try their apps. Developers were also able to use the Facebook Platform to boost their apps' growth and engagement, letting users invite

their Facebook friends to download new apps and integrating social features to make the users' experience more valuable.

198. Users benefited by being able to move their information (such as their lists of Facebook friends) to another app with increased efficiency and convenience and by gaining useful or fun social features in their apps.

199. Facebook was aware that access to its Platform APIs, especially its Find Friends API, was particularly important to potential rivals. In 2011, Facebook adopted a policy aimed at forbidding "competing social platforms," and any apps that linked or integrated with competing social platforms, from accessing its APIs. Facebook adopted this policy to prevent Google+ from gaining traction: doing so discouraged developers from creating apps that bridged the two networks, which would have reduced switching costs for users.

200. After the threat from Google+ had passed, and after years of promoting open access to Facebook Platform, Facebook increasingly turned to Platform as a tool to monitor, leverage, and harm (via rescinding API access) apps that Facebook viewed as actual or potential competitive threats.

201. In 2013, Facebook amended its Platform policy (described above) to forbid applications that "replicat[e] [Facebook's] core functionality," with no explanation as to what Facebook considered its core functionality, or how such policies would apply when Facebook expanded its functionality to a new area.

202. Facebook began to selectively enforce its policies to cut off API access to companies Facebook worried might one day threaten its monopoly. Facebook itself described its Platform as a "critical piece of infrastructure" for new apps being developed: this is particularly true for social apps which rely heavily on network effects. Facebook knew that an abrupt

termination of established access to Facebook APIs could be devastating to an app—especially one still relatively new in the market. An app that suddenly lost access to Facebook's APIs was hurt not only because its users would no longer be able to bring their friend list to the new app, but also because a sudden loss of functionality, which creates broken or buggy features, suggests to users that an app is unstable. Facebook's actions therefore disincentivized developers from creating new features that might compete with Facebook: adding new social features to an existing app might come at the significant cost of access to Facebook's APIs.

203. In 2014, Facebook announced significant changes to its Platform APIs with "Graph API 2.0" (also referred to internally as Platform 3.0). In connection with Graph API 2.0, Facebook required prior review of all requests to access many Platform APIs, including the Find Friends API, resulting in those APIs being cut off for third-party apps that previously had enjoyed such access on Platform. Under the new approach, developers could not access Facebook's APIs unless they submitted an application and received approval, which Facebook refused to grant to apps it classified as competitors or potential competitors. That allowed Facebook to proactively and categorically ensure that no app that might constitute a competitive threat would get API access in the first place, sparing Facebook the need to withdraw access after-the-fact.

204. One Facebook employee described in January 2014 the jarring impact of enticing developers to interconnect and then suddenly revoking their access:

> We sold developers a bill of goods around [Open Graph] 2 years ago and have been telling them ever since that one of the best things they could do is to a/b test and optimize the content and creative. Now that we have successes . . . in 2013, we're talking about taking it away . . . . Even if we were to give them more traffic on home page in some other way, it still nullifies all of their work to integrate [Open Graph] for the last 2 years.

205. As a further part of its scheme to maintain its monopoly position, Facebook has used its control over Facebook Platform to degrade the functionality and distribution of potential rivals' content when it perceived those firms as threats to Facebook's monopoly power. This degradation suppressed the flow of user traffic to the rivals' services, reducing overall output, and harming users in the process.

206. There are numerous examples of how Facebook abused its control of Platform to hurt potential rivals at users' expense.

1. [redacted]

207. [redacted] relied on Facebook's Find Friends API to provide important functionality that its users valued. At its peak, [redacted] growth drew Facebook's attention to the company. Facebook was specifically interested in [redacted] These characteristics increased the concern that [redacted] could attempt to enter the Personal Social Networking Services market and compete with Facebook.

208. As [redacted] went viral, Facebook made overtures to either [redacted]

209. In [redacted] Facebook rolled out free voice-calling and mobile messaging services in its Messenger product. The same month, Facebook informed [redacted] (which had been

using Facebook's Platform [redacted] that it was in violation of Facebook's policy against replicating core functionality. Facebook also said that [redacted]

210. On [redacted], without providing an opportunity to cure any policy violations, Facebook terminated [redacted] access to the Find Friends API. [redacted] experienced an almost overnight drop-off in user engagement and downloads, and its growth stalled.

211. Before Facebook's anticompetitive actions, [redacted] had been able to fund its operations and growth with investments from the venture capital market. Once [redacted] ability to add new users faltered, however, it was unable to attract the additional investment it needed to fund its operations.

212. Having lost access to Facebook's APIs and access to funding, [redacted] shifted from growth to survival mode. [redacted] Deprived of the vital API access that its users had come to rely upon, less than [redacted] after Facebook cutting off that API access, [redacted] It receded from [redacted] and the space where it posed a competitive threat to Facebook.

2. Vine

213. [redacted], Facebook also flexed its muscles against Twitter. On January 24, 2013, Twitter launched Vine, an app that allowed users to create and share six-second looping videos. Vine was founded in June 2012 and acquired by Twitter before it had launched to the public.

214. Just hours after Vine's official launch, Facebook's Director of Platform Partnerships and Operations Justin Osofsky informed Zuckerberg and other key executives that Twitter had gone public with Vine that morning and that the new app allowed Vine users to find other Vine users they were friends with on Facebook via the Find Friends API. With no additional analysis, Osofsky concluded: "Unless anyone raises objections, we will shut down their friends API access today." Zuckerberg replied decisively: "Yup, go for it."

3. [redacted]

215. Likewise, in [redacted] another [redacted] startup began gaining popularity quickly after launch. The app [redacted] offered users the ability to locate and connect with Facebook users through the Facebook's "Find Friends" API. Noticing the speed with which [redacted] was gaining popularity with users, Facebook abruptly terminated [redacted] access to the API. Osofsky pointed out that [redacted] Osofsky added that the lead of Platform policy enforcement was in the process of determining whether any other [redacted] apps [redacted]

216. After [redacted] was cut off, its users could no longer use the "Add Facebook Friends" button on the [redacted] app. The utility and thus the popularity of the app plummeted. [redacted] purchased the devalued app's team, as a talent acquisition, in [redacted] for a sum described in the trade press as [redacted]

4. Path

217. Path was a feed-based sharing app with a unique feature that limited the number of friends a user could have, to encourage more intimate sharing among groups of close friends. Path offered its users the ability to find their Facebook friends on its platform by accessing Facebook's Find Friends API. Facebook briefly restricted Path's access to Find Friends in July 2012 over concerns about reciprocity, reinstating access after Path agreed to ensure that for users of both services, posts to Path would be cross-posted to Facebook.

218. Facebook started monitoring Path's growth carefully after Path added mobile messaging services and, seeing that it was gaining momentum, in May 2013 Facebook cut off Path's access to Find Friends again. Facebook justified the decision to Path saying that the way Path enabled its users to invite their Facebook friends to Path was too aggressive, but Facebook's true, unspoken motivation was it that saw Path as a potential substitute for Facebook because it was replicating Facebook's core social networking services. Path asked Facebook to reinstate its access after addressing the invite-user flow issue Facebook cited, but Facebook refused. Path's user base declined quickly thereafter.

5. Circle

219. Circle was a local discovery app that focused on providing its users with news and information about local events, businesses, and culture. In August 2013, Zuckerberg expressed interest in the app, whose growth he had noticed. He observed to Facebook executives that it "looks reasonably polished" and was "very similar to the local vision you described to me a while ago [for Facebook]." By December 2013, Circle was a buyer of Facebook advertising and was growing quickly. Facebook moved quickly to cut off Circle's access to the Find Friends

API that month, citing several Platform policy violations, but again being careful not to mention Facebook's true concern: that Circle threatened to become a competitor to Facebook.

220. Circle's CEO wrote to Facebook that it had remedied all the cited policy violations within 48 hours and asked for access to be reinstated; he also suggested that Circle could share valuable content back to Facebook. However, as a Facebook Developer Policy Operations Manager wrote at the time: "Spoke with Justin [Osofsky] and he wants to leave the restrictions in place. 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.'"

221. Facebook recognized that its denial of Circle's API access could also affect Circle's venture capital investors. While discussing how to break the API cutoff news to Circle and preparing reactive statements, Facebook noted that there were "likely some relationship sensitivities" because Circle was "backed by some top investors, including [Marc] Andreessen and Ron Conway."

6. [redacted]

222. In [redacted], a platform called [redacted] launched. [redacted], which was [redacted] Not only was [redacted] bundle of product offerings a source of potential value to users, but its [redacted] would generate [redacted] had [redacted] million users after just [redacted] months.

223. Suddenly, on [redacted] without advance warning, [redacted] users could no longer cross-post to Facebook from the [redacted] app, nor could they post a link to [redacted] on Facebook.

Worse yet, users found that all of their [redacted]-related posts—from the inception of their [redacted] accounts, and whether shared from [redacted] to Facebook using the API or posted directly on Facebook—were removed from Facebook. Any Instagram user that included a link to their [redacted] profile in their Instagram profile received a "link not allowed" message until the user edited their profile to delete the link; when Instagram users included links to other sites in their profile, they did not have such issues. [redacted] access to Facebook's sharing API was shut down entirely several days later.

224. The exclusion of [redacted] spurred commentary in the press that Facebook was using its monopoly power to crush smaller rivals. Facebook reacted quickly to tamp down this burgeoning public relations problem, removing the block on [redacted] Despite the restored API access, [redacted] had been irreversibly harmed by the cutoff due to disrupted engagement and users' fear of future lost content. [redacted] shut down and ultimately [redacted].

7. [redacted]

225. Facebook also excluded potential rivals via its Instagram service. For example, in [redacted] app called [redacted] launched to the public. It enabled users to take [redacted] to them. Users could then share those [redacted] with their friends, for example, using Facebook or Instagram's platforms' APIs. Indeed, [redacted] knew that the size of Facebook's user base made the Find Friends functionality essential to the new app's growth. [redacted] grew rapidly in its first [redacted], and averaged [redacted] daily active users during the end of that period.

226. In early [redacted], Facebook reached out to [redacted] with a request to integrate [redacted] functionality with Facebook Messenger. [redacted] declined. In late [redacted]

Facebook deployed its open first–closed later strategy, cutting [redacted] off from Facebook's newsfeed API and from Instagram's Find Friends API. Facebook saw [redacted] as a potential competitive threat. When Instagram released a similar feature, the CEO of Instagram stated that [redacted] and instructed his staff [redacted]

227. But Facebook's tactics against the popular [redacted] app went further. Instagram began suppressing all images that were posted with the hashtag [redacted] (within Instagram, users can add hashtags to photo captions to add their posts to searchable categories). Instagram thereby buried [redacted]-generated content on Instagram, unbeknownst to the users who posted it. Even if users manually added "[redacted]" that hashtag would appear only in the user's feed but not in the public feed.

228. Moreover, when Instagram rolled out its algorithmic feed in July 2016 (replacing its reverse chronological feed), [redacted] experienced an immediate drop in user engagement with content posted from the [redacted], or content tagged with [redacted].

229. As a result of Facebook's actions, [redacted] revenue was sharply reduced. It was also unable to obtain the venture capital funding that it needed to continue to operate, and was told by venture capitalists that their appetite for social media investment had decreased because of Facebook's conduct. [redacted] shut down in [redacted].

230. Facebook used APIs and algorithms to prevent competition by ensuring that would-be competitors could not gain or maintain a foothold in the Personal Social Networking Services market and by discouraging new or adjacent firms from even entering the market. Facebook's actions also deterred venture capitalists from investing in companies that Facebook

might see as potential competitors. Early stage venture capital investments in social start-ups fell dramatically from 2016 to the present.

231. The foregoing examples illustrate how Facebook neutralized competitive threats by conditioning access to its valuable Platform on apps not competing with Facebook, and cutting off or degrading beneficial business relationships without a legitimate business justification, sacrificing prior beneficial and/or profitable relationships in the process. Facebook's conduct was intended to and had the effect of excluding, impeding, and chilling innovation, investment, and competition, which, in turn, deprived users of valuable product offerings, convenience, and choice, and served to maintain and enhance Facebook's monopoly power in the Personal Social Networking Services market. It also sent a message that any efforts to challenge Facebook would be undermined in any manner possible. In so doing, Facebook deterred any future such entry.

VIII. Facebook Exercises Monopoly Power in the Personal Social Networking Services Market

232. Facebook possesses monopoly power in the Personal Social Networking Services market.

233. As described in detail above, Facebook has a strong and durable monopoly in the Personal Social Networking Services market that has persisted for nearly a decade without meaningful erosion by new entrants or expansion of existing or potential competitors.

234. Facebook's ability to profitably degrade quality and exclude competition is further evidence of its monopoly power. In a market such as Personal Social Networking Services in which, historically, there has been no monetary price charged to users, users receive services, functionality, the user interface, privacy protections, and the like in exchange for

allowing their data to be added to the social graph, and for lending their attention to the platform on which advertisements are shown to them, both of which enable the platform to monetize its services.

235. After Facebook achieved monopoly power, the company degraded the quality of its product features and functionality. Facebook retains its monopoly power in spite of this degradation of quality.

236. In particular, Facebook degraded the privacy protections and privacy options, the favorable public perception of which had been so instrumental to its success in competing with, and dethroning, Myspace.

237. Slowly but surely, Facebook became more aggressive about both collecting data on its users' off-platform activity and pushing users to make more information public. In what came to be an oft-repeated theme, Facebook made great efforts to present its privacy changes as giving users greater control, even as Facebook made more privacy settings public and thus less protective by default, took away options to limit visibility, and changed its privacy policy to allow for more collection and use of user data.

238. With nearly every privacy policy update, Facebook steadily increased the richness of the user data it allowed itself to collect and retain, and expanded what it could do with the data. For example, by 2011, Facebook's privacy policy allowed enhanced third-party tracking, permitting Facebook to collect data when users visited a site with Facebook features (such as social plugins); enhanced Facebook's ability to share user data with third parties' sites to enable its "Instant Personalization" product (turned on by default); and allowed Facebook to combine user data from different sources for purposes of deals, events, and ads.

239. By 2012, Facebook had abandoned a previous pledge to anonymize user data received by Facebook's advertising partners and customers within 180 days, changing the practice to "stor[ing] data for as long as it is necessary to provide products and services to you and others."

240. By 2015, Facebook had abandoned its previous promise to collect payment account numbers only with user consent and allowed itself to collect "credit or debit card number and other card information, and other account and authentication information, as well as billing, shipping and contact details" if someone used Facebook's services for financial transactions. Facebook also vastly expanded its access to device information—operating system, hardware version, device settings, file and software names and types, battery and signal strength, device identifiers, specific device locations (such as through GPS, Bluetooth, or Wi-Fi signals), connection information such as the name of the user's mobile operator or ISP, browser type, language and time zone, mobile phone number and IP address—and allowed itself to "associate the information we collect from your different devices."

241. By 2018, Facebook added device operations ("information about operations and behaviors performed on the device, such as whether a window is foregrounded or backgrounded, or mouse movements") to the list of device information it could collect; allowed itself to use facial recognition technology to identify users in photos, videos, and camera experiences; and added content creators to the list of third-party partners who could receive users' data.

242. With a lack of meaningful Personal Social Networking Service alternatives, users who are otherwise dissatisfied with the data usage and privacy options available on Facebook have nowhere else to go. A 2010 study commissioned by Facebook found precisely that: "For hundreds of millions of people today who want to connect with their friends and family,

[Facebook is] the first—and more importantly—only choice." As a result, while those interviewed as part of the study felt that Facebook's messaging on privacy was confusing, overly complicated, and designed to "trick [them] into sharing [their] data," the report noted that only a small number of Facebook users had canceled their accounts "in part thanks to the absence of a credible alternative."

243. After Google+ failed to become a real competitor to Facebook Blue, Facebook's monopoly meant that it faced little competitive constraint on its approach to privacy, leaving users and their personal data to the whims of whatever metric Facebook was focused on optimizing at a given time. In 2016, in an effort to boost user sentiment, Facebook launched privacy checkup tools that educated users about certain privacy settings—such as who could see the apps the user had used through Facebook and who could see the user's likes and comments—and provided links navigating the user to those settings. But when Facebook users began to use these tools to turn on more restrictive privacy settings, Facebook discontinued the program. Facebook's head of Growth Javier Olivan explained, "It feels like a bad idea to actively point people to an area where we are certainly not buttoned up and where we do not want everyone turning certain settings in certain directions."

244. Facebook's monopoly power is so strong that user engagement has not fallen even in the face of conduct that drives deep consumer dissatisfaction and mistrust of the company. For example, following the 2018 Cambridge Analytica data scandal—a leak exposing the data of millions of Facebook users—[redacted]

IX. Harm to Competition

245. As a result of Facebook's unlawful conduct alleged above, Facebook has impeded actual and potential competition and has maintained and entrenched its monopoly power in the Personal Social Networking Services market in the United States, resulting in continuing harm to users of Personal Social Networking Services.

246. As a result of Facebook's unlawful conduct and harm to competition alleged above, innovation has been and continues to be suppressed in the Personal Social Networking Services market. Facebook's conduct in maintaining its monopoly power has discouraged investment and innovation in competing and complementary social media applications because of fears that Facebook can unilaterally strip these applications of access to key inputs.

247. In turn, users of Personal Social Networking Services in the United States have been and continue to be deprived of the benefits of additional competition in the supply of Personal Social Networking Services. The benefits to users of additional competition include some or all of the following: additional innovation (such as the development and introduction of new attractive 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 Services provider that more closely suits their preferences,

including, but not limited to, preferences regarding the content shown to them, amount and nature of advertising, and the availability, quality, and variety of data protection and privacy options for users, including, but not limited to, options regarding data gathering and data usage practices).

248. For example, as a result of Facebook's unlawful conduct and harm to competition alleged above, there is a lack of viable alternatives for users of Personal Social Networking Services, and the quality and variety of privacy options available to users of Personal Social Networking Services have been degraded, including but not limited to options associated with data gathering and data usage practices. In addition, the quantity of data extracted from users has increased over this time period.

249. Similarly, as a result of Facebook's unlawful conduct and harm to competition alleged above, the quality of the user experience on the Facebook platform has been significantly degraded by Facebook's inaction with respect to removing fake accounts.

250. And, as a result of Facebook's unlawful conduct and harm to competition alleged above, the quality of the user experience on the Facebook platform has been significantly degraded by, among other things, the increased ad load to which users are subjected on the Facebook platform. Ad load (measured as average percent of content viewed by users on Facebook's products) steadily increased from [redacted] in early 2015 to [redacted] in early 2016, to over [redacted] by early 2020 on Facebook Blue's mobile feed. Facebook similarly steadily raised the amount of advertising on Instagram since its acquisition, which had an ad load of [redacted] in late 2016 and had more than doubled that to [redacted] by late 2019. Indeed, in 2018 Facebook increased ad load by [redacted] on Instagram. And, in the United States Facebook's "average revenue per user" has likewise steadily increased from [redacted] in 2012 to [redacted] in 2018. The insertion of more ads

into a user's feed means that content from friends and family—the core reason users come to Facebook—will be interrupted more frequenly by advertisements and users will need to scroll further in their newsfeed to see the same quantity of organic (user-created) content. Facebook itself predicts that an increase in ad load will decrease user engagement, and recognizes that consumers generally do not want to see ads. Internally, Facebook executives have referred to ads as a "tax" on consumers.

251. Facebook's suppression of competing Personal Social Networking Services providers enables Facebook to avoid close competition in the supply of advertising services, thereby causing harm to advertisers.

252. Lacking meaningful alternatives to the advertising services that Facebook is able to offer, advertisers have been and continue to be deprived of the benefits of competition, including some or all of the following: additional users to advertise to (as a result of increased innovation and improved quality of Personal Social Networking Services for users); lower advertising prices (as additional advertising competition would incentivize reductions in advertising prices and increase supply); additional innovation (as additional advertising competition would incentivize the development and introduction of additional attractive features, functionalities, and business models in order to attract advertisers); quality improvements (as additional advertising competition would incentivize quality improvements 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 Neworking Services provider that more closely suits their preferences including,

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

253. For example, as a result of Facebook's unlawful conduct and harm to competition alleged above, advertisers are harmed by a lack of transparency about Facebook's reporting metrics, inability to audit Facebook's reporting metrics, unreliable metrics due to Facebook error, and the prevalence of fake accounts. In addition, they are unable to ensure the same ad is not shown to the same person across media platforms. Without accurate information about performance, advertisers cannot accurately assess the value of their ad spend on Facebook's properties.

254. Due to Facebook's unlawful conduct and the lack of competitive constraints resulting from that conduct, there has been a proliferation of misinformation and violent or otherwise objectionable content on Facebook's properties. That content has harmed users and reduced the quality of advertising on those properties for advertisers who value the health and safety of their brand. Indeed, numerous advertisers have expressed concerns about brand safety on Facebook. Internally, Facebook executives recognized that their advertising customers valued brand safety and understood that advertisers do not want their ad placements associated with disturbing content. Even so, Facebook does not provide advertisers with meaningful ways to ensure that ads are distanced from content that could harm a brand's reputation.

255. The harm to competition and to consumer welfare that has resulted from Facebook's unlawful conduct in the Personal Social Networking Services market far outweighs any benefit, if any exists, that may have been realized from Facebook's anticompetitive conduct.

X. Causes of Action

Count One – Unlawful Maintenance of Monopoly in the Personal Social Networking Services Market - Section 2 of the Sherman Act, 15 U.S.C. § 2

256. Plaintiff States incorporate by reference the allegations in Paragraphs 1 through 255 above.

257. At all relevant times, Facebook has had monopoly power in the Personal Social Networking Services market in the United States.

258. Facebook has willfully maintained and enhanced its monopoly power through its anticompetitive and exclusionary conduct, including but not limited to, the execution of its buy-or-bury strategy.

259. There is no procompetitive justification for Facebook's anticompetitive and exclusionary conduct.

260. Facebook's conduct has harmed and continues to harm competition and Plaintiff States have therefore suffered and continue to suffer harm to their general economies and to their residents.

261. The anticompetitive effects of Facebook's conduct outweigh any procompetitive benefits, to the extent that any such benefits exist. Any benefits of Facebook's conduct could have been achieved by less anticompetitive means.

262. Facebook's anticompetitive conduct constitutes unlawful monopoly maintenance in violation of Section 2 of the Sherman Act, 15 U.S.C. § 2.

Count Two – Section 7 of the Clayton Act, 15 U.S.C. § 18 – Instagram Acquisition

263. Plaintiff States incorporate by reference the allegations in Paragraphs 1 through 255 above.

264. Facebook's acquisition of Instagram removed a significant and growing competitor from the market for Personal Social Networking Services. As a result, Facebook has harmed users, harmed competition and diminished consumer welfare through reduced quality, degraded privacy protections, reduced choice, and suppressed innovation. As a further result, users have been deprived of the the choice of Instagram, either alone or if acquired by another firm, as an alternative, competing Personal Social Networking Service, which would have afforded users more choices of content, features, privacy protections, and other innovations, and acted as a significant competitive constraint on Facebook Blue.

265. The acquisition of Instagram by Facebook has substantially lessened competition and tended to create a monopoly in the Personal Social Networking Services market by:

1. Eliminating actual and potential competition between Facebook Blue and Instagram;
2. Removing a significant threat to Facebook's monopoly power;
3. Increasing barriers to entry; and
4. Maintaining and enhancing Facebook's monopoly power.

266. The acquisition of Instagram by Facebook has not resulted in verifiable, timely, merger-specific efficiencies in the Personal Social Networking Services market sufficient to outweigh the transaction's anticompetitive effects.

267. The acquisition violated and continues to violate Section 7 of the Clayton Act, 15 U.S.C. § 18.

Count Three – Section 7 of the Clayton Act, 15 U.S.C. § 18 – WhatsApp Acquisition

268. Plaintiff States incorporate by reference the allegations in Paragraphs 1 through 255 above.

269. Facebook's acquisition of WhatsApp maintained and enhanced its monopoly power by removing a nascent competitive threat which, standing alone or in the hands of another firm, threatened to reduce its monopoly power in the market for Personal Social Networking Services. As a result, Facebook has harmed competition and diminished consumer welfare through reduced quality, degraded privacy protections, reduced choice, and suppressed innovation. As a further result, users have been deprived of the significant possibility that WhatsApp, either alone or if acquired by another firm, would have become a competing Personal Social Networking Service, which would have afforded users more choices of content, features, privacy protections, and other innovations, and acted as a significant competitive constraint on Facebook Blue.

270. The acquisition of WhatsApp by Facebook has substantially lessened competition and tended to create a monopoly in the Personal Social Networking Services market by:

1. Eliminating potential competition between Facebook Blue and WhatsApp;
2. Removing a significant threat to Facebook's monopoly power;
3. Increasing barriers to entry; and
4. Maintaining and enhancing Facebook's monopoly power.

271. The acquisition of WhatsApp by Facebook has not resulted in verifiable, merger-specific efficiencies in the Personal Social Networking Services market sufficient to outweigh the transaction's anticompetitive effects.

272. The acquisition violated and continues to violate Section 7 of the Clayton Act, 15 U.S.C. § 18.

XI. Prayer for relief

273. Facebook's conduct set forth in Paragraphs 1 through 255 above has caused a significant loss of competition and has substantially contributed to the maintenance of Facebook's monopoly power.

274. Without appropriate equitable relief from the anticompetitive effects of Facebook's conduct, Plaintiff States will continue to suffer harm to their general economies. Plaintiff States have no adequate remedy at law other than the filing of this action.

275. The ongoing harm to Plaintiff States and their citizens from Facebook's illegal and anticompetitive conduct outweighs any potential harm to Facebook from the entry of an appropriately-tailored injunction.

276. Entry of an order granting the relief described below will serve the public's interest in having a free, open, and competitive Personal Social Networking Services market.

277. Accordingly, Plaintiff States request:

1. That Facebook be adjudged to have violated Section 2 of the Sherman Act, 15 U.S.C. § 2;
2. That Facebook be enjoined and restrained from continuing to engage in any anticompetitive conduct and from adopting in the future any practice, plan, program, or device having a similar purpose or effect to the anticompetitive actions set forth above;
3. That Facebook be enjoined and restrained from making further acquisitions valued at or in excess of $10 million without advance notification to Plaintiff States;

4. That Facebook be enjoined and restrained from making further acquisitions without such disclosures to Plaintiff States as would be required to the federal government under the Hart-Scott-Rodino Act for transactions falling within the scope of such Act;
5. That Facebook's acquisition of Instagram be adjudged to be in violation of Section 7 of the Clayton Act, 15 U.S.C. § 18;
6. That Facebook's acquisition of WhatsApp be adjudged to be in violation of Section 7 of the Clayton Act, 15 U.S.C. § 18;
7. That each Plaintiff State be awarded its costs, including reasonable attorneys' fees pursuant to 15 U.S.C. § 15(c); and
8. That the Court order such other and further equitable relief as this Court may deem appropriate to restore competitive conditions and lost competition and to prevent future violations, including divestiture or reconstruction of illegally acquired businesses and/or divestiture of Facebook assets or business lines.

Dated this 9th day of December 2020.

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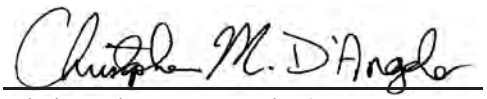

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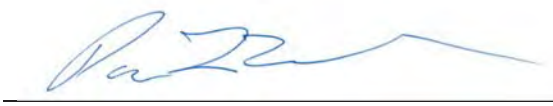

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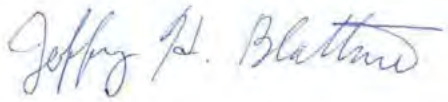

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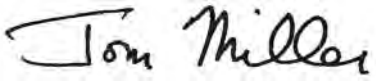

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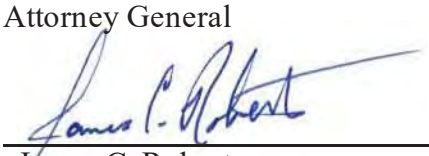

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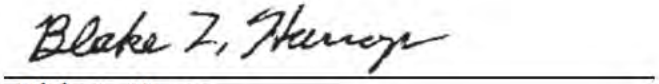

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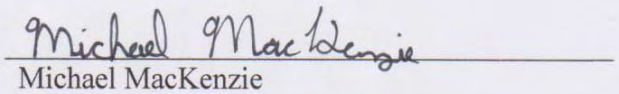

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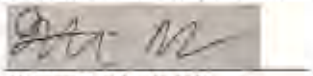

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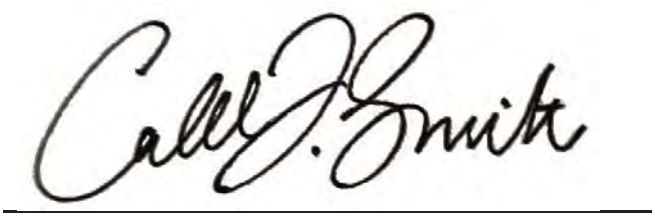

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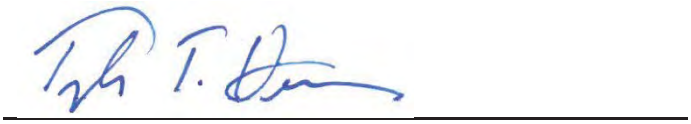

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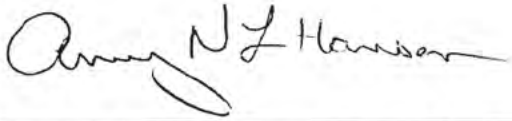

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