

COMMONWEALTH OF MASSACHUSETTS

SUFFOLK, ss.

SUPERIOR COURT  
CIVIL ACTION NO. 2484CV 2484 CV 2638-BLS-1

COMMONWEALTH OF  
MASSACHUSETTS,

Plaintiff,

v.

TIKTOK INC., TIKTOK LLC,  
BYTEDANCE INC., and BYTEDANCE  
LTD.,

Defendants.

RECEIVED

FEB 03 2025

SUPERIOR COURT - CIVIL  
JOHN E. POWERS, III  
CLERK MAGISTRATE

**COMPLAINT AND JURY DEMAND**

**I. INTRODUCTION**

1. Defendant TikTok, Inc., along with its parents and affiliates named as Defendants in this action (collectively, “Defendants” or “TikTok”), operate the social media platform known as TikTok (hereinafter, the “platform”). TikTok’s platform is one of largest and most popular social media platforms in the world, particularly among U.S. teens,<sup>1</sup> and it generates billions of dollars of advertising revenue for TikTok every year.<sup>2</sup>

2. TikTok insidiously achieves these massive profits by deploying self-described “coercive” design features on its platform that are specifically designed to take advantage of the psychological and emotional vulnerability of young users to induce them to spend as much time

<sup>1</sup> Unless otherwise specified, all references in the Complaint to “teens,” “teenagers,” “adolescents,” “children,” “young people,” “young users,” “youth,” or “minors” refer to individuals under the age of 18.

<sup>2</sup> See Monica Anderson, et al., *Teens, Social Media and Technology 2023*, PEW RESEARCH CTR. (Dec. 11, 2023), <https://www.pewresearch.org/internet/2023/12/11/teens-social-media-and-technology-2023/> (last visited Sept. 18, 2024).

on its platform as possible—longer than they would otherwise choose—and in a manner that causes them harm.

3. TikTok does so because the more time users spend on the platform, the more money TikTok can make by advertising to those users. And U.S. young users are TikTok’s primary target.

4. This is because, as TikTok’s former CEO has said, U.S. teens are “a golden audience”<sup>3</sup> because “they got a lot of time”<sup>4</sup> to spend on the platform and provide a pipeline of life-long, habitual users that provide the most “Life Time Value” for the company.

5. TikTok knows that its coercive design features, as described below, are remarkably effective at overriding young users’ agency and keeping them tied to the platform. As such, TikTok purposely targets these features to hook the hundreds of thousands of Massachusetts youth who report their use of TikTok’s platform as “almost constant.”<sup>5</sup> As TikTok itself recognizes, “compulsive usage on TikTok is rampant.”

6. TikTok also knows that this rampant use has come at grave cost to young users’ mental and physical wellbeing.

7. As TikTok’s own records confirm, young users are “more vulnerable to online harms” and suffer a slew of negative health impacts from compulsive usage of the platform, including disrupted sleep, depression, “increased loneliness,” “loss of analytical skills, memory formation, contextual thinking, conversational depth, empathy, and increased anxiety.”

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<sup>3</sup> Paul Mozur, *Chinese Tech Firms Forced to Choose Market: Home or Everywhere Else*, N.Y. TIMES (Aug. 9, 2016), <https://www.nytimes.com/2016/08/10/technology/china-homegrowninternet-companies-rest-of-the-world.html> (last visited Sept. 18, 2024).

<sup>4</sup> See Andrew Brown, *Musical.ly’s Alex Zhu on Igniting Viral Growth and Building a User Community 2016* at 5:01, YOUTUBE (Feb. 17, 2022), <https://www.youtube.com/watch?v=Y8fDv7Fsvs8> (last visited Sept. 18, 2024).

<sup>5</sup> See Anderson, et al., *supra* note 2.

8. As TikTok’s Head of Child Safety Policy admits: “The reason kids watch TikTok is because the algo[rithm] is really good. . . . But I think we need to be cognizant of what it might mean for other opportunities. And when I say other opportunities, I literally mean sleep, and eating, and moving around the room, and looking at somebody in the eyes.”

9. Despite its full knowledge of the serious harm it is causing, however, TikTok has and continues to specifically target U.S. children with features it has purposely designed to keep young users on its platform as long as possible because “the younger the user the better the performance.”

10. As observed by the U.S. Surgeon General in a 2023 report highlighting the impact of social media use on the wellbeing of young users, “pitting adolescents[’]” “willpower to control how much time [they]’re spending . . . against” some of “the world’s greatest product designers” is “just not a fair fight.”<sup>6</sup>

11. Because TikTok knows “that [its] users’ biggest usage deterrent is that they think the platform is addictive,” TikTok conceals the addictive and harmful effects of its platform on young users. It claims publicly that its platform is safe, that it is not designed to maximize time spent, and that youth well-being is its highest priority. But these representations are deceptive because internally, TikTok knows that its platform is designed to coerce kids into compulsive use and that this use causes them harm.

12. Moreover, TikTok claims that it has implemented tools that help users reduce the harms engendered by its platform. But TikTok’s representations regarding these tools are misleading because TikTok knows that they are ultimately ineffective—either because (a) only a

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<sup>6</sup> Allison Gordon & Pamela Brown, *Surgeon General Says 13 is “Too Early” to Join Social Media*, CNN HEALTH (Jan. 29, 2023), <https://www.cnn.com/2023/01/29/health/surgeon-general-social-media/index.html> (last visited Sept. 18, 2024).

tiny percent of its users actually use those tools, (b) because the tools do not work as advertised, and/or (c) because the tools do not meaningfully reduce users' time spent on the platform or prevent other harms. In fact, TikTok has deliberately chosen not to implement measures it knows can reduce such harm.

13. TikTok's choices have not only mentally and physically harmed hundreds of thousands of young people in Massachusetts, but also have burdened its school districts and social service providers attempting to respond to the serious and ongoing health impacts on youth.

14. TikTok's unfair and deceptive trade practices targeted at youth, as alleged herein, are exactly the type of unscrupulous, immoral, oppressive, unethical, and unconscionable conduct prohibited by the Commonwealth's laws.

15. Unless and until TikTok is barred from unfairly and deceptively deploying its purposefully addictive product designs to manipulate and overcome the will of its young users, it will continue to harm the Commonwealth's youth in pursuit of profit.

16. Because that is not a future Massachusetts can tolerate, the Attorney General of the Commonwealth brings this action.

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## **II. PARTIES**

### **A. Plaintiff**

17. Plaintiff is the Commonwealth of Massachusetts (“Commonwealth”), represented by Attorney General Andrea Joy Campbell, who brings this action in the public interest pursuant to G.L. c. 93A, § 4. The Attorney General has reason to believe that Defendants have engaged in, and will continue to engage in, the unfair and deceptive practices set forth below that adversely impact the health, safety, and welfare of families and youth in the Commonwealth.

18. The Commonwealth also brings certain claims in this action pursuant to the authority conferred on the Attorney General by applicable state law, common law, and pursuant to *parens patriae* authority. These laws authorize the Commonwealth to seek injunctive and other equitable relief, as well as civil penalties, attorneys’ fees, expenses, and costs.

### **B. Defendants**

19. As further detailed below, Defendants TikTok Inc., TikTok LLC, ByteDance Inc., and ByteDance Ltd. are part of a series of interconnected companies that jointly develop and operate the TikTok social media application and platform. Defendant ByteDance Ltd. is the parent and owner of both Defendant ByteDance Inc. and of TikTok Ltd. TikTok Ltd. owns Defendant TikTok LLC and TikTok Pte. Ltd. Defendant TikTok LLC in turn owns Defendant TikTok Inc.

20. Defendant ByteDance Ltd. (Chinese Name: 北京字节跳动科技有限公司) is a company incorporated in the Cayman Islands with its principal place of business in Beijing, China and Singapore.

21. Defendant ByteDance Inc. is a U.S.-based, Delaware corporation with its principal place of business at 1199 Coleman Avenue, San Jose, California 95110.

22. Defendant TikTok LLC is a U.S.-based, Delaware limited liability company with its principal place of business at 5800 Bristol Parkway, Culver City, California 90230.

23. Defendant TikTok Inc. f/k/a Musical.ly, Inc. is a U.S.-based, California corporation with its principal place of business at 5800 Bristol Parkway, Culver City, California 90230.

24. As relevant here, Defendant ByteDance Ltd., the ultimate parent company of all the Defendants, has launched multiple social media platforms internationally, including the China-based Douyin app in September 2016, and an international version of the TikTok app in 2017. ByteDance Ltd. entered the U.S. market in December 2017 by acquiring a popular lip-synching app, Musical.ly, which it merged with the TikTok app in August 2018 under the TikTok name and began operating as the TikTok social media platform in the U.S.<sup>7</sup>

25. Within just a few short years of its debut, TikTok has become one of the largest and most widely used social media platforms in the world with over 1 billion users globally, including approximately 150 million users in the United States.<sup>8</sup> In 2022, TikTok had approximately 18.9 million U.S.-based users under age 18,<sup>9</sup> including over 600,000 Massachusetts young users, ages 13-17 years old. During this same time, TikTok derived approximately \$2 billion in revenue from U.S. users aged 13-17, which represented

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<sup>7</sup> See Mozur, *supra* note 3; Paresh Dave, *China's ByteDance Scrubs Musical.ly Brand in Favor of TikTok*, REUTERS (Aug. 2, 2018), <https://www.reuters.com/article/us-ByteDance-musically/chinas-ByteDance-scrubs-musical-ly-brand-in-favor-of-tiktok-idUSKBN1KN0BW/> (last visited Sept. 18, 2024).

<sup>8</sup> *TikTok: How Congress Can Safeguard American Data Privacy and Protect Children from Online Harms Before H. Comm. on Energy and Commerce*, 118TH CONG. 28, 36, 96 (2023) (statement of Shou Chew, Chief Executive Officer, TikTok Inc.), <https://www.congress.gov/118/chrg/CHRG-118hhrg53839/CHRG-118hhrg53839.pdf> (last visited Sept. 18, 2024); Jessica Bursztynsky, *TikTok says 1 billion people use the app each month*, CNBC (Sept. 27, 2021), <https://www.cnbc.com/2021/09/27/tiktok-reaches-1-billion-monthly-users.html> (last visited Sept. 18, 2024).

<sup>9</sup> *Social media platforms generate billions in annual ad revenue from U.S. youth*, HARVARD T.H. CHAN SCHOOL OF PUBLIC HEALTH (December 27, 2023), <https://www.hsph.harvard.edu/news/press-releases/social-media-platforms-generate-billions-in-annual-ad-revenue-from-u-s-youth/> (last visited Sept. 18, 2024).



approximately 35% of its overall 2022 advertising revenue.<sup>10</sup>

26. Upon information and belief, Defendants and their executives and officers, together with the other above-referenced affiliated corporate entities, jointly direct and control the TikTok platform's features and development, and have jointly advertised, marketed, operated, promoted, and distributed the TikTok social media application and platform to consumers throughout the United States and Commonwealth since 2017.

27. Upon information and belief, Defendants have either individually or jointly formulated, approved, directed, controlled, had the authority to control, and/or participated in all aspects of the strategy, operation, planning, management, policies, design, and development of the TikTok social media platform and/or otherwise controlled the acts or practices referenced throughout this complaint.

28. Defendant TikTok Inc.'s officers and directors are shared and/or overlap with those of Defendant ByteDance Inc. and/or ByteDance Ltd. For example, TikTok Inc.'s chief executive officers between 2020 and the present (Kevin Mayer, Vanessa Pappas, and Shou Zi Chew) have simultaneously held senior positions at ByteDance Ltd. ByteDance Inc.'s officers and directors have also overlapped with officers and directors of TikTok Inc. Because employee roles among Defendants are often blurred, TikTok Inc. represents that it has not created or maintained an organizational chart because its employees' titles and responsibilities between organizations are fluid.<sup>11</sup>

29. TikTok Inc. employees can choose to have either TikTok domain emails (*i.e.*,

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<sup>10</sup> *Social media platforms generate billions in annual ad revenue from U.S. youth*, *supra* note 9.

<sup>11</sup> Roger Chen & Rui Ma, *How ByteDance Became the World's Most Valuable Startup*, HARVARD BUS. REV. (Feb. 24, 2022), <https://hbr.org/2022/02/how-bytedance-became-the-worlds-most-valuable-startup> (last visited Sept. 18, 2024).

emails ending in “tiktok.com”) or ByteDance domain emails (*i.e.*, emails ending in “bytedance.com”) “tied to the top level entity” of Defendants’ corporate structure.<sup>12</sup>

30. Because Defendants’ corporate boundaries are porous, employees at all the companies work together. All Defendants’ employees use a shared internal messaging system, Lark, where they can engage in electronic group communications called “chats” with each other regardless of their formal company affiliation.<sup>13</sup> Defendants’ employees use Lark to discuss specific features on TikTok. Employees from all Defendants also contributed to internal documents discussing so-called “safety features” for U.S. teens on TikTok. Similarly, TikTok admits that “ByteDance entities provide services that support the operation of the TikTok platform, such as [] technical support services.”<sup>14</sup>

31. As reported in a 2023 report prepared for the Australian Select Committee on Foreign Interference through Social Media, one ByteDance Ltd. insider described how TikTok Inc. “draws on personnel, experience, and methods of ByteDance’s Douyin app, software, and commercial model to achieve ‘technology accumulation and business breakthroughs.’”<sup>15</sup> Further, current and former TikTok employees “attest to the closeness” of the TikTok and ByteDance entities, indicating that ByteDance makes “decisions both large and small about

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<sup>12</sup> Senate Hearing Transcript for *Subcommittee: Protecting Kids Online: Snapchat, TikTok, and Youtube*, U.S. Senate Committee on Commerce, Science, and Transportation, 117<sup>th</sup> Cong. 224 (October 26, 2021), available at CHRG-117shrg54901.pdf (govinfo.gov), Response to Written Questions Submitted by Hon. Ted Cruz to Michael Beckerman, p. 224.

<sup>13</sup> Sapna Raheshwari & Ryan Mac, *Driver’s Licenses, Addresses, Photos: Inside How TikTok Shares User Data*, N.Y. TIMES (May 24, 2023), <https://www.nytimes.com/2023/05/24/technology/inside-how-tiktok-shares-user-data-lark.html> (last visited Sept. 18, 2024).

<sup>14</sup> Senate Hearing Transcript for *Subcommittee: Protecting Kids Online: Snapchat, TikTok, and Youtube*, *supra* note 12, Response to Written Questions Submitted by Hon. Marsha Blackburn to Michael Beckerman, p. 218, available at CHRG-117shrg54901.pdf (govinfo.gov).

<sup>15</sup> Rachel Lee *et al.*, *TikTok, ByteDance, and Their Ties to the Chinese Communist Party*, 42 SUBMISSION TO THE SENATE SELECT COMMITTEE ON FOREIGN INTERFERENCE THROUGH SOCIAL MEDIA (March 14, 2023), <https://t.co/ROPtMMud89> (last visited Sept. 18, 2024).

TikTok’s content moderation, product development, engineering, commerciali[z]ation, strategy and human resources.” As a result, the report concluded that ByteDance Ltd. management considers the entities “interchangeable” as “it is not possible for TikTok to operate independently of Bytedance” due to “the sharing of technical and human resources across the global corporate groups.”<sup>16</sup>

32. Numerous employees, including high-ranking leaders of TikTok Inc. have stated and continue to state on their public LinkedIn profiles that they are employed by “ByteDance/TikTok.”<sup>17</sup>

33. TikTok Inc.’s CEO Shou Chew, who is also paid by ByteDance Ltd., stated to Congress on March 23, 2023, that employees of ByteDance Ltd. work on the TikTok platform and that he personally uses Lark to communicate “with employees at ByteDance.”<sup>18</sup>

34. Chew reports to the CEO of ByteDance Ltd.<sup>19</sup>

35. Defendants also mingle and intertwine their finances. For example, ByteDance Ltd. provides compensation and benefits to Defendant TikTok Inc.’s CEO, and TikTok Inc. employees participate in ByteDance Ltd.’s stock option plan. ByteDance is listed on the paychecks and tax returns of TikTok employees.<sup>20</sup> Defendants have one centralized bank account for ByteDance Ltd.’s multiple products, including the TikTok platform.

36. Given the foregoing, all Defendants, together with the other above-referenced

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<sup>16</sup> *Id.*

<sup>17</sup> *Id.*; see, e.g., Profile of Erich Anderson, LinkedIn, <https://www.linkedin.com/in/erich-andersen-b001ba84/> (last accessed Sept. 17, 2024).

<sup>18</sup> *TikTok: How Congress Can Safeguard American Data Privacy and Protect Children from Online Harms Before H. Comm. on Energy and Commerce*, *supra* note 8.

<sup>19</sup> See *id.* at pp. 24 and 95-96.

<sup>20</sup> Lee et al., *supra* note 15.

affiliated corporate entities, operate as a common enterprise, including while engaging in the unfair, deceptive, and other unlawful acts and practices alleged herein.

### **III. JURISDICTION AND VENUE**

37. The Attorney General is authorized to bring this action, in this Court, under G.L. c. 93A, § 4, G.L. c. 12, § 10, common law, and *parens patriae* authority.

38. Venue is proper in Suffolk County under G.L. c. 93A, § 4, and G.L. c. 223, § 5, as the Commonwealth is the plaintiff.

39. The Attorney General notified Defendants of her intent to bring this action at least five days prior to the commencement of this action, as required by G.L. c. 93A, § 4.

40. This Court has jurisdiction over the subject matter of this action by virtue, *inter alia*, of G.L. c. 93A, § 4 and G.L. c. 212, § 4.

41. This Court has specific personal jurisdiction over Defendants under G.L. c. 223A, § 3, because, among other things, and as further set forth below:

- a. Defendants have transacted and continue to transact, direct, and solicit business in Massachusetts by advertising, promoting, and offering their product and services to Massachusetts consumers and advertisers; successfully signing up millions of Massachusetts users on the TikTok platform; collecting Massachusetts users' data; and selling advertising opportunities to entities (based within and without Massachusetts) that seek to reach audiences comprised primarily or exclusively of Massachusetts users based on such data;
- b. Defendants form bilateral contractual relationships, *i.e.*, "binding contract[s]," with each and every Massachusetts user who accesses or uses their platform and services by requiring each user to accept its Terms of Use and agree to comply

with them;<sup>21</sup>

- c. Defendants have also contracted to supply services or things in the Commonwealth by contracting with Massachusetts-based advertisers to place advertisements on their platform specifically targeted to Massachusetts users based on personal data collected from Massachusetts users registered on their platform to gain ad revenue derived from Massachusetts users;
- d. Defendants have further contracted with Massachusetts-based companies to perform strategic consulting services related to TikTok's Global Policy Framework and Community Guidelines which govern its youth safety and wellbeing standards and multiple other aspects of the TikTok user experience on its platform;<sup>22</sup>
- e. Defendants' misrepresentations, omissions, actions, and inactions in connection with designing, developing, and promoting platform features that Defendants knew would induce addictive, compulsive, and harmful use by Massachusetts young users have harmed the public health, safety, and welfare of Massachusetts residents, and in particular youth under 18 years old; and
- f. Defendants have employed Massachusetts-based employees for the purposes of facilitating product development, global trust and safety development, and their other business efforts related to advertising, offering, soliciting, and recruiting Massachusetts youth to sign up for their services.

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<sup>21</sup> *Terms of Service*, TIKTOK (effective November 2023), <https://www.tiktok.com/legal/page/us/terms-of-service/en> (last visited Sept. 18, 2024).

<sup>22</sup> *Community Guidelines*, TIKTOK, (effective May 17, 2024), <https://www.tiktok.com/community-guidelines/en> (last visited Sept. 18, 2024).

42. Because, as alleged above, Defendants operate as a common enterprise while engaging in the unfair, deceptive, and other unlawful acts and practices affecting Commonwealth residents alleged herein, such that agency and/or alter-ego relationships have formed, each of them is jointly and severally liable for the acts and practices alleged herein, and this Court has jurisdiction over each Defendant individually and collectively.

43. Defendants' business within the Commonwealth has been pervasive.

44. In June 2021, Defendants ByteDance Inc. and TikTok Inc. both filed Foreign Corporation Certificates of Registration with the Massachusetts Secretary of State pursuant to G.L. c. 156D, § 15.03 and 950 CMR 113.48, both listing their registered agent office in the Commonwealth as 84 State Street, Boston, MA. Within such certificates of registration, ByteDance Inc. and TikTok Inc. both described their "activities to be conducted in the [C]ommonwealth" as "internet technology/social media/advertising and other related commercial activities."

45. ByteDance Inc. and TikTok Inc. have filed annual corporate reports with the Massachusetts Secretary of State pursuant to G.L. c. 156D, § 16.22 and 950 CMR 113.57 each year from 2021 to present. Each annual report describes the business of the corporation within the Commonwealth as "TECH."

46. TikTok has directed and continues to direct its business toward Massachusetts users, including Massachusetts teen users, by cultivating, marketing, and operating its platform within Massachusetts to be accessed by Massachusetts youth and soliciting the creation of new accounts by Massachusetts youth who accept TikTok's Terms of Service, which TikTok states "form[s] a legally binding agreement" between each user and TikTok.<sup>23</sup>

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<sup>23</sup> *Terms of Service*, *supra* note 21.

47. When Massachusetts users sign up to use TikTok’s social media platform, TikTok collects and harvests a whole host of personal data, including users’ location data, which they then deploy to sell opportunities to third parties to advertise to TikTok users in Massachusetts, and accordingly derive substantial revenue from the Massachusetts users successfully recruited to its platform.

48. Specifically, TikTok’s website states that it collects “location information” from users’ devices “[t]o help improve your app experience,” including using location information “to show you popular content in your area, and . . . to show ads that may be more relevant to you.”<sup>24</sup> The location information collected include a user’s country, region, city or zip code.<sup>25</sup>

49. TikTok’s Privacy Policy similarly states that it uses the information it collects from each user to, among many other purposes, “provide you with location-based services, such as advertising and other personalized content.”<sup>26</sup>

50. Among the many features TikTok affords its advertisers is the ability to target its users by city/town and state, such that advertisers can and do target their advertisements to Massachusetts audiences (or to audiences in a geographic area within the Commonwealth). According to TikTok’s “Top Ads” Library, TikTok has sold advertising packages to numerous Massachusetts-based advertisers who have specifically paid to target users residing in Massachusetts cities and towns. Those advertisements were directed to Massachusetts users and TikTok purposely derived economic benefits, including ad revenue, from such activity in

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<sup>24</sup> *Privacy Policy – Location Services*, TIKTOK (Aug. 19, 2024), <https://support.tiktok.com/en/account-and-privacy/account-privacy-settings/location-services-on-tiktok> (last visited Sept. 18, 2024).

<sup>25</sup> *Id.*

<sup>26</sup> *Id.*

Massachusetts.<sup>27</sup>

51. TikTok also takes advantage of users' known or predicted location within Massachusetts to determine what posts to show those users (for example, posts from other users who are geographically nearby). In so doing, TikTok strives to show users posts that will result in those users spending more time on TikTok's platform, which allows TikTok to sell more advertisements.

52. In short, TikTok leverages and capitalizes off serving Massachusetts users a Massachusetts-specific user experience.

53. Accordingly, the number of Massachusetts users, including Massachusetts young users, and their time spent on the TikTok platform, affect TikTok's revenue and financial results by influencing the number of ads the platform is able to show, and the value of the ads to third-party advertisers who pay to target their ads to Massachusetts users.

54. In fact, TikTok generates, calculates, and tracks profits (including advertising revenue) derived from an "average revenue per user" (ARPU).

55. TikTok specifically calculates this ARPU for each state, including Massachusetts, and thus specifically monetizes Massachusetts users at their own unique average rate. Based on TikTok's reported ARPU for Massachusetts teen users, ages 13-17, during the time period April 2022 to July 2023, TikTok generated [REDACTED] in revenue from Massachusetts teen users.

56. TikTok also tracks the number of Massachusetts teen Daily Active Users ("DAU") and Monthly Active Users ("MAU") (*i.e.*, the number of unique Massachusetts teen user accounts who visited TikTok at least once on a specific day, and in the last 30 days,

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<sup>27</sup> See, e.g., "BostonBallet" Ad; "Worcester Palladium" Ad; "Cape Cod Vacation Done Right" Ad; "Wang Theater Boston" Ad; "ViewBoston" Ad, TIKTOK CREATIVE CENTER AD LIBRARY, <https://ads.tiktok.com/business/creativecenter/topads/7341439411069075458/pc/en?countryCode=US&period=30>; (last visited Sept. 18, 2024).



respectively) on its platform in order to identify opportunities to grow the number of Massachusetts teen users and increase their time spent on the platform.

57. TikTok’s tactics to target Massachusetts users have been wildly successful with hundreds of thousands of Massachusetts teen or “young users” (*i.e.*, youth 13-17 years old) with accounts on its platform at all relevant times to the Complaint.

58. In particular, from August 2022 to December 2023, the total number of Massachusetts teen user accounts (ages 13-17 years old) on the TikTok platform ranged from at least 525,521 to 631,999 user accounts.

59. Notably, the total number of Massachusetts teen user accounts on the TikTok platform at the end of 2022 (610,038) comprises 150.49% of the total MA teen population in 2022,<sup>28</sup> signaling that virtually every teenager in Massachusetts has and uses a TikTok account, and many Massachusetts teen users have more than one account.

60. And the amount of time Massachusetts teen users spend on the TikTok platform is remarkable. For example, from October 2022 to October 2023, Massachusetts teen users (ages 13-17 years old) spent an average of 10,609,756.6 minutes daily on the TikTok platform, and an average of 318,292,697.7 minutes monthly.

61. During the same October 2022 to October 2023 time period, the “daily average session duration” for Massachusetts teen users on the TikTok platform was over two hours.

62. TikTok’s near-total Massachusetts teen market saturation is not by accident. Rather, it is a result of TikTok’s focused efforts to target, attract and retain Massachusetts users, including Massachusetts teen users. In fact, TikTok’s internal strategy and planning documents

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<sup>28</sup> U.S. Census data reports an estimated 405,366 teens aged 13–17 in Massachusetts in 2022. *Kids Count Data Center*, THE ANNIE E. CASEY FOUND’N (2023), <https://datacenter.aecf.org/> (last visited Sept. 18, 2024).

show that it has explicitly targeted Massachusetts-based users. For example, in an internal “2021 H2 Planning” document, TikTok expressly identified Massachusetts as a “sensitive,” “key market.”

63. TikTok also monitors and cultivates the Massachusetts market, including developing a public relations “Media strategy” related to mitigating the impacts on Massachusetts users from viral TikTok trends that encourage dangerous behavior (and in some cases the commission of crimes), *e.g.*, such as the “slap a teacher challenge,” “blackout challenge” and “Lug Nut Challenge” which TikTok internally identified as a TikTok trend that was impacting “especially Massachusetts.”

64. Similarly, TikTok regularly monitors Massachusetts local policy and legislative developments in its internal weekly “US Public Policy: Analysis & Strategy Report,” which provides political and policy analysis of “key highlights, business impacts, and strategies to mitigate potentially adverse outcomes,” from U.S. events, including those occurring in Massachusetts.

65. In addition, TikTok is aware of its active Massachusetts user base, including Massachusetts teen users, and seeks to promote and leverage such user base to build its brand. For example, in compiling a list of TikTok creators, small businesses, and brand success stories “that can be pitched for media impact stories,” TikTok identified multiple Massachusetts TikTok creators, including teen creators, with a substantial number of followers and/or videos that have garnered significant views or shares. To that end, TikTok has also hosted an in-person local workshop targeted at Massachusetts small businesses and others in the New England area, which the company considered a “critical part” of TikTok’s community, to help them use TikTok to

grow their business.<sup>29</sup>

66. TikTok has further contracted with Massachusetts-based companies, such as [REDACTED], to perform strategic consulting services related to its Global Policy Framework, annual issue policy roadmap, and Community Guidelines which govern its youth safety and wellbeing standards and multiple other aspects of the TikTok user experience on its platform.<sup>30</sup>

67. And when conducting their “External Segmentation Marketing Research” in the U.S., TikTok specifically surveyed respondents in Massachusetts to obtain information on usage patterns to analyze and inform future opportunities to find “interest groups” and “audience segments” to target with the “highest [marketing] potential” “[t]o broaden reach.”

68. TikTok also made materially false representations and/or omissions about its product which TikTok knew or should have known would be viewed, heard by, conveyed to, and/or relied upon by Massachusetts users and residents, including on TikTok’s website, in TikTok’s published Community Guidelines, and in TikTok’s testimony to Massachusetts elected officials.<sup>31</sup>

69. TikTok has also interacted directly with the millions of Massachusetts registered users, including hundreds of thousands of Massachusetts teen users, through messages, notifications, and other communications that are directed toward and received within Massachusetts relating to the recipients’ use of TikTok’s platform. As a consequence, TikTok’s conduct has directly affected the lives and well-being of Massachusetts individuals and youth.

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<sup>29</sup> *Small Biz Block Party: TikTok's first nationwide workshop series to help SMBs*, TIKTOK (July 15, 2021), <https://newsroom.tiktok.com/en-us/small-biz-block-party> (last visited Oct. 6, 2024).

<sup>30</sup> *Community Guidelines*, *supra* note 22.

<sup>31</sup> Hearing Transcript for *Subcommittee: Protecting Kids Online: Snapchat, TikTok, and Youtube*, *supra* at 12, Michael Beckerman testimony (responding to Massachusetts Senator Ed Markey’s questions).

70. Moreover, TikTok employs Massachusetts-based employees to support its product development, development of its U.S. trust and safety policies, and their other business efforts related to advertising, offering, soliciting, and recruiting Massachusetts youth to sign up for the company's services. For example, TikTok's Massachusetts employees include product leads, U.S. trust & safety policy leads, program managers, data engineers, scientists and data solutions staff, user experience managers, digital marketing managers, and software engineers.

71. Based on the foregoing, Defendants have engaged and continue to engage in a persistent course of conduct and/or derive substantial revenue from their services and products offered and used by residents in the Commonwealth, and Defendants purposefully avail themselves of the Massachusetts market so as to render the exercise of jurisdiction over Defendants consistent with traditional principles of fair play and substantial justice.

#### **IV. TRADE AND COMMERCE IN THE COMMONWEALTH**

72. As alleged in this Complaint, TikTok's unfair and/or deceptive acts and practices occurred "in the conduct of any trade or commerce" under G.L. c. 93A, § 1.

73. Under G.L. c. 93A, § 1, "trade" and "commerce" include "the advertising, the offering for sale, . . . the sale, . . . or distribution of any services . . . directly or indirectly affecting the people of this commonwealth."

74. TikTok engages in trade or commerce because it: (a) offers, targets and advertises its platform and services to attract Massachusetts users (including Massachusetts young users) (*see supra* ¶¶ 23), (b) does in fact distribute its platform and services to hundreds of thousands Massachusetts young users, (c) forms bilateral contractual relationships with the Massachusetts users who sign up for and use its platform, (d) monetizes and profits from the data Massachusetts users agree to allow TikTok to collect by using its platform and services, and (e) enters

commercial transactions with numerous third-party advertisers who wish to reach and target Massachusetts users—all of which directly and indirectly affect Massachusetts consumers.

75. Specifically, by accessing and using TikTok’s platform, Massachusetts users accept TikTok’s Terms of Service, which TikTok states “govern[s] the relationship and serve[s] as” a “legally binding agreement” and “binding contract” “between [a user] and [TikTok]” regarding “access and use [of its] Platform and [TikTok’s] related websites, services, applications, products and content.”<sup>32</sup>

76. The Terms of Service further expressly state that in exchange for accessing or using TikTok’s platform and services, Massachusetts users “acknowledge and agree that [TikTok] may generate revenues, increase goodwill or otherwise increase [its] value from [the user’s] use of the Services, including . . . through the sale of advertising, sponsorships, promotions, usage data and [g]ifts.”<sup>33</sup>

77. As described in TikTok’s Privacy Policy, TikTok collects, uses, shares, and otherwise processes and monetizes the personal information of Massachusetts users who use its platform. This includes numerous categories of personal data associated with each individual user, such as:

- a. “Account and profile information, such as name, age, username, password, language, email, phone number, social media account information, and profile image;”
- b. “User-generated content, including comments, photographs, livestreams, audio

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<sup>32</sup> *Terms of Service*, *supra* note 21.

<sup>33</sup> *Id*; see also *Help Center – Gifts*, TIKTOK, <https://support.tiktok.com/en/live-gifts-wallet/gifts/gifts> (last visited Sept. 17, 2024) (defining “gifts” as “virtual items” a user can purchase and “send to show your appreciation for [their] favorite creators on TikTok”).

recordings, videos, text, hashtags, and virtual item videos that [the user] choose[s] to create with or upload to the Platform (“User Content”) and the associated metadata, such as when, where, and by whom the content was created;”

- c. “[the user’s] choices and communication preferences;” and
- d. “Information [the user] share[s] through surveys or [their] participation in challenges, research, promotions, marketing campaigns, events, or contests such as [their] gender, age, likeness, and preferences.”<sup>34</sup>

78. In addition to the above, TikTok “automatically collects certain information” from users when they use its platform, “including internet or other network activity information such as [a user’s] IP address, geolocation-related data, unique device identifiers, browsing and search history (including content [a user] ha[s] viewed in the Platform), and Cookies.”<sup>35</sup> In particular, this includes (but is not limited to) data such as:

- a. “Usage Information,” *i.e.*, “information regarding your use of the Platform and any other User Content that you generate through or upload to our Platform;”
- b. “Device Information,” *i.e.*, “IP address, user agent, mobile carrier, time zone settings, identifiers for advertising purposes, model of your device, the device system, network type, device IDs, your screen resolution and operating system, app and file names and types, keystroke patterns or rhythms, battery state, audio settings and connected audio devices;”
- c. “Location Data”, *i.e.*, “information about your approximate location, including location information based on your SIM card and/or IP address” and “location

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<sup>34</sup> *Privacy Policy*, TIKTOK (Aug. 19, 2024), <https://www.tiktok.com/legal/page/us/privacy-policy/en> (last visited Sept. 18, 2024).

<sup>35</sup> *Id.*

information (such as tourist attractions, shops, or other points of interest);”

- d. “Image and Audio Information,” *i.e.*, “information about the videos, images and audio that are a part of your User Content, such as identifying the objects and scenery that appear, the existence and location within an image of face and body features and attributes, the nature of the audio, and the text of the words spoken in your User Content” which TikTok uses “for demographic classification, [and] for content and ad recommendations;” and
- e. “Cookies,” *i.e.*, information that “measure[s] and analyze[s] how you use the Platform, including which pages you view most often and how you interact with content,” which TikTok uses to “provide you with advertising, [] measure the effectiveness of advertisements and other content,” and “promote the Platform on other platforms and websites.”

79. TikTok further explains that it uses Massachusetts users’ information to, among many other things, “measure and understand the effectiveness of the advertisements” it serves to each Massachusetts user, “to deliver advertising, including targeted advertising, to [Massachusetts users] on the Platform,” and “infer additional information about [a user], such as [one’s] age, gender, and interests” to “facilitate sales, promotion, and purchases of goods and services.”<sup>36</sup>

80. TikTok thus solicits, offers, and distributes its social media services to Massachusetts users in exchange for the considerable value of access to and use of the data that the users generate, which TikTok converts, leverages, and monetizes for multiple revenue-generating purposes, such as to sell advertising opportunities to third parties who want to target

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<sup>36</sup> *Id.*

specific Massachusetts users with advertising. And by unfairly and deceptively inducing Massachusetts users, including young users, to spend more time on the platform (as further alleged below), TikTok is able to collect more data and show more ads, thus furthering its advertising revenue generating goals.<sup>37</sup>

81. Moreover, TikTok attracts and retains advertisers by boasting that its possession of users’ unique personal data enables marketers to reach people based on an extensive variety of differentiating factors such as age, gender, location, interests, and online behaviors.

82. In fact, TikTok’s Business Center and Ads Manager website promotes to potential advertisers who want to “[l]aunch ads and drive business results on TikTok” that they can “[r]each a unique audience on any budget,” “connect with highly engaged shoppers” and expressly touts that “1 in 3 TikTok users bought a product because they saw it on TikTok.” Moreover, TikTok highlights that a business can target its “ideal” audience and “potential customers” by location, demographics, interests, behaviors, devices, and multiple other ways.<sup>38</sup> Because of TikTok’s massive collection of user data, TikTok advertises that it is “easy” for it to help advertisers “get the attention of highly engaged audiences at the best possible moment” by “leverag[ing] [the target] audience’s interests, viewing behaviors and creator interactions to deliver relevant ads tailored to your industry and goals.”<sup>39</sup>

83. Advertisers specifically pay TikTok for such targeted advertising and a variety of business goals, such as the amount of video views and ad impressions, *i.e.*, the number of times

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<sup>37</sup> *Terms of Service*, *supra* note 21.

<sup>38</sup> *TikTok for Business – Ads Manager*, TIKTOK, <https://www.tiktok.com/business/en-US/solutions/ads-manager> (last visited Sept. 17, 2024). These ad targeting options existed for young users under 18 up until at least June 30, 2024. *See Business Help Center – Advertising to People Under the Age of 18*, TIKTOK (effective Sept. 2024), <https://ads.tiktok.com/help/article/about-advertising-to-people-under-the-age-of-18> (last visited Sept. 18, 2024); *TikTok for Business – Sign-up Page*, TIKTOK, <https://getstarted.tiktok.com/ttvalue> (last visited Sept. 17, 2024).

<sup>39</sup> *Id.*



their ads were shown on users’ screens in their target audience.<sup>40</sup>

84. During all relevant times to this Complaint, TikTok has successfully solicited and/or maintained business from residents and youth of the Commonwealth, including from the hundreds of thousands of Massachusetts young users with accounts on its platform.

85. As alleged in further detail below, in conducting this trade or commerce in the Commonwealth, TikTok uses unfair and deceptive acts and practices in its design and operation of its platform to manipulate and compel Massachusetts young users into spending more time on its platform than they would otherwise choose (thereby viewing more ads) —at the expense of those young users’ physical and mental health.

## **V. THE TIKTOK PLATFORM**

86. TikTok’s social media platform is an online service that centers on allowing “users” (*i.e.*, people and organizations) to create, share (commonly called “posting”), discover, and watch short-form videos or slideshows that often have music, text or effects overlaid. It is one of the most widely used social media platforms among people aged 13-17 in the United States.<sup>41</sup> In 2022, two-thirds of U.S. teens reported using TikTok.<sup>42</sup> By late 2023, nearly half of U.S. teens reported using TikTok multiple times a day and/or being on the platform “almost constant[ly].”<sup>43</sup>

87. The overwhelming majority of consumers, especially young users, access the

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<sup>40</sup> *Business Help Center – Metrics Glossary*, TIKTOK (updated Aug. 2024), <https://ads.tiktok.com/help/article/basic-data> (last visited Sept. 18, 2024).

<sup>41</sup> Anderson, et al., *supra* note 2; D. Curry, *Most Popular Apps* (2023), BUSINESSofAPPS (Feb. 28, 2023), available at <https://www.businessofapps.com/data/most-popular-apps/> (last visited Sept. 18, 2024).

<sup>42</sup> Emily A. Vogels et al., *Teens, Social Media and Technology 2022*, PEW RESEARCH CTR. (Aug. 10, 2022), <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/> (last visited Sept. 18, 2024).

<sup>43</sup> Anderson, et al., *supra* note 2.

platform through an application (“app”) that is installed on a mobile device, such as an iPhone or Android phone.<sup>44</sup>

88. Once a user has signed up for a TikTok account, any time they login and open the app they are immediately taken to their personalized “For You” homepage (often referred to as the “For You page” or “fyp”) where they are shown a unique, curated series, or “feed,” of short videos (called the “For You feed”) that automatically starts playing and continues to populate and play new videos as they scroll down.

89. The For You feed is “one of the defining features of the TikTok platform,” and it is powered by a recommendation system that delivers videos to each user that that TikTok deems most “likely to be of interest to that particular user.”<sup>45</sup> As TikTok describes, “[p]art of the magic of TikTok is that there’s no one For You feed;”<sup>46</sup> each feed is unique to each user. Notably, the posts (*i.e.*, videos) in the feed are not from accounts that the user has chosen to follow (termed “following”), but rather, comprise suggested posts from unfollowed accounts that TikTok’s algorithm predicts a user will like based on the data TikTok has about that user, including personal characteristics and their pattern of behavior on the platform. TikTok continues feeding the user different videos indefinitely.

90. For illustrative purposes, an example of a still image from a video post that TikTok might show to a young user on their For You page is shown below.<sup>47</sup> The image below is overlaid with labels identifying the various features of the TikTok platform that are relevant to

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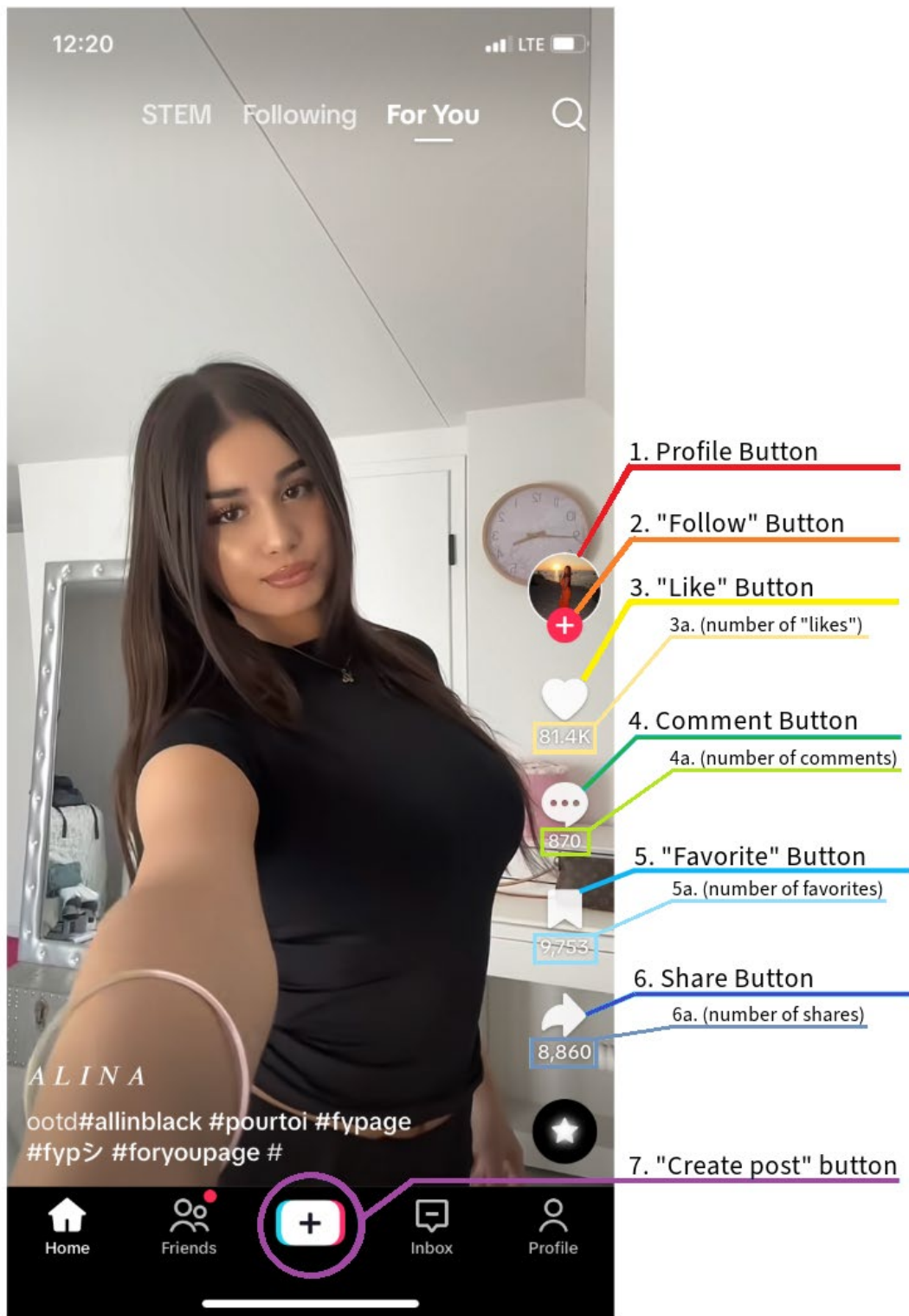
<sup>44</sup> Accordingly, unless otherwise specified, the platform features referenced herein will refer to the use of such features using the TikTok mobile app.

<sup>45</sup> *How TikTok recommends videos #ForYou*, TIKTOK (June 18, 2020), <https://bit.ly/3NuYeUY> (last visited Sept. 18, 2024).

<sup>46</sup> *Id.*

<sup>47</sup> The image comes from an Android phone, but it is not materially different from how the app appears on an iPhone.

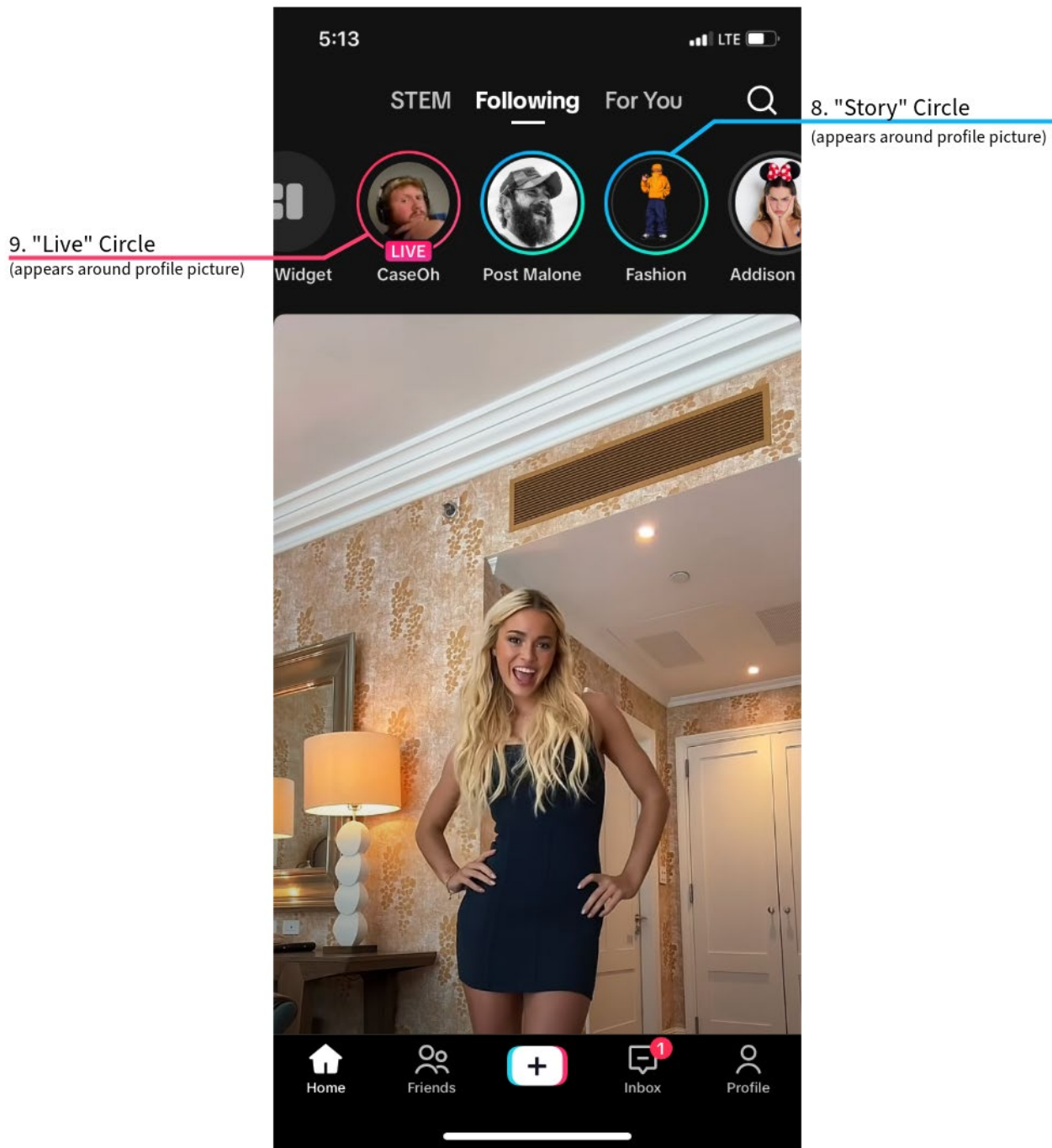
the allegations in this Complaint:



91. As the above “For You page” video still image shows, a user can interact with a video while viewing it in various ways. Specifically, as seen on the right side of the screen above, and which is described in more relevant detail below, a user can “Follow” a specific user (label #2), “Like” a post (label #3), “Comment” on a post (label #4), “Favorite” or bookmark/save a post (label #5), and “Share” a post (label #6). In addition, TikTok visibly displays next to each post a number reflecting the number of times other users have “Liked,” “Commented,” “Favorited,” or “Shared” that post (labels #3a, 4a, 5a, and 6a, respectively).

92. When a user wants to create their own video post to upload and share, they can click on the plus sign button at the bottom center of the screen (label #7). While creating their own post, a user is given options to add or overlay special “Effects,” such as beauty filters, to alter or edit their appearance before they post.

93. A user can also navigate to a separate “Following” page by tapping the “Following” tab at the top of their screen. Unlike the “For You” page, the “Following” page comprises a feed of videos posted solely by accounts the user has chosen to follow. An illustrative example screenshot of the “Following” page is provided below:



94. As seen at the top of the “Following” page screenshot above, TikTok will also show the user circles with account profiles of the users that they follow that have posted a video “Story” or series of “Stories” that can only be viewed within 24 hours of posting. A blue-green circle around an account profile picture indicates that a Story has been uploaded and is available

to view (label #8). A red circle around an account profile picture with a “LIVE” banner on top (label #9) indicates that an account profile is currently “livestreaming” a video in real time which can only be interacted with while that person is “live,” but not after the livestream ends. As further described below, TikTok embeds psychologically manipulative aspects into all these aforementioned features to induce more time spent on its platform.

## **VI. DEFENDANTS’ UNFAIR AND DECEPTIVE SCHEME TO EXPLOIT YOUNG USERS FOR PROFIT**

95. TikTok’s explosive growth has been credited to the platform’s ability to attract tens of millions of young users across the nation and capture their near “constant”<sup>48</sup> attention.

96. What these millions of young users, their families, and the public do not know, however, is that TikTok has meticulously and purposefully designed its platform features to exploit, psychologically manipulate, and capitalize off young users’ especially susceptible and vulnerable developing brains and social sensitivities, to hook them into spending excessive amounts of time on its platform—more than they would otherwise choose.

97. Young users, their families, and the public are unaware—because of TikTok’s painstaking efforts to conceal it—that TikTok intentionally designs tools and features to induce addictive and habitual use, including specifically by younger users who TikTok knows are less able to self-regulate their use.

98. TikTok also effectively and deceptively conceals the mental and physical harm caused to young users by such excessive, compulsive use, does nothing to effectively mitigate those harms, and has expressly rejected internal recommendations to reduce such problematic use of its platform because it would impact profits.

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<sup>48</sup> See Anderson, et al., *supra* note 2.

**A. TikTok Unfairly and Unconscionably Exploits Young Users' Vulnerabilities and Sacrifices Their Health and Well-Being in Order to Gain Profit**

**1. TikTok Knowingly Employs Coercive Features to Psychologically Manipulate Young Users Into Compulsive, Addictive Use of Its Platform**

99. To draw young people onto its platform, keep them there, and lure them back for hours upon hours, every single day, TikTok deploys what it self-describes as “coercive design” tactics – *i.e.*, design features that it knows preys on young users’ still-developing brains and psychological vulnerabilities, including their well-known social “fear of missing out” (commonly called “FOMO”), need for social validation, lack of ability to self-regulate, and heightened biochemical desire for dopamine- or pleasure-triggering activity.

100. These coercive design tactics include: (1) Push Notifications and Intermittent Variable Dopamine Rewards; (2) Infinite Scroll; (3) Autoplay; (4) Ephemeral Features; (5) Visible Social Validation Metrics; and (6) Behavioral-Based, Time-Maximizing Algorithms. Such features—independently and together— manipulate young users’ unique vulnerabilities and override their ability to regulate their time and free choice to leave the platform, and induce harmful compulsive, addictive and problematic use and associated physical and mental health harms.

101. As further described below, TikTok knows these features are particularly effective in inducing young users to spend more time on its platform than they would otherwise choose because it knows that “minors do not have executive function to control their screen time” or self-regulate because younger brains are not as developed as those of adults.

102. TikTok knowingly developed and maintained these features to take advantage of this vulnerability to purposefully create an addiction to its platform in young users.

103. As TikTok internally admits, “[t]here are numerous [coercive design] features

(Infinite scroll, auto-play, constant notifications) in the TikTok product experience” that are “manipulative” and do not ‘support users’ intentions on TikTok.”

104. Notably, TikTok embeds these features into its platform in a way that either cannot be changed by the user or as default settings, which TikTok knows young users are highly unlikely to alter, which furthers TikTok’s goal of keeping young users on its platform as long and as frequently as possible.

**a. Push Notifications and Intermittent Variable Dopamine Rewards**

105. Notifications and alerts, pushed to users on an optimized, variable dopamine-triggering schedule, are integral to TikTok’s business goal of hooking young users, prolonging their time spent on its platform, and keeping them returning to its platform over and over again at all times of the day. An internal “TikTok Push 101” presentation describes the overarching goal of push notifications is “to encourage users to open the app more and stay longer.”

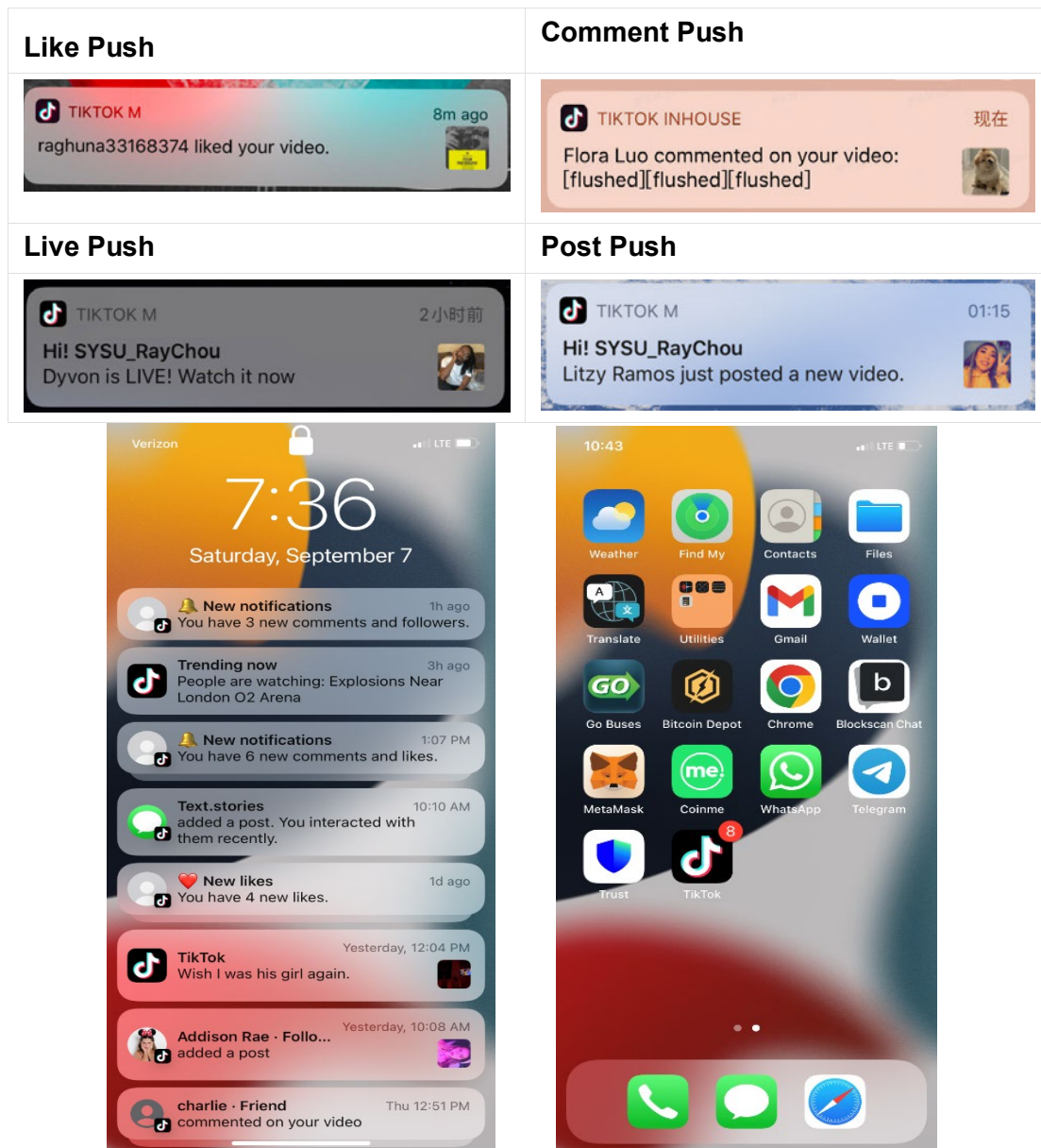
106. Notifications are TikTok-created signals displayed on a user’s device with TikTok-created messages that alert a user of activity on the platform to prompt a return to or continued use of the application. These notifications contain messages solely crafted, written, designed, developed, formatted and sent by TikTok without third-party involvement.

107. A push notification pops up as a banner on a user’s phone or mobile device screen alerting them of some type of activity that has occurred on the platform (*i.e.*, “[@user] just posted a video”). Upon account creation, by default, TikTok automatically enables approximately 33 types of notifications to alert a user to a myriad of events or activities occurring on the app, including when someone likes, comments on, or shares a user’s post, direct messages or follows them, or if someone who the user follows tags or mentions them, posts a



new video, or goes “live.”<sup>49</sup>

108. Illustrative examples of push notifications appear in the below screenshots, including how multiple notifications and badges are grouped, displayed and quantified on a user’s phone screen:



<sup>49</sup> *Help Center – Notifications*, TIKTOK, <https://support.tiktok.com/en/using-tiktok/messaging-and-notifications/notifications> (last visited Sept. 17, 2024).

109. As described in TikTok’s internal document “TikTok Push System – From Zero to One,” these notifications are “triggered without users opening the A[pp],” and show up on a user’s phone screen even when the phone is not being used at all.

110. TikTok has also designed these push notifications so that, by default, when a user receives a push notification, their device vibrates and makes a sound to alert the user, get the user’s attention, and recall them back to the platform, even if their phone is put away, in their pocket, or across the room. TikTok knows these audio, physical and haptic alerts “create a sense of urgency, which acts as a powerful,” “habit-forming summons” to return to the platform.<sup>50</sup>

111. In addition, push notifications are accompanied by a “badge,” a red circle (see above) with a number displayed on the top corner of the TikTok application icon on the user’s smartphone, to further draw the user’s attention and tell a user how many notifications the user has not yet seen. The badge remains until the user opens the TikTok platform.

112. TikTok has even used fictitious badge notifications to lure users onto its platform. Because TikTok knows users commonly understand badges to “represent[] the number of unread messages,” it designed a system to grab users’ attention by displaying badges with “random” numbers unconnected to any actual new activity or interactions available on the platform to manipulate them into opening up the app. TikTok employees describe this as “an on purpose strategic choice” to display numbers “inconsistent with the actual number of unread messages” which they know is effective in compelling users to return to the app.

113. TikTok has also purposefully and carefully designed the frequency and timing of how its notifications are “pushed” and displayed to increase young users’ time spent on its

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<sup>50</sup> Evans et. al., *Disrupted Childhood: The Cost of Persuasive Design*, 5RIGHTS (Jun. 2018) [https://www.researchgate.net/publication/329035489\\_Disrupted\\_Childhood\\_The\\_cost\\_of\\_Persuasive\\_design](https://www.researchgate.net/publication/329035489_Disrupted_Childhood_The_cost_of_Persuasive_design).

platform by taking advantage of their well-understood neurological and psychological “fear of missing out” (FOMO) and sensitivity to dopamine or pleasure-triggering activity. As stated in its “TikTok Push 101” deck, TikTok’s “goal” was to “[f]ind the best push time and the best push count for every user to maximize [Daily Active Users] and retention.”

114. Specifically, TikTok deploys “Intermittent Variable Rewards” (IVRs) in the way it delivers or “pushes” notifications to young users to induce “compulsive checking” of the platform. IVRs are the same psychological mechanism that underlies the addictive nature of slot machines.

115. As highlighted in a report about persuasive design called *Disrupted Childhood* co-authored by TikTok child safety executive Alexandra Evans, IVRs “hold a special thrill, as the user anticipates a reward [or positive stimuli] that they know could come”<sup>51</sup> at random, unpredictable intervals. When a positive social stimulus is received (*i.e.*, a notification that someone “liked” your post), it creates a psychologically-pleasing dopamine release, keeping a user in a feedback loop to continually check the app for more rewarding stimuli.<sup>52</sup> Because these social rewards are unpredictable and intermittent, users never know if their next notification will be the one that makes make them feel really good<sup>53</sup>—which keeps users returning to the platform compulsively.

116. TikTok’s internal research recognizes that these “inconsistent rewards create a trigger-reward-engage cycle” and “[c]hildren’s predilection to seek immediate gratification makes them particularly susceptible to [these] habit-forming rewards.”

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<sup>51</sup> *Id.*

<sup>52</sup> Rasan Burhan & Jalal Moradzadeh, *Neurotransmitter Dopamine (DA) and its Role in the Development of Social Media Addiction*, 11 J. NEUROLOGY & NEUROPHYSIOLOGY 507 (2020).

<sup>53</sup> See Mark D. Griffiths, *Adolescent Social Networking: How do Social Media Operators Facilitate Habitual Use?*, 36 J. EDUC. & HEALTH 66 (2018).

117. Moreover, TikTok knows from its internal research that its use of IVRs are particularly effective in turning younger users into addicted, habitual, compulsive users because teens “are particularly sensitive to reinforcement in the form of social reward,” “have high impulsivity and are more vulnerable to reward systems,” and find it especially difficult “to ignore the prospect of a dopamine reward, even when this conflicts with other essential daily activities, such as sleeping or eating.”<sup>54</sup>

118. As TikTok’s executive Evans acknowledges, the company’s employment of a “persuasive strategy of constant summons creates an exhausting level of demand that exploits a child’s human instinct to respond,” due to their heightened “fear of missing out”<sup>55</sup> and “minimal ability to self-regulate effectively.”

119. By harnessing this well-established psychological manipulation technique, TikTok successfully increases the frequency with which users return to, open, and stay on the app and keeps young users on its platform, as TikTok intends.

120. User retention is one of the “main metrics” that TikTok monitors regarding push notifications, and TikTok has consistently observed positive results for this metric. For example, TikTok’s internal testing found that “push notifications” and deceptive “badges” increased user retention by over [REDACTED] and the overall number of users on TikTok per day by over [REDACTED]. TikTok internally lauds its push notifications as “an effective marketing tool as [they] help[] to recall users” to the platform.

121. TikTok’s plethora of push notifications also unfairly coerces and manipulates users by overloading and overwhelming them to compel a return to the platform.

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<sup>54</sup> Evans et. al., *supra* note 50.

<sup>55</sup> Evans et. al., *supra* note 50.

122. The volume of notifications received by young users can be staggering. Recent research shows that about half of 11- to 17-year-olds on social media receive an average of 237 notifications (with some as high as 4,500 notifications) *per day*.<sup>56</sup> TikTok’s internal 2021 data shows that its “[p]ush notifications are regularly sent during disruptive times . . . for minors,” including “during the school day, and in some cases, up until midnight,” which it knows interferes with young users’ sleep. Only recently, in or around March 2023, did TikTok introduce an option to allow users and parents to stop notifications from being sent during certain disruptive hours for young users.<sup>57</sup>

123. Moreover, while young users can technically navigate to the settings of the app and opt-out of these excessive default notifications, TikTok knows, and has data that shows, young users rarely change their default settings. As a result, young users spend more time on the platform than they would otherwise choose.

124. Notably, TikTok knows young users are directly harmed by receiving these incessant notifications, which operate to interfere with users’ free choice to stop using the platform, and disrupts their sleep.

125. Namely, TikTok knows that its “constant stream” of disruptive notifications significantly “increase stress,” and that “ignoring a notification can be just as disruptive as reacting to it,” such that “reducing notification frequency is beneficial” to well-being. It also knows that “[c]ompulsive checking” of one’s phone “accounts for [the] majority of hindered intentions” and users’ difficulty controlling their platform use. And TikTok knows that because

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<sup>56</sup> Jenny S. Radesky, et al., *Constant Companion: A Week in the Life of a Young Person’s Smartphone Use*, COMMON SENSE MEDIA (2023) at 13, 42–43, [https://www.commonsensemedia.org/sites/default/files/research/report/2023-cs-smartphone-research-report\\_final-for-web.pdf](https://www.commonsensemedia.org/sites/default/files/research/report/2023-cs-smartphone-research-report_final-for-web.pdf).

<sup>57</sup> Cormac Keenan, *New features for teens and families on TikTok*, TIKTOK NEWSROOM (Mar. 1, 2023), <https://newsroom.tiktok.com/en-us/new-features-for-teens-and-families-on-tiktok-us> (last visited Oct. 7, 2024).

“[s]leep [is] unanimously linked to health outcomes,” notifications that induce “late night phone use [are] particularly concerning for teens who need more sleep.”

126. TikTok nevertheless employs these coercive, deceptive, and relentless notifications because they are effective at keeping young users on its platform irrespective of their harmful effects on young users’ health and well-being.

#### **b. Infinite Scroll**

127. TikTok also knows that young users’ developing brains have nascent judgment and social and emotional regulation such that teens are particularly vulnerable to features that prey upon their desire to see, and “fear of missing out” (FOMO) on seeing, novel, new activity.

128. TikTok exploits young users’ novelty-seeking minds and FOMO by using never-ending features such as “infinite scroll” (or an “infinite feed”) to keep them addicted and logged on to its platform for excessive amounts of time. Wherever a user watches a video on the TikTok platform—whether in the For You or Following feed, on another user’s profile, or in direct messages—the user is automatically and endlessly shown and offered new videos (and advertisements) for the user to view as the user scrolls down (*i.e.*, swipes through) their page feed.

129. As a TikTok child safety executive’s published report highlighted, the persuasive strategy of “auto suggestion and infinite feeds” effectively “minimi[zes] or eliminat[es] breaks during which a user might decide to disengage,” and thus keeps them on the platform longer.<sup>58</sup> Because users do “not know[] what the next video will be,” they struggle to resist the pull to continue using the platform to find out.

130. TikTok admits that endless scrolling “encourage[s] extended use” and compels

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<sup>58</sup> Evans et. al., *supra* note 50.

young users to spend more time on the platform because it strips away a natural stopping point or opportunity to turn to a new activity. The perpetual stream is designed to “keep [users] scrolling, and purposely eliminate any reason for [them] to pause, reconsider or leave.”<sup>59</sup> The users’ experience becomes a bottomless “flow state” that fully immerses users, distorts their perception of time, and has been shown to be associated with problematic use of social media platforms.<sup>60</sup>

131. Additional internal research similarly highlights that “[a]dolescents have high impulsivity and are more vulnerable to reward systems (like scrolling social media),” and that “research has linked increased scrolling with decreased self-regulation.”

132. According to TikTok’s November 2020 “Managing time on TikTok” research findings, TikTok knows that “continuous scroll [with] few or no breaks between” videos “contribute[s] to [users]’ challenges in managing their time spent” on the platform and induces “harmful” passive consumption. Yet TikTok intentionally maintains this feature to exploit young users’ “minimal ability to self-regulate” and induce more time spent on its platform than they would otherwise choose.

### **c. Autoplay**

133. TikTok similarly deploys an “autoplay” feature in all its viewing surfaces (including its “For You”, “Following”, and “Stories” feeds) to knowingly manipulate young user’s novelty-seeking minds and FOMO by automatically and/or continuously playing video posts so the user has no natural breaking point to reconsider and leave the platform. Its internal

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<sup>59</sup> See Von Tristan Harris, *The Slot Machine in Your Pocket*, SPIEGEL INT’L (July 27, 2016), <https://www.spiegel.de/international/zeitgeist/smartphone-addiction-is-part-of-the-design-a-1104237.html> (last visited Sept. 18, 2024).

<sup>60</sup> See Christopher L. Heffner, *Doomscrolling: The Ultimate Negative Flow State and Four Ways to Counter It*, ALLPSYCH (Nov. 26, 2022), <https://allpsych.com/doomscrolling-the-ultimate-negative-flow-state/> (last visited Sept. 18, 2024); Hannah Jantos, *The Psychology of TikTok: Why You Can’t Stop Scrolling*, SOC. FIXATION (Sept. 20, 2022), <https://www.socialfixation.com.au/post/why-its-hard-to-stop-scrolling-psychology-behind-tiktok-scroll> (last visited Sept. 18, 2024).

“[REDACTED]” cited reliance on “[REDACTED]” to increase user time on the platform.

134. When a user launches the TikTok platform, they are immediately taken to the “For You” feed page where the first video shown automatically begins playing. This “autoplay” feature is designed to immediately grab the user’s attention and immerse them in the platform. After a user finishes watching the first video and continues scrolling, the platform automatically plays the subsequent video without any user intervention or autonomy over whether to watch. This auto selection and autoplay continues in perpetuity, with video advertisements interspersed.

135. In addition, when a user selects to start watching another account’s “Stories,” TikTok also utilizes the “autoplay” tool so that each video or “Story” in the collection automatically starts playing as the prior story ends in a continuous slideshow. Once a user has finished watching one person’s Stories, they are automatically shepherded into the next person’s collection of Stories without needing to take any further action.

136. Much like “infinite scroll” (described above), “autoplay” encourages young users to continuously remain on the platform because it eliminates user autonomy to choose to watch the next video (*i.e.*, by hitting a “play” button). A TikTok executive’s report on persuasive design described how “autoplay” creates “[REDACTED]” (*i.e.*, something that slows down a user from performing an action) for a user to “[REDACTED],” as it “[REDACTED]” [REDACTED]”<sup>61</sup> TikTok’s teen users likewise report that the platform’s autoplay design makes it “easy” to spend excessive amounts of time on the platform because “the user doesn’t have to make any decision, so there’s no friction.”<sup>62</sup> Thus, by default

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<sup>61</sup> Evans et. al., *supra* note 50.

<sup>62</sup> Radesky, et al., *supra* note 56.



and by design, young users are kept on the platform for longer periods of time.

137. And TikTok knows the powerful, addictive nature of autoplay is successful in increasing time spent on its platform. Internal testing of the “autoplay” feature determined that it boosted user engagement, “sharing and play duration,” and time on the platform. It also knows the excessive “passive use” it induces is “harmful” to young users’ well-being.

138. Despite this knowledge, TikTok continues to employ autoplay on its platform and does not allow users to disable autoplay.

#### **d. Ephemeral, FOMO-Inducing Features**

139. To further exploit and capitalize off teens’ uniquely sensitive fears of “missing out” and social exclusion, TikTok also intentionally designs ephemeral, time-sensitive aspects into multiple platform features to recall young users back to their platform and extend and increase their time spent on the platform beyond what they would otherwise choose.

140. For example, in addition to employing “autoplay” for its “Stories” feature (as described above), TikTok also purposely designs “Stories” to have an ephemeral aspect. TikTok’s ephemeral design makes it so that Stories are only available to view for 24 hours after posting before disappearing from a consuming user’s feed.<sup>63</sup> The fact that another user’s “Stories” are only viewable for a limited, short time before disappearing inevitably incentivizes and pressures young users to frequently open, return to, and remain on the platform so they will not “miss out” on viewing all the Stories before they disappear.

141. TikTok acknowledges that Stories’ ephemeral nature is meant to “inspir[e] audiences to check on their favorite creators daily to never miss a thing.”<sup>64</sup> And internally,

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<sup>63</sup> See *Creator Academy*, TIKTOK, <https://support.tiktok.com/en/using-tiktok/creating-videos/tiktok-stories> (last visited Sept. 24, 2024).

<sup>64</sup> *Id.*

product managers intended it to “cultivate a mindset for TikTok users to post regularly,” and “create[] new triggers for users to open TikTok, which will contribute to [Daily Active Users] in the long-term.”

142. TikTok similarly seeks to leverage young users’ FOMO with the ephemeral aspect of its “LIVE” feature.<sup>65</sup> By default, LIVE content—livestreamed videos and real-time interaction with TikTok users—is available only once: while the creator livestreams.<sup>66</sup> Users must tune in immediately during the livestream or lose the opportunity to view, comment or interact with the creator and others viewing it.

143. TikTok compounds the urgency to immediately view LIVE videos with push notifications designed to get users back on the platform to watch the livestreamed videos, even if they occur at disruptive times, such as during school.

144. When an account “goes Live,” the TikTok platform sends out a notification on the mobile devices of users that follow that account that reads, “[@user] is LIVE! Watch it now!” This notification is sent even when the user does not have the TikTok app open to induce them to re-open and revisit the platform.

145. TikTok viewed LIVE as a key part of its effort to increase user engagement. It believed it could “[b]uild stronger creator[-]follower relationships on LIVE, with a heavy emphasis on creating sticky [meaning habit-forming<sup>67</sup>] viewing experiences.” Similarly, one of TikTok’s internal “[REDACTED]” goals was to “[p]romote TikTok LIVE as a daily habit” in users as young as 16. Because young users fear missing out on cultural and social

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<sup>65</sup> See Laura Marciano, et al., *The Developing Brain in the Digital Era: A Scoping Review of Structural and Functional Correlates of Screen Time in Adolescence*, 12 FRONTIERS PSYCH., 1 (Aug. 2021).

<sup>66</sup> See *Creator Academy*, *supra* note 63.

<sup>67</sup> Evans et. al., *supra* note 50.

trends, the ephemeral nature of Stories and LIVE compel them to spend more time on the app than they would otherwise choose.

146. TikTok has employed and continues to employ these FOMO-inducing features despite knowing that they result in problematic and habitual use, contribute to mental health harms to young users, and that young users are unable to extricate themselves because of these platform designs.

#### **e. Visible Social Validation Metrics**

147. TikTok also knows teens have a heightened need and desire for social validation, “social relations,” and are especially “sensitiv[e] to social evaluation,” and thus employs social validation metrics to take advantage of these vulnerabilities to induce more teen time spent on its platform. Social validation metrics include features designed to indicate popularity or size of the audience of a particular post. These include likes, comments, and view counts displayed for each video posted to the platform.

148. TikTok knows that by showing a user a “barrage” of likes, comments, and view counts (*i.e.*, signals of popularity) when they watch their own videos, the user experiences an inundation of “positive feedback” or dopamine rewards that intensify use and encourage them to post even more videos, and thereby spend more time on the platform.

149. As a TikTok’s executive Evans’ report explained, this coercive design induces teenagers to spend more time on the platform because it preys upon their overwhelming need for social acceptance and validation:

Persuasive design strategies exploit the natural human desire to be social and popular, by taking advantage of an individual’s fear of not being social and popular in order to extend their online use. For young people, identity requires constant attention, curation and renewal. At key development stages it can be overwhelmingly

important to be accepted by your peer group.<sup>68</sup>

150. The report further noted that in particular “Quantifying friends, Likes, [or] followers creates a public metric of personal value” that induces more time spent on the platform and “compels” young users to “enter a cycle in which they act and share continuously,” to constantly appease their overwhelming need for acceptance and desire for popularity.<sup>69</sup> In sum, “the need for validation creates a habit of needing more.”<sup>70</sup>

151. Further, TikTok knows that its quantification and display of social metrics successfully induces young users to spend excessive amounts of time on the platform. It internally acknowledges that teens spend more time on the platform and “do not like to disconnect” from the platform because they “worry they will miss out on a digital interaction” such as likes and comments, and feel the need to be constantly online to “protect their profile reputation/image.”

152. Moreover, despite knowing that seeing social validation metrics on users’ posts is a “key problem area” that causes harmful negative social comparison in teens, TikTok intentionally designs its platform to publicly and visibly display, quantify, and package the number of “likes”, comments, saves, and shares that a user’s own post and other users’ posts receive to drive up time spent on the platform.

153. For example, in internal documents, including its “Hide Interaction Count Research” and its “Digital Wellbeing Product Strategy,” TikTok admits that a “user problem” that needs to be addressed is that “[t]he core user experience emphasizes and celebrates like and comment count, which can leave people without them feeling self-conscious, jealous, and bitter.”

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<sup>68</sup> Evans et. al., *supra* note 50.

<sup>69</sup> Evans et. al., *supra* note 50.

<sup>70</sup> Evans et. al., *supra* note 50.

It further acknowledges that “[s]ocial validation issues stem from” seeing visible “like counts, especially for younger users.”

154. TikTok recognizes that the way its platform quantifies, displays, and packages interactions, such as “like counts” or comments, can “cause harm to teenagers” by contributing to young users’ FOMO, addictive use, and negative social comparison,<sup>71</sup> “extending their time online,” and “creates enormous pressures for young people” that induce “anxiety, low self-esteem and mental health issues.” It further acknowledges that its “validation metrics . . . negatively affect the way individual users” feel including inducing “feelings such as negative body and self image.”

155. Even after it became aware that one of its competitors, Instagram, had publicly proposed rolling out a “hide-likes-from self” feature, which TikTok employees internally lauded as a “powerful, recommended, good move for teens’ mental health,” TikTok chose to retain its visible social validation features.

#### **f. Behavioral-Based, Time-Maximizing Algorithms**

156. Another integral tool used by TikTok to prolong youth time spent on its platform is its “For You” feed’s “content-neutral” algorithmic recommendation system. The “For You” feed provides each user with a “unique,” “tailored,” stream of videos that TikTok’s recommendation system predicts will keep them on the platform based on their specific behavioral signals and past interactions with other videos.<sup>72</sup> And it works. One internal document explaining the mechanics of the recommendation system notes, “[b]ecause the Recommendation System is good, [a] [u]ser keeps scrolling TikTok and the whole process

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<sup>71</sup> Evans et. al., *supra* note 50.

<sup>72</sup> *How TikTok recommends videos #ForYou*, *supra* note 45.

repeats over and over again.”

157. TikTok’s highly personalized recommendation system is particularly effective in hooking young users because it can predict and continually present the “exact”<sup>73</sup> personalized mix of videos that will irresistibly pull a novelty-seeking young user to return to and stay on the platform to keep seeing new activity.

158. As explained in the company’s “Intro to TikTok’s Recommendation System,” presentation deck, TikTok’s recommendation system incorporates numerous unique behavioral patterns “to estimate a user’s preference on a video” and “quickly find the best showcase videos and deliver” it to them “in a process [that] repeats forever to create [a user’s] For You Page experience.”

159. This process is, in large part, composed of the following: First, TikTok monitors and records how a user engages with the platform in a “user log,” including pressing the “like” button on a video, skipping a video, commenting on a video, sharing a video, and more. Second, it organizes this information to identify patterns in the way a user reacts to the videos selected by TikTok by analyzing the user’s previous actions (clicks, view time, etc.). Third, it uses the recommendation system to compare the user’s pattern of engagement with videos to that of other users, and then pushes the user videos that have induced maximum engagement by other users with similar patterns of engagement. TikTok internally describes its recommendation system as “addictive.”

160. TikTok’s recommendation system is content-agnostic or, in TikTok’s own words, “content-neutral,” *i.e.*, it “recommends videos to users based on content-neutral user and community behavior.” As described in an internal TikTok document, the recommendation

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<sup>73</sup> Evans et. al., *supra* note 50.

system’s “algorithm doesn’t care about the content—it doesn’t have an agenda. It doesn’t qualitatively understand” what content it shows users. Another internal document, a screenshot of which is below, similarly espouses TikTok’s recommendation system’s “content-neutral” nature because “it recommends content based on behavior and certain device signals, not on the semantic nature of the content itself,” “[d]oes **not** promote or suppress particular . . . agendas, views, or content,” and “[d]oes **not** ‘understand’ content.” (emphasis in original).

## Recommendation: Capabilities Summary

The recommendation engine is content-neutral, meaning that it recommends content based on behavioral and certain device signals, not on the semantic nature of the content itself.

What the recommendation engine does	What the recommendation engine doesn't do
<ul style="list-style-type: none"><li>• Given one user and many videos, the recommendation engine can <b>predict the likelihood</b> of different user engagements with a video</li><li>• An algorithm to blend these engagement likelihoods to <b>rank the videos</b></li></ul>	<ul style="list-style-type: none"><li>• Does <b>not</b> promote or suppress particular political agendas, views, or content</li><li>• Does <b>not</b> use signals to infer someone's race, ethnicity, sexual orientation, or political affiliation or beliefs</li><li>• Does <b>not</b> “understand” content</li></ul>

161. As stated in TikTok child safety executive Evans’ report, the “extreme[],” “super-charged” “personali[z]ation” of the platform’s behavioral-based algorithmic recommendation system is “a persuasive design strategy in itself” that serves as “a powerful tool by which a user is persuaded to extend use.”<sup>74</sup>

162. Moreover, the engineers who designed and implemented the recommendation system purposely programmed it to maximize “Timespent” (which TikTok knows “also

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<sup>74</sup> Evans et. al., *supra* note 50.

increase[s] retention”), so that the system pushes videos intended to keep users on the TikTok platform longer than they would otherwise choose.

163. An internal “Onboarding Presentation” describes the “[g]oals of the recommendation system” to be how long users spend on the TikTok Platform and how often they engage with it:

#### Goals of the recommendation system

- Ultimate goal of the system is to increase **DAU** (Daily Active Users): attract new users and retain existing users (**retention**)
- App **playtime** is regarded as a similar indicator as retention
- Video views
- Interactions: like, comment, share, etc

164. Likewise, TikTok’s July 2022 “Break through US Growth” presentation set goals for its algorithm in terms of percent increase in “new user retention” and “staytime gain.”

165. Despite knowing that its recommendation system preys upon young users’ vulnerabilities to induce harmful, excessive, and compulsive use, TikTok maintains this feature as an integral part of its For You feed.

## **2. TikTok Knows That the Addiction Caused by Its Coercive Features Harm Young Users**

166. TikTok knows from its internal data and research that the way it has engineered its coercive, addiction-inducing platform features, as alleged herein, is indeed effective in addicting young users, operates to override young users’ “minimal ability to self-regulate,” and leads to negative effects on young users’ well-being.

167. Internally, the company explicitly admits that the platform “in itself has baked into it compulsive use,” and “[t]he TikTok product experience utilizes many coercive design tactics that detract from user agency such as infinite scroll, constant notifications, and the ‘slot



machine’ effect.” And TikTok knows that “[a]gency is the most important aspect of well being” for teens and “passive use of social media is more harmful.” As TikTok’s internal documents explain, “agency”—*i.e.*, the capacity to act independently, exercise some measure of control over one’s own functioning, and to make one’s own free choices—“[m]atters because people with control feel more resilient, less vulnerable to anxiety and depression,” and “[p]eople without agency can develop learned helplessness.”

168. TikTok internally concludes that “[i]nvesting in user agency is critical to helping our users effectively manage their quantity and quality of time spent on TikTok so that it is a healthy and sustainable experience.”

169. And yet despite this, TikTok “know[s] that user agency is very limited on TikTok due to the problems [it] see[s] related to addictive behavior.”

170. An internal survey of TikTok users found that “50% cite time management as an issue, 24% reported too many notifications, and 23% reported too much time spent on TikTok.” TikTok’s research found that the “aspects of TikTok that contributed to participants’ challenges with managing their time included the continuous scroll, few or no breaks between content, short videos, and not knowing what the next video will be.”

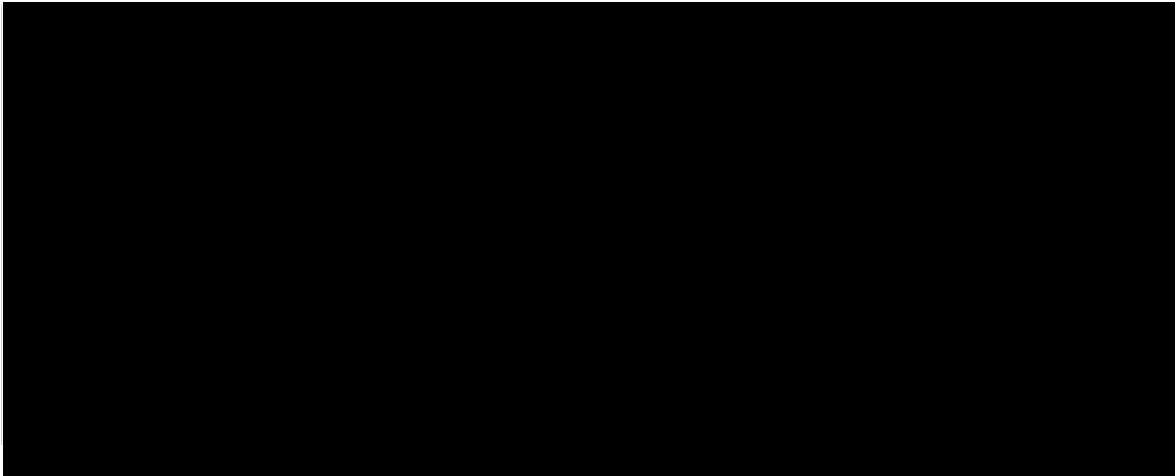
171. A report from “TikTank,” an internal TikTok research group also highlighted user survey results showing that users believe they spend too much time on the TikTok Platform, and feel “negative about their ability to manage their time” on the platform.

172. TikTok also has external consultants at the Digital Wellness Lab at Boston Children’s Hospital (“BCH”) that provide feedback on the company’s “wellness policy work.”

173. And in its 2021 “Digital Wellbeing Product Strategy” shared with BCH, TikTok highlighted “Compulsive Usage and Lack of Agency” as a “User Problem[.]” because

“compulsive usage on TikTok is rampant.”

174. As shown in the chart below, taken from an internal planning document, 34% of TikTok users, ages 13 and 17 years old, averaged over two hours on the platform, 25% over 2.5 hours, and 10% of users in this age range averaged more than four hours per day.<sup>75</sup>

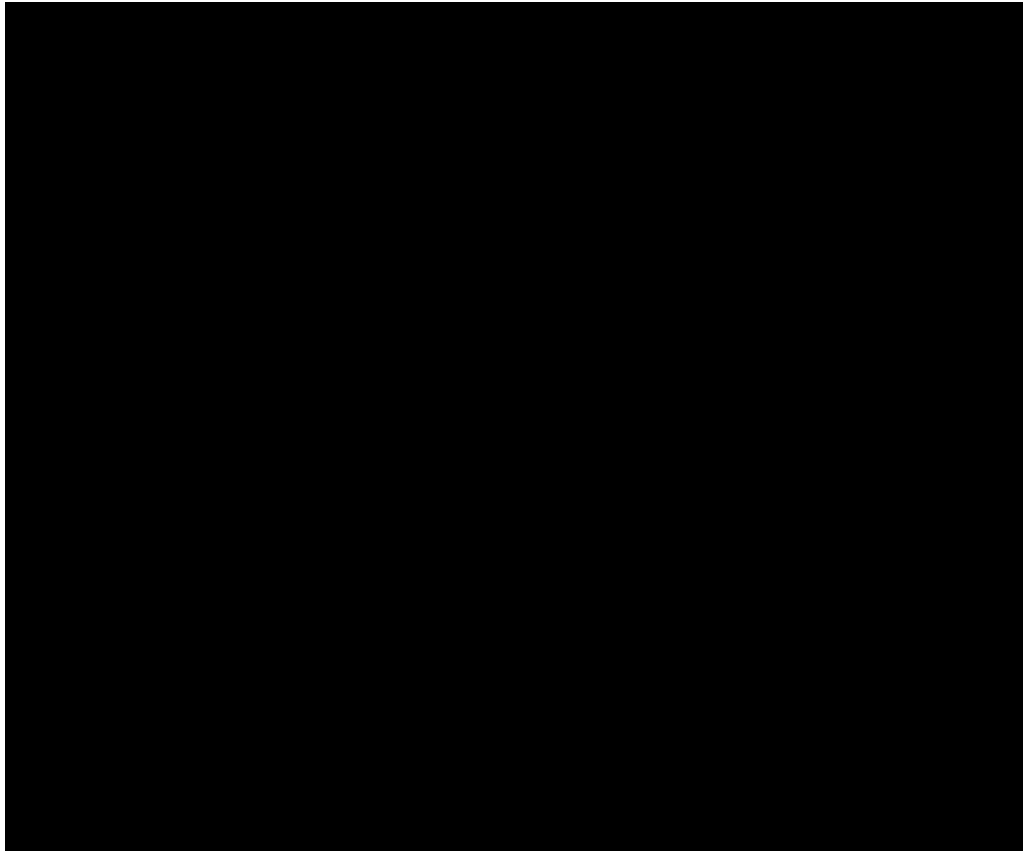


175. Additional internal TikTok statistics show that, on average, L1 (ages 13-15) and L2 (ages 16-17) users open the TikTok Platform over 16 times a day.<sup>76</sup>

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<sup>75</sup> See MMGuardian, *TikTok Is Now the Most Used App by Teens & Pre-Teens in the US*, PR NEWswire (Mar 23, 2021), <https://www.prnewswire.com/news-releases/tiktok-is-now-the-most-used-app-by-teens--pre-teens-in-the-us-301253639.html> (last visited Sept. 18, 2024).

<sup>76</sup> See *TikTok Ads Break Through Better Than Tv and Drive Greater Audience Engagement*, TIKTOK, <https://www.tiktok.com/business/library/TikTokDrivesGreaterAudienceEngagement.pdf> (last visited Sept. 18, 2024).



176. Further, in a February 2020 survey of over 2,300 TikTok users, “respondents were asked to give a score out of 5 to indicate strength of the agreement with the statement ‘I spend too much time on TikTok.’ . . . The average response was 4.0.”

177. Notably, TikTok knows from its own research that such addictive use inflicts great mental and physical harm on young users.

178. In particular, TikTok’s internal documents acknowledge that “compulsive usage correlates with a slew of negative mental health effects like loss of analytical skills, memory formation, contextual thinking, conversational depth, empathy, and increased anxiety.” And further, that “compulsive usage interferes with essential personal responsibilities like sufficient sleep, work/school responsibilities, and connecting with loved ones.

179. TikTok also knew its platform could cause harm to young users specifically, with internal documents showing that the extended use of platforms like TikTok can lead to

“increased loneliness,” depression, and lower cognitive functioning among young people.

180. In addition to the above, internal documents also confirm TikTok knew that:

- a. The use of social media platforms “can become habitual or excessive,” and some of that habitual or excessive use “leads to deficient self-regulation, and in severe cases, . . . can eventually lead to negative life consequences.”
- b. Addiction to the TikTok platform is “interfering with [users’] obligations and productivity (e.g., work, school, household duties, and sleep).”
- c. There is “a strong association, and likely a causal one, between heavy phone and internet use and losses of analytical and problem-solving skill [*sic*], memory formation, contextual thinking, conversational depth and empathy as well as increases in anxiety.”
- d. Excessive social media engagement, such as on the TikTok platform, “means that we are spending less time building and maintaining relationships with actual people.”

181. By maximizing TikTok platform’s addictive properties, TikTok has cultivated a generation of young users who spend hours a day on its platform—more than they would otherwise choose—which, as described above, is highly detrimental to teens’ development and ability to attend to personal needs and responsibilities.

182. TikTok is also well-aware of one especially harmful physical effect: TikTok’s negative effect on young users’ sleep.

183. Excessive, compulsive, and addictive use of TikTok’s Platform keeps minors using it late at night and decreases the amount and quality of their sleep. TikTok’s internal

research extensively acknowledges that “[s]leep [is] unanimously linked to health outcomes,” “late night phone use [is] particularly concerning for teens who need more sleep,” “[b]ad sleep is a source of many serious physical and mental health issues,” “[t]eens need 9-10 hours of sleep each night,” and “sleep is critical for the healthy physical, cognitive and emotional development of children.”

184. TikTok further acknowledges that it “contributes to this problem,” as its internal research confirms:

- a. “Excessive time” on the platform interferes, “displace[s],” and/or “erod[es] teens’ ability to get” “healthy amounts of sleep and physical activity.”
- b. “The use of TikTok at night delays sleep for some users, disturbing their sleep patterns and preventing them from getting the minimum recommended amount of sleep.”
- c. “[M]any [users] described their use of TikTok disturbing their sleep, which limited their productivity and performance the following day.”
- d. “[C]ompulsive use of [the] platform” is “harmful . . . through displacing activities such as sleep.”
- e. Social media disrupts sleep because “FOMO-induced anxiety makes falling asleep difficult.”

185. Despite knowing for years that use of the platform impairs young users’ sleep, TikTok sent notifications to young “users . . . up until midnight.” Only in August 2021, did the

company minimize late-night notifications for teens.<sup>77</sup>

186. Since TikTok meticulously tracks user data, the company knows that indeed, “[u]sers are active on TikTok when they should be sleeping,” with internal data showing 19% of users aged 13 to 15 and 25% of those aged 16 to 18 used the platform between midnight and 5:00 a.m.

187. Ultimately, TikTok knows that “bedtime access and use of a cell phone or tablet [is] significantly associated with inadequate sleep quantity, poor sleep quality, and excessive daytime sleepiness, which presents health concerns.” Yet to date, TikTok has not made the necessary changes to its platform to avoid these outcomes.

188. As described above, TikTok had pervasive knowledge of the harms being caused by its coercive design features despite internal efforts to deceptively publicize otherwise. Indeed, when TikTok engaged its consultants at BCH in or around October 2021, BCH expressly advised that a statement in TikTok’s external talking points “about there being no evidence of a causal relationship between screen-based activities and mental health problems” was “misleading” because “[Randomized Controlled Trials] are difficult to craft around this topic and we didn’t need to assign people to be smokers to understand the risks of cigarettes.”

189. Despite knowing the harms occurring to young users’ well-being as a result of its addiction-inducing design features, TikTok purposefully chose, and continues to choose, to employ these tools to exploit, psychologically manipulate, and take advantage of susceptible young users’ vulnerabilities to induce more time spent on its platform.

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<sup>77</sup> Faith Karimi, *TikTok disables late-night notifications for teens as part of new safety measures*, CNN BUSINESS (Aug. 12, 2021), <https://www.cnn.com/2021/08/12/business/tiktok-child-safety-measures/index.html> (last accessed Oct. 4, 2024).

### 3. TikTok Employs These Coercive Features to Drive Revenue

190. TikTok’s choice to design and implement these exploitative and manipulative features to addict young users and maximize their time on its platform is not an accidental byproduct of its efforts to grow its base of users and increase its advertising revenues. Rather, addicting young users to its platform is a central pillar of its growth strategy—and one that TikTok has doggedly pursued notwithstanding the harm caused to those young users.

191. Because TikTok “generates substantially all of its revenue from selling advertising” placements to third-party marketers,<sup>78</sup> TikTok’s business model is based on maximizing and increasing user time spent on its platform. More time spent on TikTok’s platform means more eyes on ads. And more time means more video views and ad impressions (*i.e.*, the number of times an ad was shown to a target audience<sup>79</sup>), sold to the millions of advertisers on TikTok’s platform who pay per impression. More time spent on the platform also means more user data that TikTok can collect, and the better targeted advertising space it can sell, which also increases its revenue.<sup>80</sup>

192. TikTok’s internal documents confirm that the “ultimate goal” of its platform’s features is to “increase DAU (Daily Active Users): attract new users and retain existing users,” increase “[a]pp playtime” (*i.e.*, the “[t]ime in minutes spent watching videos”), “video views,” and “[i]nteractions: like, comment, share, etc.”

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<sup>78</sup> Senate Hearing Transcript for *Subcommittee: Protecting Kids Online: Snapchat, TikTok, and Youtube*, *supra* note 12, Response to Written Questions Submitted by Hon. Amy Klobuchar to Michael Beckerman, p. 216, available at [CHRG-117shrg54901.pdf](https://www.govinfo.gov/legislation/congressional_hearings/subcommittee/protecting_kids_online_snapchat_tiktok_and_youtube) (govinfo.gov); *see also* Lydia Kibet, *How Does TikTok Make Money*, GOBANKINGRATES (Apr. 23, 2021), <https://www.gobankingrates.com/money/business/how-does-tiktok-make-money/> (last visited Sept. 18, 2024).

<sup>79</sup> *Business Help Center – Metrics Glossary*, *supra* note 40.

<sup>80</sup> *See* Zheping Huang, *TikTok Has a Few Main Ingredients for Making Money*, BLOOMBERG (June 28, 2022), <https://www.bloomberg.com/news/newsletters/2022-06-28/how-does-tiktok-make-money-app-relies-on-a-few-main-ingredients> (last visited Sept. 18, 2024).

193. Interviews of TikTok employees conducted by an outside consulting group demonstrate the company’s keen focus on increasing users’ time spent on the platform. For example, product leadership reported that the “number of [platform] opens in 30 days [and] stay time” are “core metrics . . . that drive growth in the business.” Another employee stated that the company “want[s] people to spend as much time as possible on TikTok.” An internal document also confirms this objective, concluding that TikTok “need[s] to improve frequency of use.”

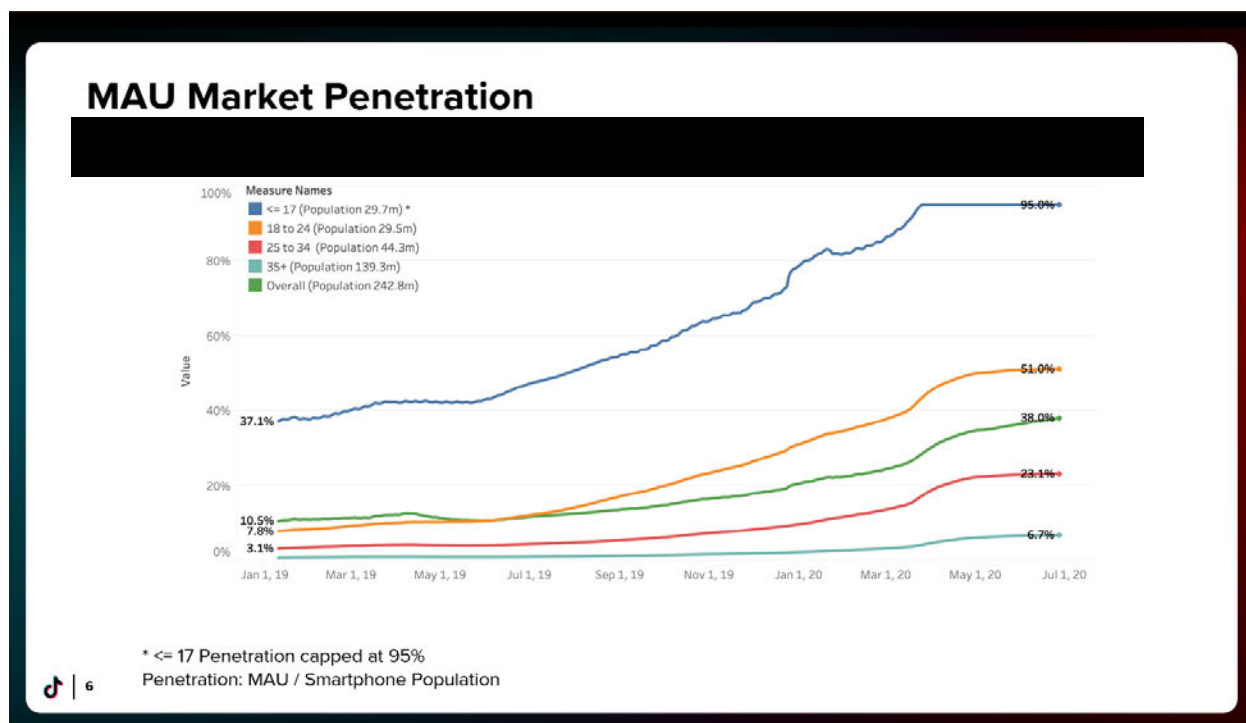
194. TikTok has thus intentionally designed its Platform to capture as much of its users’ time and attention as possible, and admits that its “advertising-based business model encourages optimization for time spent in the app.”

195. And TikTok is highly incentivized to maximize young people’s time on the platform in particular. An internal review of user engagement noted that “[a]s expected, across most engagement metrics, the younger the user the better the performance.” According to internal data from 2019, users aged 14 and under consume more videos per user per day than any other age group on TikTok. An internal 2019 “TikTok Ecosystem overview” presentation stated that the app’s “ideal user composition” would be for 82% of its users to be under the age of 18. TikTok also considers users under age 13 a critical demographic, believing users will continue to use the platform to which they are accustomed “after they grow up.”

196. With a relentless focus on young people, TikTok’s growth in the United States exploded. Through at least 2020, the platform’s user growth in the United States was primarily driven by users aged 17 and under.

197. TikTok’s internal data estimated that at that time it had nearly “hit a ceiling”, having achieved 95% market penetration of U.S. teens between the ages of 13 and 17:





198. Increasing time spent by young users, in particular, remains pivotal to TikTok achieving its business goals because younger users become a pipeline of life-long users and long-term customers, and are early adopters that set trends that the rest of society emulates. According to its “TikTok Algo 101” document, users who spend the most time on the TikTok platform are regarded as having the greatest “Life Time Value” for the company, where the objective is to “get the most value out of a user.”<sup>81</sup>

199. To further optimize maximum teen usage, TikTok tracks metrics to measure its success, such as: how many young people use the platform per day and month; how much time young people spend watching videos; how many videos young people watch; and whether young people keep coming back to the platform. TikTok uses this information to feed its algorithms and further increase young user engagement.

<sup>81</sup> Ben Smith, *How TikTok Reads Your Mind*, N.Y. Times (Dec. 5, 2021), <https://www.nytimes.com/2021/12/05/business/media/tiktok-algorithm.html>.

200. TikTok’s efforts to optimize its platform for maximum use by young people have been extremely successful. The TikTok app is now U.S. teens’ “primary social app of choice.”<sup>82</sup>

201. And TikTok’s business model has been extremely profitable. In 2019, TikTok’s revenue was █ million. By 2022, it was over █ billion. TikTok has been described as an “ads juggernaut” by *The New York Times*<sup>83</sup> and *The Wall Street Journal* has noted TikTok’s massive rise, even while other platforms have stumbled.<sup>84</sup>

202. As described above, TikTok has perniciously achieved its explosive growth and revenue, and near total teen market domination, by unfairly deploying an arsenal of psychologically manipulative addictive-by-design features on its platform to induce millions of young users to spend hours upon hours of their time, more than they would otherwise want or willingly choose—to the detriment of their own well-being.

203. And TikTok has made this business decision despite internally knowing that as a “second generation” social media company, it had an opportunity to not follow the same harmful design playbook of earlier competitors:

Mistakes made by first generation social media companies have become clear as we have uncovered that ad-based business models create incentives for companies to grow at the expense of their users. Infinite scroll, video auto-play, and constant notifications are some of the powerful coercive design tactics that we are realizing tend to benefit companies and advertisers more than users.

204. The company has further recognized as its “█,” its “█

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<sup>82</sup> See Andrew Hutchinson, *New Survey Underlines TikTok’s Popularity with Teen Users*, SOC. MED. TODAY (Nov. 7, 2022), <https://www.socialmediatoday.com/news/Survey-Underlines-TikToks-Popularity-with-Teens/635961/> (last visited Sept. 18, 2024).

<sup>83</sup> See Huang et al., *supra* note 80.

<sup>84</sup> See Patience Haggin, *Google and Meta’s Advertising Dominance Fades as TikTok, Streamers Emerge*, WALL STREET J. (Jan. 4, 2023), <https://www.wsj.com/articles/google-and-metas-advertising-dominance-fades-as-tiktok-netflix-emerge-11672711107> (last visited Sept. 18, 2024).

██████████” which meant it “██████████  
██████████” Yet, TikTok has not meaningfully done so.

205. Rather, TikTok has made these unscrupulous design decisions while unfairly and deceptively hiding the risky and harmful nature of these features as further described below.

**B. TikTok Misrepresents Its Efforts to Keep Its Platform Safe for Young Users**

206. Because candidly disclosing the purposefully addictive nature of its platform’s coercive design features and their harmful impacts on young users would negatively impact its business and reputation, TikTok has chosen to deceive.

207. TikTok’s deception is pervasive.

208. Namely, as further detailed below, TikTok actively misrepresents to users in the United States, particularly youth and parents, that teen safety and well-being are its “core,” “highest,” or “top priority;” that it works to make sure its platform “does not negatively impact people’s physical or psychological health;” that it takes teen safety “extremely seriously” and, to that end, that it provides a series of “robust” safety features to promote young users’ mental health.

209. Such representations are deceptive because while TikTok publicly reassured parents, families, lawmakers, advertisers, and users that its platform is safe for young users and designed to promote their well-being, it internally continued to prioritize, develop, and implement features that it knew induced young users’ addictive and habitual use of its platform to drive time spent; deliberately chose not to implement measures it knew could reduce harms to youth; and deliberately concealed its internal data showing higher frequency of harmful material present on its platform than represented in its public reports.

210. By engaging in these and similar misrepresentations, and by failing to disclose critical, material information regarding its platform’s risks, TikTok deceives users and prevents

young users and their parents from making truly informed decisions about their platform usage.

**1. TikTok Misrepresents That It Does Not Seek to Maximize Time Spent Via Its Addictive Features**

211. Despite intentionally designing its product with coercive features to drive time spent on its platform (and thereby increase revenue), and knowing that its coercive design tactics in fact induce young users’ excessive, compulsive and problematic use, TikTok emphatically and falsely claims that its “goal is not to optimize and maximize time spent.”<sup>85</sup>

212. Specifically, in an April 2023 TED Talk conversation, CEO Shou Chew repeatedly denied that it was in TikTok’s “interest to have people on [its platform] as long as possible” and that it “want[s] people to be addicted as long as possible.”<sup>86</sup> Chew emphasized that TikTok’s “goal is not to optimize and maximize time spent. It is not.”<sup>87</sup>

213. This statement is directly and wholly inconsistent with TikTok’s relentless targeting of users’ time and attention, and internal measuring of success based on metrics such as how many young people use the platform per day and month, how long they spend watching videos, how many videos they watch, and whether they keep coming back—a practice TikTok has engaged in for years.

214. As discussed above, TikTok internally states that it “want[s] people to spend as much time as possible on TikTok,” “need[s] to improve frequency of use,” and that TikTok’s “core metrics” that drive its business growth are the “number of [platform] opens in 30 days [and] stay time” on the platform (*see supra* ¶ 193).

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<sup>85</sup> See *TikTok's CEO on Its Future — and What Makes Its Algorithm Different*, TED (Apr. 2023), [https://www.ted.com/talks/shou\\_chew\\_tiktok\\_s\\_ceo\\_on\\_its\\_future\\_and\\_what\\_makes\\_its\\_algorithm\\_different?subtitles=en](https://www.ted.com/talks/shou_chew_tiktok_s_ceo_on_its_future_and_what_makes_its_algorithm_different?subtitles=en) (last visited Sept. 18, 2024) (hereinafter “Chew TED Talk”).

<sup>86</sup> See *Id.*

<sup>87</sup> See *id.*

215. And in reality, and as discussed above, compulsive use is woven into the very fabric of the app (*see supra* ¶¶ 99-189). TikTok’s internal documents show that the platform’s design features have successfully trapped youth into patterns of compulsive use, with TikTok’s own statistics showing that youth ages 13 to 17 open the app on average 16 times per day and a large percentage of them use it for more than two hours per day and when they should be sleeping (*see supra* ¶¶ 166-176).

216. Moreover, as alleged above, TikTok internally seeks to maximize young users’ time spent on the platform specifically, and knows that its coercive design features (including push notifications, intermittent variable dopamine reward systems, infinite scroll, autoplay, ephemeral features, visible social validation metrics, and its behavioral-based algorithmic recommendation system) help achieve such goal (*see supra* ¶¶ 99-189).

217. Thus, contrary to its public representations, TikTok’s goals are in fact to addict users, especially young users, to increase and maximize the time spent on its platform for profit, and TikTok knowingly conceals this.

## **2. TikTok Misrepresents That Youth Well-Being is its Highest, “Top” Priority**

218. TikTok also deceptively claims that young users’ safety and well-being are its highest priority, even though it has retained platform features that it knows harm young users in order to increase its own revenue and, for the same reason, has deliberately chosen not to implement feasible changes it knew could reduce such harms.

219. On multiple occasions, TikTok has made deceptive statements, representations, and assertions that its top priority is young users’ well-being and that it is committed to and/or invests in making its platform a safe and age-appropriate place for young users. In particular:

- a. On TikTok’s website, the company represents, “We care deeply about your well-

being” and “[w]e work to make sure [our platform] does not negatively impact people’s physical or psychological health.”<sup>88</sup>

- b. At an October 26, 2021 congressional hearing, when TikTok Vice President and Head of Public Policy for the Americas, Michael Beckerman, was asked to articulate to parents and the public why they “should be less fearful and scared of” TikTok and “how [TikTok] protect[s] kids in a way that” competitors don’t, he responded: “First, we put people first and particularly as it relates to teens, we put their well-being first. . . we have made difficult policy and difficult product choices that put the well-being of teens first.”<sup>89</sup>
- c. In response to written questions submitted by U.S. senators at the same hearing, Beckerman stated: “At TikTok, safety and wellness—in particular for children and teens on our platform—is our priority. . . . With respect to teens, we work hard to provide families with the tools and features to make the content decisions that are right for them.”<sup>90</sup>
- d. In written testimony to Congress on March 23, 2023, CEO Shou Chew, who explained that he is “responsible for all business operations and strategic decisions for TikTok,”<sup>91</sup> stated: “Safety and wellness—in particular for teens—is a core priority for TikTok” and that TikTok creates its platform “with a safety-by-

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<sup>88</sup> *Community Guidelines – Mental and Behavioral Health*, TIKTOK (effective May 17, 2024), <https://www.tiktok.com/community-guidelines/en/mental-behavioral-health> (last visited Sept. 18, 2024).

<sup>89</sup> Senate Hearing Transcript for *Subcommittee: Protecting Kids Online: Snapchat, TikTok, and Youtube*, *supra* note 12, at p. 71, CHRG-117shrg54901.pdf (govinfo.gov).

<sup>90</sup> Senate Hearing Transcript for *Subcommittee: Protecting Kids Online: Snapchat, TikTok, and Youtube*, *supra* note 12, Response to Written Questions Submitted by Hon. Mike Lee to Michael Beckerman, at p. 225, *available at* CHRG-117shrg54901.pdf (govinfo.gov).

<sup>91</sup> See Celine Kang, *Who is Shou Chew, TikTok’s Chief Executive?*, N.Y. TIMES (Mar. 23, 2023), <https://www.nytimes.com/2023/03/23/technology/who-is-shou-chew-tiktok-ceo.html> (last visited Sept. 18, 2024).

design mentality, even if those features limit our monetization opportunities.”<sup>92</sup>

- e. Shou Chew further testified: “[T]here are more than 150 million Americans who love our platform, and we know we have a responsibility to protect them, which is why I’m making the following commitments to you and to all our users. Number one, we will keep safety particularly for teenagers as a top priority for us.”<sup>93</sup>
- f. In an April 2023 TED Talk, Shou Chew referred back to his commitments before Congress, reiterating his first commitment “to our users and to the politicians in the U.S. . . . that we take safety, especially for teenagers, extremely seriously, and we will continue to prioritize that.”<sup>94</sup>
- g. In the same interview, Shou Chew affirmatively proclaimed that TikTok works “to make sure that we invest enough . . . to keep the [platform] experience as safe as possible for as many people as possible.”<sup>95</sup>
- h. A blog post under the “Safety” section of TikTok’s website further touts that TikTok has “robust”<sup>96</sup> so-called “safety features” that ostensibly render its platform safe for teens in particular, and which TikTok’s CEO proactively publicizes as evidence that TikTok takes meaningful measures “to address people spending too much time on our platform.”<sup>97</sup>

220. As further described below, all of the above statements are misrepresentations

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<sup>92</sup> See *TikTok: How Congress Can Safeguard American Data Privacy and Protect Children from Online Harms Before H. Comm. on Energy and Commerce*, *supra* note 8.

<sup>93</sup> See *id.*

<sup>94</sup> See *Chew TED Talk*, *supra* note 85.

<sup>95</sup> See *Id.*

<sup>96</sup> See Cormac Keenan, *New Features for Teens and Families on TikTok*, TIKTOK (Mar. 2023), <https://newsroom.tiktok.com/en-us/new-features-for-teens-and-families-on-tiktok-us> (last visited Sept. 18, 2024).

<sup>97</sup> See *Chew TED Talk*, *supra* note 85.

inconsistent with TikTok’s internal knowledge, research, actions, policies, business priorities and practices, and/or design decisions.

**a. Rejecting Design Changes to Reduce Compulsive Use**

221. TikTok’s public claims that it prioritizes youth well-being are deceptive because when TikTok internally identified design changes that would, in the company’s own judgment, improve well-being, TikTok’s top executives rejected implementing those design changes because they would decrease time spent on TikTok’s platform.

222. For example, TikTok’s “Digital Wellbeing 2022 Product Strategy” team recommended changing the platform’s design to show users a “non-personalized feed” in order to improve user safety and to reduce compulsive use. It was categorized as a “P0,” or high priority, recommended alternative to TikTok’s existing feed recommendation system, which used a user’s personalized behavioral patterns and past interactions with content to recommend a feed of videos most likely to continue to engage a user and which was known to successfully prolong their time on the platform.

223. However, even though TikTok’s research showed that a non-personalized feed could reduce the harmful compulsive use induced in minors by the existing recommendation system, TikTok CEO Shou Chew (based on input from TikTok’s “legal + monetization” teams) “blocked” its implementation because it would have a “negative business impact.”

224. TikTok also considered but failed to implement other design features related to screentime management and anti-addiction measures intended to help curb its users’ compulsive use of the platform.

225. For example, TikTok decided against implementing a “mandatory 15-minute break” to reduce addiction. TikTok did so despite its own internal surveys in which users criticized the platform’s existing screentime management features as “difficult to find” and



needing “stricter controls,” such as “wait times” after a certain amount of usage.

226. And despite knowing it was “behind industry standards,” and notwithstanding TikTok’s recognition that the platform’s “notifications interrupt other important areas of people’s lives like sleep, school, work, exercise, and relationships,” it took nearly a year and half<sup>98</sup> for the company to roll out a feature to mute nighttime notifications for teens and an additional almost two years to introduce an option to minimize notifications during daytime hours known to be disruptive to teens (*i.e.*, during school hours). TikTok delayed making this easy fix despite internally admitting that it “seems like an obvious low effort, high impact investment” to improve well-being. Even when TikTok finally implemented this feature, it did so in a substantially weakened form, by requiring minors to affirmatively opt into some aspects of the feature—which it knew minors rarely did.<sup>99</sup> Further, TikTok expected “[n]o impact” on stay duration or daily active users for a feature enabling users to “[m]ute push notifications in settings,” because of the feature’s expected “[l]ow adoption rates.”

227. Given TikTok’s repeated and knowing failure to implement effective measures it knew it could take to reduce young users’ harmful compulsive use, TikTok’s public assertions that youth well-being is its “top priority,” are plainly false.

### **b. Launching Ineffective Time Management Tools**

228. Further, rather than implementing design changes that TikTok knew, by its own measures, could improve young users’ well-being, TikTok has introduced tools and features meant to create the deceptive perception that it takes well-being seriously, while knowing those

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<sup>98</sup> Keenan, Corman, *New features for teens and families on TikTok*, TIKTOK NEWSROOM (Mar. 1, 2023), <https://newsroom.tiktok.com/en-us/new-features-for-teens-and-families-on-tiktok-us> (last accessed Oct. 4, 2024).

<sup>99</sup> *See Help Center - Notifications*, TIKTOK, <https://support.tiktok.com/en/using-tiktok/messaging-and-notifications/notifications> (last visited Sept. 18, 2024).

features would be ineffective.

229. TikTok’s app has several so-called screentime management functions, including: (1) a screentime limit: a purported feature to “limit” teen users to 60 minutes on the platform by default; (2) a screentime dashboard: a page where users can “get a summary of your time spent on TikTok”; (3) family safety mode: a feature that “links a parent’s TikTok account to their teen’s” to allow parents to control their teens’ daily screen time; and (4) take a break videos: videos that are pushed after a set period of time to encourage users to take a break from the platform.

230. TikTok advertises these features as tools to combat problematic use and aid youth well-being, but knows such tools are ineffective because the majority of users are “unaware” of these tools, these tools are not functional or useful, and teens “lack the skills to regulate their own app usage” so these tools “remain unused by teens.” As TikTok’s external consultants at Boston Children’s Hospital Digital Wellness Lab similarly advised, “all of the [screentime management] features” are unlikely to be “widely used or particularly useful” because they require “some education,” “a degree of self awareness that [] doesn’t come naturally to kids,” and involve “too many steps.”

231. Despite this knowledge, TikTok executives have touted the platform’s in-app time management tools to counter perceptions that the platform is designed to, and does in fact, operate to induce compulsive, addictive use.

232. For example, at an October 26, 2021 congressional hearing, when asked if TikTok’s platform is “specifically designed to keep users engaged as long as possible,” and “intended to foster addictive use,” TikTok VP and Head of Public Policy Michael Beckerman implicitly denied such premise by showcasing, “we have already done a number of [things]

proactively in the form of take a break [] videos,” “time management tools,” “[a]nd family pairing is another tool where parents can help limit the time their teenagers are spending on the app.”<sup>100</sup>

233. Similarly, at an April 2023 TED Talk, in stating he disagreed with the assertion that it is “in [Tik Tok’s] interest to have people on [its platform] as long as possible” and that TikTok “want[s] people to be addicted as long as possible,” CEO Shou Chew pointed to TikTok’s time management tools and interventions as evidence to the contrary, stating: “If you spend too much time on our platform, we will proactively send you videos to tell you to get off the platform. And depending on the time of day: If it’s late at night, [the video] will come sooner.”<sup>101</sup> By touting these tools, TikTok purposefully created the impression that it meaningfully engages in efforts to mitigate compulsive use.

234. But TikTok knows this is not true.

235. In fact, TikTok’s internal analyses show that many such features were designed to make no material dent in young users’ excessive use of the platform.

236. Rather, “leadership’s guidance” was to stay within so-called “guardrails” when creating these new screen time safety features. Namely, leadership directed TikTok employees to “keep stay duration impact within a reasonable threshold” and have “no impact to [user] retention.” Indeed, TikTok’s “A/B Analysis” of its time management tools confirmed that it “[m]et” such “[e]xpectations,” finding “no impact to retention” and no “[REDACTED]” for minors specifically, which the company attributed to the fact that “minors do not have

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<sup>100</sup> See Senate Commerce Subcommittee Hearing on Consumer Protection at 2:27:20, CSPAN (Oct. 26, 2021), <https://archive.ph/hmyvL>.

<sup>101</sup> See Chew TED Talk, *supra* note 85; See also N.Y. Times Events YouTube Interview “TikTok C.E.O. Shou Chew on China, the Algorithm and More”, YOUTUBE (Nov. 30, 2022) <https://www.youtube.com/watch?v=EE5Pcz99JFI>;

executive function to control their screen time.”

237. Similarly, in commenting on TikTok’s internal one pager describing its Screen Time Management features, a Product Manager Lead confirmed that the company’s “goal is not to reduce the time spent” on the TikTok app, but rather to ultimately “contribute to DAU [daily active users] and retention” of users.

**i. Teen Users’ 60-Minute “Limit” is Not a Limit**

238. TikTok repeatedly represents that it sets a “60-minute daily screen time limit”<sup>102</sup> for users under the age of 18. Despite the feature’s name, however, TikTok’s “limit” tool does not place an actual restriction on the amount of time teens spend on the app, but rather, merely provides an easily dismissible pop-up prompt that users can readily disable or enter a passcode to bypass,<sup>103</sup> and return unimpeded to using the platform.

239. Specifically, after using the TikTok platform for 60 minutes, teens are simply presented with a prompt that states: “Ready to close TikTok? You’ve spent 1h on TikTok today. Close it to stay within your daily time, or enter the passcode 1234 to return to TikTok.” The only button presented is a large red button that says “Return to TikTok.” Users can freely change when this prompt occurs, with options ranging from after 40 minutes to 2 hours per day, or they can disable the tool entirely. Further, because such prompt is only sent once, after entering the passcode just once, the tool is fully disabled for the day, letting the user stay on TikTok without additional prompts or interruption.

240. Notably, TikTok purposely eschewed a design that required a user to create a

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<sup>102</sup> See Keenan, *supra* note 96.

<sup>103</sup> See Rachel Lerman, *TikTok Adds 60-minute Limit for Teens But Leaves Easy Workarounds*, WASH. POST (Mar. 1, 2023), <https://www.washingtonpost.com/technology/2023/03/01/tiktok-time-limit-teens/> (last visited Sept. 18, 2024); Sadia Israr, *How to Turn Off TikTok Screen Time Without Password*, LOGMEONCE, [https://logmeonce.com/resources/how-to-turn-off-tiktok-screen-time-without-password/#google\\_vignette](https://logmeonce.com/resources/how-to-turn-off-tiktok-screen-time-without-password/#google_vignette) (last visited Sept. 18, 2024).

“custom pin code,” in order to return to the app, rather than an immediately provided “preset 1234 pin code,” because it would create too much of a “‘memory test’ problem” and “friction” to continuing to use the app.

241. Pursuant to TikTok’s “Managing time on TikTok” research, TikTok knew this time limit prompt was ineffective. Namely, users reported that the feature had limited “functionality” and “usefulness,” and that to be effective, TikTok needed “more complex passcodes, wait times between entering [the] passcode and being allowed to continue watching, and other options for stricter controls.” Users further reported that “relying on” TikTok’s “Screen Time Prompts” that merely gave an “awareness of time was easy to bypass” and “not powerful enough to end a session on TikTok.”

242. Moreover, TikTok knew that due to the overwhelmingly addictive nature of its collective platform features and young users’ inability to regulate their time spent, “relying on users to monitor themselves with controls they can override,” was unreasonable, unrealistic, and ineffective.

243. Tellingly, TikTok measured the success of its 60-minute limit tool, not by whether it *actually* reduced the time teens spent on the platform, but by three unrelated “success metrics” discussed in an internal January 2023 presentation, the first of which was “improving public trust in the TikTok platform via media coverage.” Reducing the time teens spent on the platform was not a “success metric,” and too much reduction was disfavored by TikTok.

244. Instead, the “[g]uardrail” for this feature was that it cause “██████████” in the number of daily active minor users, and only up to a ██████ overall drop in “[s]tay duration” or global time spent. And if the daily time teens spent on the app dropped more than ██████, the company would need to revisit the design. At the time, TikTok knew “roughly 40% of teens

spen[t] more than 2 hours per day on the platform,” so even a [REDACTED] drop would still leave many teens using TikTok for much longer than the one hour limit TikTok’s research indicated was healthy. Moreover, TikTok anticipated that the estimated negative business impact would “decrease based on teens’ likelihood to disable [the] feature or exceed [its] limits.”

245. Indeed, TikTok’s default “time limit” proved to have negligible impact. After running an A/B testing experiment in a March 2023 internal study, the company found that the default screen time use prompts only reduced the average time per day teens spent on TikTok per day from approximately [REDACTED] minutes to approximately [REDACTED] minutes. Despite seeing this paltry result, the company did not revisit the tool’s design and/or implement more effective measures it knew it could take.

246. As public concern grew that TikTok’s platform was addictive and unsafe for teens, it was important for TikTok to convince parents that those concerns were being addressed and that TikTok was a unique leader among similar companies. Therefore, after releasing the 60-minute limit tool, TikTok prominently advertised it to the public, including upon information and belief throughout Massachusetts and in Massachusetts-based publications—but failed to disclose how it actually works. For example, one advertisement in the *Washington Examiner*, a news magazine more likely to be read by adults than teens, stated only that “Teen accounts automatically have a daily screen time limit of 60 mins. Only on TikTok,” as seen below:



247. Nowhere in the advertisement does TikTok disclose that the screen time “limit” merely constitutes a prompt that can be easily bypassed or even disabled. TikTok made identical or similar public representations in other contexts, including in January 2024 advertisements for *The Washington Post* reading “[t]een accounts automatically have a daily screen time limit of 60 mins.” These advertisements leave consumers—especially parents who do not use the platform—with a false impression that this tool imposes an actual limit on teen screen time, and that TikTok effectively addresses concerns around excessive use.

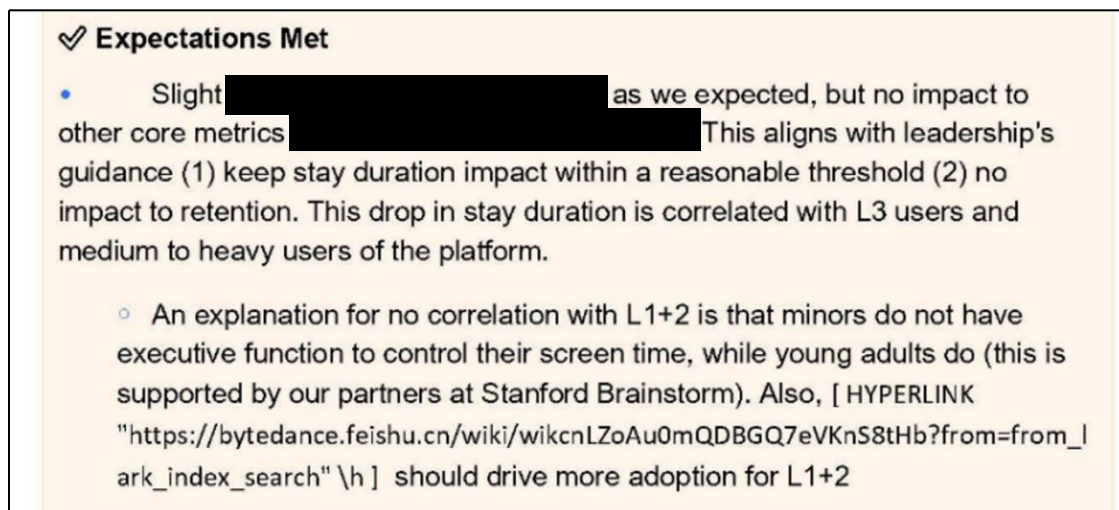
**ii. Screentime Dashboard, Family Pairing, and Take a Break Videos Have No Impact**

248. In addition, TikTok has launched several other knowingly ineffective time management tools that it deceptively touts to the public as evidence that its platform is safe for teens. For example, TikTok’s screentime dashboard, meant to allow a user to monitor the

amount of time spent on the platform so they can self-regulate their time, was purposely designed to bolster TikTok's public image regarding its safety efforts without making any actual meaningful change in user behavior.

249. According to an internal September 2021 document seeking approval for the "Screen Time Dashboard," TikTok set a specific "guardrail" to only allow "a maximum 5% drop in stay time for . . . minors" at the direction of leaders including TikTok's Global Research and Development Chief, and noted that "we don't expect significant impact to stay time with this feature since it is only improving awareness and is not an intervention."

250. In fact, TikTok found—as it expected—that the screentime dashboard did not affect minors' usage because "minors do not have executive function to control their screen time." In the image below, "L1" users refers to 13- to 15 year olds, "L1+2" users refers to 15- to 17 year olds, and "L3" refers to 18- to 24 year olds.





251. As part of the screentime dashboard feature, TikTok also allows users to “opt-in” to receive “weekly screen time updates” directly in their in-app message inbox.<sup>104</sup> However, after A/B testing, TikTok confirmed that this tool was similarly ineffective in combatting compulsive use, *i.e.*, there was “no statistically significant decrease in stay duration for users who have enabled this feature.” And this was expected since, as with all TikTok’s other screen time management tools, the “feature’s north star” was not to be a meaningful intervention to reduce compulsive usage as the company publicly promoted, but only to “improve user awareness” about the user’s screen time.

252. Another feature that TikTok heavily promotes to parents and parent groups is Family Pairing,<sup>105</sup> which “links a parent’s TikTok account to their teen’s” to allow parents to control teens’ daily screen time. However, like its screentime dashboard tool, TikTok expected “[n]o impact” on stay duration or daily active users for its feature because of the feature’s expected “[l]ow adoption rates.” Indeed, TikTok’s internal research confirmed “[f]amilies do not use Family Pairing” due to “lack of awareness” that the feature exists.

253. Moreover, TikTok knows “Family Pairing” does not mitigate young users’ problematic use of its platform. As an internal document notes, “Family Pairing doesn’t address parents’ top concerns,” and “[t]een users can disable Family Pairing without [a] PIN, so it’s less

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<sup>104</sup> *Safety Center – Well-Being Guide*, TIKTOK (last updated Sept. 10, 2024), <https://www.tiktok.com/safety/en/well-being-guide/> (last visited Sept. 18, 2024).

<sup>105</sup> See *TikTok Guide For Parents*, NATIONAL PTA, <https://www.pta.org/docs/default-source/files/programs/pta-connected/tiktok-toolkit-2019-2020/tiktok-guide-for-parents-revised.pdf> (last accessed Sept. 18, 2024); Jeff Collins, *TikTok Introduces Family Pairing*, TIKTOK (Apr. 15, 2020), <https://newsroom.tiktok.com/en-us/tiktok-introduces-family-pairing> (last visited Sept. 18, 2024); Chew Written Testimony, *supra* note 18.

restrictive than activating either Restricted Mode<sup>106</sup> or Screentime Management individually.”<sup>107</sup> Further, teens can easily bypass Family Pairing. Because the function works only on TikTok’s mobile application, teens can avoid parent-imposed restrictions simply by using their desktop or phone web browser.<sup>108</sup>

254. TikTok also touts that it offers “Take a Break” (also called “Screen Time Break”) videos that purportedly encourage users to stop excessive use by prompting them “to consider taking a break” after long periods of uninterrupted time on the platform.<sup>109</sup> Again, TikTok designed such reminders to be easily dismissed and/or turned off for an immediate and quick return to more infinite scrolling.

255. As internal research noted, the “Take a Break” videos’ “format [is] too similar with general TikTok content and can be easily skipped,” which was validated by the low “finish/play rate of these videos.” TikTok internally concluded that “[u]sers don’t take [these videos] seriously” as they do “not [provide] enough friction to result in meaningful behavior change.” Nevertheless, TikTok CEO Shou Chew and Head of Public Policy Michael Beckerman extolled the virtues of such videos on multiple occasions before Congress, media, and in an interview with Andrew Ross Sorkin of the *The New York Times* at the 2022 DealBook summit.<sup>110</sup> But as TikTok’s Senior Director of Public Policy, Eric Ebenstein, admitted internally

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<sup>106</sup> Restricted Mode is described in more detail *infra* at ¶¶ 274-291.

<sup>107</sup> See Alex Castro, *TikTok now lets parents set restrictions on their kids’ accounts*, THE VERGE (April 16, 2020, 8:00 AM), <https://www.theverge.com/2020/4/16/21222817/tiktok-family-pairing-linked-accounts> (last visited Sept. 18, 2024).

<sup>108</sup> See *User Safety*, TIKTOK, <https://web.archive.org/web/20240528043614/support.tiktok.com/en/safety-hc/account-and-user-safety/user-safety#4> (last accessed May 31, 2024).

<sup>109</sup> *Help Center – Screen Time*, TIKTOK, <https://support.tiktok.com/en/account-and-privacy/account-information/screen-time> (last visited Sept. 17, 2024).

<sup>110</sup> See N.Y. Times Events YouTube Interview “TikTok C.E.O. Shou Chew on China, the Algorithm and More”, YOUTUBE (Nov. 30, 2022) <https://www.youtube.com/watch?v=EE5Pcz99JFI>.

months before the 2022 DealBook summit, the videos that Shou Chew touted were “useful [as] a good talking point” to external policymakers, but TikTok’s research in fact established that “they’re not altogether effective.”

256. And not only are all these screentime management features ineffective, but TikTok also makes them hard to find. As TikTok internally acknowledges, many of the tools “only exist[] behind a somewhat hidden series of menus” and behind multiple screens, reducing their use and effectiveness. Internal documents criticize this approach because hiding these features results in “limiting users’ ability to find and take advantage of these features” and “[i]f [screentime management] is actually an important problem [for TikTok] to solve, we should make our entry points more prominent.”

257. Similarly, TikTok’s external consultants at the Boston Children’s Hospital Digital Wellness Lab provided critical feedback on the “functionality” of TikTok’s time management tools, advising that they were too “hidden” as “[i]t takes two taps and then you need to scroll down to find it in the app.” But TikTok did not take these small steps toward increasing awareness and functionality of these tools that it publicly touted as addressing the problem of teen overuse.

258. And despite TikTok’s internal research findings that “[u]sers want restrictive solutions since permissive, ignorable, and unrestrictive tools are useless to reduce phone addiction”—and knowledge that its existing tools do not actually help minors reduce time spent—TikTok still refuses to impose actual meaningful measures.

259. By contrast, TikTok imposes stricter minor safety restrictions for its sister platform Douyin, which is available only in China, including limiting some minors to 40 minutes

of use per day and limiting the platform’s availability to certain hours.<sup>111</sup> To prevent overuse and addiction, Douyin users also may face a five-second pause between videos if they spend too long on the app.<sup>112</sup>

260. TikTok’s internal documents reveal that it knows Douyin’s restrictions help “special groups like teens and excessive users . . . control extreme usage” and “[e]nhance users’ sense of control,” but, as indicated above, TikTok has chosen to not implement the same safety measures for U.S. teen users.

261. Thus, contrary to TikTok’s public representations of these time management tools as legitimate interventions designed to promote young users’ healthy usage of the platform, TikTok’s knew these time management features did not have any meaningful impact on mitigating excessive time spent or problematic, addictive use.

262. And in making these misrepresentations, TikTok deceptively omits material information about the ineffectiveness of these tools and renders consumers without crucial information to assess the safety of the platform and make informed decisions about their use.

### **c. Launching Ineffective Content Moderation Tools**

263. TikTok likewise deceives consumers by promoting certain tools that it claims are designed to help users “control,”<sup>113</sup> manage, and moderate harmful and inappropriate content TikTok’s recommendation system feeds them, despite knowing that they are ineffective, do not

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<sup>111</sup> See Diksha Madhok, *The Chinese version of TikTok is limiting kids to 40 minutes a day*, CNN (Sept. 20, 2021), <https://www.cnn.com/2021/09/20/tech/china-tiktok-douyin-usage-limit-intl-hnk/index.html> (last visited Sept. 18, 2024).

<sup>112</sup> See Matthew Humphries, *China’s TikTok Adds Mandatory 5-second Pause Between Videos*, PCMag (Oct. 21, 2021), <https://www.pcmag.com/news/chinas-tiktok-adds-mandatory-5-second-pause-between-videos> (last visited Sept. 18, 2024).

<sup>113</sup> Sandeep Grover & Mabel Wang, *Introducing a way to refresh your For You feed on TikTok*, TIKTOK (Mar. 16, 2023) <https://newsroom.tiktok.com/en-us/introducing-a-way-to-refresh-your-for-you-feed-on-tiktok-us> (last visited Sept. 18, 2024).

meet user’s expectations, and/or do not work as advertised.

**i. “Refresh” Feature is Only Temporary**

264. TikTok is internally well-aware that young users experience psychologically harmful “rabbit holes” (also known as a “filter bubbles”) when they encounter a high percentage of repetitive and sequential videos on the same topics—particularly those that trigger anxiety or depression, or provoke harmful social comparison, self-harm or disordered eating.

265. And in response to internal and external pressure for TikTok to make “efforts to guard against” such overly “narrow” and “repetitive recommendations,”<sup>114</sup> TikTok introduced an algorithm “Refresh” tool which purportedly enables a user to completely reset their “For You” feed “to view a new set of popular videos, as if you’ve just signed up to TikTok.”<sup>115</sup> “As [a user] interact[s] with the new videos” presented on their For You feed, a user’s “personalized profile will be refreshed to show [] more varied content than before.”<sup>116</sup>

266. According to an internal planning document, TikTok believed that “[o]ffering users a full reset button would go a long way to addressing policy makers’ concerns about our algorithm,” including users’ inability to escape from so-called “rabbit holes.”

267. TikTok touted that its “Refresh” tool was intended to “serve as a way to support potentially vulnerable users who want to distance themselves from their current content experience.”<sup>117</sup>

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<sup>114</sup> Grover & Wang, *supra* note 113.

<sup>115</sup> *Help Center - Refresh Your For You Feed*, TIKTOK <https://web.archive.org/web/20240709035614/https://support.tiktok.com/en/account-and-privacy/account-privacy-settings/refresh-your-for-you-feed> (archived Jul. 9, 2024).

<sup>116</sup> *Id.*

<sup>117</sup> See Sarah Perez, *TikTok Introduces a Strike System for Violations, Tests a Feature to ‘Refresh’ the For You Feed*, TECHCRUNCH (Feb. 2, 2023), <https://techcrunch.com/2023/02/02/tiktok-introduces-a-strike-system-for-violations-tests-a-feature-to-refresh-the-for-you-feed/> (last visited Sept. 18, 2024).

268. These public statements reasonably could have misled consumers to believe that resetting the For You feed would result in a completely new feed as if they were new users, and that they would be able to escape rabbit holes of harmful content.

269. However, TikTok failed to disclose and/or omitted that the Refresh tool was specifically designed to be ineffective and/or not meant to operate as advertised.

270. This is because, as TikTok’s Director of Product Management, Privacy & Responsibility stated in a May 2022 internal chat, the company was “concerned about the potential [business] impact of the Algorithm Reset feature” and thus tasked its employees to find “ways to add friction to the user experience that might limit adoption (e.g. discoverability, multiple steps to execute, etc.)” of the Refresh feature. Other employees were then tasked with determining “how [to] both offer a Reset feature with limited adoption ‘by design’ and credibly claim externally we are addressing [safety] issues etc. observed by critics.”

271. And not only did TikTok design the Refresh feature to not be used, but it also failed to disclose and deceptively concealed its temporary (and thereby ineffective) nature. As described in its internal “Algorithm Refresh One Pager/FAQ,” despite TikTok advertising the “Refresh” feature as a complete reset of a user’s For You feed, the refresh lasts for only 200 videos, after which the algorithm returns to incorporating the user’s pre-refresh interactions with the platform. Thus, TikTok designed the Refresh feature to reset users’ recommendations only *temporarily*. After the user views or swipes through 200 videos, the platform’s recommendation system resumes pushing users’ videos based on *all* of their past engagement data—including from before the so-called “refresh.”

272. Thus, for users previously stuck in rabbit holes, the recommendation system quickly reintroduces videos based on the same engagement data that led them into the rabbit hole

in the first place.

273. TikTok has not disclosed these material facts to users or the public. Rather, TikTok deceptively represents to users and their parents/guardians that the Refresh feature is a meaningful tool to address harmful rabbit holes that lead to compulsive viewing of more and more problematic content, while knowing its temporary nature renders it ineffective.

**ii. “Restricted Mode” Does Not Effectively Filter Content**

274. TikTok also misleads users about the efficacy of its “Restricted Mode” tool, which TikTok publicly described in an October 2019 Newsroom post on its website as a feature allowing a teen user or their parent/guardian to “limit[] the appearance of content that may not be appropriate for all audiences.”<sup>118</sup>

275. According to TikTok, this means users in Restricted Mode “shouldn’t see mature or complex themes,” such as: profanity, sexually suggestive content, realistic violence or threatening imagery, firearms or weapons in an environment that isn’t appropriate, illegal or controlled substances/drugs, and explicit references to mature or complex themes that may reflect personal experiences or real-world events that are intended for older audiences.<sup>119</sup>

276. TikTok’s website specifically promotes this tool to parents as a meaningful way “to ensure the content [their teen is] viewing is age-appropriate.”<sup>120</sup>

277. TikTok has actively promoted its platform’s Restricted Mode as providing an

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<sup>118</sup> Parental Guide, TikTok <https://newsroom.tiktok.com/en-us/tiktok-parental-guide> (last visited Sept. 18, 2024); *TikTok’s Top 10 Tips for Parents*, TIKTOK (Oct. 16, 2019), <https://newsroom.tiktok.com/en-us/tiktoks-top-10-tips-for-parents> (last visited Sept. 18, 2024).

<sup>119</sup> *Help Center – Restricted Mode*, TIKTOK, <https://support.tiktok.com/en/safety-hc/account-and-user-safety/restricted-mode> (last visited Sept. 17, 2024).

<sup>120</sup> *Limiting Unwanted Content*, TIKTOK (Apr. 25, 2019), <https://newsroom.tiktok.com/en-us/limiting-unwanted-content> (last visited Sept. 18, 2024); see also *TikTok’s Top 10 Tips for Parents*, *supra* note 118 (listing “enabling Restricted Mode” as a tip for parents and describing Restricted Mode as “an option that limits the appearance of content that may not be appropriate for all audiences”).

“‘appropriate’ experience” for teen users to family and parent interest groups, media, and “family-oriented partners,” such as the National Parent Teacher Association and Family Online Safety Institute, to create the public perception that it serves as a meaningful tool that blocks, hides, and filters out inappropriate, mature content for minors.<sup>121</sup>

278. Internally, TikTok acknowledged its marketing intent was to present “Restricted Mode” as constructively equivalent to the “highly curated” “<13 experience,” where every video is required to be approved by a content moderator before entering the pool.

279. Yet TikTok knew that Restricted Mode did not function in the manner TikTok represented, and instead only filtered very limited categories of potentially objectionable content.

280. Indeed, an internal 2020 “TikTank” research report noted that Restricted Mode was “still not completely child-safe.” And nearly two years after TikTok began making misrepresentations touting the efficacy of Restricted Mode on its website, TikTok’s Global Head of Minor Safety internally told TikTok’s U.S. Safety Head that “Restricted Mode does not meet user expectations [for] almost all content themes (violence, gore, profanity, adult, etc.).”

281. Further, an April 2020 internal “product safety” audit of the Restricted Mode feature found that the feature did not effectively “match up with consumer expectations” because the filters used to limit content in Restricted Mode “do[] not completely filter for ‘inappropriate’ content.”

282. The audit concluded that the company needed to “change the Restricted mode

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<sup>121</sup> See *TikTok’s ‘Family Safety Mode’ Gives Parents Some App Control*, BBC (Feb. 19, 2020), <https://www.bbc.com/news/technology-51561050> (last visited Sept. 18, 2024); *Parents’ Ultimate Guide to TikTok*, COMMONSENSE MEDIA (Apr. 26, 2024), <https://www.commonsensemedia.org/articles/parents-ultimate-guide-to-tiktok> (last visited Sept. 18, 2024); Brandy Shaul, *TikTok: Here’s How to Turn on Restricted Mode*, ADWEEK (Mar. 21, 2019), <https://www.adweek.com/performance-marketing/tiktok-heres-how-to-turn-on-restricted-mode/> (last visited Sept. 18, 2024); *TikTok Parental Control Settings*, INTERNET MATTERS, <https://www.internetmatters.org/parental-controls/social-media/tiktok-privacy-and-safety-settings/#:~:text=To%20set%20up%20restricted%20mode,to%20turn%20on%20Restricted%20Mode> (last visited Sept. 18, 2024).



experience into the <13 experience” in order to conform with “how [the company has] been advertising this version of the app.”

283. Moreover, TikTok failed to disclose that the Restricted Mode’s limited filters will only filter content within a young user’s For You feed. A young user using the TikTok platform can easily circumvent the feature by, for example, watching videos that they search for, that are sent directly to them, or that are uploaded by accounts they follow.

284. Upon information and belief, it was years (*i.e.*, in or around July 2022) before TikTok made the changes to Restricted Mode that were recommended by the audit during which time it knowingly and deceptively misrepresented its efficacy to users, parents and guardians.

#### **d. Retaining Harmful Beauty Filters**

285. TikTok’s public statements that youth well-being is its “top priority” are also deceptive because, despite specifically identifying internally that its platform’s appearance-modifying beauty filters and effects cause harm to young users (and in particular female young users), it deliberately chose to retain such filters because their removal would decrease user time on the platform.

286. When a user is creating a post, TikTok provides users with beauty “filters” and “effects,” such as the “RETOUCH (formerly called “Beauty” mode),” “Beautify,” and “Bold Glamour” filters, which a user can use to visually alter their appearance in photos and videos before posting them onto the platform. Specifically, as TikTok internally acknowledges, these filters enable and “propagat[e]” “unrealistic” appearance changes and beauty standards (*i.e.*, those that can only be achieved by plastic surgery) by allowing a user to dramatically adjust many of their physical attributes, such as the size and shape of their jaw, nose, lips, and

eyebrows, teeth whiteness, or skin smoothness, texture, tone, or color.<sup>122</sup> Such filters are especially dangerous to young users because they can cause negative self-obsession or self-hatred of their appearance,<sup>123</sup> foster body dysmorphia, and induce low self-esteem and negative body image.<sup>124</sup> To that effect, plastic surgeons have reported an increase in patients seeking procedures to look better on-screen and have remarked that TikTok’s advanced effects “blurr[ed] the line between fantasy and reality.”<sup>125</sup>

287. TikTok’s internal research has likewise confirmed that beauty filters are associated with harm, stating that such filters have a “high potential from a research perspective to lead to negative body image and body dysmo[r]phia symptoms, especially among teenage girls.”

288. Specifically, an internal document entitled “YSW U18 Considerations for Appearance-Altering Filters,” described the “[u]nique psyc[h]osocial developmental features that make U18 users vulnerable to harm from beauty filters” and expressly acknowledged that “[f]ilters on Tik[T]ok and other Bytedance products have a high risk of harming U18 users.” It

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<sup>122</sup> See Alena Arsenova, *What Is AR Beauty and How It Benefits Makeup, Salons, and Retail*, BANUBA (May 19, 2021), <https://www.banuba.com/blog/beauty-ar-technology-possibilities-and-use-case> (last visited Sept. 18, 2024); Press Release, AM. ACADEMY OF FACIAL PLASTIC & RECONSTRUCTIVE SURGERY, INC., ‘TikTok Face’ Impact on Facial Plastic Surgery, <https://archive.ph/TMDXA> (last accessed May 30, 2024).

<sup>123</sup> See Tara Well, *The Hidden Danger of Online Beauty Filters*, PSYCH. TODAY (March 25, 2023), <https://www.psychologytoday.com/us/blog/the-clarity/202303/can-beauty-filters-damage-your-self-esteem> (last visited Sept. 18, 2024); Ana Javornik, et al., *Research: How AR Filters Impact People’s Self-Image*, HARV. BUS. REV. (Dec. 22, 2021), <https://hbr.org/2021/12/research-how-ar-filters-impact-peoples-self-image> (last visited Sept. 18, 2024).

<sup>124</sup> See Scott Griffiths, et al., *The Contribution of Social Media to Body Dissatisfaction, Eating Disorder Symptoms, and Anabolic Steroid Use Among Sexual Minority Men*, 21 CYBERPSYCHOLOGY, BEHAV. & SOC. NETWORKING 149, 149 (Mar. 1, 2018); Siân McLean, et al., *Photoshopping the Selfie: Self photo Editing and Photo Investment Are Associated with Body Dissatisfaction in Adolescent Girls*, 48 INT’L J. OF EATING DISORDERS 1132, 1133 (Aug. 27, 2015); Jing Yang, et al., *Selfie-Viewing and Facial Dissatisfaction Among Emerging Adults: A Moderated Mediation Model of Appearance Comparisons and Self-Objectification*, 17 INT’L J. ENV’T RES. & PUB. HEALTH 672, 672 (Jan. 2020).

<sup>125</sup> Press Release, AM. ACADEMY OF FACIAL PLASTIC & RECONSTRUCTIVE SURGERY, INC., ‘TikTok Face’ Impact on Facial Plastic Surgery, [https://www.aafprs.org/Media/Press\\_Releases/%E2%80%98TikTok-Face%E2%80%99-Impact-On-Facial-Plastic-Surgery.aspx](https://www.aafprs.org/Media/Press_Releases/%E2%80%98TikTok-Face%E2%80%99-Impact-On-Facial-Plastic-Surgery.aspx) (last visited Sept. 18, 2024)

further concluded that “adolescents are particularly susceptible to harm” when it comes to the usage and consumption of beauty filters “as they are developing their self-image, are at a critical period for developing body dysmorphia and eating disorders, and are more easily pressured by the opinions of others.”

289. Despite knowing its beauty effects can harm young users, and that such harm was a salient issue in external “public discourse” such that it was internally identified as an area where it could “build more trust,” TikTok has chosen to keep them because TikTok knows these filter effects significantly increase usage of the platform, particularly among minor users. Indeed, when TikTok experimented with removing one of the beauty filters in TikTok LIVE, viewers’ engagement dropped and TikTok Creators (the platform’s users who post videos or livestream) livestreamed less.

290. Thus, TikTok’s retention of these filters while concealing and failing to disclose their “potential to negatively impact the wellbeing” of young users, belies its claims that young user well-being is its highest priority.

### **3. TikTok’s Public Metrics Misrepresent the Amount of Policy-Violating Material on the Platform**

291. Despite knowing otherwise, TikTok goes to great lengths to portray its platform as safe. It has buried internal data that identifies harms to young users and designed a deceptive public metric to downplay the large amount of policy-violating content on its platform that it fails to remove.

292. TikTok publicly issues “Community Guidelines” pursuant to which TikTok claims that it “[r]emove[s] violative content from the platform that breaks our rules.”<sup>126</sup> Such

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<sup>126</sup> See *Community Guidelines*, *supra* note 22.

rules state that TikTok “does not allow” content constituting “Violent and Criminal Behavior,” “Hate Speech and Hateful Behavior,” “Youth Sexual and Physical Abuse,” “Harassment and Bullying,” “Suicide and Self-Harm,” “Disordered Eating and [Negative] Body Image,” “Sexual Activity and Services,” “Nudity and Body Exposure,” “Sexually Suggestive Content,” and “Shocking and Graphic Content,” among other categories.<sup>127</sup> TikTok states it issues its Community Guidelines to outline “rules for what is allowed on TikTok” and to create a “safe” experience for its users.<sup>128</sup>

293. To reassure the public of its robust content moderation efforts, TikTok publishes and publicly releases quarterly Community Guidelines Enforcement Reports (“CGE Reports”) on the “Transparency Center” page of its website. These reports purport to highlight the safety of TikTok’s platform by focusing solely on metrics that show the swiftness with which TikTok removes policy-violating content. Such metrics include TikTok’s “Proactive removal rate,” “Removal within 24 hours rate,” and “Removal at zero views” rate.<sup>129</sup>

294. Specifically, TikTok defines its “Proactive removal rate” as the rate at which TikTok “identif[ies] and remov[es] a violative video before it’s reported to us.”<sup>130</sup> The “Removal within 24 hours rate” indicates the rate at which TikTok removes a violative video within 24 hours of it being posted on the platform. And the “Removal at zero views” rate is the

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<sup>127</sup> See list of categories contained in TikTok’s collection of sub webpages that comprise its Community Guidelines at: *Community Guidelines – Safety and Civility*, TIKTOK (May 17, 2024), <https://www.tiktok.com/community-guidelines/en/safety-civility> (last visited Sept. 18, 2024); *Community Guidelines – Mental Health*, TIKTOK (May 17, 2024), <https://www.tiktok.com/community-guidelines/en/mental-behavioral-health> (last visited Sept. 18, 2024); and *Community Guidelines – Sensitive and Mature Themes*, TIKTOK (May 17, 2024), <https://www.tiktok.com/community-guidelines/en/sensitive-mature-themes> (last visited Sept. 18, 2024).

<sup>128</sup> See *Community Guidelines*, *supra* note 22.

<sup>129</sup> *Community Guidelines Enforcement Report April 1, 2021- June 30, 2021*, TIKTOK, (released Oct. 13, 2021) [www.tiktok.com/transparency/en-gb/community-guidelines-enforcement-2021-2/](https://www.tiktok.com/transparency/en-gb/community-guidelines-enforcement-2021-2/) (last visited Sept. 18, 2024).

<sup>130</sup> *Id.*

rate at which a violative video was removed after it was posted but before anyone viewed it.<sup>131</sup>

At bottom, these metrics simply quantify how fast TikTok removes violative content *that it manages to catch*, but not how much content it manages to catch overall and/or what volume of violating content remains on the platform.

295. Internally, TikTok knows that its moderation metrics are “largely misleading” because “we are good at moderating the content we capture, but these metrics do not account for the content that we miss. . . .”

296. For example, TikTok’s Transparency report for the period April to June 2021 boasted that approximately 81.5 million videos “were removed globally for violating its Community Guidelines or Terms of Service, which is less than 1% of all videos uploaded.” Of those videos, TikTok stated it “identified and removed 93.0% within 24 hours of being posted” (its “Removal within 24 hours rate”), “94.1% before a user reported them” (its “Proactive removal rate”), and “87.5% at zero views” (its “Removal at zero view” rate). The report further itemized the “Proactive removal rate” for multiple categories of violative content, including a 97.6% proactive removal rate for content that violates its “minor safety” policy.<sup>132</sup>

297. TikTok’s Vice President and Head of Public Policy for the Americas, Michael Beckerman, touted TikTok’s same April to June 2021 “Proactive removal rate” statistics to Congress at his October 26, 2021 Senate hearing in response to a question regarding the efficacy of TikTok’s content moderation practices to “completely protect” minors from harmful drug content. Namely, Beckerman underscored that: “As it relates to minors[’] safety, over 97 percent

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<sup>131</sup> *Id.*

<sup>132</sup> *Community Guidelines Enforcement Report April 1, 2021- June 30, 2021*, *supra* note 129.

of violative content is removed proactively.”<sup>133</sup> This statement deceptively suggested to government officials and the public that less than 3% of violative content regarding minor safety (such as drug content) remained on the platform due to such enforcement efforts.

298. Similarly, in response to written questions submitted by U.S. senators at the same hearing, Beckerman doubled-downed on his representation that extremely minimal violative content exists on the platform: “We publish quarterly Community Guideline Enforcement Reports that demonstrate that of all the content that users upload to TikTok, less than 1 percent of videos uploaded was found to violate the Community Guidelines.”<sup>134</sup>

299. But TikTok’s own data shows this is far from true.

300. In fact, Tik knows and does not disclose it has significant “leakage” rates, which measures the percentage of violative content that is not moderated or removed from its platform.

301. Internally, TikTok calculates the rate at which certain categories of content “leak” through its moderation processes and remain on the platform, which are multiple orders of magnitude higher than the very small percentage suggested in its CGE Reports and touted to the public.

302. For example, its April to June 2021 CGE Report lists:

- a. A 73.3% proactive removal rate for “Harassment and bullying,” while its internal data shows leakage rates of [REDACTED] for “Bullying behaviors” and 33.33% for “Sexual harassment” content;
- b. A 97.1% proactive removal rate of “Illegal activities and regulated goods”

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<sup>133</sup> Senate Hearing Transcript for *Subcommittee: Protecting Kids Online: Snapchat, TikTok, and Youtube*, *supra* note 12, Testimony of Michael Beckerman, p. 29, available at [CHRG-117shrg54901.pdf](#) (govinfo.gov).

<sup>134</sup> Senate Hearing Transcript for *Subcommittee: Protecting Kids Online: Snapchat, TikTok, and Youtube*, *supra* note 12, Response to Written Questions Submitted by Hon. Richard Blumenthal to Michael Beckerman, p. 214, available at [CHRG-117shrg54901.pdf](#) (govinfo.gov).

while its internal data shows leakage rates of [REDACTED] for “Mention of drugs and other controlled substances” and [REDACTED] for “firearms” and other related categories;

- c. A 94.9% proactive removal rate of “Violent and graphic content” while its internal data shows leakage rates of [REDACTED] for “Violent or graphic content” in a fictional setting, [REDACTED] for “Violent death or accident,” and [REDACTED] for “Animal mutilation” and related categories;
- d. A 94.2% proactive removal rate for “Suicide, self-harm, and dangerous acts,” while its internal data shows leakage rates of [REDACTED] for “Suicide or self-harm tendencies,” [REDACTED] for “Dangerous driving behavior,” and [REDACTED] for “depiction of eating disorder[s]”;
- e. A 97.6% proactive removal rate of violative “Minor Safety” content while its internal data shows leakage rates of 35.71% for “Normalization of Pedophilia” content, 33.33% for “Minor Sexual Solicitation” content; 39.13% for “Minor Physical Abuse” content, 50% of “Glorification of Minor Sexual Assault”, and “100% of “Fetishizing Minors.”<sup>135</sup>

303. These are just some examples of the large disparity and incongruity between TikTok’s public “proactive removal rate” metric cited in its CGE Reports and its internal “leakage rate” data for multiple categories of violating content.

304. In short, TikTok’s undisclosed internal metrics demonstrate that its publicly reported metrics misrepresent and/or fail to adequately disclose that a significant amount of policy-violating content is not removed and/or remains viewable on the platform for minors.

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<sup>135</sup> *Community Guidelines Enforcement Report April 1, 2021- June 30, 2021*, *supra* note 129.

TikTok’s deception in this regard, at least in part explains the notable (and valid) confusion expressed by multiple public officials regarding the discrepancy between the numerous constituent reports of regular exposure to violative content on TikTok’s platform, and TikTok’s representations that its removal and elimination rate of such content from the platform is extremely high.<sup>136</sup>

305. Because letting the world know that its content moderation tools do not effectively remove a large percentage of harmful content from its platform would hurt its business and reputation, TikTok has deceptively concealed this from the public.

#### **4. TikTok’s Deception and Concealment Was Material**

306. Importantly, TikTok and its executives’ conduct in knowingly misrepresenting, misleading, failing to disclose, and/or concealing to the public, including Massachusetts young users and their families, the manipulative, addiction-inducing nature of its platform’s coercive design features, its failure to prioritize youth well-being (including failing to implement measures it knew it could take to reduce harms to youth), and the amount of policy-violating content viewable on its platform, was material. It was material, *inter alia*, because TikTok’s deception has prevented young users and their families from making truly informed decisions about their platform usage and from taking steps to avoid, mitigate, and/or protect themselves from the harms TikTok knew, but concealed, were being caused by its platform.

307. TikTok’s own internal June 2021 research, surveying approximately [REDACTED], revealed that TikTok knew that parents had concerns about their teens’ “screen time management,” exposure to inappropriate content, and the platform’s overall negative impacts on

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<sup>136</sup> See, e.g., *Subcommittee: Protecting Kids Online: Snapchat, TikTok, and Youtube*, *supra* note 12, Response to Written Questions submitted by Hon. Mike Lee to Michael Beckerman, p. 225 (“Question 2. How do you reconcile content that is typically banned by your platform being recommended to teens regularly through your algorithm?”).



their teens' wellbeing. In particular, parents reported wanting their teens to "have safe, healthy and age appropriate experiences online" and "worry about their children getting addicted to TikTok or spending too much time on the app without any limitations in place." TikTok also knows from its own research "that [its] users' biggest usage deterrent is that they think the platform is addictive" and "time management" was a "key concern." TikTok also knew that there was large public concern about the addictive nature of its platform, and that it was important for TikTok to convince parents that those concerns were being addressed. In addition, TikTok knew that "especially for younger users," one of the "largest critiques" and "problems" of its platform was "issues stem[ming] from beauty filters, effects, and [] like counts."

308. Had young users and their families known of TikTok's psychologically manipulative design features and exploitation tactics and the addiction and harm that those tactics caused, they reasonably would have altered or changed their conduct and decisions around using TikTok's platform. Likewise, had TikTok disclosed its internal data regarding the amount of policy-violating content viewable by minors on its platform, young users and their families and may have acted differently, including deciding not to use the product, restricting use of the product, actively monitoring or regulating use of the product, and changing how they use certain platform settings and features.

**C. TikTok's Unfair and Deceptive Practices Have Caused Substantial and Unjustified Harm to Massachusetts Youth and the Commonwealth**

309. Hundreds of thousands of Massachusetts youth have been, and continue to be, mentally and physically harmed by TikTok's intentional, profit-motivated exploitation and manipulation of their vulnerabilities to induce addictive overuse of its platform.

310. The extent of harm to Massachusetts’ approximately 400,000 teens,<sup>137</sup> ages 13–17, is substantial.

311. TikTok’s internal data shows that hundreds of thousands of Massachusetts teens are frequent, excessive users of TikTok’s platform, and that the average daily session duration for Massachusetts teen users on the TikTok platform is over two hours. TikTok further knows that 10% of its users in the 13-17 age range spend more than four hours on its platform and over 20% of its 13-17 year old users are on the platform between midnight and 5 a.m., including Massachusetts teen users, whose highest usage consistently occurs between midnight and 4 a.m.

312. The hundreds of thousands of Massachusetts youth spending excessive hours of time on TikTok’s platform are being subjected to mental and physical harms.

313. TikTok’s own “Digital Wellbeing Research Repository,” which “incorporates external consultant feedback, academic research, public survey data, internal qualitative + quantitative research data, and industry standards,” recognizes the “[n]umerous studies” that have “found that as hours per day increase” on its platform, “rates of happiness, life satisfaction and self-esteem fall.”

314. In particular, TikTok’s Youth Safety and Wellbeing Team concluded that “a large proportion of recent research on social media screen time recommends one hour or less for adolescents” based on the harms suffered beyond that amount of time, and that the more time teens spend beyond their first hour on social media each day is directly connected to worsening mental health.

315. External research corroborates those findings. After one hour of social media use

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<sup>137</sup> U.S. Census data reports an estimated 414,508 teens aged 13–17 in Massachusetts in 2020; 410,413 in 2021; 405,366 in 2022; and 406,552 in 2023. *Kids Count Data Center*, *supra* note 28.

per day, mental health steeply declines for adolescents: decreases in happiness and self-esteem occur alongside increases in self-harm, depression, and behavioral challenges.<sup>138</sup> In particular, “the risk of depression increase[s] by 13%” for every hour increase in social media use.<sup>139</sup>

316. Internal TikTok documents note research findings that teens with more than two hours a day of screentime “scored lower on thinking and language tests.”

317. Multiple studies of adolescents aged 12–15 that adjusted for baseline mental health have found that adolescents who used social media three or more hours per day faced double the risk of poor mental health outcomes such as depression and anxiety symptoms.<sup>140</sup>

318. Notably, TikTok knows that millions of its users, including young users, spend “██████████” on its platform, and research shows that “spending six hours or more per day” on the platform has “a higher risk for depression,” and those spending seven hours or more per day “experience[] thinning of the brain’s cortex, which is related to critical thinking and reasoning.”

319. Habitual social media use also affects how young users’ brains mature.

320. Recent research shows that habitually checking social media can alter the brain chemistry of adolescents, changing the brain’s sensitivity to social rewards and punishments,

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<sup>138</sup> See, e.g., Jean Twenge & W. Keith Campbell, *Media Use Is Linked to Lower Psychological Well-Being: Evidence From Three Datasets*, 90 PSYCH. Q. 311 (Jun. 2019), <https://doi.org/10.1007/s11126-019-09630-7> (last visited Sept. 18, 2024); Kira E. Riehm, et al., *Associations Between Time Spent Using Social Media and Internalizing and Externalizing Problems Among US Youth*, 76 JAMA PSYCH. 1266–1273 (2019), <https://doi.org/10.1001/jamapsychiatry.2019.2325> (last visited Sept. 18, 2024); Amber Barthorpe, et al., *Is Social Media Screen Time Really Associated with Poor Adolescent Mental Health? A Time Use Diary Study*, 274 J. AFFECTIVE DISORDERS 864–870 (Sept. 1, 2020), <https://doi.org/10.1016/j.jad.2020.05.106> (last visited Sept. 18, 2024); Mingli Liu, et al., *Time Spent on Social Media and Risk of Depression in Adolescents: A Dose-Response Meta-Analysis*, 19 INT. J. ENVIRON. RES. PUBLIC HEALTH 5164 (2022), <https://doi.org/10.3390/ijerph19095164> (last visited Sept. 18, 2024).

<sup>139</sup> *Id.*

<sup>140</sup> Riehm, et al., *supra* note 138; Jacqueline Nesi & Mitchell J. Prinstein, *Using Social Media for Social Comparison and Feedback-Seeking: Gender and Popularity Moderate Associations with Depressive Symptoms*, 43 J. ABNORMAL CHILD PSYCH. 1427–38 (Nov. 2015), <https://bit.ly/3qW6FSz> (last visited Sept. 18, 2024).

with implications for long-term psychological adjustment.<sup>141</sup> Specifically, “studies have shown that people with frequent and problematic social media use can experience changes in brain structure similar to changes seen in individuals with substance use or gambling addiction.”<sup>142</sup>

321. Research also indicates that going through puberty while being a heavy social media user interferes with development during a sensitive period for social and emotional learning, negatively affecting life satisfaction.<sup>143</sup> For example, “[f]requent social media use may be associated with distinct changes in the developing brain in the amygdala (important for emotional learning and behavior) and the prefrontal cortex (important for impulse control, emotional regulation, and moderating social behavior), and could increase sensitivity to social rewards and punishments.”<sup>144</sup>

322. In addition, deprivation studies, including a randomized control trial that limited social media usage to 1 hour per day, have demonstrated that deactivating and/or reducing social media use leads to “significant improvements in well-being, and in particular in self-reported happiness, life satisfaction, depression, and anxiety.”<sup>145</sup>

323. Making matters worse, excessive and problematic social media use has been

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<sup>141</sup> See Office of the Surgeon General, *Social Media and Youth Mental Health*, *The U.S. Surgeon General’s Advisory*, U.S. DEP’T OF HEALTH AND HUM. SERVS. (May 23, 2023), <https://www.hhs.gov/sites/default/files/sg-youth-mental-health-social-media-advisory.pdf> (citing Maria T. Maza, et al., *Association of Habitual Checking Behaviors on Social Media With Longitudinal Functional Brain Development*, 177 JAMA PEDIATRICS 160–167 (2023), <https://doi.org/10.1001/jamapediatrics.2022.4924>); Eveline A. Crone & Elly A. Konijn, *Media Use and Brain Development During Adolescence*, 9 NATURE COMM’NS 588 (2018), <https://doi.org/10.1038/s41467-018-03126-x> (last visited Sept. 18, 2024).

<sup>142</sup> *Id.*

<sup>143</sup> See, e.g., Amy Orben, et al., *Windows of Developmental Sensitivity to Social Media*, 13 NATURE COMM’NS 1649 (March 28, 2022), <https://pubmed.ncbi.nlm.nih.gov/35347142/> (last visited Sept. 18, 2024).

<sup>144</sup> Office of the Surgeon General, *supra* note 141.

<sup>145</sup> See Hunt Allcott, et. al, *The Welfare Effects of Social Media*, 110 AM. ECON. REV. 629, 630 (2020); Christopher G. Davis and Gary S. Goldfield, *Limiting social media use decreases depression, anxiety, and fear of missing out in youth with emotional distress: A randomized controlled trial*, AM. PSYCH. ASSOC. (Apr. 22, 2024), <https://psycnet.apa.org/buy/2024-76138-001> (last visited Sept. 18, 2024).

linked to sleep problems among adolescents,<sup>146</sup> which in turn causes or exacerbates symptoms of depression and anxiety.<sup>147</sup>

324. Insufficient sleep also causes a slew of other health problems for minors, including neurological deficiencies, dysregulated emotional functioning, heightened risk of suicide, and many other mental health harms.<sup>148</sup>

325. As noted by the U.S. Surgeon General, “[s]leep is essential for healthy development of adolescents[,]” and “[a] systematic review of 42 studies on the effects of excessive social media use found a consistent relationship between social media use and poor sleep quality, reduced sleep duration, sleep difficulties, and depression among youth.”<sup>149</sup> Poor sleep also has negative physical effects, including altered neurological development in adolescent brains, suicidal thoughts and behaviors,<sup>150</sup> and interfering with the antibody response to vaccines.<sup>151</sup>

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<sup>146</sup> *Id.*; see also Hugues Sampasa-Kanyinga, et al., *Use of Social Media is Associated With Short Sleep Duration in a Dose-Response Manner in Students Aged 11 To 20 Years*, 107 ACTA PAEDIATRICA 694, 694–700 (2018), <https://doi.org/10.1111/apa.14210> (last visited Sept. 18, 2024).

<sup>147</sup> Megan A. Moreno & Anna F. Jolliff, *Depression and Anxiety in the Context of Digital Media*, HANDBOOK OF ADOLESCENT DIGITAL MEDIA USE & MENTAL HEALTH, 227 (2022), <https://www.cambridge.org/core/books/handbook-of-adolescent-digital-media-use-and-mental-health/depression-and-anxiety-in-the-context-of-digital-media/16C5A5E3F7F957DDDA8698985B39CEBE> (last visited Sept. 18, 2024); Rea Alonzo et al., *Interplay Between Social Media Use, Sleep Quality, And Mental Health In Youth: A Systematic Review*, 56 SLEEP MEDICINE REVIEWS 101414 (Apr. 2021), <https://doi.org/10.1016/j.smr.2020.101414> (last visited Sept. 18, 2024).

<sup>148</sup> See, e.g., *Health Advisory on Social Media Use in Adolescence*, AM. PSYCH. ASS’N, (May 2023), <https://archive.ph/Hsm1e>; Seung-Schik Yoo et al., *A Deficit in the Ability to Form New Human Memories Without Sleep*, NATURE NEUROSCIENCE 385 (2007); see also Moreno & Jolliff, *supra* note 147; Sampasa-Kanyinga, *supra* note 146; . Simon & Matthew P. Walker, *Sleep Loss Causes Social Withdrawal and Loneliness*, 9 Nature Commc’n 1, 4 (2018); Els van der Helm et al., *Sleep Deprivation Impairs the Accurate Recognition of Human Emotions*, 33 Sleep 335 (2010).

<sup>149</sup> Office of the Surgeon General, *supra* note 141., p. 10 (citing Rea Alonzo, et al., *Interplay Between Social Media Use, Sleep Quality, And Mental Health In Youth: A Systematic Review*, 56 SLEEP MEDICINE REVIEWS 101414 (Apr. 2021), <https://doi.org/10.1016/j.smr.2020.101414> (last visited Sept. 18, 2024)).

<sup>150</sup> Office of the Surgeon General, *supra* note 141, p. 10.

<sup>151</sup> Karine Spiegel, et al., *A Meta-analysis of the Associations Between Insufficient Sleep Duration and Antibody Response to Vaccination*, 33 CURRENT BIOLOGY 998 (Mar. 13, 2023), <https://doi.org/10.1016/j.cub.2023.02.017> (last visited Sept. 18, 2024).

326. Adolescents who use social media for five or more hours per day are three times more likely than non-users to not get enough sleep.<sup>152</sup>

327. Disruptions in length and quality of sleep also negatively affect school performance and productivity. Students who do not get the recommended amount of sleep are more likely to have difficulty completing schoolwork, attention issues, and behavioral problems—all of which impact their ability to succeed academically.<sup>153</sup>

328. The extensive time teens spend on social media also displaces time that teens could be spending engaging in “off-screen” protective activities that have been shown to promote health and well-being. The Massachusetts Department of Public Health has identified that for youth, these protective factors are centered on positive interactions with family, school, and community[,]” such as “volunteer/community work, organized activities, and [sitting] down to dinner with their families.” “Previous research has demonstrated links between these protective factors and . . . better general health, . . .[and] decreased risk of suicidal ideation[.]”<sup>154</sup>

329. In addition to the human toll on Massachusetts teen users, the costs of Massachusetts teens’ excessive and problematic use of TikTok’s platform (all orchestrated by TikTok’s purposefully addictive design) place an undue burden on society and the Commonwealth of Massachusetts. In particular, there has been a marked uptick in school system and health care expenditures to address the mental and physical health harms TikTok has caused

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<sup>152</sup> Hugues Sampasa-Kanyinga, *supra* note 146; see also Marian Freedman, *Social Media and Sleep Duration—There is a Connection!*, 35 CONTEMP. PEDIATRICS 12 (May 1, 2018), <https://www.contemporarypediatrics.com/view/social-media-and-sleep-durationthere-connection> (last visited Sept. 18, 2024).

<sup>153</sup> *Sleep and Health*, CTRS. FOR DISEASE CONTROL AND PREVENTION (2023), <https://www.cdc.gov/healthyschools/sleep.htm> (last visited Sept. 18, 2024).

<sup>154</sup> *Results of the Massachusetts Youth Health Survey 2021*, MASS. DEP’T OF PUB. HEALTH (2022), <https://www.mass.gov/doc/results-of-the-massachusetts-youth-health-survey-2021/download>. (last visited Sept. 18, 2024).

in Massachusetts youth.

330. For example, Massachusetts school administrators and teachers overwhelmingly report that use of social media on phones in schools is disruptive, interferes with learning and performance, teaching and student engagement, and fosters negative social interactions.<sup>155</sup> The problem is so pervasive that more than half of Massachusetts school districts have a total ban on cell phones during school hours, and even more have a partial ban (*i.e.*, phones put away during class time).<sup>156</sup> In addition, approximately 50 Massachusetts public schools and districts have invested in implementing magnetic-locking phone pouches, at an estimated annual cost of approximately \$20,000 per school,<sup>157</sup> to reduce use of social media during school hours. The Massachusetts Department of Elementary and Secondary Education (“DESE”) has likewise recognized a huge need to address problematic social media and phone use in Massachusetts schools, and in July 2023, launched a pilot grant program, offering up to \$800,000 in total funding, to assist school districts in mitigating and/or reducing negative impacts of social media and phone use through age-appropriate, effective, and innovative approaches.<sup>158</sup> Ultimately, DESE awarded nearly \$1.3 million in grants to approximately 77 Massachusetts school districts

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<sup>155</sup> Recording of May 23, 2023 Meeting, MASS. BD. OF ELEMENTARY AND SECONDARY EDUC., at 2:22:20, <https://livestream.com/madesestreaming/events/10865571/videos/236316593> (last visited Sept. 18, 2024).

<sup>156</sup> Matt Schooley, “*Methuen schools ban cellphones, superintendent says devices are ‘addictions’ for students.*” WBZ NEWS (Aug. 19, 2024), <https://www.cbsnews.com/boston/news/methuen-massachusetts-schools-cellphone-ban/> (last visited Sept. 18, 2024); Paula Ebben, “Should Schools ban cellphones?”, WBZ NEWS (May 9, 2024), <https://www.cbsnews.com/boston/news/should-massachusetts-schools-ban-cellphones-question-everything/> (last visited Sept. 18, 2024).

<sup>157</sup> Jeanette DeForge, *Chicopee Cellphone Lock-up Program May Expand to Younger Students*, MASS. LIVE (Mar. 3, 2023), <https://www.masslive.com/news/2023/03/chicopee-schools-may-expand-cell-phone-locking-program-to-middle-schools.html> (last visited Sept. 18, 2024).

<sup>158</sup> *FY2024: Approaches to Address Student Cellphone Use Pilot Grant*, MASS. DEP’T OF ELEMENTARY AND SECONDARY EDUC. (July 17, 2023), <https://www.doe.mass.edu/grants/2024/729/> (last visited Sept. 18, 2024).

over the past year to reduce problematic social media use on cellphones.<sup>159</sup> Approximately three-quarters of districts used such funding to purchase phone pouches, lockers, and the like to restrict disruptive cell phone and social media use.<sup>160</sup>

331. Further, schools, which serve as one of the main providers of mental health services for teens and adolescents, are struggling to meet the increasing demand for mental health and other social services, and have invested large sums to meet the demand.

332. For example, an August 2023 survey of Massachusetts superintendents showed at least 94 Massachusetts school districts newly invested additional time and resources to address social media use in schools and its associated mental and social impacts on students.<sup>161</sup> Schools reported investments in a myriad of ways, including *inter alia*:

- a. Hiring additional mental health professionals, guidance and adjustment counselors, school resources officers, and assistant principals;
- b. Applying for mental health grants and cell-phone use restriction grants;
- c. Developing and delivering new or additional mental health resources and digital literacy and social emotional curricula;
- d. Strengthening multi-tiered systems of supports for social and emotional learning; and
- e. Creating and circulating written materials and hosting education workshops for families regarding the harms of social media use.<sup>162</sup>

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<sup>159</sup> Vaznis et. al., *Mass. Schools are Cracking Down on Cellphones in Class. It's Putting Teachers and Students at Odds*, Boston Globe (Aug. 27, 2024) <https://www.bostonglobe.com/2024/08/27/metro/school-cellphone-bans-massachusetts/> (last visited Sept. 18, 2024).

<sup>160</sup> *Id.*

<sup>161</sup> Massachusetts Association of School Superintendents, *MA School District Survey Results Regarding Steps Taken to Address Cell Phone and Social Media Use and Impacts* (Aug. 22, 2023).

<sup>162</sup> *Id.*



333. Notably, in FY2022 and FY2023, Massachusetts’ DESE expended more than \$10 million in state grant funding (all of which was allocated) to help Massachusetts school districts build comprehensive mental health systems to adapt, expand, or strengthen multi-tiered systems of support to respond to the social-emotional and behavioral health needs of students.<sup>163</sup> In grant applications, various Massachusetts school districts indicated the need for such funding was, in part, to address the specific impacts of social media use on students’ mental health.<sup>164</sup>

334. Defendants’ conduct, as alleged herein, has fueled a mental health crisis for hundreds of thousands of Massachusetts youth, the cost of which has been borne by the Commonwealth’ schools and public health systems at-large. The harm being suffered by Massachusetts youth and families as the result of TikTok’s unfair and deceptive conduct alleged herein is great, and our youth “don’t have the luxury of waiting years until we know the full extent of social media’s impact.”<sup>165</sup>

## VII. CONCLUSION

335. Holding TikTok accountable for its unfair and deceptive conduct is critical because of the Massachusetts children and youth it has harmed and because of Defendants’ repeated, deliberate, unscrupulous, and unconscionable choices to prioritize profit over child and adolescent well-being. TikTok and its executives knew or should have known more than anyone about the addictive and harmful features of their platform, and of the resulting harms to youth. They knew how to get youth addicted, how to keep youth addicted, and how to generate the most

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<sup>163</sup> FY2023: Supporting Students’ Social Emotional Learning (SEL), Behavioral & Mental Health, and Wellness — Competitive Grant (Mental Health Grant), MASS. BD. OF ELEMENTARY AND SECONDARY EDUC. (Nov. 30, 2022), <https://www.doe.mass.edu/grants/2023/613-332/> (last visited Sept. 18, 2024).

<sup>164</sup> Massachusetts Association of School Superintendents, *supra* note 161.

<sup>165</sup> Office of the Surgeon General, *supra* note 141.

money from the youth trapped and ensnared on their social media platform. They also knew ways they could mitigate their platform’s addictiveness and mitigate harms to youth—and yet repeatedly chose not to do so—and lied instead. TikTok pitted its powers as a multi-billion dollar corporation against the vulnerable and susceptible minds of youth in an unfair fight for their time and attention, to the detriment of their health.

## **VIII. CAUSES OF ACTION**

### **COUNT ONE**

UNFAIR ACTS AND/OR PRACTICES IN VIOLATION OF G.L. c. 93A, § 2 AND 940 CMR 3.16 ET SEQ.

#### **Defendants’ Immoral, Unethical, Oppressive, Unscrupulous and Unconscionable Conduct in Knowingly Exploiting and Harming Youth**

336. Plaintiff, Commonwealth of Massachusetts, repeats and realleges the foregoing paragraphs, and incorporates them herein by reference.

337. The Consumer Protection Act, G. L. c. 93A, § 2, prohibits unfair or deceptive acts or practices by any person in the conduct of any trade or commerce. Each Defendant is a “person” as defined by G.L. c. 93A, § 1, which includes “natural persons, corporations, trusts, partnerships, incorporated or unincorporated associations, and any other legal entity.”

338. Defendants are engaged in “trade” or “commerce” as defined by G.L. c. 93A, § 1, which includes “the advertising, the offering for sale, . . . the sale, . . . or distribution of any services . . . directly or indirectly affecting the people of this commonwealth.”

339. Pursuant to her authority under G.L. c. 93A, § 2(c), the Attorney General has promulgated regulations defining specific unfair or deceptive acts and practices under the Massachusetts Consumer Protection Act. Specifically, 940 CMR 3.16 states that “an act or practice is a violation of M.G.L. c.93A, § 2 if . . .[i]t is oppressive or otherwise unconscionable in any respect.” 940 CMR 3.16(1).

340. Defendants' conduct, as alleged in the foregoing paragraphs, in particular paragraphs 95-204 and 309-334, constitute unfair acts and/or practices within the meaning of the Massachusetts Consumer Protection Act, G.L. c. 93A, § 2, including because their acts and practices are: (1) offensive to public policy such that they fall within at least the penumbra of some common-law, statutory, or other established concept of unfairness; (2) immoral, unethical, oppressive, unscrupulous, and unconscionable; and/or (3) have caused unjustified, substantial injury to consumers that consumers themselves could not reasonably have avoided.

341. Defendants' acts and practices, including Defendants' actions taken to induce young users' compulsive, habitual use of and addiction to their social media platform are offensive to public policy, as defined by statute and common law. The protection of minors from the dangers of addiction and the associated mental and physical harm is a well-established objective underlying public policy in Massachusetts. Defendants' acts and practices alleged herein—including Defendants' intentional, profit-motivated design of psychologically manipulative and exploitative tools to addict especially susceptible youth to its platform, while knowing that such addictive use severely harms its young users—therefore offend public policy.

342. Defendants' acts and practices to induce young users' addictive and compulsive use of their social media platform are also immoral, unethical, oppressive, unscrupulous, and unconscionable. As described in detail in the foregoing paragraphs, Defendants, at all relevant times, based on their own internal research, had knowledge of the severe harms suffered by young users as a result of addictive use of their platform and the role their platform played in exacerbating those harms. Instead of taking meaningful measures to mitigate these damaging effects, Defendants knowingly, deliberately, and recklessly disregarded and turned a blind eye to them in pursuit of profit. Further, Defendants' willful design and use of platform tools and

features to target, prey on, exploit, and manipulate, highly vulnerable young users, is unconscionable.

343. Defendants' acts and practices alleged herein also have caused and continue to cause unjustified substantial injury to consumers that could not be reasonably avoided. Namely, Massachusetts young users are suffering severe negative effects from addictive use of Defendants' platform, including negative effects on sleep and school performance, emotional and behavioral challenges, poor mental health outcomes such as depression and anxiety, and negatively altered brain chemistry. Young users also could not have reasonably avoided the injuries resulting from Defendants' acts and practices, including because Defendants misrepresented and failed to disclose the dangerous nature of their social media platform, and because Defendants utilized psychologically manipulative engagement-inducing features, knowing that young users do not have executive function to control their screen time and minimal ability to self-regulate.

344. Moreover, the unwarranted public health and safety risks and harm engendered by use of Defendants' social media platform are not outweighed by any countervailing benefit to consumers or competition. The detrimental, and potential long-term effects on developing youth, in addition to the increased burdens on society, families, schools, and health care systems are substantial.

345. Specifically, Defendants have willfully, knowingly, and repeatedly violated the Massachusetts Consumer Protection Act, G.L. c. 93A, by engaging in multiple unfair acts and practices that exploited the psychological vulnerabilities of young users and caused harmful outcomes for young users, including but not limited to:

- a. Defendants designed, developed, and deployed disruptive push notifications and alerts, infinite scroll and autoplay functions, visible social validation metrics, behavioral-based time-maximizing algorithmic recommendation systems, and ephemeral aspects to its platform features to exploit and cultivate young users’ “fear of missing out” in order to recall young users back to their platform, overcome their autonomy, and induce them to spend more time than they would otherwise choose; and
- b. Defendants employed and utilized psychologically manipulative “intermittent variable reward” systems, to trigger dopamine releases in young users, unfairly inducing them to engage excessively, problematically, and addictively with their product—much like a gambler at a slot machine—to the extent of physical and mental harm.

346. Defendants engaged in the above unfair actions despite knowing that the addiction caused by its manipulative design features harmed young users and that they were sacrificing young users’ well-being in the pursuit of profit.

347. Each unfair act or practice engaged in by Defendants as recited above and throughout this Complaint constitutes a separate violation of G.L. c. 93A, § 2.

348. Massachusetts consumers and youth are suffering, have suffered, and will continue to suffer unjustified substantial injury as a result of Defendants’ violations of Massachusetts consumer protection laws. Absent injunctive relief by this Court, Defendants are likely to continue to injure consumers and harm the public interest.

## COUNT TWO

### DECEPTIVE ACTS AND/OR PRACTICES IN VIOLATION OF G.L. c. 93A, § 2

#### **Defendants' Willful Misrepresentations Regarding the Harmful Nature of their Platform and their Prioritization of Youth Safety and Well-Being**

349. Plaintiff, Commonwealth of Massachusetts, repeats and realleges the foregoing paragraphs, and incorporates them herein by reference.

350. The Consumer Protection Act, G. L. c. 93A, § 2, prohibits unfair or deceptive acts or practices by any person in the conduct of any trade or commerce. Each Defendant is a “person” as defined by G.L. c. 93A, § 1, which includes “natural persons, corporations, trusts, partnerships, incorporated or unincorporated associations, and any other legal entity.”

351. Defendants are engaged in “trade” or “commerce” as defined by G.L. c. 93A, § 1, which includes “the advertising, the offering for sale, . . . the sale, . . . or distribution of any services . . . directly or indirectly affecting the people of this commonwealth.”

352. Defendants’ conduct, as alleged in the foregoing paragraphs, in particular paragraphs 206-308, constitute deceptive acts or practices within the meaning of the Massachusetts Consumer Protection Act, G.L c. 93A, § 2, including because Defendants made material statements, representations, omissions, and/or concealed information in a way that had the capacity or tendency to mislead consumers such that they would have acted differently from the way they otherwise would have acted, and/or affected their ability to make a free and informed choice with respect to their health and safety.

353. In numerous instances, Defendants’ public statements and communications knowingly misrepresented, directly or indirectly, expressly or by implication, that their platform was not designed to maximize time spent on the platform, that young users’ well-being and safety were their highest, top priority, and the amount of violating content on their platform was

minimal, while concealing and/or misrepresenting their internal knowledge that the amount of harmful material on their platform was far more pervasive than Defendants' public statements revealed.

354. Specifically, Defendants have willfully, knowingly, and repeatedly violated the Massachusetts Consumer Protection Act, G.L. c. 93A, § 2, by engaging in multiple deceptive acts and practices that duped young users, their families, and the public regarding the safety of their platform and TikTok's efforts in prioritizing well-being, including but not limited to, misrepresentations, omissions and/or active concealment to Congress, news media, and the general public, including Massachusetts youth and residents, that falsely and misleadingly asserted that:

- a. Defendants' social media platform is not designed to induce young users' compulsive, addictive use and maximize time spent when it is in fact so designed;
- b. Defendants prioritized young users' well-being, when in fact Defendants repeatedly chose not to implement measures they knew could reduce harms to youth and purposely launched ineffective time management and content moderation tools; and
- c. Defendants' social media platform is safe for young users while concealing their internal data showing the high amount of policy-violating content on its platform that Defendants had identified as harmful.

355. Defendants' deception has prevented young users and their families from making an informed choice about their use of Defendants' platform and taking steps to protect their health and well-being.

356. Each deceptive act or practice engaged in by Defendants as recited above and throughout this Complaint constitutes a separate violation of G.L. c. 93A, § 2.

357. Massachusetts consumers and youth are suffering, have suffered, and will continue to suffer unjustified substantial injury as a result of Defendants' violations of Massachusetts consumer protection laws. Absent injunctive relief by this Court, Defendants are likely to continue to injure consumers and harm the public interest.

### **COUNT THREE**

#### **PUBLIC NUISANCE**

358. Plaintiff, Commonwealth of Massachusetts, repeats and realleges the foregoing paragraphs and incorporates them herein by reference.

359. Under Massachusetts common law, a defendant is liable for the tort of public nuisance when their conduct unreasonably interferes with a right common to the general public, such as interference with public health, public safety, public peace, and public comfort or convenience.

360. The Massachusetts Attorney General is empowered to bring a *parens patriae* action on behalf of the Commonwealth for abatement of a public nuisance.

361. The Commonwealth has a special relationship with, and responsibility to, its residents, including in particular, upholding the public health, safety, and welfare of Massachusetts adolescents, youth, and children. *See, e.g., Prince v. Massachusetts*, 321 U.S. 158, 165–66 (1944) (the State has a duty to “guard the general interest in youth’s well-being,” “to protect the welfare of children,” and to see that they are “safeguarded from abuses” which might prevent their “growth into free and independent well-developed men and citizens.”);



*Ginsberg v. State of N.Y.*, 390 U.S. 629, 640–41 (1968) (State “has an independent interest in the well-being of its youth”).

362. Through their conduct as described in this Complaint, including by purposefully designing, developing, and promoting features and tools to addict youth and induce compulsive, problematic use of their social media platform, Defendants have knowingly created, substantially contributed to, and/or were substantial participants in maintaining a public nuisance of youth addiction to their platform, which has significantly interfered with the public health, safety, peace, comfort, and convenience by causing severe negative mental and physical health harms in the hundreds of thousands of Massachusetts youth who spend excessive amounts of time on Defendants’ social media platform.

363. Specifically, Defendants engaged in unfair and deceptive misrepresentations that concealed the harmful and addictive nature of its social media platform for youth, contributing directly to a youth mental health crisis in Massachusetts, which has resulted in unjustified substantial public injuries.

364. Additionally, Defendants knowingly and unconscionably manipulated, exploited, and preyed upon vulnerable youth’s developing brains by purposely designing and employing platform tools and features that utilized addictive, habit-forming dopamine response patterns, triggered youth’s “fear of missing out,” and incessantly recalled young users back to their platform to prolong and maximize their time spent on their platform to the extent of causing serious psychological and physical harm.

365. The public nuisance created by Defendants’ actions is substantial and unreasonable. Defendants’ actions have caused, and continue to cause, significant and long-lasting harm to children, teens, and youth in Massachusetts, and the larger Commonwealth and

public. At the very least, the significant injuries caused by Defendants include but are not limited to:

- a. A crisis of youth addiction in the hundreds of thousands of Massachusetts youth, 13–17, who compulsively use Defendants’ platform for excessive amounts of time per day, and the associated negative mental, physical, and social health impacts on such Massachusetts teens from such problematic use;
- b. Health care costs borne by Massachusetts youth, their families, schools, health care providers, and the Commonwealth and its subdivisions for prevention, treatment, and recovery related to mental and physical harms to youth caused by the addiction induced by Defendants’ platform;
- c. Public education-related costs borne by Massachusetts youth, their families, schools, communities, and the Commonwealth and its subdivisions, including resources expended to combat loss of productivity, disruption and poor school performance related to excessive and addictive social media use by Massachusetts youth; and
- d. Special public costs borne solely by the Commonwealth and its subdivisions in its efforts to abate the nuisance and to support the public health, safety, and welfare.

366. The harm inflicted by Defendants’ acts and practices greatly outweigh any potential social utility their product and services may provide to children.

367. Moreover, because of Defendants’ extensive internal research identifying the harms occurring to youth engaging in excessive and problematic use of their platform,

Defendants knew or had reason to know that the development, design, and operation of their addictive and psychologically manipulative platform features would create a public nuisance.

368. Defendants' unfair and deceptive conduct was unreasonable, and at a minimum, negligent and reckless with regard to Defendants' knowledge of the risks associated with addictive use of its social media platform to young users and their lack of efforts to mitigate or address such problems despite knowing measures they could take to reduce harms to youth.

369. But for Defendants' conduct, Massachusetts consumers, and in particular youth, would not be suffering severe mental and physical harm and injury, which was the foreseeable result of Defendant's intentionally addictive platform designs and features specifically targeted at young users to support their goals of maximizing young users' time on their platform to drive revenue.

370. The Commonwealth must pay the public costs to abate the harms being suffered by Massachusetts youth engaging in addictive, excessive, and problematic use of Defendants' platform purposefully induced by Defendants' psychologically manipulative and exploitative design features and tools. These public costs include, but are not limited to, a myriad of treatment, prevention, intervention, and recovery initiatives to address the severe mental and physical impacts experienced by Massachusetts youth, such as suicides and suicidal ideation, self-harm, sleep disorders, eating disorders, body image issues, anxiety, and depressive symptoms. It also includes the additional expenditures and investments made by Massachusetts public schools to combat the negative impacts of problematic social media use on students and their school performance, and public grant funding awarded to school districts to address the same.

371. Absent injunctive relief by this Court to abate Defendants' ongoing conduct, Defendants are likely to continue to injure Massachusetts consumers and youth and harm the public interest.

## **IX. PRAYERS FOR RELIEF**

WHEREFORE, Plaintiff Commonwealth of Massachusetts respectfully requests that the Court grant the following relief:

- A. Determine that all Defendants engaged in unfair and deceptive acts and practices in violation of G.L. c. 93A, § 2, and the regulations promulgated thereunder;
- B. Permanently enjoin all Defendants from continuing to engage in unfair and deceptive acts and practices in violation of G.L. c. 93A, § 2 and from engaging in future actions that constitute a public nuisance;
- C. Order all Defendants to pay full and complete restitution to every person who has suffered any ascertainable loss by reason of Defendants' unlawful conduct;
- D. Order all Defendants to pay civil penalties of up to \$5,000 for each and every violation of G.L. c. 93A, § 2;
- E. Award the Commonwealth costs and attorneys' fees, pursuant to G.L. c. 93A, § 4;
- F. Determine that all Defendants created a public nuisance;
- G. Order all Defendants to abate the nuisance, to reimburse the cost of the Commonwealth's abatement efforts, and to pay compensatory damages for harms caused by the nuisance;
- H. Order Defendants to produce an accounting of monies collected from Massachusetts consumers pursuant to the fraudulent, deceptive, and/or unlawful conduct alleged in the Complaint;

- I. Order Defendants to disgorge all profits and/or ill-gotten gains gleaned as a result of their unlawful and wrongful acts; and
- J. Award any and all other additional relief as the Court may determine to be just and proper.

**X. JURY DEMAND**

The Commonwealth demands a trial by jury on all issues so properly tried.

Respectfully Submitted,

COMMONWEALTH OF MASSACHUSETTS  
By its Attorney,  
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