EXHIBIT 91

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA

PEOPLE OF THE STATE OF CALIFORNIA, et al., Plaintiffs, v. *META PLATFORMS, INC, Instagram, LLC, Meta Payments, Inc., Meta Platforms Technologies, LLC., et al.,* Defendants IN RE: SOCIAL MEDIA ADOLESCENT ADDICTION/PERSONAL INJURY PRODUCTS LIABILITY LITIGATION THIS DOCUMENT RELATES TO: 4:23-cv-05448	MDL No. 3047 Case No. 4:23-cv-05448-YGR Judge: Hon. Yvonne Gonzalez Rogers Magistrate Judge: Hon. Peter H. Kang

EXPERT REPORT OF CARL S. SABA, MBA, CVA, ASA, ABV

November 21, 2025

Instagram, LLC, Meta Payments, Inc., and Meta Platforms Technologies, LLC ("Defendants" or "Meta" or "Company") of the Children's Online Privacy Protection Act ("COPPA") and of each state's Unfair and Deceptive Acts and Practices statutes (the "UDAP Statutes"). MDL Plaintiffs allege that Meta violated COPPA and engaged in unfair and / or deceptive acts or practices which violated states' consumer protection statutes, and further constitute unlawful acts under common law principles.[1] The MDL Plaintiffs are listed in the table below.[2]

MDL Plaintiffs - States or Commonwealths		
Arizona	Kentucky	Oregon
California	Louisiana	Pennsylvania
Colorado	Maine	Rhode Island
Connecticut	Maryland	South Carolina
Delaware	Minnesota	South Dakota
Hawaii	Nebraska	Virginia
Idaho	New Jersey	Washington
Illinois	New York	West Virginia
Indiana	North Carolina	Wisconsin
Kansas	Ohio	

17. I have been asked to perform the following calculations for the period from January 2012 through March 31, 2024 (Relevant Time Period):

[1] Amended Complaint for Injunctive and Other Relief, 29 States and Commonwealths of United States v. Meta Platforms, Inc.; Instagram, LLC; Meta Payments, Inc.; and Meta Platforms Technologies, LLC, June 9, 2025, p.3. ("Complaint").

[2] I understand that 11 of the MDL States only allege violations of COPPA and the remaining 18 of the MDL States also assert UDAP claims: California, Colorado, Connecticut, Delaware, Illinois, Indiana, Kansas, Kentucky, Louisiana, Minnesota, Nebraska, New Jersey, New York, North Carolina, Pennsylvania, South Carolina, Virginia, and Wisconsin (collectively "UDAP States").

a. Calculate the number of instances in which 13-17 year olds' (Teens or "Youth"[3]) accounts averaged more than 30 minutes per day, one hour per day, two hours per day, three hours per day, four hours per day, and five hours per day in a given month on the Instagram ("IG") and Facebook ("FB") platforms. I understand that the MDL Plaintiffs claim that these instances may represent or be the result of violations of the UDAP Statutes during the Relevant Time Period.

b. Calculate the revenue earned by IG and FB from Teens whose accounts averaged more than 30 minutes per day, one hour per day, two hours per day, three hours per day, four hours per day, and five hours per day in a given month ("Teen Revenues").

c. Calculate the costs associated with the Teen Revenues ("Teen Costs").

d. Calculate the difference between Teen Revenues and Teen Costs ("Teen Profits").

e. Calculate for purposes of disgorgement, the cumulative profits earned by IG and FB on Teens accounts spending more than 30 minutes per day, one hour per day, two hours per day, three hours per day, four hours per day, and five hours per day in a given month, for periods after the Teens turned age 18 through March 2024[4] ("Profits From Aged-Up Teens"). I understand that the MDL Plaintiffs claim that

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[3] State Attorneys General's First Notice and Request for Production of Documents, Definitions. Production letters from Meta's counsel, Covington, describe Teens as "Youth." For example, refer to 2024.11.05 – Meta Production Ltr. Re META3047MDL_VOL077. Meta's interrogatory responses also reference the term "Youth" without providing a definition.

[4] The calculations are restricted to Teen accounts that averaged more than half an hour per day, one hour per day, two hours per day, three hours per day, four hours per day, and five hours per day on FB and IG, that later became adults over the Relevant Time Period.

absent IG and FB's alleged violations of UDAP Statutes, IG and FB would not have earned these profits.

f. Calculate the number of instances in which Teens were exposed to specific bad experiences on Instagram, based on the findings of the Bad Experiences and Encounters Survey conducted by Meta. I understand that the MDL Plaintiffs claim that these instances are violations of the UDAP Statutes.

g. Calculate the number of Teen Daily Active Persons ("DAP")[5] and Monthly Active Persons ("MAP")[6] on IG and FB, on a monthly basis, in each state, during the Relevant Time Period.

h. Calculate the number of unique Teen persons that were active on IG or FB at any time during the Relevant Time Period.

i. Calculate the number of under 13 year olds ("Under 13" or "U13") Monthly Active Persons and Daily Active Persons on IG and FB, on a yearly basis during the Relevant Time Period.

j. Calculate the number of unique Under 13 persons that were active on IG or FB at any time during the Relevant Time Period.

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[5] Meta Form 10-K for the period ended December 31, 2023, p.64 "We define a daily active person as a registered and logged-in user of Facebook, Instagram, Messenger, and/or WhatsApp (collectively, our "Family" of products) who visited at least one of these Family products through a mobile device application or using a web or mobile browser on a given day." Meta clarifies in a note "We report the numbers of DAP and MAP as specific amounts, but these numbers are estimates of the numbers of unique ***people*** using our products." The "P" in DAP *denotes a person, not a user account*. Persons can have multiple user accounts.

[6] Meta Form 10-K for the period ended December 31, 2023, p.65 "We define a monthly active person as a registered and logged-in user of one or more Family products who visited at least one of these Family products through a mobile device application or using a web or mobile browser in the last 30 days, as of the date of measurement." Meta clarifies in a note "We report the numbers of DAP and MAP as specific amounts, but these numbers are estimates of the numbers of unique ***people*** using our products." The "P" in MAP *denotes a person, not a user account*. Persons can have multiple user accounts.

18. In performing my assignment, I reviewed materials related to Meta's history, financial condition, and teen user acquisition and retention. I also reviewed internal and third-party studies and analyses commissioned by Meta or contained in Meta's internal documents, including the Bad Experiences and Encounters Framework Survey (BEEF Survey). I also reviewed Meta's efforts to address teen usage issues on Instagram and Facebook, MDL State teen user population data, third-party survey data, and time spent metrics.

19. This report summarizes my current opinions given the information available to me to date; I may consider any additional materials that become available and amend or supplement my opinions and this report, if appropriate.

20. I understand that my analysis does not constitute the full scope of potential methods of counting violations that the MDL States in this action may present at trial. In other words, I understand that the MDL States may claim other conduct by Meta not analyzed in this report violates the states' UDAP statutes and/or COPPA, and/or that there are other ways of quantifying Meta's violations of the states' UDAP statutes. Such conduct and methodologies are not included in my analysis.

21. In connection with my anticipated testimony at trial or other proceedings, I may be asked to create, from various documents produced in this litigation and obtained through independent research, additional demonstrative exhibits which refer or relate to the matters discussed in this report. Other than the exhibits appended to this report, I have not yet created such demonstrative exhibits.

22. In my work I have been assisted by others in my firm who have acted under my direction and control. However, the opinions in this report are my own. I recognize that I am

an expert witness, not a witness of fact. My understanding of the relevant facts comes from the documents obtained in discovery and materials I gathered.

23. I understand that this report may be made available to other parties in this litigation, to their counsel and experts, as well as to the Court. It has been prepared for use in this action. In all other respects, this report is confidential. It should not be used, reproduced, or circulated for any other purpose, in whole or in part, without my prior written consent. No other party is entitled to rely on this report for any purpose whatsoever.

IV. Evidence Relied Upon

24. A listing of the documents and information considered in deriving my opinions in this report is outlined in Appendix B.

V. Company Background

1. Meta Overview and History

25. Meta, formerly known as Facebook until October 2021,[7] operates social media platforms ("Family of Apps") and virtual reality products ("Reality Labs").[8] In May 2012 Meta completed an initial public offering.[9] In August 2012 Meta acquired Instagram[10]—which became one of Meta's social media platforms. Users can access Meta's social media platforms from mobile devices and computers.[11] Meta's Reality Labs produces hardware that

[7] Meta Form 10-K for the period ended December 31, 2021, p. 3.

[8] Meta Form 10-K for the period ended December 31, 2024, p. 7.

[9] Facebook Form 10-K for the period ended December 31, 2012, p. 26.

[10] Facebook Form 10-K for the period ended December 31, 2012, p. 5.

[11] Facebook Form 10-K for the period ended December 31, 2014, p. 5.

can be used in the Metaverse—Meta's virtual and mixed reality initiative.[12] Meta generates revenue primarily from selling advertising placements to marketers.[13] I understand that advertising placements reach people based on age, gender, location, interests, and behaviors.[14]

26. I understand that as of the Fiscal Year Ended December 31, 2024, Meta's Family of Apps Products is comprised of Facebook, Instagram, Messenger, Threads, and WhatsApp.[15]

27. I understand that as of the Fiscal Year Ended December 31, 2024, Instagram has a Feed, Reels, Stories, Explore[16] and Direct Messaging surfaces, among other digital offerings.[17]

28. I understand as of the fiscal year ended December 31, 2024, financial growth is reliant upon platform user retention, user growth, and user engagement since users drive ad impressions and clicks,[18] and accordingly, ad spend and revenue.[19] It appears that time spent also impacts financial results.[20]

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[12] Meta Form 10-K for the period ended December 31, 2024, p. 7.

[13] Facebook Form 10-K for the period ended December 31, 2014, p. 5.

[14] Facebook Form 10-K for the period ended December 31, 2014, p. 5.

[15] Meta Form 10-K for the period ended December 31, 2024, p. 7.

[16] https://help.instagram.com/487224561296752 Explore page.

[17] Meta Form 10-K for the period ended December 31, 2024, p.7.

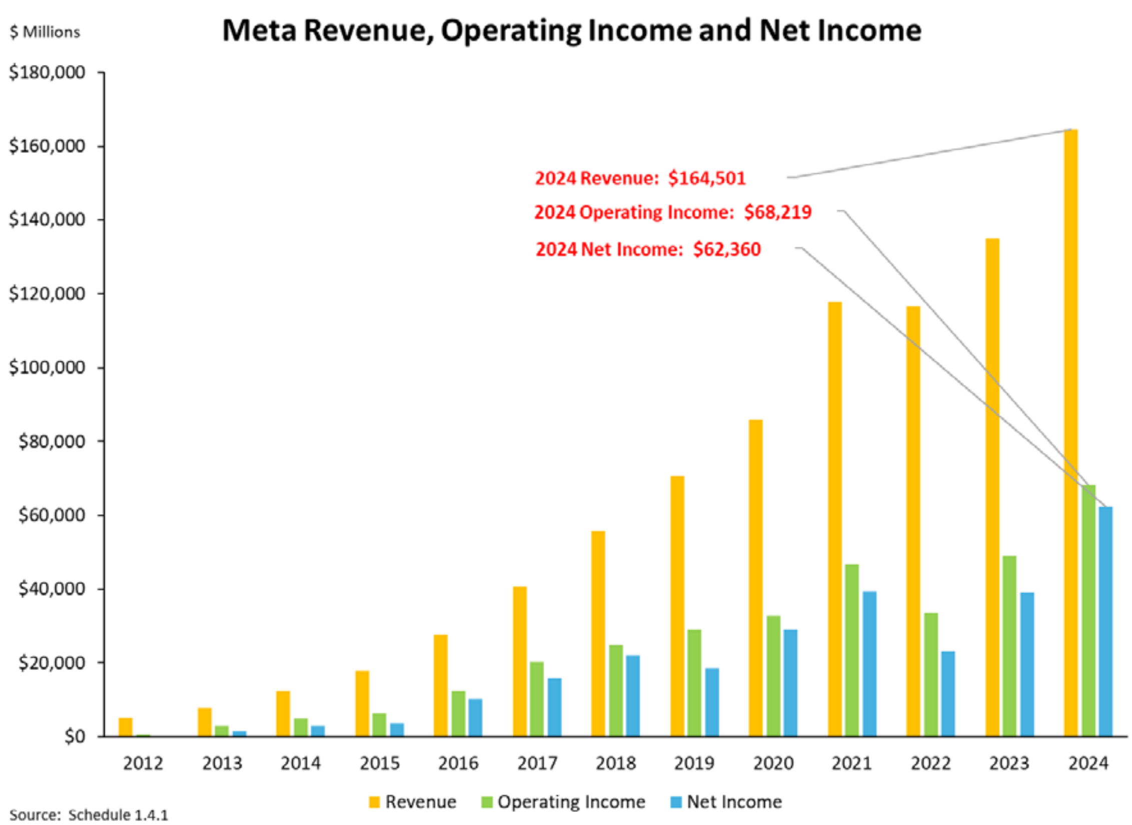
[18] Deposition of Jessica Walton, June 6, 2025, 41:20-42:14

[19] Meta Form 10-K for the period ended December 31, 2024, pp. 17-18.

[20] Meta Form 10-K for the period ended December 31, 2024, pp. 17-18, 20-23.

2. Meta's Financial Performance and Ability to Pay Penalties

29. I have reviewed Meta's financial statements for the fiscal year ended December 31, 2012 to the fiscal quarter ended March 31, 2025[21] which demonstrate profitable operations with sustained high levels of year-over-year growth. As can be seen in the chart below, in fiscal year 2024, Meta had revenues of $164.5 billion, operating income of $68.2 billion and net income of $62.4 billion. For the three months ended March 31, 2025, Meta had revenues of $42.3 billion, operating income of $17.6 billion and net income of $16.6 billion.



[21] Schedules 1.4.1 to 1.4.5.

30. I understand that Meta derives most of its revenues from advertising, at a proportion that is upward of 97% in each year since 2016.[22] The remaining revenue is generated from payments and other fees, and from the Reality Labs segment.[23]

31. Meta's ability to generate revenues is highly dependent on user acquisition and engagement on Meta's platforms. Meta's CFO, Susan Li described time spent by users as the "most colloquially understandable" way to measure user engagement.[24] Meta's 10-K filings contain the following disclosures:[25]

- If we fail to retain existing users or add new users, or if our users decrease their level of engagement with our products, our revenue, financial results, and business may be significantly harmed.
- The size of our active user base and our user's level of engagement across our products are critical to our success. Our financial performance has been and will continue to be significantly determined by our success in adding, retaining, and engaging active users of our products that deliver ad impressions, particularly for Facebook and Instagram.
- Any significant decrease in user retention, growth or engagement could render our products less attractive to users, marketers, and developers, which is likely to have a material and adverse impact on our ability to deliver ad impressions, and accordingly, our revenue, business, financial condition, and results of operations.

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[22] Schedule 1.4.2. Deposition of Jessica Walton, June 6, 2025, 35:18-24.

[23] Schedule 1.4.2

[24] Deposition of Susan Li, March 10, 202562:21-25.

[25] Meta Platforms Inc. 10-K, year ended 12/31/23, pp. 16, 18.

32. My review also indicates that Meta maintains high levels of working capital on its balance sheet.[26] These include total current assets of $100.5 billion against current liabilities of $33.6 billion as of December 31, 2024, date of Meta's last fiscal year financial disclosure. The resulting working capital of $66.5 billion represents the significant amount by which liquid assets exceed liabilities that will have to be paid in the next twelve months. This amount is equal to approximately one year of operating expenses, which totaled $65 billion for the fiscal year ended December 31, 2024.[27]

Meta Working Capital **Schedule 1.4.6**

$ Millions	2023	2024	Q1 2025	
Current Assets at Fiscal Period End (12/31, or 3/31)				[1]
Cash and Cash Equivalents	$41,862	$43,889	$28,750	
Marketable Securities	$23,541	$33,926	$41,480	
Accounts Receivables	-	-	$14,514	
Accounts Receivable, Net	$16,169	$16,994	-	
Income Tax Refundable	-	-	-	
Prepaid Expenses and Other Current Assets	$3,793	$5,236	$5,483	
Total Current Assets	**$85,365**	**$100,045**	**$90,227**	
Current LIabilities at Fiscal Period End				[1]
Accounts Payable	$4,849	$7,687	$8,512	
Accrued Expenses and Other Current Liabilities	$25,488	$23,967	$23,402	
Current Portion of Capital Lease Obligations	-	-	-	
Operating Lease Liabilities: Current	$1,623	$1,942	$1,976	
Deferred Revenue and Deposits	-	-	-	
Partners Payable	-	-	-	
Total Current Liabilities	**$31,960**	**$33,596**	**$33,890**	
Working Capital	**$53,405**	**$66,449**	**$56,337**	

Source and Notes
[1] Schedule 1.4.3.

[26] Working capital is the difference between a company's current assets and current liabilities, representing the liquidity available for day-to-day operations.

[27] Meta Platforms Inc., 10-K for calendar year ended 12/31/24, p.87. Total costs and expenses for 2024, excluding cost of revenue.

33. As of March 31, 2025, date of Meta's most recent financial statement disclosure, Meta held cash and equivalents of $28.8 billion, and marketable securities of $41.5 billion, totaling $70.2 billion.[28] Cash equivalents are highly liquid assets that may be quickly converted into cash, such as short term treasury bills, certificates of deposit, and money market funds. Marketable securities include stocks and bonds that can be converted to cash through sale on active markets in which they are traded.

34. I also note that Meta is a valuable company that is traded on the NASDAQ stock exchange. As of December 31, 2024, Meta's market capitalization was $1.740 trillion. As of March 31, 2025, Meta's market capitalization was $1.445 trillion and $1.628 trillion as of May 30, 2025.[29]

3. Meta's Focus on Teen Acquisition and Retention

35. I understand that Meta has identified and tracked the percentage of its users that were teens for many years. I discuss in this section Meta's focus on Teen acquisition and retention both as a company and specific to the Facebook and Instagram platforms. I also discuss the concept of LifeTime Value which appeared to be a focus for Meta's strategic growth over time.

36. Evidence of Meta's focus on Teen acquisition and retention is relevant to my assignment because it contextualizes the Profits from Aged-Up Teens analysis. More specifically, this evidence indicates that Meta benefits from acquiring Teens largely because

[28] Schedule 1.4.3. Market capitalization is defined as total outstanding shares times traded market price of those shares as of a specific date.

[29] S&P Capital IQ; Schedule 1.4.5.

while Meta makes less revenue from Teens during their teen years, Meta makes much more when Teens remain on the platforms into adulthood.

37. It is important as context for the following discussion to note, as stated above, that until October 2021, the name of the Company was Facebook instead of Meta. As early as October 2013, the Company had identified a decline of about 500,000 per year in the number of U.S. Daily Active Users under 18 years old, from around 22 million in January 2012 to under 20 million around September 2013. This is shown in the excerpted email below, sent to Meta's Chief Executive Officer Mark Zuckerberg on October 11, 2013.[30]

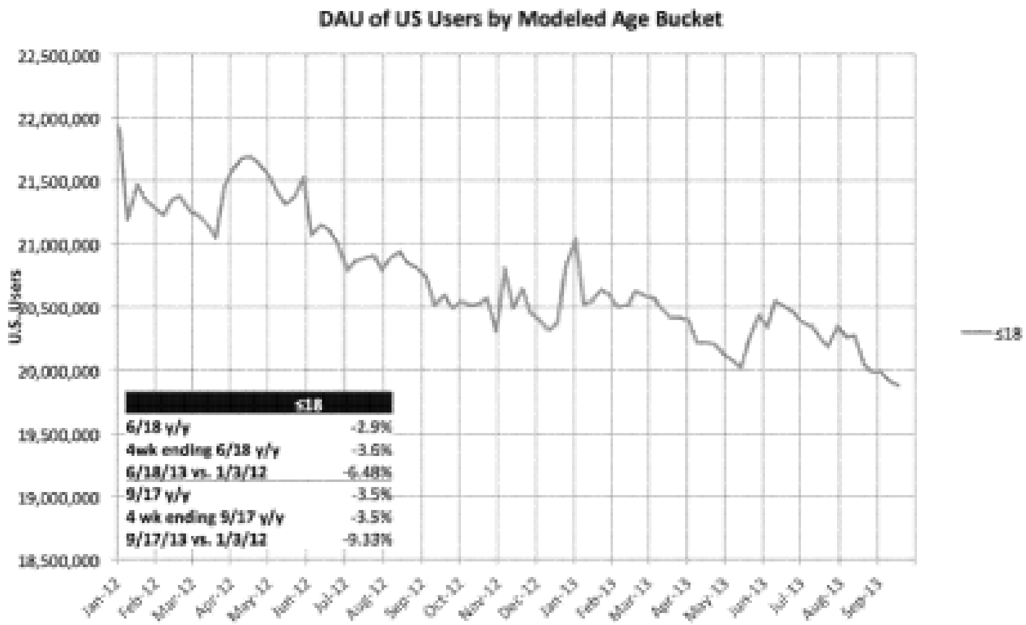
[30] META3047MDL-040-00226503 to 6504 at 6503.

Message

From: Javier Olivan [/O=THEFACEBOOK/OU=FIRST ADMINISTRATIVE GROUP/CN=RECIPIENTS/CN[redacted]
Sent: 10/11/2013 4:42:24 AM
To: Mark Zuckerberg [[redacted]@fb.com]
Subject: RE: Teens
Attachments: image001.png

Hey Mark – quick follow up since I wasn't sure about the numbers in the car. I am reviewing the new model's outcome and we are looking into the 20M DAUs range (US <18), losing about 500k/year over the last two years.

I am going to dig deeper into this, but I wanted to make sure you have the right order of magnitude.



38. A day earlier, Mr. Zuckerberg had noted in an email the decline in U.S. teen content production and asked whether any targeted efforts—such as training a feed ranking model to optimize engagement, optimizing content production, or conducting quantitative sentiment research for this demographic—were being made to address this trend.[31]

39. In 2017, Meta appeared focused on teens and teen retention, as shown in an email from Chief Product Officer Chris Cox[32] to Mr. Zuckerberg on March 29, 2017. Mr. Cox

[31] META3047MDL-040-00226503 to 6504 at 6503.

[32] META3047MDL-003-00136504 at 6504.

writes of his concern over the decrease in U.S. Teens from 25 million Monthly Active Persons (MAP) in 2012 to 17 million MAP in 2017.[33] Mr. Cox adds that increasing the acquisition rate of 13 year-old users was becoming critical, in order to stem the increasingly slow rate of growth for the younger cohorts, and that the company needed to take steps to increase teen penetration.[34] I have excerpted this email below.

From: Chris Cox [/O=THEFACEBOOK/OU=EXTERNAL (FYDIBOHF25SPDLT)/CN=RECIPIENTS/CN=[redacted]
Sent: 3/29/2017 7:36:39 PM
To: Mark Zuckerberg [redacted]@fb.com]
Subject: FW: analysis of teen usage across FB family

We've just this week received a much clearer picture on US Teens using our updated US "affinity" model, which we consider to be the most accurate picture we've ever had of Teens across vintages and FB family. We can bring this in if you want to review it, but I thought you'd just appreciate the summary:

We should be **concerned but not alarmed** by the decline in overall FB MAP and DAP/MAP cohort-by-cohort in US.

- Teen MAP has decreased from 25 million in 2012 to 17 million now. This represents an annualized rate of decline of 8%.
- However, the MAP of current Teen cohorts are increasing at a consistent rate, and current trends suggest that MAP of these new cohorts will be similar to earlier cohorts at 22+ of age.
- DAP/MAP ratio of US Teens started to fall mid-2011, but it has since recovered slightly starting late 2014. The timing of the fall lines up with the initial growth of Instagram. Stay tuned for future installments as we investigate the Instagram correlation and explore potential causes for the recovery!
- It now takes longer for new US Teen cohorts to adopt Facebook. For example, it has taken the 1998 year of birth cohort 8 years to reach 3.6 million MAP, where as the 1995 year of birth cohort only took 4.5 years.

Tactical Implications

1. **U13 will be critical for increasing the rate of acquisition when users turn 13**, and stemming the increasingly slow rate of growth for these younger cohorts. To help with on-boarding the 13 year olds, we should focus on building for tweens. One way to think about this is to treat tweens like we treat non-Snapchat countries: let's get to the market first and deliver the best sharing app before others do.
2. We need to prioritize follow up analyses to better understand why Teens inevitably join Facebook albeit at a slower rate. This will help us to understand how to **close the gap between late high school and college users faster**, and reduce the risk that the penetration of current Teens slow down and plateau at a level lower than current college and adult users.

More summary, with links to specific studies, below. If interested I can bring the team in to you too, though I think this paints a pretty clear picture.

40. In 2018, a report by Data Engineer [redacted][35] and Market Strategist Robert Chen from the Youth Team,[36] "Long Term Retention: The Young Ones are the Best

[33] META3047MDL-003-00136504 at 6504.

[34] META3047MDL-003-00136504 as 6504. Meta documents cited in this report refer to Teen penetration to mean the percentage of the teen population in a particular geography that makes use of Meta's product(s).

[35] META3047MDL-033-00091626 to 1675, at 1632.

[36] META3047MDL-047-00543315 to 3324, at 3315.

Ones and Other Learnings" identified long term retention as a key metric for Meta.[37] The report made the following findings:[38]

- The least retentive cohorts (the most red) are:
  - **Late teens/young adults**—we see this pattern emerging as early as 2007/2008!
    - **Implication:** Social product for those joining as young adults are unlikely to be retentive
  - Over time, the band of less retentive users expands in both directions
    - Younger and younger teens become less and less retentive. Hypothesis here is that people are joining social media earlier and earlier in life and habits are established early on

41. This led to the following recommendations with a focus on increasing onboarding high volumes of tweens, which had extremely high long term retention rates — I understand that these would eventually become 13 to 17 year-olds.[39]

Recommendations and Concluding Thoughts

Product Recommendations

Who precisely are we building for?

- Given the extremely high long term retention of tweens, what can we do to safely and appropriately onboard high volumes of tweens onto Facebook?
  - And can we push those growth while maintaining high retention?
- When we launch new products, do we intend for these new products for high-tenure or low-tenure people?
  - Because the LTR for high-tenure people continues to be high, we could have greater focus on building for low-tenure people
  - However, we would want to monitor our high-tenured people in case their retention drops
- Can we replicate the earlier days of Facebook and recreate the very high long term retention that Facebook used to have?

42. Meta appeared to continue to monitor teen trends on its platform, as shown in a November 2018 Market Strategy Youth Update, which discussed the "Teen Decline Process"

[37] META3047MDL-047-00995641, at 5641.

[38] META3047MDL-047-00995641, at 5646.

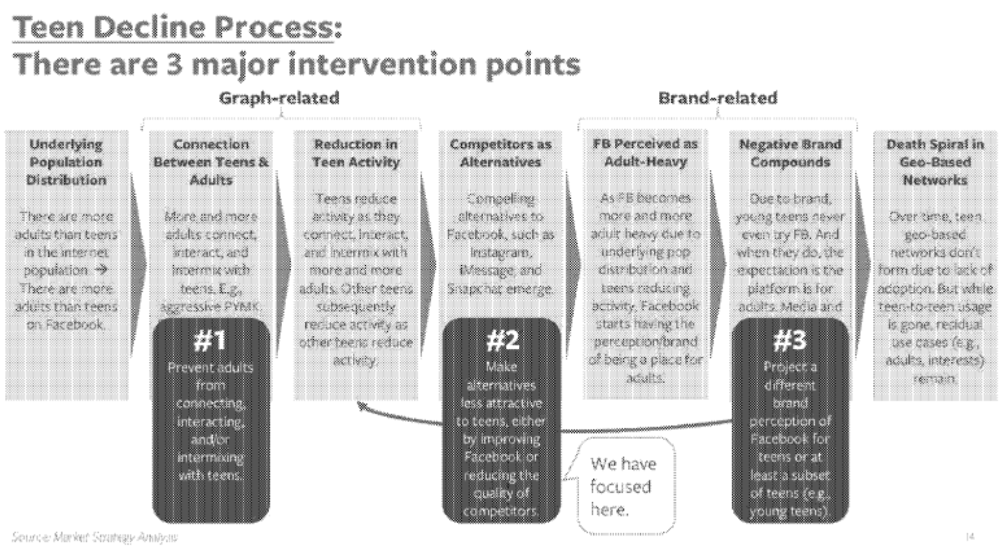
[39] META3047MDL-047-00995641, at 5651.

on Facebook and strategies to avoid it's occurrence on Instagram.[40] Of note, [redacted], the Youth Team Lead at Meta,[41] was a recipient of this update.

From: Robert Chen [/O=THEFACEBOOK/OU=EXTERNAL (FYDIBOHF25SPDLT)/CN=RECIPIENTS/CN=[redacted]
Sent: 11/2/2018 7:27:57 PM
To: [redacted]@fb.com]; Loredana Crisan [redacted]@fb.com]; [redacted]@fb.com]; [redacted]@fb.com]; [redacted]@fb.com]; [redacted]@fb.com]; [redacted]@fb.com]; [redacted]@fb.com]
CC: [redacted]@fb.com]; Keval Patel [[redacted]@fb.com]; [redacted]@fb.com]
Subject: Market Strategy Youth Update - Nov 2
Attachments: image001.jpg; image002.jpg; image003.jpg; image004.png; image005.png

Why do US teens continue to use IG despite high numbers of adults/parents on the platform?
Instagram's strengths in **(1)** preventing adults from connecting and interacting with teens **(2)** Being a more attractive product (via features, UI, etc.) and **(3)** Projecting a youthful brand make it so that US teens continue to use IG despite a high absolute # of adults/parents on the platform.

I am using the "Teen Decline Process" as the frame of reference. Please check out the full materials here. This is my *proposed* process for how Facebook "lost" teens. Reasonable people can disagree with this, and in particular, we do not yet have sufficient evidence on the impact of parent/adult interaction on teens. Two good existing analyses: (1) Adult Comments of Death by Johannes Ferstad (2) The Parent Gap by Mike Develin.



43. This apparent focus on preventing teen decline and retaining teens continued in January 2019.[42]

[40] META3047MDL-040-00457394 at 7394 to 7395.

[41] META3047MDL-003-00136729 to 6740, at 6729; META3047MDL-040-00457394 at 7394 to 7395.

[42] META3047MDL-040-00432077 to 2083 at 2077-2078.

From: Keval Patel [redacted]@fb.com>
Date: Tuesday, January 22, 2019 at 8:34 AM
To: market_strategy_updates <[redacted]@fb.com>
Subject: Market Strategy Updates - 1/18/19

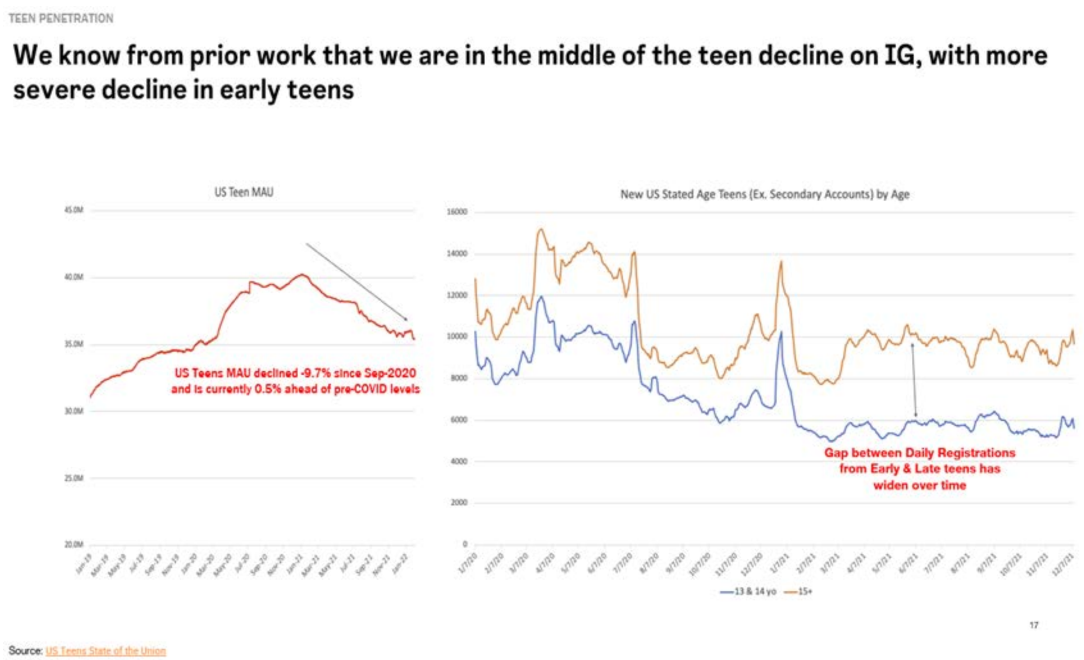
Highlights

1. **Youth - Driver for Teen Decline on Facebook:** Indiscriminate connections between teens and parents/relatives/older adults drives Facebook's loss of product/market fit with teens. We recommend a combination of growth/friending changes and audience/identity controls to vaccinate the developing world before we lose product/market fit there, just like we have lost it in the United States and other western markets.
2. **Facebook - Long Term Retention:** Since 2007, the most retentive FB users (US) have been ones who joined as tweens (10-12 yo). Retention drops off rapidly the older people are when they join. This suggests FB should make a more concerted effort to attract tweens. Within several years of FB's founding, long term retention for new users (US) dropped significantly with each subsequent year. It is possible that much of this effect is due to external factors (e.g., competition, saturation). However, some of this effect may be due to factors within our control, so we should understand this phenomenon as it may inform our strategy in developed markets.

44. In 2021, in a presentation titled *2021 Planning Data Scratchpad*, Meta had reiterated that "Instagram's Core Consumer Target is Younger Social Media Users, Ages 13-24."[43] In 2021, Meta identified a decline in teen usage of Instagram in the United

[43] META3047MDL-163-00021867 to 1965 at 1901.

States.[44] This focus on teen usage was connected to the perceived LifeTime Value of such teens as discussed in the following paragraphs.



45. This continuing focus on Teens as a high priority is discussed in a September 30, 2021 document titled "IG Growth: Communities Leads Monthly Check-in." The document discusses adjusting goals due to the strategic focus on US Teens. Teens are described as one of the "highest priority" areas for IG growth.[45]

46. In August 2022, it appears that U.S. Teens growth and retention of key markets were a top priority for Instagram because of U.S. Teen users' LTV.[46] I understand LTV to signify LifeTime Value, meaning the cumulative value, usually expressed as the present value

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[44] META3047MDL-047-01044884 at p.17.

[45] META3047MDL-019-00028543 to 8562 at 8543.

[46] META3047MDL-072-0045873 to 3897 at 3873.

of future profit, that Meta expects from a user.[47] Meta's focus on the concept of Teen LTV indicates that the value of Teens (and even tweens) to Meta was partially based on Meta's assessment that it can retain young users and profit off of them in the long term. Key Groups included "US" and "US teens." "Initial thoughts on levers" included the "[a]cquisition of younger teens" and "[r]etention for all." This is shown in the excerpt below,[48] which was included in a presentation on the "User Growth <> Revenue Acceleration Workstream" in August 2022. The initial task for this workstream was to come up with a recommendation of

[47] META3047MDL-072-00453873 to 3897 at 3873.

[48] META3047MDL-047-00592197_HIGHLY CONFIDENTIAL (COMPETITOR), p.25.

which cohorts to focus on, based on user and revenue growth opportunities available to Instagram.[49]

Proposed cohorts based on growth and revenue situation

Region level groupings are useful for thinking about the differences in growth and revenue, but there's a fair amount of variation within regions like APAC (includes more developed countries like Japan, Korea as well as Indonesia), and similarity across regions (e.g. WE and US). We propose grouping countries into the following cohorts based on Monetization Efficiency, MAU YoY growth, and the total revenue headroom remaining.

	Key groups (full list in appendix)	Objective	2023 MAU Growth	2023 MAU Revenue Growth (daily)	Total MAU Headroom (to internet pop.)	Headroom Revenue ($/day)	Initial thoughts on levers
1. Special cohorts	US, US teens	Re-accelerate growth and retain key markets (teens for LTV, US as a leader for trends)	-0.1M (-0.1%)	-0.02M (-0.8%)	140.2M (6%)	23.9M (34%)	Acquisition for younger teens Retention for all
2. Similar to US, with high growth (high ME, high revenue headroom)	Japan, Korea, Australia, Canada, Germany,	Leverage existing momentum to accelerate growth	15.55M (8%)	1.38M (49%)	285.43M (13%)	25.13M (36%)	Sessions growth (e.g. through Graph CF), collaboration with ads team.
3. Low ME markets with high growth and potential	India, Indonesia, Pakistan, Bangladesh, Africa, etc	Leverage existing momentum to accelerate growth, try to improve ME	139.99M (73%)	0.99M (35%)	1314.45M (59%)	9.16M (13%)	Improve Android Monetize web IG Lite improvements
Total	All		191.54M	2.84M	2221.67M	70.29M	

We'll update these to 3 years, but the only notable change is the US shows stronger growth and hence higher revenue. However, it's hard to predict this far out and it may change.

Discussion Points:

- **How is this different from FCI:**
  - The Focus Country Index was developed in 2018 to bring focus to high value contested markets: US, CA, AU, BR, JP, DE, BR, JP, KR (IN added in 2020).
  - The idea was global masks regional variations, but FCI suffered a similar flaw with a strong skew to large countries like India.
  - The key difference here is we recommend to keep the cohorts separate and develop levers for each, then map to appropriate team goals.
- **Goal on global at the Connections level, but operationalize at the cohort level for teams**
  - Ultimately we want to drive global growth to maximise revenue, but a geo based approach allows us to tailor the strategy to different cohorts with different needs.
  - Once we identify levers we can see if certain teams have more synergy with certain cohorts and set goals accordingly.
- **ME improvements not captured in revenue headroom:** work with ads team on opportunities to accelerate

Notes: 1) as at July 1st 2022; 2) Population size is scaled up to 'accounts' by multiplying by the current IG multiple account ratio for teens in each country (estimated using the secondary account flow), see appendix for ratios

47. This focus on the LTV of U.S. teen appears to have arisen previously, in September 2018. In Market Landscape Review dated September 6, 2018, Mr. Chen, Market Strategist for the Youth Team at Meta,50 had studied the "US Teen Opportunity Cost" and the "Lifetime Value" of teens.51 I understand that this study was shared[52] with [redacted], the Youth Team Lead at Meta[53] and [redacted], a Data Engineer at Meta.[54] In this

[49] META3047MDL-047-00592197_HIGHLY CONFIDENTIAL (COMPETITOR), pp.2, 25.

[50]META3047MDL-047-00543315 to 3324, at 3315.

[51] META3047MDL-005-00000318 to 0332 at 0323-0332.

[52] META3047MDL-047-00544113. I understand that the study was included in this email and meeting invite. The email includes attachments with matching file names.

[53] META3047MDL-003-00136729 to 6740, at 6729.

[54] META3047MDL-098-00006628, "FTE HC Actual 6.30.2018" tab. [redacted] is listed as a Data Engineer.

study, “US Teen Opportunity Cost” was described as a “financial opportunity” that Meta might miss:[55]

> **US Teen Opportunity Cost**
>
> **Objective**
>
> Make the case for investment in teens by showing in concrete terms the missed financial opportunity
>
> **Example Uses**
>
> - What is Facebook’s projected revenue in the United States if we do not solve the teen problem?
> - Should I invest more in teens or in FB Watch?

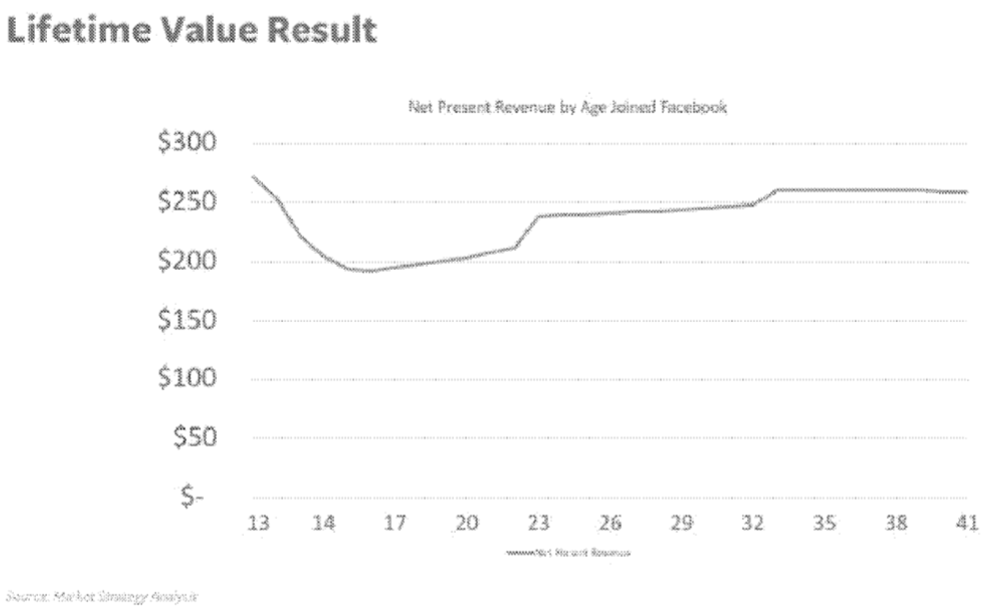
48. The study then quantified the value of this financial opportunity to Meta, at around $12 billion:[56]

> **Discussion**
>
> - From an opportunity cost perspective, the loss of teens is material. From around $150 million in 2019 to $1.8 billion (~$600 M in PV) in 2030. And a present value of roughly $12 billion
> - By 2030, the number of FB users in the US will be roughly 30 million fewer people, conservatively assuming that what ails teens does not ail the rest of the population
> - The findings here are US only—assuming that our teen problem is global, the opportunity cost is likely much greater

[55] META3047MDL-005-00000318 to 0332 at 0323.

[56] META3047MDL-005-00000318 to 0332 at 0326.

49. The study also estimated the lifetime value of a 13 year-old at around $270 per user,[57] as shown in the chart below.[58]



50. The study then noted the need to compare against Instagram, as "Teen ARPU on IG may be higher than on FB"[59] and made the following recommendations.[60]

[57] This and other LTV estimates by Meta that are listed in this Section of the report are Meta's estimates, based on Meta's assumptions, data, and parameters. Meta's estimates illustrate Meta's efforts to analyze Teen LTV and contextualize the discussions and assessments that Meta engaged in related to those estimates.

[58] META3047MDL-005-00000318 to 332 at 330.

[59] META3047MDL-005-00000318 to 332 at 331. METATNAG-003-00225608 to 5622 at 5621.

[60] META3047MDL-005-00000318 to 332 at 332. METATNAG-003-00225608 to 5622 at 5622. I understand the term "ARPU" to refer to Average Revenue per User.

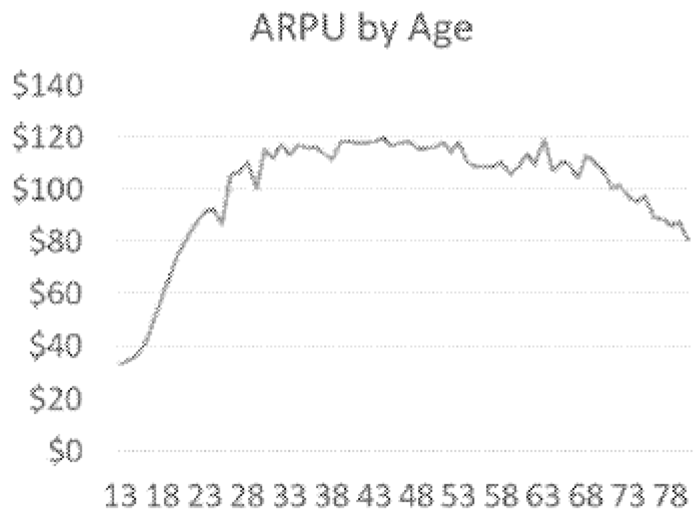
Recommendations

- Because of the high value of young teens, more product teams, and not just the Youth Team, should care about young teens as those are the users with the potential for highest loyalty and value over time
- If we are looking to spend near or more than the lifetime value ($270) per young teen, then that spending should result in extra scrutiny
- Given the importance of lifetime value, we should find a long term owner for the model—Youth leadership likely needs to make the case to Finance
- Analytics should track long term retention to understand app health and user behavior

51. This concept of LTV of U.S. teens appears consistent with an October 2018 Market Strategy Update by Meta that shows that teens have lower average revenue per user as compared to older users, as shown in the chart below.[61] Therefore, according to Meta's estimates, teen users that are retained by Meta that generate $30 of average revenue per year

[61] META3047MDL-014-00289025 to 031 at 028. METATNAG-002-00289025 to 9031 at 9028.

will turn into much more profitable adults generating $100 - $120 of average revenue per year according to the chart below.



- ARPU by age is based on August 2018 FB Inc. revenue in the United States and Age Affinity age
- Special thanks to George China, Eduardo Hurtado, and Alex Ilyin who helped with ARPU by age

Source: Market Strategy Analysis

52. I understand the above analysis to have been shared with the Market Strategy Update mailing list,[62] which appears to include executives Alex Schultz[63] and Javier Olivan.[64] I understand that it was later sent to executive Chris Cox.[65] This same Market Strategy

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[62] META3047MDL-014-00289025 to 9031 at 9025.

[63] META3047MDL-004-00017284 to 7288 at 7284. Alex Schultz appears to have been on the Market Strategy Update mailing list since December 8, 2017.

[64] META3047MDL-004-00022790 to 7294 at 7290 to 2791. Javier Olivan appears to have been on the Market Strategy Update mailing list since September 18, 2017.

[65] META3047MDL-020-00106905 to 6911 at 6905.

Update estimated the LTV of a user in the United States at between $200 and $350, based on "conservative assumptions”[66] which is similar to the $270 figure cited previously.

53. It appears that LTV remained a relevant concept at Meta, as in June 2021 Meta reduced ad load for Teens and young adults (18-29) in the US among other geographies, to recover engagement in this high priority user cohort. The results the following month were in line with expectations as July sessions increased amongst the teen cohort relative to June.[67] Similarly, in the fourth quarter of 2023, Meta had both Facebook and Instagram perform “LTV-based ad load protections” for teens in order to improve Long-Term Engagement.[68]

[66] META3047MDL-014-00289025 to 9031 at 9027.

[67] META3047MDL-074-00130390 to 0404 at 0402-0403.

[68] META3047MDL-047-00374068 at Slide 2.

This was included in a presentation on Ads Sentiment and Supply, which analyzed quality and quantity metrics for Facebook and Instagram ads.

TL;DR

Key Trends across IG & FB in Q4 '23:

- **Supply Personalization:** We continue to invest in supply personalization which has unlocked material iRev gains across apps this year (+0.96% Meta iRev IG, +0.88% FB). This enables us to prioritize keeping feed ad load neutral and protect organic engagement. Supply personalization is available across major surfaces on FB/IG (Feed, Reels, Stories). In Q4, IG extended supply personalization to dynamically trigger top-of-feed ads and back-to-back ads, and FB brought supply personalization to Reels unlocking more efficiency in our ad load systems.
- **Optimizing for Long-Term Engagement:** Both FB/IG are invested in improving long-term engagement efficiency. FB/IG continue to invest in LTV-based ad load protections (namely for teens). While FB experienced more severe headwinds in H2, recovery work in Q4 is showing promise in reversing those trends (FB: +0.05% US/CA LT DAU and +0.23% LT YA Session in Q4). *(FYI: Both apps are goalling or tracking revenue weighted organic engagement (rVPV, rSession) to ensure engagement growth/recovery is long-term monetization efficient.)*
- **Ads Quality Optimizations**: At the end of Q4, both apps saw Objectionable Ads (OOPS) increases, due to seasonality and vendor changes. We made meaningful reductions in OOPS prevalence on FB (-19% Feed, -30% Reels), and IG was already within guardrails/desired state in Q4 (~1-5% reduction on Feed, Stories, Reels). We continue to closely monitor OOPS seasonality recovery in Q1. We invested in quality efficiency and personalized diversity/repetition optimizations on both apps (e.g. IG repetition bid, FB save bid, user-cohort personalization) which drove long-term revenue (+0.45% Meta iRev IG, FB impact lands in Q1).
- **State of Reels Supply:** In Q4'23, we increased ad load on FB Reels by +5.5%-points to 16.7% and kept IG Reels ad load flat to protect organic engagement. IG had a slight decline on Reels ad load by -0.9%-points to 14.2% driven by the rollout of Basic Ads Youth and the launch of LTV-based ad load protections for teens across IG/FB. We expect Reels ad load to grow in 2024 (Q1'24 will remain relatively flat).

54. Susan Li, Meta's CFO, discussed the topic of ad load and interplay between lower ad load to Teens, and improved retention and long-term engagement. "Question: So Meta's expectation […] was that teen users of Facebook would use the platform more frequently if the ad load was decreased right? Answer: Yes."[69] She further clarified the objective of ad load reductions for Teens, "the thing we are almost always trying to optimize for with ad load optimizations of this kind is trying to make sure that, basically, the aggregate user experience is, you know, useful and positive for the people using it and that, you know, that results in sort of long run, them having a better experience on the product, and of course, that gives us the opportunity over the long run to – align sort of the ability to show ads with that."[70] Ms. Li

[69] Deposition of Susan Li , March 10, 2025,286:20 – 287:7.

[70] Deposition of Susan Li, March 10, 2025, 287:10 – 288:3.

further explained that "it is really about building, like, a great long-term experience for teens so that they want to continue being users well past their teenage years when they are adults who need to buy umbrellas."[71] This explanation aligns with Meta's focus on retaining Teens in the long term so that they become recurring sources of advertising revenue well past their teenage years, and their LTV is enhanced.

55. The chart below demonstrates that Teens were a small proportion of Facebook revenue, increasing with Young Adults, and reaching significantly higher levels for Other Adults. [72] Meta monitored and focused on increasing engagement within these younger groups.

Core Product | Existing user engagement weakness suggests we should focus on Core Product in Developed markets

			Favorability	Saturation	New User volume	Conf. success	New User retention	New User engagement		Existing User retention curve (share of MAU@365)			Existing User engagement		Revenue	
Group	Country	Cohort	% favorable non-users	MAU relative to total population	Years to pop. saturation	Conf relative to benign reg.	MAU@180 relative to conf.	DAU:MAU	Sessions Cap 15/DAU (FBage=180)	MAU@2yrs (reg 20-21)	MAU@2yrs (reg 18-19)	MAU@4yrs (reg 18-19)	DAU:MAU	Sessions Cap 15/DAU; (YoY)	Quarterly ARPU, USD	Share of FB revenue
	US	Teens		30%	9.9	79%	42%	56%	7.9	85%	89%		61%	8 (6%)	8.2	0.4%
		YA	38%	77%	3.3		35%	48%	8.6	81%	83%	72%	73%	10 (0%)	15.0	3.7%
		OA	31%	87%	3.2		42%	57%	8.4	76%	78%	60%	80%	9.6 (0%)	51.0	40.3%
	CA	Teens		35%	12.0	80%	45%	54%	5.7	91%	95%		67%	7.4 (4%)	3.7	0.0%
		YA		86%	2.5		42%	43%	6.6	86%	87%	79%	77%	9.6 (0%)	9.3	0.3%
		OA		91%	3.3		47%	54%	8.0	83%	85%	71%	83%	9.7 (1%)	28.6	2.6%
	GB	Teens		33%	7.8	78%	43%	52%	6.6	91%	91%		64%	7.3 (8%)	2.9	0.0%
		YA		88%	1.2		34%	43%	7.2	83%	85%	77%	79%	10.1 (-1%)	11.0	0.5%
		OA		90%	2.5		37%	54%	7.6	82%	84%	70%	83%	9.7 (0%)	27.5	4.3%
	FR	Teens		23%	14.7	73%	37%	51%	6.9	87%	90%		59%	6.8 (1%)	2.8	0.0%
		YA		95%	0.6		30%	48%	7.8	81%	84%	71%	77%	9.1 (-2%)	5.9	0.3%
		OA		90%	2.1		37%	58%	7.2	84%	85%	72%	80%	8.9 (-1%)	13.0	1.8%
	DE	Teens		11%	18.7	71%	31%	47%	8.4	80%	84%		48%	6.9 (1%)	3.2	0.0%
Engagement problems among existing users		YA		58%	6.9		32%	37%	6.6	76%	80%	63%	63%	8 (0%)	8.9	0.3%
		OA		64%	10.2		42%	57%	7.2	82%	83%	67%	75%	7.9 (-1%)	22.3	2.6%
	AU	Teens		30%	10.1	84%	55%	53%	6.0	95%	97%		67%	6.6 (6%)	3.4	0.0%
		YA		100%	0.0		44%	44%	8.1	88%	88%	81%	85%	10.5 (-3%)	18.9	0.4%
		OA		94%	2.0		46%	55%	7.6	82%	84%	71%	84%	9.8 (0%)	38.3	2.4%
	ID	Teens		40%	4.1	81%	35%	50%	7.7	67%	68%		52%	7.6 (0%)	0.1	0.0%
		YA	76%	95%	0.4		36%	51%	8.4	69%	69%	47%	64%	8.6 (-3%)	0.6	0.2%
		OA	82%	58%	6.5		47%	62%	8.2	69%	68%	45%	70%	8.4 (-3%)	1.4	0.5%
	BR	Teens		52%	5.3	81%	35%	49%	7.2	72%	78%		52%	6.8 (-5%)	1.0	0.1%
		YA	65%	79%	3.3		32%	49%	8.1	70%	73%	52%	67%	8.2 (-6%)	2.3	0.4%
		OA	65%	72%	6.5		47%	61%	7.9	74%	74%	55%	75%	8 (-4%)	5.0	2.0%
	JP	Teens		2%	75.1	82%	25%	19%	4.7	64%	69%		27%	5.1 (3%)	0.7	0.0%
		YA		22%	38.3		29%	31%	5.9	72%	76%	54%	44%	7.8 (2%)	4.5	0.1%
		OA		34%	52.6		40%	38%	4.7	78%	80%	61%	53%	5.1 (1%)	8.5	0.7%
	TR	Teens		10%	25.6	79%	38%	34%	4.8	76%	84%		40%	4.7 (-3%)	0.0	0.0%
		YA		65%	4.9		31%	38%	6.5	74%	76%	58%	54%	6.8 (2%)	0.9	0.1%
		OA		69%	8.4		37%	56%	7.0	79%	82%	68%	78%	7.7 (0%)	1.9	0.3%

Funnel Health
Healthy
At risk
Concerning
NA

56. Meta's focus on acquiring and retaining Teens is also discussed in several depositions that I have reviewed. Adam Mosseri stated that "Teens are trendsetters. They are

[71] Deposition of Susan Li, March 10, 2025 204:8 - 204:12.

[72] META3047MDL-047-00577796_HIGHLY CONFIDENTIAL (COMPETITOR), at pp. 5, 7.

the adopters. And we find that often how teens use Instagram or other products is a leading indicator of how they're going to use other things over time."[73]

57. Dr. Kenzie Synder, Lead User Experience Researcher for Instagram between 2019 – 2023 had a similar opinion to Mr. Mosseri. She stated in a January 2021 research note to a Household Ecosystem Study[74] "If we're looking to acquire (and retain) new users we need to recognize a teen's influence within the household to help do so, and the potential ripple effect (e.g, a teen shows a parent who then shows a grandparent.) . . . If a teen were to abandon the app would a parent still feel inclined to join? Would a preteen (the next generation of IG teens) be excited to join if their older sibling wasn't using IG?" Therefore it's important we not only understand a teen's role in acquisition but also how teen retention impact the retention of others."[75]

58. Dr. Snyder went on to explain that "Historically, teens have been a key focus for IG. Acquiring and maintaining them continues to be a priority, reflected by investment in new features like Reels."[76] According to Dr. Snyder "Teens inspire acquisition within a household because they are typically the first within a household to join. In many cases, they're also critical to the onboarding process for parents and preteens alike."[77] Therefore the value of

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[73] Deposition of Adam Mosseri, March 17, 2025, at 106:7-18.

[74] Deposition of Kenzie Snyder , February 27, 2025, at 264:10-23 and Exhibit 17 (META3047MDL-003-00020827 to 0863).

[75] Deposition of Kenzie Snyder , February 27, 2025, at 250:12-25 and Exhibit 18 (META3047MDL-003-00021070 to 1081 at 1072).

[76] Deposition of Kenzie Snyder , February 27, 2025, at 250:12-25. Exhibit 18 (META3047MDL-003-00021070 to 1081 at 1071).

[77] Deposition of Kenzie Snyder , February 27, 2025, at 250:12-25. Exhibit 18 (META3047MDL-003-00021070 to 1081 at 1072).

Teens to Meta went beyond their individual LifeTime Value, but also included their ability to draw other family members to Instagram.

59. The importance of Teens to Meta is further emphasized in Shayli Jimenez's deposition testimony. Ms. Jiminez joined Facebook in 2015 as a User Experience Researcher, moved to IG in 2020 as a Senior User Experience Researcher, and to Reality Labs in 2024.[78]

60. She stated that "I can certainly speak to why teens are an important market segment to some extent. The reason that teens are important is because teens are typically the culture or taste-makers of culture. And if something is popular with teens, you know, eventually all the other market segments tend to follow them. They are leaders in culture."[79]

VI. Analysis of Bad Experiences and Encounters Framework (BEEF) Survey and Other Surveys and Analyses

61. In this section I provide an overview and analysis of various surveys and studies known to Meta that relate to users' negative experiences on the Instagram platform. I use results from the BEEF Survey in my calculation of Bad Encounter instances, as detailed in Section XII of this report.

1. Bad Experiences and Encounters Framework (BEEF) Survey, July 2021.

62. I have reviewed the Bad Experiences and Encounters Framework Survey, which I understand Meta to have performed in June and July 2021.[80] I understand that the BEEF

[78] Deposition of Shayli Jimenez, February 11, 2025, at 21:12-23:11.

[79] Deposition of Shayli Jimenez, February 11, 2025, at J 36:14-37:1

[80] META3047MDL-004-00015029 to 5062 at 5029.

Survey was based on data collected over the period June 27 to July 28, 2021, and that it was authored by Dr. Kyle Andrews, a researcher on Instagram's well-being team.[81]

63. I have reviewed the following documents, which provide context on the BEEF survey.

- "'Bad Experiences' Measurement – Plan for a 2021 plan" – November 19, 2020.[82] I understand this was a document focused on the need for Meta to better understand the extent of bad experiences users were having on Instagram, which was a motivation for the BEEF survey.[83]
- "Instagram Bad Experiences" – May 2021.[84] This internal Instagram presentation, subtitled "What are Bad Experiences and why we should care," appears to summarize the understanding of Bad Experiences on Instagram and how these may be addressed.[85] I understand this presentation to have been authored in the run-up to the BEEF survey, which studied the amount of bad experiences users faced on Instagram. The presentation suggests that Instagram may be "Rethinking [their] approach" since the current approach of "policy-first" may not be effective in all circumstances.[86]

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[81] META3047MDL-004-00015029 to 5062 at 5029.

[82] META3047MDL-019-00094148; Deposition of Arturo Bejar, April 7, 2025, Volume 1, Exhibit 19 – (WIT) Arturo Bejar (Meta) – 04-07-2025.

[83] META3047MDL-019-00094148; Deposition of Arturo Bejar, April 7, 2025, Volume 1, Exhibit 19 – (WIT) Arturo Bejar (Meta) – 04-07-2025, p. 7.

[84] Deposition of Kyle Andrews, November 19, 2024, Exhibit 12 – (WIT) Kyle Andrews Ph.D. (Meta) – 11-19-2024. Appears to be dated May or June 2021 based on metadata.

[85] Deposition of Kyle Andrews, November 19, 2024, Exhibit 12 – (WIT) Kyle Andrews Ph.D. (Meta) – 11-19-2024, p. 2.

[86] Deposition of Kyle Andrews, November 19, 2024, Exhibit 12 – (WIT) Kyle Andrews Ph.D. (Meta) – 11-19-2024, pp. 8-11.

Limits of our "policy-first" approach

Policy is effective, but ...

1. it's constrained to specific definitions
2. it cannot keep pace with dynamic user experiences
3. it limits our detection of "grey area" or emerging issues
4. it doesn't capture the contextual nature of bad experiences

Policy isn't the right tool when ...

1. we want to center the truth of our users' experiences
2. "bad" is impossible to determine with any consistency
3. support calls for an alternative approach to the violator/non-violator binary model

The presentation appears to recommend making "Bad Experiences the ground truth that we use to support people."[87]

[87] Deposition of Kyle Andrews, November 19, 2024, Exhibit 12 – (WIT) Kyle Andrews Ph.D. (Meta) – 11-19-2024, p. 22.

Our recommendation

Make Bad Experiences the ground truth that we use to support people.

This means:

- The ground truth across the company, in addition to prevalence
- Establishing Social Norms
- Product interventions - IGWB as not seeing this as a separate effort from IG vision/priorities
- Ongoing measurement and understand work
- Support and care integration

64. Consistent with the above documents, one of the main purposes of the BEEF Survey appears to have been to develop a holistic and consistent picture of users' bad experiences on Instagram and for Meta to track results over time.[88]

[88] META3047MDL-004-00015029 to 5062 at 5031.

Why are we doing this?

To develop a holistic, consistent picture of user bad experiences on Instagram that allows us to track our progress each half.

Holistic: TRIPS focuses on policy-violating experiences, but there are additional causes of bad experiences on Instagram. By contrast, the BEEF Survey pulls issues from the Bad Experiences and Encounters Framework, which sourced issues from all of our user input channels.

Consistent: We have many sources of valuable user data, such as individual UXR surveys and interviews, FRX reports, flytrap, app store reviews, and social media listening. But, it's hard to make apples-to-apples comparisons between these data points, because of differences in how they're collected and weighted. The BEEF Survey asks a random sample of users the top 22 issues from BEEF, so we can compare and contrast easily.

Track our progress: Without a control group, it's impossible to determine causality from our other signals. The BEEF Survey was fielded to both the well-being holdout and production groups.

3

65. As I understand it, the planning of the BEEF Survey began in April of 2021, with analysis and reporting occurring in September 2021, and was designed to continue after December 2021, with the launch of a second survey, "BEEF Survey V2," as reflected in the timeline below.[89]

[89]. META3047MDL-004-00015029 to 5062 at 5032.

Survey timeline

Date	To do	Status
April 12	Agree on which TRIPS questions to include	Complete
April 19	Use framework project results to generate proposal for additional survey constructs	Complete
April 26	Develop survey questions/ look for questions from existing surveys	Complete
May 3	Develop survey questions/ look for questions from existing surveys	Complete
May 10	Submit to research review	Complete (June 3)
~~May 24~~ June 3	Submit to survey review	Complete (June 9)
~~May 31~~ June 10	Submit to translations	Complete (June 29)
~~June 14~~ June 30	Launch survey	Complete (June 30)
~~June 21~~ July 6	Data cleaning	Complete
~~June 28~~ August 25	Data weighting/ appending	Complete (August 25)
~~July 19~~ August 26	Data cleaning	Complete (September 5)
~~July 26~~ September 7	Analysis/ reporting	In progress
October 4	Socialization	
October 11	v2 Framework	
October 18	Begin BEEF Survey v2 development	
December 16	Launch BEEF Survey v2 (code freeze Dec 16-Jan 4)	

What's next?

The plan is to add findings to this deck and the Bad Experiences Working Group as I go, with the goal of having a draft completed in the next two weeks. After that, I will focus on 1:1 and small group meetings with various teams, to share the findings relevant to them.

As I engage in socialization of the findings, I will also begin a literature review of work done since the v1 BEEF, to see if any new issues have emerged that should be included in the next BEEF Survey (v2 Framework, although it will be much more lightweight than the v1 effort).

I will use the current BEEF Survey and any new insights gathered during the v2 Framework to begin the survey development process for the v2 BEEF Survey.

4

66. The survey included the following questions, each addressing specific issues relevant to this analysis.[90]

Survey questions, issues

Questions that are also in TRIPS are highlighted in yellow. All questions had the same response options as TRIPS: 'Yes, during the last 7 days,' 'Yes, but more than 7 days ago,' and 'No.'

False or misleading	Have you ever seen anything on Instagram that was false or misleading?
Violence	Have you ever seen any violent, bloody, or disturbing images on Instagram that bothered you?
Hate (witness)	Have you ever seen anyone discriminating against people on Instagram because of their gender, religion, race, sexual orientation, or another part of their identity?
Bullying (witness)	Have you ever seen anyone do any of these things to someone else on Instagram? -Insult or disrespect them -Contact them in an inappropriate way -Damage their reputation -Threaten them -Exclude them or leave them out
SRG drug sales	Have you ever seen anyone trying to buy or sell any of the following things on Instagram? -Prescription drugs -Illegal drugs
Bullying (target)	Has anyone ever done any of these things to you on Instagram? -Insulted or disrespected you -Contacted you in an inappropriate way -Damaged your reputation -Threatened you -Excluded you or left you out
Nudity	Have you ever seen nudity or sexual images on Instagram that you didn't want to see?
Negative Social Comparison	Have you ever felt worse about yourself because of other peoples' posts on Instagram?
Unwanted advances	Have you ever received unwanted sexual advances on Instagram?
Account security	Have you ever been unable to access your Instagram account, either because of a lost password or because your account was hacked?
Civic content	Have you ever felt that you have seen too many political posts on Instagram?
Impersonation	Have you ever found out that a Instagram account was pretending to be you?
Self-harm	Have you ever seen someone harm themselves, or threaten to do so, on Instagram?
Spam/ fake account contact	Have you ever been contacted on Instagram by an account that seemed fake?
Over enforcement	Have you ever felt that Instagram was wrong when it removed a post or video for violating the rules?
Audience limitation	Have you felt that not enough people see the things you share on Instagram?
Usability, action	Have you ever had difficulty posting a picture or video to Instagram?
Transparency	Have you ever felt Instagram isn't transparent about why it removes posts that are against the rules?
Usability, consumption	Have you ever experienced the Instagram app freezing, crashing, or closing unexpectedly?
Data privacy	Have you ever had concerns about the way Instagram might use data and information about you?
Perceived control	Have you ever felt a lack of control over what you see on Instagram?
Commerciality	Have you ever felt that you have seen too many ads on Instagram?

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[90] META3047MDL-004-00015029 to 5062 at 5033.

The undersigned hereby certifies their understanding that they owe a primary and overriding duty of candor and professional integrity to help the Court on matters within their expertise and in all submissions to, or testimony before, the Court. The undersigned further certifies that their report and opinions are not being presented for any improper purpose, such as to harass, cause unnecessary delay, or needlessly increase the cost of litigation.

Carl S. Saba, MBA, CVA, ASA, ABV